From: Benzie, Richard (DEQ)
Sent: Wednesday, April 01, 2015 2:09 PM
To: Busch, Stephen (DEQ)
Cc: Cook, Pat (DEQ);Prysby, Mike (DEQ)
Subject: RE: Schedule 2 plants

I think we can safely place them in Schedule 2. If that schedule results in their monitoring not being completed before they connect to the Authority's pipeline, we should ask them to complete the monitoring so both we and they know their LT2 Bin Classification and what level of treatment is appropriate should they ever need to rely upon the river again.

As for the Needs Survey, the 2013 Census Bureau estimate could have justified them being excluded from the category of systems serving greater than 100,000 that all have to submit a survey. However, since we used a population of over 102,000 for their 2015 Annual PWS fee and the city paid it, we can assume the population EPA and Cadmus were given on the date they froze the data for the Needs Survey was over 100,000. Next survey, the city will have to be randomly selected to be included unless they reverse the population decline by 2018-19.

From: Busch, Stephen (DEQ)
Sent: Wednesday, April 01, 2015 1:54 PM
To: Benzie, Richard (DEQ)
Cc: Cook, Pat (DEQ); Prysby, Mike (DEQ)
Subject: RE: Schedule 2 plants

Here is the timeline I have for Flint population info.

3/2013 Sanitary survey completed and mailed based on 2010 Census population of 102,434

7/2013 Census Bureau publishes 2013 census estimate for Flint of 99,763

11/2014 LT2 schedule developed with Flint Schedule 2 based on latest (2013) census estimate.
Estimate validated by City DPW staff based on vacated service accounts.

Based on the Needs Survey emails from EPA it would appear that the Need Survey populations were validated by the states earlier than November 15, 2014, which is prior to this population change.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Cook, Pat (DEQ)
Sent: Monday, March 30, 2015 3:11 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Schedule 2 plants

Before you change the population in SDWIS, we need to discuss this with Richard. He is concerned about some other ramifications by lowering their population below 100k for some other programs, like the Needs Survey.

pat

From: Prysby, Mike (DEQ)
Sent: Monday, March 30, 2015 7:48 AM
To: Cook, Pat (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Schedule 2 plants

Pat,

Your note serves as a reminder for me to confirm Flint's population (<100,000). I requested the city to provide us with the most recent number of residential accounts ...if which they have responded. Flint's most recent estimate of residential accounts shows further loss of customer base...and is below 100K. I will tally up the numbers, compare against their most recent Sanitary Survey and provide an updated population estimate for Adam to enter into SDWIS.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Cook, Pat (DEQ)
Sent: Friday, March 27, 2015 4:02 PM
To: Bolf, Michael (DEQ); Brennan, Patrick (DEQ); Bridges, Jeriesha (DEQ); Brookens, Todd (DEQ); Chooi, Wood (DEQ); Conradson, Scott (DEQ); Dehtiar, Luke (DEQ); Drake, Jerry (DEQ); Esparsa, Brian (DEQ); Gotham, Daryl (DEQ); Islam, Abuzoha (DEQ); Johnson, Stephanie (DEQ); Joseph, Mark (DEQ); London, Bob (DEQ); Lopez, Amber (DEQ); Pascoe, Doug (DEQ); Prysby, Mike (DEQ); Reinke, Joseph (DEQ); Reyes, Katelyn (DEQ); Sarkipato, Ernest (DEQ); Skinker, Bethel (DEQ); Slater, Brad (DEQ); Swendsen, Kurt (DEQ); Swenor, Scott (DEQ); Thurston, Brian (DEQ); Wozniak, Gary (DEQ)
Subject: Schedule 2 plants

Hi All,

According to the population figures in SDWIS, below is a list of Schedule 2 water plants that will have to conduct a second round of Crypto, E. coli and turbidity sampling from their raw water source(s) starting in October, 2015. This monitoring is required by the Long Term 2 Enhanced Surface Water Treatment Rule and Act 399. As a reminder, a Schedule 2 water plant serves 50,000 to 99,999 people OR belongs to a Combined Distribution System in which the largest system serves 50,000 to 99,999.

The plan is to forward to the appropriate district engineers a sample letter and Monitoring Plan template that they in turn will have to mail to the plants. The letter explains the source water sampling requirements while also reminding them that the monitoring plans have to completed/submitted to the district office's by July 1st.

Please look at the below list and let me know if any plants meeting the Schedule 2 definition are missing or need to be added.

Schedule 2 Plants

- All plants receiving raw water from the Saginaw Midland pipeline: Au Gres, Linwood, Omer, Saginaw, Sims-Whitney, Standish, Midland
- Flint
- Wyoming

Patrick Cook, P.E.
Community Drinking Water Unit
Office of Drinking Water & Municipal Assistance
Michigan Department of Environmental Quality
Phone: (517) 284-6514
cookp@michigan.gov

From: Cupal, Suzanne <scupal@gchd.us>
Sent: Wednesday, October 07, 2015 7:46 PM
To: Prysby, Mike (DEQ)
Subject: GCHD Water Issues Meeting

Mr. Prysby-

GCHD is pulling together a meeting with local hospital infection control staff so they can connect with you and City of Flint water staff members so you can provide them an update on current water treatment procedures and concerns regarding lead in water. We would greatly appreciate your attendance on Friday, October 23rd at 11:30am in the private dining room of the Masonic Temple in downtown Flint. Please let me know if you are available to attend.

Thank you.

Suzanne Cupal

Suzanne Cupal, M.P.H.
Public Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Suite 4
Flint, MI 48502
(810) 768-7970
scupal@gchd.us

From: Benzie, Richard (DEQ)
Sent: Friday, October 09, 2015 2:54 PM
To: Tetzlaff, Katherine (DEQ);Shekter Smith, Liane (DEQ);Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Subject: RE: Project Number for City of Flint Drinking Water

Here's my best guess from a review of my calendar and my emails.

- August 10 – 1 hour
- August 12 – 2 hours
- August 14 – 1 hour
- August 17 – 1 hour
- August 24 – 2 hours
- August 28 – 2 hours
- August 31 – 4 hours
- September 2 – 2 hours
- September 3 – 1 hour
- September 4 – 1 hour
- September 8 – 2 hours
- September 9 – 2 hours
- September 10 – 5 hours
- September 11 – 4 hours
- September 15 – 3 hours
- September 16 – 4 hours
- September 17 – 4 hours
- September 18 – 1 hour
- September 21 – 5 hours
- September 22 – 4 hours
- September 23 – 4 hours
- September 24 – 6 hours
- September 25 – 3 hours

Total before last pay period: 64 hours

From: Tetzlaff, Katherine (DEQ)
Sent: Wednesday, October 07, 2015 7:28 AM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: FW: Project Number for City of Flint Drinking Water
Importance: High

I wasn't sure who all will need this so please forward as appropriate. The department would like to capture our costs related to the Flint situation. The below project number has been established. You can use this with any account coding that you would normally be using for DCDS or travel expenses. As I understand it, we also want to go back and capture as much as we can prior to this date. If you would process payroll corrections to add this project number, that would be helpful. If there is travel, let us know so we can correct it. We can also do the DCDS corrections for you if you provide the dates and hours that should be charged.

With year-end, the sooner the better. Thanks

From: Lundy, Anastasia (DEQ)
Sent: Tuesday, October 06, 2015 4:00 PM
To: Jackson, Michael (DEQ); Lundy, Anastasia (DEQ); Marinangeli, Lois (DEQ); Renteria, Sylvia (DEQ); Tetzlaff, Katherine (DEQ)
Cc: Austin, Dawn (DEQ); Bradsher, Esther (DEQ); McDonald, Paul (DEQ)
Subject: Project Number for City of Flint Drinking Water
Importance: High

Hello all. If your division incurs expenditures related to the City of Flint drinking water situation, we have established a central project number to track as many of the costs as possible department-wide. This can be used for both payroll and non-payroll charges. *Exception: As usual, if you are using federal grants to fund the work/purchase, please use the appropriate grant project number instead of this central number.*

Project #: 900040-00, City of Flint Drinking Water

Thanks everyone!

Anastasia M. Lundy, Administration Section Chief
Remediation & Redevelopment Division
Michigan Department of Environmental Quality
Phone: 517-284-5129 / Fax: 517-373-2637
Email: LundyA1@michigan.gov

From: Howard Croft <hcroft@cityofflint.com>
Sent: Monday, October 12, 2015 3:26 PM
To: Prysby, Mike (DEQ)
Cc: Natasha Henderson;Michael Glasgow;Brent Wright
Subject: Emails from DEQ

Mike,

I would like to request that our City Administrator Natasha Henderson be copied on all future correspondence between the DEQ and the City. I am relating the same information to the Plant Supervisor and Utilities Administrator, she is copied on this email so that everyone will have her contact information.

Thank you,
--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Prysby, Mike (DEQ)
Sent: Monday, October 06, 2014 11:39 AM
To: Ladouceur, Anita (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: Email Inquiry

Anita,

I called Ms. Dumas this morning and explained to her the factors contributing to the boil water advisory and the aesthetic water quality problems at her location (she resides in the BWA area). She was wondering if the State was overseeing the situation in Flint pertaining to the drinking water. I explained to her our role in the DEQ's oversight of the Flint city water supply. The call was productive and her concerns were addressed.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Ladouceur, Anita (DEQ)
Sent: Monday, October 06, 2014 9:18 AM
To: Prysby, Mike (DEQ)
Subject: FW: Email Inquiry

Hi Mike:

This looks like it is for you.

Anita

From: deq-assist
Sent: Monday, October 06, 2014 9:13 AM
To: Ladouceur, Anita (DEQ)
Subject: FW: Email Inquiry

Good morning Anita,
Please review the attached customer email and respond at your earliest convenience or if another staff member is a more appropriate responder, then please forward.
Thank you for your continued assistance.
I greatly appreciate your support.

Tonya

Tonya Schelter, Department Analyst
Michigan Department of Environmental Quality
Office of Environmental Assistance
Environmental Assistance Center 1-800-662-9278

517-284-6873
scheltert@michigan.gov
Deq-assist@michigan.gov

517-284-7272 **SARA Title III Program Phone**
Deq-sara@michigan.gov

Thanks for contacting our Department of Environmental Quality, Office of Environmental Assistance. To help us improve our services, we encourage you to complete our short customer service survey
https://www.surveymonkey.com/s/oeaes

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 8:28 AM
To: Seymour, Veronica (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Thanks

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Willard, Veronica (DEQ)
Sent: Wednesday, January 14, 2015 8:23 AM
To: Prysby, Mike (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

This is a reply direct letter, so it can come from you or your supervisor.

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 7:57 AM
To: Willard, Veronica (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Veronica,

Can you send me the proper format (letter) for me to complete this assignment...."Directors Log letter?" Today is my last day in the office till next week. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Benzie, Richard (DEQ)
Sent: Friday, January 09, 2015 5:24 PM
To: Prysby, Mike (DEQ); Willard, Veronica (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Mike,

You need to draft a response that says pretty much what you say below but in a format (letter) that can be used to provide a response to Ms. Warner from someone probably higher up the chain. I assume Joanne can assist you in identifying the appropriate format.

Veronica,

Can you tell from the attachment you sent (DIR00004) whose signature Mike should be preparing this response? All I see is the initials "RD." Will Mike be signing it or will it be someone else?

Also, since we did not receive this request until the afternoon of January 9th, is it possible we may have a week to respond, making the due date January 16th? Mike has his hands full with all of the demands placed on him by the ongoing issues in Flint.

Richard

From: Prysby, Mike (DEQ)
Sent: Friday, January 09, 2015 3:25 PM
To: Willard, Veronica (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Veronica,

I contacted Ms. Patricia Warner and gave her the opportunity to ask me questions and/or voice concerns with the TTHM violation in Flint. Her main complaint, most common complaint across the board, is the high cost of water Flint residents are paying yet receiving water of poor quality. Another concern she voiced was the city's delay in notifying the public of increased TTHM levels. She and others feel the city should have notified residents last May when high TTHM levels were first detected.

I explained to Patricia some of the possible reasons for the increase in water rates included.... improvements needed at the WTP (necessary for full-time operation both for KWA and Flint River operation) and the cost of infrastructure to connect to KWA. The financial commitment to KWA may also be factored into increased costs; however, I stressed that the city needs to work harder at educating the public on why the water rates were increased. With regards to PN requirements, I explained how the TTHM exceedance for Flint is determined (running annual average) and the PN requirement. I stressed that...although the city has met all of the monitoring and PN requirements for this violation, it may be worthwhile for them to convey the status of TTHMs ahead of state and federal reporting deadlines as a means towards regaining public trust. I also provided technical information pertaining to TTHMs and discussed the health-effects in more detail. The duration of the call was a half hour and Patricia seemed satisfied with my response to her questions/concerns. I offered her the opportunity to call me again if she has any further questions.

If any further action is needed regarding this inquiry, please let me know.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Willard, Veronica (DEQ)
Sent: Friday, January 09, 2015 2:16 PM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Mike – this is the official assignment.

From: DEQ-LogLetter
Sent: Friday, January 09, 2015 11:36 AM
To: Willard, Veronica (DEQ)
Cc: Thelen, Mary Beth (DEQ); Shaler, Karen (DEQ)
Subject: DIR00004 Warner / Water toxins in Flint MI

Assigned to ODWMA

From: Sheila Bailey-Waddell <sheila.bw@hotmail.com>
Sent: Friday, April 03, 2015 7:29 PM
To: Prysby, Mike (DEQ)
Subject: RE: City of Flint Water

Michael,

You may not reside in Genesee County, but you are employed with the State DEQ. Furthermore, rivers meander; meaning, they flow. It matters not to me how far up or downstream the contamination is located. The water supply is already threatened with poor quality for consumption and possibly not the best for hygiene. I appreciate your forwarding my communications to the appropriate parties.

Have a great weekend,
Sheila

From: PRYSBYM@michigan.gov
To: sheila.bw@hotmail.com
Subject: Re: City of Flint Water
Date: Fri, 3 Apr 2015 22:14:05 +0000

Sheila,
I was not aware of the sewage discharge since I don't reside in Genesee County and I don't work in the waste water program. I appreciate you bringing it to my attention. The sewage discharge occurred in the city of Flushing and is approximately 20 miles downstream of the Flint Water Treatment river intake; thus the treatment and Flint's water supply was not threatened by this particular discharge. I will follow up with you further on Monday concerning the cost of water.

Sent from my iPhone

On Apr 3, 2015, at 4:34 PM, Sheila Bailey-Waddell <sheila.bw@hotmail.com> wrote:

> Michael,
>
> I refuse to believe that you were unaware of this incident. I have provided a link below for your reference and that you were informed. Although you have stated that you do not regulate the rates, there, perhaps, is an indirect relationship with Michigan DEQ components and rates charged (i.e revolving funds, loans, etc...). Somewhere in your agency's organization structure these two elements must cross.
>
> http://www.mlive.com/news/flint/index.ssf/2015/04/flushing_discharges_nearly_100.html
>
> Thank you,
> Sheila

From: PRYSBYM@michigan.gov
To: sheila.bw@hotmail.com
Subject: City of Flint Water
Date: Fri, 3 Apr 2015 19:57:28 +0000

Sheila,

To better help address your first concern pertaining to the spill of sewage into the Flint, I will need to know the location of the spill and when it occurred. Your second concern, pertaining to the high cost of water cannot be answered by our department since we do not regulate how a water utility charges its customers. It is the city's obligation, as part of building good public relations and perception, to provide an informative response to customers concerned over high water rates.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
MDEQ

From: Prysby, Mike (DEQ)
Sent: Monday, May 11, 2015 10:09 AM
To: sheila.bw@hotmail.com
Cc: Busch, Stephen (DEQ);Benzie, Richard (DEQ);Devereaux, Tracy (DEQ);Smith, Laura (DEQ)
Subject: Ticket #23002-490657
Attachments: Flint 2013 CCR.pdf

Shelia,

Based on the e-mail thread, Flint's Consumer Confidence Report (CCR) provided to Flint residents may address your question. Attached is Flint's 2013 CCR that summarizes the quality of the drinking water provided to residents (including detected contaminants) for the 2012 calendar year. We have not received Flint's 2015 CCR since the deadline for the city to distribute it to residents and the MDEQ is July 1, 2015. Also, our department is not involved with or have control on how monitoring results and/or violations are presented on other websites that may contain information on Flint's water quality . As always, if you have further questions concerning Flint's drinking water quality and detected contaminates, feel free to contact me.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

000907

2310

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE

CONSUMER CONFIDENCE REPORT FOR COMMUNITY WATER SUPPLY CERTIFICATE OF DISTRIBUTION

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.
Failure to submit certification is a violation of the Act and may subject the water supply to enforcement penalties.

Supply Name:	City of Flint	County:	Genesee	WSSN:	2310
Population:	☐ 500 or fewer people	☐ 501 – 9,999 people	☒ 10,000 or more people		

Community water supplies must confirm that the Consumer Confidence Report (CCR) and any enclosed Public Notices (PN) or notices of CCR availability, have been distributed to customers by July 1 as required under administrative rules R 325.10415 and R 325.10404(4)(c). Supplies must also certify that the information contained in the CCR is correct and consistent with the compliance monitoring data previously submitted to the Michigan Department of Environmental Quality (DEQ). Return the certification to the appropriate DEQ district office by October 1. For addresses, visit www.michigan.gov/deq, click on Locations.

Method of delivery to DEQ

☒ Mail ☐ Email ☐ Hand Delivery ☐ Other _____ Date delivered: 6/25/2014

Method of delivery to Local Health Department

☒ Mail ☐ Email ☐ Hand Delivery ☐ Other _____ Date delivered: 6/25/2014

Method or combination of methods to directly deliver CCR to each bill paying customer. Check all that apply.

☒ Mail or hand deliver a paper copy of CCR. Date(s) mailed or hand delivered: 6/24/2014
☐ Mail or hand deliver notification that the CCR is available at a direct URL. Date(s) delivered to customers: _____
☐ Email notification that CCR is available at direct URL: Date(s) emailed: _____
☐ Email notification that CCR is attached to the email. Date(s) emailed: _____
☐ Email notification that CCR is embedded in the email. Date(s) emailed: _____

If using notification of CCR availability:

1. Mail a paper CCR to customers who request it and to customers known to be incapable of receiving electronically.
2. Include a copy of the notification to the DEQ district office with this certification form.
3. Explain the nature of the notification, prominently display the direct URL, include statement how to request a paper copy.

> Example of Notification of CCR Availability Subject Line: 2012 Drinking Water Quality Report Available.
> Message: Your annual report on the source and quality of your drinking water is available on the Web at **www.anytown.gov/waterqualityreport**. To have a copy mailed to you, contact Anytown at 555-111-1111 or water@anytown.gov.

☐ **Option for supplies serving fewer than 10,000 persons:** Publish entire report in newspaper, and notify customers via newspaper(s) in which CCR published, mail, email or hand delivery that individual copies will not be mailed, and include statement how to request a paper copy.
Date(s) of publication: _____

☐ **Option for supplies serving 500 or fewer persons:** Notify customers via mail, email, hand delivery or, with DEQ approval, posting in public places, that a copy of the report is available from the water supply on request.
Date(s) of notification: _____

Post on Internet (required for supplies serving ≥100,000, optional for others)

☒ Internet address: www.cityofflint.com/utilities/utilities.asp Date accessible: 6/26/2014

"Good Faith" efforts to reach non-bill-paying consumers (in addition to the method(s) above). Check all that apply.

☐ Mail the report to all postal patrons. Zip codes and dates mailed: _____
☒ Mail to each service connection physical address. Date(s) mailed: 6/24/2014
☐ Advertise the availability of the report in the newspapers, on TV, and on the radio.
☐ Publish the report in a local newspaper.
☐ Post the report in public places such as cafeterias in public buildings, libraries, churches, and schools.
☐ Deliver multiple copies for distribution by single-bill customers, e.g., apartments or private employers.
☐ Deliver the report to community organizations.
☐ Other: _____

Send to the DEQ a copy of the news articles, a list of channels broadcast and dates, and a list of locations/organizations reports delivered to and dates.

A Tier 3 Public Notice is Distributed with this CCR

☐ This CCR is being used to deliver a Tier 3 Public Notice for one or more violations. To use this Tier 3 delivery option, the CCR must be directly delivered to each bill paying customer or, with DEQ approval, continuously posted, and must be issued within 12 months of learning of the violation. A copy of this form must be delivered to the DEQ within 10 days of delivering the CCR to customers to meet the public notification requirements.

Name/Title: Brent F. Wright / Water Plant Supervisor

Signature: _____ Date: 6/25/2014

DEQ
RESOURCE MANAGEMENT DIVISION
JUN 27 2014
LANSING DISTRICT

See reverse side for U.S. EPA Expectations for Electronic Delivery of CCR

EQP 5943 (Rev. 5/2014)

02310

CUSTOMER SERVICE CENTER
CITY HALL
1101 S. SAGINAW ST.
FLINT, 48501

DEQ
RESOURCE MANAGEMENT DIVISION
JUN 27 2014
LANSING DISTRICT

Department of Utilities
FLINT
WATER PLANT

City of Flint
Water Plant & Facilities

2013 Consumers Annual Report on Water Quality

The City of Flint Department of Utilities is dedicated to providing high quality drinking water to the residents of the community. The Consumers Annual Report on Water Quality provides important information about your drinking water. This report includes information about the source of the water, health information, a chart summarizing United States Environmental Protection Agency (USEPA) required testing results, and a table giving explanations of important terms to understand when viewing the test results. The Flint Water Plant & Facilities operates and maintains a certified drinking water laboratory to assure compliance with all state and federal regulations and is committed to prompt and thorough notification to the consumers if there is any reason for concern about the quality of the drinking water.

Information about your drinking water is available at the City of Flint web page on the Internet at www.cityofflint.com or by calling the Flint Water Plant & Facilities at (810) 787-6537. The Safe Drinking Water Hotline at (800) 426-4791 is a resource for health related questions and water quality issues. General drinking water information can be found on the USEPA web site at www.epa.gov/safewater/.

Water Source

In 2013, The City of Flint purchased drinking water from the Detroit Water & Sewerage Department (DWSD) which operates several drinking water facilities. Following treatment to remove impurities, the water is pumped by DWSD to the Flint Water Plant, where the water is then monitored and distributed throughout the City.

The source water comes from the lower Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron. The Michigan Department of Environmental Quality in partnership with the U.S. Geological Survey, the Detroit Water & Sewerage Department, and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of potential contamination. The susceptibility rating is a seven-tiered scale ranging from "very low" to "very high" based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminant sources. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards. If you would like to know more information or a complete copy of the report, contact the City of Flint Water Plant at (810) 787-6537.

General Information

In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by the public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants;** such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants;** such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides;** which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **Organic chemical contaminants;** including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants;** which can be naturally occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-comprised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Flint Department of Utilities is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize your potential exposure to lead in your water by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Lake Huron Water Treatment Plant

20[illegible] Regulated Detected Contaminants [illegible]bles

Regulated Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Inorganic Chemicals – Monitoring at Plant Finished Water Tap								
Fluoride	05/13/2013	ppm	4	4	0.55	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	05/13/2013	ppm	10	10	0.32	n/a	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	6/9/2008	ppm	2	2	0.01	n/a	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits

Disinfection By-Products – Monitoring in Distribution System								
Contaminant	Test Date	Units	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2013	ppb	n/a	80	37.8	11.5 – 43.8	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2013	ppb	n/a	60	17.0	6.0 – 19.0	No	By-product of drinking water disinfection

Disinfectant Residuals Monitoring in Distribution System								
Contaminant	Test Date	Units	Health Goal	Allowed Level	Highest RAA	Range of Detection	Violation	Major Sources in Drinking Water
Disinfectant Total Chlorine Residual	Jan-Dec 2013	ppm	MRDGL 4	MRDL 4	0.81	0.65-0.93	No	Water additive used to control microbes

2013 Turbidity – Monitored every 4 hours at Plant Finished Water Tap			
Highest Single Measurement Cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation	Major Sources in Drinking Water
0.26 NTU	100%	No	Soil Runoff
Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.			

2013 Microbiological Contaminants – Monthly Monitoring in Distribution System					
Regulated Contaminant	MCLG	MCL	Highest Number Detected	Violation	Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	In one month 1	No	Naturally present in the environment.
E.coli or Fecal Coliform Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or *E. coli* positive.	entire year 0	No	Human waste and animal fecal waste.

2011 Lead and Copper Monitoring at Customers' Tap								
Regulated Contaminant	Test Date	Units	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples Over AL	Violation	Major Sources in Drinking Water
Lead	2011	ppb	0	15	< 2.0	0	No	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2011	ppm	1.3	1.3	0.10	0	No	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.
*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.								

Regulated Contaminant	Treatment Technique	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each month and because the level was low, there is no requirement for TOC removal.	Erosion of natural deposits

2013 Special Monitoring

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	4.52	Erosion of natural deposits

Collection, sampling result information and table provided by Detroit Water and Sewerage Department (DWSD) Water Quality Division, ML Semegen

Additional sample result information provided by the City of Flint Water Plant Laboratory, M Glasgow

2013 Key to the Detected Contaminant Tables		
Symbol	**Abbreviation for**	**Definition/Explanation**
>	Greater than	
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichoroacetic, and trichloroacetic acids. Compliance is based on the total .
LRAA	Locational Running Annual Average	
MCL	Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health.
MRDL	Maximum Residual Disinfectant Level	The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRLDG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
n/a	Not Applicable	
ND	Not Detected	
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
ppb	Parts Per Billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
ppm	Parts Per Million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
RAA	Running Annual Average	
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromoochloromethane and bromoform. Compliance is based on total.

From: Sheila Bailey-Waddell <sheila.bw@hotmail.com>
Sent: Tuesday, December 15, 2015 10:23 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ);Benzie, Richard (DEQ);EPA Safe Drinking Water Hotline;jcurtis@co.genesee.mi.us;OIG_Hotline@epa.gov
Cc: mkm0220@comcast.net
Subject: RE: Ticket #23002-490657 Response Sent

Hello,

It is my contention that you have grossly embellished about the water quality in Genesee County; particularly Flint. The response submitted below is prior to the stark discovery that federal laws were violated. It's plain to see that funds have been misappropriated resulting in harm to residents and their families. In the correspondence, below, you have minimized the problem and diverted the blame to individual residents. Considering the public broadcast about our water equality, the culprits are not the residents, but the officials that are designated to ensure the quality of water.

Thank you,
Sheila

From: PRYSBYM@michigan.gov
To: sheila.bw@hotmail.com
CC: BUSCHS@michigan.gov; BENZIER@michigan.gov
Subject: RE: Ticket #23002-490657 Response Sent
Date: Fri, 2 Oct 2015 14:03:35 +0000

Sheila,

I am responding to your e-mail to address your concerns with lead Flint's drinking water. The drinking water treated at the Water Treatment Plant (WTP) and distributed to Flint residents meets all applicable drinking water standards and has not detected the presence of lead in any plant tap samples (water that leaves the WTP). Although the drinking water standards are being met, and compliance with the Action Level for lead is being achieved (90% of selected sites sampled throughout the city are at or below the 15 parts per billion Action Level for lead in accordance to EPA's monitoring requirements), there is no safe level for lead in drinking water. Compliance with the lead Action Level; however, does not mean that under certain conditions that some residents may have water within their domestic plumbing system that has leached lead from either a lead service line or lead solder.

The only way to know if you are being exposed to a higher concentration of lead at your residency is to have a sample collected from your residency and analyzed for lead at a certified laboratory. It is our understanding that the city of Flint is working with their customers on lead sampling requests without charge. You will need contact the city to arrange for the sampling.

If lead is present in the water at your home or if there is uncertainty, our advice is to minimize stagnation of the water prior to consumption by running your faucet for several minutes to clear out the stagnated water from your plumbing and service line.

Below is a link that provide additional information regarding lead in drinking water.

http://water.epa.gov/drink/contaminants/basicinformation/lead.cfm

If you have any further concerns regarding lead in your drinking water or on any other water related matter, please don't hesitate to contact me.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Sheila Bailey-Waddell [mailto:sheila.bw@hotmail.com]
Sent: Wednesday, September 30, 2015 8:43 PM
To: Hill, Charles (DEQ); Selden, Barry (DEQ); Smith, Laura (DEQ); Prysby, Mike (DEQ)
Subject: RE: Ticket #23002-490657 Response Sent

Hello,

Have you not heard that the water quality in Michigan is detrimental to its residents? It is filled with lead; killing our children and the elderly who are most vulnerable. What is the EPA doing about this? Even the hospitals are forced to order distilled water for patients (in/out). I want expeditious answers.

Thank you,
Sheila

From: sheila.bw@hotmail.com
To: hillc@michigan.gov; seldenb@michigan.gov; smithl16@michigan.gov
Subject: FW: Ticket #23002-490657 Response Sent
Date: Thu, 7 May 2015 17:16:50 -0400

From: sheila.bw@hotmail.com
To: safewater_support@supportportal.com; bartholi@msu.edu; info@cityofflint.com; senator@stabenow.senate.gov; bennettc4@michigan.gov
Subject: RE: Ticket #23002-490657 Response Sent
Date: Thu, 7 May 2015 16:41:38 -0400
Hello,

It is unfortunate that you don't track local drinking water information. So in essence your tracking efforts are limited to the auspices of NRCS Water Division only for the conservation of farming and other natural (non-human) resources. What if, by chance, the local water source is not being accurate in their reporting of safe drinking water and source supply?

Thank you,
Sheila

http://mi.water.usgs.gov/pubs/MISC/RTSMI-0121/pdf/WTO222b.pdf

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From: safewater_support@supportportal.com
To: sheila.bw@hotmail.com
Date: Thu, 20 Feb 2014 08:25:04 -0500
Subject: Ticket #23002-490657 Response Sent
The Safe Drinking Water Hotline has responded to your question(s).
Hello,
Thank you for contacting the Safe Drinking Water Hotline. You had some concerns regarding your local water quality. Please review the information included below:
The Safe Drinking Water Hotline does not track local drinking water information. The best source of specific information about your drinking water is your water supplier. Water suppliers that serve the same people year-round are required to send their customers an annual water quality report called a Consumer Confidence Report (CCR). The CCR describes any contaminants that have been detected in your drinking water, how these detection levels compare to health-based national drinking water standards, and the source of your drinking water. To obtain a copy of your CCR, you may search online at http://cfpub.epa.gov/safewater/ccr/index.cfm.
If your water system's report is not online, you should contact your local water provider to obtain a copy of this report. To find the telephone number for your local water provider, please check your water utility bill, your local phone book, or search online at http://cfpub.epa.gov/safewater/ccr/index.cfm.
If your city has a population in excess of 100,000, they are obligated to publish the reports online. Many local governments have sites where reports can be posted, even if a system itself does not have a site. EPA will make links from its Web site (http://water.epa.gov/drink/index.cfm) to all the reports of which it is aware (Preparing Your Drinking Water Consumer Confidence Report: Revised Guidance for Community Water Suppliers), EPA816-R-05-002).
If your city has not made the 2012 report available, please contact your state water program. They are the regulatory and enforcement agency for all public water systems in your state. The state water program should help you find the data. You can find contact information to your state by following the link below:
http://water.epa.gov/drink/local/index.cfm.http://cfpub.epa.gov/safewater/ccr/index.cfm.
EPA's Safe Drinking Water Hotline answers questions about the regulations and programs developed in response to the Safe Drinking Water Act. The Safe Drinking Water Hotline provides information, including access to publications, on EPA's drinking water standards, source water protection, and underground injection wells. The Hotline also provides referrals to state public water supply supervision programs, state underground injection control programs, and state laboratory certification programs.
If you have additional questions, you may contact the Safe Drinking Water Hotline at the following number:
(800) 426-4791 -- Toll Free
For more information, please visit EPA's Office of Ground Water and Drinking Water Internet web site:
http://water.epa.gov/drink/index.cfm.
Thank you for your interest in safe drinking water.

Ticket Information:

Ticket #:	23002-490657
Date Created:	2/19/2014 02:18 PM EST
Subject:	Water Quality Assessment
Question:	I live in Flint Michigan. What I have learned is Michigan appears to have 2012 and 2014 reports but neither are being reported by EPA. On this side of reporting for this data, we have no information as to the status of the 2012 or 2014 data. There are automotive plants in my area and the water quality is suspected to be less than satisfactory for residents.

To update or check the status of this Ticket:
Go to http://safewater.supportportal.com/link/portal/23002/23015/Ticket/490657
Log in, and you will be automatically taken to the Ticket page.

From: Clampitt, Christopher (DEQ)
Sent: Tuesday, November 03, 2015 4:11 PM
To: Fish, Kim (DEQ)
Cc: Russell, Jon (DEQ);Fulcher, Jerry (DEQ);Kammer, Stephanie (DEQ);Prysby, Mike (DEQ);Doty, Susan (DEQ);Vanderlaan, Mary (DEQ)
Subject: FW: Meeting with GCDC-WWS on KWA issues
Attachments: Lapeer_fund_source.pdf; 2014-06-20 Genessee County Easement L-10392.pdf

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From: Olson, Jennifer (DNR)
Sent: Wednesday, August 20, 2014 9:56 PM
To: Clampitt, Christopher (DEQ) <CLAMPITTC@michigan.gov>; Vanderlaan, Mary (DEQ) <VANDERLAANM@michigan.gov>; Melanie Burdick - US EPA (burdick.melanie@epa.gov) <burdick.melanie@epa.gov>; James_Bettaso@fws.gov
Cc: Flegler, Earl (DNR) <FLEGLERE@michigan.gov>; Oakes, Julie (DNR) <OAKESJ@michigan.gov>; Hanaburgh, Christine (DNR) <HanaburghC@michigan.gov>
Subject: RE: Meeting with GCDC-WWS on KWA issues

Hi Chris-
Thanks for the heads up about this meeting concerning Norway Lake Road at Lapeer State Game Area. I'm assuming this is all related to the water pipeline project? If the Lapeer County Road Commission is requesting a wider roadway, Wildlife Division will need to know if they will be working outside of their existing right-of-way and/or if they require a permanent easement. The land along Norway Lake Road was purchased with Pittman-Robertson Funds and thus requires U.S. Fish & Wildlife Service approval by the Minnesota office for any permanent conveyance of rights in land. NEPA documentation is required.

I've attached the funding source map for Lapeer County for your information.

The Genesee County Drain Commission (GCDC) did receive approval and a permanent easement (350' long x 40' wide) for the pipeline crossing of the South Branch of the Flint River along Norway Lake Road (south side of the road). The easement is attached. That process took about 10 months. It would be best if we could avoid going through this process again. When we met with GCDC, all indications were they would be able to install the pipeline within the existing road ROW.

Please let me know if there are any questions.

Thank you,

Jennifer Olson
Land Matters Biologist – SE region
DNR Wildlife Division
Rose Lake Field Office
8562 East Stoll Road
East Lansing, MI 48823

Office: (517) 641-4903 ext. 266
Fax: (517) 641-6022

From: Clampitt, Christopher (DEQ)
Sent: Wednesday, August 20, 2014 3:13 PM
To: Vanderlaan, Mary (DEQ); Melanie Burdick - US EPA (burdick.melanie@epa.gov); James_Bettaso@fws.gov
Cc: Olson, Jennifer (DNR)
Subject: FW: Meeting with GCDC-WWS on KWA issues

FYI, I just spoke with Mr. Osborn. The impetus for the meeting, which is slated for tomorrow afternoon, is that the road through the Lapeer State Games Area is narrow (9-foot lanes) and the Lapeer County Road Commission (now) wants it widened to meet current standards (11-foot lanes plus shoulder). About 1,600 linear feet of roadway are under discussion.

If the entire expansion is into wetland, it would entail nearly ¾ of an acre of additional permanent wetland impact. However, any additional permanent wetland impact will require a new permit application. I will have more details after the meeting and will keep you in the loop. In the meantime, your thoughts are welcome.

Chris

Christopher Clampitt
DEQ-WRD
517-243-6956

From: Osborn, Larry [mailto:LOSBORN@WadeTrim.com]
Sent: Tuesday, August 19, 2014 4:09 PM
To: Ryan Doyle
Cc: Matt Raysin; Don Camp; Clampitt, Christopher (DEQ)
Subject: Meeting with GCDC-WWS on KWA issues

Ryan,

Matt Raysin has asked me to set up a meeting with you, GCDC-WWS and a representative from both Wade Trim and Rowe to discuss and hopefully resolve the final issues for the S.4005 and S.4006 Contracts. We are also attempting to include the MDEQ since some of the issues relate to wetlands included in the MDEQ Part 31/301/303 Permit the GCDC-WWS was issued. We would like to hold the meeting at the GCDC office, G-4610 Beecher Road, Flint, MI.

Would you please give me a few dates and times you are available so I can coordinate with the other attendees and we can lock into a date/time that is convenient for all. Thanks.

Look forward to hearing from you.

WADETRIM

Larry A. Osborn, PE, Professional Engineer
555 S. Saginaw Street, Suite 201, Flint, Michigan 48502
810.235.2555 direct | 810.516.6793 cell | 810.235.4975 fax

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FUND SOURCE AND DNR OWNERSHIP

LAPEER COUNTY

08E 09E 10E 11E 12E 13E

11N 10N 09N 08N 07N 06N 05N

LEGEND

Fund Codes

1	State Game Fund
1B	Recreation Bond Fund
2	State Game Fund
3	Michigan Land Trust Fund
3T	Michigan Natural Resources Trust Fund
3W	Federal ICETEA Grant
4	Game And Fish Fund
4A	Waterways Fund
4B	Recreation Bond Fund
4D	Dingell-Johnson Fund
5	State Game Fund
6	Special Legislation
6B	Recreation Bond Fund
6D	Purchase of Development Rights
6E	Land Exchange Facilitation Fund
6G	Environmental Protection Bond Fund
6H	Harbor Development Fund
6I	Environmental Settlements Funds
6S	Special Legislation Funding for Snowmobile Trail
7	Pittman-Robertson Fund
7B	Recreation Bond Fund/Pittman-Robertson
7C	Statewide Wetlands
7D	Wetland Mitigation
7T	Turkey License Fees
8	Gift
8A	Special Legislation
9	General Fund/Game & Fish Fund
LWCF3	Federal Land & Water Conservation Fund
SWP	Payment in-Lieu of Tax Payments
M	Multiple Funding Sources

DNR Ownership

- Surface
- Mineral and Surface
- Minerals
- Mixed Ownership
- Other Rights

Transportation

- Highway
- Paved
- Gravel
- Poor Dirt
- Railroads

Political

- County Line
- Townships
- Sections

Hydrology

- Drains or Intermittent Streams
- Lakes and Ponds

Utility Lines

- Pipeline
- Powerline

40.00 Acres of Surface Ownership
40.00 Acres of Mineral and Surface Ownership
40.00 Acres of Mineral Ownership

3 1.5 0 3 Miles

MAP INFORMATION

DNR Land Ownership and Fund Source information is derived weekly from the MDNR's Land Ownership Database. Parcel information is compiled to the quarter-quarter section level.

COMPLETENESS and QUALITY
In general, the data does not reflect platted parcels, Private Claims, and parcels within the City of Detroit and/or Saint Clair County Flats.

The amount of acreage owned within a quarter-quarter section is identified by acreage labels in the upper-right corner of each quarter-quarter section.

The quality and completeness of this data is unknown. It is suggested that this data be combined with a second source, such as plat maps, to further identify ownership.

The information displayed on this map is intended for general purposes only. Specific ownership or fund source should be verified by contacting the MDNR.

Michigan Department of Natural Resources
Forest Resources Division

Date: 06/10/2014

EASEMENT TO CONSTRUCT AND MAINTAIN
60 Inch I.D. Raw Water Transmission Line

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES

L-10392
LTA 20130227

FOR AND IN CONSIDERATION OF THREE THOUSAND SEVENTY FOUR and 00/100 DOLLARS ($3,074.00) in hand paid, the receipt of which is hereby acknowledged, the STATE OF MICHIGAN by the DEPARTMENT OF NATURAL RESOURCES, P.O. Box 30448, Lansing, Michigan 48909-7948, (hereinafter called the Grantor) acting under authority of its Director, and by virtue of the authority conferred by Act No. 451, P.A. 1994, does hereby Convey and Quit-Claim to Genesee County Drain Commission, whose post office address is G-4610 Beacher Road, Flint, Michigan 48532 (hereinafter called the Grantee) and to its successors and assigns the easement and right to place, construct, operate, repair and maintain one (1) sixty (60) inch inside diameter raw water transmission line within a 40-foot wide right of way as shown on and across lands described on the attached Exhibit A, pages 1 of 1 that are located within the following quarter quarter-Sections within the State of Michigan:

County	Township	Town/Range	Section	Quarter-Quarter	DNR Parcel ID
Genesee	Oregon	T08N-R09E	1	NE ¼ of the NE ¼	69131
Genesee	Oregon	T08N-R09E	1	NW ¼ of the NE ¼	69130

This easement is subject to the following conditions and requirements as well as conditions on attached EXHIBIT B, pages 1 - 2.

Notifications

(1) The Department's Representative for the purposes of this easement is the Lapeer State Game Area Wildlife Biologist, who, at the present time is:

Julie Oakes, Wildlife Biologist
14390 Fish Lake Road
Holly, MI 48442
(248) 328-8113 (voice)
OAKESJ@michigan.gov
or successors and assigns.

Grantee may contact the Department of Natural Resource's Lansing Headquarters Office for assistance in determining the name and contact information for current Department's Representative should the Grantee need assistance.

(2) For the terms of this easement, 'written notification' means the date and time upon which: (1) the Department's Representative provides confirmation that he/she has

received written correspondence; or, (2) a letter that was sent via Certified Mail thru the US Postal Service was signed for.

(3) Grantee agrees to maintain copies of all written notifications provided to the Grantor and approvals granted by the Grantor during the lifetime of this easement.

Construction and Maintenance

(4) This document does not authorize construction of additional facilities after a period of two (2) years, from the date of issuance of this easement. This time period may be extended in writing by the Department's Representative at their discretion if the request is received no less than 90 days prior to the end of the two (2) year window.

(5) Grantee, by the acceptance of this instrument, agrees to consult with and provide written notification to the Department's Representative no less than three (3) State business days prior to commencing non-emergency clearing, construction, development, maintenance or replacement activities under this easement.

(6) Any relocation of the facilities constructed under this easement will be made only upon written approval of the Department's Representative before such relocation takes place.

(7) Unless otherwise stated elsewhere in this document, Grantee may cut, trim, and remove all brush and trees within said easement area which threaten to interfere with or be hazardous to construction, operation, and maintenance.

(8) Underground facilities shall be buried to a minimum depth of 48 inches.

(9) Grantee shall be responsible for restoration of disturbances caused by the Grantee for the lifetime of the easement.

(10) This easement is granted contingent upon the Grantee receiving all necessary permits and approvals prior to starting construction. Grantee is responsible for obtaining all required state, local and federal permits and to follow the permit requirements as specified. Before any construction may proceed, Grantee is required to give notice to the public utilities under Act 53, P.A. 1974 (460.701 et seq. M.C.L.) as amended and to comply with all provisions of that Act as well as the Natural Resources and Environmental Protection Act, being Act 451, P.A. 1994 as amended. If this project crosses floodplains, wetlands, rivers, streams, or designated critical dunes, permits may be required under the land/water interface statutes. A copy of all required permits shall be provided to the Department's Representative upon request.

(11) All underground non-detectable facilities must be buried with detectable underground utility marking tape meeting the applicable industry and governmental standards.

L-10392
Pg. 3 of 9

(12) Following consultation with the Department's Representative, the Grantee shall block vehicular traffic to the easement area and place gates in the manner specified by the Department's Representative, so long as the Grantee's access to the easement area is not unreasonably blocked. Such barriers shall be installed and maintained by the Grantee for the duration of the easement. Ineffective barriers shall be promptly repaired by the Grantee.

The Department's Representative must be provided with a key for any gate placed under this condition and/or the Department's Representative may place a Department lock on the gate along with the Grantee's lock so that the gate may be opened via the opening of either lock. Gates must be kept locked at all times except for immediate access purposes or as otherwise specified by the Department's Representative.

(13) The Grantee shall place and maintain Caution, Closed, and/or Stop signs, near vehicular barrier locations. Sign placement shall be as determined by the Department's Representative.

(14) Grantee must preserve all established survey Corners on or adjacent to the proposed ROW. All Witness or Bearing Trees for such survey Corners must be plainly identified through use of green paint, and preserved from destruction during the construction of the easement. If a Witness or Corner needs to be removed during construction, the Corner shall be properly Witnessed and re-established as soon as construction is completed. If a Witness is removed during construction, a new Witness will be established as required by the Corner Recordation Act, 1970 P.A. 74, as amended. This information shall be recorded at the county courthouse within six (6) months of construction of the easement. In addition, two (2) copies of this same information must be provided to the Department's Representative within six (6) months of construction.

(15) Any clearing work done by the Grantee or their employees or agents outside the area authorized to be cleared without other proper written permission, shall be considered a trespass.

The Grantor may seek any legal remedy provided by statute and rules.

Emergencies and Spills

(16) Emergency work may be conducted without providing prior written notification to the Department's Representative. In such cases, the Grantee will provide written notification to the Department Representative within 24 hours of the work being performed or by 12 PM the next State business day, whichever is later.

(17) The Grantee may close forest roads and recreational trail crossings in emergency situations for up to 24 hours without approval of the Department's Representative.

Emergency closures of more than 24 hours require the written approval of the Department's Representative.

(18) The Grantee agrees to report to the Department's Representative any release of toxic or hazardous substance that results from an activity for which the Grantee is responsible, and to evaluate the nature and extent of the release. Grantee agrees to undertake appropriate measures consistent with NREPA Act 451, Part 201 to abate the release and promptly develop and implement a work plan approved by the Department's Representative to address the release.

(19) In addition to reporting to the Department's Representative all spills resulting from an activity for which the Grantee is responsible, the Grantee shall also keep a written log of all spills resulting from an activity for which Grantee is responsible and all situations the Grantee investigates for spills, even if it is determined that no spill has occurred.

Timber, Trees, Shrubs, and other Vegetation

(20) This easement does not provide for the removal or pruning of trees including 'hazard trees' outside the easement area. Such pruning requires the written approval of the Department's Representative.

(21) Merchantable timber cut under the terms of this easement are the property of the Grantee and may be removed from the easement area. If cut merchantable timber is to remain within the easement area for more than 7 days, it shall be piled or decked at a location agreed to by the Department's Representative. Merchantable timber that is cut and not removed within 60 days shall, at the option of the Department's Representative, become the property of the Grantor. Grantee, shall make a concerted attempt to salvage and utilize the timber removed from the easement area.

(22) Except for emergency situations or unless otherwise approved in writing by the Department's Representative, the clearing, cutting or pruning of oak trees is not permitted from April 15 to July 15. This is necessary to reduce the spread of oak wilt.

(23) Grantee agrees that no herbicides on the land herein described shall be used without first securing written permission from the Department's Representative.

(24) It is understood that all slash and forest growth cut resulting from operations under this easement shall be handled in accordance with the provisions of Part 519, Act 451, P.A. 1994 as amended, and the rules and regulations pertaining thereto.

(25) Vegetation restoration of the cleared ROW must be completed by the Grantee in accordance to the specifications found in the attached Exhibit B and/or to the reasonable written specification(s) of the Department's Representative.

Invasive Species

(26) Invasive species are managed under Michigan's Natural Resources and Environmental Protection Act (NREPA) 451 of 1994, Section 324.41301. Under Act 451, Michigan regulates the possession or introduction of prohibited and restricted invasive species. Information on Michigan's invasive species can be found at www.michigan.gov/invasivespecies. It is the Grantee's responsibility to monitor changes to the list of prohibited and restricted invasive species.

The soils brought in to the easement area must be weed free, and all equipment is to arrive clean to each work site (free of mud, debris, weeds, any vegetative material). This will help minimize the risk of spreading invasive species between sites.

Forest Roads and Recreational Trails

(27) The Grantee shall ensure that the Grantor's or its assign's use of existing forest roads and recreational trails crossing or adjacent to the ROW will not be altered or adversely affected by this easement. This shall include, but not be limited to, use by heavy equipment for the harvesting and transportation of timber products. These roads and trails shall remain open and useable both during and after construction/installation, and during any ROW maintenance or abandonment activity unless written authorization is provided by the Department's Representative.

(28) Forest roads and recreational trails used by the Grantee or its assigns under the terms of this easement, shall be left in as good or better condition as they were before their use.

(29) The Grantor retains its right to develop and use the easement area in a manner that is consistent with its mission as outlined in Part 5, Section 503 of Act 451 of 1994 as amended, and are not inconsistent or interfere with the purpose or use of this easement. This includes the right to develop, use and maintain new forest roads and new recreational trails which may be adjacent to, include and/or cross the ROW.

Best Management Practices

(30) Best Management Practices (BMP) must be adhered to. It is recommended that the Grantee reference the then current revision of the "Sustainable Soil and Water Quality Practices on Forest Land" manual. This manual was produced by the Michigan DNR and DEQ and has been assigned a publication number of IC4011.

(31) All vehicle traffic shall be confined to existing access roads, and within the surveyed boundary of the easement area.

(32) Part 365, Endangered Species Protection, Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.36501 to 324.36507 (Part 365), states that "a person shall not take, possess, transport, ...fish, plants, and wildlife" that are "indigenous to the state and determined to be endangered or threatened." Part 365 defines "take" of fish and animals as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect or attempt to engage in any such conduct" and for plants as

"to collect, pick, cut, dig up, or destroy in any manner." Part 365 reflects the desire of the people of Michigan to protect the rare natural resources of the State. Accordingly, the Grantor is required to take those steps necessary to protect, conserve, and restore species listed as threatened and endangered. The Department of Natural Resource's Wildlife Division has discretion to permit take in some circumstances, but must do so in a way that minimizes adverse impacts and considers all reasonable alternatives.

If State threatened or endangered species occur on or near this easement and may be impacted by the Grantee's activities then any activities that could result in "take" must be avoided until issues associated with the presence of endangered and threatened species are resolved. Prior to any site disturbance, the Grantee will need to obtain an approved endangered and threatened species permit from the Department of Natural Resources, Wildlife Division.

The U.S. Fish and Wildlife Service (Service) has the responsibility and authority over species listed under the Federal Endangered Species Act of 1973. Therefore, if there is potential for federally listed species to be impacted by the Grantee then they must contact the Michigan office of the Service for further guidance.

(33) Extreme care must be taken by the Grantee during and after construction, or maintenance, or upon abandonment activity to prevent any soil erosion. Any soil erosion occurrence that occurs as a result of the Grantee's use of this easement must be corrected immediately by the Grantee.

(34) The Grantee shall dispose of all excavated materials not used as backfill as a part of the construction process outside of the easement area according to all applicable laws. Disposal of excavated materials within the easement area shall only occur with the Department's Representative consent and in a manner and location approved by the Department's Representative..

(35) The location of known or prehistoric sites, buildings, objects, and properties related to American history, architecture, archaeology, and culture may be protected by State and/or Federal law. The Grantor may unilaterally modify the easement conditions to protect an area, site, building, antiquity, artifact or similar object which is or may be entitled to protection under State or Federal law. The Grantee must report promptly any suspected discovery of same to the Department's Representative.

The Department's Representative may suspend Grantee's activities within or near locations containing such areas, sites, buildings, antiquities, artifacts, and objects pending further investigation and determination. Wheeled or tracked equipment shall not be operated within such locations except on approved roads or specified new routes.

Assignment

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Pg. 7 of 9

(38) The Grantee shall not assign this easement or any portion thereof to any entity other than the owner of said land or an affiliate or subsidiary of Grantee, without first securing the written approval of the Department of Natural Resources for the State of Michigan.

General

(39) Grantee accepts this easement subject to all prior and valid easements, permits, leases and other rights existing or pending at the time of the issuance of this easement, which may have been granted on said land.

(40) Grantee agrees to take all reasonable precautions to prevent and suppress forest fires and shall cause no unnecessary damage to natural tree growth or to any plantation, and shall pay all damages other than ordinary to State-owned property arising out of its negligent acts or failure to act.

(41) Grantee shall obtain required permits before intentionally burning any refuse or intentionally starting any fires.

(42) Unless resulting from the sole negligence of the Grantor, the Grantee hereby releases, waives, discharges and covenants not to sue the State of Michigan, its departments, officers, employees and agents, from any and all liability to Grantee, its officers, employees and agents, for all losses, injury, death or damage, and any claims or demands thereto, on account of injury to person or property, or resulting in death of Grantee, its officers, employees or agents, in reference to the activities authorized by this easement.

(43) Grantee hereby covenants and agrees to indemnify and save harmless the State of Michigan, its departments, officers, employees and agents, from any and all claims and demands, for all loss, injury, death or damage, that any person or entity may have or make, in any manner, arising out of any occurrence related to (1) issuance of this easement; (2) the activities authorized by this easement; and (3) the use or occupancy of the premises which are the subject of this easement by the Grantee, its employees, contractors, or its authorized representatives.

(44) The Grantee agrees to pay to the Grantor for damages to State-owned property or public trust resources arising out of its operations.

(45) It is expressly understood and agreed that nothing in this easement shall be construed as a statement, representation or finding by the Grantor relating to any risks that may be posed to the environment by activities conducted by the Grantee or that the right-of-way conveyed by this easement is fit for any particular use or purpose.

Termination and Abandonment

(46) It is expressly understood and agreed that every enumerated condition set forth in this easement is a material condition and that if the Grantee breaches any material

condition the Grantor, at its sole discretion, may seek any remedy provided by statute or under the common law, including, but not limited to, revocation of this easement.

(47) This easement shall continue in full force and effect for as long a time as the easement is properly used for its intended purpose. The right to use this easement for the intended purpose shall terminate upon the easement not being used for its intended purpose for two (2) years unless the Grantee has received written notification from the Department's Representative extending the two year period. Grantee agrees to notify the Department's Representative in writing within thirty (30) days of the easement not being used for the intended purpose; non-notification does not toll the two (2) year clock.

(48) If the Grantee loses its right to use this easement, unless otherwise agreed to between Grantor and Grantee, the Grantee agrees to remove its property and to restore the premises within one (1) year of the lose in accordance with a written, site specific, abandonment plan that will be prepared by the Department's Representative and provided to the Grantee. All rights and obligations under this easement shall terminate upon the Department Representative's providing written confirmation to the Grantee that the requirements of the abandonment plan, if one exists, have been completed to their satisfaction.

This instrument shall be binding upon and inure to the benefit of the parties, hereto, their heirs, representatives, successors and assigns.

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Page 9 of 9

IN WITNESS WHEREOF, the Department of Natural Resources by authority of its Director has caused this instrument to be executed for the State of Michigan by its Real Estate Services Manager, this 20th day of June, 2014.

DEPARTMENT OF NATURAL RESOURCES
FOR THE STATE OF MICHIGAN

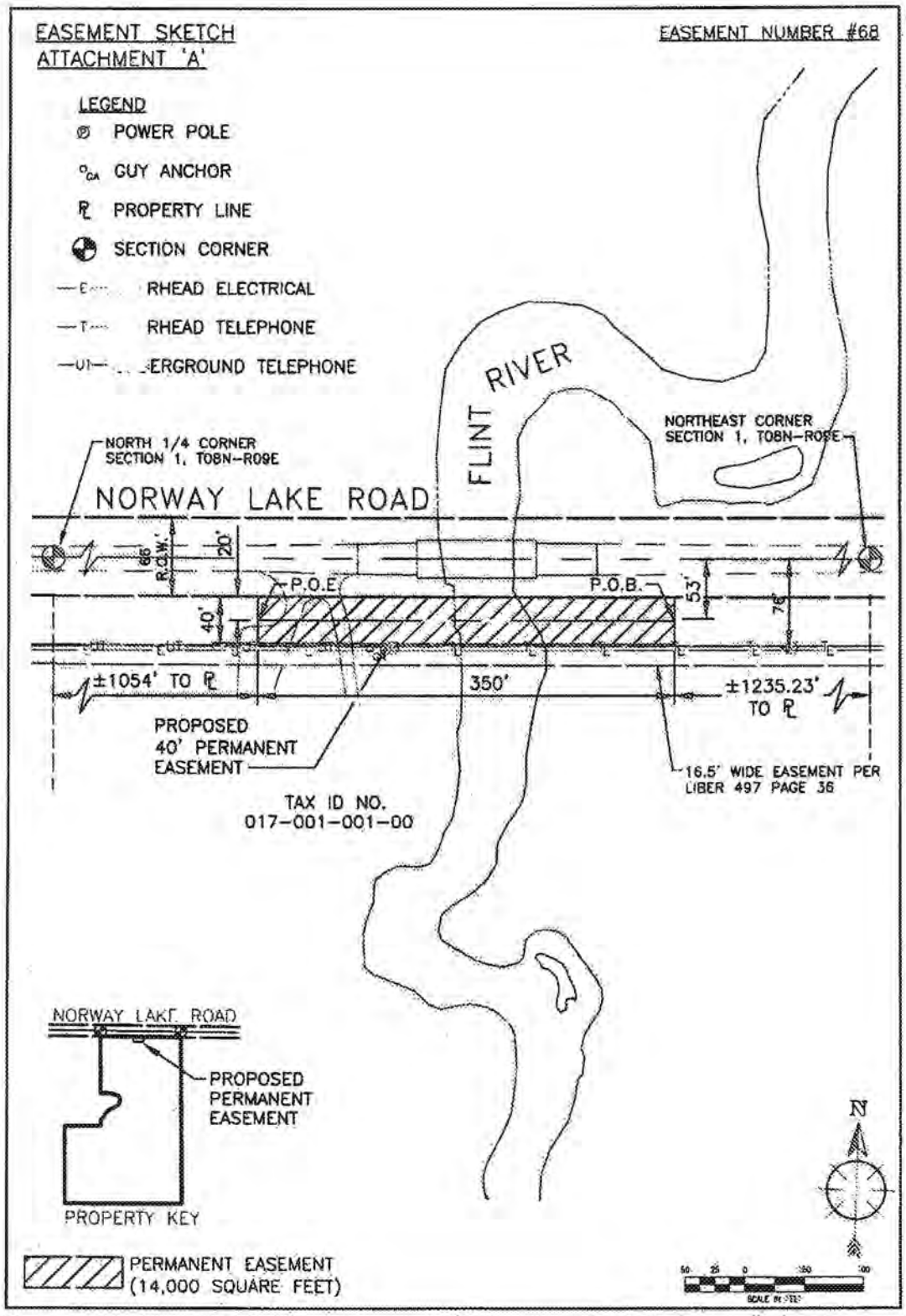
Steven L. Sutton, Real Estate Services Manager

STATE OF MICHIGAN }
§
COUNTY OF INGHAM }

On this 20th day of June, 2014, before me a Notary Public in and for said County personally appeared Steven L. Sutton, Real Estate Services Manager, of the Department of Natural Resources for the State of Michigan, to me known to be the same person who executed the within instrument, and who acknowledged the same to be his free act and deed and the free act and deed of the Department of Natural Resources for the State of Michigan in whose behalf he acts.

Walter Linn, Notary Public
State of Michigan, County of Ingham
My Commission Expires: October 10, 2019
Acting in the County of Ingham

PREPARED BY: Paul Johnson
DNR Real Estate Services
P.O. Box 30448
Lansing, Michigan 48909-7948



EASEMENT FOR UTILITIES

017-001-001-00
MI DEPARTMENT OF NATURAL RESOURCES
FLINT RIVER RD
COLUMBIAVILLE, MI

WADETRIM
555 South Saginaw Street, Suite 201
Flint, MI 48502
810.235.2555/800.841.0342
FAX: 810.239.4975
www.wadetrim.com Building relationships on a foundation of excellence

LAKE HURON WATER INITIATIVE

SEC.	1	T08N	R09E
DR BY:	EJD	CK BY:	NLG
JOB #:	GDC2045.01F.A01		
SHEET:	2 OF 2		

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EXHIBIT B

Special Right-Of-Way Construction, Restoration and Maintenance Conditions:

1. **INSTALLATION METHOD:** The installation method for the pipeline shall be by jack and bore.

2. **PIPELINE MATERIAL REQUIREMENT AND PRE-START-UP INSPECTION:** All pipe and connections shall be of non-corrodible or corrosion-protected materials. After installation and prior to start-up, all pipelines shall be pressure-tested and be certified as capable of holding anticipated maximum working pressures. All pipelines must be able to be located using tracing tape or a similar mechanism.

3. **PIPELINE POST-START-UP INSPECTION:** The pipeline easement right-of-way (ROW) shall be visually inspected on a regular schedule. Upon start-up of the pipeline, Grantee shall visually inspect the land surface of the easement ROW daily for its first week of operation; weekly for its first month of operation; and biannually thereafter. Such inspections shall be documented in the Grantee's field personnel's daily record sheet which shall be signed and maintained for future reference.

4. **VEGETATION RESTORATION:** Vegetation restoration of the cleared pipeline easement area must be completed by the Grantee, its successors, or assigns, to the specifications provided here. Seed mixes on wildlife lands (e.g. Lapeer State Game Area) shall be a mixture of grass and legumes. A minimum of two-thirds of the seed mix shall be grasses including Orchardgrass *(Dactylis glomerata)* and Timothy *(Phleum pretense)*. Ryegrass and annual grasses (spring oats) are also acceptable. A minimum of one-third of the seed mix shall be legumes including a mixture of ladino clover (*Trifolium repens* varieties), medium red clover *(Trifolium pretense)* and alfalfa *(Medicago sativa)*. Upon abandonment, vegetation restoration shall be completed to the same specifications.

   Fescue species (*Festuca* sp.) have no wildlife value and are <u>not</u> allowed in seed mixes on wildlife lands.

5. **RECREATIONAL USE:** The South Branch of the Flint River at Norway Lake Road is a heavily used canoe launch and canoe exit site. The stream bank shall be stabilized and revegetated as described above. Access to the parking lot on the west side of the South Branch of the Flint River should remain open as long as possible and close for as short of duration as possible.

6. **KIOSK SIGN:** The Norway Landing kiosk sign in the parking lot immediately west of the South Branch of the Flint River should be preserved or replaced if removed. The Flint River Watershed Coalition constructed this sign.

7. **OAK TREE:** The large oak tree in the parking lot on the west side of the South Branch of the Flint River on Norway Lake Road should be preserved.

8. **PARKING LOT RESTORATION:** Any parking lots within the Lapeer State Game Area that are utilized during easement construction, installation and/or maintenance must be restored with 23A road gravel to as good as or better condition than before construction, installation and/or maintenance activity commenced. There is a large oak tree in the parking lot immediately west of the South Branch of the Flint River on Norway Lake Road. It should be preserved if possible.

9. **NEW ACCESS POINTS**: Any new access points created at Lapeer State Game Area during construction, installation and/or maintenance should be blocked, bermed or barricaded with boulders or other large material as defined by the Grantor's field representative.

10. **AS-BUILT SURVEY:** An as-built survey will be provided to the DNR representative. Send a PDF document and GIS shapefile (including coordinate system used) or CAD file (like a *.dxf file). For technical questions, please work with Marshall Strong, DNR Wildlife Division Mapping and Geotechnology Program Specialist, strongm@michigan.gov or 517-241-3102.

From: Clampitt, Christopher (DEQ)
Sent: Monday, November 30, 2015 11:48 AM
To: warrenm@spicergroup.com
Cc: jkenyon@wadetrim.com;losborn@wadetrim.com;Hansen, Ron B.;Okeefe, Colleen (DEQ);burdick.melanie@epa.gov;Cervelli, Donna (DEQ);Fish, Kim (DEQ);Russell, Jon (DEQ);Vanderlaan, Mary (DEQ);Prysby, Mike (DEQ);Barbara Hosler;'Matt Raysin'
Subject: FW: Proposed Water Line Relocation (Genesee Co. Drain Commissioner/Karegnondi Water Authority)
Attachments: Location Map.pdf; 20151125-S.5004_Plan and Profiles.pdf; Delineation Report.pdf; WT_Standard Details.pdf; 20151124_S5004 Restoration Table.pdf; Wetland Disturbance Comparison.pdf

Warren,

As I previously advised Ron Hansen, re-routing a permitted pipeline so that it crosses streams, lakes, or wetlands at new or expanded locations requires a new permit from our office. Based on the materials that you provided (attached), I anticipate that the US EPA (and the US Fish and Wildlife Service) will review the application; they have 90 days to complete their review once they receive the complete application (typically when they receive our Public Notice). Depending on the nature and quality of the affected resources and the extent and nature of the impacts (temporary and permanent), compensatory mitigation may be required. Obviously, the sooner we receive an application, the sooner the various agencies can complete their reviews.

We encourage you to submit a permit application, including materials that you provided last week, as soon as you can so that we can complete our review to meet your deadlines. Please make sure that the application package is complete and thorough. It should include the completed application form, location map(s), and detailed drawings showing the wetland/stream crossings. Wetland delineation forms, photographs, culvert dimensions and calculations, conceptual mitigation plans, and other information should be included as needed.

Feel free to contact me if you have further questions regarding this matter.

Thank you.

Chris

Christopher Clampitt
Lansing District
Water Resources Division
Michigan Department of Environmental Quality
525 W. Allegan Street
P.O. Box 30242
Lansing, MI 48909
Phone: 517-243-6956; FAX: 517-241-3571

From: Miller, Warren T. [mailto:warrenm@spicergroup.com]
Sent: Wednesday, November 25, 2015 2:57 PM
To: Clampitt, Christopher (DEQ) <CLAMPITTC@michigan.gov>
Cc: Jason Kenyon (jkenyon@wadetrim.com) <jkenyon@wadetrim.com>; PE Larry A. Osborn (losborn@wadetrim.com)

<losborn@wadetrim.com>; Hansen, Ron B. <ronh@spicergroup.com>
Subject: Proposed Water Line Relocation

Chris,

The GCDC-WWS is planning to realign the portion of the 36-inch City of Flint raw water line and 48-inch GCDC treated water line that were originally permitted for wetland and stream impacts along Stanley Road between Marathon Road and German Road in Oregon Township, Lapeer County. The previously permitted impacts for this section of water line include wetland Impacts 59 and 60 as included in MDEQ Permit No. 13-25-0060-P and stream Impact 58 as included in MDEQ Permit No 15-44-0016-P. The previous permit allowed for temporary wetland impacts and replacement of the Stanley Road crossing over the Henry Drain including cofferdams, rip rap and SESC BMP's.

At this point, GCDC-WWS is planning to change the alignment for this reach of pipe as show by the red line on the attached location map, and as shown in more detail on the attached construction drawing. The need for GCDC-WWS to revise the alignment is due to (1) poor soils conditions found along the originally proposed route within the Stanley Road right-of-way, (2) the costs associated with providing piles and saddles to support the water main through the areas of poor soils and (3) to reduce the potential of unexpected impacts associated with working in poor soils. Somat Engineering, the geotechnical consulting firm hired by GCDC-WWS, performed a number of soil borings along the originally proposed route and found that poor soils, including but not limited to loose silty sand, fibrous peat, and organic clay, were encountered on both sides of the road and extended about 19 to 29 feet below the proposed pipe invert elevations. Based on these findings, the water line was originally designed to be supported on an extensive and deep foundation system. However, when GCDC-WWS received several bids from Contractor's to perform the work, the costs were found to be approximately 3 times higher than in other areas of the project.

As a result, the GCDC-WWS developed this alternative to move the water lines away from the area of poor soils and eliminate the need for a considerable support system. The GCDC-WWS has obtained easements for this proposed realignment. The proposed realignment would now extend from the intersection of Marathon and Stanley Roads west approximately 1300 feet, where it would then turn south in a private easement and extend approximately 1400 feet, before turning west, again in private easements, and extending approximately 3250 feet. The 36" water main would then turn north and proceed another 1250 feet to the right-of-way at Stanley Road, where it will then turn west and extend another 200 feet where it will then be connected to the existing 36" water main that was installed as part of the S-4007 project that was previously constructed by the Karegnondi Water Authority. The 48" water main would continue west, approximately 3250 feet, where it would connect to the S-5005 project to be constructed by the GCDC-WWS.

The route of the proposed realignment was reviewed by Mike Nurse of Streamside Ecological Services for regulated streams and wetlands. It was identified that additional wetland complexes or streams significantly beyond those addressed in prior permit application will be not impacted with the proposed realignment.

The re-alignment will result in significantly less wetland impact overall.

The originally permitted route along Stanley Road crossed through Wetland Impacts 59 and 60, which were classified as emergent/ scrub shrub wetlands. The total temporary wetland disturbance associated with these wetland Impacts was 0.45 Acres. With the proposed realignment, the GCDC is requesting temporary impacts of 0.15 acres for the renamed Impact 59-REV1 and Impact 59-REV2. Attached is a comparison table that illustrates the proposed realignment that reduces the amount of disturbed wetland area by 0.30 Acres.

Wetlands Impacts 59-REV1 and 59-REV2, as shown on the attached plan and profile sheets, are classified as emergent/forested (EM/FO) wetlands. Areas of forested wetlands are located within County Drain right-of-way. The GCDC is proposing wetland plantings as shown on the attached wetland restoration table, which outlines the type and quantity of trees/shrubs that are specified for restoration.

The water lines also crossed the Henry Drain at a location approximately 1500 feet upstream of the location previously permitted. The water lines are proposed to be installed across the Henry Drain using open cut methods, including installation of a temporary cofferdam for water control. The stream will be stabilized in accordance with the stream utility crossing detail (attached). The overall footprint of the stream crossing will be reduced from what was prior permitted and the time frame for installation will be less, since this realignment does not require a culvert replacement, thus significantly reducing construction time.

The construction schedule for the proposed realignment in proximity to the regulated stream and wetlands is March and April of next spring. This is also an optimal time for minimizing impact to fish and wildlife. It is also critical as this is the last section of water line to be installed to get a high quality raw water supply to the City of Flint.

When we last spoke about this, you indicated that a permit application for a new individual permit would be required. The GCDC is asking that you complete an initial review of the proposed realignment and discuss with the GCDC-WWS permitting avenues to meet the proposed construction timeline of March and April of next year. It has been our experience that permit revisions are common, providing impacts are the same or reduced. The GCDC is of the opinion that the overall impacts to streams and wetlands has been reduced with this realignment plan, the construction schedule is optimal, the realignment reduces the risks of unknown impacts that may arise from construction in poor soils, it is a cost effective approach and it is critical to complete this line to deliver raw water to the City of Flint.

Should you have any questions please feel free to contact Ron or me.

Thank you,

Warren T. Miller, E.I.T

Design Engineer
Spicer Group
Phone: (989)-754-4717 ext. 5572
Cell: (906)-281-0771
www.spicergroup.com

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PFOIC

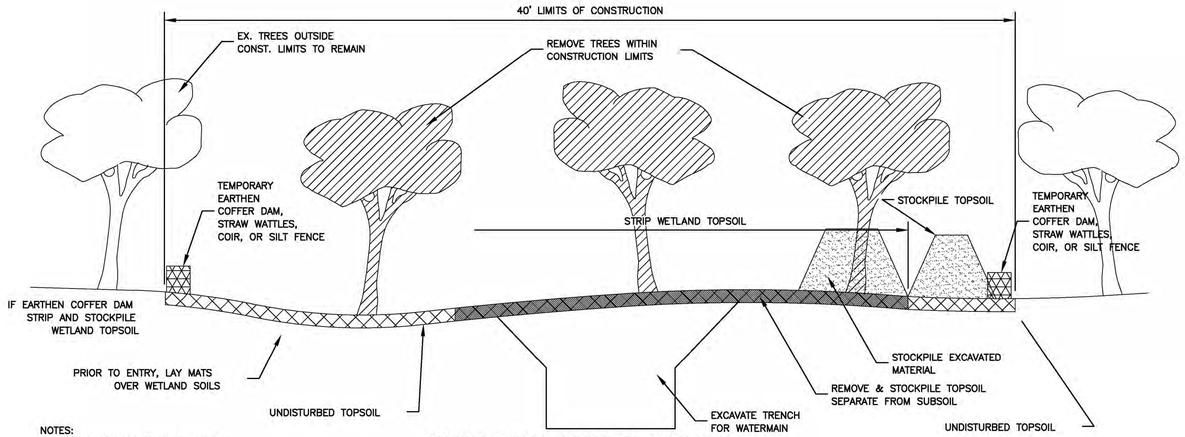
Stanley Rd

Wetland Types

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland

W Lake Rd

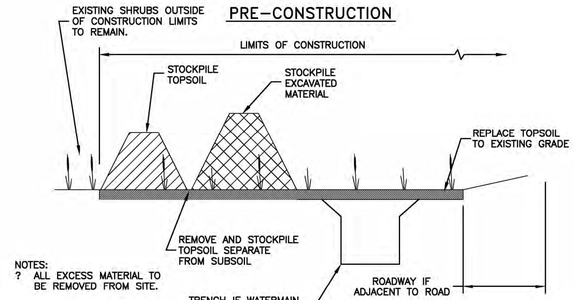
Status Map



NOTES:
? ALL EXCAVATED MATERIAL TO BE REMOVED FROM SITE.
? SEED AND PLANT FORESTED WETLANDS IN ACCORDANCE WITH WETLAND RESTORATION TABLE.
? IN AREAS WHERE SLOPE EXCEEDS 1%, INSTALL TEMPORARY OAT AND RYE SEED MIX. IF SLOPE EXCEEDS 5%, APPLY STRAW MULCH OR MULCH BLANKET TO STABILIZE THE SLOPE.
? DO NOT GRUB TREE ROOTS UNLESS IN DIRECT LINE OF TRENCH.

TYPICAL DETAIL FORESTED WETLAND CROSS-COUNTRY TYPE I IMPACTS PRE-CONSTRUCTION CONDITION

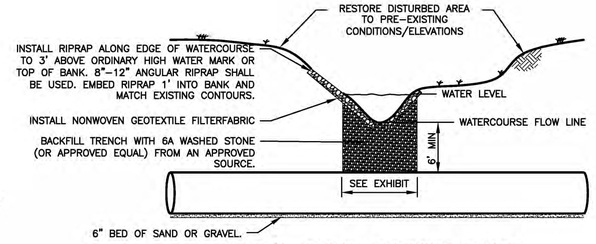
NOT TO SCALE



NOTES:
? ALL EXCESS MATERIAL TO BE REMOVED FROM SITE.

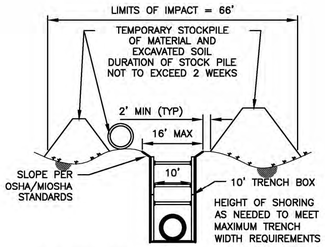
TYPICAL DETAIL EMERGENT/WET MEADOW WETLAND ALL IMPACT LOCATIONS - TYPE I

NOT TO SCALE



TYPICAL STREAM CROSSING PROFILE

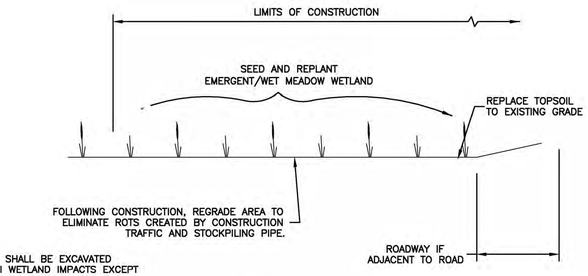
NOT TO SCALE



TYPICAL TRENCH CROSS SECTION

NOT TO SCALE

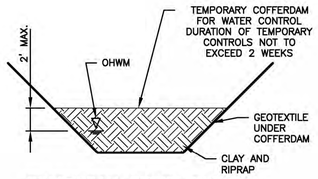
RESTORED CONDITIONS



NOTES:
? NO MATERIAL SHALL BE EXCAVATED FROM TYPE II WETLAND IMPACTS EXCEPT AS NEEDED FOR CROSS-CULVERT REPLACEMENT.
? STOCKPILING DONE IN TYPE II WETLANDS WILL BE DONE AT INCIDENTAL COST OF CONTRACTOR.

TYPICAL DETAIL EMERGENT/WET MEADOW WETLAND ALL IMPACT LOCATIONS - TYPE II

NOT TO SCALE



COFFERDAM CROSS SECTION

NOT TO SCALE

TYPICAL WATER MAIN CROSSING OPEN CUT WATERCOURSE

TYPICAL DETAIL FORESTED WETLAND CROSS-COUNTRY TYPE I IMPACTS RESOTRED CONSTRUCTION CONDITION

NOT TO SCALE

Type I Wetland Restoration Table Contract No. S.5004 (Revised 11/24/15)

								Tree Species				Scrub Shrub Species				Seeding		
Contract	Impact Number	Name	Preliminary Temporary Area (Ac)	Preliminary Wetland Type	Delineated Wetland Type	Type I Preliminary Wetland Grade Restoration (Ac)	Type I Delineated Wetland Grade Restoration (Ac)	Common Name	Spacing	Preliminary Number of Trees	Number of Trees	Common Name	Spacing	Preliminary Number of Scrub Shrubs	Revised Number of Scrub Shrubs	Live Seed (PLS) Mix	Preliminary Ounces of Live Seed Mix	Ounces of Live Seed Mix
												Silky dogwood	6' on center	0	3			
												Sandbar Willow	6' on center	0	3			
S5004	59-REV1	Wetland	0.36	N/A	WM/FO	N/A	0.14			0	0	Grey Dogwood	6' on center	0	3		0	6
S5004	59-REV2	Wetland	0.03	N/A	WM	N/A	0.005	Red Maple	10' on Center	0	4							0
	TOTAL					N/A	**0.14**				**4**			0	**9**			**6**

Seed Mix Forested and SS Wetland			
Scientific Name	Common Name	Seed Mix Ounces/Acre	Seed Mix Ounces/Linear Foot
Calamagrostis canadensis	Bluejoint Grass	1	0.0009
Carex crinita	Fringed Sedge	2	0.0018
Carex lupulina	Common Hop Sedge	4	0.0037
Carex lurida	Bottlebrush Sedge	1.5	0.0014
Carex frankii	Bristly Cattail Sedge	3	0.0028
Carex squarosa	Narrow-Leaved Cattail Sedge	1	0.0009
Carex typhinia	Common Cattail Sedge	1	0.0009
Carex vulpinoidea	Brown Fox Sedge	4	0.0037
Elymus virginicus	Virginia Wild Rye	20	0.0184
Glyceria striata	Fowl Manna Grass	2	0.0018
Leersia oryzoides	Rice Cut Grass	2	0.0018
Scirpus atrovirens	Dark Green Rush	2	0.0018
Spartina pectinata	Prairie Cord Grass	1	0.0009
	TOTAL	44.5	0.0409

*Ounce per linear foot based on 40 foot width.

PROJECT MANAGER:Christopher J. Bassard
C:\PW_WORK2\d0823463\d01-PLTS-NEW-DETAILS.DWG - 16.1 - PLOTTED 11/25/2015 10:10 AM BY RUGGLES, TIMOTHY
FIELD BOOK INFORMATION:

REV#	DATE	DESCRIPTION	BY

DESIGNED CJB
DRAWN TWR
CHECKED TAB
DATE

KAREGNONDI WATER AUTHORITY
G-4610 BEECHER RD
FLINT, MI 48532
(810) 732-7870

GENESEE COUNTY DRAIN COMMISSIONER
DIVISION OF WATER AND WASTE SERVICES
G-4610 BEECHER RD
FLINT, MI 48532
(810) 732-7870

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555 South Saginaw Street, Suite 201
Flint, MI 48502
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FAX: 810.235.4975
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ISSUED FOR PERMITS
11/25/2015
NOT FOR CONSTRUCTION

KWA WATER SUPPLY SYSTEM
CONTRACT S-5004
STANDARD DETAILS

SHEET NUMBER
16.1

DP PROJECT NO.
GDC2047.02F

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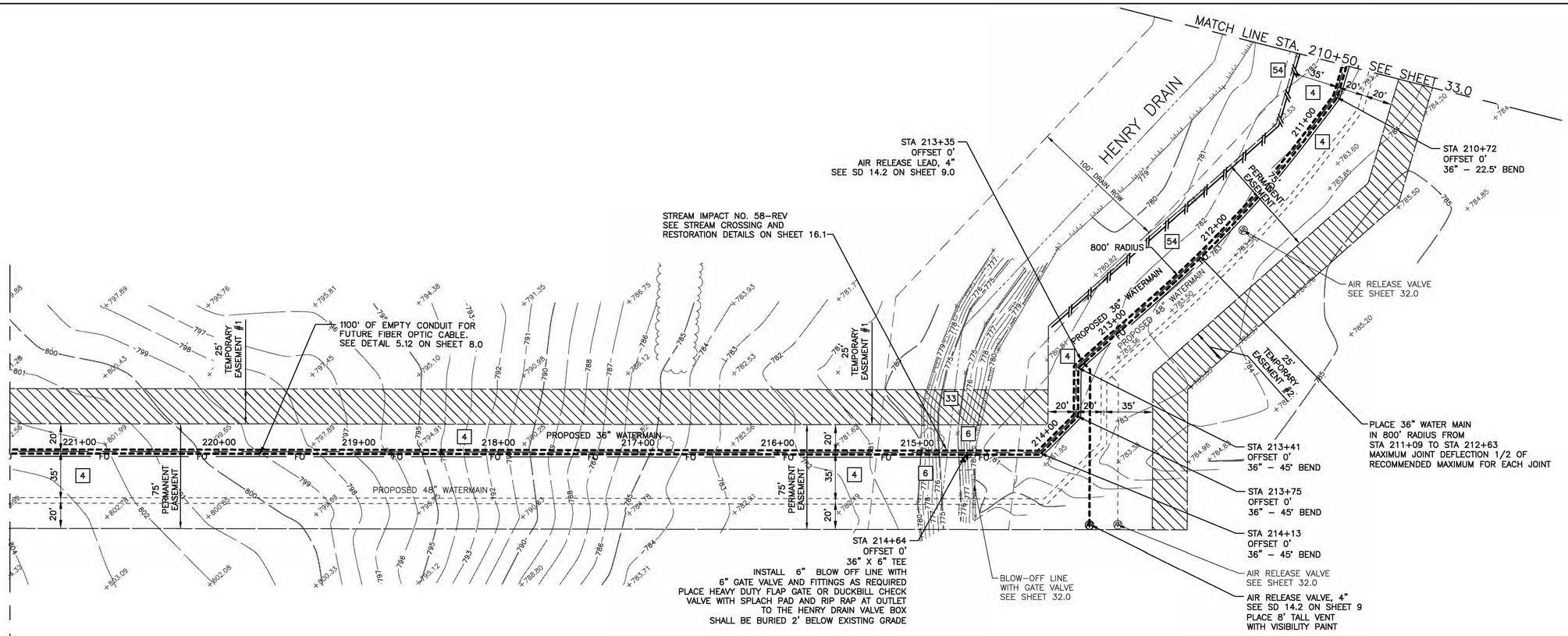
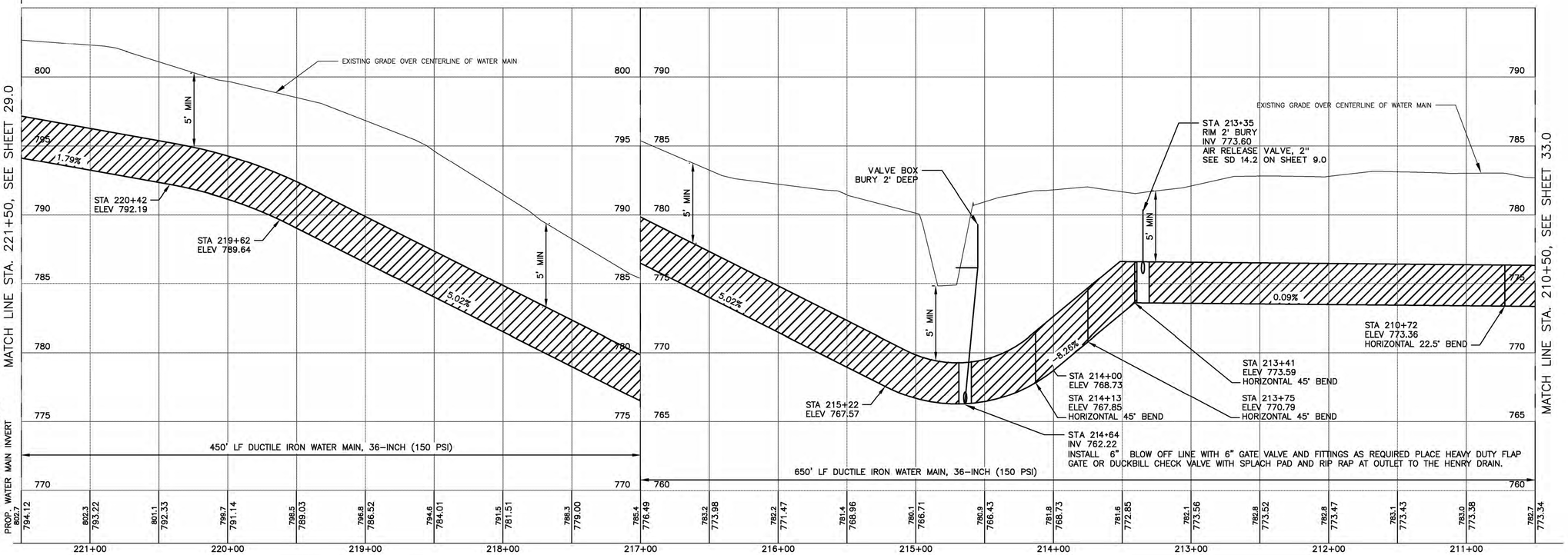
CONTRACT S-5004

000936





HORIZONTAL
40 20 0 40 80
4 2 0 4 8
VERTICAL
SCALE IN FEET

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FLINT, MI 48532
(810) 732-7870

GENESEE COUNTY DRAIN COMMISSIONER
DIVISION OF WATER AND WASTE SERVICES
G-4610 BEECHER RD
FLINT, MI 48532
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KWA WATER SUPPLY SYSTEM
CONTRACT S-5004
36" WATERMAIN PLAN AND PROFILE
STA. 210+50 TO 221+50

SHEET NUMBER
31.0
DP PROJECT NO.
GDC2047.02F

CONTRACT S-5004

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PROJECT MANAGER:Christopher J. Boserd
C:\PW_WORK\cboserd\d0623453\C-BASE-CHMP-PROPOSED 36 WM-PLNPRO21-28-S.5004.DWG - 31.0 - PLOTTED 11/25/2015 10:30 AM BY RUGGLES, TIMOTHY
FIELD BOOK INFORMATION:

000937

PLAN NOTES

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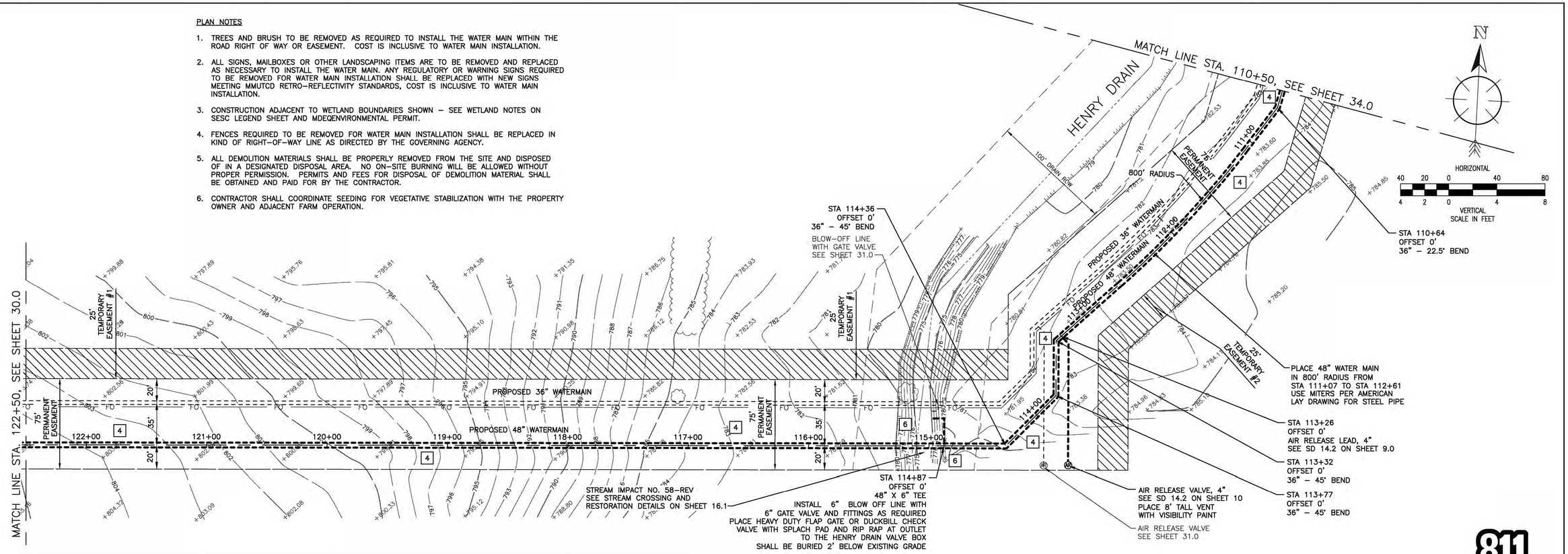

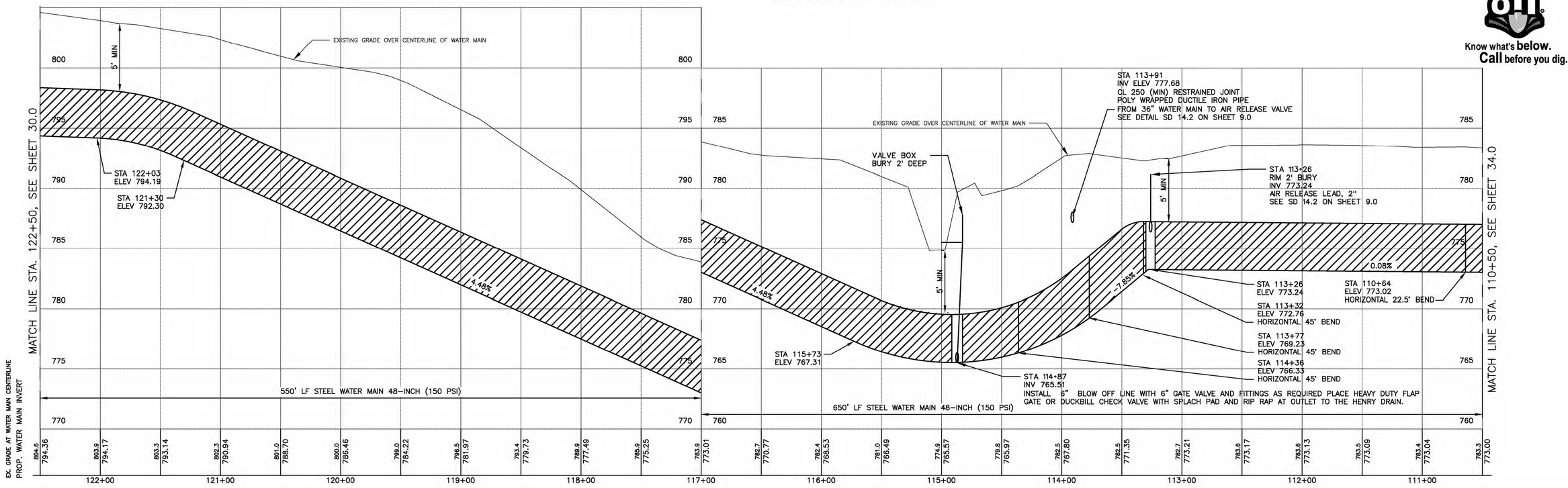

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(810) 732-7870

GENESEE COUNTY DRAIN COMMISSIONER
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KWA WATER SUPPLY SYSTEM
CONTRACT S-5004
48" WATERMAIN PLAN AND PROFILE
STA. 110+50 TO 122+50

SHEET NUMBER
32.0

DP PROJECT NO.
GDC2047.02F

CONTRACT S-5004

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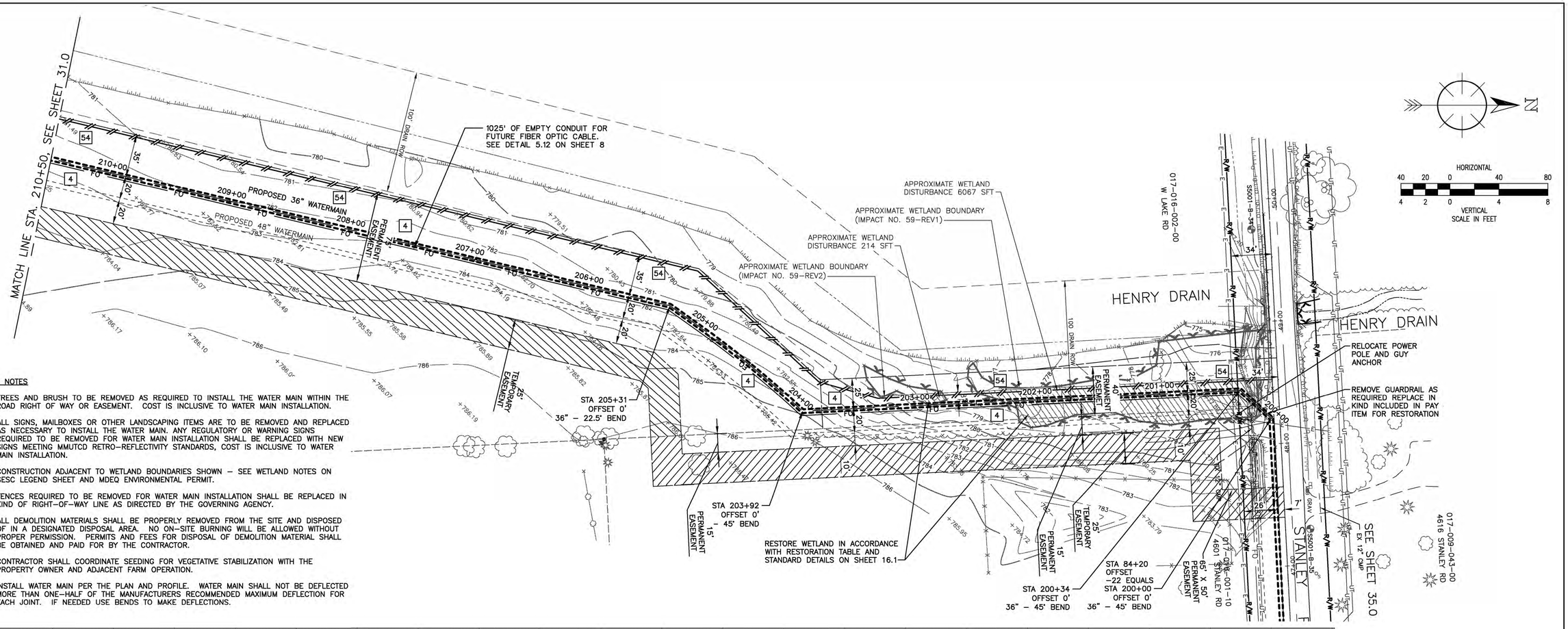
PROJECT MANAGER:Christopher J. Bossard
C:\PW_WORK\JOB\23445\C-BASE-CIMP-PROPOSED 48 WM-PLNPRO30-35-S.S004.DWG – 32.0 – PLOTTED: 11/25/2015 10:31 AM BY RUGGLES, TIMOTHY
FIELD BOOK INFORMATION:

000938



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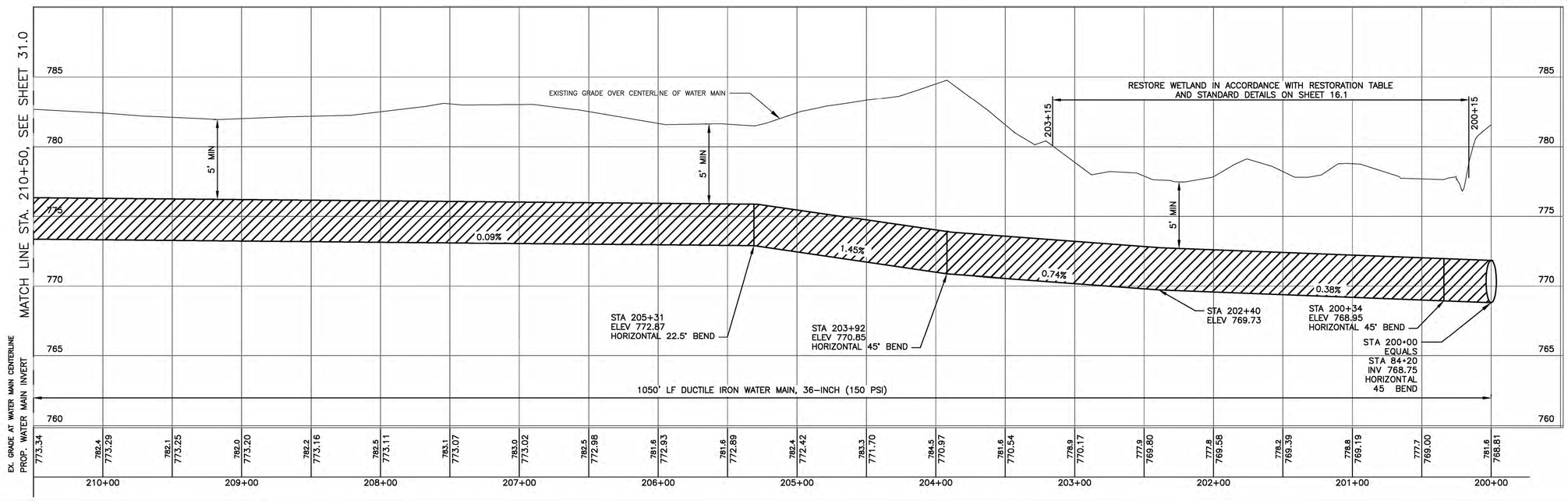

PROJECT MANAGER: Christopher J. Bossard
C:\YW_WORK2\30823463\C-BASE-C\MP-PROPOSED 36 WM-PLMPR021-28-S.S004.DWG – 33.0 – PLOTTED 11/25/2015 10:31 AM BY RUGGLES, TIMOTHY
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FLINT, MI 48532
(810) 732–7870

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36" WATERMAIN PLAN AND PROFILE
STA. 200+00 TO 210+50

SHEET NUMBER
33.0

DP PROJECT NO.
GDC2047.02F

CONTRACT S–5004

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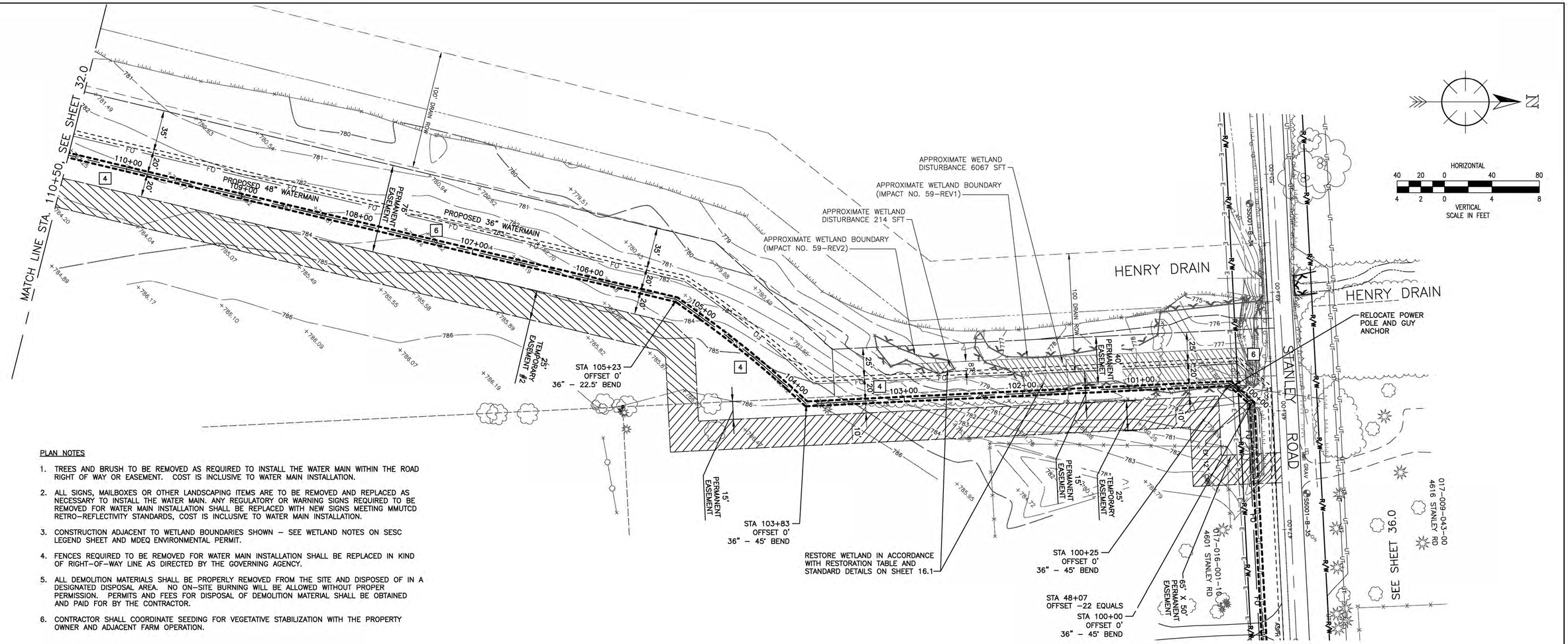

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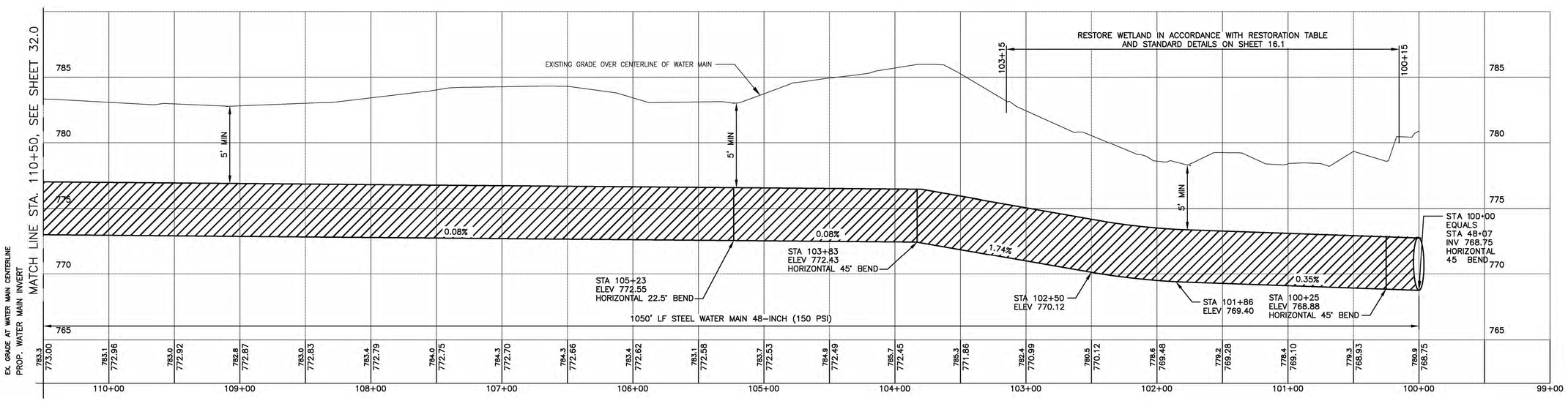

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772.66	772.62	772.58	772.53	772.49	772.45	771.86	770.99

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770.12	769.48	769.28	769.10	768.93	768.75		

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STA. 100+00 TO 110+50

SHEET NUMBER
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DP PROJECT NO.
GDC2047.02F

CONTRACT S–5004

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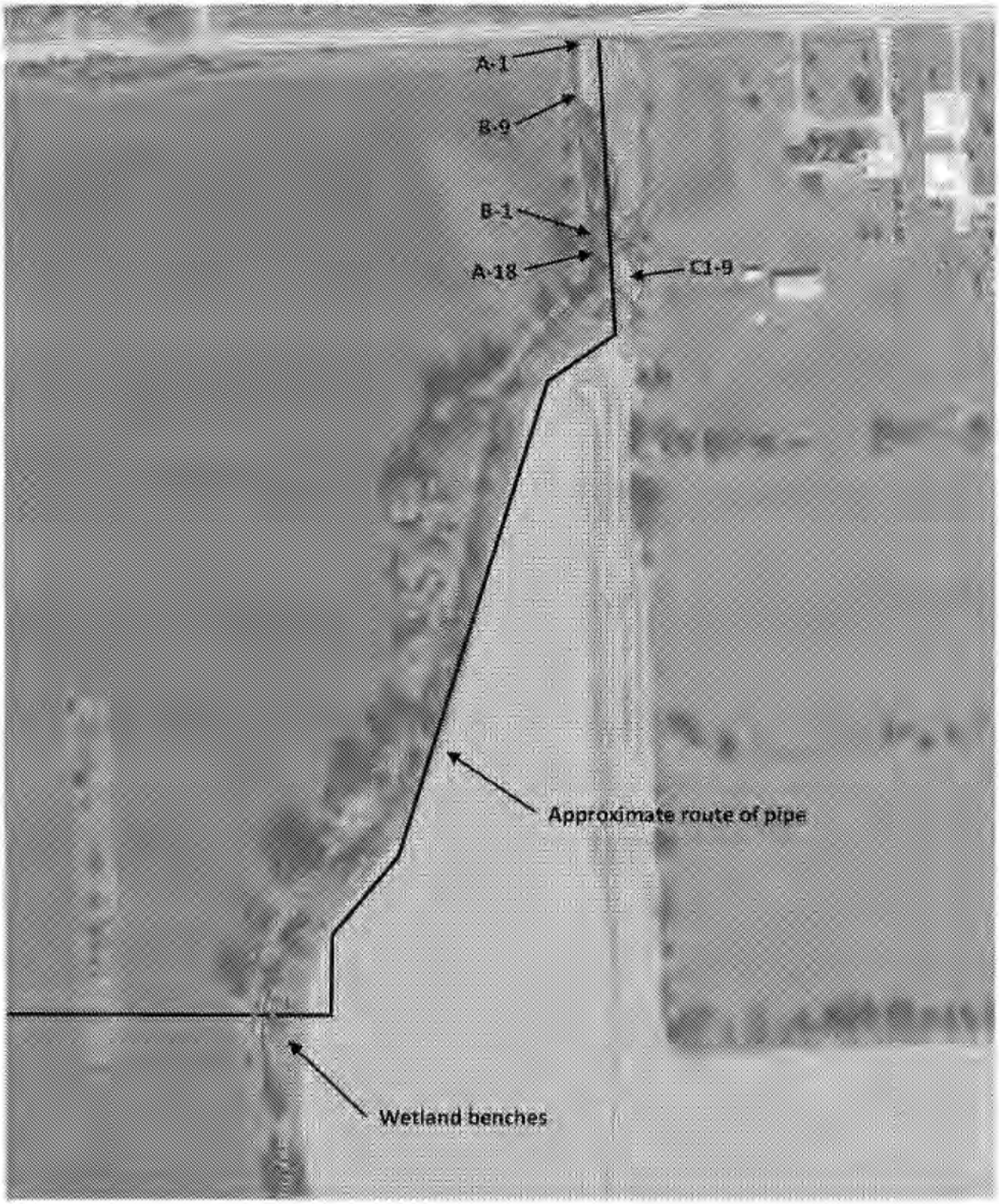
PROJECT MANAGER: Christopher J. Bossard
C:\PW_WORK\cbossard\d0622\M31\C-BASE-CHMP-PROPOSED 48 WM-PLWPRO30-35-S-5004.DWG – 34.0 – PLOTTED 11/25/2015 10:32 AM BY RUGGLES, TIMOTHY
FIELD BOOK INFORMATION:

WETLAND DELINEATION MAP – RELOCATED ROUTE NEAR HENRY DRAIN



Northern Wetland Delineated by A and B Lines

Wet meadow

Wet meadow portion of wetland. Contiguous to Henry Drain. Strongly dominated by reed canary grass. Few silky dogwood and sandbar willow near Stanley Road.

Forested

Forested portion of wetland. Contiguous to Henry Drain. Dominated by box elder, giant goldenrod and narrow-leaved aster. Marginal hydrology.

Wetland Delineated by C Line

All herbaceous species – considered wet meadow. Dominated by narrow-leaved aster and tall goldenrod. Marginal hydrology – not directly contiguous to Henry Drain. Recommend planting trees with forested wetland seeding.

Crossing of Henry Drain

Wet meadow wetland present along benches adjacent to the river. Strongly dominated by reed canary grass. Wetland is 3 feet and 6 feet wide on the east and west bank respectively.

Michigan unified keying system (modified)

✳ indicates applicability of a specific control measure to one or more of the seven problem areas

KEY	DETAIL	CHARACTERISTICS	SLOPES A	STREAMS AND WATERWAYS B	SURFACE DRAINAGEWAYS C	ENCLOSED DRAINAGE (Inlet & Outfall Control) D	LARGE FLAT SURFACE AREAS E	BORROW AND STOCKPILE AREAS F	ADJACENT PROPERTIES G
1	Dust Control – No Detail –	DUST CONTROL APPLICATIONS CAN INCLUDE WATERING, CHEMICAL DUST SUPPRESSION, GRAVEL OR ASPHALT SURFACING, TEMPORARY AGGREGATE COVER AND HAUL TRUCK COVERS	✳				✳	✳	
2	Selective Grading & Shaping	WATER CAN BE DIVERTED TO MINIMIZE EROSION FLATTER SLOPES EASE EROSION PROBLEMS	✳				✳	✳	✳
3	Grubbing Omitted	SAVES COST OF GRUBBING, PROVIDES NEW SPROUTS RETAINS EXISTING ROOT MAT SYSTEM, REDUCES WIND FALL AT NEW FOREST EDGE. DISCOURAGES EQUIPMENT ENTRANCE	✳				✳		✳
4	Vegetative Stabilization	MAY UTILIZE A VARIETY OF PLANT MATERIAL STABILIZES SOIL SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF	✳	✳	✳		✳	✳	✳
5	AVAILABLE DETAIL								
6	Seeding with Mulch Blanket and/or Matting	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAINAGEWAYS WITH LOW VELOCITY EASILY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL, SHOULD INCLUDE PREPARED TOPSOIL BED	✳		✳			✳	✳
7	AVAILABLE DETAIL								
8	Sodding	PROVIDES IMMEDIATE PROTECTION CAN BE USED ON STEEP SLOPES WHERE SEED MAY BE DIFFICULT TO ESTABLISH, EASY TO PLACE; MAY BE REPAIRED IF DAMAGED SHOULD INCLUDE PREPARED TOPSOIL BED	✳		✳		✳	✳	✳
9	Vegetative Buffer Strip	SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF REDUCES VOLUME OF RUNOFF ON SLOPES	✳	✳					✳
10	Mulching	USED ALONE TO PROTECT EXPOSED AREAS FOR SHORT PERIODS PROTECTS SOIL FROM IMPACT OF FALLING RAIN PRESERVES SOIL MOISTURE AND PROTECTS GERMINATING SEED FROM TEMPERATURE EXTREMES	✳				✳	✳	
11	Roughened Surface	REDUCES VELOCITY AND INCREASES INFILTRATION RATES COLLECTS SEDIMENT HOLDS WATER, SAND AND MULCH BETTER THAN SMOOTH SURFACES	✳				✳		
12	AVAILABLE DETAIL								
13	Riprap, Rubble, Gabions	USED WHERE VEGETATION IS NOT EASILY ESTABLISHED EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS PERMITS RUNOFF TO INFILTRATE SOIL DISSIPATES ENERGY FLOW AT SYSTEM OUTLETS	✳	✳	✳				
14	AVAILABLE DETAIL								
15	AVAILABLE DETAIL								
16	AVAILABLE DETAIL								
17	Benches	REDUCES RUNOFF VELOCITY BY REDUCING EFFECTIVE SLOPE LENGTH COLLECTS SEDIMENT, PROVIDES ACCESS TO SLOPES FOR SEEDING, MULCHING AND MAINTENANCE	✳					✳	
18	Earth Diversion Berm	DIVERTS WATER FROM VULNERABLE AREAS COLLECTS AND DIRECTS WATER TO PREPARED DRAINAGEWAYS MAY BE PLACED AS PART OF NORMAL CONSTRUCTION OPERATION	✳					✳	✳
18A	Earth Diversion Berm With Stone Outlet and Filter	DIVERTS WATER FROM VULNERABLE AREAS COLLECTS AND DIRECTS WATER TO PREPARED DRAINAGEWAYS MAY BE PLACED AS PART OF NORMAL CONSTRUCTION OPERATION	✳					✳	✳
19	Diversion Ditch	COLLECTS AND DIVERTS WATER TO REDUCE EROSION POTENTIAL MAY BE INCORPORATED IN PERMANENT PROJECT DRAINAGE SYSTEMS	✳					✳	✳
20	Diversion Berm & Ditch	DIVERTS WATER TO A PREPARED DRAINAGEWAY MAY BE USED AT INTERVALS ACROSS SLOPE FACE TO REDUCE EFFECTIVE SLOPE LENGTH	✳					✳	✳
21	Stone Filter Berm	CONSTRUCTED OF GRAVEL OR STONE INTERCEPTS AND DIVERTS RUNOFF TO STABILIZED AREAS OR PREPARED DRAINAGE SYSTEMS SLOWS RUNOFF AND COLLECTS SEDIMENT	✳	✳					✳
21A	Stone Filter Berm with Silt Fence	CONSTRUCTED OF GRAVEL OR STONE INTERCEPTS AND DIVERTS RUNOFF TO STABILIZED AREAS OR PREPARED DRAINAGE SYSTEMS SLOWS RUNOFF AND COLLECTS SEDIMENT – SILT FENCE PREVENTS EROSION AROUND SPILLWAY	✳	✳					✳
22	AVAILABLE DETAIL								
23	AVAILABLE DETAIL								
24	Grassed Waterway	MUCH MORE STABLE FORM OF DRAINAGEWAY THAN BARE CHANNEL GRASS TENDS TO SLOW RUNOFF AND FILTER OUT SEDIMENT USED WHERE BARE CHANNEL WOULD BE ERODED			✳				
25	Slope Drain (Surface Pipe)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGES OF SLOPE AREA. USUALLY TEMPORARY CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	✳						
26	Slope Drain – Paved Chute/Flume	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA. USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	✳						
27	Slope Drain (Subsurface Pipe)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA. USUALLY PERMANENT CAN BE CONSTRUCTED AS GRADING PROGRESSES	✳						
28	Drop Spillway	SLOWS VELOCITY OF FLOW, REDUCING EROSIVE CAPACITY		✳	✳				
29	Pipe Drop	REDUCES RUNOFF VELOCITY REMOVES SEDIMENT AND TURBIDITY CAN BE DESIGNED TO HANDLE LARGE VOLUMES OF FLOW			✳				
30	Pipe Spillway	REMOVES SEDIMENT AND TURBIDITY FROM RUNOFF MAY BE PART OF PERMANENT EROSION CONTROL PLAN			✳				
31	Energy Dissipator	SLOWS RUNOFF VELOCITY TO NON-EROSIVE LEVEL PERMITS SEDIMENT COLLECTION FROM RUNOFF	✳		✳	✳			
32	Level Spreader	CONVERTS COLLECTED CHANNEL OR PIPE FLOW BACK TO SHEET FLOW AVOIDS CHANNEL EASEMENTS AND CONSTRUCTION OFF PROJECT SITE SIMPLE TO CONSTRUCT			✳				
33	Sediment Trap	MAY BE CONSTRUCTED OF A VARIETY OF MATERIALS TRAPS SEDIMENT AND REDUCES VELOCITY OF FLOW CAN BE CLEANED AND EXPANDED AS NEEDED		✳	✳				
34	Sediment Basin	TRAPS SEDIMENT RELEASES RUNOFF AT NON-EROSIVE RATES CONTROLS RUNOFF AT SYSTEM OUTLETS CAN BE VISUAL AMENITIES		✳	✳	✳			
35	AVAILABLE DETAIL								
36	Catch Basin Inlet Protection	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET					✳		✳
37	Sod Filter	INEXPENSIVE AND EASY TO CONSTRUCT PROVIDES IMMEDIATE PROTECTION PROTECTS AREAS AROUND INLETS FROM EROSION				✳			
38	AVAILABLE DETAIL								
39	Fabric Filter Curb Inlet Protection	CAN UTILIZE MATERIAL FOUND ON SITE EASY TO CONSTRUCT FILTERS SEDIMENT FROM RUNOFF				✳			✳
40	Inlet Sediment Trap	EASY TO SHAPE COLLECTS SEDIMENT MAY BE CLEANED AND EXPANDED AS NEEDED				✳			
41	Stone and Rock Ford Crossing	MAY BE ROCK OR CLEAN RUBBLE MINIMIZES STREAM TURBIDITY INEXPENSIVE MAY ALSO SERVE AS DITCH CHECK OR SEDIMENT TRAP		✳					
42	Temporary Culvert	ELIMINATES STREAM TURBULENCE AND TURBIDITY PROVIDES UNOBSTRUCTED PASSAGE FOR FISH AND OTHER WATER LIFE CAPACITY FOR NORMAL FLOW CAN BE PROVIDED WITH STORM WATER FLOWING OVER ROADWAY		✳					
43	Culvert Sediment Trap	EASY TO INSTALL AT INLET KEEPS CULVERT CLEAN AND FREE FLOWING MAY BE CONSTRUCTED OF LUMBER OR LOGS		✳					✳
44	AVAILABLE DETAIL								
45	Temporary Stream Channel Change	NEW CHANNEL KEEPS NORMAL FLOWS AWAY FROM CONSTRUCTION REQUIRES STATE PERMIT		✳					
46	AVAILABLE DETAIL								
47	Cofferdam	WORK CAN BE CONTINUED DURING MOST ANTICIPATED STREAM CONDITIONS CLEAN WATER CAN BE PUMPED DIRECTLY BACK INTO STREAM		✳					
48	AVAILABLE DETAIL								
49	Check Dam	REDUCES FLOW VELOCITY CATCHES SEDIMENT CAN BE CONSTRUCTED OF LOGS, STRAW, HAY, ROCK, LUMBER, MASONRY, OR SAND BAGS		✳	✳				
50	AVAILABLE DETAIL								
51	Retaining Wall	REDUCES GRADIENT WHERE SLOPES ARE EXTREMELY STEEP PERMITS RETENTION OF EXISTING VEGETATION, KEEPING SOIL STABLE IN CRITICAL AREAS, MINIMIZES MAINTENANCE	✳						✳
52	AVAILABLE DETAIL								
53	Windbreak	MINIMIZES WIND EROSION MAY BE SNOW FENCE					✳		
54	Silt Fence	USES GEOTEXTILE FABRIC AND POSTS OR POLES EASY TO CONSTRUCT AND LOCATE AS NECESSARY	✳		✳		✳		✳
55	Stone Filter–Before Paving	STONE FILTER TO PROVIDE INEXPENSIVE AND EASILY CONSTRUCTED SEDIMENT CONTROL PRIOR TO PAVING SEE DETAIL AT LEFT			✳	✳			
55A	Stone Filter–After Paving	STONE FILTER TO PROVIDE INEXPENSIVE AND EASILY CONSTRUCTED SEDIMENT CONTROL AFTER PAVING SEE DETAIL AT LEFT			✳	✳			
56	Turbidity Curtain	A TURBIDITY CURTAIN IS USED WHEN SLACK WATER AREA IS NECESSARY TO ISOLATE CONSTRUCTION ACTIVITIES FROM THE WATERCOURSE. THE STILL WATER AREA CONTAINS THE SEDIMENT WITHIN THE CONSTRUCTION LIMITS		✳					
57	Stream – Liner	MAY BE 6A TYPE STONE, SMALL ROCKS OR SIMILAR-SIZED CLEAN CONCRETE-MASONRY RUBBLE, MINIMIZES STREAM TURBIDITY RELATIVELY INEXPENSIVE MAY BE USED AS DITCH CHECK OR SEDIMENT TRAP			✳				
58	Sediment Sump	CONTROLS SEDIMENTATION IN LARGE STREAMS, CONSIST OF OVER EXCAVATING THE DRAIN BY ONE TO TWO FEET. THE SUMP WILL BE AT LEAST 200 FEET LONG, SEDIMENTS ACCUMULATED DURING CONSTRUCTION WILL BE REMOVED UPON PROJECT COMPLETION			✳				
59	AVAILABLE DETAIL								
60	Temporary Construction Entrance	ASSISTS IN REMOVING SOIL FROM THE TIRES OF CONSTRUCTION EQUIPMENT/VEHICLES WHEN EXITING THE CONSTRUCTION SITE. THIS REDUCES TRACKING EXCESSIVE SEDIMENT/DOIL ONTO THE ADJACENT ROAD							✳

SOIL EROSION AND SEDIMENTATION CONTROL

1. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.
2. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
3. CLEANUP WILL BE DONE IN A MANNER TO INSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
4. THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENT CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE CONTRACTOR WITHIN 24 HOURS.
5. TEMPORARY EROSION CONTROL MEASURES SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR UPON ESTABLISHMENT OF PERMANENT CONTROL MEASURES.

CONSTRUCTION SEQUENCE

1. EXCAVATION AND STOCKPILING OF SOIL.
2. IMPLEMENTATION OF TEMPORARY EROSION CONTROL MEASURES; SELECTIVE GRADING, DIVERSIONS AS REQUIRED IN FIELD, PROTECTION OF STORM SEWER FACILITIES.
3. PERIODIC MAINTENANCE OF AFFECTED EROSION CONTROL MEASURES.
4. PERMANENT MEASURES; FINAL GRADING, SEEDING AND MULCHING.

SEE UNIFIED KEYING SYSTEM FOR EROSION CONTROL KEY NUMBERS

MDEQ STREAM CROSSING NOTES

1. CONSTRUCTION OF STREAM CROSSINGS SHALL BE SUBJECT TO THE SPECIFICATIONS FOR PROTECTION OF NATURAL RESOURCES AT UTILITY CROSSINGS AS GIVEN IN THE ADMINISTRATIVE RULES OF PART NO. 301 OF PUBLIC ACT 451, AS AMENDED, 1994.
2. FOR WATER CROSSINGS AND WATERWAYS, CROSSINGS SHALL BE COMPLETED IN LOW FLOW CONDITIONS. THE USE OF TURBIDITY CURTAINS, BY-PASS CHANNEL OR COFFERDAMS IS ALLOWED (SEE MICHIGAN UNIFIED KEYING SYSTEM AND PLAN SHEETS FOR SPECIFIC BARRIER).
3. BACKFILL SHALL CONSIST OF INERT MATERIALS WHICH WILL NOT CAUSE SILTATION NOR CONTAIN SOLUBLE CHEMICALS OR ORGANIC MATTER WHICH IS BIODEGRADABLE. ALL FILL SHALL BE CONTAINED IN SUCH A MANNER SO AS NOT TO ERODE INTO ANY WATERCOURSE.
4. ALL RAW BANKS SHALL BE STABILIZED WITH RIPRAP TO THREE FEET ABOVE THE ORDINARY HIGH WATER WATER MARK, THEN SEEDED, FERTILIZED AND MULCHED, OR SODDED TO PREVENT EROSION AS SOON AS POSSIBLE.
5. UPON PROJECT COMPLETION THE EXCESS SPOILS SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED UPLAND SITE.
6. SILTATION BARRIER MAY BE REMOVED UPON PLACEMENT OF PERMANENT EROSION CONTROL MEASURES.

WETLAND AREAS

1. WETLAND AREAS HAVE BEEN IDENTIFIED ON THE PLANS. NOTE THE USE OF DIVERSION CHANNELS WILL NOT BE ALLOWED THROUGH A WETLAND AREA.
2. NO STOCKPILING OF SOILS OR OTHER MATERIALS WILL BE ALLOWED IN WETLAND AREAS.
3. WETLAND AREAS TEMPORARILY DISTURBED DURING CONSTRUCTION WILL BE RESTORED TO EXISTING CONDITIONS.
4. REFER TO MDEQ PERMIT FOR ADDITIONAL PROCEDURES AND CONDITIONS THAT WILL BE ADHERED TO FOR THIS PROJECT.

ZONES

ZONE 1

TYPE OF SEED	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	RATE OF APPLICATION * PER/1000 S.F.	PER ACRE
OATS / BARLEY ANNUAL RYE						15TH		2 LBS. 3/4 LB.	3 BUSHELS 25 LBS.
SUDANGRASS				15TH				1 LB.	35 LBS.
CEREAL RYE							15TH	1.5 LBS.	2 BU.
WINTER WHEAT						20TH	15TH	1.5 LBS.	2 BU.

TEMPORARY SEEDING GUIDE

RECOMMENDED PLANTING SEASON

*RATE OF APPLICATION APPLIES TO ALL ZONES

ZONE	TYPE OF IRRIGATION	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
ZONE 1	IRRIGATED and/or MULCHED without IRRIGATION or MULCH							
ZONE 2	IRRIGATED and/or MULCHED without IRRIGATION or MULCH							
ZONE 3	IRRIGATED and/or MULCHED without IRRIGATION or MULCH							

PERMANENT SEEDING GUIDE

RECOMMENDED PLANTING SEASON

TO BE COMPLETED BY CONTRACTOR FOR PERMIT

SOIL EROSION / SEDIMENTATION CONTROL
OPERATION TIME SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADE / SEDIMENT CONTROL												
TEMP. CONTROL MEASURES												
STORM FACILITIES												
TEMP. CONSTRUCTION ROADS												
FOUNDATION / BLDG. CONSTRUCTION												
SITE CONSTRUCTION												
PERM. CONTROL MEASURES												
FINISH GRADING												
LANDSCAPING												

REV#	DATE	DESCRIPTION	BY

DESIGNED
DRAWN
CHECKED
DATE 12/19/13

KAREGNONDI WATER AUTHORITY
G-4610 BEECHER RD
FLINT, MI 48532
(810) 732-7870

KWA WATER SUPPLY SYSTEM
CONTRACT S-XXXX
STANDARD DETAILS
SHEET 15

SHEET NUMBER
D-16
DP PROJECT NO.
307

CONTRACT S-XXXX

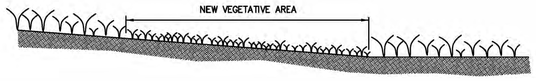
PROJECT MANAGER: Larry A. Osborn
C:\PW_WORK\00448287\Q01-PLTS-NEW-DETAILS.DWG – D-16 – PLOTTED 2/27/2014 10:16 AM BY DZIURKA, ERIK
FIELD BOOK INFORMATION:

TEMPORARY SEEDING APPLICATIONS

1. WHEN AN AREA NEEDS STABILIZATION DURING A BREAK IN CONSTRUCTION.
2. TO STABILIZE SOIL AND PREVENT OR REDUCE SOIL EROSION/SEDIMENTATION PROBLEMS FROM DEVELOPING.
3. USED ON CONSTRUCTION AND EARTH CHANGE SITES WHICH REQUIRE TEMPORARY VEGETATIVE STABILIZATION.

DESIGN

1. REVIEW SESC PLAN AND CONSTRUCTION PHASING TO IDENTIFY AREAS IN NEED OF TEMPORARY VEGETATIVE STABILIZATION.
2. SELECT ANNUAL GRASS SEED FOR TEMPORARY COVER AREAS.
3. SEED MIXES MAY VARY, SHOULD ONLY CONTAIN ANNUAL, NON-AGGRESSIVE SPECIES, AND GENERALLY INCLUDE RYE, WHEAT OR OAT SPECIES. SEED MIXES SHOULD OBTAINED THROUGH CONSULTATION WITH A CERTIFIED SEED PROVIDER AND WITH CONSIDERATION OF SOIL TYPE, LIGHT, MOISTURE AND USE APPLICATION.
4. PREPARE SEEDBED BY REMOVAL OF CONSTRUCTION AND WOODY DEBRIS. THEN SCARIFY OR RAKE SEEDBED.
5. SLOPES STEEPER THAN 1:3 SHOULD BE ROUGHENED.
6. APPLY SEED AS SOON AS POSSIBLE AFTER SEEDBED PREPARATION. MULCH IMMEDIATELY AFTER SEEDING ALL SLOPES, UNSTABLE SOILS, HEAVY CLAY SOILS AND ALL AREAS ADJACENT TO WETLANDS, WATERCOURSES, OR SENSITIVE AREAS.
7. PROTECT SEEDED AREAS FROM PEDESTRIAN OR VEHICULAR TRAFFIC.
8. DIVERT CONCENTRATED FLOWS AWAY FROM THE SEEDED AREA UNTIL VEGETATION IS ESTABLISHED.
9. INSPECT TEMPORARY SEEDED AREAS WEEKLY AND FOLLOWING EACH RAIN EVENT UNTIL FINAL GRADING AND STABILIZATION ARE COMPLETED.
10. TEMPORARY SEEDING MUST BE FOLLOWED BY PERMANENT SEEDING.



PERMANENT SEEDING APPLICATIONS

1. TO FINALIZE STABILIZATION OF TEMPORARY SEEDING AREAS OR WHEN AN AREA NEEDS PERMANENT STABILIZATION FOLLOWING COMPLETION OF CONSTRUCTION. ALSO USED WHEN VEGETATIVE ESTABLISHMENT CAN CORRECT EXISTING SOIL EROSION OR SEDIMENTATION PROBLEM.
2. TO STABILIZE SOIL AND PREVENT OR REDUCE SOIL EROSION/SEDIMENTATION PROBLEMS FROM DEVELOPING.
3. USED ON CONSTRUCTION AND EARTH CHANGE SITES WHICH REQUIRE PERMANENT VEGETATIVE STABILIZATION.

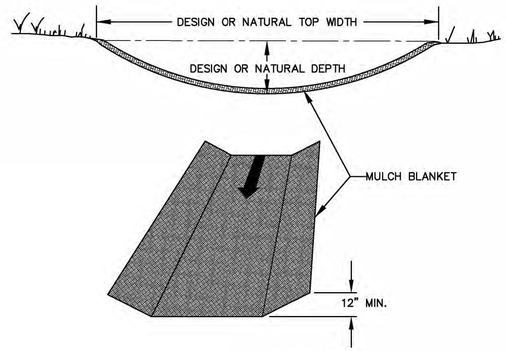
DESIGN

1. REVIEW SESC PLAN AND CONSTRUCTION PHASING TO IDENTIFY AREAS IN NEED OF PERMANENT VEGETATIVE STABILIZATION.
2. SELECT PERENNIAL GRASS AND GROUND COVER FOR PERMANENT COVER.
3. SEED MIXES MAY VARY BUT SHOULD BE SELECTED THROUGH CONSULTATION WITH A CERTIFIED SEED PROVIDER AND WITH CONSIDERATION OF SOIL TYPE, LIGHT, MOISTURE, USE APPLICATIONS, AND NATIVE SPECIES CONTENT.
4. SOIL TESTS SHOULD BE PERFORMED TO DETERMINE THE NUTRIENT AND PH LEVELS IN THE SOIL. THE PH MAY NEED TO BE ADJUSTED TO BETWEEN 6.5 AND 7.0.
5. PREPARE A 4-5" DEEP SEEDBED, WITH THE TOP 4" CONSISTING OF TOPSOIL.
6. SLOPES STEEPER THAN 1:3 SHOULD BE ROUGHENED.
7. APPLY SEED AS SOON AS POSSIBLE AFTER SEEDBED PREPARATION. SEED MAY BE BROADCAST BY HAND, HYDROSEEDING, OR BY USING MECHANICAL DRILLS.
8. DORMANT SEED MIXES ARE FOR USE AFTER THE GROWING SEASON, USING SEED WHICH LIES DORMANT IN THE WINTER AND BEGINS GROWING AS SOON AS SITE CONDITIONS BECOME FAVORABLE.
9. MULCH IMMEDIATELY AFTER SEEDING.

   PROTECT SEEDED AREAS FROM PEDESTRIAN OR VEHICULAR TRAFFIC.
10. DIVERT CONCENTRATED FLOWS AWAY FROM THE SEEDED AREA UNTIL VEGETATION IS ESTABLISHED.

VEGETATIVE STABILIZATION [4]

NO TO SCALE



APPLICATIONS

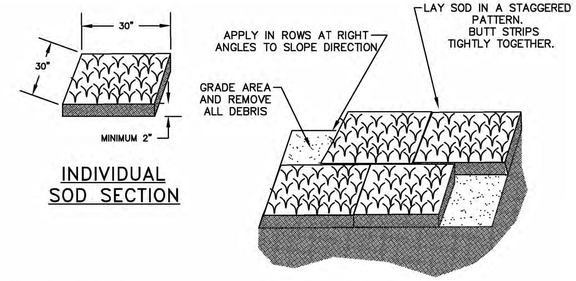
1. STEEP SLOPES.
2. CHANNEL AND ROADSIDE DITCH BOTTOMS.
3. USE SEED AND HIGH VELOCITY MULCH BLANKETS TO STABILIZE THE GRASSED LINED CHANNEL, IMMEDIATELY AFTER GRADING (ONE DAY MAX).
4. MUST NOT BE PLACED ON FROZEN SOIL: MUST REMAIN IN IN CONTACT WITH SEED AND SOIL.
5. MUST BE USED DURING THE NON-GROWING SEASON TO MINIMIZE EROSION UNTIL VEGETATION IS ESTABLISHED.

DESIGN

1. FOR DITCHES AND CHANNELS ROLL HIGH VELOCITY MULCH BLANKETS IN THE DIRECTION OF FLOW. DO NOT STRETCH.
2. FASTEN OR PEG MULCH BLANKET PER MANUFACTURERS INSTRUCTIONS.
3. ON BACKSLOPES, BLANKETS SHALL BE PLACED AT RIGHT ANGLES TO ROADBED OR PIPE LINE.
4. OVERLAY ENDS BY 18" AND EDGES BY 4".
5. AT ALL BLANKET EDGES, BURY 6'-10" OF BLANKET IN 3-4' DEEP TRENCH AND COMPACT TRENCH WITH NATIVE SOIL BACKFILL OR MDOT 6AA STONE.

SEEDING WITH MULCH BLANKET AND/OR MATTING [6]

NO TO SCALE



INDIVIDUAL SOD SECTION

APPLICATIONS

1. WHEN IMMEDIATE VEGETATIVE COVER IS NEEDED ON EXPOSED AREAS.

   APPLY ON EXPOSED AREAS/SLOPES
2. WHERE VEGETATIVE STABILIZATION IS NEEDED SOONER THAN CAN BE ESTABLISHED BY SEEDING AND WHERE IRRIGATION IS AVAILABLE.

DESIGN

1. PREPARE AREA BY GRADING AND REMOVAL OF STICKS, ROCKS, ROOTS, SOIL CLODS, AND CONSTRUCTION DEBRIS.
2. COMPLETE SOIL TESTING TO DETERMINE PH AND NUTRIENT CONTENT OF SOIL.
3. APPLY SOIL AMENDMENTS AS NECESSARY PER SOIL TESTING.
4. SELECT SOD TYPE BASED ON EXPECTED EXPOSURE AND MOISTURE REGIMES, PLANNED MAINTENANCE LEVEL, AND INTENDED USE.
5. STRIPS OF SOD SHOULD BE UNIFORM IN
6. WIDTH WITH STRIPS FREE OF WEEDS.

   CULTURED SOD SHOULD BE APPROXIMATELY 0.5" THICK AND NOT LESS THAN 30" IN LENGTH. OTHER GRASS SODS SHOULD BE CUT AT LEAST 2" THICK AND IN STRIPS AT LEAST 10" BY 18".

DESIGN (CONT)

7. APPLY SOD IN ROWS PERPENDICULAR TO SLOPE DIRECTION.
8. APPLY SOD PERPENDICULAR TO WATERFLOW DIRECTION ON SLOPES OR IN FLOW PATHS.
9. PLACE SOD PIECES IMMEDIATELY ADJACENT TO ONE ANOTHER WITH NO OPEN JOINTS LEFT BETWEEN STRIP EDGES OR ENDS.
10. STAGGER ENDS OF ADJACENT SOD STRIPS TO MINIMIZE CONCENTRATED FLOW AT JOINTS.
11. ROLL OR TAMP SOD IMMEDIATELY AFTER INSTALLATION.
12. ON SLOPES STEEPER THAN 1:3, OR IN AREAS OF CONCENTRATED FLOWS, SECURE SOD WITH 10" WOOD STAKES OR PEGS SPACED 2 FEET APART, DRIVEN FLUSH WITH THE SOD SURFACE.
13. WATER SOD TO THOROUGHLY MOISTEN SOIL.
14. WITHHOLD TRAFFIC FROM RECENTLY SODDED AREA UNTIL SOD IS FIRMLY ESTABLISHED.
15. SOD CAN BE LAID BETWEEN MAY 1 AND OCTOBER 20. BETWEEN JUNE 10 AND SEPTEMBER 10 IRRIGATION IS NECESSARY.

SODDING [8]

NO DRAWING DETAIL PROVIDED

APPLICATIONS

1. WHEN AREAS ARE SUBJECT TO EROSIVE SURFACE SHEET FLOWS OR SEVERE WIND.
2. TEMPORARILY PROTECTS SEEDED AREAS AND SLOPES AGAINST EROSION FROM RAIN OR WIND. HOLDS SOIL MOISTURE TO ALLOW FOR SEED GERMINATION AND REDUCES WIND DESSICATION OF GERMINATED SEEDS. INHIBITS SEED CONSUMPTION BY BIRDS.
3. USE ON EXPOSED SLOPES, NEWLY SEEDED AREAS AND OTHER AREAS SUBJECT TO EROSION.

DESIGN

1. OTHER SURFACE RUNOFF CONTROL MEASURES SHOULD BE INSTALLED PRIOR TO MULCHING.
2. PREPARE SURFACE TO PROPER GRADE AND COMPACTION REQUIREMENTS.
3. IF TREATMENT AREA IS TO BE REVEGETATED IMMEDIATELY, SPREAD OR DRILL SEED, OR INSTALL VEGETATIVE SPRIGS INTO PLANTING SURFACE.
4. SELECT MULCH MATERIAL APPROPRIATE FOR SITE CHARACTERISTICS, INCLUDING GRADE, LEVEL OF TRAFFIC, INSTALLATION METHOD, AND ACCESSIBILITY.

DESIGN (CONT.)

5. MULCHES SHOULD NOT BE APPLIED IF FREE SURFACE WATER IS PRESENT BUT MAY BE APPLIED TO WET SOIL.
6. MULCHES (PARTICULARLY STRAW) MAY NEED ANCHORING. COMMON METHODS INCLUDE CRIMPING, DISKING, OR PUNCHING INTO SOIL; COVERING WITH NETTING; SPRAYING WITH A BINDER/TACKIFIER, OR KEEPING MOIST.
7. IF USING A TACKIFIER TO ANCHOR MULCH IN PLACE, APPLY IMMEDIATELY AFTER MULCH HAS BEEN PLACED. TACKIFIERS INCLUDE:

   LATEX-BASE. MIX 37 GALLONS OF ADHESIVE OR THE MANUFACTURER'S RECOMMENDED RATE WITH A MINIMUM OF 620 LBS. OF RECYCLED NEWSPRINT AS A TRACER WITH 925 GALLONS OF WATER.

   RECYCLED NEWSPRINT. MIX 1850 LBS. OF NEWSPRINT WITH 3700 GALLONS OF WATER.

   WOOD FIBER. MIX 1850 LBS. OF WOOD FIBER WITH 3700 GALLONS OF WATER.

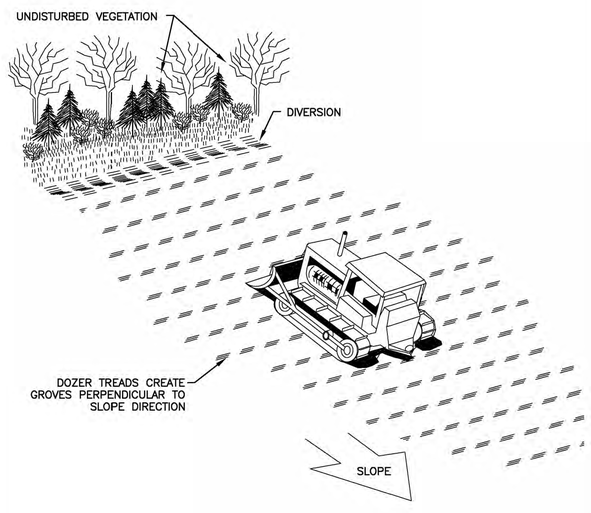
   GUAR GUM. MIX 120 LBS. OF DRY ADHESIVE AND A MINIMUM OF 620 LBS. RECYCLED NEWSPRINT AS A TRACER WITH 3225 GALLONS OF WATER.

   OTHER TACKIFIERS. MIX 240 LBS. OF DRY ADHESIVE OR THE MANUFACTURER'S RECOMMENDED RATE AND A MINIMUM OF 620 LBS. OF RECYCLED NEWSPRINT AS A TRACER WITH 3225 GALLONS OF WATER.

STRAW - MOST COMMON AND WIDELY USED MATERIAL. PROVIDES ORGANIC MATTER AS IT BREAKS DOWN. EFFECTIVENESS OF SEDIMENT REDUCTION HIGH FOR AT LEAST 3 MONTHS. SUBJECT TO WINDBLOW AND WASHOUT. FOR STRAW, APPLY A MINIMUM OF 2 TONS/ACRE OR APPROX. 50 LBS./1000 SQ.FT. TO COVER THE SURFACE. INCREASE APPLICATION RATES 50% FOR DORMANT SEEDING.

MULCHING [10]

NO TO SCALE



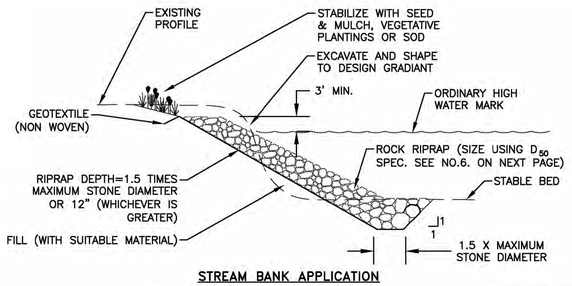
UNVEGETATED SLOPE SHOULD BE TEMPORARILY SCARIFIED TO MINIMIZE RUNOFF VELOCITIES

APPLICATION

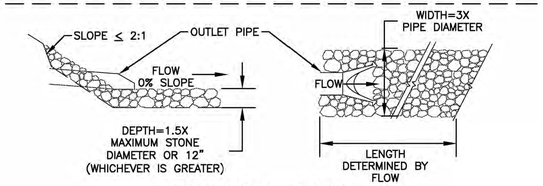
PLACE HORIZONTAL GROOVES IN A SLOPE PERPENDICULAR TO THE FLOW OF THE RUNOFF. THIS CAN BE DONE BY EITHER DISC HARROWING, BACK BLADING OR JUST RUNNING THE TREADS OF A CRAWLER TRACTOR PERPENDICULAR TO THE SLOPE AS SHOWN BELOW.

ROUGHENED SURFACE [11]

NO TO SCALE



STREAM BANK APPLICATION



OUTLET POINT APPLICATION

SIZE OF TYPICAL RIPRAP STONES			
Weight (lbs.)	Average Spherical Diameter (in.) D50	Typical Rectangular Shape Length (in.)	Width/Height (in.)
50	10	18	6
100	13	21	7
150	14	24	8
300	18	30	10
500	22	36	12
1000	27	45	15
1500	31	52	17
2000	34	57	19
4000	43	72	24
6000	49	83	28
8000	54	90	30

Source: Adapted from USDA NRCS

RIP RAP, RUBBLE, GABIONS [13]

NO TO SCALE

1 of 2

APPLICATIONS

1. WHEN CONCENTRATED WATER FLOWS HAVE THE POTENTIAL TO CREATE SCOUR, DOWN-CUTTING, OR LATERAL CUTTING.
2. TO PREVENT LOSS OF LAND OR DAMAGE TO UTILITIES OR STRUCTURES. IN AQUATIC APPLICATIONS, RIPRAP IS USED TO CONTROL CHANNEL MEANDER AND MAINTAIN CAPACITY, PROTECT AGAINST WAVE ATTACK, AND REDUCE SEDIMENT LOAD.
3. ON SLOPES WITH PROFILES MEASURING 1:1.5 OR LESS.

DESIGN

1. REVIEW SUBJECT SITE TO IDENTIFY AREAS SUBJECT TO CONCENTRATED FLOWS OR WAVE/CURRENT ATTACK.
2. THE AREA UNDER REVIEW FOR RIPRAP PLACEMENT MUST BE SHAPED AND CONTOURED APPROPRIATELY BY GRADING PRIOR TO MATERIAL PLACEMENT.
3. NON-WOVEN GEOTEXTILE FABRIC SHOULD BE INSTALLED PRIOR TO RIPRAP PLACEMENT, WITH UPPER END AND TOE END OF FABRIC BURIED OR ANCHORED TO PREVENT MOVEMENT.
4. RIPRAP PLACEMENT SHOULD BE STARTED AT A STABILIZED LOCATION AND ENDED AT A STABILIZED OR CONTOURED POINT.
5. MATERIAL SELECTED FOR RIPRAP SHOULD BE HARD, ANGULAR, AND RESISTANT TO WEATHERING. APPROPRIATE MATERIAL SIZE DEPENDS ON EXPECTED WATER ENERGY AND INTENDED FUNCTION OF THE MATERIAL.
6. RIPRAP MIXTURE SHOULD BE AN EVEN MIXTURE OF STONE SIZES BASED ON THE AVERAGE, OR D_{50} THIS MEANS 50% OF THE STONE, BY SIZE, WILL BE LARGER THAN THE DIAMETER SPECIFIED, AND 50% WILL BE SMALLER THAN THE SIZE SPECIFIED. THE DIAMETER OF THE LARGEST STONE SHOULD NOT BE MORE THAN 1.5 TIMES THE D STONE SIZE.
7. SEE TABLE ON THE PREVIOUS PAGE FOR TYPICAL RIPRAP STONE SIZES.
8. ROCK SHALL BE PLACED SO THAT LARGER ROCKS ARE UNIFORMLY DISTRIBUTED AND IN CONTACT WITH ONE ANOTHER. SMALLER ROCKS SHOULD FILL THE VOIDS.
9. WHEN IN CONTACT WITH MOVING WATER, RIPRAP WILL TIE INTO A STABLE BANK AT THE DOWNSTREAM END AND WILL BE KEYED INTO THE BANK AT THE UPSTREAM END. RIPRAP SHOULD EXTEND 3 FT. ABOVE THE ORDINARY HIGH WATER MARK OR TO THE TOP OF THE BANK ON SHORT SLOPES. EXTEND RIPRAP A MINIMUM 10 FT. BEYOND ACTIVE EROSION AREA.

RIP RAP, RUBBLE, GABIONS [13]

2 of 2

PROJECT MANAGER: Larry A. Osborn
C:\PW_WORK\JDM2487\D01-PLTS-NEW-DETAILS.DWG - D-17 - PLOTTED 2/27/2014 10:17 AM BY: DZIURKA, ERIK
FIELD BOOK INFORMATION:

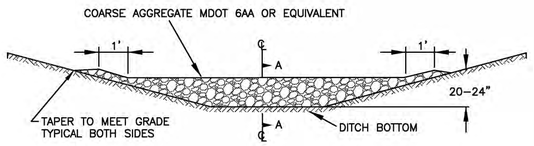
REV#	DATE	DESCRIPTION	BY
			DESIGNED
			DRAWN
			CHECKED
			DATE 12/19/13

KAREGNONDI WATER AUTHORITY
G-4610 BEECHER RD
FLINT, MI 48532
(810) 732-7870

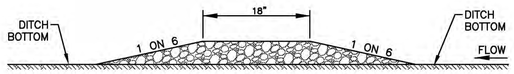
KWA WATER SUPPLY SYSTEM
CONTRACT S-XXXX
STANDARD DETAILS
SHEET 16

SHEET NUMBER
D-17
DP PROJECT NO.

CONTRACT S-XXXX



DITCH CROSS SECTION



SECTION A – A

APPLICATION

1. FILTER WATER BEFORE LEAVES SITE TO REDUCE SEDIMENT.
2. DO NOT USE AS A CHECK DAM.

WARNINGS

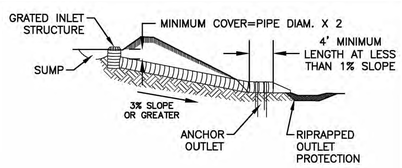
1. WARNING! THIS DEVICE MAY CAUSE FLOODING OF ADJACENT PROPERTY.

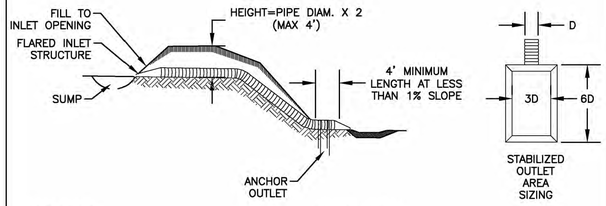
GRAVEL FILTER BERM 21

NO TO SCALE

DESIGN CRITERIA FOR PIPE SLOPE DRAIN

PIPE DIAMETER (IN.)	MAXIMUM DRAINAGE AREA (ACRES)
12	0.5
18	1.5
21	2.5
24	3.5
(2) 24	5.0





APPLICATIONS

1. WHEN SURFACE RUNOFF ACCUMULATES AT THE TOP OF A SLOPE AND REQUIRES PERMANENT CONVEYANCE TO SLOPE BOTTOM TO MINIMIZE EROSION.
2. TO ELIMINATE SLOPE EROSION, GULLY FORMATION, AND SLOPE FAILURE.
3. WHERE CONCENTRATED FLOW OF SURFACE RUNOFF MUST BE PERMANENTLY CONVEYED DOWN A SLOPE IN ORDER TO PREVENT EROSION.
4. TO PROVIDE PERMANENT DRAINAGE FOR TOP OF SLOPE DIVERSION DIKES OR SWALES.

DESIGN

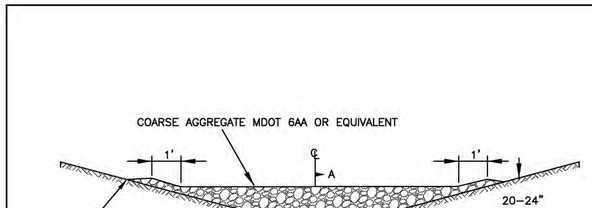
1. UTILIZE GRADING PLAN TO IDENTIFY PERMANENT SLOPE TOP RUNOFF/STORMWATER CONCENTRATION POINTS.

DESIGN (CONT)

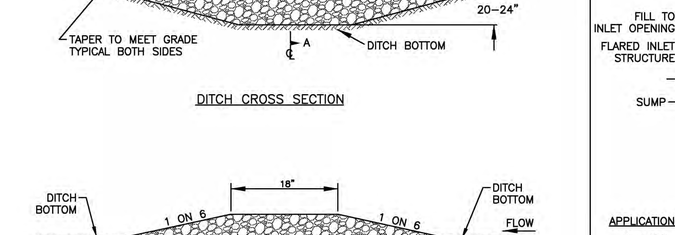
2. SELECT APPROPRIATE PIPE SIZE. SIZE SHOULD NOT BE LESS THAN SPECIFIED IN DESIGN CRITERIA TABLE. UNLESS OTHERWISE SPECIFIED, TEMPORARY DRAINS SHOULD BE SUFFICIENT TO HANDLE PEAK RUNOFF FROM A 10–YEAR, 24–HOUR RAINFALL EVENT.
3. CONSTRUCT THE PIPE SLOPE DRAIN ENTRANCE USING A DROP PIPE WITH A SCREENED INLET (ALTERNATIVE: A STANDARD FLARED INLET). THE SLOPE OF THE ENTRANCE IS USUALLY AT LEAST 3 PERCENT.
4. UTILIZE ANTI–SEEP WATERTIGHT COLLARS TO JOIN PIPE SECTIONS.
5. THOROUGHLY COMPACT THE SOIL AROUND AND UNDER THE PIPE AND ENTRANCE SECTION IN MULTIPLE LIFTS.
6. STABILIZE OUTLET WITH RIPRAP. RIPRAP SHOULD CONSIST OF 6" DIAMETER STONE PLACED ACCORDING TO VOLUME OF DISCHARGE EXPECTED.

SLOPE DRAIN – SUBSURFACE PIPE 27

NOT TO SCALE



PLAN VIEW



FOREBAY CROSS SECTION

EMBANKMENT/CONTROL CROSS SECTION

APPLICATIONS

1. WHEN SITE RUNOFF IS SEDIMENT–LADEN AND/OR RUNOFF RELEASE RATE IS REQUIRED.
2. TO DETAIN RUNOFF SUFFICIENTLY TO ALLOW EXCESSIVE SEDIMENT TO SETTLE OUT BEFORE STORMWATER LEAVES CONSTRUCTION SITE.
3. AT THE OUTLET OF ANY DISTURBED AREA OR AT THE ULTIMATE SITE OUTLET.
4. SHOULD BE USED IN ASSOCIATION WITH DIKES, TEMPORARY CHANNELS, AND PIPES TO DIVERT STORMWATER FROM THE DISTURBED AREAS INTO THE BASIN.
5. MAY BE COMBINED WITH PERMANENT DETENTION BASIN.

DESIGN

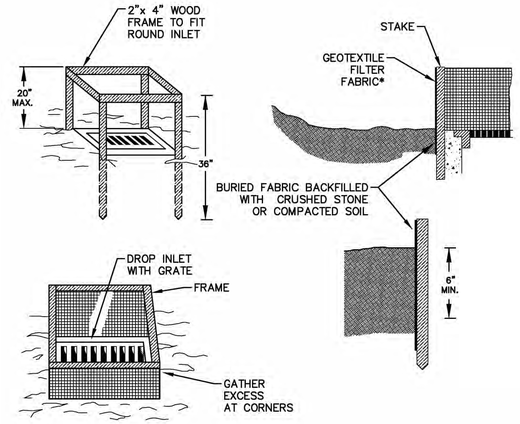
1. BASIN TO BE DESIGNED TO ENSURE ADEQUATE STORAGE VOLUME FROM THE CONTRIBUTING DRAINAGE AREA.
2. BASINS SHOULD BE CONSTRUCTED BEFORE CLEARING AND GRADING WORK BEGINS.
3. BASINS SHOULD BE LOCATED AT THE STORMWATER OUTLET FOR THE SITE AND MULTIPLE BASINS MAY BE LOCATED THROUGHOUT THE SITE.
4. BASIN LOCATION SHOULD ENSURE SUITABLE ACCESS FOR MAINTENANCE AND CLEANOUT.
5. DO NOT LOCATE IN A STREAM.
6. ALL BASIN SITES SHOULD BE LOCATED WHERE EMBANKMENT FAILURE WILL NOT COMPROMISE SAFETY OR RESULT IN PROPERTY DAMAGE.

DESIGN (CONT)

7. THE BASIN VOLUME SHOULD BE DESIGNED TO HANDLE THE VOLUME OF STORMWATER EXPECTED FROM THE DISTURBED ACREAGE FOR A MINIMUM 10–YEAR STORM EVENT.
8. THE BASIN VOLUME CONSISTS OF TWO ZONES
   - A SEDIMENT STORAGE ZONE TO A 1' MINIMUM DEPTH.
   - A SETTLING ZONE AT LEAST 2 FEET DEEP.
9. DESIGN SHOULD CONTAIN SUFFICIENT CAPACITY TO DETAIN RUNOFF FOR 24–48 HOURS, MAXIMIZING SEDIMENT SETTLEMENT POTENTIAL.
10. LENGTH TO WIDTH RATIO SHOULD BE GREATER THAN 4:1 TO ALLOW FOR SUFFICIENT SETTLEMENT TIME.
11. UTILIZE A WELL ANCHORED RISER PIPE WITH ANTI–SEEP COLLARS AS THE PRINCIPAL OUTLET, ALONG WITH AN EMERGENCY OVERFLOW SPILLWAY FOR MAJOR EVENTS.
12. TYPICALLY, PERMANENT BASINS ARE USED FOR DRAINAGE OF 5 ACRES OR MORE.

SEDIMENT BASIN 34

NO TO SCALE



APPLICATIONS

1. INLETS WITH DRAINAGE OF 1 ACRE OR LESS AND SLOPES LESS THEN 5%.
2. SERVICE, CLEAN AND REPAIR AFTER EACH STORM EVENT.

* NOTE *

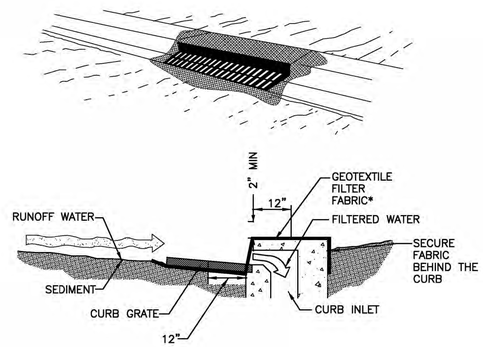
DO NOT USE SILT FENCE IN LIEU OF FILTER FABRIC FOR THIS APPLICATION.

DESIGN

1. FILTER BAGS MAY BE PLACED IN THE MANHOLE TO INCREASE THE EFFECTIVENESS OF THIS DEVICE.
2. IN SOME CASES FILTER BAGS IN THE MANHOLE MAY BE USED ALONE.
3. WARNING! THIS DEVICE MAY CAUSE FLOODING OF ADJACENT PROPERTY!
4. TOP OF FRAME (PONDING HEIGHTS) MUST BE LOWER THAN GROUND ELEVATION DOWN STREAM TO PREVENT BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY DOWN SLOPE OF THE STRUCTURE.

CATCH BASIN INLET PROTECTION 36

NO TO SCALE



APPLICATION

1. INLETS AT CURB OPENINGS.

* NOTE *

DO NOT USE SILT FENCE IN LIEU OF FILTER FABRIC FOR THIS APPLICATION.

DESIGN

1. WARNING! THIS DEVICE MAY CAUSE FLOODING OF ADJACENT PROPERTIES.
2. SERVICE CLEAN AND REPAIR AFTER EACH STORM EVENT.

FABRIC FILTER
CURB INLET PROTECTION 39

NOT TO SCALE

REV#	DATE	DESCRIPTION	BY

DESIGNED
DRAWN
CHECKED
DATE 12/19/13

KAREGNONDI WATER AUTHORITY
G–4610 BEECHER RD
FLINT, MI 48532
(810) 732–7870

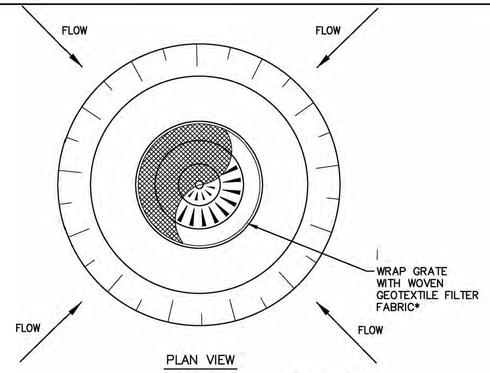
KWA WATER SUPPLY SYSTEM
CONTRACT S–XXXX
STANDARD DETAILS
SHEET 17

SHEET NUMBER
D–18
DP PROJECT NO.

CONTRACT S–XXXX

309

PROJECT MANAGER: Larry A. Osborn
C:\PW_WORK\DJH8287\DGT-PLTS-NEW-DETAILS.DWG – D-18 – PLOTTED 2/27/2014 10:17 AM BY DZIURKA, ERIK
FIELD BOOK INFORMATION:

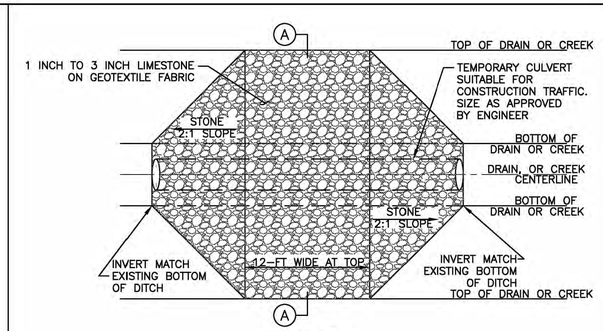


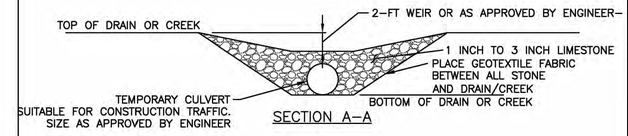
* NOTE *

DO NOT USE SILT OR ANY NON-WOVEN MATERIAL FENCE IN LIEU OF FILTER FABRIC FOR THIS APPLICATION.

INLET SEDIMENT TRAP 40

NO TO SCALE



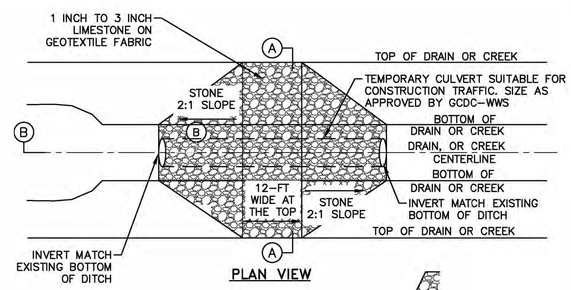


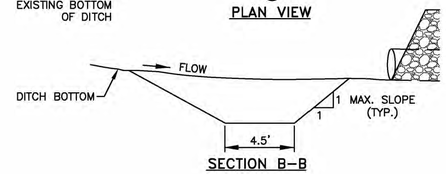
NOTES:

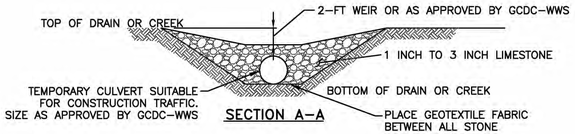
1. FORDING, DRIVING OR MOVING CONSTRUCTION EQUIPMENT OR VEHICLES THROUGH THE BED OF A DRAIN OR CREEK IS NOT PERMITTED AT ANY TIME.
2. TEMPORARY CROSSINGS SHALL BE REMOVED WITHIN TWO WEEKS OF THE WORK REACHING THE NEXT CROSS ROAD.
3. ALL STONE USED FOR THE TEMPORARY CROSSING SHALL BE REMOVED FROM THE DRAIN/CREEK.
4. SEED AND HIGH VELOCITY MULCH BLANKETS SHALL BE USED TO RESTORE DRAIN/CREEK BANKS. 3 TO 6 INCH SIZE STONE SHALL BE USED TO RESTORE THE BOTTOM OF THE DRAIN/CREEK.
5. CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR DAMAGE DUE TO WET WEATHER FLOWS.

TEMPORARY CULVERT 42

NOT TO SCALE





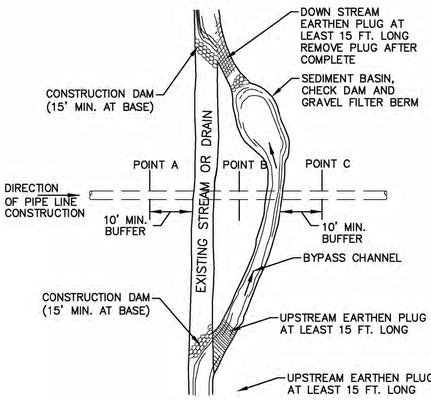


NOTES:

1. FORDING, DRIVING OR MOVING CONSTRUCTION EQUIPMENT OR VEHICLES THROUGH THE BED OF A DRAIN OR CREEK IS NOT PERMITTED AT ANY TIME.
2. TEMPORARY CROSSINGS SHALL BE REMOVED WITHIN TWO WEEKS OF THE WORK REACHING THE NEXT CROSS ROAD.
3. ALL STONE USED FOR THE TEMPORARY CROSSING SHALL BE REMOVED FROM THE DRAIN/CREEK.
4. SEED AND HIGH VELOCITY MULCH BLANKETS SHALL BE USED TO RESTORE DRAIN/CREEK BANKS. 3 TO 6 INCH SIZE STONE SHALL BE USED TO RESTORE THE BOTTOM OF THE DRAIN/CREEK.
5. CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR DAMAGE DUE TO WET WEATHER FLOWS.

CULVERT SEDIMENT TRAP 43

NOT TO SCALE



APPLICATIONS

1. STREAM CROSSING THAT NEEDS A DRY CONSTRUCTION SITE.

DESIGN

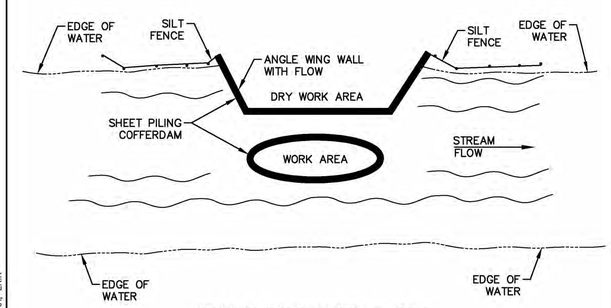
1. EXCAVATE BYPASS CHANNEL BEFORE PIPE LINE CONSTRUCTION REACHES POINT A.
2. INSTALL STREAM SEDIMENT BASIN.
3. REMOVE DOWNSTREAM PLUG AND STABILIZE CHANNEL DOWNSTREAM OF SEDIMENT BASIN WITH GEOTEXTILE FABRIC OR MDOT RIPRAP TO PREVENT EROSION. ALTERNATIVE IS TO LOCATE SEDIMENT BASIN ON DOWNSTREAM CHANNEL.
4. REMOVE UPSTREAM PLUG.
5. INSTALL UPSTREAM CONSTRUCTION DAM.

DESIGN (CONT)

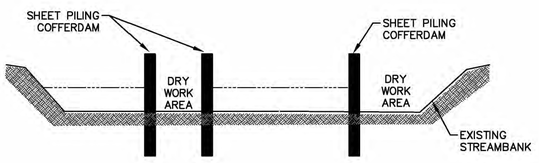
6. INSTALL DOWN STREAM CONSTRUCTION DAM.
7. INSTALL PIPELINE FROM POINT A TO POINT B AND STABILIZE DISTURBED STREAM CHANNEL AND BANKS WITH MULCH BLANKET AND/OR RIPRAP.
8. REMOVE DOWN STREAM CONSTRUCTION DAM.
9. REMOVE UP STREAM CONSTRUCTION DAM.
10. INSTALL EARTHEN PLUG AT UPSTREAM AND DOWN STREAM ENDS OF BYPASS CHANNEL STABILIZE WITH RIPRAP AND/OR MULCH BLANKET.
11. BACKFILL BYPASS CHANNEL.
12. STABILIZE AND RESTORE ALL DISTURBED AREAS.

TEMPORARY STREAM CHANNEL CHANGE 45

NOT TO SCALE



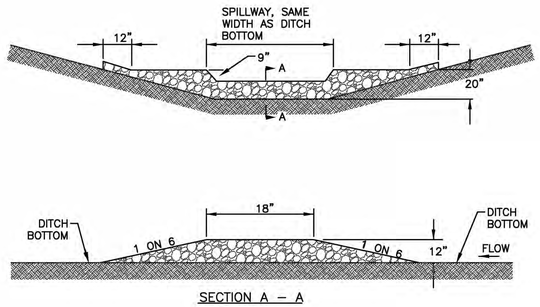
SHEET PILING COFFERDAM – PLAN



COFFERDAM CROSS-SECTION

COFFERDAM 47

NOT TO SCALE



APPLICATION

ACROSS DITCH LINES AND LOW CONCENTRATED FLOW AREAS.

DESIGN

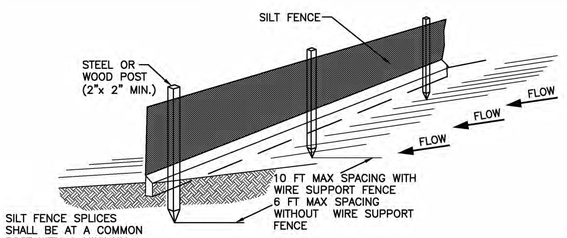
1. CHECK DAM STONES:
   *2" TO 4" SIZE FOR DITCH GRADE LESS THAN 2%.
   *3" TO 8" SIZE FOR DITCH GRADES 2% OR GREATER.
2. APPROXIMATELY 90% OF STONE SIZE SHALL BE BETWEEN THE RANGES INDICATED. NO STONES GREATER THAN 8" SHALL BE ALLOWED.
3. SEDIMENT TRAPS MAY BE INSTALLED IMMEDIATELY UP SLOPE TO INCREASE ABILITY TO COLLECT SEDIMENT.
4. IF MULTIPLE CHECK DAMS ARE USED, THE GENERAL GUIDE TO SPACING IS THAT THE CREST OF THE DOWN SLOPE CHECK DAM SHOULD EQUAL THE ELEVATION OF THE TOE OF THE UP SLOPE CHECK DAM.

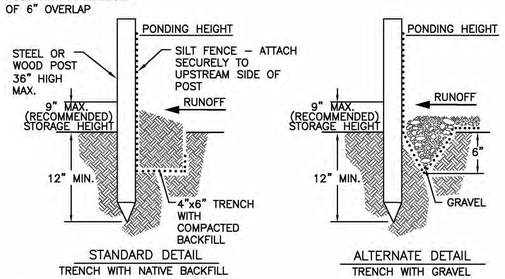
DESIGN (CONT)

5. CHECK DAMS SHALL BE REMOVED IN THEIR ENTIRETY WHEN THE SOIL IS ADEQUATELY STABILIZED. ANY DAMAGE CAUSED DURING REMOVAL MUST BE REPAIRED. IF DIRECTED BY THE ENGINEER/OWNER, CHECK DAMS MAY BE SPREAD OUT ON THE DITCH LOCATION PROVIDING THAT THE DITCH BOTTOM ELEVATION IS NOT INCREASED BY MORE THAN 6".
6. STONE SHALL BE MONITORED AND REPAIRED WHEN DAMAGED OR DISPLACED.
7. ALTERNATE: A MANUFACTURED BERM CAN INSTALLED IF APPROVED BY ENGINEER. SPACING TO BE PER MANUFACTURER'S RECOMMENDATION.
8. WARNING THIS DEVICE MAY CAUSE FLOODING OF ADJACENT PROPERTY.

CHECK DAM 49

NOT TO SCALE





APPLICATIONS

1. INSTALLED TO REDUCE SEDIMENT LADEN SURFACE RUNOFF FROM LEAVING THE PROPERTY OF A CONSTRUCTION SITE INVOLVING DISTURBED EARTH.
2. DIVERSIONARY STRUCTURE.

DESIGN

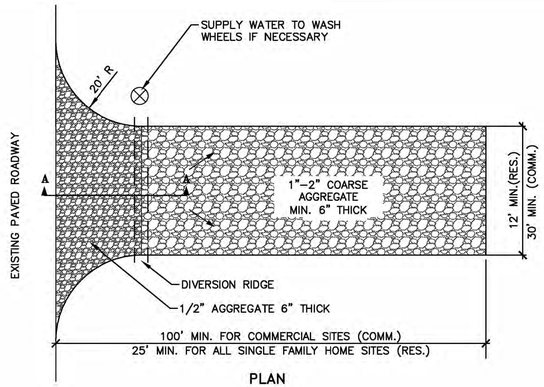
1. INSTALL AROUND THE BASE OF SOIL STOCKPILES.
2. UTILIZE FOR SHEET FLOW ONLY.

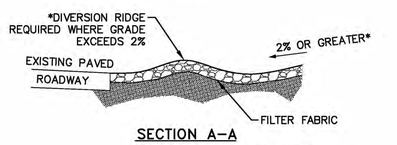
DESIGN (CONT)

3. INSTALL ON DOWN STREAM SIDE OF CONSTRUCTION.
4. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
5. IF POSSIBLE LOCATE FENCE 10-FT. FROM TOP OF SLOPE, WETLAND OR WATER BODY.

SILT FENCE 54

NOT TO SCALE





APPLICATIONS

1. ASSISTS IN REMOVING SOIL FROM THE TIRES OF CONSTRUCTION EQUIPMENT/VECHICLES WHEN EXITING THE CONSTRUCTION SITE. THIS REDUCES TRACKING EXCESSIVE SEDIMENT/SOIL ONTO THE ADJACENT ROAD.

DESIGN

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ON PUBLIC RIGHTS-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE 60

NOT TO SCALE

PROJECT MANAGER: Larry A. Osborn
C:\PW_WORK\JOHNSR\D0192877\dgn\PLTS-NEW-DETAILS.DWG - D-19 - PLOTTED 2/27/2014 10:17 AM BY DZIURKA, ERIK
FIELD BOOK INFORMATION:

REV#	DATE	DESCRIPTION	BY	
				DESIGNED
				DRAWN
				CHECKED
				DATE 12/19/13

KAREGNONDI WATER AUTHORITY
G-4610 BEECHER RD
FLINT, MI 48532
(810) 732-7870

KWA WATER SUPPLY SYSTEM
CONTRACT S-XXXX
STANDARD DETAILS
SHEET 18

SHEET NUMBER
D-19
DP PROJECT NO.

CONTRACT S-XXXX

310

Type I Wetland Restoration Table Contract No. S.5004 (Revised 11/24/15)

					Tree Species			Scrub Shrub Species			Seeding
Contract	Impact Number	Name	Delineated Wetland Type	Type I Delineated Wetland Grade Restoration (Ac)	Common Name	Spacing	Number of Trees	Common Name	Spacing	Revised Number of Scrub Shrubs	Ounces of Live Seed Mix
								Silky dogwood	6' on center.	3	
								Sandbar Willow	6' on center.	3	
S5004	59-REV1	Wetland	WM/FO	0.14			0	Grey Dogwood	6' on center.	3	6
S5004	59-REV2	Wetland	WM	0.005	Red Maple	10' on Center	4				0
	TOTAL			0.14			4			9	6

Seed Mix Forested and SS Wetland			
Scientific Name	Common Name	Seed Mix Ounces/Acre	Seed Mix Ounces/Linear Foot
Calamagrostis canadensis	Bluejoint Grass	1	0.0009
Carex crinita	Fringed Sedge	2	0.0018
Carex lupulina	Common Hop Sedge	4	0.0037
Carex lurida	Bottlebrush Sedge	1.5	0.0014
Carex frankii	Brisby Cattail Sedge	3	0.0028
Carex squarosa	Narrow-Leaved Cattail Sedge	1	0.0009
Carex typhlina	Common Cattail Sedge	1	0.0009
Carex vulpinoidea	Brown Fox Sedge	4	0.0037
Elymus virginicus	Virginia Wild Rye	20	0.0184
Glyceria striata	Fowl Manna Grass	2	0.0018
Leersia oryzoides	Rice Cut Grass	2	0.0018
Scirpus atrovirens	Dark Green Rush	2	0.0018
Spartina pectinata	Prairie Cord Grass	1	0.0009
	TOTAL	44.5	0.0409

*Ounce per linear foot based on 40 foot width.

Wetland Disturbance Comparison

Wetland Impacts Associated with Original Route		
Impact Number	Wetland Type	Area (Ac.)
59	EM	0.05
60	EM/SS	0.40
	TOTAL	**0.45**
Wetland Impacts Associated with Re-Route		
Impact Number	Wetland Type	Area (Ac.)
59-REV1	WM/FO	0.14
59-REV2	WM	0.005
	TOTAL	**0.14**
Net Wetland Disturbance Compared to Original Route		**-0.30**

From: Clampitt, Christopher (DEQ)
Sent: Tuesday, December 01, 2015 9:24 AM
To: Vanderlaan, Mary (DEQ);Kammer, Stephanie (DEQ);Kolhoff, Thomas (DEQ);Smith, Justin (DEQ);Valor, Carol (DEQ);Cervelli, Donna (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: KWA chair no longer Flint Mayor

KWA picks Sanilac drain commissioner as chief, new Flint mayor tries for the job

FLINT, MI — The Karegnondi Water Authority Board of Trustees chose existing members as its new leadership.

On Wednesday, Nov. 25, the board for the KWA voted for Greg Alexander as chairman and Jamie Curtis as its vice chairman. Alexander is the Sanilac County drain commissioner, and was the vice chairman for the past few years under former Flint Mayor Dayne Walling, who was the chairman. Curtis is chairman of the Genesee County Board of Commissioners.

http://www.mlive.com/news/flint/index.ssf/2015/11/water_authority_votes_former_v.html#incart_river_index

Christopher Clampitt
Lansing District
Water Resources Division
Michigan Department of Environmental Quality
525 W. Allegan Street
P.O. Box 30242
Lansing, MI 48909
Phone: 517-243-6956; FAX: 517-241-3571

From: Henry, James <jhenry@gchd.us>
Sent: Friday, June 05, 2015 4:37 PM
To: Collins, Jim (DCH);Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne;Hasan, Shurooq;Childs, Bonnie;Valacak, Mark;Yoder, Jonathan S. (CDC/OID/NCEZID);Langley, Gayle E. (CDC/OID/NCIRD);Fialkowski, Veronica (DCH);Weinberg, Meghan (DCH);Tyndall Snow, Leigh (DCH);Johnson, Shannon (DCH);Fiedler, Jay (DCH);Bohm, Susan (DCH);GJOHNSON@gchd.us;Wright, Michael;Prysby, Mike (DEQ);Connolly, Stephanie
Subject: Legionellosis Outbreak Investigation

Hello Team,

The executive summary regarding the Legionella outbreak is appreciated, but I don't know if there is consensus that it is over. We have been collaborating with our local, state and federal partners regarding the next steps and efforts to improve methods to obtain adequate clinical and environmental isolates.

Genesee County has had three confirmed Legionella cases, since the beginning of May 2015. The most recent cases on 6/1/15 and 6/2/15 have provided sputum samples to McLaren Hospital for analysis. We have discussed concerns regarding the hospitals' lack of success isolating the bacteria and MDCH and CDC have expressed interest to assist with the process.

Below is a brief summary of the recent cases.

Patient #1 MDSS 7117888505 Patricia Schaffer, 408 Sharon Dr. Flushing, MI 48433. Ms. Schaffer is 81 years old. She was admitted to McLaren Hospital on 4/18/15 and discharged on 4/29/15. She returned to McLaren on 5/4/15 and was diagnosed with Legionella. McLaren attempted, but was unable to collect an adequate respiratory specimen. Ms. Schaffer does not receive Flint water at her residence.

Patient #2 MDSS #7208825131 Robert Skidmore, 576 Melrose Ln., Mt. Morris, MI 48458. Mr. Skidmore is 84 years old. He was admitted to McLaren Hospital on 5/13/15 and discharged on 5/19/15. He returned to McLaren on 6/1/15 and diagnosed with Legionella. Mr. Skidmore does not receive Flint water at his residence.

Patient #3 MDSS 7202952890 Gradine Rogers, 2314 Barth Street, Flint MI, 48504. Ms. Rogers is 74 years old. She was admitted to Hurley Hospital on 2/8/15, and discharged on 3/1/15. Hurley Hospital receives Flint water. Ms. Rogers went to McLaren on 5/29/15 and was diagnosed with Legionella. She resides approximately 2-3 miles North of McLaren Hospital. She receives Flint water at her residence. Her son, Dr. Antrick Johnson indicated that she has been ill since returning home from Hurley Hospital on 3/1/15. He also mentioned that there has been low water pressure events at their residence.

GCHD is prepared to collect environmental samples, as previously discussed, but without the clinical isolate the environmental samples may not have much value.

If there are recommendations, questions or concerns, please reply to the group, as we all have different roles with the investigation.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Collins, Jim (DCH) [mailto:CollinsJ12@michigan.gov]
Sent: Thursday, June 4, 2015 3:17 PM
To: Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Henry, James; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Weinberg, Meghan (DCH); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (DCH); Bohm, Susan (DCH)
Subject: Flint, Michigan - Legionellosis Outbreak Investigation Summary

Good Afternoon,

As we enter summer (finally) here in Michigan, I wanted to share a summary of the analysis of the data around this past year's increase in legionella cases identified in proximity to the city of Flint. As you'll recall, while there were no clinical specimens available for testing from the 45 cases included in the investigation, there was a significant outreach to gather more patient information from cases. I've attached an executive summary of the investigation and analysis to this post.

Please feel free to contact us is you have any questions,
Jim

Jim Collins MPH, RS
Director, CD Division
MDHHS
Desk: 517-335-8586
Cell: PPI

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From: Henry, James <jhenry@gchd.us>
Sent: Friday, June 05, 2015 6:20 PM
To: Collins, Jim (DCH);Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne;Hasan, Shurooq;Childs, Bonnie;Valacak, Mark;Yoder, Jonathan S. (CDC/OID/NCEZID);Langley, Gayle E. (CDC/OID/NCIRD);Fialkowski, Veronica (DCH);Weinberg, Meghan (DCH);Tyndall Snow, Leigh (DCH);Johnson, Shannon (DCH);Fiedler, Jay (DCH);Bohm, Susan (DCH);GJOHNSON@gchd.us;Wright, Michael;Prysby, Mike (DEQ);Connolly, Stephanie
Subject: RE: Legionellosis Outbreak Investigation

I recalled the original email. I didn't consider hackers or intended recipients may allow others (unintended recipients) to access their email. It won't happen again. I hope the statement below is appropriate and adequately conveys the message.

Sincerely,
Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Henry, James
Sent: Friday, June 5, 2015 4:37 PM
To: 'Collins, Jim (DCH)'; Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Weinberg, Meghan (DCH); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (DCH); Bohm, Susan (DCH); 'GJOHNSON@gchd.us'; 'Wright, Michael'; Prysby, Mike (DEQ) (PRYSBYM@michigan.gov); Connolly, Stephanie
Subject: Legionellosis Outbreak Investigation

Hello Team,

The executive summary regarding the Legionella outbreak is appreciated, but I don't know if there is consensus that it is over. We have been collaborating with our local, state and federal partners regarding the next steps and efforts to improve methods to obtain adequate clinical and environmental isolates.

Genesee County has had three confirmed Legionella cases, since the beginning of May 2015. The most recent cases have provided sputum samples to McLaren Hospital for analysis. We have discussed concerns regarding the hospitals' lack of success isolating the bacteria and MDCH and CDC have expressed interest to assist with the process.

Below is a brief summary of the recent cases.

Patient #1 MDSS 7117888505 Patient #1 was admitted to McLaren Hospital. Approximately one week after being discharged, returned to McLaren and was diagnosed with Legionella. McLaren attempted, but was unable to collect an adequate respiratory specimen. Patient #1 does not receive Flint water at residence.

Patient #2 MDSS #7208825131 Patient #2 was admitted to McLaren Hospital. Approximately 10 days after being discharged, returned to McLaren and was diagnosed with Legionella. Patient #2 does not receive Flint water at residence.

Patient #3 MDSS 7202952890 Patient #3 was admitted to Hurley Hospital. Approximately two months after being discharged, went to McLaren and was diagnosed with Legionella. Patient #3 resides approximately 2-3 miles North of McLaren Hospital and receives Flint water. A family memeber of Patient #3, indicated that illnesses lingered after returning home from Hurley Hospital and also mentioned that there has been low water pressure events at their residence.

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From: Henry, James <jhenry@gchd.us>
Sent: Friday, June 05, 2015 7:06 PM
To: Garrison, Laurel (CDC/OID/NCIRD);Collins, Jim (DCH)
Cc: Cupal, Suzanne;Hasan, Shurooq;Childs, Bonnie;Valacak, Mark;Yoder, Jonathan S. (CDC/OID/NCEZID);Langley, Gayle E. (CDC/OID/NCIRD);Fialkowski, Veronica (DCH);Weinberg, Meghan (DCH);Tyndall Snow, Leigh (DCH);Johnson, Shannon (DCH);Fiedler, Jay (DCH);Bohm, Susan (DCH);Johnson, M.D., Gary;Wright, Michael;Prysby, Mike (DEQ);Connolly, Stephanie
Subject: RE: Legionellosis Outbreak Investigation

A conference call sounds great. We have a good rapport with the hospitals and some details of their activities. McLaren sampled, identified Legionella and hyper chlorinated, which brought most levels to "less than 1". Hurley has increased filtration (reverse osmosis) and ion exchange in certain areas, but are not sampling. I'll try to get an update of their activities on Monday.

Have a good weekend.
Jim

Jim Henry RS, MBA
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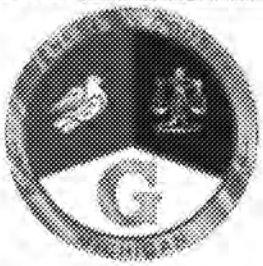

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Sent: Friday, June 5, 2015 5:05 PM
To: Henry, James; Collins, Jim (CDC michigan.gov)
Cc: Cupal, Suzanne; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Meghan Weinberg (CDC michigan.gov); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (CDC michigan.gov); Bohm, Susan (CDC michigan.gov); Johnson, M.D., Gary; Wright, Michael; PRYSBYM@michigan.gov; Connolly, Stephanie
Subject: RE: Legionellosis Outbreak Investigation

Thanks, Jim. I'm concerned about the hospital. I can get our folks together for a call to discuss next week if you'd like. Do you have the details of what they've been doing to address the colonization there?

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Friday, June 05, 2015 4:37 PM
To: Collins, Jim (CDC michigan.gov); Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Meghan Weinberg (CDC michigan.gov); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (CDC michigan.gov); Bohm, Susan (CDC michigan.gov); GJOHNSON@gchd.us; Wright, Michael; PRYSBYM@michigan.gov; Connolly, Stephanie
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Please feel free to contact us is you have any questions,
Jim

Jim Collins MPH, RS
Director, CD Division
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Desk: 517-335-8586
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From: Busch, Stephen (DEQ)
Sent: Tuesday, November 17, 2015 4:57 PM
To: rbincsik@cityofflint.com
Cc: Prysby, Mike (DEQ)
Subject: Table
Attachments: Flint LCR Site Reporting History.pdf

Rob,

Attached is an electronic copy of the table per your request.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

of Flint Lead and
All results in parts per million,
L=Lead, , G=Galvanized, P=Plastic

Sam	Location	Sam Categor	Service Line	Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
	3714 Beecher Rd.	1	L	C														1LC	498	(n/a)	
	3714 Beecher Rd.	1	L	C,P														1LC/P	498		
	318 Marquette	1	L	G	1LG	1LG													675	(n/a)	
	416 M	1	L	C					1LC										757		
	911 Hughes	1	L	C							1LC	1LC							977	(n/a)	
	2111 Brownell Blvd.	1	L	C						1LC									3725		
	2201 Brownell	1	L	G	1LG	1LG													3800	(n/a)	
	2455 Thomas	1	L	G									1LG						4265		
	2463 Thomas	1	L	G	1LG	1LG													4267	(n/a)	
	2467 Thomas	1	L	G			1LG	1LG	1LG	1LG	1LG								4269		
	2471 Norbert	1	L	G,C				1LG/C	1LG/C	1LG/C	1LG/C	1LG/C							4272	(n/a)	
	2512 Altoona	1	L	G									1LG						4306		
	2922 Barth St.	1	L	C										1LC	1LC	1LC			5536	(n/a)	
	3722 Van Buren	1	L	P															8048		

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
920 Stocker St.	1	L	P													1LP	1LP	1062	[redacted]	
1020 Wellman	1	L	C										1LC	1LC				1481	copper	
1809 W. Home Ave.	1	L	no data													1L		3178	[redacted]	
1810 W. Hobson Ave.	1	L	no data													1L		3193	copper	
1914 W. Home Ave.	1	L	no data													1L		3433	[redacted]	
2020 Crooked Ln.	1	L	C,P														1LC/P	3643	copper	
2230 Winona	1	L	C					1LC	1LC	1LC	1LC							3922	[redacted]	
2559 Norbert	1	L	C									1LC						4516	copper	
2560 Thomas St.	1	L	no data													1L		4518	[redacted]	
2574 Nolen	1	L	C					1LC										4538	copper	
2619 Thomas	1	L	G							1LG	1LG							4634	[redacted]	
2730 Coventry Ct.	1	L	no data													1L		4957	copper	
2806 Norbert St.	1	L	no data													1L		5127	[redacted]	
2810 Kellar Ave.	1	L	no data													1L		5143	[redacted]	

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
3120 Norwood	1	L	C,P										1LC/P	1LC/P	1LC/P	1L	1LP	6204	[redacted]	
3131 Wolcott	1	L	no data													1L		6275	copper	
3227 Raskob	1	L	C,P											1LC/P				6640	[redacted]	
3314 Gratiot Ave.	1	L	C											1LC				6811	copper	
3510 Brandon St.	1	L	no data													1L		7368	[redacted]	
3623 Norwood Dr.	1	L	no data													1L		7776	copper	
3805 Larchmont	1	L	C,P												1LC/P			8125	[redacted]	
3808 Brownell Blvd	1	L	no data													1L		8156	copper	
3811 Brentwood. Dr.	1	L	P														1LP	8200	[redacted]	
4013 Brownell Blvd.	1	L	C,P													1LC/P	1LC/P	8744	copper	
5805 Leslie Dr.	1	L	no data													1L		10198	[redacted]	
5806 Leslie Dr.	1	L	no data													1L		10207	copper	
309 M[redacted]	1	L	C	1LC	1LC													662	[redacted]	Confirmed
915 H[redacted]	1	L	C						1LC	1LC	1LC							1021	[redacted]	Confirmed

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Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
2470 Nolen Dr.	1	L	C					1LC										4271	[redacted]	Confirmed
2527 Altoona	1	L	C									1LC						4406	lead-copper	Confirmed
2534 Norbert	1	L	C									1LC						4441	[redacted]	Confirmed
2615 Trumbull Ave.	1	L	C,P														1LC/P	4614	lead-copper	Confirmed
1002 Durand St.	1	L	no data													1L				
1006 Kensington	1	L	no data													1L				
1016 [redacted] Ave.	1	L	C,P														1LC/P			
1017 Simcoe Ave.	1	L	C											1LC						
1021 S. Franklin Ave.	1	L	no data													1L				
1100 Stockton St.	1	L	C,P										1LC/P			1L				
1109 [redacted] Ave.	1	L	no data													1L				
111 Prospect	1	L	C,P										1LC/P							
1125 Barrie Ave	1	L	no data													1L				
1130 Simcoe Ave.	1	L	no data													1L				

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
1150 Woodside Dr.	1	L	P														1LP			
1205 Blanchard Ave.	1	L	C,P														1LC/P			
1210 Cam[redacted]l St.	1	L	C,P										1LC/P							
1220 Beard St.	1	L	no data													1L				
1220 Decker St.	1	L	P														1LP			
1223 Campbell St.	1	L	G											1LG		1L				
1224 Decker St.	1	L	C,P														1LC/P			
1248 Niagra	1	L	G										1LG							
1367 [redacted] Ave.	1	L	P														1LP			
1372 Washington Ave.	1	L	C,P														1LC/P			
1379 [redacted] Ave.	1	L	P														1LP			
1383 Washington Ave.	1	L	C,P														1LC/P			
1401 [redacted] Ave.	1	L	no data													1L				
1401 [redacted]	1	L	G	1LG	1LG	1LG	1LG	1LG	1LG											

All results in [redacted] million, [redacted]
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1405 [redacted]	1	L	C							1LC	1LC									
1414 Stone St.	1	L	no data													1L				
1422 [redacted] Ave.	1	L	C,P										1LC/P							
1505 Kensington	1	L	G										1LG	1LG	1LG					
1505 Woodlawn Park Dr.	1	L	no data													1L				
1519 Lincoln	1	L	C			1LC	1LC	1LC	1LC	1LC	1LC									
1528 Delaware Ave.	1	L	P														1LP			
1537 Lincoln	1	L	G											1LG						
1543 Kea[redacted] Park Blvd.	1	L	no data													1L				
1559 Chevrolet Ave.	1	L	no data													1L				
1602 [redacted] Ln.	1	L	P														1LP			
1613 Woodlawn Pk	1	L	G	1LG	1LG	1LG	1LG	1LG	1LG	1LG	1LG	1LG								
1614 Woodlawn Pk	1	L	C	1LC	1LC	1LC	1LC	1LC	1LC	1LC	1LC									
1615 S. Franklin Ave.	1	L	P														1LP			

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
1616 Durand St.	1	L	no data													1L				
1623 Neome Dr.	1	L	no data													1L				
1636 [redacted] Lane	1	None	None											1						
1651 Woodlawn Park Dr.	1	L	G											1LG	1LG	1L				
1701 Forest Hill	1	L	L,P										1LL/P							
1701 Marquette Dr.	1	L	C,P														1LC/P			
1701 [redacted]	1	L	G,C				1LG/C													
1720 Davison Rd.	1	L	no data													1L				
1721 Chelsea Circle	1	L	no data													1L				
1725 Lincoln Ave.	1	L	no data													1L				
1730 Overhill Dr.	1	L	C,P														1LC/P			
1801 Greenbriar Lane	1	L	C											1LC						
1805 Proctor	1	L	G			1LG		1LG	1LG											
1805 [redacted] Blvd.	1	L	no data													1L				

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
1807 Oren Ave.	1	L	P														1LP			
1809 E. Court Street	1	L	C,P												1LC/P					
1809 [redacted]	1	L	P													1LP	1LP			
1809 Stevenson St.	1	L	P														1LP			
1818 Rock Creek Ln.	1	L	C,P														1LC/P			
1901 Crestbrook Ln.	1	L	no data													1L				
1901 Montclair Ave	1	L	no data													1L				
1906 Knapman	1	L	C											1LC						
1910 [redacted] Blvd	1	L	no data													1L				
1911 Corry St.	1	L	no data													1L				
1914 Penbrook Lane	1	L	C,P											1LC/P	1LC/P	1L	1LP			
1922 Bagley	1	L	C							1LC										
1922 Barth	1	L	G	1LG	1LG	1LG		1LG												
2006 Aitken Ave.	1	L	no data													1L				

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
2006 Clement St	1	L	no data													1L				
201 Browning Ave	1	L	P														1LP			
2014 Leith	1	L	G			1LG														
2014 Leith	1	L	C						1LC											
2015 Gold Ave	1	L	no data													1L				
2023 Miller Rd.	1	L	C,P														1LC/P			
2026 Hill	1	L	C			1LC	1LC					1LC								
2028 Corunna Rd.	1	L	no data													1L				
2048 Mc Phail St	1	L	C										1LC							
206 Baker St.	1	L	C						1LC											
2101 [redacted]	1	L	G	1LG	1LG															
2110 Flushing Rd.	1	L	C														1LC			
2110 Mountain Ave.	1	L	no data													1L				
2110 N. Stevenson	1	L	G	1LG	1LG	1LG	1LG	1LG	1LG											

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam Categor	Service Line	Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
2112 Sherff	1	L	C,P														1LC/P			
2114 Flushing Rd.	1	L	C,P														1LC/P			
2117 Stanford Ave.	1	L	C,P													1LC/P	1LC/P			
2122 Pierce St	1	L	P														1LP			
2124 Wisconsin	1	L	G										1LG							
2126 Nebraska	1	L	C							1LC	1LC	1LC								
2130 Flush[redacted]	1	L	C	1LC	1LC												1CP			
215 Browning Ave.	1	L	C,P														1LC/P			
216 [redacted] Ave.	1	L	C,P														1LC/P			
2202 Flushing Rd.	1	L	C,P														1LC/P			
2202 Joliet	1	L	G	1LG	1LG															
2205 Flushing Rd.	1	L	C,P													1LC/P	1LC/P			
2207 Windemere	1	L	G			1LG	1LG		1LG	1LG										
2213 Flush[redacted] Rd	1	L	no data													1L				

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
2214 Nebraska	1	L	C	1LC	1LC															
224 E. Court St.	1	L	no data													1L				
229 Baker St.	1	L	C							1LC										
2300 Flushing Rd.	1	L	C														1LC			
2306 Levern	1	L	G/C								1LG/C									
2307 Radcliffe	1	L	no data													1L				
2310-610 Garland	1	L	G/C								1LG/C									
2322 Calumet	1	L	C	1LC	1LC	1LC	1LC	1LC	1LC	1LC	1LC									
238 Peer	1	L	C		1LC															
2402 Altoona	1	L	G													1LG				
2411 Illinois	1	L	C,P														1LC/P			
2414 Flushing Rd.	1	L	P														1LP			
2416 Altoona	1	L	G													1LG				
2417 Thomas	1	L	G													1LG				

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
2418 Gold Ave.	1	L	no data													1L				
2420 Norbert	1	L	G	1LG	1LG															
2424 Thomas	1	L	G									1LG								
2428 Thomas	1	L	G	1LG	1LG															
2429 Flush[redacted] Rd.	1	L	C,P														1LC/P			
2432 Beta Ln.	1	L	P														1LP			
2436 Norbert	1	L	G,C				1LG/C	1LG/C			1LG/C									
2440 Norbert	1	L	C					1LC					1LC							
2441 Norbert	1	L	no data													1L				
2443 Thomas	1	L	C	1LC	1LC	1LC	1LC	1LC	1LC	1LC										
2448 Nolen	1	L	C	1LC	1LC															
2448 Thomas	1	L	G	1LG	1LG															
2451 Thomas	1	L	G									1LG								
2453 Norbert	1	L	[redacted]				1LG/C													

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Service Line Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
2459 Norbert	1	L	C					1LC		1L/GC										
2465 Norbert	1	L	G,C				1LG/C	1LG/C	1LG/C	1LG/C	1LG/C									
2472 Thomas	1	L	G	1LG	1LG	1LG	1LG	1LG	1LG	1LG	1LG									
2501 Bagley	1	L	G	1LG	1LG								1LG							
25151 Ch[redacted] Blvd.	1	L	no data													1L				
2517 Delaware Ave.	1	L	no data													1L				
2519 Norbert	1	L	G									1LG								
2522 Wolcott	1	L	C							1LC	1LC									
2554 Norbert	1	L	C									1LC								
2601 Mackin	1	L	G	1LG	1LG	1LG	1LG	1LG	1LG	1LG	1LG									
2606 Mountain Ave	1	L	P														1LP			
2615 Westwood Pkwy	1	L	no data													1L				
2617 [redacted] Street	1	L	C,P												1LC/P					
2622 Windmere	1	L	no data													1L				

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
2625 Pinetree Dr.	1	L	C												1LC					
2648 Swayze	1	L	C,P												1LC/P					
2701 Yale	1	L	C			1LC	1LC	1LC												
2705 Yale	1	L	C			1LC														
2706 Cum[redacted]	1	L	C						1LC	1LC	1LC									
2709 Yale	1	L	C			1LC	1LC		1LC											
2709 Zimmerman	1	L	no data													1L				
2710 Yale	1	L	C			1LC		1LC	1LC	1LC	1LC									
2713 Yale	1	L	C			1LC	1LC		1LC	1LC	1LC									
2714 Yale	1	L	C			1LC	1LC													
2717 Yale	1	L	C			1LC	1LC													
2718 Yale	1	L	C			1LC	1LC	1LC	1LC											
2721 Westwood[redacted]	1	L	no data													1L				
2721 Yale	1	L	C			1LC	1LC													

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
2730 Westwood [redacted]	1	L	no data													1L				
2734 Yale	1	L	C			1LC	1LC	1LC												
2751 [redacted]	1	L	L			1LL	1LL	1LL	1LL											
2762 Yale	1	L	C											1LC						
2801 [redacted]	1	L	no data													1L				
2801 Yale	1	L	C			1LC								1LC						
2802 Westwood [redacted]	1	L	no data													1L				
2821 Hillcrest	1	L	C											1LC						
2829 Yale St.	1	L	no data													1L				
2920 N. Dexter St.	1	L	no data													1L				
2920 Parkside Dr.	1	L	no data													1L				
2937 Oklahoma	1	L	G	1LG	1LG															
2937 Oklahoma	1	L	C				1LC													
3005 Montana Ave.	1	L	P												1LC/P					

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam Categor	Service Line	Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	Service Line Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
3009 Montana	1	L	L,C										1LL/C	1LL/C	1LL/C	1L				
3010 Cheyenne St.	1	L	C,P														1LC/P			
3022 Arizona	1	L	C										1LC							
305 Allendale	1	L	C,P												1LC/P	1L				
306 S. Vernon Ave.	1	L	C											1LC						
3082 Lanning Dr.	1	L	no data													1L				
310 E. Foss	1	L	C	1LC																
310 E. Moore St.	1	L	P														1LP			
3107 Leith St.	1	L	C										1LC	1LC	1LC					
3119 Leith St.	1	L	C,P										1LC/P	1LC/P	1LC/P					
313 E. Stewart	1	L	G							1LG	1LG									
3139 Colorado	1	L	no data													1L				
3142 McClure	1	L	P														1LP			
3202 Camden	1	L	C							1LC	1LC	1LC								

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Service Line Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
3205 [redacted] Ave	1	L	C,P												1LC/P					
3245 Montana Ave.	1	L	no data													1L				
328 Robbie Ln.	1	L	C,P														1LC/P			
3320 Leith St.	1	L	C,P											1LC/P						
3405 Brunswick Ave.	1	L	C											1LC						
341 Robbie Ln.	1	L	C,P														1LC/P			
3413 Brunswick	1	L	C					1LC	1LC	1LC	1LC		1LC	1LC	1LC					
344 Robbie Ln.	1	L	C,P														1LC/P			
3440 [redacted]	1	L	no data													1L				
349 Robbie Ln.	1	L	P														1LP			
3507 Dearborn Ave.	1	L	no data													1L				
3517 Bennett Ave.	1	L	C,P												1LC/P	1L	1LC/P			
352 Commonwealth	1	L	C				1LC	1LC	1LC	1LC	1LC									
3521 Bennett	1	L	P										1LC/P	1LC/P	1LC/P	1L	1LP			

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam Categor	Service Line	Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
353 Robbie Ln.	1	L	C,P														1LC/P			
357 Robbie Ln.	1	L	C														1LC			
3602 Camden	1	L	P										1LP							
3602 N. Term St.	1	L	C,P											1LC/P						
3613 Cassius	1	L	C	1LC	1LC															
3614 Branch	1	L	C,P										1LC/P							
3704 Circle	1	L	C	1LC	1LC															
3706 Leith	1	L	C								1LC									
3713 Hirrick St.	1	L	C,P										1LC/P							
3714 Circle	1	L	C	1LC	1LC															
3714 Leith	1	L	C							1LC	1LC	1LC	1LC							
3718 Dolphaine Ln.	1	L	no data														1L			
3727 [redacted] Ave.	1	L	no data														1L			
3737 Worchester Dr.	1	L	no data														1L			

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
3802 [redacted] Ave.	1	L	no data													1L				
3814 Deleware Ave.	1	L	P												1LP					
3814 Whitter Ave.	1	L	P													1LP	1LP			
3821 Deleware	1	L	C,P												1LC/P	1L				
3829 Ivanhoe Ave.	1	L	no data													1L				
3901 Leedra St.	1	L	P														1LP			
401 E. Newall St.	1	L	P														1LP			
4024 Sterling	1	L	no data													1L				
413 Bu[redacted] Ave.	1	L	P										1LP	1LP	1LP	1L				
415 W 4th Ave.	1	L	C,P												1LC/P					
4205 [redacted]	1	L	C										1LC	1LC						
421 Lyon St.	1	L	C,P														1LC/P			
422 W. [redacted]	1	None	None						1											
430 Westcombe Ave.	1	L	no data													1L				

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
4317 [redacted]	1	L	C	1LC	1LC															
502 Crapo	1	L	C	1LC	1LC	1LC	1LC	1LC	1LC											
508 Avon	1	L	C			1LC	1LC	1LC	1LC											
509 Mathewson	1	L	L			1LL	1LL	1LL	1LL											
518 Frost	1	L	no data													1L				
530 Leta	1	L	C	1LC	1LC															
5303 Custer Ave.	1	L	C,P														1LC/P			
5410 Edwards Ave.	1	L	C											1LC						
547 [redacted] Blvd.	1	L	P														1LP			
5801 Edwards Ave.	1	L	C								1LC									
605 Bu[redacted]	1	L	G,C										1LG/C							
611 Weller	1	L	C	1LC	1LC	1LC	1LC	1LC	1LC	1LC	1LC									
616 Carrill Ct. #2	1	L	C											1LC						
617 [redacted] Place	1	L	[redacted]										1LG/C							

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
618 S. Meade St.	1	L	no data													1L				
626 Commonwealth Ave	1	L	no data													1L				
631 Alvord Ave.	1	L	P														1LP			
638 W. Pulaski Ave.	1	L	C											1LC						
709 Frost St.	1	L	P													1LP	1LP			
710 Leland St.	1	L	C											1LC						
711 [redacted] Ave	1	L	no data													1L				
721 East St.	1	L	C,P													1LC/P	1LC/P			
722 M[redacted]	1	L	C										1LC							
734 E. Foss	1	L	C	1LC	1LC															
742 Lincoln Ave.	1	L	P													1LP	1LP			
778 Bundy Ave.	1	L	P														1LP			
809 E. 3rd Street	1	L	G										1LG	1LG						
811 Oak St.	1	L	G											1LG						

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
815 Brad[redacted] Ave	1	L	no data													1L				
822 E. 6th St.	1	L	C,P										1LC/P	1LC/P						
830 E. 7th Street	1	L	G									1LG								
841 E. 7th Street	1	L	G									1LG								
849 E. 7th Street	1	L	G									1LG								
853 E. 7th St.	1	L	C,P														1LC/P			
857 E. 7th Street	1	L	G									1LG								
860 Schafer St.	1	L	C,P													1LC/P	1LC/P			
903 E. 7th Street	1	L	G									1LG								
906 E. 7th Street	1	L	G									1LG								
909 E. 7th Street	1	L	G									1LG								
911 Beard	1	L	G/C								1LG/C									
911 E. 7th Street	1	L	G									1LG								
912 Crawford St	1	L	no data													1L				

All results in [redacted] million, [redacted]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[redacted] Categor	Service Line	[redacted] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[redacted] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
912 [redacted]	1	L	C	1LC	1LC															
912 Lexington Ave.	1	L	P														1LP			
912 Waldman Ave	1	L	no data													1L				
915 E. 7th Street	1	L	G									1LG								
919 Blanchard	1	L	G	1LG	1LG	1LG	1LG	1LG	1LG	1LG	1LG									
921 E. 7th Street	1	L	G									1LG								
924 E. 7th Street	1	L	C									1LC								
925 E. 7th Street	1	L	G									1LG								
927 [redacted] Ave.	1	L	no data													1L				
928 Durand	1	L	no data													1L				
928 Garland	1	L	G/C								1LG/C									
932 E. 7th Street	1	L	G									1LG								
937 E. 7th Street	1	L	G									1LG								
939 Alvord St.	1	L	C										1LC							

All results in [illegible] million, [illegible]
L=Lead, C=Copper, G=Galvanized, P=Plastic

Sample Location	Sam[illegible] Categor	Service Line	[illegible] Plumbing	6/92	12/92	6/97	12/97	12/98	6/99	2000	2001	2002	2005	2008	2011	12/14	6/15	[illegible] Index ID	Service Line Material	Justification of Lead Service Line and Tier 1 Criteria
942 E. 7th Street	1	L	G									1LG								
983 [illegible] Ave.	1	L	no data													1L				

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Thursday, February 26, 2015 10:53 AM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Poy, Thomas;Deltoral, Miguel
Subject: HIGH LEAD: FLINT Water testing Results
Attachments: 212 Browning (Pb & Cu).pdf; Flint Technical Advisory Team List_R1.pdf

Hi, Steve and Mike. Thanks for talking with me yesterday, Steve, about the most recent TTHM results. We'll look forward to receiving them whenever you get them back from the lab.

However, the main purpose of my email is to alert you to the high lead levels reported to a citizen yesterday by Flint Water Dept. I have been discussing the water situation with LeeAnn Walters since January, and she has been talking with Mike Glasgow at the plant about the black sediment in her water. (HUGE KUDOs to MIKE!!) He did test it to find that the iron levels were greater than his test would go; GT 3.3. But, because the iron levels were so high, he suggested testing for lead and copper. WOW!!!! Did he find the LEAD! **104 ppb.** She has 2 children under the age of 3... Big worries here.

So, Steve, this goes back to what you and I were talking about yesterday. That the different chemistry water is leaching out contaminants from the insides of the biofilms inside the pipes. I think Lead is a good indication that other contaminants are also present in the tap water, that obviously were not present in the compliance samples taken at the plant. VOC/SOC and inorganics/metals would be good samples to start with to take at the tap. And since Ms. Walters' drinking water is showing the high lead levels, her tap water would be a good place to start, I think.

We also talked about Dr. Joan Rose from Michigan State being on the Flint Tech Advisory Committee—you also mentioned that someone from the Dept of Community Health was on the Committee. I'm thinking that Dr. Rose would want to dive further into this, since there's actual evidence that the water is leaching contaminants from the biofilms; or Dept of Community Health would want to get involved and look at this from an epidemiological perspective. (She and her family are also exhibiting the rashes when exposed to the water, and her daughter's hair is falling out in clumps.)

Maybe MSU could authorize the payment of the analyses for these samples? Or Dept of Community Health?

The citizen's name is:
LeeAnn Walters
212 Browning Ave
Flint, MI 48507
616-212-6233
Lwalters313@gmail.com

Jennifer

From: Lea Moste [mailto:lwalters313@gmail.com]
Sent: Thursday, February 26, 2015 9:08 AM
To: Crooks, Jennifer
Subject: Fwd: Re: Water testing Results

---------- Forwarded message ----------
From: "Michael Glasgow" <mglasgow@cityofflint.com>
Date: Feb 26, 2015 7:55 AM
Subject: Re: Water testing Results

To: "Lea Moste" <lwalters313@gmail.com>
Cc:

Lee,

Here are your Lead & Copper Results. This number is very high, 104 ppb of lead. In the last few months over 100 samples have been tested and only 2 were over the 15 ppb regulatory limit, and the highest level I have seen is 37 ppb. I will pass this info to Mr. Croft so he is aware. I will send the sample I collected from your kitchen faucet today for a complete metals test (12 different metals), to see what the level is without letting the water stagnate over night. I'm hoping that value will be much, but we will have to see. Sorry for this news, but I wanted to let you know right away.

Mike

On Tue, Feb 24, 2015 at 1:50 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:

> Lee,
>
> I will bring a copy of last years annual report when I stop by tomorrow. The annual report from 2014 must be delivered to residents by July 1st of this year. I imagine we may have it complete by June.
>
> Mike
>
> On Fri, Feb 20, 2015 at 1:00 AM, Lea Moste <lwalters313@gmail.com> wrote:
>
> > Mike,
> > Thank you for the water reports and we already planned to see you on the 25th at 10:00am. I was wondering if you know who I need to talk to in the water plant to obtain the Annual Drinking Water Report from last year. According to the EPA website there is link to access but when you click on it, it cannot be accessed. Was also curious if there is an expected time frame for this years report due to the switch. If you can be of any assistance I would appreciate it.
> >
> > Thank You
> > LeeAnne Walters
> >
> > On Thu, Feb 19, 2015 at 12:47 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:
> >
> > > Lee & Dennis,
> > >
> > > Here is a list of test results from water sampled at your home over the last 2 weeks. I have sent in your lead and copper sample, and also a sample from the toilet tank for manganese. I should hopefully have results from this testing early next week. I'll plan on stopping over on Wednesday (the 25th) around 10 am again to give you these results & sample again.
> > >
> > > Mike

Consumer Notice of Lead & Copper Results in Drinking Water

Water Supply Name: City of Flint

County: Genesee WSSN: 2310

Sample Location: 212 Browning Date Sampled: 2/18/2015

Thank you for participating in the lead and copper monitoring of drinking water. The levels of lead and copper found at your location are in the table below.

Key to Table	Contaminant	AL	MCLG	Your Result
Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow. **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water which there is no known or expected risk to health. MCLG's allow for a margin of safety. **ppb:** parts per billion or micrograms per liter.	Lead (ppb)	15	0	104
	Copper (ppb)	1300	1300	Not Detected

Lead can cause serious health problem if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and it can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects on the brain with lower IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

To reduce exposure to lead in drinking water:

- *Run your water to flush out lead.* Run the water until it becomes cold.
- *Use cold water for cooking and preparing baby formula.* Do not cook with or drink water from the hot tap; lead dissolves more easily in hot water.
- *Do not boil water to remove lead.* Boiling water will not reduce lead levels.
- *Look for an alternative sources or treatment of water.* If your lead result is above 15 ppb, you may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010, or www.nsf.org for information on performance standards for water filters.
- *Identify if your plumbing fixtures contain lead.* New faucets, fittings, and valves, may contain up to 8 percent lead including those advertised as lead-free" and may contribute lead to drinking water. Consumers should be aware of this when choosing fixtures and take appropriate precautions.

Although the primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead contaminated soil, the U.S. EPA estimates that 10 to 20 percent of human exposure to lead may come from drinking water.

For more information, contact us at: ***City of Flint Water Plant (810)787-6537.***

For more information on reducing lead exposure around your home ant the health effects of lead, visit the U.S. EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY

USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LF54945

Official Laboratory Report

Report To: MIKE GLASGOW
4500 N DORT HWY
FLINT MI 48505

System Name/Owner:	CITY OF FLINT	WSSN/Pool ID:	2310	
Collection Address:	212 BROWNING AVE,FLINT	Source:	TYPE I	
Collected By:	LEANNE WALTERS	Site Code:		
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	02/18/2015	07:15
Sample Point:	KITCHEN	Date Received:	02/19/2015	11:13
Water System:	Treated Public Distribution System	Purpose:	Routine Monitoring	

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	Not detected	02/20/2015	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.104	02/20/2015	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminant Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Wednesday, April 08, 2015 3:52 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: RE: Flint River Monitoring

Yes! I saw that too! Great detective work, Steve!

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Wednesday, April 08, 2015 2:48 PM
To: Busch, Stephen (DEQ); Crooks, Jennifer
Subject: RE: Flint River Monitoring

Also, not sure if the complainant read further into the Wikipedia reference....the reference provides discussion on the formation of TTHMs in drinking water through the reaction between chlorine and the TTHMs precursors present from the source water.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Wednesday, April 08, 2015 3:33 PM
To: Crooks, Jennifer
Cc: Prysby, Mike (DEQ)
Subject: RE: Flint River Monitoring

Jennifer,

Here is what we think your complainant may be referring to:

The solvent/refrigerant reference appears to come from Wikipedia
http://en.wikipedia.org/wiki/Trihalomethane

The Flint Public Notice was mailed out to residents on January 2, 2015.
http://www.mlive.com/news/flint/index.ssf/2015/01/flint_water_has_high_disinfect.html

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Wednesday, April 08, 2015 3:02 PM
To: Busch, Stephen (DEQ)

Cc: Prysby, Mike (DEQ)
Subject: RE: Flint River Monitoring

Thank you, Steve, for such a prompt answer—I definitely appreciate it. So, I thought I would respond below—is this accurate in your opinion?

"Your letter indicated that you received a letter of alert regarding refrigerant and cleaning solvents found in the Flint River. Three different programs in the Water Resources Division were contacted, and none were aware of any reports of dumping of these chemicals, nor of any monitoring being done on the Flint River for these chemicals."

Jennifer

From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Wednesday, April 08, 2015 1:06 PM
To: Crooks, Jennifer
Cc: Prysby, Mike (DEQ)
Subject: Flint River Monitoring

Jennifer,

Per our phone conversation this morning, I have contacted MDEQ Water Resources Division Staff. This included:
Stephanie Kammer, Acting Lansing District Supervisor
Chuck Bennett, NPDES and Wastewater Engineering
William Keiper, Aquatic Biologist, Surface Water Assessment Section
Susan Doty, Storm Water NPDES and Non-point Source

All responded and none of them are aware of such monitoring (solvents or refrigerants) being done on the Flint River.

Please let me know if you end up with a copy of this "Letter of Alert" from your complainant. I'm sure we would all be interested in the source of such information.

Thanks.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Thursday, May 21, 2015 10:57 AM
To: Crooks, Jennifer
Subject: Re: Flint quick question

Yes...that is correct....and Flint collected their May quarter TTHM samples this past Monday....so we may see something by next week.

Sent from my iPhone

On May 21, 2015, at 10:25 AM, Crooks, Jennifer <crooks.jennifer@epa.gov> wrote:

> Mike—For my Controlled Correspondence, I'm just verifying that the last time we talked on the phone, you said that Flint has offered to test people's drinking water if they call the Water Service Center or the Treatment plant. This is still correct?
>
> Jennifer

From: Busch, Stephen (DEQ)
Sent: Monday, July 06, 2015 2:28 PM
To: Prysby, Mike (DEQ)
Subject: FW: Bios for Mike Schock and Darren Lytle from EPA's Office of Research and Development

FYI.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Busch, Stephen (DEQ)
Sent: Monday, July 06, 2015 12:50 PM
To: 'Crooks, Jennifer'
Subject: RE: Bios for Mike Schock and Darren Lytle from EPA's Office of Research and Development

I passed the bio info for Mike and Darren on this morning. Not sure if the City has any intention to utilize them at this point.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Busch, Stephen (DEQ)
Sent: Monday, June 29, 2015 3:54 PM
To: 'Crooks, Jennifer'; Prysby, Mike (DEQ); Cook, Pat (DEQ)
Cc: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Philip, Kris (DEQ)
Subject: RE: Bios for Mike Schock and Darren Lytle from EPA's Office of Research and Development

Jennifer,

Mike has been out and won't likely return until next Monday 7/6. I have not been in touch with the City on this yet. The City's Pb/Cu monitoring period ends tomorrow 6/30, so by 7/10 we should also have a better idea where the City stands.

As you saw from the June 9, TTHM MCL VN, only one compliance sample (out of 24) in the last 9 months exceeded 80 ppb (Site DBP4, 94 ppb, 11/20/14).

TOC removal has been effective at the WTP, and with the upcoming GAC filter media changeout should be even more effective.

Total Coliform has not been an issue for the last 9 months, since September 2014, and work on the distribution system has improved chlorine residuals (with additional transmission main work planned over the next couple of years).

So at this point I don't think we have any questions.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Friday, June 26, 2015 5:41 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Cook, Pat (DEQ)
Cc: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Philip, Kris (DEQ)
Subject: Bios for Mike Schock and Darren Lytle from EPA's Office of Research and Development

Steve and Mike; referring to the bios I sent you all last Monday, 6/22, of Mike Schock and Darren Lytle, I was wondering if you've had a chance to discuss Mike and Darren's participation in evaluating treatment/water quality/lead levels with the City of Flint?

Perhaps I can answer any questions you might have about their participation with you all?

Jennifer

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Wednesday, July 15, 2015 1:18 PM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ);Cook, Pat (DEQ)
Subject: RE: Flint lead sampling results?

Thank you, Steve!
Jennifer

From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Wednesday, July 15, 2015 8:39 AM
To: Crooks, Jennifer; Prysby, Mike (DEQ); Cook, Pat (DEQ)
Subject: RE: Flint lead sampling results?

Jennifer,

We will provide the 90th percentile when available, but at this point we do not anticipate any violations of the Lead and Copper Rule.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Tuesday, July 14, 2015 3:34 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Cook, Pat (DEQ)
Cc: Bair, Rita
Subject: Flint lead sampling results?

Steve/Mike/Pat—Thank you for cluing me in to the fact that Liane and Tinka are talking about Flint next Tuesday. I guess it's just a manager discussion, from what I understand. I understand that Flint didn't get the minimum number of lead samples (100) for the second 6-month monitoring period that ended June 30, so I assume Flint is collecting the remaining samples now. Our Division Director, Tinka Hyde asked today if we will know what the lead results are from the second 6-month monitoring period. Perhaps you don't know what the results are for the remaining samples Flint began taking in July; but do you know what the other 80+ sample results are? Would you be able to share this information with us prior to the call on Tuesday? If not, Liane can share this info regarding the status of the sampling and the sample results with Tinka on Tuesday.

Thank you all for your hard work with Flint and with your management; I know this has not been an easy problem to deal with for anyone.

Jennifer

From: Benzie, Richard (DEQ)
Sent: Wednesday, September 02, 2015 1:32 PM
To: Busch, Stephen (DEQ);Shekter Smith, Liane (DEQ);Prysby, Mike (DEQ)
Subject: RE: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!
Attachments: Editorial response to Virginia Tech testing Flint homes for lead.doc

Here are my suggested edits in an attached word document. I thought we should probably just draft a single response so I am circulating it to you three before we reply to Brad.

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 02, 2015 12:12 PM
To: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Prysby, Mike (DEQ)
Subject: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!

We are aware that Virginia Tech researchers are now testing water at various Flint homes for lead levels in their plumbing.

First, we want to be very clear that the lead issue in Flint, to the extent there is one, is not from the source water or the plant or even the transmission lines. The river has no detectable levels of lead in it, and treated water from the plant has not detectable levels of lead in it. The issue is how, whether, and to what extent the water is interacting with lead plumbing in people's homes.

It does not appear their research lab is certified, and we can't speak to the whatever sampling methods are being employed to achieve these results. The results reported so far fail to track with any of the lead sampling done by the DEQ for the past 25 years (since 1991), or the blood lead levels testing regularly conducted by the state department of community health. That said, we do appreciate that Virginia Tech's team is working on this issue because it brings the public spotlight on an important fact: if you have lead water pipes in your home, or a lead service connection to the city system, it is very likely you are ingesting some level of lead. That's just a fact, and in the City of Flint that fact affects 15,000 or more residences.

The state's monitoring program, which uses certified laboratories and a standardized, federal testing protocol, looks specifically at the homes in communities most likely to experience lead problems. Our results, obtained from two separate rounds of testing over the past year, concluded that the mean average of lead in Flint drinking water, meets state and federal safe drinking water standards.

That said, the state is pushing Flint to 'optimize' its water, which means addressing additives that can minimize the extent to which the water interacts with lead plumbing in homes. While statute allows several years for an operator actually undertake this process -- Detroit took five years to complete its water optimization work -- we are encouraging Flint water system operators to take these steps immediately and we are encouraged by the conversation so far.

Any resident who has concerns about lead in their drinking water should have their water tested and get professional consultation on how to address it. The leading cause of lead poisoning is known to be lead paint and, in some areas, environmental legacy hot spots where lead is present in soils.

However, I will say it again: when homes are fitted with lead plumbing pipes, homeowners should assume there is some varied level of interaction between water and pipes that means exposure.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, September 02, 2015 11:34 AM
To: Wurfel, Brad (DEQ)
Cc: Kristin Longley; Bryn Mickle
Subject: lead in flint water

Brad:
I left a message with Mike Prysby on Tuesday, Sept. 1, but wanted to reach out to you also because of stories we are working on about the extent to which lead is becoming an issue in Flint drinking water.
Today, Sept. 2, researchers at Virginia Tech posted the results on an experiment with Flint water online.

The report concludes that Flint River water leaches much more lead from plumbing than does Detroit.

"On average, Detroit water is 12 times (or 12X) less corrosive than the Flint River water currently in use ... This is creating a public health threat in some Flint homes that have lead pipe or lead solder," the report says.

An earlier post by the same researchers says that initial water tests show "a serious lead in water problem" in Flint, partly because Flint River water is so corrosive to pipes.

Given the state's role in oversight of the city's drinking water system through DEQ and its overall oversight by state emergency managers during the past several years, I wanted to make sure I'm reaching out to the right person to respond to this information.

Could you let me know who that is?

I expect to post the first story about the experiment today and expect the issue will be getting more attention as the VT study of 300 water test kits from Flint is completed.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile [PPI]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

We are aware that Virginia Tech researchers are now testing water at various Flint homes for lead levels ~~in their plumbing~~.

First, we want to be very clear that the lead issue in Flint, to the extent there is one, is not from the source water or the treatment plant or even the transmission lines. The river has no detectable levels of lead in it, and treated water from the plant has not detectable levels of lead in it. The issue is how, whether, and to what extent the water is interacting with lead plumbing in people's homes.

It does not appear ~~their~~ (instead of their, do we want to say "the Virginia Tech") research lab is certified, and we can't speak to the ~~whatever~~ sampling methods ~~are~~ being employed to achieve these results. The results reported so far fail to track with (match? mirror?) any of the lead sampling conducted by the city ~~done by the DEQ~~ for the past 25 years (since 1991), or with the blood lead levels testing regularly conducted by the state department of community health. That said, we do appreciate that Virginia Tech's team is working on this issue because it brings the public spotlight on an important fact: if you have lead water pipes or plumbing fixtures containing lead in your home, or a lead service connection to the city system, it is very likely you are ingesting some level of lead. That's just a fact, and in the City of Flint, that fact affects 15,000 or more residences.

The state's compliance monitoring ~~program, which~~program requires the city to use~~s~~ certified laboratories and a standardized, federal testing ~~protocol,~~protocol that looks specifically at the homes in communities most likely to experience lead problems. The latest~~Our~~ results from Flint, obtained from two separate rounds of testing over the past year, indicated~~concluded~~ that ~~the mean average of lead in~~ Flint drinking water, meets state and federal safe drinking water standards for lead.

That said, the state is pushing Flint to 'optimize' its water treatment, which means addressing additives that can minimize the extent to which the water interacts with lead plumbing in homes. While statute allows several years for a drinking water system ~~n operator actually~~to actually undertake this process – Detroit took five years to complete its water optimization work – we are encouraging Flint water system operators to take these steps immediately and we are encouraged by the conversation so far.

Any resident who has concerns about lead in their drinking water should have their water tested at a certified laboratory and get professional consultation on how to address it. The leading cause of lead poisoning is known to be lead paint and, in some areas, environmental legacy hot spots where lead is present in soils. However, I will say it again: when homes are fitted with lead plumbing or plumbing fixtures containing lead~~pipes~~, homeowners should assume there is some varied level of interaction between water and pipes that results in lead~~means~~ exposure.

From: Shekter Smith, Liane (DEQ)
Sent: Wednesday, September 02, 2015 1:38 PM
To: Busch, Stephen (DEQ);Benzie, Richard (DEQ);Prysby, Mike (DEQ)
Subject: RE: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!

What neither of you have touched upon is Dr. Edwards claim that using the Flint River as a source the finished water from the treatment plant is 12 times more corrosive than water they used to receive from the city of Detroit. I'm not sure what we can say about this, but it does seem to be the elephant in the room. When we bring up 25 years of good lead sampling results, that seems to bolster the argument further. While we do mention the recent 6-month rounds of sampling, perhaps we need to emphasize this more.

From: Busch, Stephen (DEQ)
Sent: Wednesday, September 02, 2015 1:34 PM
To: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ)
Subject: RE: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!

I had already started over lunch and am half way through.

First, we want to be very clear that the source of this lead is not from the City's source water or the treated water from the City's water treatment plant. Treated water from the plant continues to show no detectable level of lead according to state analysis. The Flint public water distribution system is not constructed of lead piping materials. However lead materials were used decades ago for service lines, and household plumbing, both of which are not part of the public water system. Property owners who have failed to replace such materials continue to expose themselves to at least some level of lead.

The DEQ regulates the impact of the City's water on leaching such metals to help limit this exposure. The City has continued to comply with the federal Action Level standard for lead since regulations became effective in 1991. The state's monitoring program, which uses certified laboratories and a standardized, federal testing protocol, looks specifically at the homes in communities most likely to experience lead problems.

While Dr. Edwards is well respected in this field, we are not aware of any certification for his university's research laboratory for metals analysis, and it does not appear he has disclosed this fact. It is also disappointing that he has not fully disclosed information regarding each of these test results. What instructions were provided to residents for collection the sample, plumbing conditions within the home, sample preservation, chain of custody documentation, etc. In many cases it appears samples were collected in a manner that is not consistent with Safe Drinking Water Act requirements. His finding of lead in and of itself is not surprising as the City has for decades documented that fact that over 15,000 customers have at least some lead materials.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Benzie, Richard (DEQ)
Sent: Wednesday, September 02, 2015 1:32 PM
To: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ)
Subject: RE: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!

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Subject: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!

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That said, the state is pushing Flint to 'optimize' its water, which means addressing additives that can minimize the extent to which the water interacts with lead plumbing in homes. While statute allows several years for an operator actually undertake this process -- Detroit took five years to complete its water optimization work -- we are encouraging Flint water system operators to take these steps immediately and we are encouraged by the conversation so far.

Any resident who has concerns about lead in their drinking water should have their water tested and get professional consultation on how to address it. The leading cause of lead poisoning is known to be lead paint and, in some areas, environmental legacy hot spots where lead is present in soils.

However, I will say it again: when homes are fitted with lead plumbing pipes, homeowners should assume there is some varied level of interaction between water and pipes that means exposure.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, September 02, 2015 11:34 AM
To: Wurfel, Brad (DEQ)
Cc: Kristin Longley; Bryn Mickle
Subject: lead in flint water

Brad:
I left a message with Mike Prysby on Tuesday, Sept. 1, but wanted to reach out to you also because of stories we are working on about the extent to which lead is becoming an issue in Flint drinking water.
Today, Sept. 2, researchers at Virginia Tech posted the results on an experiment with Flint water online.

The report concludes that Flint River water leaches much more lead from plumbing than does Detroit.

"On average, Detroit water is 12 times (or 12X) less corrosive than the Flint River water currently in use ... This is creating a public health threat in some Flint homes that have lead pipe or lead solder," the report says.

An earlier post by the same researchers says that initial water tests show "a serious lead in water problem" in Flint, partly because Flint River water is so corrosive to pipes.

Given the state's role in oversight of the city's drinking water system through DEQ and its overall oversight by state emergency managers during the past several years, I wanted to make sure I'm reaching out to the right person to respond to this information.

Could you let me know who that is?

I expect to post the first story about the experiment today and expect the issue will be getting more attention as the VT study of 300 water test kits from Flint is completed.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile PPI
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Shekter Smith, Liane (DEQ)
Sent: Friday, September 04, 2015 9:58 AM
To: Benzie, Richard (DEQ);Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Subject: RE: Draft Notes from call Tuesday with MI DEQ RE: Flint

One more change.

From: Shekter Smith, Liane (DEQ)
Sent: Friday, September 04, 2015 9:50 AM
To: Benzie, Richard (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: RE: Draft Notes from call Tuesday with MI DEQ RE: Flint

[redacted]

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Thursday, September 03, 2015 2:51 PM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Poy, Thomas; Porter, Andrea
Subject: Draft Notes from call Tuesday with MI DEQ RE: Flint
Importance: High

All—these are the notes I jotted down during our call this past Tuesday when we discussed Flint. Any edits?
Jennifer

Date: August 31, 2015
Present: Liane Shekter Smith, Richard Benzie, Steve Busch, (2 other MDEQ staff?), Tom Poy, Andrea Porter, Janet Kuefler, Jennifer Crooks

STRATEGIC NEXT STEPS FOR FLINT TO ADDRESS LEAD CORROSION CONCERNS

Tom Poy discussed Marc Edwards' website, "Flint, MI Water Study Updates" (https://flintwaterstudyupdates.wordpress.com/). The discussion focused on the lead sampling and analytical results Marc Edwards' team posted to their website. Tom emphasized that EPA is not involved with Marc Edwards' work in Flint. Tom mentioned that the Edwards team's samples may not have been analyzed by a certified lab (which is only required for compliance samples) nor taken from sites that qualify as Tier 1 for LCR compliance sampling, but the results give further evidence that lead levels in Flint are trending upward. (The conclusion that there is an increasing trend of lead concentrations at consumer taps builds upon earlier compliance sampling taken by Flint in 2014 and 2015 that showed the 90th percentile of the 1st 6-month sampling period at 6ppb, then the 90th percentile of the 2nd 6-month sampling period at 11ppb.) [redacted]

The "Flint, MI Water Study Updates" website is putting added pressure on MDEQ and EPA to ensure that Flint addresses their lack of optimized corrosion control treatment in an expedited manner in order to protect the residents from

exposure to high lead levels. Richard noted that there are numerous systems across the country that have installed corrosion control treatment, have optimized their corrosion control, but did not necessarily reduce their lead levels. We all acknowledged that this is true, but we all also acknowledged that implementing installation of corrosion control treatment in Flint is prudent to protect public health since there are **approximately 15,000 lead service lines** within the city.

Region 5 and MDEQ brainstormed on strategic next steps for Flint to address lead corrosion concerns. These steps included:

1. **Public Education for Flint Residents.** Liane has contacted the Department of Community Health to discuss developing a consumer lead education piece outlining the consumer's [redacted] to lower the lead in their drinking water. The Region was glad to hear of a plan to initiate Lead Public Education since this will provide the public immediate actions they can take. The educational material could include steps consumers can take to reduce their exposure to lead in drinking water (flushing their lines after long stagnation periods, using filters certified to remove lead, etc.) as well as longer term fixes to remove lead sources (for example, financing the cost to remove any part of a lead service line on the owner's property at the same time as Flint is replacing its portion of the lead service line).
2. **Gathering Information on Flint's Future Treatment Plans.** Steve Busch said Flint and their engineering consultants were meeting this week (Sept 1) to discuss conceptually the necessary optimized corrosion control treatment at Flint. Tom Poy shared EPA lead experts' (Mike Schock and Darren Lytle of EPA's Office of Research and Development in Cincinnati) caution against simply adding orthophosphate without first studying the water quality and existing distribution system conditions to ensure that any installed treatment has a good chance of working. EPA lead experts have research and field experience showing the complexity of optimizing corrosion control treatment when water quality is significantly changed, as is the case for Flint.
3. **Offering Flint Free Help from EPA Experts.** Steve Busch has already provided the names of EPA lead experts (Mike Schock and Darren Lytle) to Flint, as has Susan Hedman, R5 Administrator. MDEQ and Region 5 agree that, to successfully control lead corrosion in the distribution system, Flint needs to review this situation holistically, while also addressing the lead issue in an expedited manner.
4. **Laying Groundwork for MDEQ/EPA Collaboration with Flint.** If Flint accepts the offer of technical assistance for optimizing corrosion control, Tom Poy suggested that MDEQ and EPA lead experts (Mike Schock and Darren Lytle) form a partnership to provide such help. EPA experts are able to provide pipe scale analyses, as well as other laboratory support. Although Flint (using their consultant) bears the ultimate responsibility for designing and installing corrosion control, MDEQ and EPA experts are willing and able to provide advice throughout the process.

END

Jennifer

From: Prysby, Mike (DEQ)
Sent: Friday, October 09, 2015 10:37 AM
To: Shekter Smith, Liane (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: Daily updates

Lianne,

Flint and Genesee County are coordinating their efforts to have the unused portion of the 72-inch transmission main (pipeline) available for service. The city e-mailed me a draft procedure late afternoon yesterday. I commented back to the city and the county emphasizing the need to include the disinfection standard AWWA C651-14. I provided the city and the county with a copy of the standard. The draft procedure mentions that the pipeline would be re-filled overnight and chlorination was to begin at 8:30 am today.

My follow-up calls this morning with the city and the county confirmed that the main was being re-filled at this time. Once filled, the ability of the pipeline to hold pressure will be confirmed. Chlorination has not started yet.

I discussed, in more detail the need to send us an updated description of the procedure which needs to include adherence to the AWWA disinfection standard. Discussion of the sampling locations and the number of bacteriological samples to be collected also needs to be included. The city and the county are meeting this morning to review the procedures and to be certain that there is no confusion. I expect to receive an updated procedure later today in which the city and the county will ask for our concurrence. An Act 399 permit does not apply here; however, I plan to offer the DEQ's concurrence with their proposed procedure – provided that it references adherence to AWWA's disinfection standard and the sampling protocol that was discussed.

I leave at 11am today; however, I plan to respond to the city and the county anytime today to give them the go-ahead after I receive an acceptable procedure.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Shekter Smith, Liane (DEQ)
Sent: Friday, October 09, 2015 8:09 AM
To: Prysby, Mike (DEQ); Rennaker, Joanne (DEQ); Rosenthal, Adam (DEQ); Butler, Sonya (DEQ); Benzie, Richard (DEQ);

Busch, Stephen (DEQ); Cook, Pat (DEQ)
Cc: Devereaux, Tracy Jo (DEQ)
Subject: FW: Daily updates
Importance: High

FYI – I'll need a daily summary by 4:00pm (4:15pm at the latest) of all work efforts as described below.

Be sure to cc Tracy Jo so that one of us will be able to forward it to George by the 4:30pm deadline.

Thanks!

From: Krisztian, George (DEQ)
Sent: Friday, October 09, 2015 7:07 AM
To: Shekter Smith, Liane (DEQ)
Cc: Thelen, Mary Beth (DEQ); Shaler, Karen (DEQ); Wyant, Dan (DEQ); Sygo, Jim (DEQ)
Subject: Daily updates
Importance: High

Hi Liane,

The Governor wants daily updates regarding the progress we are making on the Flint issue. Can you please provide me with a summary of the action steps that we have taken on a daily basis? The summary should not contain excessive detail, it should be something like:

- Steve Busch contacted Natasha Henderson at the City of Flint to get details on supplemental Phosphate Dosing
- Pat Cook/Mike P Analyzed Plans for flushing and pressure testing lines to make the switch back to GLWA
- Met with city of Flint officials to review actions to date and to create a list of next steps

The above examples are for illustrative purposes only

I need to have this summary each day no later than 4:30 PM. This is a hard deadline as we need to get the summary to the Governor by 5:00 PM. Please make sure that you copy Mary Beth and Karen.

Thank you!
George

From: Prysby, Mike (DEQ)
Sent: Friday, October 16, 2015 4:05 PM
To: Shekter Smith, Liane (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: Preliminary and Deliberative: Not Subject to FOIA: Action Steps - Update

Liane,

Below is an update of the Action Steps assigned to me.

Action Step 6 – Flint pipeline is ready to be placed into service.

Action Step 18 - Contact KWA to identify any construction bottlenecks

No updates today – this Action Step will be carried over next week to continue working With KWA towards addressing the bottlenecks

Action Step 19 – Expedite 399 Plan and Phosphate Plan

Corrosion control proposal received electronically from LAN this morning (without 399 application). Pat and I are reviewing the proposal and preparing comments. The proposal was forwarded to Darren Lytle and Michael Schock from EPA for their review with comments requested by Monday morning. Darren acknowledged receipt of the proposal. LAN is hand delivering a full sized set of the proposal along with a signed permit application later this afternoon.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Thursday, October 22, 2015 5:33 PM
To: Shekter Smith, Liane (DEQ)
Subject: Preliminary and Deliberative: Action Steps Update
Attachments: Monitoring Schedule 4th Qtr - 2015.pdf

Liane,

Below is a summary of the Action Steps worked on today by Steve Busch and myself.

Action Step 19: Corrosion Control Treatment plan:

A summary of our discussion with EPA regarding Flint's corrosion control plan was provided to Darren Lytle and Michael Schock of EPA. The summary included confirmation of the actual phosphate dosage from the Detroit Lake Huron WTP. Steve's summary to EPA is included in the thread below.

Action Step 20: Act 399 permit for phosphate feed system:

Proper dosages are now confirmed based on incoming P04 residual at Flint. A product cut-sheet to confirm NSF approval and max dose is to be provided shortly. The consultant will also confirm proper sizing of the feed pumps. Anticipate receiving this info tomorrow which will facilitate issuance of the Act 399 permit.

Action Step 22: Provide Flint with an updated monitoring schedule:

An updated monitoring schedule is completed and signed. The schedule will be mailed to the city tomorrow. A copy of the updated monitoring schedule is attached.

Action Step No. 24: Work with KWA to address bottleneck issues:

An electronic communication was sent to Genesee County (John O'Brien) informing him of our concern over improper soil erosion control measures at the pipeline jobsite and what corrective measures were being taken to avoid a potential halt of construction by the Lapeer County Road Comm. Genesee County has not responded thus far.

Michael Prysby, P.E.

District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Thursday, October 22, 2015 12:58 PM
To: Schock, Michael; Lytle, Darren
Cc: Kempic, Jeffrey; Prysby, Mike (DEQ); kaplan.robert@epa.gov; Krisztian, George (DEQ); Sygo, Jim (DEQ)
Subject: RE: Flint WTP PH2 SEG4 - Corrosion Control

This will summarize our phone conversation of 10/19 and provide clarification regarding the previous comments.

The City of Flint converted back to purchasing of Detroit Water and Sewerage Department water on Friday October 16, 2015. No indications of upset in the distribution system have been reported to date.

Detroit Water and Sewerage Department (DWSD) has confirmed the use of Innophos "Phosphoric Acid 75% Technical" product which is NSF Standard 60 certified with a maximum allowable feed rate of 13 mg/L as product.

The City of Flint will need to supply a similar phosphoric acid product, NSF Standard 60 approved with allowable maximum dosage.

DWSD supplied water is currently dosed at 0.39 mg/L as P (1.2 mg/L as PO4) slightly above DWSD's OCCT requirement to dose a minimum of 0.9 mg/L as PO4 and have a minimum plant tap residual of 0.8 mg/L as PO4. DWSD plant tap residuals have been shown to consistently be at 0.39 mg/L as P (1.2 mg/L as PO4). In addition water supply entering Flint has been tested and so far shown to contain approximately 0.39 mg/L as P (1.2 mg/L as PO4) as well.

To achieve pipe passivation Flint will boost orthophosphate dosage to establish a minimum distribution residual of 1.0 mg/L as P (3.1 mg/L as PO4). The chemical feed system will be sized to achieve a dose up to 2.0 mg/L as P (6.1 mg/L as PO4) in case orthophosphate loss is observed.

Flint will continue Water Quality Parameter Monitoring in accordance with the LCR at the same 25 distribution locations used under the Flint River. In addition 10 of these locations also serve as total coliform monitoring sites, including disinfectant residual, and Flint will be told to, for the purpose of assessing water stability, conduct water quality parameter monitoring along with turbidity and iron sampling will be at these 10 locations on a weekly basis as suggested. This will also ensure that a minimum recommended pH levels are being maintained throughout the system.

EPA ORD staff will provide instructions to the City of Flint for creating test loops to help confirm effectiveness of the corrosion control treatment. This data will help in rebuilding public trust.

The County Health Department and MI Department of Health and Human Services will be conducting blood lead level testing of children in Flint. Children with elevated blood lead levels will be offered exposure assessments of their homes. These assessments should include the contribution of lead from service line and interior plumbing sources. Such diagnostic testing should help further substantiate the effectiveness of corrosion control treatment. Procedures recommended by EPA should be shared with the Michigan Department of Health and Human Services.

The University of Michigan in Ann Arbor had previously expressed interest in assisting the City of Flint. Both the Department of Civil and Environmental Engineering, and School of Public Health should be contacted to determine if that interest still exists with potential to assist in both test loop construction and monitoring, and exposure assessment monitoring in homes. Any water analysis should occur at a certified laboratory.

The City will be required to complete a 6 month round of lead and copper compliance monitoring in the January – June 2016 period. The City continues to offer all residents a first draw lead sample collection and analysis. Any additional staggered monitoring suggestions should be brought before the City's Technical Advisory Committee.

Criteria for deeming the treatment optimized must be established as the LCR only requires compliance with the lead and copper Action Levels once this determination has been made.

The City of Flint is continuing to digitize service line index card records into a Geographic Information System to confirm the location of lead service lines. EPA can provide additional information to the City regarding a sampling procedure to verify lead service line sites.

The City's engineering consultant will need to evaluate KWA water in conjunction with the City of Flint treatment plant processes to determine any necessary adjustments in optimized corrosion control treatment prior to initiating service to customers. Full scale testing may not be feasible.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Lytle, Darren [mailto:Lytle.Darren@epa.gov]
Sent: Monday, October 19, 2015 12:05 PM
To: Prysby, Mike (DEQ)
Cc: Schock, Michael; Kempic, Jeffrey; Busch, Stephen (DEQ)
Subject: RE: Flint WTP PH2 SEG4 - Corrosion Control

Mike,

Thank-you for giving us the opportunity to review the city of Flint's corrosion control plan.

We believe it is necessary that Flint boosts orthophosphate dosage. Given that the distribution system has not received orthophosphate in over a year, we expect that orthophosphate will need to be boosted to 1) meet the demand of the distribution system, 2) reach the service lines and other lead-containing components in premise plumbing, and 3) accelerate lead reduction at the consumer's taps. Orthophosphate should preferably be added in the same form as the Detroit source which is phosphoric acid from our understanding. This is the proposed case here, however, a simple test should be performed to make sure that the pH is not impacted in a significant way at the desired target dose.

We have not been able to obtain comprehensive water quality data for the finished water characteristics of the Detroit water that will be fed to Flint, to assess ranges of major chemical characteristic fluctuations. However, based upon the email trail, Detroit water entering the Flint system appears to only contain around 0.4 PO4/L. This concentration range is entirely too low compared to that needed in studies presented and published in the last 20+ years that have focused on lead released directly from lead pipes, and the solubility of the most likely lead orthophosphate pipes scales. We also strongly feel that targeted dose of 0.8 mg PO4/L is also too low, for the very same reason. We would be glad to share with you numerous standard corrosion control and treatment reference works, best practices guides and published results from US and international lead corrosion control field and pilot studies. Secondly, the basis for that target (other communities using Lake Huron source use the same dose) is not scientifically derived nor does it consider water quality and the current state of Flint's distribution system. We have reviewed the original Detroit corrosion study and have seen some of the LCR monitoring data, and besides the fact that it did not directly pertain to this water source, few dosages were tested in the cited 1994 pipe loop study, and the higher dosage than the one implemented in the field currently was more effective. Based on the limited amount of data on the quality of Detroit water, what we know about the

history of Detroit corrosion control, we think an orthophosphate residual of 3 to 4 mg PO4/L should be the minimum starting test target residual for pipe passivation. It is likely that, at least initially a higher dosage will be necessary to reach the far ends of the distribution system and sufficiently reduce lead solubility and release from all lead sources. To allow flexibility, we feel the design of the chemical feed and storage systems should be able to consistently deliver a maximum dose of 5 to 6 mg PO4/L, if substantial orthophosphate loss is observed, if the starting dose is set for the desired residual level of 3 to 4 mg/L as PO4. We suggest that jar tests be performed in advance of orthophosphate addition to Detroit water to evaluate the impact of orthophosphate dose on turbidity that could result from interactions between orthophosphate and background Detroit water quality parameters (e.g., aluminum, calcium, etc.).

We want to stress that immediately shifting to Detroit water and adding orthophosphate will not necessarily translate to immediate improvements. Furthermore, this is a change, albeit a return to past conditions. Nonetheless, a period of system upset should be anticipated. The need for a communication strategy and a distribution system plan are critical.

Lastly, we see no mention of a water quality monitoring program. Two programs need to be put in place immediately (before return to Detroit water) to 1) identify lead sources, 2) assess treatment effectiveness against lead release from all of the simultaneously operating mechanisms (solubility, particulate release, galvanic corrosion), and 3) assess orthophosphate levels and stability of water quality in the distribution system.

There are multiple sources of lead in the Flint distribution system to the consumers' taps, such as: pipes; leaded brass; leaded solder; accumulations on old galvanized steel pipes; possibly accumulated on copper or some plastic pipes. It is critical that the fate of orthophosphate in the distribution system is understood, and how effective it is against each type of lead source, so dosing adjustment can be properly made. For this purpose, we recommend that a number of residences throughout Flint that meet the following plumbing criteria, be identified for an assessment of the contribution lead from the different potential service line and interior plumbing sources, through detailed mapping of plumbing materials, lengths, sizes, and location and type of inline devices and faucets using profile sampling. For confidence in interpretation, probably at least 5 sites from each of the configurations will be necessary. The configurations we would estimate to be most important (but should be changed or added to if local construction practice indicates it's necessary): Lead service line, galvanized steel interior plumbing; lead service line, copper with leaded solder joints; lead service line, plastic interior plumbing. It is also possible that interior plumbing may differ from the material used for the customer-side service line segment. We would be glad to discuss the specifics of this sampling effort.
For the purpose of assessing stability of water quality in the distribution system and to inform on orthophosphate residual adjustment, we suggest that 8 to 10 locations in the distribution system be selected to measure pH, alkalinity, orthophosphate, turbidity and iron on a weekly basis. These could be collected from TCR sampling locations, or other readily-accessible buildings, should be located at a distribution of locations in the distribution system and should be collected after a flush sufficiently long to assure that "fresh" distribution system water is being measured. Research has shown that over time, orthophosphate can reduce disinfectant demand associated with corroding metallic distribution system materials. These measurements need to be performed in the field and can simply be done with a portable HACH test kit or spectrophotometer.

A lead sampling plan needs to be in place to access the effectiveness of water change and treatment boost. LCR monitoring sites with confirmed lead service lines can be in the sampling pool. Sampling should consist of a 1 liter first draw sample (LCR sample without 5 minute pre-flush), followed by an additional flushed sample or two depending on profile sample results which is intended to capture major lead source(s). The specific details of this effort need to be worked out by the technical committee as soon as possible. We would gladly work with Flint on establishing a water sampling program to identity and verify lead service line sites. The plan and initial sampling effort should be performed before the switch so that one baseline sample set is collected.

Lastly, our strength does not fall under full-scale pump and chemical feed delivery systems. We would only say that the systems need to be scaled-up in size to accommodate our suggested dosing needs. Also, there is the some discussion about diverting water to the Dort reservoir and an associated orthophosphate feed system. We are not familiar with the reservoir but are wondering if it is an open reservoir?

Of course this is a lot of information to share and we would gladly be available to discuss the technical and scientific basis for our suggestions.
Let us know if you have any questions and thanks again.

Darren and Mike

Darren A. Lytle, Ph.D., P.E.
Branch Chief (Acting)
U.S. Environmental Protection Agency
26 West Martin Luther King Dr.
Cincinnati, Ohio 45268
Phone: (513) 569-7432
Fax: (513) 487-2543
email: lytle.darren@epa.gov

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Friday, October 16, 2015 1:32 PM
To: Lytle, Darren <Lytle.Darren@epa.gov>; Schock, Michael <Schock.Michael@epa.gov>
Cc: Busch, Stephen (DEQ) <BUSCHS@michigan.gov>
Subject: FW: Flint WTP PH2 SEG4 - Corrosion Control

Darren, Michael

We have received Flint's corrosion control proposal from their consultant. If you have comments, please provide them to me by Monday morning.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Matta, Samir [mailto:SFMatta@lan-inc.com]
Sent: Friday, October 16, 2015 12:02 AM
To: Prysby, Mike (DEQ)
Subject: Flint WTP PH2 SEG4 - Corrosion Control

Hi Mike,

Please see attached plans for the Corrosion Control Plan for the City of Flint. I will have the official submittal package to you tomorrow afternoon after I get Brent or Mike's signature on the permit application. I will call you when I get back in Lansing to drop the package. Is three sets of full size plans adequate? Would you like some half size plans? Let me know.

Basis of Design

Given that Flint will require lead and copper corrosion control and given that Detroit utilizes orthophosphate for their corrosion control methodology, and that Flint will be receiving Detroit water for the immediate future, orthophosphate is the appropriate corrosion control methodology for Flint. A dosage of 0.8 mg/l as PO_4 has been recommended for the

Detroit water. Numerous utilities utilizing Lake Michigan water have a target dosage of 0.9 mg/l as PO_4. Therefore, a target dosage in the range of 0.8 to 0.9 mg/l appears appropriate.

It is expected that, at least initially, there will be a significant PO_4 demand in the system. This will require a significantly higher dosage until this demand is satisfied and the target residual can be maintained. We are therefore designing for capability of a maximum dosage of 1.5 mg/l.
The arriving Detroit water will likely have some residual PO_4 when it arrives at Flint. It has been reported that this residual will be approximately 0.4 mg/l. The system must therefore be capable of a minimum dosage of 0.4 mg/l.

Based upon the usage of 75% Phosphoric Acid and a flow range of 4 MGD to 25 MGD, with an average day of 16 MGD, the expected feed rate will be 1.35 to 32 gpd. Average Phosphoric Acid feed is expected to be 10.8 gpd, requiring 30 days storage of 325 gal.

Orthophosphate will need to be applied at two locations. Detroit water will enter the Flint system at Control Station CS2, and supplementary phosphate will be applied there. However, on occasion some incoming water may need to be diverted to the Dort Reservoir, bypassing CS2. This water would then be introduced to the system through High Service Pump Station PS4 and phosphate would be introduced at this location.

Please let me know if the information is adequate or you require additional information.

Thanks.

Samir F. Matta, PE
Team Leader

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STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

October 22, 2015

Mr. Brent Wright
City Of Flint – D.P.W
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Revised Drinking Water Monitoring Schedule – 2015
Monthly Operation Reports
Siting Plans and Record Keeping

Monitoring Schedule:

Enclosed is your revised Drinking Water Monitoring Schedule for remainder of calendar year 2015 outlining the minimum requirements for your public water supply. Your schedule has been revised based on the City's change in source of its drinking water from the treatment of the Flint River utilizing the City's Water Treatment Plant to the Great Lakes Water Authority/Detroit Water and Sewerage Department. Collect samples early in the monitoring period of the year indicated on the schedule. If you use a private laboratory you are required to report the results to us within the first ten days of the month following the month that you received the results. To receive credit for monitoring, the **"WSSN"** (water supply serial number), the **"Site Code,"** and **"County"** must appear on the sample result. Bottles will NOT be mailed automatically. If you use the Department of Environmental Quality Laboratory, you can order bottles by calling 517-335-8184. Be certain of the United States Environmental Protection Agency sampling and analysis method requirements for hold times.

Monthly Operation Report (MOR) Requirements:

The City shall submit MORs as required under Administrative Rule 1502 (R325.11502). Please note required coliform bacteria monitoring results and associated chlorine residual monitoring shall be submitted to the department within the first 10 days following the end of the required monthly monitoring period. In addition, monthly operation reports shall be submitted to the department during the month following the month for which the monthly operation report was prepared.

Disinfection By-Product Sample Siting Plans:

The City of Flint shall continue routine standard monitoring of disinfection by-products, according to your Disinfection & Disinfectants By-Product (DDBP) plan which identifies 8 sites for routine quarterly monitoring.

Lead and Copper Monitoring Requirements and Site Sample Pool

Please note distribution system monitoring for water quality parameters (WQPs) continues at the expanded set of 25 sites per quarter. Lead and copper monitoring in accordance with the requirements of Administrative Rule 710a (R325.10710a) is being required for the 6 month period between January 1, 2016 and June 30, 2016. The City must ensure its sample site pool is large enough to collect the number of lead and copper tap samples required. All sites from which first draw samples are collected shall be selected from the pool of targeted sampling sites.

The City shall also conduct additional operational monitoring to demonstrate the effectiveness of corrosion control treatment.

Record Keeping:

The City shall maintain all monitoring records in accordance with all applicable requirements under the Administrative Rules including Rule 720a (R325.10720a), Rule 1506 (R325.11506), and Rule 1507 (R325.11507).

The Michigan Safe Drinking Water Act requires certain reports to be submitted to this office each year. Please remember that cross connection reports and annual pumpage reports are due by March 31, and the **Consumer Confidence Report** is due by July 1.

Also enclosed is the document "2015 Monitoring and Reporting Requirements." This provides additional details about monitoring and reporting requirements. If you have any questions, please contact us using the information below.

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-290-8817

Adam Rosenthal, EQA
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-284-6644

Enclosure
cc/encl: Mr. Robert Bisnick, City Of Flint
Genesee County Health Department

2015 Monitoring Schedule

FLINT, CITY OF **WSSN: 02310**

Collect samples early in the monitoring period. This schedule reflects your expected routine monitoring and is subject to change. To receive credit for monitoring, include the **WSSN, Site Code**, and **County** on your request for analysis form. Collect Bacteriological and Automated Partial Chemistry samples close to the shipping time and send overnight delivery. Send all sample results to your Department of Environmental Quality (DEQ) district office unless you use the DEQ laboratory. Test codes, sample units, and costs are listed to help you complete the DEQ laboratory form. Prices are subject to change without notice. The DEQ laboratory is closed on state holidays.

Location: Distribution System

Sample Type	Collect Samples According to the ...	# Samples/ Frequency	Collect	Site Code	Fee	Unit Number	Test Code
Bacteriological – coliforms	TCR Sampling Site Plan	100/Monthly	**Monthly**	DIST	$16.00	30	BPTC
Chlorine Residual	DBP Monitoring Plan	If serving chlorinated water, measure the residual disinfectant level at the same point and at the same time as the bacteriological sample and report the average to the DEQ.					
Total Trihalomethanes	DBP Monitoring Plan	8/3 months	**During February, May, August and November 2015**	See DBP Monitoring Plan	$65.00	36VO	CXTM
Haloacetic Acids		8/3 months	**During February, May, August and November 2015**	See DBP Monitoring Plan	$130.00	36HA	CXHA
Water Quality Parameters	Representative Sites	25/Quarterly	**Quarterly**	DIST	Various	Various	Various
Lead Copper for Corrosion Control	Lead and Copper Sampling Pool	60/6 months	Between 1/1 and 6/30/2016	DIST	$26.00	36CC	CCUB

Community Water Supply
2015 Monitoring and Reporting Requirements

Please Monitor Early: Collect samples early in the monitoring period (month, quarter, year) of the year indicated on the schedule. Bacteriological and partial chemistry samples should be collected close to the shipping time and sent overnight delivery to assure sample holding times are not exceeded (30 and 48 hour hold times respectively). We also recommend avoiding mailing bacteriological samples immediately preceding or following a holiday because samples tend to exceed the 30 hour hold time. When this occurs, a repeat sample must be collected as soon as possible upon notification.

If you use a private laboratory please report the results to us within the first ten days of the month following the month that you received the results. A list of certified laboratories is available on request. If samples are not collected as indicated on your monitoring schedule, you will incur a monitoring violation and possibly a fine. For information on the fines policy, visit http://michigan.gov/deqwater. Click on Drinking Water, Community Water Supply, and Administrative Fines (under Laws and Rules).

To receive credit for monitoring, you must include the **"WSSN"** (water supply serial number), the **"Site Code,"** and the **"County"** when you submit samples for analysis. Site codes are listed on your monitoring schedule.

Special Instructions If You Use The DEQ Laboratory: Bottles will NOT be mailed automatically. To order bottles, call the DEQ Laboratory at 517-335-8184 or download the form EQP 2301 *Requisition for Water Sample Units* from www.michigan.gov/deq. Click on Key Topics, Laboratory Services, Drinking Water, Obtaining The Necessary Sampling Units, and 'test list'. Please note that the DEQ laboratory is closed on most state holidays. The DEQ laboratory prices are subject to change without notice.

Special Instructions For Automated Partial Chemistry, VOC and TTHM Samples: These sample bottles must be cooled and preserved during shipment to the laboratory. If you use the DEQ laboratory, you will receive the ice pack, acid dropper (if necessary) and small cooler when you request the bottles. Samples must be preserved correctly to be used for compliance purposes. To avoid resampling follow instructions contained with the sample bottle. If you would like more information, contact the DEQ lab, at 517-335-8184, or contact this office.

Cyanide: Previously, supplies that chlorinated the water were waived from monitoring for cyanide. The U.S. EPA now requires all supplies to sample the entry point for cyanide.

UCMR3 Monitoring: You may have monitoring requirements in 2015 under the third Unregulated Contaminant Monitoring Rule (UCMR3). The U.S. EPA will contact you directly if your water supply is required to monitor in 2015. A list of laboratories certified to analyze the samples collected for UCMR3 is available at http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/upload/lablist.pdf. Contact the U.S. EPA with questions.

Reminder if Lead and Copper Monitoring Due This Year: Provide individual lead tap results to people who receive water from sites that you sampled, even if lead was not detected, within 30 days of learning the results. Send us a certification that you met all the delivery requirements along with a sample copy of the customer notice within 3 months after the end of the monitoring period. Water supplies that failed to distribute the Consumer Notice of Lead Results must include the following statement in their CCR, "During the year, we failed to provide lead results to persons served at the sites that were tested as required by the Lead and Copper Rule." To download the *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Microsoft Word or PDF format, visit www.michigan.gov/deqwater. Click on Drinking Water, Community Water Supply, and Reporting Forms (under Manuals, Forms & Brochures).

Annual Reports: These reports are due to this office each year.

- The **Cross Connection Report**, due by March 31, describes the status of your local cross connection control program. Manufactured housing communities are exempt from this requirements until 2016.

  Each year, water supplies must submit this report, even if a formal program has not been implemented. If cross connections do not exist in your water system, indicate so on the report. Download the Cross Connection Report form from http://michigan.gov/deqwater. Click on Drinking Water, Community Water Supply, Reporting Forms (under Manuals, Forms & Brochures). Instructions are included with the form.

- The **Annual Pumpage/Usage Report**, due by March 31, is required of water supplies that do not submit monthly operation reports.

  This summary of water pumpage and water use must be submitted by each water supply that does not submit a monthly operation report. To manage our natural resources, pumpage data are compiled to determine water use demands in Michigan. Download the Annual Pumpage/Usage Report form from http://michigan.gov/deqwater. Click on Drinking Water, Community Water Supply, Reporting Forms (under Manuals, Forms & Brochures). Please be sure to indicate the appropriate units on the report (e.g. million gallons or gallons).

- The **Consumer Confidence Report**, due by July 1 to your customers, to your local health department and to this office, describes the quality of the water and characterizes the risks, if any, from exposure to contaminants detected..

  Electronic delivery methods may be used to distribute the CCR to bill-paying customers, provided the method is direct. A paper copy must be delivered to bill-paying customers who request it or known to be unable to receive the CCR electronically. For more information on e-delivery, visit www.michigan.gov/deqwater. Click on Drinking Water, Community Water Supply, Consumer Confidence Report Rule (under Laws and Rules).

From: Prysby, Mike (DEQ)
Sent: Friday, October 30, 2015 5:27 PM
To: Shekter Smith, Liane (DEQ)
Subject: Action Steps update

Liane,

Below is an update of the Action Steps completed today:

Action Step 8: Review corrosion control treatment plan and get any EPA comments

Corrosion Control Treatment Operation letter was completed and an electronic copy was sent to the city of Flint and EPA.

Action Step 16: Confirm plumbing assessment and sampling is scheduled for Brownell K-2 STEM Academy and Eisenhower Elementary:

Plumbing assessment was completed at both schools. A briefing of the plumbing layout and sampling details was provided to the sampling teams. Sampling will be conducted at both schools tomorrow morning.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Sygo, Jim (DEQ)
Sent: Thursday, November 12, 2015 10:35 AM
To: Hess, Elmer (OAG)
Cc: Mikulec, Allison (OAG)
Subject: Requested Information for Drinking Water Audit
Attachments: Flint LCR 11_9_15.pdf; Compliance and Enforcement Policy 04-003 Final (10-12-15).pdf

Elmer and Allison,
In response to our meeting today I am providing the following information:

I have attached the letter sent to the City of Flint regarding their certifications of the Tier 1 sites.
I have also attached our current Compliance and Enforcement Policy. This copy is the final copy but a signed copy is on our Intranet.

Instructions to residents at Flint. Contact Stephen Busch 517-643-2314.
First 6 month sample- population used, sample selected, results received, final report prepared. Contact Mike Prysbe 517-290-8817
Second 6 month sample- same thing. Contact Mike Prysbe 517-290-8817
Virginia Tech results. Marc Edwards Can be contacted through Virginia Tech.
Hurley detailed results. Contact Linda Dykema 617-335-8566

Other phone numbers requeste
Liane Shekter-Smith 517-284-6543
Richard Benzie 517-284-6512

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

November 9, 2015

Mr. Michael Glasgow
Utilities Administrator
City of Flint
4500 North Dort Highway
Flint, Michigan 48505

WSSN: #2310

Dear Mr. Glasgow:

SUBJECT: Water Supply – City of Flint (City) – Compliance Communication
Lead and Copper Rule Compliance Sampling Sites

The City community water system is subject to the requirements of the Michigan Safe Drinking Water Act, 1976 Public Act 399, as amended (Act 399). According to Department of Environmental Quality (DEQ) records, City reports submitted to the DEQ regarding Lead and Copper Rule (LCR) compliance monitoring information have been certified by the City that all LCR compliance monitoring since 1992 has been conducted at sampling sites meeting the Tier 1 criteria listed under subrule 1c of administrative rule 710a (R325.10710a).

The City's recent efforts to electronically convert customer service line information and statements by some of the City's certified operators conflict with the information provided in the City's LCR compliance monitoring certification reports.

Therefore, the DEQ is hereby requesting the City provide additional information and documentation regarding all 324 historic LCR compliance sampling sites.

As of November 3, 2015, the City's electronic database of customer service connections listed 10,895 records of converted customer service connection index cards. The City has recently indicated it has a total of 29,072 customer service connections, leaving approximately 18,177 records left to be converted. These digital records include a listing of the service line material.

The DEQ has obtained a copy of these 10,895 digital records and cross referenced them with the addresses for the City's 324 historic LCR compliance monitoring sites. However, only 46 of the 324 sites were able to be matched at the current time. Of these 46 sites, only 6 sites contained information confirming the Tier 1 site criteria based on having lead service line materials. 14 sites were listed as having no available information (n/a), and require additional documentation to justify being designated as a Tier 1 sample site having a lead service line. The remaining 26 cross referenced sites were listed as having copper service line materials which directly conflicts with the City's LCR reports certifying these sites as Tier 1 based on the criteria of having a lead service line. The City needs to provide additional information to the DEQ demonstrating these sites meet the Tier 1 site criteria or we will assume they do not.

The City's remaining 278 historic LCR compliance sampling sites must also be reviewed and will require additional documentation to justify being designated as Tier 1 sample sites.

Our office has provided the enclosed table that lists all 324 of the City's historic LCR compliance monitoring sites, when each site was utilized, the City's certification information for each site, and information cross referenced from the City's customer service line database. The City can use the far right column in this table, labeled *Justification of Lead Service Line and Tier 1 Criteria*, to summarize the City's justification for certifying these sites as Tier 1 and having a lead service line. Any supporting documentation regarding the justification for each site needs to be provided as separate attachments.

As a reminder, in accordance with subrule 1 of administrative rule 710a (R325.10710a), by January 1, 1992, the City was to have completed a materials evaluation of its distribution system to identify a pool of targeted sampling sites from which all first draw samples are collected. This evaluation was required to include information from:

- Special Monitoring for Corrosivity Characteristics
- All plumbing codes, permits, and records in the files of the building department or departments that indicate the plumbing materials installed within publically and privately owned structures connected to the water distribution system.
- All inspections and records of the distribution system indicating material composition of customer service connections.
- Water quality information that indicates locations which may be particularly susceptible to high lead or copper concentrations.

The completed table and all supporting documentation must be provided to our office as soon as possible, but by no later than December 30, 2015, prior to the next LCR compliance monitoring period.

Please contact me at 517-290-8817 or prysbym@michigan.gov at your earliest convenience to discuss this matter in more detail.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance

cc: Mr. Robert Bisnick, City of Flint
Mr. Brent Wright, City of Flint
Mr. Howard Kroft, City of Flint
Ms. Natasha Henderson, City of Flint
Mr. Jim Sygo, Chief Deputy Director, DEQ
Mr. Stephen Busch, DEQ
Mr. Adam Rosenthal, DEQ

From: Henry, James <jhenry@gchd.us>
Sent: Thursday, October 01, 2015 4:00 PM
To: Prysby, Mike (DEQ)
Subject: FW: MDEQ Water Testing for Flint Community Schools
Attachments: Lead_Copper_Sampling_Instructions_329915_7.pdf; Flint School List.pdf

From: Henry, James
Sent: Thursday, October 1, 2015 1:53 PM
To: 'Sitko, Anthony M'; Busch, Stephen (DEQ); Tawwab, Bilal; Lisa Ermak
Cc: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

Good afternoon, below is the message that I sent to GCHD staff today. Please let me know if there are questions or concerns.

Thanks Jim

Attached is the school list w/assignments and sampling protocol. If the school locations are more geographical convenient for someone else, please feel free to switch.

Plan

- Report to GCHD tomorrow morning at regular scheduled time to pick up the water bottles and forms.
- Report to first school office w/identification (approx. 8:30am). They will have designated three sample locations per school. The school will have followed their part of the sampling protocol.
- Follow our part of the sampling protocol. Be very specific when identifying the location on the MDEQ sample form i.e. classroom numbers, NSEW, ect.
- Return to office with samples. MDEQ will pick up samples for analysis.

Let me know if there are questions/concerns. Thanks for helping to expedite the schools sampling.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Sitko, Anthony M [mailto:tsitko@flintschools.org]
Sent: Wednesday, September 30, 2015 11:10 AM
To: Henry, James; Busch, Stephen (DEQ); Tawwab, Bilal; Lisa Ermak
Cc: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

Thank you.

We ask that the GCHD staff collecting samples please report to the main office of each school site to sign in as visitors and present GCHD identification. Principals will identify the selected fountains and direct you to their locations.

Respectfully,
Tony

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Wednesday, September 30, 2015 10:07 AM
To: Busch, Stephen (DEQ); Tawwab, Bilal; Sitko, Anthony M
Cc: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

Got it, Thanks

GCHD staff will collect samples Friday morning, if it works for the schools. I will follow up with more detailed information.

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Wednesday, September 30, 2015 9:31 AM
To: Henry, James; btawwab@flintschools.org; tsitko@flintschools.org
Cc: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

A school based sampling instruction sheet is attached. We will provide copies to the Genesee County Health Department with sampling units.

A sheet should be completed for each sample. As discussed yesterday the plan is to collect 3 samples from each facility.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Pallone, Maggie (DEQ)
Sent: Tuesday, September 29, 2015 5:16 PM
To: Busch, Stephen (DEQ); Wurfel, Brad (DEQ)
Subject: FW: MDEQ Water Testing for Flint Community Schools

Steve-
Can you work on putting together the quick info they will need?
Thanks,
Maggie

From: Sitko, Anthony M [mailto:tsitko@flintschools.org]
Sent: Tuesday, September 29, 2015 5:15 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>
Cc: Tawwab, Bilal <btawwab@flintschools.org>; Lisa Ermak <lermak@byrumfisk.com>
Subject: RE: MDEQ Water Testing for Flint Community Schools

Greetings Maggie,

Mr. Tawwab our Superintendent has a principal meeting tomorrow morning with our district principals.

If at all possible it would be good for us to be able to present them with the information needed (protocols) to prepare for the County Health Department to get the water samples from the schools on Thursday and/or Friday.

Mr. Tawwab would like to get them a memo communication in the morning to this effect. Therefore, please send the needed information that we discussed in the conference call as early as you can tomorrow for this important communication to our district principals.

Thanking you in advance,
Tony

From: Pallone, Maggie (DEQ) [mailto:PalloneM@michigan.gov]
Sent: Tuesday, September 29, 2015 3:12 PM
To: Sitko, Anthony M
Cc: Tawwab, Bilal; FARRIS SHARRECE; Lisa Ermak; Busch, Stephen (DEQ); Tommasulo, Karen (DEQ); Pallone, Maggie

(DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

We would like to have this call at 4:00.

Conference call info: **PPI**
Access Code: **PPI**

Please let me know if you have any questions.

Thanks!
Heather Feuerstein for Maggie Pallone
Management Assistant to
Maggie Pallone, Deputy Director and
Brad Wurfel, Communications Director
Department of Environmental Quality
517.284.6715

From: Sitko, Anthony M [mailto:tsitko@flintschools.org]
Sent: Tuesday, September 29, 2015 1:23 PM
To: Pallone, Maggie (DEQ)
Cc: Tawwab, Bilal; FARRIS SHARRECE; Lisa Ermak
Subject: MDEQ Water Testing for Flint Community Schools
Importance: High

Greetings, Maggie,

Thank you for taking the time to talk with me this afternoon regarding water testing for our schools. Please find the attached list of sites within the Flint Community Schools at which Superintendent Tawwab would like water tested.

Per our discussion on the phone this afternoon, the list of school buildings is attached and I will be available between 3:00PM and 5:00PM for a conference call with yourself and the identified other parties.

I await your reply on the time for the conference call.

Regards,
Tony

From: Henry, James <jhenry@gchd.us>
Sent: Tuesday, October 06, 2015 12:31 PM
To: Prysby, Mike (DEQ)
Subject: Flint Schools

Mike, do you have water results for Flint schools?

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Daugherty Johnson <djohnson@cityofflint.com>
Sent: Monday, January 05, 2015 12:23 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Cc: Brent Wright;Michael Glasgow;Howard Croft;Robert Bincsik
Subject: TTHM notice and press release
Attachments: Flint Water TTHM Press Release Jan 2.pdf; TTHM Public Notification Final.pdf

Hello Steve and Mike. I have attached the press release sent to the media as well as the Public Notice that we mailed to all customers on Jan 2nd. We are planning a televised press conference tomorrow afternoon at the Water Plant. I will get you further info as details finalize. There will be an official letter to you detailing all of our notification steps. I just wanted to make sure you had this asap.

Duffy

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system was recently found to be in violation of a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, and November 20 of 2014). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the Maximum Contaminant Level (MCL). The standard for TTHMs is 80 ug/L. The location reporting the highest TTHM level was 99 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. In that case, you may be at increased risk and should seek advice about drinking water from your health care provider.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem in 2015.

For more information, please contact Mr. Brent Wright or Mike Glasgow at 810-787-6537 or the Water Plant at 4500 North Dort Highway, Flint, MI 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: F1 S3 WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules. Reminder to water supplier: This notice/certification must be sent to the DEQ.

Michael Glasgow ASSISTANT SUPERVISOR 1/2/15

Signature Title Date Distributed

From: Busch, Stephen (DEQ)
Sent: Tuesday, January 27, 2015 9:22 AM
To: Shekter Smith, Liane (DEQ);Prysby, Mike (DEQ);Benzie, Richard (DEQ)
Subject: RE: ABC12 News Flint water test results comment?

The other issue is they could cherry pick the worst results and throw away anything they think is low. We would need to obtain all results from the lab.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Shekter Smith, Liane (DEQ)
Sent: Tuesday, January 27, 2015 9:20 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Subject: RE: ABC12 News Flint water test results comment?

Do we know whether they were collected at any of the same locations that Flint uses for compliance?

From: Busch, Stephen (DEQ)
Sent: Tuesday, January 27, 2015 9:18 AM
To: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: ABC12 News Flint water test results comment?

I would be sure to look into:
Who collected the samples
What sampling protocols were used
Is the lab certified to run this analysis
What lab method was used

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 27, 2015 8:55 AM
To: Busch, Stephen (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: FW: ABC12 News Flint water test results comment?

I am in the position to look at these results; however, the validity of the samples may be questionable given they were most likely not collected by Flint operators or in accordance to Flint's Stage 2 DDBP plan. Any professional opinion may need to be carefully worded....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Elliott, Larry F. [mailto:larry.f.elliott@abc12.com]
Sent: Tuesday, January 27, 2015 7:48 AM
To: Prysby, Mike (DEQ)
Subject: ABC12 News Flint water test results comment?

Mike,
We have just completed our own independent testing of multiple sites within the Flint water system and wonder if you'd be willing to look them over and give us your professional opinion.
I could email you the reports from the testing lab we used.
Larry Elliott
ABC12 News
(810)257-2805 office
PPI cell

From: Wurfel, Brad (DEQ)
Sent: Thursday, September 03, 2015 11:18 AM
To: Shekter Smith, Liane (DEQ);Benzie, Richard (DEQ);Prysby, Mike (DEQ)
Subject: FW: U.S. EPA Lead Expert

And also, this.
b

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Thursday, September 03, 2015 11:13 AM
To: Wurfel, Brad (DEQ)
Subject: FW: U.S. EPA Lead Expert

Brad:
Can you help me with some information from the DEQ regarding this email, sent by the U.S. EPA enforcement team leader in Region 5?
It seems to say the U.S. EPA has offered the city the assistance of a lead expert and sent the information to the DEQ as well. I'm following up the a PR contact at the U.S. EPA on this and about the more general federal interest in the lead in water issue in Flint.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile PPI
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Arthur Woodson [mailto:arthurlw_2000@yahoo.com]
Sent: Thursday, September 03, 2015 9:52 AM
To: Ronald Fonger
Subject: Fw: U.S. EPA Lead Expert

From: Shoven, Heather <shoven.heather@epa.gov>;
To: arthurlw_2000@yahoo.com <arthurlw_2000@yahoo.com>;
Subject: U.S. EPA Lead Expert
Sent: Mon, Aug 31, 2015 5:55:41 PM

Dear Mr. Woodson:

Thank you for your call on Friday.

In follow-up to your inquiry on U.S. EPA lead experts, I had a conversation with Dr. Darren Lytle, who is the Acting Chief of the Treatment Technology Evaluation Branch in the Water Supply and Water Resources Division within EPA's Office of Research and Development. Scientists within Dr. Lytle's branch have expertise in drinking water treatment including corrosion control to address lead contamination. We passed along Dr. Lytle's information to both MDEQ and Flint's Mayor, Dayne Walling, for consideration to work with Flint's Technical Advisory Committee.

You mentioned that you wanted to provide the Flint City Council with this information since Mayor Walling has not shared EPA's assistance offer with the Council. I have left a voicemail message with Councilwoman Monica Galloway regarding your inquiry since it is critical that the Council work with the City and the State to discuss next steps for the Flint Water system.

Please let me know if you have any follow-up questions.

Best wishes,

Heather

Heather A. Shoven | Enforcement Team Leader | U.S. Environmental Protection Agency, Region 5

Ground Water and Drinking Water Branch | 77 W. Jackson Blvd (WG-15J) | Chicago, IL 60604 | 312-886-0153

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Thursday, September 10, 2015 10:47 AM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)

Steve & Mike,

Good morning, I hope you enjoyed your holiday weekend. I am contacting you on behalf of Howard to request a "quote". Howard is preparing a presentation for the City Council on Monday night in regards to this recent lead & copper news. He would appreciate a statement in regards to why corrosion control was not required by the City at the onset of using the Flint River, and how it took two rounds of lead & copper sampling to determine that "optimization" is required. I have explained to him my understanding, although for the presentation he is looking for a brief statement of a couple sentences to reference or quote one of you.

Thank you,

--
Mike Glasgow
Utilities Administrator
City of Flint
1101 S. Saginaw St.
Flint, MI 48502
(810)766-7135 ext. 2602

From: Benzie, Richard (DEQ)
Sent: Thursday, September 24, 2015 5:51 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: RE: Flint draft lead advisory

Mike,

I like all of your edits with the possible exception of the last ones where your additional information makes it sound like the city has already initiated OCCT and then immediately following, you say they hope to have it installed by January. I would make it clear in one sentence that the city plans to install OCCT by January, 2016. In other words, one of the activities yet to be conducted is the installation of OCCT

Also, Steve and I discussed the heading of "Public Health Advisory." We would recommend they call it a Consumer Awareness Notice, as an advisory implies a regulatory aspect that really doesn't exist in this case.

Richard Benzie, P.E., Chief
Field Operations Section
Office of Drinking Water and Municipal Assistance, MDEQ
517-284-6512

From: Prysby, Mike (DEQ)
Sent: Thursday, September 24, 2015 4:06 PM
To: Busch, Stephen (DEQ); Benzie, Richard (DEQ)
Subject: Flint draft lead advisory

Steve, Richard,

Although I've been in the field most of the day...I thought it was prudent to review Flint's Public Health Advisory (draft) regarding lead in drinking water, at the city's request. Attached is the draft advisory with my tracked revisions. Feel free to comment or make any further revisions as needed.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Thelen, Mary Beth (DEQ)
Sent: Friday, September 25, 2015 11:05 AM
To: Prysby, Mike (DEQ)
Subject: RE: Consumer Notice (draft) - city of Flint

Thanks – I have sent on to Brad for approval (and to call you or Steve). I also left him a voice mail. Thanks.

Mary Beth

Mary Beth Thelen
Management Assistant to Director Dan Wyant
Department of Environmental Quality
Constitution Hall, 6th Floor South
Phone: 517-284-6712 or 284-6700 (new numbers)
Fax: 517-241-7401
Thelenm2@michigan.gov

From: Prysby, Mike (DEQ)
Sent: Friday, September 25, 2015 11:03 AM
To: Thelen, Mary Beth (DEQ)
Subject: FW: Consumer Notice (draft) - city of Flint

Mary,

See note to Brad with attached draft public health advisory. Thanks

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Friday, September 25, 2015 8:30 AM
To: Wurfel, Brad (DEQ); Fields, Maggie (DEQ)
Cc: Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: Consumer Notice (draft) - city of Flint

Brad,

Mr. Howard Kroft from the city of Flint has prepared a draft Public Health Advisory regarding lead in drinking water that he intends to publish today. Mr. Kroft requested us to review the draft advisory and make any revisions as needed. Attached is a copy of the draft advisory along with our tracked changes. If there are any further edits you see fit, let me know. Also, I will be out of the office today after 11am. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Henry, James [jhenry@gchd.us]
Sent: Thursday, October 01, 2015 3:57 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: FW: Public Health Emergency Declaration
Attachments: public health emergency announcement 10-1-15.pdf

From: Sandlin, Mary
Sent: Thursday, October 1, 2015 2:33 PM
To: GCHD-Everyone
Subject: Public Health Emergency Declaration

Mary E. Sandlin
Clerical Coordinator
Genesee County Health Department
630 S. Saginaw Street, Suite 4
Flint, MI 48502-1540
(810) 257-3812 FAX: (810) 257-3147
msandlin@gchd.us

Genesee County
Health Department

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us

Genesee County Board of Commissioners

1101 BEACH STREET, ROOM 312 FLINT, MICHIGAN 48502

TELEPHONE: (810) 257-3020
FAX: (810) 257-3908

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TED HENRY DISTRICT 9
REGGIE ADAMS DISTRICT 10

October 1, 2015

Public Health Emergency Declaration for People Using the Flint City Water Supply with the Flint River as the Source

The County is issuing an Emergency Advisory recommending that people not drink the water coming from the City of Flint using the Flint River as the water source unless:

It has been tested to assure it does not contain elevated levels of lead.

It is being filtered through a National Sanitation Foundation (NSF) approved filter certified to remove lead that meets ANSI standard 53.

Findings reported in the Detroit Free Press September 30, 2015 indicate that Governor Snyder has publically acknowledged that Flint's water supply "appears" to have problems. Snyder has conceded that "it appears that (water) lead levels could be higher or have increased," and that there are "probably things that weren't fully understood when the switch was made." This is in direct contrast to previous reports from the State that downplayed the severity of the situation and conflicted with local data released by researchers at Hurley Medical Center.

Young children are most vulnerable to leads effects, because prior to age six, their brain and central nervous system are still forming and easily susceptible to damage. For an adult to suffer significant health effects, exposure to lead would have to be sustained and more intense. Most adults who are affected by lead have been exposed in an occupational setting, such as working as a house painter or in a battery recycling plant.

Pregnant women are at special risk because the lead they absorb crosses the placenta and enters the fetus.

It's important to remember that there is no known safe level of lead in a human body. Experts now use a reference level of 5 micrograms per deciliter to identify children with blood lead levels that are much higher than most children's levels. This new level is based on the U.S. population of children ages 1-5 years who are in the highest 2.5% of children when tested for lead in their blood.

Lead in water can contribute to a child's blood lead level. The Michigan Department of Environmental Quality, who regulates municipal water supplies, has assured us that the water leaving the Flint Water Plant meets all Federal and State requirements. The City of Flint has a documented problem with lead in its drinking water due to service and household lines that may contain lead or lead solder which can leach lead because of the corrosivity of the water since changing to the Flint River as the source supply. Generally, those who are most vulnerable

to leads health effects from exposure to unfiltered tap water are the very youngest children. For this reason, if you are not sure about the lead content in your tap water, it's best to either use a filter that has been found to be effective for reducing or eliminating lead, or to use bottled water instead. Water filters should be National Sanitation Foundation (NSF) certified to remove lead and meet ANSI standard 53. If these options are not available to you, then it's best to let the water run for at least five minutes before using it for either drinking or cooking purposes. Always use cold water instead of hot water for drinking and cooking.

It's especially important to avoid using untested or unfiltered tap water for mixing infant formula unless you can assure your water is lead free.

When leaded gasoline was in widespread use in this country, the lead came out the tail pipe and was deposited in yards near the roads. That lead may still be in those yards. In addition, lead paint continues to be a major source of childhood lead poisoning and can be found in homes built before 1978 when lead paint was banned in the U.S. and may be a hazard inside and outside the home especially where paint is worn or flaking.

There are many other potential sources of lead exposure, including:

- "Home remedies" and cosmetics imported from other countries
- Tamarind or chili-based candies from Mexico
- Stained glass windows
- Fishing sinkers
- Firing ranges
- Old, deteriorated mini-blinds
- Bean pots and painted ceramics
- Crystal decanters
- Lead crystal glassware

Since no safe level has been identified it is in everyone's interest to reduce exposure to lead as much as possible. Recommendations on ways to reduce lead exposure can be found on the Genesee County Health Department website www.gchd.us and Center for Disease Control and Prevention website: http://www.cdc.gov/nceh/lead/tips.htm .

Recent data provided by Hurley researchers has indicated a significant increase in blood lead levels in children after the switch to Flint River water. The County Health Officer has requested that MDHHS provide specific data to support their claim that state data is more comprehensive and does not show a significant increase. To date the state has failed to provide the requested data by the September 30, 2015 deadline in our previous request to the state.

COUNTY OF GENESEE

BY: _____ Date: 10-1-15

Jamie W. Curtis, Chairperson
Board of Commissioners

BY: _____ Date: 10-1-15

Brenda Clack, Chairperson
Human Services Committee
Board of Commissioners

BY: _____ Date: 10-1-15

Bryant W. Nolden, Vice Chairperson
Board of Commissioners

GENESEE COUNTY HEALTH DEPARTMENT

BY: _____ Date: 10-1-15

Mark Valacak, M.P.H.
Health Officer

From: Howard Croft <hcroft@cityofflint.com>
Sent: Thursday, March 05, 2015 1:11 PM
To: Brent Wright;Daugherty Johnson;Dayne Walling;donna. cole;gdn2@aol.com;Howard Croft;James Henry;jmikewright;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;rob.nicholas@veolia.com;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green;Elizabeth Murphy
Subject: Tech Committee Follow up
Attachments: Water Advisory Cmte 030515.zip; COf TTHM Data.pdf; COF Improvements Since November.pdf; Tech Committee Presentation - Veolia.pdf

All,

I want to thank everyone for attending our first Technical Committee Meeting yesterday, by all measurements this was a very successful first gathering. I am forwarding everyone an electronic copy of the materials shared yesterday including the presentation by Veolia.

As for next steps, I am looking for literature form DR. Rose and from Michael Wight of the EPA to come within the next day or two. I also would like to have specific questions that anyone feels should be included in a bullet point list so that we can move quickly to generate the best responses.

Next week I will look to vet with this group the information that we intend to send to the community along with the next violation notice. Our goal is to have documented information in everyone's hands prior to the mailing of the violation.

We will also plan to have another meeting very early in April to assess the community response to the upcoming notice, evaluate if there are items coming from the community advisory group that need to be addressed, share the internal water plant progress, and to determine our next steps.

Thank you again,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

City of Flint

Water Forum

5/30/2012

City Of Flint Water Forum

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City Of Flint Water History Facts

Current Treatment Plant was put into service in 1954.

Current 72" main pipeline was completed in 1970.

Flint signed a 30 year contract with Detroit water and Sewer Department in the mid 1960's.

The contract with DWSD has expired and we are currently operating on a yearly extension.

In 2006 Flint completed a $48,000,000 upgrade of the existing Water Plant. (Required by the MDEQ & for backup only).

Flint's Water & Sewer System is approximately a 300,000,000 Enterprise.

Flint's Water & Sewer System is designed to deliver water to over 200,000 people with over 1,500 miles of infrastructure.

Flint's most recent census count shows a population of approximately 102,000 in 2010.

Flint's census population in 2000 was approximately 124,000.

The water system had over 45,000 customers in June of 1999.

The water system had just over 36,000 customers by June 2011.

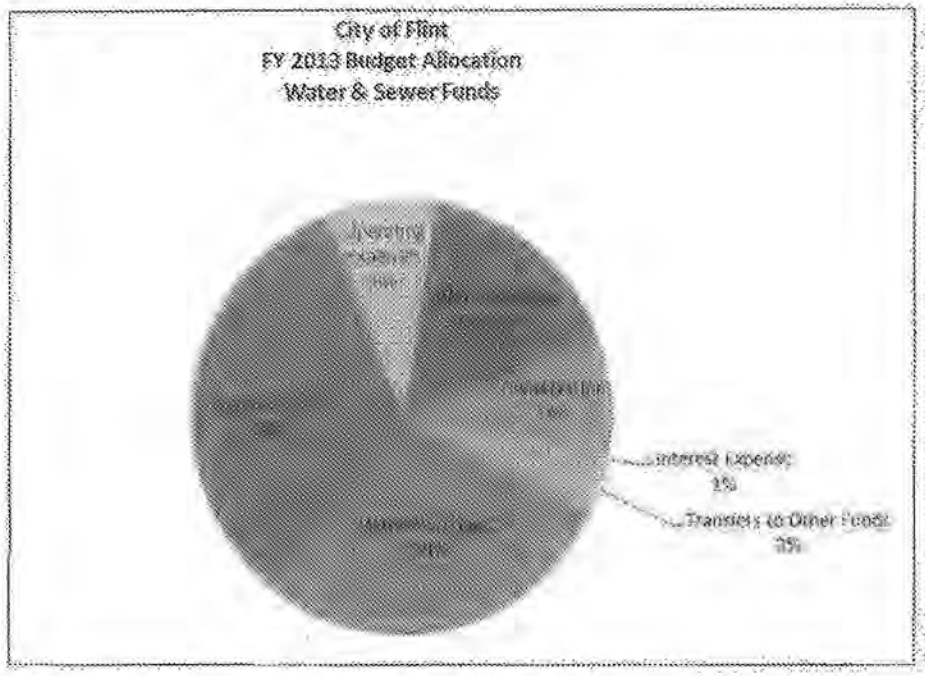
The "Fixed Costs" that must be covered to maintain the system and deliver quality water have increased over time.

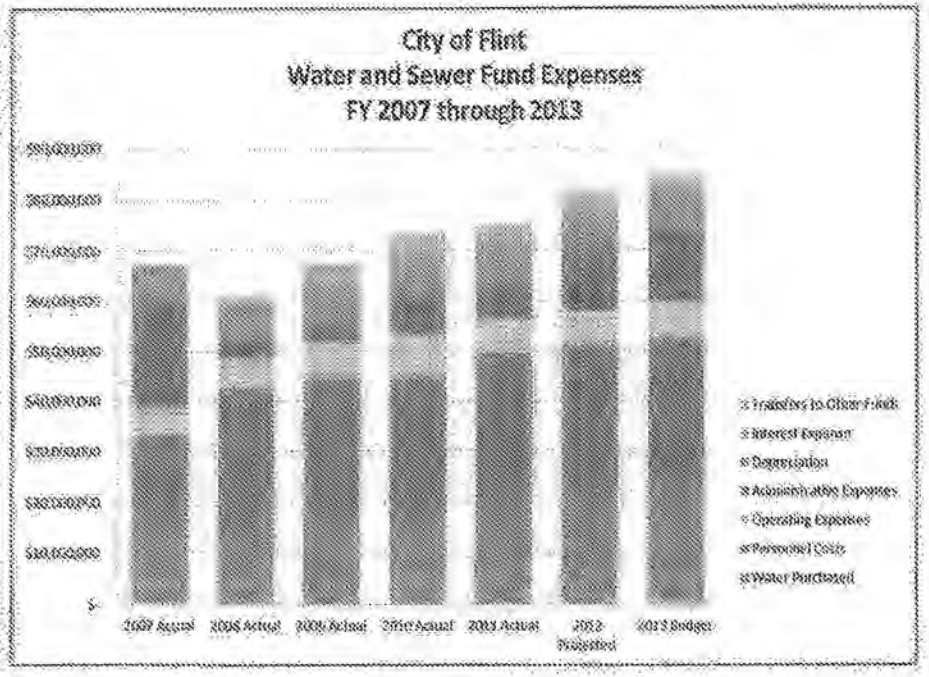
City Of Flint
Most Frequently Asked Questions about Water

- ❑Why are the water rates so high ?
- ❑How does my water bill work (Explanation of charges) ?
- ❑Why do others in the area pay less for the same amount of water ?
- ❑Where has all of the water and sewer fund money gone ?
- ❑What do I do if I think my bill is incorrect ?
- ❑What effect does leakage or theft have on my bill ?
- ❑How can I report water theft ?
- ❑Why don't we go back to using the Flint River like we once did ?

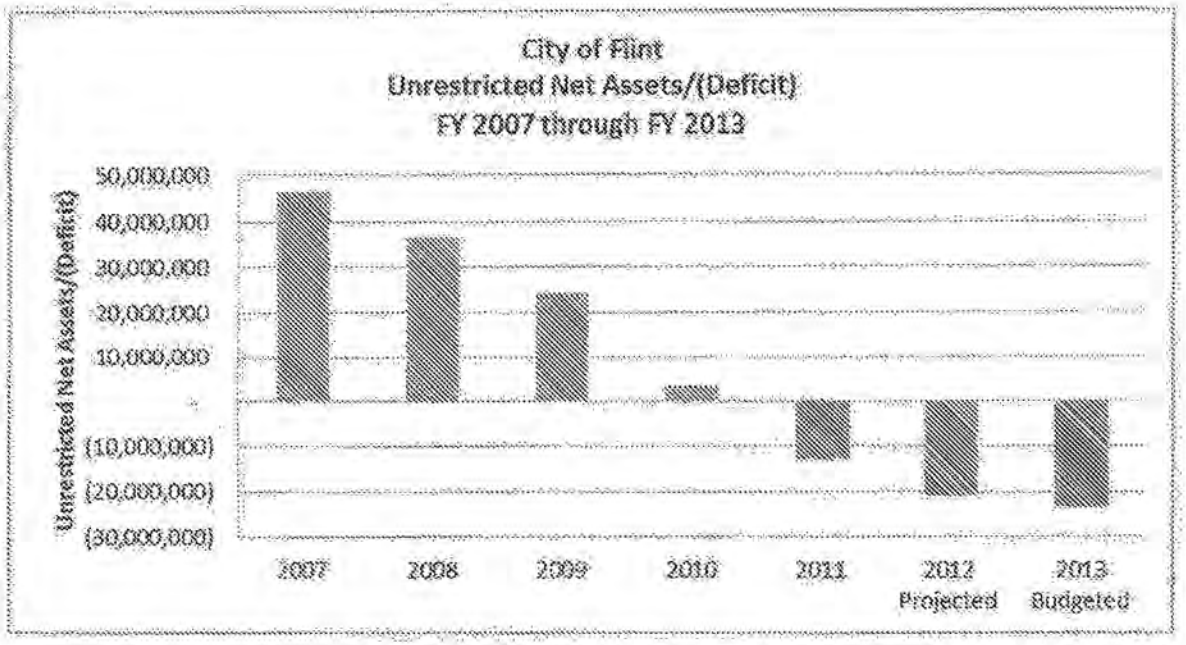
City of Flint

Budget Allocation and Fund Expenses





	Audited						
	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Projected	2013 Budget
Operating Revenues	51,090,679	51,100,332	51,906,553	47,926,589	54,385,644	67,983,044	81,734,552
Other Revenues	2,627,939	3,274,450	1,442,383	764,886	68,645	126,670	455,867
Annual Revenues	53,718,618	54,374,782	53,348,936	48,691,475	54,454,289	68,109,714	82,190,419
Water Purchased	16,052,006	16,297,871	17,421,663	17,108,752	20,919,987	21,756,787	24,031,417
Personnel Costs	17,292,444	26,302,590	27,591,206	28,149,946	28,618,817	29,640,499	28,546,350
Operating Expenses	5,355,638	6,145,119	6,950,534	8,146,390	6,917,964	6,420,260	7,258,290
Administrative Expenses	21,300,900	4,229,382	3,403,231	7,327,630	6,221,627	11,465,462	14,140,047
Depreciation	7,217,142	7,132,870	8,364,022	8,854,889	8,689,809	8,615,000	7,500,000
Interest Expense	86,632	485,499	868,031	812,270	754,890	705,150	644,314
Transfers to Other Funds	-	-	2,990,000	2,990,000	2,990,000	2,990,000	2,990,000
Annual Expenses	67,304,762	60,593,331	67,588,687	73,384,877	75,113,094	81,593,158	85,111,418



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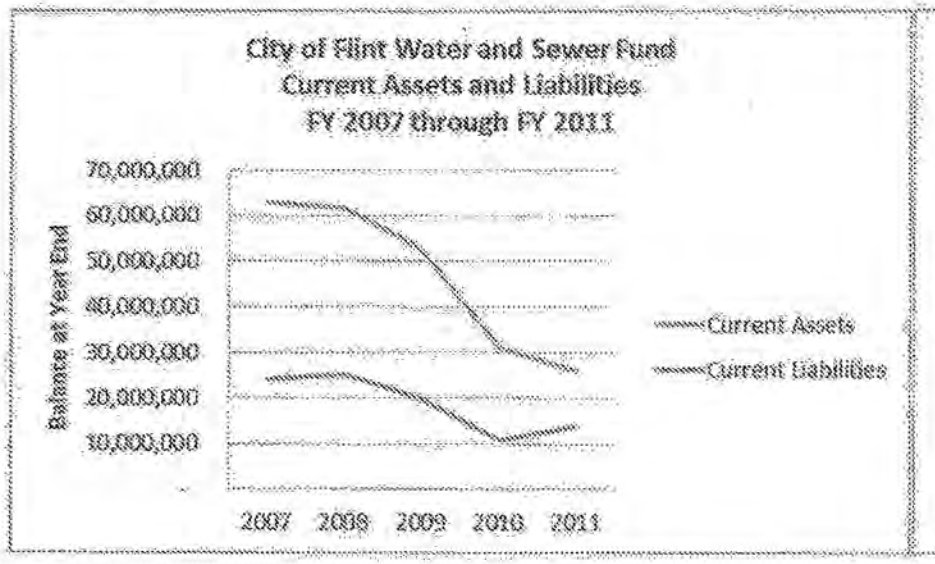
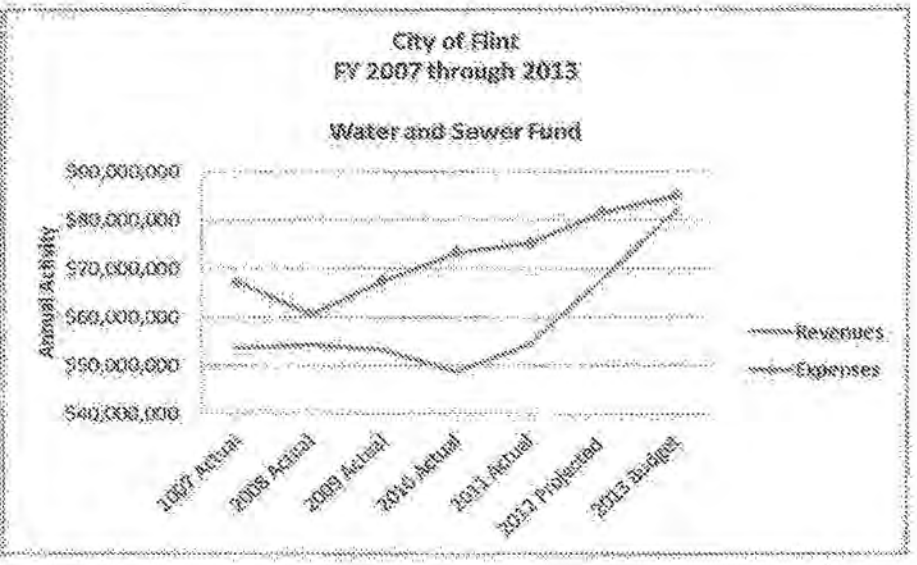
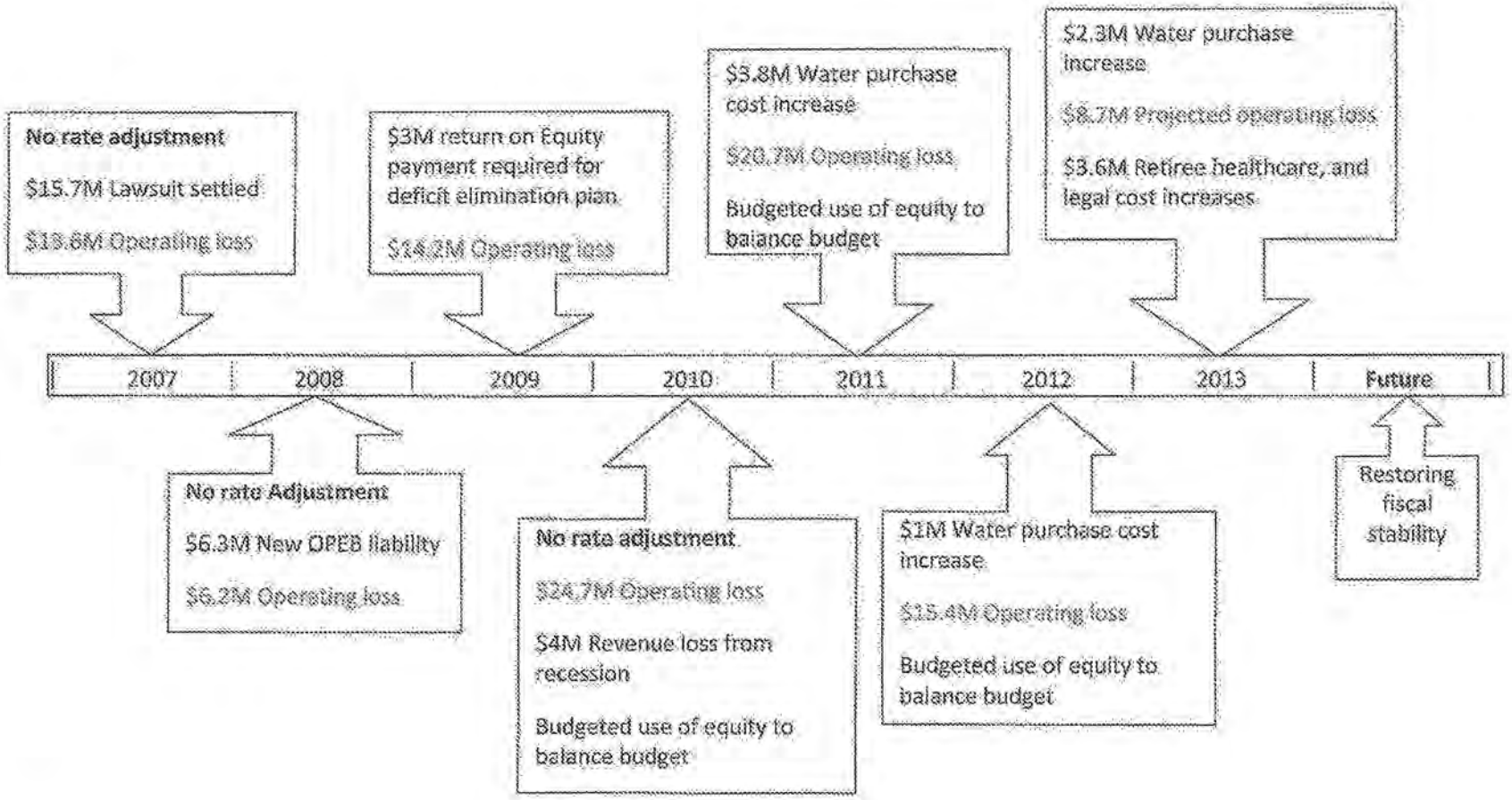




City of Flint

Recent Timeline of Water and Sewer Funds

FY 2007 through 2013



City of Flint- Water and Sewer System Additional Asset / Revenue Data

The average annual residential water sewer bill in FY2005 was less than $700 annually
The average annual residential water/ sewer bill in FY13 will be nearly $1,700

Expenses have exceeded revenues every year since 2006:

FISCAL YEAR	Rate Base	Revenues	Expenses	Revenues Minus Expenses	Unreserved System Equity	FACTORS IMPACTING SOLVENCY			COST IMPACT
2006	2005	$55,204,242	$50,933,792	$4,270,450	$60,340,013				
									(millions)
2007	2005	$53,855,857	$67,442,993	($13,587,136)	$46,399,452	No rate adjustment			??
						$15.7 million lawsuit settlement	15.7	0	$15.7
2008	2005	$54,374,781	$60,593,331	($6,218,550)	$36,482,488	No rate adjustment			??
						OPEB liabilities added	3.6	2.7	$6.3
2009	2009	$53,489,463	$67,728,218	($14,229,755)	$24,023,065	ROE payment added as part of City f	1.9	1.1	$3.0
2010	2009	$48,620,329	$73,513,725	($24,893,396)	$3,531,768	No rate adjustment			??
						Use of retained earnings budgeted	12.5	0.5	$13.0
						Revenue lost due to recession	2	2	$4.0
2011	2011	$54,527,079	$75,185,679	($20,658,600)	($17,668,607)	Use of retained earnings budgeted	7.1	3.5	$10.6
	2011					Water purchase cost increase	0	3.8	$3.8
2012		$69,279,187	$83,682,840	($14,403,653)	($32,884,122)	Use of retained earnings budgeted	5.1	0	$5.1
						Water purchase cost increase	0	0.8	$0.8
2013	2013	$82,220,420	$90,970,420	($8,750,000)	($23,379,690)	Water purchase cost increase	0	2.3	$2.3
						RHC/Legal/Admin Cost Allocation	2.1	1.5	$3.6
				($99,279,840)					$68.2

Calculation of Water and Sewer Rates for FY13 Budget

March, 2012:

	Expense Projection Based on FY12 Costs	Revenue Projection Based on FY12 Receipts	Difference Between Projected Revenues and Expenses	Rate Increase Necessary To Close Gap
Water	$49.9	$44.4	-$5.5	12.4%
Sewer	$31.0	$21.4	-$9.6	44.9%
TOTAL	$80.9	$65.8	-$15.1	22.9%

CITY of FLINT, MICHIGAN
WATER &/OR SEWER BILL

Service at: 5810 BALDWIN BLVD

TREASURER
CITY OF FLINT
P.O. BOX 1950
FLINT, MI 48501

PRESORTED
FIRST CLASS MAIL
US POSTAGE PAID
CITY OF FLINT

3419 Active

ACCOUNT NUMBER	DUE DATE
[redacted]	02/28/2012
	NET AMOUNT DUE
	147.85

RETURN THIS STUB WITH YOUR PAYMENT

Seq=3138

**AUTO [redacted]

00000376810000014785022820120000014913777O6

KEEP THIS PORTION FOR YOUR RECORDS

LAST READ/DATE/TYPE		NEW READ/DATE/TYPE		CONS	SERVICE	CHARGE
361	01/05/2012 A	383	02/03/2012 A	2	Sewer Non-metered	6.62
					Sewer Svc Chrg	22.07
					Water	13.36
					Water Svc Chrg	19.36

Prev. Balance	161.08
Payments	-75.00
Adjustments	0.00
Current Penalty	0.36
New Charges	61.41
Total Due	147.85
Due Date	02/28/2012

ACCOUNT: BALD-005810-0000-01 SERVICE AT [redacted]

PENALTY ASSESSED 30 DAYS AFTER DUE DATE

CITY OF FLINT
DEPARTMENT OF FINANCE

Customer Service Center

Dayne Walling
Mayor

Douglas Bingaman
Treasurer

CITY OF FLINT
WATER NON-PAYMENT TURN-OFF POLICY

1. Water services to any customer may be shut off if the account is not paid until after 30 days after the due date. (City ordinance 46-52 (h))

2. Non-payment turn-offs are done only Monday through Thursday. The Customer Service Center does not schedule non-payment turn-offs on Fridays, Saturdays, Sundays, or most recognized holidays.

3. Illegal usage, broken payment arrangements and NSF (non-sufficient funds) turn-offs are done at any time without additional notice.

4. Turn-off notices are mailed to delinquent customers fifteen (15) days before actual turn-off.

5. The water customer is responsible for maintenance of all plumbing in the premises including connection to City water mains or sewer lines.

6. If a customer disputes a water bill and is unable to resolve the issue with Customer Service personnel, the customer may request an administrative review. Further information on any water account may be obtained by calling (810) 766-7015 or visiting the Customer Service Center at 1st Floor, City Hall, 1101 S. Saginaw St.

Preliminary Options for Future City of Flint Water Sources

Consider a New Negotiated Contract with Detroit Water and Sewer Department

PRO'S	CON'S
No upfront capital costs	Lack of control over new / fixed changes
Possibility to negotiate a lower rate	Past practices
Ability to "Blend" water sources to further control costs	

Consider a Contract with the Karegnondi Water Authority

PRO'S	CON'S
Voting member of KWA board	Capital cost (debt service)
Ability to "Blend" water sources to further control costs	Uncertainty of final costs
Raw water is an asset for attracting new buisnesses	

Blended Use of the Flint River

PRO'S	CON'S
Helps contro cost of water	

*** CURRENTLY NO DECISIONS HAVE BEEN MADE REGARDING THE FUTURE WATER SOURCE

Improvements for City of Flint Water System

Reduce Leakage

- **Finalize a Preventative Maintenance Plan**
  - (Planning started in January 2012, requires funding, … part of Operational Costs)
  - Will help identify repair area's

- **Reduce water theft**

- **Replace water meters**
  - We currently have an eighteen month plan to replace all meters with more efficient "*Smart Meters*"

- **Encourage routine household checks**
  - "Faulty" toilets are a significant reason for household water loss. and unexpected larger bills.

Other Leakage concerns

✓Transmission Loss

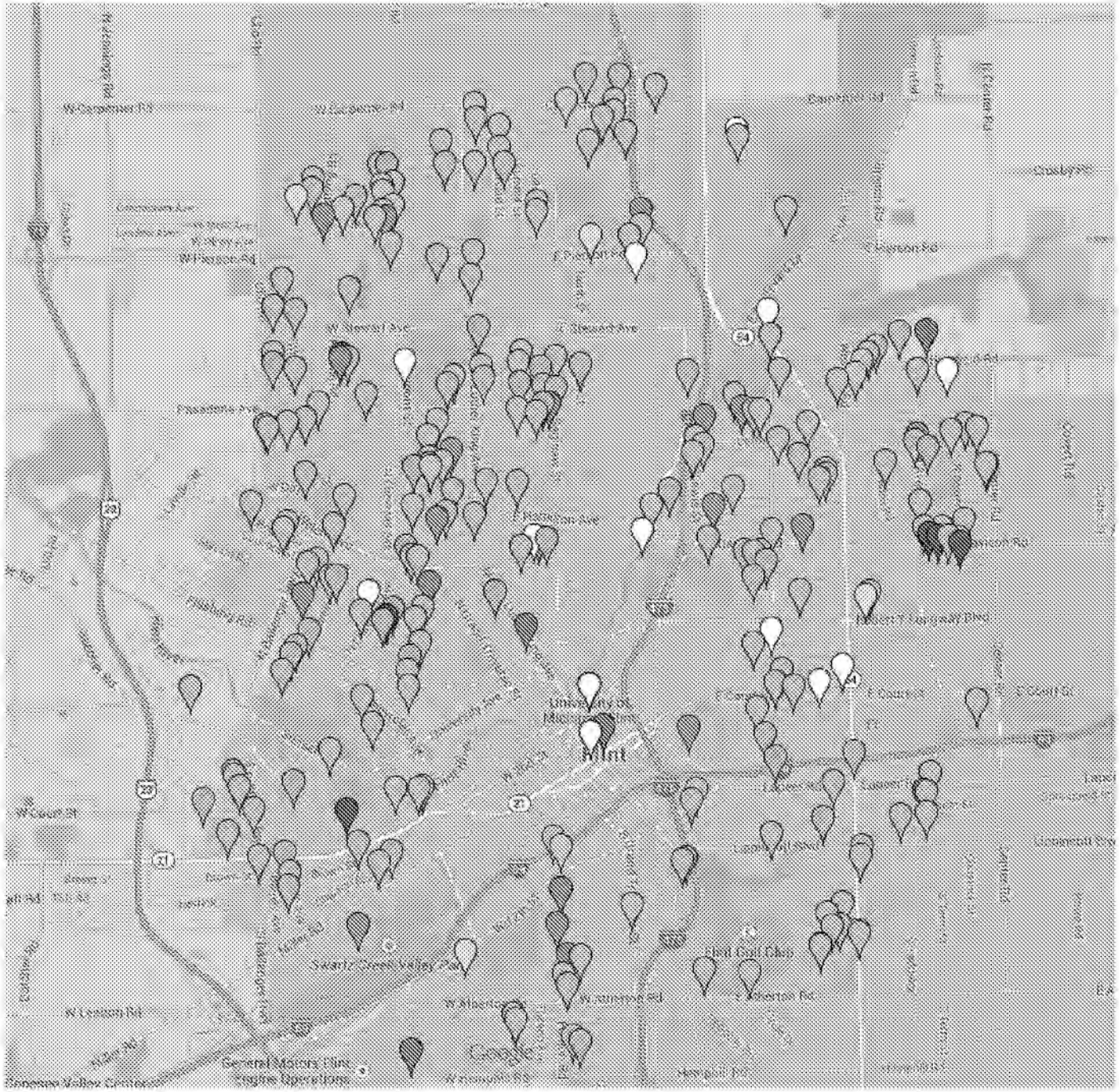
✓Fire Hydrants

✓Incorrect water bills

✓Non-Payment

Water Main Breaks 2014

- [x] Main Breaks from Leak Report
  - Clean break
  - Split at pipe bell
  - 2" dia hole
  - Service line
  - Corp break
  - Pipe bell clean break
  - hole in mechanical bell
  - mechanical joint
  - 3" dia hole
  - 4" hole
  - Previous repair failure
  - Split pipe
  - Split tee
  - valve face
  - 1" dia hole
  - 2" split
  - 3" split
  - 3/4" lead corp
  - 4" split
  - Tapping saddle
  - Other / No data



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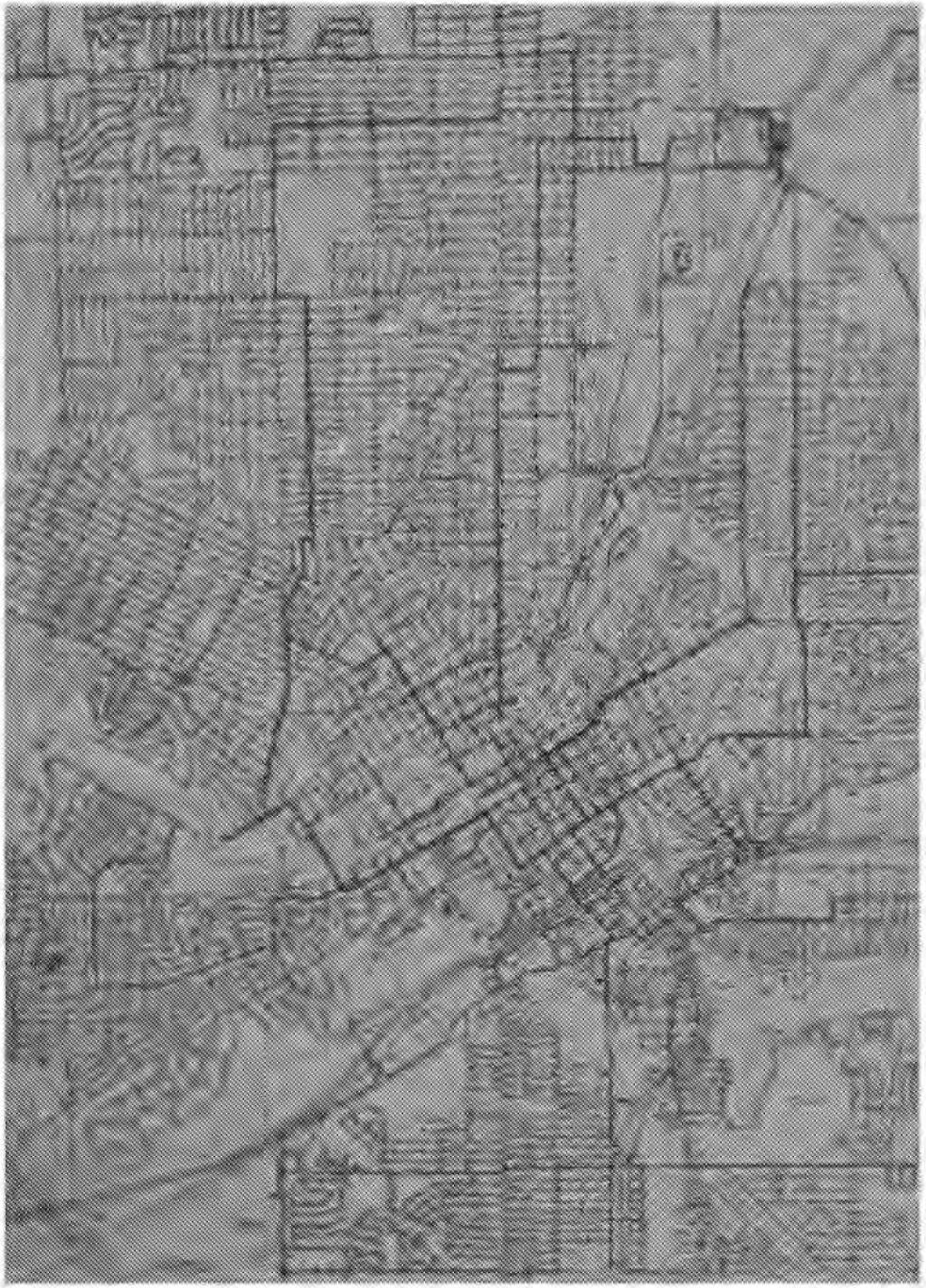


City of Flint
Water System Facts

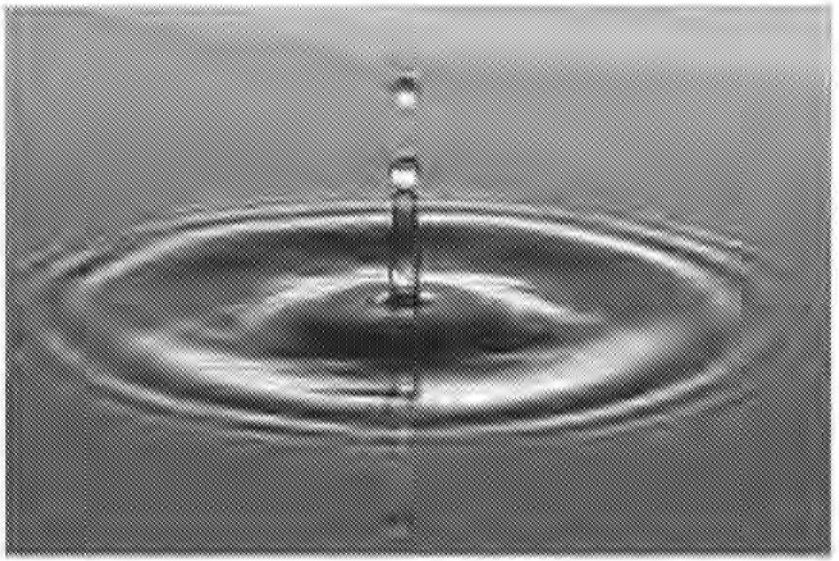
Over 600 Miles of Distribution Mains

Over 7000 Valves
Over 3909 Hydrants

Over 46,000 users in 2006
Only 31,000 users in 2014

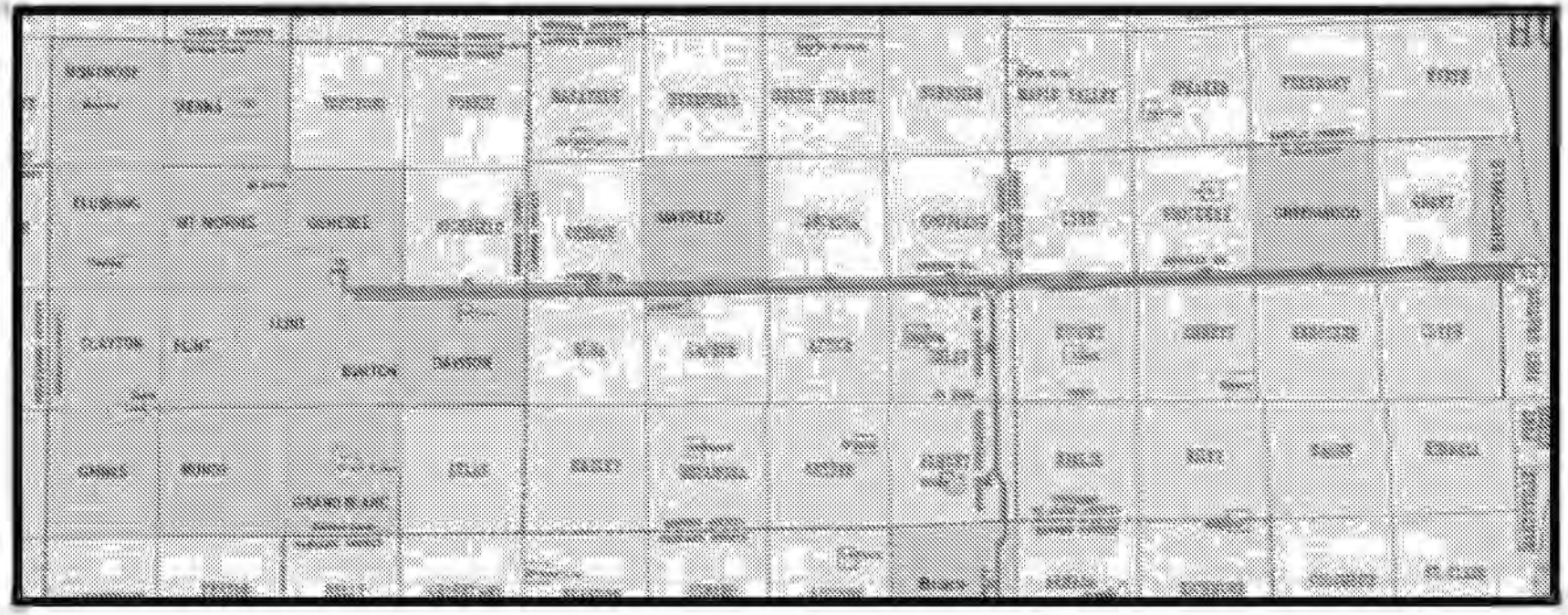
What Can Impact Water Quality ?

- Condition of source water
- Temperature
- Organic material
- Retention time in system
- Low flow
- Dead ends
- Main Breaks
- Repairs



Quality Indicators

- Chlorine residual
- Total coliforms



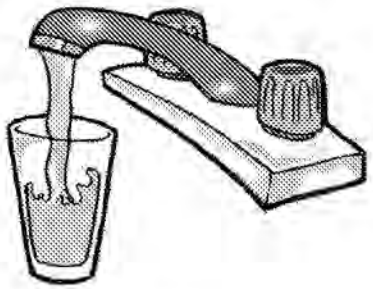
Flint River

vs.

DWSD

CITY TESTING

- 10 test sites around the city
- Tests are performed manually 2 – 3 times a week
- Over 100 Tests are performed a month
- All tests are reported to the DEQ for oversight
- Tests are performed EVERY four hours inside the Plant
- The City responds to and tests all reported concerns



Michigan DEQ
State License Types

Complete Treatment	Limited Treatment	Distribution
F-1	D-1	S-1
F-2	D-2	S-2
F-3	D-3	S-3
F-4	D-4	S-4

Recent Boil Water Advisories in MICHIGAN

LOCATION	DATE	CAUSE
Edwardsburg / Lunker	Nov 12, 2014	Fire
Superior Township	May 03, 2014	Main Break
Benton Harbor	Jan 9, 2014	Water Pressure
Union Township	Nov 6, 2013	Main Break
Charlevoix	August 7, 2013	Pressure Loss
Novi	Feb 13, 2013	Pressure Loss
Muskegon Heights	Nov 17, 2012	Main Break
Commerce Township	Dec 6, 2010	Depressurization

City of Flint Contacts

Public Works Director	Howard Croft – hcroft@cityofflint.com
Utilities Administrator	Daugherty Johnson- djohnson@cityofflint.com
Plant Supervisor	Brent Wright – bwright@cityofflint.com
F-1 Operator in Charge	Mike Glasgow – mglasgow@cityofflint.com
S-1 Operator in Charge	Robert Bincsik – rbincsik@cityofflint.com

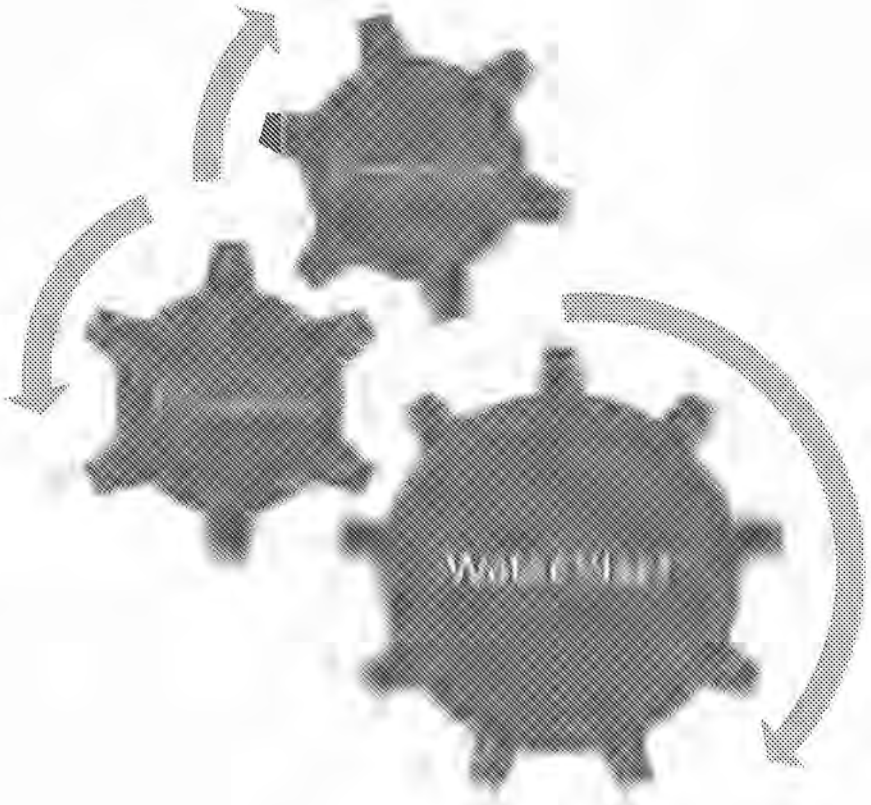
Phone Numbers

City of Flint Treatment Plant	810-787-6537
Public Works Director	810-766-7346 x 2403
Utilities Administrator	810-766-7135 x 2602
EPA Safe Drinking Water Hotline	1-800-426-4791

001061

VEOLIA
City of Flint, MI
Water Quality Report
Technical Advisory Committee

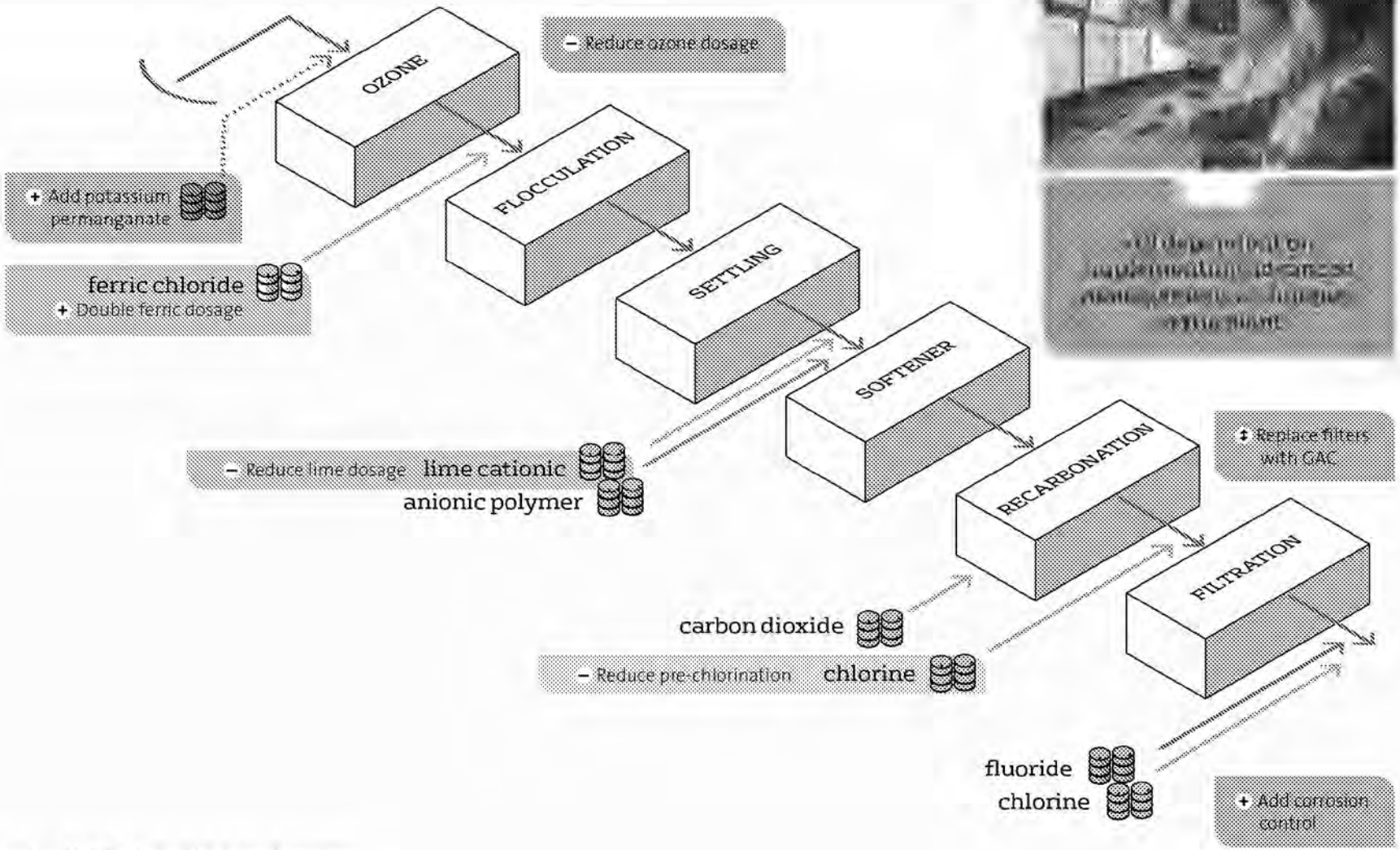
Solution Involves Coordination of 3 Activities



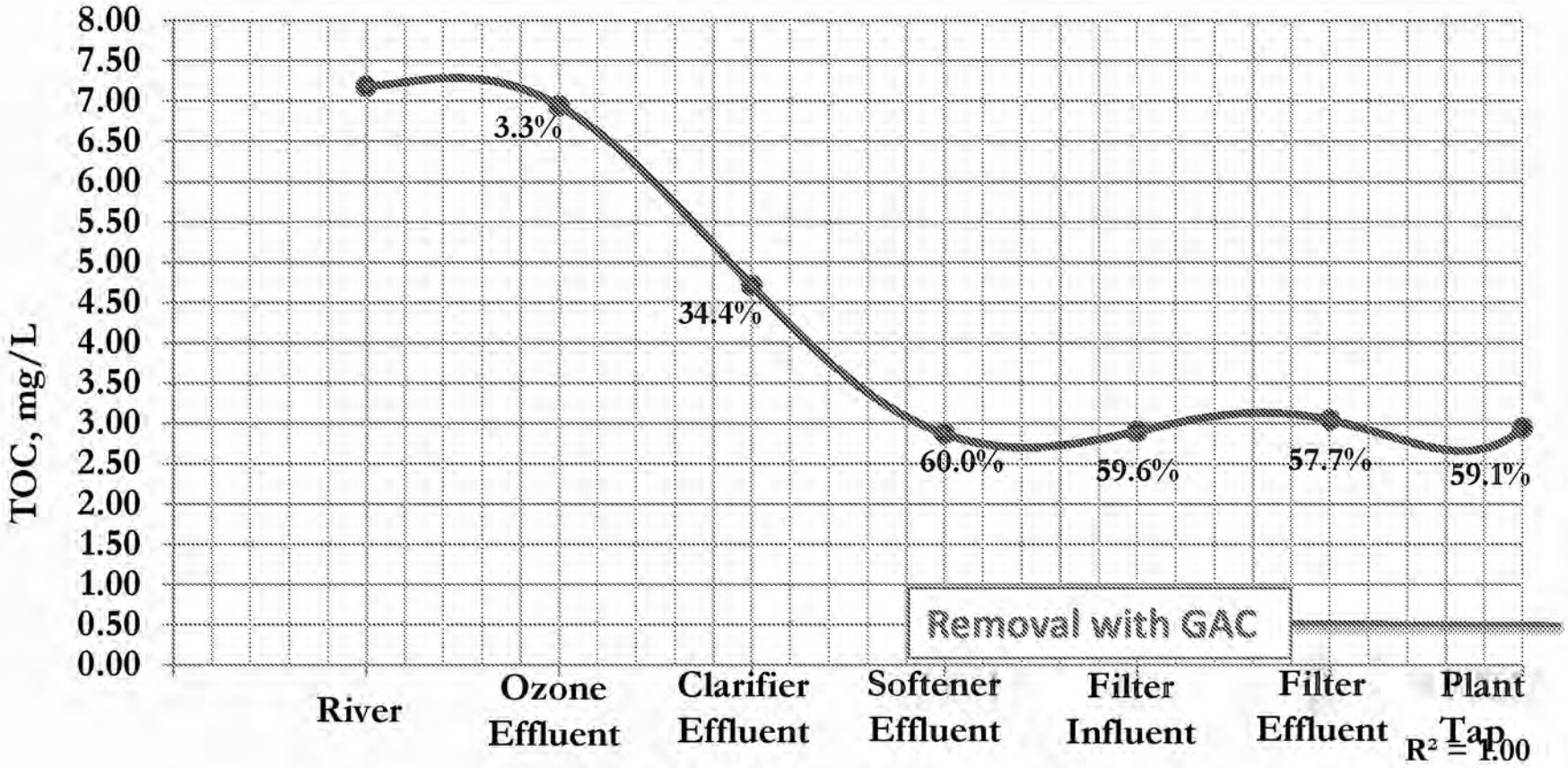
- Water plant improvements
  - *Optimize chemical dosages*
  - *Consider different chemicals*
  - *Install granulated activated carbon*
  - *Complete plant upgrades*
  - *Implement best mgt practices*
- Distribution system improvements
  - *Fix broken valves*
  - *Ask for customer feedback*
  - *Reduce tank storage*
  - *Target line flushing*
  - *Run a hydraulic model*
- Better communication with customers
  - *Engage advisory committees*
  - *More accessible utility*
  - *Make it easy to access information*
  - *Better customer communication*

001063

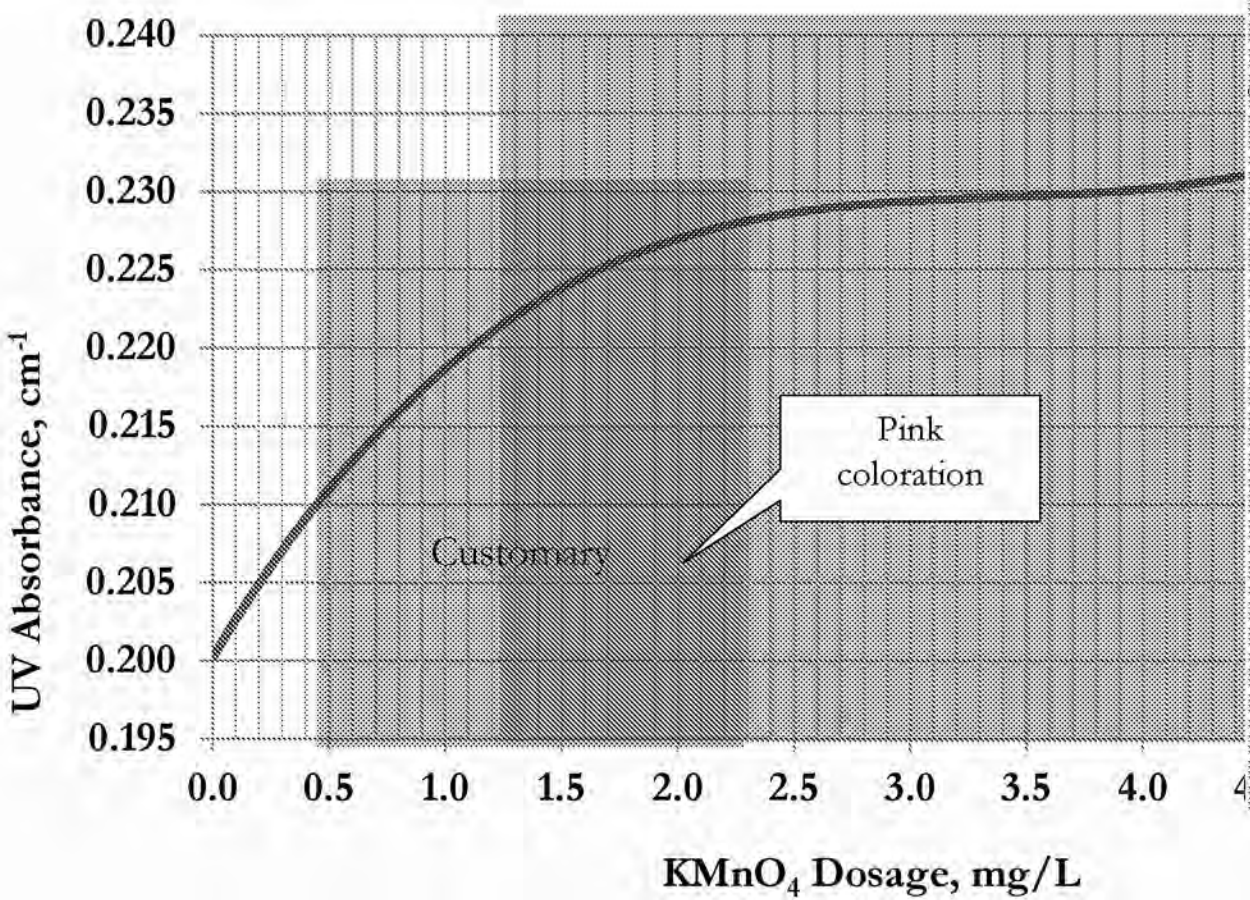
Optimize Plant Processes



TOC Removal Efficiency Optimizing Current Plant



Potassium Permanganate Dosing Graph



JAR TEST BENCH SHEET 1

FACILITY NAME Flint, Michigan DATE February 16, 2015

CHEMICAL DATA	ALUM	$FeCl_3$	$Fe_2(SO_4)_3$	POLYMER	LIME	$KMnO_4$
Specific gravity						1.18
Percent dry chemical						28
Stock volume, mL						100
Chemical added, mL or grams						0.9
Stock concentration, mg/L						3,000
Solution volume, mL						
Stock solution added, mL						
Solution concentration, mg/L						

TEST CONDITIONS	STIRRER RPM	DURATION		Simulated Conditions	
Rapid Mixing	500		seconds	G	sec
Flocculation	20	15	minutes	G	
Settling	0		minutes	Coag. 0.3	gpm/ft²
Filtered distilled water time			seconds	Soft. 1.28	gpm/ft²

RAW WATER CHARACTERISTICS

Temperature °C	pH	Alkalinity	Hardness	Turbidity	Color	TOC	DOC	POC
						7.05		
Filterability Index	Calcium	Magnesium	Iron	Manganese	THMFP	UV_{254} 0.198		

JAR NUMBER	1	2	3	4	5	6
Raw water volume, mL	2,000	2,000	2,000	2,000	2,000	2,000
Alum solution added, mL						
Alum dosage, mg/L						
Ferric solution added, mL						
Ferric dosage, mg/L						
Polymer solution added, mL						
Polymer dosage, mg/L						
$KMnO_4$ solution added, mL	0.5	1.5	2.5	3.5	4.5	5.5
$KMnO_4$ dosage, mg/L	0.5	1.5	2.5	3.5	4.5	5.5
Lime solution added, mL						
Lime dosage, mg/L						

FLOC FORMATION OBSERVATIONS

5 minutes
10 minutes
15 minutes
20 minutes
25 minutes

SETTLING CHARACTERISTICS OBSERVATIONS

1 minute
2 minutes
3 minutes
4 minutes
6 minutes

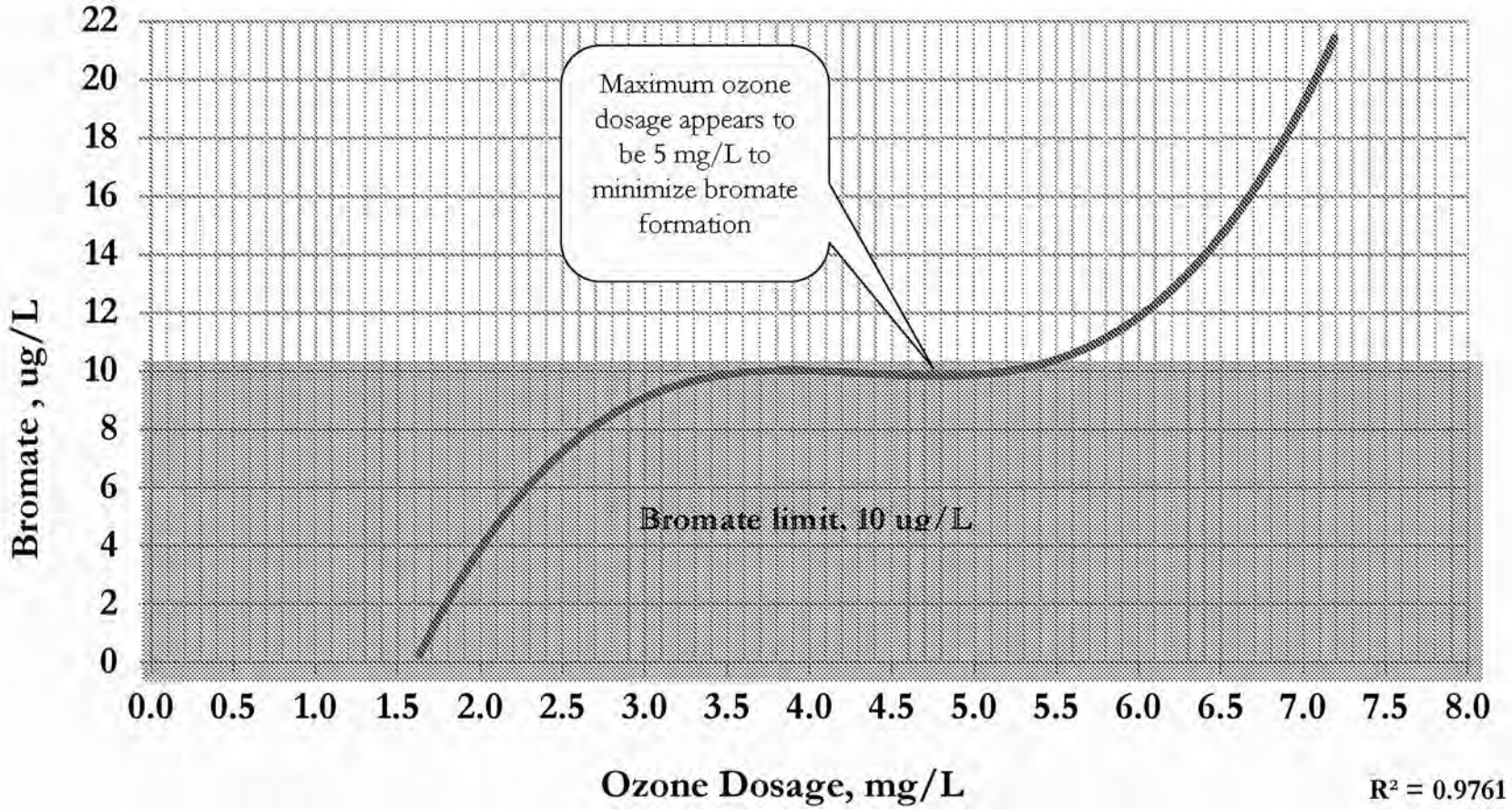
SETTLED WATER RESULTS

Turbidity, NTU						
Water pH						
Alkalinity, mg/L						
Hardness, mg/L						
TOC, mg/L						
UV_{254}, cm^{-1}	0.225	0.222	0.220	0.230	0.232	0.237
Filtered water time						
Filterability Index						
NOTES						

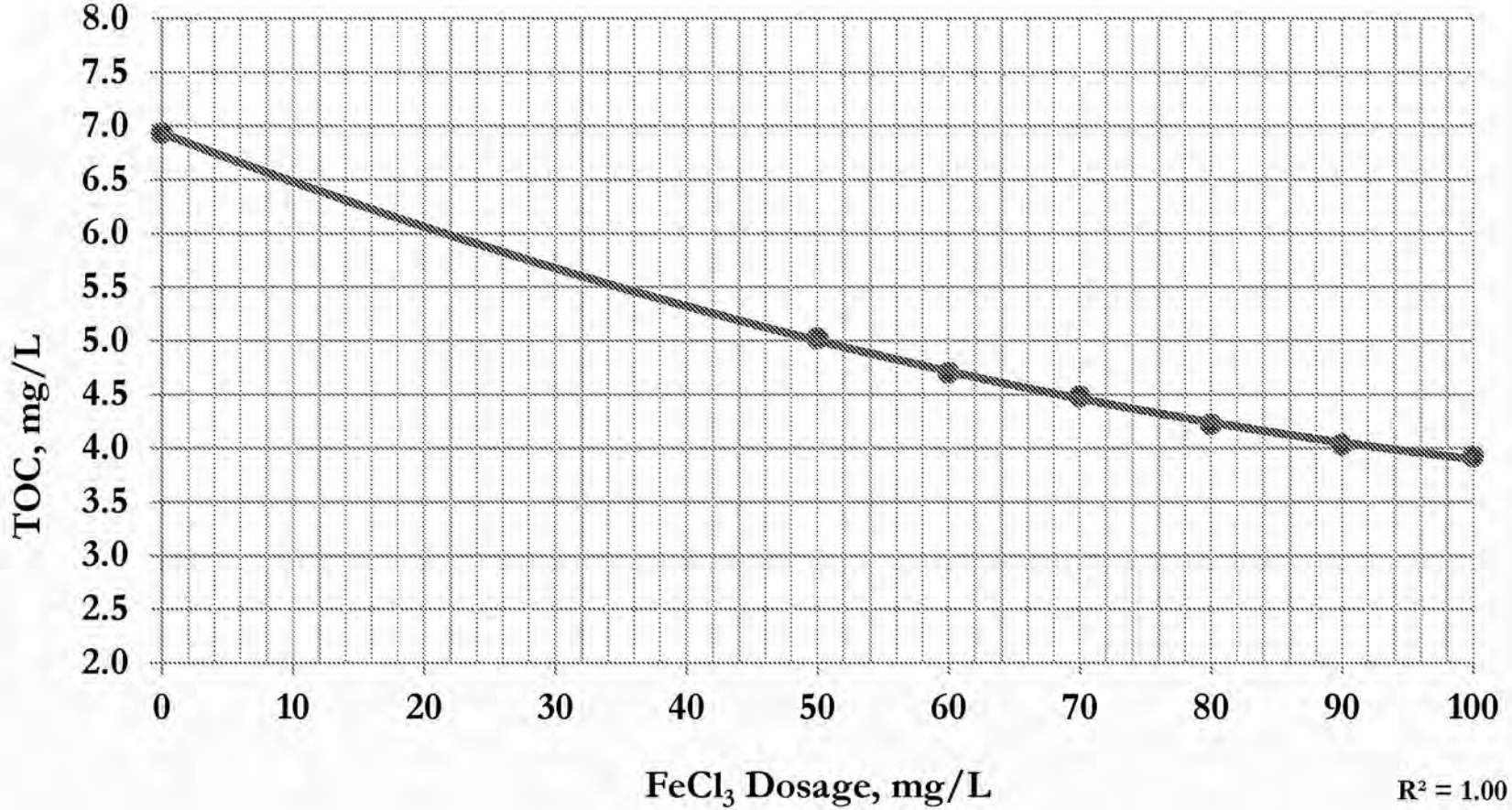
Veolia Water North America

$R^2 = 0.9753$

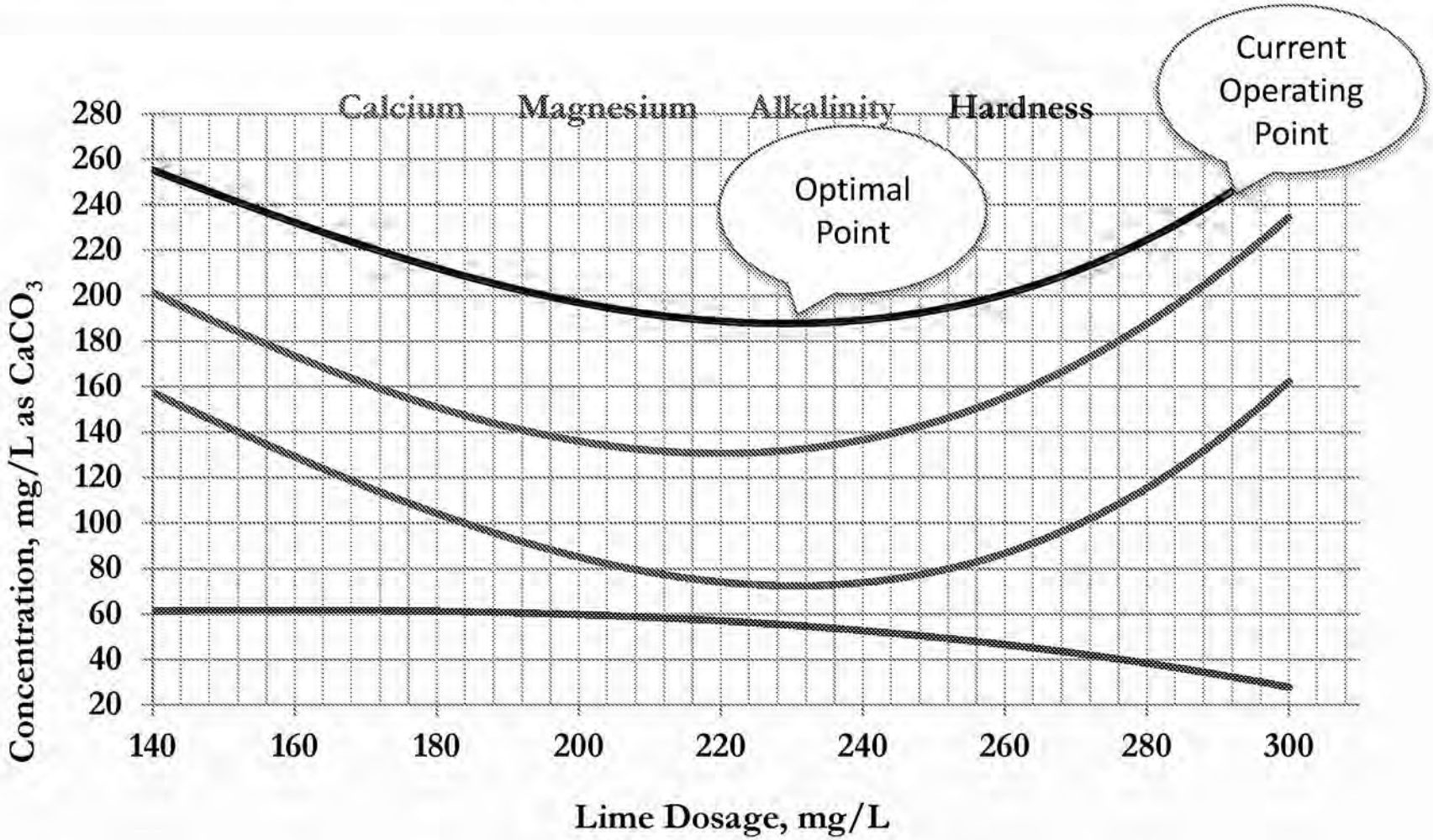
Bromate Dosing Graph



Dosage of Ferric Chloride



Lime Dosage Graph



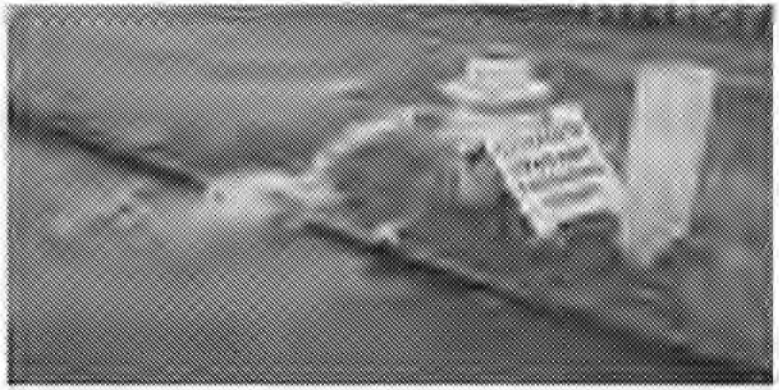
Implement Best Management Practices

<u>Activities to Help Operators Maintain Good Water Quality</u>

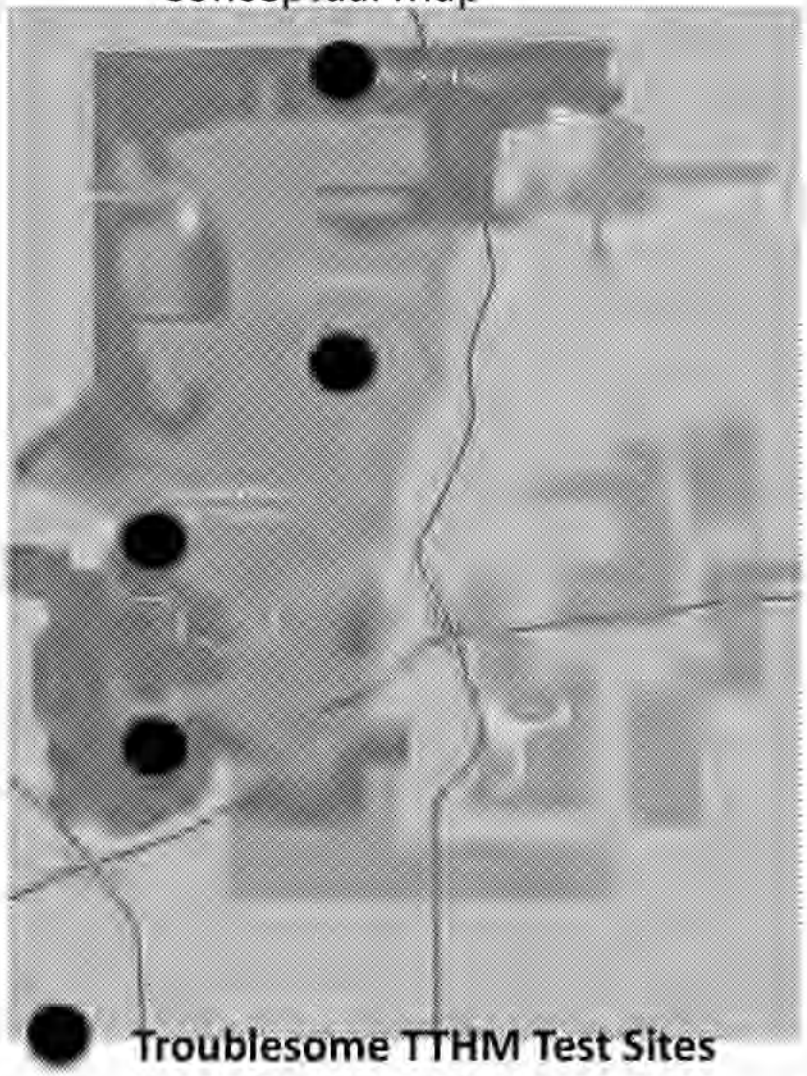
- Process Control Management Plan
- Lab QA/QC Program
- Computerized Maintenance Management System
- Asset Management System
- Training and Certification Program
- Vulnerability Plan

Water Age Map

- Speed up flow of water from plant to homes – 2 weeks plant to house
  - *Find closed valves & open them*
  - *Replace broken valves*
  - *Update hydraulic model*
  - *Reduce system storage*
- Track customer complaints
  - *Test customer water*
  - *Spot flush hydrants to clean areas of stagnant water in the system*



Conceptual Map



Make It Easy to Access Information and People

Develop a proactive customer communication plan

- Create advisory committees to help direct efforts and improve flow of information
- Add additional communication personnel for the utility
- Develop a pro active communication program
- Establish a single point of contact to manage all water quality complaints
- Provide additional customer service training and tools to staff
- Expand neighborhood and community outreach
- Change monthly billing statements from card to envelope with information

VEOLIA

Questions?

From: Howard Croft [hcroft@cityofflint.com]
Sent: Monday, March 09, 2015 2:10 PM
To: donna. cole;gdn2@aol.com;James Henry;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Mike Lane;Prysby, Mike (DEQ);Norb Birchmeier;Pete Levine;Russell Hudson;JoAnne Herman;Michael Glasgow;Daugherty Johnson;Brent Wright;Warren Green;Samir Matta;Robert Nicholas
Subject: Literature
Attachments: Bottled Water NRDC.pdf; CA study on THMs and pregnancy.pdf; Egorov-ExpDBPsRussia-Proofs.pdf; Guidance for People with Severely Weakened Immune Systems.pdf; KrasnerWright-DBPBoil-WatRes2005.pdf; TTHM fact sheet (1).pdf; vulnerable to drinking water.pdf; ycn-infection-safedrinkingwaterguidelines-sept2004.pdf

All,

I am sending out the literature that I received from Dr. Rose and from Mr. Wright of the EPA. There is a lot of information to go through here and we will attempt to put together a new fact sheet from these documents.

We are working on a cover letter that will be mailed out with the DEQ notice and I still intend to send a draft copy to this group prior to the mailer going out. We are targeting this Wednesday to have the letter ready for preview (along with a fact sheet) and we will potentially mail it out by this weekend or next Monday if the notice has been received.

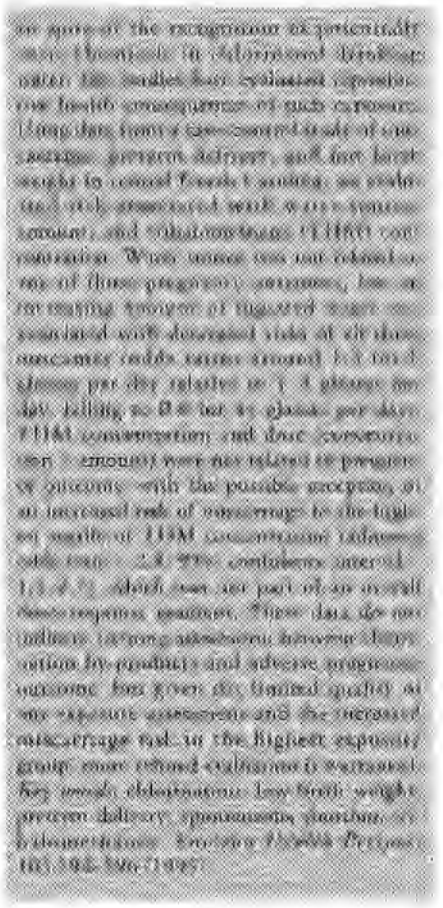
Thank you,
--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

001075

Drinking Water and Pregnancy Outcome in Central North Carolina: Source, Amount, and Trihalomethane Levels

David A. Savitz, Kurtis W. Andrews, and Lisa M. Pastore

Department of Epidemiology, School of Public Health, University of North Carolina, Chapel Hill, NC 27599 USA



It has been known for nearly 20 years that chlorination of surface waters produces small amounts of chloroform and other potentially toxic by-products (*1*). Ingestion of these agents by large numbers of people over extended periods of time has generated considerable concern with potential adverse health effects. Most of that concern has focused on carcinogenicity, with studies providing mixed support for an association between chlorination by-product concentrations and the risk of bladder and colon cancer (*2*).

Reproductive outcomes, known to be sensitive to environmental toxicants, have received much less attention. In addition to the obvious public health impact of congenital malformations and fetal and infant death, studies of reproductive consequences have the logistical advantage of a shorter interval between exposure and disease manifestation. This briefer period of interest facilitates more accurate recall of consumption over the relevant time period and improved estimation of contaminant concentration. The seasonal variation in chlorination by-product levels (higher in the summer) can be incorporated into reproductive health studies as a component of the exposure variability that is analyzed.

Laboratory research relevant to chlorination by-products and reproduction is limited (*3,4*) with most evaluations focused on single chemicals rather than the complex mixture encountered by humans in treated water. At exposure levels orders of magnitude higher than those encountered naturally, developmental toxicity in the form of reduced fetal weight, heart malformations, and reproductive toxicity related to adverse effects on sperm has been demonstrated for chloroform, bromoform, haloacetic acids, and related compounds (*3*). However, it is not clear whether they produce toxic effects at the low exposure levels of concern.

Prior research on the outcomes of interest, fetal loss, preterm delivery, and low birth weight, is limited in both quantity and quality (*4*). In the most thorough effort to evaluate preterm delivery, low birth weight, and small for gestational age (SGA), Kramer et al. (*5*) conducted a study in Iowa. Exposure was classified based on the community of residence in conjunction with a survey of chlorination by-products. Chloroform concentrations above 10 ppb in drinking water were associated with a small increase in risk of low birth weight [adjusted odds ratio (OR) = 1.3] and a somewhat greater risk of SGA (adjusted OR = 1.8). As noted by the investigators, there was no opportunity to consider fluctuations in the contaminant levels over time or individual variability in water consumption.

The only other study that considered trihalomethane (THM) levels in the community supply was conducted in northern New Jersey (*6*) using birth and fetal death certificates to identify birth weight, low birth weight (<2500 g), very low birth weight (<1500 g), term low birth weight, preterm delivery, SGA births, and fetal deaths. Mean birthweight was reduced slightly in relation to use of surface water supplies and in relation to use of water with THM concentrations above the federal standard of 100 ppb (*7*) as reflected in the nearest quarterly sample. The risk of adverse outcomes was generally elevated slightly in relation to both surface (versus ground) water use and elevated THM levels, with adjusted OR, in the range of 1.1–1.4. Except for a closer temporal relation between the pregnancy and the measurement, the same limitations noted for the Iowa study are applicable to the New Jersey study.

Other reports of less direct relevance found that stillbirth risk was associated with chlorinated versus chloraminated water supplies in Massachusetts (*8*) and that the use of bottled water rather than tap water may be associated with a reduced risk of spontaneous abortion in Northern California (*9*). However, the investigators suggested that a reporting bias may account for the latter association (*10*).

Given current knowledge, additional work is clearly needed to evaluate whether the previous suggestions of small adverse effects on pregnancy are likely to be causal. Data collected from interviews of women who experienced miscarriage, preterm delivery, and low birth weight births as well as term, normal birth weight controls allow for an examination of individual water consumption in relation to water source and measured community THM levels.

Methods

A population-based case–control study of miscarriage, preterm delivery, and low birth weight was conducted in Alamance, Durham, and Orange Counties in central North Carolina. The region was originally chosen for the concentration of textile industry employment in Alamance County and expanded to include the larger, more sociodemographically diverse populations of Durham and Orange counties.

All medically treated miscarriage cases among women in Alamance County during the period September 1988 through August 1991 were identified through medical care providers, including hospitals and private clinics, as described in detail elsewhere (*11*). Preterm deliveries (<37 weeks completed gestation) and low birth weight infants (<2,500 g) were identified at six area hospitals covering virtually all births to area residents during the period September 1988 to August 1989 in Orange and

Address correspondence to D.A. Savitz, Department of Epidemiology, CB 7400, University of North Carolina, Chapel Hill, NC 27599 USA.

We thank Kate M. Brett, Laurie E. Evans, and Nancy Dole Runkle for work on data collection and analysis and acknowledge funding from the National Institutes of Health (HD23862, HD23862S), March of Dimes (15–157), Centers for Disease Control (R48/CCR402177), and U.S. EPA (CR 820076-02).

Received 5 January 1995; accepted 10 March 1995.

Durham Counties, and September 1988 to April 1991 in Alamance County. There was substantial overlap between the preterm and low birth weight groups, with 34% of eligible live birth cases preterm and not low birth weight, 17% low birth weight and not preterm, and 50% both preterm and low birth weight.

Controls were selected in a one-to-one ratio to live birth cases from the deliveries immediately following a preterm or low birth weight case of the same race and hospital as the case, but restricted to term, normal weight births. The controls selected for preterm and low birth weight cases in Alamance County also served as controls for the miscarriage cases. We considered the controls as a hospital- and race-stratified sample from the population. Therefore, we did not analyze the data as a pair-matched sample but controlled as needed for race and hospital in the analysis.

Ten to fifteen percent of cases and controls were lost due to subject refusal (higher for miscarriage cases than the other groups), and an additional 11 to 16% were lost due to being untraceable (Table 1). An abbreviated form of the questionnaire which did not include the questions pertaining to drinking water was used for subjects who would have otherwise refused (short questionnaire). Final response proportions ranged from 62 to 71%, lowest for miscarriage cases and highest for preterm delivery cases.

Telephone interviews were used to ascertain information on a wide range of potential risk factors for adverse pregnancy outcome, including sociodemographic attributes (age, race, education, marital status, income), pregnancy history, tobacco and alcohol use, prenatal care, physical exertion, psychological stress, and employment. Each woman was asked, What was your primary source of drinking water at home? Was it supplied by the community water company, from a private well, or bottled water? This was followed by the question, About how many glasses of water did you drink per day around the time of your pregnancy?

After analyzing water source and amount, we restricted the sample to women who were served by public supplies and who reported drinking one or more glasses of water daily (omitting approximately 30% of eligible subjects; see Table 1). A woman's address was used to assign her to one of the five public water supplies serving residences in this region. Although we did not have information on changes in water consumption during pregnancy, we were able to consider the changes in THM concentrations over time. The dates of pregnancy were used to assign the reported quarterly average THM value from the appropriate supplier as her THM score. For miscarriage cases and their controls, the fourth week of pregnancy was the time period used for making that assignment, and for preterm delivery cases, low birth weight cases, and their controls, the 28th week of pregnancy was used to assign the nearest THM value. These periods reflect the most likely intervals in which any adverse effects would occur.

With this information, we were able to analyze several indices of water exposure: 1) source: community supply, private well (referent), bottled water; 2) amount (glasses per day): 0, 1–3 (referent), 4+; 3) source × amount: private well, 1–3 glasses per day (referent); private well, 4+ glasses per day; community supply, 1–3 glasses per day; community supply, 4+ glasses per day; bottled (regardless of amount); 4) THM concentration: analyzed as a continuous measure and divided into tertiles based on distribution of controls, categorized separately for analyses of miscarriage and the live birth outcomes (as indicated in Tables 2–4); 5) THM dose (glasses per day × concentration): analyzed as continuous measure and divided into tertiles based on distribution of controls, categorized separately for analyses of miscarriage and the live birth outcomes as indicated in Tables 2–4.

The ORs were calculated comparing exposures of cases to that of controls, e.g., community versus private source or higher versus lower THM concentrations. The ORs provide an estimate of the relative risk, i.e., the magnitude of increased risk associated with the exposed versus the referent category. The confidence intervals (CIs) provide an indication of the statistical precision of those estimates.

Based on preliminary analyses to identify factors associated with adverse pregnancy outcomes, potential confounders included maternal age, race, hospital (for preterm delivery and low birth weight only) education, marital status, poverty level, smoking, alcohol consumption, employment, and nausea (for miscarriage only). Crude and adjusted ORs were compared, with adjustment for each of the above covariates one at a time. When the adjusted OR differed from the crude by 10% or more, the variable was considered as a confounder and incorporated into the adjusted ORs presented. When multiple confounders were identified, a logistic regression model was developed to simultaneously adjust for those confounders. Therefore, the adjusted ORs presented in the tables can be interpreted as free from confounding by all of the above variables, but only the subset that influenced the results (if any) were considered directly. Given the small numbers of subjects in some cells and the lack of a biological basis for postulating effect modification, we did

Table 1. Number of eligible and interviewed participants: Alamance, Durham, and Orange counties, North Carolina, 1988–1991

	Miscarriage analysis				Preterm and LBW analysis					
	Cases		Controls		Preterm cases		LBW cases		Controls	
	No.	%	No.	%	No.	%	No.	%	No.	%
Eligible	418	100.0	341	100.0	586	100.0	464	100.0	782	100.0
Physician refusal	9	2.2	1	0.3	3	0.5	4	0.9	5	0.6
Patient refusal	63	15.1	39	11.4	52	8.9	53	11.4	85	10.9
Untraceable	48	11.5	34	10.0	70	11.9	74	15.9	84	10.7
Other	18	4.3	4	1.2	6	1.0	7	1.5	4	0.5
Short questionnaire	12	2.9	22	6.5	39	6.7	25	5.4	51	6.5
Missing water data										
Source only	1	0.2	0	0.0	1	0.2	1	0.2	0	0.0
Amount only	0	0.0	0	0.0	1	0.2	1	0.2	3	0.4
Source and amount	6	1.4	4	1.2	2	0.3	3	0.6	7	0.9
Complete water data	261	62.4	237	69.5	412	70.3	296	63.8	543	69.4
Restriction for THM analysis										
No water consumed	40	9.6	22	6.5	44	7.5	35	7.5	40	5.1
Bottled or well water	77	18.4	70	20.5	104	17.7	67	14.4	141	18.0
Missing date/THM data	18	4.3	23	6.7	20	3.4	16	3.4	29	3.7
Complete THM data	126	30.1	122	35.8	244	41.6	178	38.4	333	42.6

Abbreviations: LBW, low birth weight; THM, trihalomethane.

not examine interactions between water exposures and other variables.

Results

Relative to women served by community supplies, women served by private wells were more likely to be white and somewhat more likely to be married, but were otherwise similar with respect to education, tobacco and alcohol use, and reproductive history. Bottled-water users were less likely to use tobacco and were more highly educated. The amount of water consumed was somewhat lower for women who were parous, white, and less educated. THM concentrations were somewhat higher for women who reported using tobacco or marijuana during pregnancy. In general, these potential confounders (which were controlled, as needed, in the analysis) were not strongly associated with water characteristics.

Risk of miscarriage was slightly increased among women who reported using bottled water compared to those who used private wells (Table 2), but this observation was based on few exposed cases. Also, bottled water users were not at increased risk relative to women served by community supplies (Table 2). Regardless of water source, women who reported not drinking any water were at highest risk and those drinking the largest amounts at slightly decreased risk. This pattern was also apparent in the analysis of source by amount and possibly reflected in the reduced risk in the highest tertile of THM dose (THM concentration × amount). THM concentration was not associated with miscarriage risk in the categorical analysis, yet the continuous measure predicted a rather substantial association, with an odds ratio of 1.7 per 50 ppb increment. This was attributable to a much higher risk associated in the highest sextile of exposure (adjusted OR = 2.8, 95% CI = 1.2–6.1) with an anomalously low risk in the second to highest sextile (adjusted OR = 0.2, 95% CI = 0.0–0.5) (not shown).

Preterm delivery showed virtually no association with water source, THM concentration, or THM dose; all adjusted ORs were between 0.8 and 1.2 (Table 3). The number of glasses of water consumed per day showed the same pattern as for miscarriage, with decreasing risk with increasing amount. The estimates were much more precise than for miscarriage, due to a case group nearly twice as large and a control group nearly three times as large.

Analysis of low birth weight (Table 4) indicated no association with water source and a decreased risk with increasing number of glasses per day. Categorical analysis of THM concentration indicated the lowest risk in the referent group but no trend of increasing risk across the middle and highest categories. Analysis using the continuous dose did not indicate a positive association.

Discussion

Overall, drinking water source was not related to the risk of adverse pregnancy outcome, with the possible exception of an increased risk of miscarriage among bottled water versus private well users. We considered only medically treated miscarriages and found some evidence of differential under-ascertainment related to social class (*11*). The association between miscarriage

Table 2. Miscarriage in relation to drinking water characteristics: Alamance County, North Carolina, 1988–1991

	Cases	Controls	Crude OR	Adjusted OR[a]	95% CI
Water source					
Private well[b]	78	68	1.0	1.0	—
Community	171	159	0.9	1.0	0.7–1.6
Bottled	12	10	1.0	1.6	0.6–4.3
Water amount (glasses per day)					
0	40	22	1.6	1.6	0.9–2.8
1–3[b]	137	120	1.0	1.0	—
4+	84	95	0.8	0.8	0.5–1.1
Water source × amount					
Private well/1–3[b]	36	29	1.0	1.0	—
Private well/4+	29	31	0.8	1.2	0.6–2.4
Community/1–3	95	85	0.9	0.8	0.4–1.4
Community/4+	49	60	0.7	0.6	0.3–1.2
Bottled/1+	12	10	1.0	1.0	0.3–3.1
THM concentration (ppb)					
40.8–59.9[b]	37	35	1.0	1.0	—
60.0–81.0	43	44	0.9	1.0	0.5–2.0
81.1–168.8	46	43	1.0	1.2	0.6–2.4
Per ppb change	126	122	1.5	1.7	1.1–2.7
THM dose (ppb × glasses/day)					
40.8–139.9[b]	50	47	1.0	1.0	—
140.0–275.0	45	40	1.1	1.0	0.6–1.9
275.1–1171.0	31	35	0.8	0.6	0.3–1.2
Per 250 unit change	126	122	1.0	1.0	0.7–1.2

Abbreviations: OR, odds ratio; THM, trihalomethane.
[a]Adjusted as needed for potential confounders listed in text; if no confounders identified, the crude OR is presented.
[b]Referent category.

Table 3. Preterm delivery in relation to drinking water characteristics: Alamance, Durham, and Orange counties, North Carolina, 1988–1991

	Cases	Controls	Crude OR	Adjusted OR[a]	95% CI
Water source					
Private well[b]	95	114	1.0	1.0	—
Community	294	388	0.9	0.9	0.7–1.2
Bottled	24	43	0.7	0.8	0.4–1.4
Water amount (glasses per day)					
0	44	40	1.4	1.4	0.9–2.2
1–3[b]	212	261	1.0	1.0	—
4+	157	244	0.8	0.8	0.6–1.0
Water source × amount					
Private well/1–3[b]	46	50	1.0	1.0	—
Private well/4+	34	48	0.8	0.7	0.4–1.3
Community/1–3	153	189	0.9	0.9	0.6–1.4
Community/4+	111	173	0.7	0.8	0.5–1.3
Bottled/1+	24	43	0.6	0.6	0.3–1.3
THM concentration (ppb)					
40.8–63.3[b]	80	110	1.0	1.0	—
63.4–82.7	102	118	1.2	1.2	0.8–1.8
82.8–168.8	62	105	0.8	0.9	0.6–1.5
Per 50 ppb change	244	333	0.8	0.8	0.6–1.2
THM dose (ppb × glasses/day)					
44.0–169.9[b]	78	108	1.0	1.0	—
170.0–330.8	97	115	1.2	1.2	0.8–1.7
330.9–1171.0	69	110	0.9	0.9	0.6–1.3
Per 250 unit change	244	333	0.9	0.9	0.8–1.1

Abbreviations: OR, odds ratio; THM, trihalomethane.
[a]Adjusted as needed for potential confounders listed in text; if no confounders identified, the crude OR is presented.
[b]Referent category.

and bottled water use may reflect a systematic tendency for bottled water users to more comprehensively seek medical care for miscarriages or for women with heightened health concerns to drink bottled water. Socioeconomic status may influence both miscarriage identification and bottled water use, but the associations we reported were adjusted for mother's education and family income.

A consistent pattern of decreasing risk with increasing consumption of water suggests either a genuine beneficial effect of such consumption or a reporting artifact. There are potential benefits of increased fluid consumption during pregnancy since the plasma volume must expand markedly in that period (*12*), but it is not clear that restricted fluid intake would influence the outcomes we addressed. With the available data, we could not examine total fluid consumption or consider beverages prepared from tap water. Analysis of water source by amount added little additional insight to this pattern.

Analysis of THM concentrations yielded some indication of an association with miscarriage, with a notably increased risk in the most highly exposed subset driving a linear dose–response pattern. Analysis by tertiles yielded little evidence of increased risk, whereas isolation of the most highly exposed sextile generated a pronounced association, with an aberrantly low risk in the next to highest sextile. Although limited by imprecision, these data encourage further examination of women who drink water with THM levels in the range of 100 ppb and above, which is the federal standard. Preterm delivery was unrelated to THM concentration but low birth weight risk was reduced among women in the lowest tertile of exposure with no increase in risk above that exposure level. Total dose of THM (incorporating THM concentration and amount consumed) yielded little association with any of the outcomes.

The miscarriage results have few prior studies to which they can be compared, but appear not to support the previous observation of decreased risk among bottled water users (*9*). The absence of association with water source is consistent with the report of Aschengrau et al. (*8*), that risk was similar in Massachusetts communities served by chlorinated versus chloraminated supplies. To our knowledge, no previous study has explicitly evaluated THM concentration in relation to miscarriage.

Preterm delivery and low birth weight results may be compared to those from Iowa (*5*) and New Jersey (*6*). The absence of association with preterm delivery in our study is consistent with the lack of association found in Iowa (*5*), but is not notably discrepant with the small associations (ORs <1.5) found in New Jersey (*6*). The small increase in risk of low birth weight for the upper two tertiles in the present study is likewise compatible with small increases reported in each of the other two studies (*5,6*). We were not able to examine risk of SGA births for comparison to the strongest findings of Kramer et al. (*5*) due to our method of selecting cases. Term births who weighed >2500 g, a large proportion of all SGA deliveries, were not selected as cases in our study.

The limitations in our study should be noted. A sizable fraction of nonrespondents (due to refusal, being untraceable, or having key water information unavailable) raises the question of whether the participants differed from nonparticipants in a manner that would distort exposure–disease associations. The interview itself may generate erroneous reports, particularly of the amount of water consumed. We did not ask about preparation of cold beverages from tap water, such as frozen orange juice. Furthermore, we did not ask where the water was consumed (home, work, or elsewhere), or whether home filters were used. Thus, inferences about chlorination by-product exposure based on available data are subject to error.

The link to water suppliers is likely to be accurate, but the assignment of a particular THM score based on the nearest measurement day is certain to contain error relative to the true THM values over the etiologic period of interest. The THM sample is taken from an approximately appropriate point in time at locations other than the occupant's home. Furthermore, the pattern of home water use and ventilation could produce rather different exposures even for a given tap water THM concentration. Changes in water consumption during the course of pregnancy were not ascertained, requiring respondents to provide an average value for the entire pregnancy that may differ from the consumption in the etiologically relevant time period. Most of these sources of error are likely to be similar for cases and controls, yielding relative risk estimates that are biased toward the null value (*13*). Given the seasonal patterns in THM levels, matching controls on time of birth could have further biased the results towards the null value (*13*), but analyses adjusted for season (summer versus other) did not differ substantially from those reported.

On the other hand, along with Bove et al. (*6*), our study was among the first to try to link THM measurements in both time and space to study subjects. Availability of data on water ingestion and a wide array of potential confounders distinguishes this study from previous record-based investigations (*5,6*). Accuracy of identifying pregnancy outcomes is also certain to be improved using hospital data as opposed to birth certificate information. Finally, because of the extensive array of information we obtained through the interview, we were able to examine

Table 4. Low birth weight in relation to drinking water characteristics: Alamance, Durham, and Orange counties, North Carolina, 1988–1991

	Cases	Controls	Crude OR	Adjusted OR[a]	95% CI
Water source					
Private well[b]	63	114	1.0	1.0	—
Community	225	388	1.0	1.0	0.7–1.4
Bottled	13	43	0.5	0.8	0.4–1.6
Water amount (glasses per day)					
0	35	40	1.5	1.5	0.9–2.5
1–3[b]	150	261	1.0	1.0	—
4+	116	244	0.8	0.6	0.6–1.1
Water source × amount					
Private well/1–3[b]	32	50	1.0	1.0	—
Private well/4+	22	48	0.7	0.8	0.4–1.6
Community/1–3	12	189	0.9	0.8	0.4–1.3
Community/4+	86	173	0.8	0.8	0.5–1.4
Bottled/1+	13	43	0.5	0.6	0.3–1.6
THM concentration (ppb)					
40.8–63.3[b]	48	110	1.0	1.0	—
63.4–82.7	74	118	1.5	1.5	1.0–2.3
82.8–168.8	57	105	1.3	1.3	0.8–2.1
Per 50 ppb change	178	333	1.1	0.9	0.6–1.4
THM doses (ppb × glasses/day)					
44.0–169.9[b]	60	108	1.0	1.0	—
170.0–330.8	63	115	1.0	1.0	0.6–1.5
330.9–1171.0	55	110	0.9	0.8	0.5–1.3
Per 250 unit change	178	333	1.0	1.0	0.8–1.2

Abbreviations: OR, odds ratio; THM, trihalomethane.
[a]Adjusted as needed for potential confounders listed in text; if no confounders identified, the crude OR is presented.
[b]Referent category.

and control for confounding much more effectively than studies based on birth certificates.

The challenge in interpreting our results and the literature as a whole is that we would like to distinguish between the absence of association and the presence of a modest association. To do so with confidence requires large studies with refined exposure assessment. Subject to some uncertainty, literature suggests that there is not a strong association between THM exposure and adverse pregnancy outcome but provides some tentative suggestions that risk of miscarriage (based on the present study) and low birth weight or small-for-gestational-age births (based on previous studies) may be affected. More sophisticated approaches to exposure assessment through water quality models in the context of rigorous epidemiologic study designs can be expected to help reduce the uncertainty.

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Int. J. Hyg. Environ. Health 206, 1–13 (2003)
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http://www.urbanfischer.de/journals/intjhyg

International Journal of Hygiene and Environmental Health

Exposures to drinking water chlorination by-products in a Russian city

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Received August 27, 2002 · Revision received March 11, 2003 · Accepted March 30, 2003

Abstract

Exposures to water disinfection by-products (DBPs) via ingestion of drinking water, and dermal absorption and inhalation during showering/bathing were assessed in the city of Cherepovets, Russia, which uses heavy chlorination to disinfect organic-rich surface water. Concentrations of DBPs (mean ± standard deviation) in tap water were the following: total trihalomethanes (THMs) 205 ± 70 μg/l, five haloacetic acids (HAAs) 150 ± 30 μg/l, and 3-chloro-4-(dichloromethyl)-5-hydroxy-2(5*H*)-furanone (mutagen X or MX) 160 ± 50 ng/l. Concentrations of THMs and HAAs exceeded the corresponding US standards by a factor of 2.5, while MX concentrations were the highest ever reported. The mutagenic activity of tap water extracts in the *Salmonella* TA-100 assay was 14,900 net revertants/l. Concentrations of chloroform in breathing zone air in bathrooms during showering were 330 ± 260 μg/m^3, shower room air at an industrial plant 2,600 ± 1,100 μg/m^3, and bedrooms of local residents 2 ± 2 μg/m^3. The mean concentration of chloroform was 3.2 μg/m^3 in exhaled air samples collected before showering and 110 μg/m^3 after showering. Data on water ingestion and water use practices in the general population and for pregnant women were collected using questionnaires and diaries. Due to concerns over microbiological safety of water, average daily consumption of non-boiled tap water in pregnant women was only 0.01 l/day, while consumption of boiled tap water was 0.81 l/day. This resulted in low ingestion exposures to volatile THMs. Inhalation and dermal absorption determined total exposures to these compounds. HAAs and MX persist in boiled water and drinks resulting in high ingestion exposures. Several brands of inexpensive home water filters were tested for removal of these compounds. To demonstrate a method of exposure reduction in a sensitive subpopulation, the most efficient filters were given to a group of pregnant women. These women and a control group of pregnant women without filters maintained water ingestion diaries for two weeks. The use of home filters resulted in reduction of exposures to HAAs by a factor of three and a greater reduction in exposures to MX.

Key words: DBPs – trihalomethanes – haloacetic acids – MX – water – ingestion – inhalation – dermal absorption – pregnant women

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Setzer: Segeritz
TrennProgramm: English
Status: 1. AK von Seite 1 bis 13
Datum: 26 KW., 26. Juni 2003 (Donnerstag)
Pagina: 1
Seite: 1 to von 13
Umfang (Seiten): 13
Auftragsnummer: 03-2026
3B2-Version: 6.05d
Zeit: 10:07:53 Uhr

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Introduction

Chlorination of water results in formation of an array of DBPs (disinfection by-products). THMs (trihalomethanes) are the most common volatile DBPs and HAAs (haloacetic acids) are the major non-volatile DBPs (Cunning and Jolley, 1993; U.S. Environmental Protection Agency (EPA), 1997b; Boorman et al., 1999). Other DBPs, such as haloacetonitriles (HANs), chloropicrine and chlorinated furanones are usually present at lower concentrations. Concentrations of 3-chloro-4-(dichloromethyl)-5-hydroxy-2(5*H*)-furanone (MX) are usually in the ng/l range (Smeds et al. 1997). However, this compound is the strongest determinant of mutagenic activity of chlorinated drinking water in *Salmonella* assays (Kronberg and Vartiainen, 1988; Tuomisto and Vartiainen, 1990; Vartiainen et al., 1990; Wright et al., 2002).

Health effects of exposures to DBPs are thought to include various cancers and reproductive health effects, including spontaneous abortions, stillbirths, congenital malformations and retarded fetal development (Smallwood et al., 1993; Chiu et al., 1996; Swan and Waller, 1998; Nieuwenhuijsen et al., 2000a; Bove et al., 2002).

Concentrations of DBPs usually vary by season reflecting variability in source water composition and disinfection practices (Arora et al., 1997). DBP concentrations may also vary within the distribution system due to continuous formation and decomposition (LeBel et al., 1997; Chen and Weisel, 1998; Rossman et al., 2001).

Water boiling results in volatilization of chloroform and other THMs. These compounds are present at low concentrations in drinks prepared with boiled water and are not detectable in most foods. Thus, individual ingestion exposures are determined by consumption of non-boiled tap water. Inhalation is an important pathway of exposures to THMs as these compounds can accumulate in in-door air during showering, bathing and other activities associated with water use (Backer et al., 2000; Kerger et al., 2000; Lynberg et al., 2001). Dermal absorption during showering/bathing is another major route of exposure to THMs (Weisel, 1993; Weisel and Jo, 1996; Weisel et al., 1999; Neuwenhuijsen et al., 2000b). Within the exposed population, individual dermal and inhalation exposures depend on showering/bathing frequency and duration, and other parameters, such as water temperature (which strongly affects dermal absorption of THMs), water flow, type of showerhead, and air exchange rate in the bathroom.

Polar molecules of HAAs, HANs, and MX (mutagen X) do not readily penetrate the skin (Xu et al., 2002). Inhalation exposures to these non-volatile and semi-volatile DBPs have also been demonstrated to be insignificant (Kim and Weisel, 1998). On the other hand, these compounds, especially dichloroacetic acid (DCAA), persist in boiled water and foods (Raymer et al., 2000; Wu et al., 2001). Thus, individual exposures to these compounds are determined by total ingestion of tap water (non-boiled and boiled), hot drinks and tap water-containing foods.

Point-of-use treatment of drinking water using activated carbon filters may reduce ingestion exposures to DBPs. However, the efficiency of home filters may vary depending on filter brand, age and characteristics of tap water.

The DBP exposure assessment study presented in this paper was conducted in the city of Cherepovets, Russia, by the Harvard School of Public Health and the Cherepovets Center for Sanitary and Epidemiological Control (Sanepid) in cooperation with the National Public Health Institute (Finland), and Research and Production Corporation Typhoon (Russia). Cherepovets (population of 320,000) is located 400 km to the North of Moscow in the sparsely populated area of coniferous forests. The city uses a major water artery in the area, the Sheksna River, as its sole water source. The single water treatment plant uses chlorination with high doses of liquid chlorine, which vary from 5 mg/l to 13 mg/l depending on the immediate chlorine demand of source water. No DBP precursor removal is practiced. Chlorination is followed by coagulation with aluminum sulfate and rapid upward filtration through sand filters (direct clarification). Most of the time, total residual chlorine concentration in effluent water varies from 1 mg/l to 2 mg/l (these limits are set by local water quality standards) with free chlorine accounting for two thirds and chloramines accounting for the remainder. In the spring of 1999, the mean free chlorine concentration in effluent water was 1.09 mg/l, the mean concentration of chloramines was 0.47 mg/l, while the mean pH was 6.85. Secondary chlorination in the distribution system is not practiced. According to the utility company, mean residence time of water in the distribution system is several hours, while exact water residence times for specific locations are unknown. The mean concentrations of free chlorine at point of use sites (a sample of residences in different parts of the city) were 0.06 mg/l in fall 1998 and 0.03 mg/l in spring 1999, while the mean concentrations of chloramines were correspondingly 0.43 mg/l and 0.26 mg/l (Egorov et al., 2002a).

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According to the water utility's data, concentrations of chloroform in treatment plant effluent frequently exceed the Russian standard of 200 µg/l. Monitoring of chloroform at point-of-use sites is not practiced and other DBPs are not routinely monitored in Cherepovets.

Materials and methods

Water sampling and analysis

Water and air samples for DBP analysis were collected during several short visits of Harvard specialists to Cherepovets from the fall of 1999 through the spring of 2001. Samples were then transported to the chemistry laboratories at Harvard University or Typhoon Corp. Tests of mutagenicity were conducted at the National Public Health Institute (Kuopio, Finland), which also provided methodology for MX monitoring and analyzed replicate control samples.

Cold tap water samples were collected from local households for determination of HAAs, HANs, MX and mutagenicity, while warm water samples (at a temperature normally used for showering) were collected for determination of THMs. Several samples of boiled tap water and tea have also been analyzed.

Water samples for determination of THMs were collected into 40 ml bottles, acidified and preserved with sodium thiosulfate and transported in insulated containers with ice packs. Analysis was conducted using a gas chromatography/mass spectrometry (GC/MS) capillary column technique with head space sample introduction in accordance with the method developed by the Pacific Northwest National Laboratory (PNNL Method VOA-4, 1998). Water samples for determination of HAAs were collected, preserved, transported and analyzed in accordance with the US EPA Method 552.2 (US EPA, 1995a). Analysis of HANs was conducted using GC/MS in accordance with the US EPA method 551.1 (US EPA, 1995b).

For determination of MX, tap water samples of 2 l volume were collected into precleaned glass bottles, acidified and filtered through sorption columns with XAD-8 resin. MX was eluted from the sorbent with ethyl acetate. MX solution in ethyl acetate was evaporated to a non-volatile residue. MX was methylated with 2% H_2SO_4 in methanol and then extracted with hexane. MX concentrations were determined using GC/MS in accordance with the method described by Vartiainen et al. (1991) and Smeds et al. (1997).

Water samples for determination of mutagenic activity in the standard *Salmonella typhimurium* assay (Maron and Ames, 1983) were collected, processed and extracted following the procedure for determination of MX as described above. Tests were conducted using the tester strain TA100 without metabolic activation in accordance with the method used in previously conducted studies of tap water mutagenicity (Vartiainen and Liimatainen 1988; Wright et al. 2002).

Selection of home water filters to reduce ingestion exposures

To assess removal efficiency of THMs, HAAs, HANs and MX, we concurrently tested three commercially available inexpensive home filters: Brita™ and Aquaphor™ table-top pitcher filters and a detachable faucet-tip Rodnik filter. Cartridges in all of these filters contained activated carbon. Brita filters also contained ion-exchange resins for removal of heavy metals, and, thus, a smaller amount of activated carbon. Filtered water samples were collected after filtration of a predefined quantity of tap water through these new filters (for example, from 1st, 50th, 100th, and 150th liters). Non-filtered tap water samples were collected concurrently to determine baseline concentrations. In addition, two previously used faucet-tip filters of different brands were tested by collecting filtered and non-filtered samples from apartments of Sanepid employees. Testing of water filters was conducted in April 2001.

Air sampling and analysis

Indoor air sampling for determination of THMs was conducted using an active sampling method. The sampling equipment included a portable pump, electronic flowmeter/totalizer, Tygon™ tubing, and sorption tubes packed with Carbopack-B™ sorbent (Supelco Inc., Bellefonte, Pennsylvania, USA). Samples from shower rooms at industrial facilities were collected when workers were taking showers after work shifts. Bathroom, kitchen and bedroom air samples were collected from apartments of Sanepid employees. Bathroom samples were collected during showering activities at a distance of 20 cm from the water flow for 15 to 20 minutes (duration of normal showering in Cherepovets) at an average flow rate of approximately 10 ml/min. Bedroom samples were collected for 20 minutes at an average flow rate of approximately 100 ml/min and kitchen samples were collected at an average flow rate of 20 ml/min for 20 min. Sample volumes were measured using an electronic totalizer. In addition, to assess temporal variability of chloroform concentrations in air during long bathing activities, two Sanepid volunteers collected air samples during consecutive 10-minute intervals while taking 50 minute-long baths. To determining how ventilation affects accumulation of chloroform in breathing zone air, several samples were collected from bathrooms with all ventilation openings temporarily sealed. For determination of THMs in indoor air samples, analytes were thermally desorbed from Carbopack-B™ sorption tubes in accordance with the US EPA Method TO-17 (US EPA, 1997a) and analyzed in accordance with the US EPA Method TO-15 (US EPA, 1999) using an automatic thermal desorption unit connected to GC/MS.

Air exchange rates (AER) were measured in several selected bathrooms of Sanepid employees with different ventilation types. AER were determined using air concentrations of a volatile tracer compound, perfluorinated methylcyclohexane (PMCH), under steady-state conditions. PMCH was allowed to permeate into bathrooms for several (six to eight) hours. Concentrations of PMCH

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Table 1. Sampling schedule and number of samples analyzed.

Type of analyses	Number of samples				
	October-December 1999	February 2000	August 2000	April 2001	Total
THMs in tap water	–	–	4	10	14
HAAs in tap water	3	2	–	11	16
HANs and chloropicrin in tap water	–	–	–	3	3
MX in tap water	–	–	–	11	11
Mutagenicity of tap water	–	–	–	2	2
THMs in indoor air	17	–	13	5	35
THMs in exhaled air	–	–	–	9	9
Air exchange rates	–	–	–	4	4

were then measured using a passive sampling technique (open sorption tubes). Analysis was conducted using a gas chromatograph with electron capture detector (GC/ECD) by Mr. Robert Weker (Harvard School of Public Health).

Exhaled air concentrations of THMs were measured in samples collected from Sanepid employees before and within 1 minute after their routine showering and bathing activities. Samples were collected into five-liter Tedlar™ air sampling bags with mouthpieces and valves. All samples were collected in bedrooms, where inhaled air had low concentrations of THMs. Within 12 hours from sampling, analytes were transferred into Carbopack-B™ sorption tubes by pumping air from sampling bags at a flow rate of 50 ml/min. Sorption tubes were transported to the laboratory where sample processing and analysis were conducted as described above for indoor air samples.

Questionnaire and diary surveys in the general population

A cross-sectional questionnaire survey of the use of water filters and showering and bathing activities was conducted in randomly selected households in the fall of 1998 (500 families) and the spring of 1999 (750 families). These surveys were nested within a cross-sectional epidemiological study of health effects of microbiological water pollution in the distribution system (Egorov et al., 2002a). A daily diary survey of tap water consumption in 100 randomly selected households was conducted from June through November 1999. This survey was nested within a prospective epidemiological study of health effects of microbiological water pollution (Egorov et al., 2003).

Questionnaire and diary surveys in pregnant women

A cross-sectional questionnaire survey of 51 pregnant women in spring 2001 was designed specifically for assessment of exposures to DBPs. Participants of this survey were recruited by local health care specialists at one of the city's pregnancy consultation centers.

A two weeks-long diary survey of tap water consumption and water exposures was conducted in 27 women recruited from the cross-sectional survey population. Only pregnant women who did not have home water filters purchased through their own initiative were recruited for this survey. At baseline, 10 participants received free-of-charge pitcher-type home water filters and replacement cartridges. The remaining 17 participants continued to use non-filtered tap water for drinking. All survey participants recorded detailed information on water use and water consumption at home and outside the home. Daily DBP ingestion exposures for each woman were then estimated using the data on DBP concentrations in filtered and non-filtered tap water.

Results

Sampling schedule and numbers of air and water samples collected are presented in Table 1.

Concentrations of DBPs in water

The results of DBP measurements in Cherepovets tap water are presented in Table 2. Chloroform was the major THM species forming 96% of total THMs in water, while bromoform was below the detection limit in all samples collected. The concentration of total THMs in August 2000 was 50% higher than in April 2001 (270 μg/l vs. 180 μg/l). The mean total THM concentration in two samples of boiled tap water collected from teakettles in local residences was 7 μg/l (these samples are not included in Tables 1 and 2).

Total concentrations of five HAAs in Cherepovets tap water were rather stable over time: 157 μg/l in December 1999, 158 μg/l in February 2000 and 148 μg/l in April 2001.

Concentrations of MX at point-of-use sites (180 ± 51 ng/l; $N = 8$) were higher than concentrations in the treatment plant effluent (113 ± 12 ng/l; $N = 3$). Although MX is unstable in water at the neutral pH, the rate of MX decomposition is low with a half-life of more than seven days (Vartiainen et al., 1991). Thus, in this distribution system with a short water residence time, continuing formation of MX through reactions of residual chlorine with organic compounds appears to be more important than its decomposition. The concentration of MX in

Table 2. Concentrations of DBPs in tap water in Cherepovets (μg/l).

Parameter	Mean	SD	Method detection limit
Chloroform	198	70	0.1
Bromodichloromethane (BDCM)	6.7	2.0	0.1
Dibromochloromethane (DBCM)	0.5	0.5	0.1
Bromoform	ND	–	0.3
Total THMs	205	70	
Monochloroacetic acid (MCAA)	3.6	2.9	0.4
Dichloroacetic acid (DCAA)	62	19	0.01
Trichloroacetic acid (TCAA)	83	26	0.01
Bromochloroacetic acid (BCAA)	1.9	1.5	0.01
Bromodichloroacetic acid (BDCAA)	0.4	0.4	0.01
Total HAAs	150	31	
Dichloroacetonitrile (DCAN)	5.6	0.3	0.01
Bromochloroacetonitrile (BCAN)	0.3	0.2	0.02
Trichloroacetonitrile (TCAN)	0.1	0.01	0.01
Dibromoacetonitrile (DBAN)	0.2	0.1	0.02
Total HANs	6.2	0.2	
Chloropicrin	0.35	0.04	0.02
MX	0.16	0.05	0.004

Table 3. Removal of DBPs by various home water filters (manufacturer recommended capacity of cartridges is 150 liters of water for Brita™ and Aquaphor™ and 1,000 liters for Rodnik).

Filter	Made in	Compound	Percent removal of DBPs						
			1st liter	50th liter	100th liter	150th liter	300th liter	600th liter	1000th liter
Brita	Germany	DCAA	95	48	49	2			
		TCAA	87	57	39	−19			
		MX	NA	>99	NA	>99			
		Chloroform	94	96	92	90			
Aquaphor	Russia	DCAA	97	96	67	59			
		TCAA	95	88	67	63			
		MX	>99	>99	NA	>99			
		Chloroform	94	95	95	95			
Rodnik	Russia	DCAA	80	NA	51	NA	47	45	31
		TCAA	81	NA	37	NA	45	40	18
		MX	95	NA	NA	NA	NA	73	60
		Chloroform	91	NA	88	NA	88	90	77

one sample of tea prepared by boiling tap water for approximately 1 minute was 84 ng/l.

In April 2001, the mutagenic activity of water extracts in the *Salmonella* TA-100 assay was 14,900 ± 800 net revertants/L (N = 2).

Removal of DBPs by point-of-use activated carbon filters

The results of testing home water filters for removal of major DBP species are presented in Table 3. Removal of MX and THMs was consistently higher than removal of HAAs. The latter limited the useful life of carbon cartridges. As suggested by negative TCAA removal by a Brita filter from the 150th liter, longer use of a cartridge may result in elution of previously accumulated HAAs (probably due to HAA replacement by compounds with higher affinity to binding sites). At the same time, the metal removing capacity of Brita was underutilized as concentrations of heavy metals including lead were very low in Cherepovets (data not shown). The Russian-made Aquaphor™ filter, which employs a mixture of fibrous and granular absorbents (U.S. patents 5904854 and 5521008), demonstrated the highest removal rates of all DBP species.

Our tests of two faucet-mounted filters, which had been used for various amounts of time by Sanepid employees in their apartments, demonstrated practically zero removal of DBPs (data not shown).

Table 4. Results of indoor air chloroform monitoring in Cherepovets (μg/m³).

Type of sampling site	N	Mean	SD	Min	Max
Bathrooms	15	330	310	75	900
Kitchens	4	86	91	ND	170
Bedrooms	5	2.1	2.3	ND	5.0
Hotel shower with enclosure	1	5,400	NA	5,400	5,400
Factory shower	5	2,600	1,100	1,900	4,900
Change room at a factory shower	1	18	NA	18	18
Bathrooms with all ventilation openings closed	4	7,800	6,300	2,400	15,600

Air concentrations of volatile DBPs

A summary of chloroform concentrations in indoor air by the type of sampling site is presented in Table 4. The method detection limits (MDL) for chloroform were 1.2 μg/m³ for samples of 2 l volume and 0.3 μg/m³ for 200 ml samples. Chloroform was the major species present in bathroom air forming almost 98% of total THMs. Chloroform concentrations in kitchens varied widely from non-detectable to a maximum of 170 μg/m³ depending on ventilation rate, cooking and washing activities. Its concentrations in bedrooms were invariably low. The concentration of bromodichloromethane (BDCM) in bathrooms during showering was 8.4 ± 4.1 μg/m³. The MDLs for BDCM were 1.0 μg/m³ and 0.2 μg/m³ for 2 l and 200 ml samples respectively. Dibromochloromethane and bromoform were non-detectable in most samples.

Concentrations of chloroform in female shower rooms at the city's largest industrial factory, when workers were taking showers after their work shift, were almost an order of magnitude higher than in residential bathrooms (2,600 μg/m³ vs. 330 μg/m³). The chloroform concentration in one sample collected in an adjacent changing room was only 18 μg/m³, suggesting that water used for showering was the main source of chloroform in indoor air. A hotel shower enclosure was another site with a very high chloroform concentration in breathing zone air.

The analysis of predictors of chloroform concentrations in bathroom air indicated that variability in bathroom volumes in typical apartment buildings of standard design is very low (from 5.2 m³ to 7.0 m³). This low variability in bathroom volumes could not substantially affect the rate of chloroform accumulation. However, air exchange rates in four bathrooms with different ventilation settings varied from 1.4 to 4.2 air exchanges per hour with an average of 2.9.

The results of multiple chloroform measurements in bathroom air during 50-minute bathing (not included in Table 4) in two different bathrooms are presented in Figure 1. Figure 1 (left panel) shows that chloroform concentrations in air continued to increase throughout bathing in a bathroom with a low air exchange rate. Figure 1 (right panel) shows a decrease in chloroform concentration during bathing activity in a bathroom with a higher air exchange rate. This decrease followed an initial rise due to the use of the shower to fill the bathtub. Maximum BDCM concentrations in 10-minute samples from these two experiments were 14.5 μg/m³ and 5.4 μg/m³ respectively.

The mean chloroform concentration in breathing zone air in four bathrooms with all ventilation openings temporarily sealed was 7,800 μg/m³ (SD = 6,300 μg/m³; range from 2,400 μg/m³ to 15,600 μg/m³). Air exchange rates in these bathrooms were not measured. However, these rates were likely to be very low. The equilibrium concentration of chloroform in air for a 200 μg/l concentration in water at 40 °C is 30,000 μg/m³. Thus, concentration of chloroform in air at the end of a 20 minute-long shower was likely to be close to the equilibrium point (the 15,600 μg/m³ average reflects accumulation of chloroform from near zero to the equilibrium concentration 30,000 μg/m³).

The mean chloroform concentration in exhaled air of local residents before showering was 3.2 μg/m³ (N = 3, SD 0.7 μg/m³, MDL 0.3 μg/m³) while after showering/bathing it increased to 110 μg/m³ (N = 6, range from 11 to 410 μg/m³, standard deviation 160 μg/m³). BDCM was non-detectable in all samples before showering (N = 3), while average concentration after showering was 0.8 μg/m³ (N = 6, range from non-detectable to 3.7 μg/m³, MDL 0.2 μg/m³). Bromoform and DBCM were non-detectable in all samples collected before and after bathing. Concentrations of benzene, toluene, o-xylene, m, p-xylenes, tetrachloroethene, ethylbenzene and tetrachloromethane in exhaled air before and after showering did not differ significantly (data not shown).

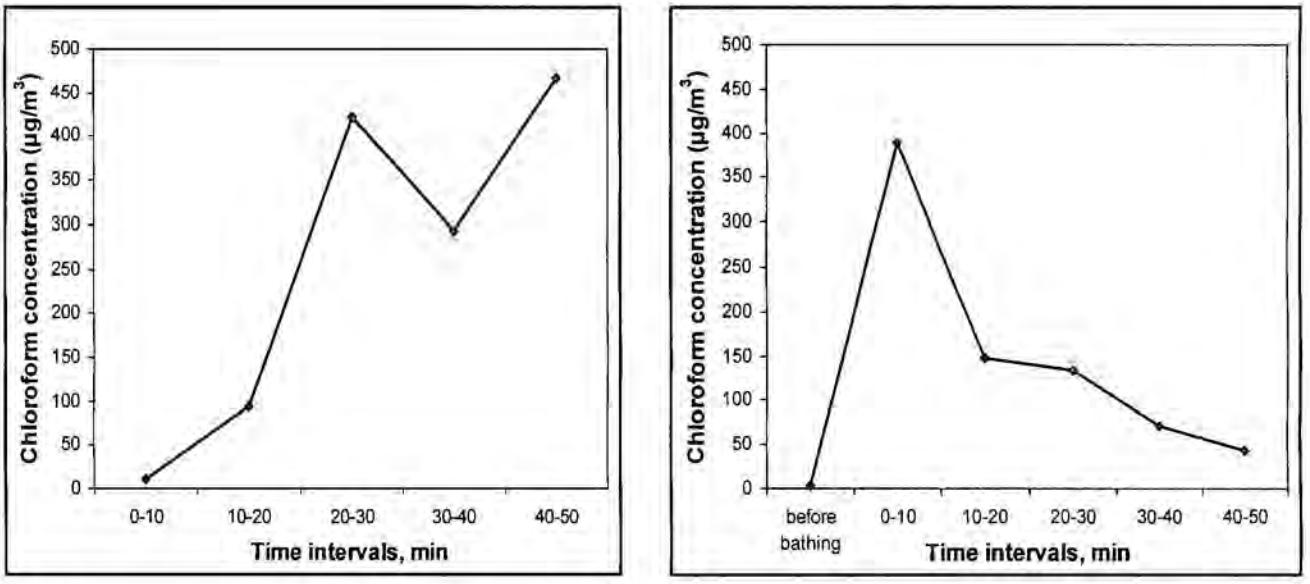

Fig. 1. Air concentrations of chloroform in two Cherepovets bathrooms during bathing. Left panel: Air exchange rate 1.4/hour; volunteer fills the bathtub using the faucet; then sits in the bathtub for 50 minutes. Right panel: Air exchange rate 3.4/hour; volunteer fills the bath using the shower head; then turns shower off and sits in the bath tub for 50 minutes.

Surveys of water exposures in the general population

The results of questionnaire surveys in the general population show that 15% of study participants used home water filters. These were predominantly (83%) faucet-mounted filters designed mainly for removal of suspended particles. Table-top pitcher-type filters were less popular, while the use of more expensive stationary in-line filters was very uncommon (only 3% of all filters used). The average frequency of showering and bathing in study participants was 0.7 times per day with a range from once per week to three times per day.

The results of the 5.5 month-long diary survey of 100 families (367 individuals; mean age 29.6 years) indicated that the majority of Cherepovets residents never drinks non-boiled tap water or drinks it rarely. Only 39% of study participants reported some episodes of non-boiled tap water consumption. Each day, from 3% to 13% of study participants (7% on average) reported consumption of non-boiled tap water, with higher rates corresponding to higher ambient air temperatures. This high rate of boiling is due to concerns about microbiological safety of tap water (the Cherepovets health officials advise local residents to boil their drinking water).

Questionnaire survey of water exposures in pregnant women

The age of 51 pregnant women who participated in the questionnaire survey (mean ± standard deviation) was 24.0 ± 4.6 years; their weight was 66.4 ± 12.4 kg; and the pregnancy term was 27.1 ± 8.1 weeks. Study participants had, on average, 1.20 previous pregnancies, including 0.31 live births, 0.12 miscarriages and 0.77 medical abortions. Only 10% were smokers. Prevalence of home water filter use in this group was 18%. Only one individual regularly attended a swimming pool with chlorinated water and two individuals reported attendance at public saunas. The average reported frequency of showering and bathing was 1.2 times per day, substantially higher than in the general population. The mean reported daily duration of showering and bathing in this group was 21.8 ± 11.1 min. There was no association between daily duration of showering/bathing and pregnancy term.

Diary survey of water exposures in pregnant women

The results of the two weeks-long diary survey involving 27 of these pregnant women are presented in Table 5. At the inception of the survey, 10 women received free-of-charge home filters and replacement cartridges while the remaining 17 women continued to use non-filtered tap water. The mean daily consumption of non-boiled tap water in both groups

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Table 5. Daily consumption of water and drinks by a group of pregnant women in Cherepovets during a 14 days-long diary survey. Mean (standard deviation), liters.

Types of water	Did not use home water filters (17 women)	Used home water filters (10 women)
Non-boiled non-filtered tap water and drinks prepared of it	0.01 (0.03)	0.02 (0.04)
Non-boiled filtered tap water and drinks prepared of it	0 (0)	0.07 (0.13)
Boiled non-filtered tap water and drinks prepared of it	0.78 (0.16)	0.18 (0.23)
Boiled filtered tap water and drinks prepared of it	0 (0)	0.62 (0.21)
Non-chlorinated non-bottled water (wells at summer houses)	0.05 (0.08)	0.01 (0.01)
Bottled water (boiled and non-boiled) and drinks prepared of it	0.21 (0.16)	0.18 (0.13)
Total self-reported water intake	1.04 (0.23)	1.07 (0.13)

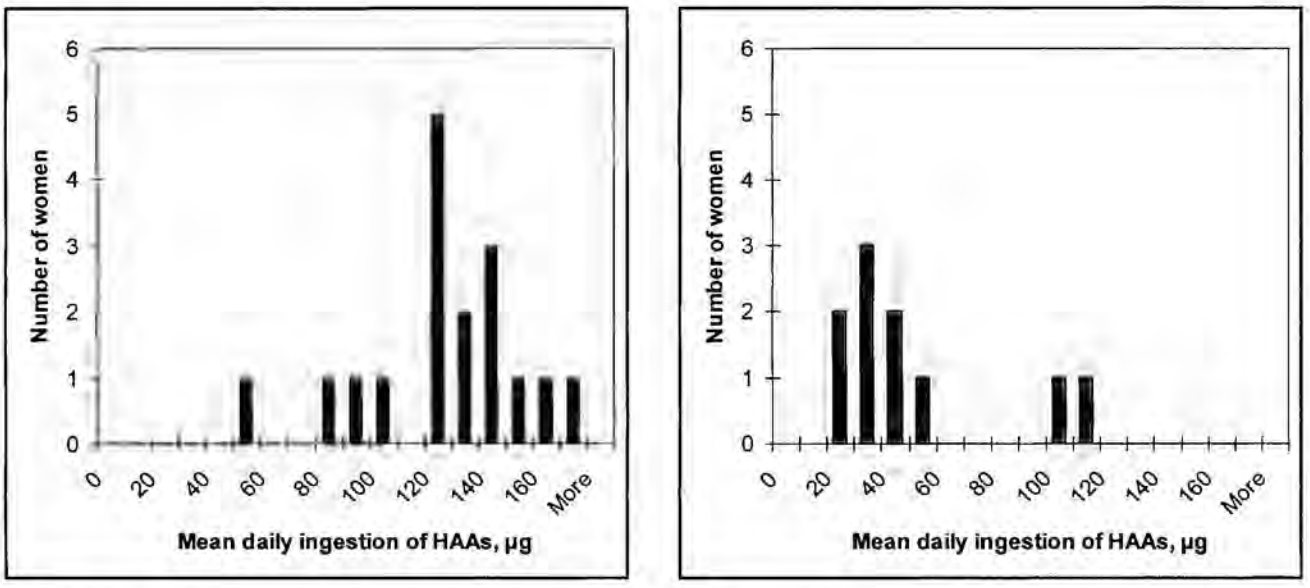

Fig. 2. Estimated daily ingestion of HAAs with water and drinks by pregnant women in Cherepovets. Left panel: Pregnant women without home water filters. Right panel: pregnant women with home water filters.

of pregnant women was very low, while consumption of boiled water and drinks that were prepared from boiled water (hot tea, coffee, etc.) was substantial. Average daily total intake of tap water (boiled and non-boiled) was 0.82 l/day. Women with filters continued to boil most of their water for drinking. They also consumed some non-filtered tap water outside their homes (mostly at work places). Survey participants in both groups also reported substantial consumption of milk (0.8 l/day) and natural juices (0.3 l/day), while consumption of bottled soft drinks was low (0.07 l/day).

Figure 2 shows approximate estimates of daily ingestion of HAAs with water and drinks by pregnant women with home water filters and without filters. The estimates assume a mean concentration of total HAAs in non-filtered tap water of 150 µg/l, 90% mean removal efficiency of filters during the first two weeks of use (~ 75 liters of filtered water), no change in HAA concentration after boiling and preparation of hot drinks, and zero concentration of HAAs in bottled water, juices and soft drinks. These crude estimates, which do not account for ingestion of HAAs with foods that are prepared with tap water, indicate a substantial (approximately by a factor of three) reduction in exposures to HAAs in women using filtered water (42 µg/day vs. 117 µg/day).

In the group of pregnant women, the total daily duration of full-body water contact (mean ± standard deviation) was 15.5 ± 12.6 min. The daily duration of showering at home was 12.0 ± 7.8 min. The mean daily duration of showering at work places was 0.5 min (standard deviation 2.2 min) and bathing at home 3.0 min (standard deviation 3.9 min). The total daily duration of water

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contact estimated from the diary data was lower than the duration reported by the same individuals in their questionnaires, suggesting a reporting bias (rounding up) in the questionnaire study.

Discussion

In the city of Cherepovets, Russia, high doses of chlorine are applied to poor quality source water with high concentrations of dissolved organic compounds. Concentrations of chlorination by-products, including THMs, HAAs, HANs and MX, as well as mutagenic activity of treated water are, therefore, very high.

The mean concentration of five HAAs in Cherepovets (150 μg/l) exceeds by far the 95th percentile of the distribution of HAAs concentrations in US municipalities of 86 μg/l (US EPA, 1997c). The mean concentration of five HAAs in Cherepovets exceeded the current US EPA standard, the annual running average of 60 μg/l (US EPA, 2001), by a factor of 2.5. The concentrations of DHAA in 11 out of 16 samples analyzed exceeded the provisional WHO guideline for this compound of 50 μg/l (WHO, 1993). The concentrations of TCAA exceeded the provisional WHO guideline of 100 μg/l in four out of 16 samples.

The mean concentration of total THMs in Cherepovets (205 μg/l) also exceeds the current US EPA standard (US EPA, 2001), the annual running average of 80 μg/l, and the 95th percentile of concentrations in the US water supply systems (104 μg/l; US EPA, 1997c), to a similar degree. The concentrations of total THMs were above the EU standard of 100 μg/l (Council of the European Union, 1998) in all but one sample. Chloroform concentrations in six out of 14 samples were above the WHO guideline of 200 μg/l, while concentrations of bromoform, DBCM and BDCM were well below the corresponding WHO guidelines of 100 μg/l, 100 μg/l and 60 μg/l in all samples.

MX concentrations in chlorinated waters in Massachusetts in 1997–1998 ranged from 4 ng/l to 80 ng/l (N = 88), with a mean value of 28 ng/l (Wright et al., 2002). Reported concentrations of MX in Finland, Japan and the UK are even lower (Kronberg and Vartiainen 1988; Smeds et al., 1997; Suzuki and Nakanishi, 1990; Fawell and Horth, 1990). Thus, the average concentration of MX in Cherepovets (160 ng/l) exceeded the highest previously reported concentration by two-fold.

Water extracts from Cherepovets also had very strong mutagenic activity in the *Salmonella* TA100 assay (14,900 net revertants/liter), which by far exceeds mutagenic activity of tap waters in Finland (from 230 to 3,250 rev/l, Smeds et al., 1997) and in Massachusetts (from 300 to 5,700 rev/l, with a mean of 1,450 rev/l, Wright et al., 2002). Determination of mutagenicity in these three studies was conducted by the same laboratory in Kuopio, Finland.

A characteristic feature of the Cherepovets population and especially of pregnant women in this city is low consumption of non-boiled tap water due to concerns over its microbiological safety. These concerns seem to be justified: surveys conducted by regional health authorities demonstrated the presence of hepatitis A and rotaviruses (A. Tereschenko and N. Drizhd, personal communication), while a survey conducted by the Harvard School of Public Health in cooperation with the local Sanepid demonstrated the presence of disinfection-resistant protozoan parasites in treated water (Egorov et al., 2002b). Epidemiological studies demonstrated associations between episodes of elevated effluent water turbidity and daily episodes of self-reported diarrheal illness (Egorov et al., 2003), and between deterioration of microbiological water quality in the distribution system and elevated rates of diarrheal illness in some areas of the city (Egorov et al., 2002a). Pregnant women in Cherepovets consumed 0.01 l/day of non-boiled tap water vs. 0.56 l/day reported by Shimokura et al. (1998) for pregnant women in the USA. This low consumption of non-boiled tap water in Cherepovets results in low ingestion exposures to THMs, as concentrations of these compounds are low in boiled water. Total tap water consumption (0.82 l/day) by pregnant women in Cherepovets was comparable to daily consumption by pregnant women in the USA (Shimokura et al. (1998), 0.78 l/day; Ershow et al. (1991), 1.19 l/day) and Italy (Barbone et al. (2002), 0.6 l/day). Most home water filters that were used by Cherepovets residents were likely to be inefficient for DBP removal. As concentrations of non-volatile DBPs, which persist in boiled water, are very high in Cherepovets, ingestion exposures to these compounds in pregnant women may result in non-trivial adverse health effects. Using simple exposure-reduction measures, such as more efficient home filters, can reduce these adverse effects.

This study demonstrated a high efficiency of activated carbon filters (Aquaphor™) for removal of DBPs. Application of these inexpensive filters to the sensitive subpopulation of pregnant women is a cost-effective method to reduce exposures to potentially fetotoxic DBPs. When this study was conducted, the total cost of an Aquaphor pitcher and 20 replacement cartridges was the Ruble equivalent of

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approximately $ 90, an affordable expense for most families in this city with a very low birth rate. In this pilot study, with filtered water used only at homes, ingestion exposures to HAAs were reduced by almost 3-fold. The use of filtered water both at home and outside the home could result in up to a 10-fold reduction in exposures to HAAs and even greater reduction in exposures to MX.

Exposures to volatile THMs occur predominantly through dermal absorption and inhalation during showering, bathing and other activities associated with water contact. In general, daily duration of bathing and showering in Cherepovets' pregnant women (15.5 min) was slightly higher than that reported by Shimokura et al. (1998) for US pregnant women (13.1 min). The Cherepovets distribution was substantially skewed to the right, probably due to fixed hot water fees and the centralized hot water supply, which is conducive to excessive use of hot water by some individuals.

As concentrations of THMs in indoor air depend on many factors, a precise assessment of inhalation exposures may require extensive THM measurements in bathrooms (where concentrations are the highest) and in kitchens (where individuals spend more time). Our results of chloroform measurements suggest that ventilation rate is an important determinant of chloroform concentrations in bathroom air during showering and bathing. The ratio of chloroform concentrations in bathroom breathing zone air and water in this study was approximately 1.6 $\mu g/m^3$ per 1 $\mu g/l$, which is somewhat lower than 3.3 $\mu g/m^3$ per 1 $\mu g/l$ reported by Kerger et al. (2000). The difference might be due to different construction of bathrooms (for example, the fact that many bathrooms in Cherepovets do not have shower enclosures and curtains).

This ratio was higher in the shower room of an industrial factory (approximately 13 $\mu g/m^3$ per 1 $\mu g/l$) probably due to the continuous use of multiple showers resulting in a high rate of chloroform volatilization. Very high concentrations of chloroform in shower room air at the largest industrial factory in Cherepovets suggest substantial exposures in factory workers. In this industrial city, more than 50% of active age males and a substantial proportion of females are industrial workers who take regular showers in factories' shower rooms.

The results also suggest that inhalation exposures in kitchens may be another important determinant of total exposure. However, a larger exposure assessment study would be needed to assess the contribution of the various microenvironments.

Measurements of concentrations of THMs in exhaled air have been demonstrated to be informative bioindicators of dermal and inhalation exposures (Weisel et al., 1992; Pleil and Lindstrom, 1997; Gordon et al., 1998; Aggazzotti et al., 1998). Exhaled air sampling, which is much more acceptable to study participants than blood sampling, is a method of choice for population surveys. The average concentration of chloroform in exhaled air in Cherepovets volunteers after showering (110 $\mu g/m^3$ average) was higher than levels previously reported (Gordon et al., 1998: 45 $\mu g/m^3$; Weisel et al., 1999: from 4 to 54 $\mu g/m^3$) reflecting higher concentrations of chloroform in Cherepovets tap water. Similar exhaled air concentrations have been reported after swimming in indoor swimming pools (Aggazzotti et al., 1995: 94 $\mu g/m^3$; Levesque et al., 1994: 89 $\mu g/m^3$). A study of competitive swimmers (Lindstrom et al., 1997) reported an increase in chloroform concentrations in exhaled air of a male swimmer from about 3 $\mu g/m^3$ before swimming to 148 $\mu g/m^3$ at the eighth minute, to 371 $\mu g/m^3$ at the 90th minute. The present study did not include assessment of chloroform exposures in swimming pools. However, the contribution of this pathway to developmental health risks in Cherepovets is likely to be very small as very few pregnant women attend swimming pools there.

THMs are fully metabolized by the liver after ingestion. Thus, biologically effective doses of these compounds depend on route of exposure and target organs. For the same amount of internalized chloroform, ingestion results in a higher dose to the liver, while inhalation and dermal absorption result in higher fetal exposure (Weisel and Jo, 1996). As inhalation and dermal absorption exposures to THMs in Cherepovets are high in pregnant women, these exposures may result in measurable fetotoxic and teratogenic effects.

HAAs, HANs and MX are not volatilized during boiling, which results in high ingestion exposures in Cherepovets pregnant women. Most epidemiological studies of pregnancy outcomes conducted to date relied on THMs measurements to characterize exposures. Thus, epidemiological data on developmental toxicity and teratogenicity of other classes of DBPs are extremely limited or non-existent (Neuwenhuijsen et al., 2000a and 2000b). However, toxicological studies have demonstrated fetotoxic and teratogenic effects of HAAs (Smith et al., 1989a and 1992; Hunter et al., 1996; Ward et al., 2002) and HANs (Smith et al., 1988 and 1989b). It would also be prudent to minimize exposures to MX and other unknown mutagenic DBPs that determine high mutagenic activity of Cherepovets tap water in the standard *Salmonella* assay.

Construction of a new more sophisticated water treatment plant that will minimize formation of

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DBPs in treated water was under way in Cherepovets at the beginning of 2003. Meanwhile, application of home filters may be recommended to a sensitive subpopulation such as pregnant women as a temporary measure to reduce ingestion exposures to semi-volatile and non-volatile DBPs in Cherepovets and elsewhere.

Acknowledgements. This study was funded partly by a World Bank loan to the Russian Federation and partly by a seed grant from a National Institute of Environmental Health Sciences' Center at the Harvard School of Public Health. Andrey Egorov was partially supported through grant 2 P42 ES-05947 from the NIEHS with funding provided by EPA. The contents of this manuscript are the responsibility of the authors and do not necessarily represent the official views of the NIEHS or EPA. The authors acknowledge the administrative and organizational support of the Environmental Health Component of the Centre for Preparation and Implementation of International Projects on Technical Assistance (CPPI), Moscow, Russia.

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United States Environmental Protection Agency | Office of Water (4606) | EPA 816-F-99-005 June 1999 www.epa.gov/safewater

EPA Guidance for People with Severely Weakened Immune Systems

(co-released with the Centers for Disease Control and Prevention, 1995)

INTRODUCTION

Cryptosporidium is a parasite commonly found in lakes and rivers, especially when the water is contaminated with sewage and animal wastes. *Cryptosporidium* is very resistant to disinfection, and even a well-operated water treatment system cannot ensure that drinking water will be completely free of this parasite. Current EPA drinking water standards were not explicitly designed to assure the removal or killing of *Cryptosporidium*. Many large water systems already voluntarily take actions for greater control of *Cryptosporidium* and other microbial contaminants. By 2001, the water systems serving the majority of the United States population (those relying on a surface water source, such as a river, and serving more than 10,000 people) must meet a new EPA standard that strengthens control over microbial contaminants, including *Cryptosporidium*. EPA continues to conduct research on microbial contaminants which will be used for determining priorities for the drinking water program, including setting future standards and reevaluating existing standards.

Cryptosporidium has caused several large waterborne disease outbreaks of gastrointestinal illness, with symptoms that include diarrhea, nausea, and/or stomach cramps. People with severely weakened immune systems (that is, severely immunocompromised) are likely to have more severe and more persistent symptoms than healthy individuals. Moreover, *Cryptosporidium* has been a contributing cause of death in some immunocompromised people. Individuals who are severely immunocompromised may include those who are infected with HIV/AIDS, cancer and transplant patients taking immunosuppressive drugs, and people born with a weakened immune system.

BACKGROUND

Data are not adequate to determine how most people become infected. For example, we do not know the importance of drinking water compared to other possible sources of *Cryptosporidium*, such as exposure to the feces of infected persons or animals, sex involving contact with feces, eating contaminated food, or accidentally swallowing contaminated recreational water.

Thus, in the absence of an outbreak, there are insufficient data to determine whether a severely immunocompromised individual is at a noticeably greater risk than the general public from waterborne Cryptosporidiosis. Even a low level of *Cryptosporidium* in water, however, may be of concern for the severely immunocompromised, because the illness can be life-threatening. The risk of a severely immunocompromised individual acquiring Cryptosporidiosis from drinking water in the absence of an outbreak is likely to vary from city to city, depending on the quality of the city's water source and the quality of water treatment. Current risk data are not adequate to support a recommendation that severely immunocompromised persons in all U.S. cities boil or avoid drinking tap water.

In the absence of a recognized outbreak, this guidance has been developed for severely immunocompromised people who may wish to take extra precautions to minimize their risk of infection from waterborne *Cryptosporidiosis*. To be effective, the guidance must be followed consistently for all water used for drinking or for mixing beverages. During outbreaks of waterborne *Cryptosporidiosis*, studies have found that people who used precautions only part of the time were just as likely to become ill as people who did not use them at all.

GUIDANCE

EPA and CDC have developed the following guidance for severely immunocompromised people who may wish to take extra precautions. Such individuals should consult with their health care provider about what measures would be most appropriate and effective for reducing their overall risk of *Cryptosporidium* and other types of infection.

Although data are not sufficient for EPA/CDC to recommend that all severely immunocompromised persons take extra caution with regards to their drinking water, individuals who wish to take extra measures to avoid waterborne Cryptosporidiosis can bring their drinking water to a full boil for one minute. **Boiling water is the most effective way of killing *Cryptosporidium*.** As an alternative to boiling water, people may use the following measures:

- **A point-of-use (personal use, end-of-tap, under-sink) filter**. Only point-of-use filters that remove particles one micrometer or less in diameter should be considered. Filters in this category that provide the greatest assurance of *Cryptosporidium* removal include those that use reverse osmosis, those labeled as "Absolute" one micrometer filters, or those labeled as certified by NSF International under standard 53 for "Cyst Removal." The "Nominal" one micrometer rating is not standardized and many filters in this category may not reliably remove *Cryptosporidium*. As with all filters, people should follow the manufacturer's instructions for filter use and replacement. Water treated with a point-of-use filter that meets the above criteria may not necessarily be free of organisms smaller than *Cryptosporidium* that could pose a health hazard for severely immunocompromised individuals.

- **Bottled water**. Many, but not all, brands of bottled water may provide a reasonable alternative to boiling tap water. The origin of the source water, the types of microorganisms in that water, and the treatment of that water before it is bottled vary considerably among bottled water companies and even among brands of water produced by the same company. Therefore, individuals should not presume that all bottled waters are absolutely free of *Cryptosporidium*. Bottled waters derived from protected well and protected spring water sources are less likely to be contaminated by *Cryptosporidium* than bottled waters containing municipal drinking water derived from less protected sources such as rivers and lakes. Any bottled water treated by distillation or reverse osmosis before bottling assures *Cryptosporidium* removal. Water passed through a commercial filter that meets the above criteria for a point-of-use device before bottling will provide nearly the same level of *Cryptosporidium* removal as distillation or reverse osmosis. Bottled waters meeting the above criteria may not necessarily be free of organisms other than *Cryptosporidium* that could pose a health hazard for severely immunocompromised individuals.

Neither EPA nor CDC maintains a list of point-of-use filters or bottled water brands that meet the above criteria. NSF International can provide a list of filters that meet the NSF criteria. The NSF address is 789 N. Dixboro Road, PO Box 130140, Ann Arbor, Michigan 48113-0140; phone number (877) 8-NSF-HELP (http://www.nsf.org/). Individuals who contact bottlers or filter manufacturers for information should request data supporting claims that a brand of bottled water or filter can meet the above criteria.

FURTHER INFORMATION

When an outbreak of waterborne Cryptosporidiosis is recognized and is determined to be on-going, officials of the public-health department and/or the water utility will normally issue a "boil water" notice to protect both the general public and the immunocompromised.

Current testing methods cannot determine with certainty whether *Cryptosporidium* detected in drinking water is alive or whether it can infect humans. In addition, the current method often requires several days to get results, by which time the tested water has already been used by the public and is no longer in the community's water pipes.

Severely immunocompromised people may face a variety of health risks. Depending on their illness and circumstances, a response by such individuals that focuses too specifically on one health risk may decrease the amount of attention that should be given to other risks. Health care providers can assist severely immunocompromised persons in weighing these risks and in applying this guidance.

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Water Research 39 (2005) 855–864

WATER RESEARCH

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The effect of boiling water on disinfection by-product exposure

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Received 25 September 2004; received in revised form 20 December 2004; accepted 21 December 2004

Abstract

Chloraminated and chlorinated waters containing bromide were used to determine the impact of boiling on disinfection by-product (DBP) concentrations. No significant changes were detected in the concentrations of the dihalogenated haloacetic acids (DXAAs) (i.e., dichloro-, bromochloro-, dibromoacetic acid) upon boiling of chloraminated water, whereas the levels of the trihalogenated haloacetic acids (TXAAs) (i.e., trichloro- (TCAA), bromodichloro- (BDCAA), dibromochloroacetic acid (DBCAA)) decreased over time (e.g., 9–37% for TCAA). Increased DXAA concentrations (58–68%) were detected in the boiled chlorinated sample, which likely resulted from residual chlorine reacting with DXAA precursors. TCAA concentration was unchanged after boiling chlorinated water for 1 min, but a 30% reduction was observed after 5 min of boiling. BDCAA concentrations decreased 57% upon boiling for 1 min and were completely removed after 2 min of boiling, whereas DBCAA was removed after boiling chlorinated water for 1 min. Trihalomethane concentrations were reduced in both chloraminated (74–98%) and chlorinated (64–98%) water upon boiling. Boiling chloraminated water for 1 min reduced chloroform concentration by 75%. Chloroform was reduced by only 34% in chlorinated water after a 1 min boil, which indicates that simultaneous formation and volatilization of chloroform was occurring. Most of the remaining DBPs (e.g. haloketones, chloral hydrate, haloacetonitriles) were removed by at least 90% after 1 min of boiling in both samples. These data suggest that other mechanisms (e.g., hydrolysis) may have been responsible for removal of the non-volatile DBPs and further highlight the importance of examining individual species when estimating thermal effects on DBP concentrations.
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Keywords: Disinfection by-products; Trihalomethanes; Haloacetic acids; Haloketones; Haloacetonitriles; Boiling water

1. Introduction

Disinfection by-products (DBPs) are ubiquitous in chemically disinfected water containing natural organic matter and/or bromide. Carcinogenic and reproductive effects of DBPs have been reported in toxicological and epidemiological studies (Nieuwenhuijsen et al., 2000; Villanueva et al., 2003). Epidemiologic studies of DBPs have often relied on ecologic measures, including type of treatment, type of source water, and trihalomethane (THM) compliance monitoring data (e.g., utility average concentrations) to estimate individual-level exposures. These indirect measures of exposure lead to measurement error, which can result in bias and reduced statistical power to detect associations. Key DBP research needs have been identified to address these exposure assessment limitations, including collection of detailed individual water use data, examination of

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0043-1354/$ - see front matter © 2005 Elsevier Ltd. All rights reserved.
doi:10.1016/j.watres.2004.12.006

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non-volatile DBPs, use of sensitivity and uncertainty analysis, and development of exposure prediction models (Arbuckle et al., 2002; Nieuwenhuijsen et al., 2000). Recent DBP research has begun to address some of these DBP exposure assessment issues (Whitaker et al., 2003; Waller et al., 2001; Wright and Bateson, 2004; Wright et al., 2004; Dodds et al., 2004; Fenster et al., 2003; Windham et al., 2003), but it remains unclear which of these needs are most critical.

Information on exposure modifying factors, such as point-of-use filtration and boiling water prior to consumption (e.g., hot water-based beverages) needs to be considered in epidemiologic studies, because these activities can influence estimates of DBP ingestion exposure (Egorov et al., 2003; Eslinger and Weinberg, 2003). Experimental data have shown that boiling water prior to consumption can greatly impact DBP concentrations (Table 1). Batterman and colleagues (2000) examined thermal effects on THM concentrations by heating chlorine-free distilled water in an electric kettle. Average volatilization rates of 81% for chloroform (trichloromethane (TCM)) and 73% for bromodichloromethane (BDCM) were reported at 100 °C, with a 69% reduction in the four regulated THMs (THM4). Wu and colleagues (2001) conducted boiling experiments of Seattle tap water typically containing 0.9 mg/L chlorine residual and 0.9–1.5 mg/L of dissolved organic carbon (DOC). As boil time increased from 1 to 5 min, reductions of 68% and 83% for chloroform and 75% and 94% for BDCM were observed. Lahl and colleagues (1982) reported THM4 volitalization losses of 73% for a 1-min boil and 88% following a 5-min boil. Chloroform had the highest loss, and the amount removed during boiling decreased with increasing bromine substitution. Kuo and colleagues (1997) found similar removals of chloroform and BCDM upon boiling chlorinated water from Taiwan.

Different effects of boiling on haloacetic acid (HAA) concentrations have been reported in previous experimental studies (Table 1). Trichloroacetic acid (TCAA), a trihalogenated acid (TXAA), has been shown to be more readily removed (30–70%) upon boiling compared to the other subclasses of HAAs (i.e., dihaloacetic acids (DXAAs) and monohaloacetic acids (MXAAs)). Wu and colleagues (2001) reported more than a doubling of dichloroacetic acid (DCAA) levels in chlorinated water upon boiling for 1 or 5 min, whereas Kim (1997) observed no change in DCAA levels in distilled water following a 5-min boil. These results suggest that DCAA originally present was not impacted by boiling and that, in the presence of chlorine, additional DCAA could form during the boiling process. Changes in MXAA concentrations from previous studies varied from −28% to 46%. The MXAAs are typically present (if detected) at concentrations near their minimum reporting levels (MRLs) in most chlorinated waters, which limits the ability to quantify changes upon heating.

Table 1
Previous experimental studies of boiling effects on disinfection by-product concentrations[a]

Study (boiling time)	TCM (%)	BDCM (%)	DBCM (%)	TBM (%)	THM4 (%)	MCAA (%)	MBAA (%)	DCAA (%)	BCAA (%)	DBAA (%)	TCAA (%)
Kim (1997) (5 min)[b]								0			−40
Dojido et al. (1999) (10 min)[c]						−6	−28	−18		−11	−70
Wu et al. (2001) (1 min)[d]	−68	−75				25	40	122	−13		−30
Wu et al. (2001) (5 min)[d]	−83	−94				32	46	130	−7		−46
Batterman et al. (2000) (12.5 min)[b]	−81	−73			−69						
Kuo et al. (1997)[d,e]	−79	−79	−93								
Lahl et al. (1982) (1 min)[f]	−80	−76	−71	−62	−73						
Lahl et al. (1982) (5 min)[f]	−91	−90	−87	−82	−88						

Abbreviations: TCM = chloroform (trichloromethane), BDCM = bromodichloromethane, DBCM = dibromochloromethane, TBM = bromoform (tribromomethane), THM4 = sum of the four regulated trihalomethanes, MCAA = monochloracetic acid, MBAA = monobromoacetic acid, DCAA = dichloroacetic acid, BCAA = bromochloroacetic acid, DBAA = dibromoacetic acid, TCAA = trichloroacetic acid.

[a]Negative value corresponds to decrease in concentration of DBP, whereas positive value corresponds to increase in concentration of DBP.

[b]Distilled water with known DBP concentration.

[c]Ozonated and chlorinated water.

[d]Chlorinated water.

[e]Boil time not reported.

[f]Hypochlorite treated water.

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Hot and cold water use is an increasingly important consideration for DBP exposure assessment, because hot water-based beverages can contribute substantially to overall water consumption levels (Kaur et al., 2004; Egorov et al., 2003) and may have higher levels of certain DBPs compared to cold water. Balko and colleagues (2001) reported TCAA and DCAA concentrations up to three times as high in tea, coffee, and juice samples compared to chloraminated tap water, suggesting that the residual chlorine reacted with HAA precursors in the beverages. In the present study, boiling experiments were conducted on chloraminated and chlorinated water containing bromide. The effects of boiling on a wide range of regulated and emerging DBPs of health concern (Woo et al., 2002) were examined in relation to degree of DBP volatility and bromine substitution.

2. Methods

The boiling experiments were conducted on water samples from the Weymouth water treatment plant (La Verne, CA) in winter 2000. Although not measured, the DOC and bromide levels of this water were typically ~3.0 and ~0.1–0.2 mg/L, respectively. Conventional water treatment does not remove bromide, so bromide would have been present in the finished water. The typical pH of this water was ~8.2. Separate aliquots of chlorinated filter effluent and chloraminated plant effluent were collected in 1-L glass bottles. Although not measured, the chlorine and chloramine residuals at these locations were each typically ~2.5 mg/L as Cl_2. Residual chlorine and chloramines were not measured in each sample, but were at comparable levels based on treatment plant specifications. The disinfectant residuals of these samples were not quenched. Shortly after sampling, the water samples were boiled using a 2.5-quart tea kettle on a stovetop in the Metropolitan Water District of Southern California (MWDSC) laboratory kitchen. The experiments consisted of 1-, 2-, and 5-min boil times. The samples were allowed to cool down prior to extraction. Control samples consisted of water that was not boiled (i.e., boil time = 0). Note, the comparisons between the two water treatments are the results from a single set of samples. The samples underwent liquid/liquid extraction (LLE) and were analyzed for DBPs by gas chromatography/electron capture detection (GC/ECD) (Krasner et al., 2001). Additional samples underwent LLE, were derivatized with an acidic methanol solution, and were analyzed by GC/ECD for HAAs (Munch et al., 1995). Sample analysis included standard measures of quality assurance for precision, accuracy, and bias.

Values for Henry's Law constant—a measure of the volatility of a compound—were obtained from the literature or were estimated using a quantitative structure activity relationship model (HENRYWIN version 3.10, part of the Estimation Program Interface for Windows from the US Environmental Protection Agency) (Westerhoff, 2003). HENRYWIN provided experimental values where available and predicted the Henry's Law Constants at 25 °C by the bond contribution method for those DBPs without experimental values. Henry's Law Constants were not determined for boiling water at 100 °C. The Henry's Law Constants served as a tool to ascertain if a DBP was considered volatile (10^{-1}–10^{-3} atm-m^3/mol), moderately volatile (10^{-3}–10^{-5} atm-m^3/mol), slightly volatile (10^{-5}–10^{-7} atm-m^3/mol) or non-volatile ($<10^{-7}$ atm-m^3/mol). DBPs that are not volatile would still be considered relatively non-volatile in boiling water.

3. Results

3.1. Overview

The HAAs were the most prevalent DBP in the chlorinated and chloraminated samples, followed by the THMs (Tables 2 and 3). Significant amounts of haloaldehydes, haloacetonitriles (HANs), and haloketones (HKs) were also detected. Because of the presence of bromide in the treated source waters, there was a mix of bromine- and chlorine-containing DBP species detected for those DBP classes (i.e., THMs, HANs, haloaldehydes, HAAs) in which brominated species were analyzed. An iodinated THM (dichloroiodomethane) was detected in the chlorinated water, while low levels of chloropicrin (trichloronitromethane (TCNM)) were found in both the chlorinated and chloraminated samples. As shown in Tables 2 and 3, with the exception of the HAAs as a class sum, the sum of the THMs and that of the other DBPs were significantly reduced following a 1-min boil. More modest reductions in these DBP concentrations occurred upon boiling for 2 and 5 min. Within some DBP classes, however, there were significant differences in the impact of boiling on the concentrations of individual DBPs (Fig. 1).

3.2. THMs

Reduction (presumably due to volatilization) in the sum of the THMs (i.e., THM4 and dichloroiodomethane) was (in general) comparable for chlorinated and chloraminated waters, especially after 2 and 5 min of boiling (Tables 2 and 3). THM4 removals ranged from 64% to 98% across the different boiling times.

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Table 2
Cumulative percent change (from time 0) in DBP concentrations (μg/L) from boiled chloraminated water[a]

DBP class	Analyte	Time (min)			
		0	1	2	5
Regulated trihalomethanes (THMs)	Chloroform (trichloromethane) (TCM)	18	4.6 (−75%)	3.0 (−84%)	0.6 (−97%)
	Bromodichloromethane (BDCM)	26	6.3 (−75%)	4.2 (−84%)	0.6 (−98%)
	Dibromochloromethane (DBCM)	13	4.1 (−70%)	2.1 (−84%)	ND (−100%)
	Bromoform (tribromomethane) (TBM)	0.9	0.4 (−60%)	ND (−100%)	ND (−100%)
	Sum of 4 regulated THMs (THM4)	58	15 (−74%)	9.3 (−84%)	1.2 (−98%)
Haloacetonitriles (HANs)	Dichloroacetonitrile (DCAN)	4.3	0.2 (−96%)	0.1 (−98%)	ND (−100%)
	Bromochloracetonitrile (BCAN)	1.1	0.05 (−96%)	0.07 (−94%)	ND (−100%)
Haloaldehydes (HAs)	Dichloroacetaldehyde (DCA)	1.5	0.5 (−70%)	0.4 (−75%)	0.2 (−85%)
	Chloral hydrate (CH) (trichloracetaldehyde)	5.1	0.1 (−98%)	0.1 (−98%)	ND (−100%)
Haloketones (HKs)	1,1-Dichloropropanone (1,1-DCP)	0.5	ND (−100%)	ND (−100%)	ND (−100%)
	1,3-Dichloropropanone (1,3-DCP)	0.1	0.07 (−42%)	ND (−100%)	ND (−100%)
	1,1,1-Trichloropropanone (1,1,1-TCP)	2.2	ND (−100%)	ND (−100%)	ND (−100%)
	1,1,3-Trichloropropanone (1,1,3-TCP)	0.1	ND (−100%)	ND (−100%)	ND (−100%)
Halonitromethane (HNM)	Chloropicrin (trichloronitromethane) (TCNM)	1.4	0.7 (−50%)	0.5 (−67%)	ND (−100%)
Sum of other DBPs (i.e., HANs, HAs, HKs, HNM)		16	1.6 (−90%)	1.1 (−93%)	0.2 (−99%)
Haloacetic acids	Dichloroacetic acid (DCAA)	38	34 (−9%)	37 (−3%)	40 (7%)
	Bromochloroacetic acid (BCAA)	14	14 (4%)	15 (9%)	15 (12%)
	Dibromoacetic acid (DBAA)	4.5	4.2 (−7%)	4.1 (−9%)	4.3 (−4%)
	Sum of dihalogenated HAAs (DXAAs)	56	53 (−6%)	56 (−1%)	60 (7%)
	Trichloroacetic acid (TCAA)	26	23 (−9%)	20 (−21%)	16 (−37%)
	Bromodichloroacetic acid (BDCAA)	15	7.1 (−53%)	3.2 (−79%)	1.1 (−93%)
	Dibromochloroacetic acid (DBCAA)	3.9	ND (−100%)	ND (−100%)	ND (−100%)
	Sum of trihalogenated HAAs (TXAAs)	45	30 (−32%)	23 (−48%)	17 (−61%)
Sum of HAAs		100	83 (−17%)	79 (−22%)	77 (−23%)

Abbreviations: DBP = disinfection by-product, ND = not detected.

[a]Percent changes were calculated from the values of the concentrations before those values were rounded to the number of significant figures given in this table.

Table 3
Cumulative percent change (from time 0) in DBP concentrations (μg/L) from boiled chlorinated water[a]

DBP class	Analyte	Time (min)			
		0	1	2	5
Regulated trihalomethanes (THMs)	Chloroform (trichloromethane) (TCM)	30	20 (−34%)	2.8 (−91%)	1.0 (−97%)
	Bromodichloromethane (BDCM)	33	6.4 (−81%)	2.2 (−93%)	0.7 (−98%)
	Dibromochloromethane (DBCM)	16	2.9 (−82%)	0.4 (−97%)	ND (−100%)
	Bromoform (tribromomethane) (TBM)	1.0	0.2 (−76%)	ND (−100%)	ND (−100%)
	Sum of 4 regulated THMs (THM4)	80	29 (−64%)	5.4 (−93%)	1.6 (−98%)
Iodinated THM	Dichloroiodomethane (DCIM)	0.8	ND (−100%)	ND (−100%)	ND (−100%)
Sum of THMs		81	29 (−64%)	5.4 (−93%)	1.6 (−98%)
Haloacetonitriles (HANs)	Dichloroacetonitrile (DCAN)	6.2	0.1 (−98%)	ND (−100%)	ND (−100%)
	Bromochloracetonitrile (BCAN)	1.6	0.1 (−94%)	ND (−100%)	ND (−100%)
Haloaldehydes (HAs)	Dichloroacetaldehyde (DCA)	1.2	0.9 (−27%)	0.2 (−85%)	0.06 (−95%)
	Chloral hydrate (CH) (trichloracetaldehyde)	12	0.4 (−97%)	ND (−100%)	ND (−100%)
	Tribromoacetaldehyde (TBA)	0.4	0.4 (0%)	ND (−100%)	ND (−100%)
Haloketones (HKs)	Chloropropanone (CP)	1.1	0.08 (−93%)	ND (−100%)	ND (−100%)
	1,1-Dichloropropanone (1,1-DCP)	0.3	ND (−100%)	ND (−100%)	ND (−100%)
	1,3-Dichloropropanone (1,3-DCP)	0.2	ND (−100%)	ND (−100%)	ND (−100%)
	1,1,1-Trichloropropanone (1,1,1-TCP)	6.2	ND (−100%)	ND (−100%)	ND (−100%)
Halonitromethane (HNM)	Chloropicrin (trichloronitromethane) (TCNM)	1.5	0.7 (−57%)	ND (−100%)	ND (−100%)
Sum of other DBPs (i.e., HANs, HAs, HKs, HNM)		31	2.6 (−92%)	0.2 (−99%)	0.06 (−100%)
Haloacetic acids (HAAs)	Monochloroacetic acid (MCAA)	3.4	3.9 (15%)	4.2 (24%)	4.6 (35%)
	Dichloroacetic acid (DCAA)	43	68 (59%)	72 (69%)	75 (76%)
	Bromochloroacetic acid (BCAA)	17	26 (51%)	25 (48%)	25 (49%)
	Dibromoacetic acid (DBAA)	4.3	7.4 (72%)	6.9 (60%)	6.8 (58%)
	Sum of dihalogenated HAAs (DXAAs)	64	101 (58%)	104 (63%)	107 (68%)
	Trichloroacetic acid (TCAA)	31	31 (0%)	28 (−10%)	21 (−30%)
	Bromodichloroacetic acid (BDCAA)	17	7.4 (−57%)	3.1 (−82%)	ND (−100%)

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Table 3 (*continued*)

DBP class	Analyte	Time (min)			
		0	1	2	5
	Dibromochloroacetic acid (DBCAA)	4.6	ND (−100%)	ND (−100%)	ND (−100%)
	Sum of trihalogenated HAAs (TXAAs)	52	38 (−27%)	31 (−41%)	21 (−60%)
Sum of HAAs		120	142 (19%)	139 (16%)	133 (11%)

Abbreviations: DBP = disinfection by-product, ND = not detected.

[a]Percent changes were calculated from the values of the concentrations before those values were rounded to the number of significant figures given in this table.

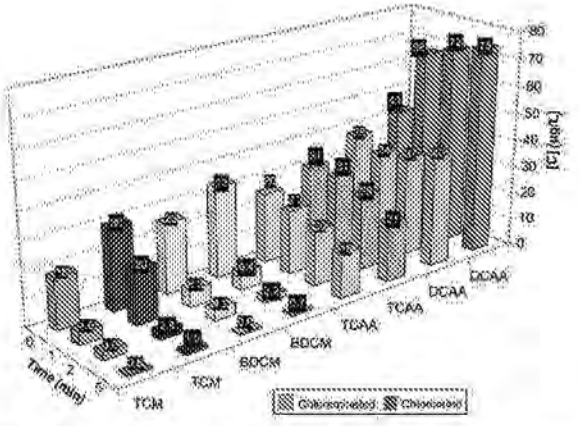

Fig. 1. The effects of boiling chlorinated and chloraminated water on the concentrations of the major THM and HAA species.

Individual THM removals in the chloraminated water ranged from 60% to 75% in chloraminated water boiled for 1 min (Table 4). The THMs are the most volatile group of the DBPs studied, based on their values of Henry's Law constant (the higher the value, the more volatile the compound). Eighty-four percent or more of each species was removed following a 2-min boil, whereas 97% or more of each THM was removed upon boiling for 5 min (Table 2). In the chlorinated water, slightly higher removal of the bromine-containing THMs was detected following a 1-min boil (76–82%), whereas there was limited removal (34%) of chloroform (Table 3). There was little difference between THM removal in chlorinated versus chloraminated water upon further boiling, with both samples having removals of 97% or greater for each THM detected after 5 min of boiling. The only iodinated THM that was detected, dichloroiodomethane, was completely eliminated after boiling chlorinated water for 1 min.

Table 4
Relationship of volatility of DBPs to percent change from time 0 after 1 min of boiling in chloraminated water

DBP	Henry's Law Constant (atm−m^3/mol)	% Change from time 0 at 1 min in chloraminated water[a]
TCM	3.67E−03[b]	−75
BDCM	2.12E−03[b]	−75
TCNM	2.05E−03[b]	−50
DBCM	7.83E−04[b]	−70
TBM	5.35E−04[b]	−60
DCA[c]	8.42E−06	−70
DCAN	3.79E−06	−96
DCAA	3.52E−07[b]	−9
TBA	1.04E−07	N/A
BCAA	2.22E−08	4
TCAA	1.35E−08[b]	−9
BDCAA	7.83E−09	−53
MCAA	9.42E−09[b]	N/A
DBAA	7.27E−09	−7
CH	5.71E−09	−98

Abbreviations: DBPs = disinfection by-products, N/A = not applicable (not detected in chloraminated water at time 0).

[a]Volatility comparisons were made with the test in chloraminated water, to eliminate the confounding phenomena of simultaneous formation of some DBPs in the presence of chlorine.

[b]From literature values provided in HENRYWIN. Other Henry's Law Constants in this table were estimated by HENRYWIN.

[c]Henry's Law Constant was estimated for dichloroacetaldehyde and not for its hydrate.

3.3. HAAs

The overall impact of boiling on HAAs gave different results in the two water samples that were

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analyzed. Increased HAA formation occurred in the chlorinated water after 1 min of boiling, and the concentration was still relatively high after 5 min of boiling (Table 3). A reduction in overall HAA concentration was observed in chloraminated water after 1 min of boiling, and the levels changed very little upon further boiling.

Boiling of the chloraminated sample produced no significant changes (−9% to 7%) in DCAA concentrations (Fig. 1), where the coefficient of variation of DCAA and other DBP samples is typically on the order of approximately ±20% (Fair et al., 2002). Similar results were observed in the chloraminated sample for the other DXAAs, with no significant change in bromochloroacetic acid (BCAA) and dibromoacetic acid (DBAA) concentrations (Table 2). DCAA concentrations in chlorinated water increased from 59 to 76% as boiling time increased from 1 to 5 min (Table 3). BCAA and DBAA concentrations increased by at least 50% in chlorinated water for a 1-min boil but remained relatively constant upon further boiling. No change in TCAA concentration was observed for a 1-min boil of chlorinated water, but 10% and 30% reductions were noted in water boiled for 2 and 5 min, respectively (Fig. 1). Among the chloraminated samples, somewhat larger reductions (9–37%) in TCAA concentrations were found as boil time increased. Similar reductions were observed over time for bromodichloroacetic acid in both the chlorinated (57–100%) and chloraminated samples (53–93%). Although found in smaller concentrations compared to the other TXAAs, dibromochloroacetic acid was not detected upon boiling for 1 min. Small increases in the monochloroacetic acid (MCAA) concentration were noted for the chlorinated sample upon boiling.

3.4. HKs

For the chloraminated water sample, substantial reductions in concentrations were noted for most of the other DBPs upon boiling (Table 2). The following HKs were not detected after 1 min: 1, 1-dichloropropanone (1,1-DCP), 1, 1, 1-trichloropropanone (1,1,1-TCP), and 1, 1, 3-trichloropropanone (1,1,3-TCP). The level of 1, 3-dichloropropanone (1,3-DCP) decreased 42% upon boiling for 1 min and was completely removed after 2 min of boiling. Similar reductions were observed in the chlorinated water with complete removal of 1,1-DCP, 1,1,1-TCP and 1,3-DCP upon boiling for 1 min (Table 3). In addition, the concentration of chloropropanone (CP) was reduced by 93% following a 1-min boil and was not detected after 2 min. CP was not detected in the chloraminated water sample, and 1,1,3-TCP was not found in the chlorinated water sample.

3.5. HANs

HAN concentrations in chloraminated water were reduced by 94–98% following a 1- and 2-min boil, and were not detected upon 5 min of boiling (Table 2). Similar removal of the HANs (94–98%) occurred upon boiling the chlorinated sample for 1 min, and no HANs were detected in the chlorinated water after 2 min (Table 3).

3.6. Haloaldehydes

The concentration of dichloroacetaldehyde (DCA) in chloraminated water was reduced from 70% to 85% for 1- to 5-min boil times (Table 2). Boiling chlorinated water for 1 min had a minimal effect on the level of DCA (−27%), but reductions from 85% to 95% were observed upon further boiling (Table 3). Chloral hydrate (CH) (i.e., trichloroacetaldehyde) concentration was reduced by at least 97% following a 1-min boil of both chlorinated and chloraminated water and was not detected after 2 min. Tribromoacetaldehyde (TBA) was not detected in the chloraminated water and a minimal amount was found in chlorinated water (0.37 μg/L). TBA was unchanged upon boiling for 1 min and was not detected after 2 min of boiling.

3.7. Halonitromethane

TCNM concentration was 50–67% lower in the chloraminated water boiled for 1–2 min and was not detected at 5 min (Table 2). A reduction similar in magnitude (57%) was observed for chlorinated water boiled for 1 min, and TCNM was not detected after 2 min of boiling (Table 3).

4. Discussion

Overall, large reductions in most DBP concentrations were observed in boiling experiments of chloraminated and chlorinated finished water samples. Removal rates among the THMs were similar to those noted in previous studies (Lahl et al., 1982; Kuo et al., 1997; Batterman et al., 2000; Wu et al., 2001), although a smaller net removal of chloroform was detected in the chlorinated water (34%) compared to the chloraminated water (75%) for 1 min of boiling (Fig. 1). Because there was a free chlorine residual in the chlorinated water at the time of boiling, it is likely that chloroform was being formed from the reaction of the chlorine with DBP precursors in the water at the same time that chloroform was being volatilized. Although the residuals were not measured after boiling in these tests, preliminary experiments at MWDSC have shown

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that the chlorine residual was removed during the first minute of boiling. Thus, the critical issue is that there can be simultaneous formation and volatilization during the first minute, whereas in subsequent minutes of boiling only volatilization can occur. In the chloraminated water, volatilization appeared to be the most important phenomenon, even during the first minute of boiling. In that sample, the two more brominated THMs were removed to a lesser extent (60–70%) than the two more chlorinated THMs (75%). This is similar to the finding of Lahl and colleagues (1982) for a 1-min boil.

Different effects were observed in haloaldehyde concentrations upon boiling. The semi-volatile haloaldehydes, DCA and TBA (Table 4), were not significantly impacted by boiling chlorinated water for 1 min, suggesting that there was simultaneous formation and removal of these haloaldehydes while a free chlorine residual was present. Note, because conventional water treatment does not remove bromide, there can still be bromide in the finished water available to react with free chlorine to form TBA. Their removal at longer boiling times in the chlorinated water and the removal of DCA in the chloraminated water may be due to a combination of volatilization and degradation. Alternatively, the removal of the non-volatile CH (Table 4) was probably due to base-catalyzed hydrolysis. Although hydrolysis is more significant at pH 9 than at pH 7 for CH (Stevens et al., 1989), the combination of elevated temperature and alkaline pH may have resulted in the degradation of this DBP.

HAN concentrations were dramatically reduced upon boiling of chloraminated and chlorinated water. Dichloroacetonitrile (DCAN) is a semi-volatile DBP (Table 4), which can also undergo base-catalyzed hydrolysis (Croué and Reckhow, 1989). DCAN's degradation product is dichloroacetamide, which can be further hydrolyzed to DCAA (Reckhow et al., 2001). Therefore, it is possible that some of the HANs degraded (e.g., due to hydrolysis), in addition to volatilizing, during the boiling process. TCNM does not undergo base-catalyzed hydrolysis (Croué and Reckhow, 1989) and has a Henry's Law Constant similar to that of the THMs (Table 4), so reductions in TCNM concentrations were likely due to volatilization.

Henry's Law constant values were not obtained for the HKs. Some HKs (e.g., 1,1,1-TCP) are known to undergo base-catalyzed hydrolysis (Croué and Reckhow, 1989). The pH of the samples in the present study was ~8.2; therefore, it is possible that some of the HKs degraded (e.g., due to hydrolysis) during the boiling process. Chloroform is the degradation product of 1,1,1-TCP and CH hydrolysis; therefore, these degradation processes may have contributed to the limited removal of chloroform that was observed during the initial boil of chlorinated water.

In general, the DXAAs were not significantly impacted by boiling in the chloraminated water (Table 2), whereas their concentrations increased significantly in the chlorinated water (Table 3). Most of the increased formation occurred during the first minute of boiling as shown for DCAA (Fig. 1). These data suggest that free chlorine reacted with DBP precursors to form additional DXAAs (and perhaps MCAA), which were not volatilized or degraded by the boiling process. The DXAAs and other HAAs are not volatile (Table 4). A reduction in TXAA concentrations during the boiling process was observed, with the rate of loss higher with increased bromine substitution. Bromine-containing TXAAs have been shown to be less stable with increasing bromine substitution and are subject to thermal- and photodegradation (Pourmoghaddas and Dressman, 1993). Thus, the loss of the brominated TXAAs in the present study was most likely due to the relative instability of these DBPs. The net impact on the sum of the HAAs (increased concentrations of 11–19% for chlorinated water and decreased concentrations of 17–23% in the chloraminated samples) reflect the very different impact of boiling on the two subclasses of HAAs, DXAAs and TXAAs. These findings highlight the importance of considering the varied formation and degradation processes of individual HAAs when estimating the impact of heating and boiling on exposures.

5. Conclusion

The different effects of boiling within DBP classes in chlorinated versus chloraminated water have important implications for DBP exposure assessment efforts in epidemiologic studies. Previous DBP research has rarely included individual-level water use information, and only two epidemiological studies have examined individual data on hot and cold beverage consumption. Compared to THM water concentrations alone, Klotz and Pyrch (1999) and Waller and colleagues (1998) reported smaller relative risks for reproductive outcomes with THM exposures that considered hot and cold water consumption. Neither study attempted to adjust estimates of individual exposure to account for volatilization or other exposure modifying effects. These studies were also limited in their ability to adequately consider the impact of dermal and inhalation exposures, which may be more important than ingestion for volatile DBPs (Gordon et al., 1998; Keating et al., 1997). THM concentrations can increase upon heating water at lower temperatures than boiling (Weisel and Chen, 1994; Batterman et al., 2000), so future studies should also consider potential exposure modifying activities (e.g., water temperatures during showering or in swimming pools) that may impact overall DBP exposure.

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Based on the results of this study and the previous research cited, the effects of heating and boiling on DBPs are dependent on the degree of DBP volatility and compound stability, water temperature, type of residual disinfectant present, as well as the amount of DBP precursors and chlorine residual present in the water. Because chlorine residual can vary considerably within a distribution system, boiling and heating effects may differ between individuals using the same water supply. Failure to directly measure residential DBP concentrations or adequately capture spatial variability in residual chlorine and DBP formation/degradation when estimating individual level exposures can lead to measurement error in epidemiologic studies.

Acknowledgements

This project was supported by the US Environmental Protection Agency (USEPA) (Award No. CR826697-01-1) under a cooperative agreement between the University of North Carolina (Howard S. Weinberg) and the National Exposure Research Laboratory (Susan D. Richardson). The authors thank Alicia C. Gonzalez and Russell Chinn (MWDSC) for conducting the disinfection by-product analyses. The authors acknowledge Paul Westerhoff (Arizona State University) for providing most of the modeled Henry's Law Constant values and Raghu Venkatapathy (USEPA) for providing the Henry's Law Constant value for bromodichloroacetic acid.

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TTHM (total trihalomethanes) **FACT SHEET**

WHY ARE THERE TTHMS IN DRINKING WATER?

TTHM are what is known as Disinfection- By- Products (DBPs) and are formed in water treatment.

The TTHMS are an indicator of how disinfection of the drinking water is managed. This includes the time the water is in the pipes.

Disinfection of water is important to prevent waterborne disease and thus is essential for the water industry as part of the *Safe Drinking Water Act.* Health agencies including the World Health Organization support disinfection to control microorganisms. Thus the goal for water treatment is to obtain microbial safe water while minimizing these DBPs.

WHAT *ARE THE HEALTH ISSUES?*

Of the many studies looking at long-term exposure a few have shown a small number of people were affected and thus the standard for TTHM levels was reduced in 1990s. A few People who drink water containing THMs in excess of the standard (MCL) over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. However no links have been established when drinking water in excess of the standard for a few days.

A few studies have suggested that THMs in drinking water are associated with miscarriages and certain birth defects when consumed during the first three months of pregnancy. However, EPA has concluded that no link has been established between adverse reproductive outcomes and the TTHMs levels found in drinking water.

NOTE: Some individuals who are severely compromised immune compromised the elderly, and young infants may be at greater risk when using tap water. Even when tap water is safe for most healthy people to drink because a water utility is doing a good job of meeting or surpassing all standards set by the EPA, there are some groups of people such as those undergoing chemotherapy treatment for cancer, people with HIV/AIDS or other immune disorders, those who have undergone organ transplants, and some elderly and infants — who are more vulnerable to microbial and some other contaminants in their drinking water.

A particular concern is if other contaminants lead, nitrates or pesticides are in the tap water. These have been tested and are at safe levels in the drinking water.

WHAT TO DO

If you are concerned about TTHMs in your tap water, call (us the water utility, health dept?).

Some experts suggest that you can refrigerate tap water in an open container for several hours before drinking to allow TTHMs to leave the water and enter the air.

A carefully selected bottled water (check www.nrdc.org for bottled water test results) or water that has been filtered by a home system could be used.

SOURCES:

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http://water.epa.gov/lawsregs/rulesregs/sdwa/stage2/regulations.cfm

National Primary Drinking Water : Stage 2 Disinfectants and Disinfectant By Products Rule Issues January 1, 2006 which modified the original regulation from 1979.

C2 DBP Health Effects

"EPA concludes that no dose response relationship or causal link has been established between exposure to chlorinated drinking water or disinfection byproducts and adverse developmnental or reproductive effects. "

They go on as a way to justify adding the DBP2 requirements by saying: " EPA's evaluation of the best available studies, particularly epidemiological studies is that they do not support a conclusion at this time as to whether exposure to chlorinated drinking water or disinfection byproducts cause adverse developmental and reproductive health effects, but do provide an indication of a potential health concern that warrants incremental regulatory action beyond Stage 1 DBPR."

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1. Background

Immunocompromised patients, such as those rendered neutropenic following cytoreductive therapy for malignancy are at risk of acquiring a wide range of potentially pathogenic microorganisms from drinking water. These include environmental Gram-negative bacteria, such as pseudomonads, and atypical mycobacteria. Despite the risk for these patients, there are few guidelines on the provision of safe drinking water for immunocompromised individuals including those with solid organ or haematological malignancy.

In the UK, guidelines [1] have been focused almost exclusively on ensuring that water is free of *Cryptosporidium hominis* and *C. parvum*. These belong to a genus of coccidian protozoa, which, whilst causing self-limiting gastrointestinal infection in immunocompetent individuals, may result in life-threatening diarrhoeal illness in immunosuppressed patients. Other guidelines e.g.[2] make little reference to the safety of potable water for immunocompromised patients other than that which relates to the potential acquisition of *Cryptosporidium* spp. In contrast, scant attention is paid to opportunistic Gram-negative bacteria which can be found in both bottled and tap water [3] and there are almost no references in published guidelines to the possibility that fungal pathogens, such as *Aspergillus* species, might be acquired through potable water.[4]

Given the lack of information provided by national guidelines, it is unsurprising that there is considerable inter-unit variation in the methods of provision of potable water to cancer and other immunocompromised patients. This was highlighted in a regional survey [5]

In the survey, questionnaires were sent to 15 Trusts across Yorkshire and Humberside. Ten Trusts replied, reporting on provision of potable water in 14 separate units. Of these, nine provided only tap water to all patients, irrespective of underlying condition. In two units, iced water, with ice from commercially available makers, was used. Five units distinguished between neutropenic and non-neutropenic patients, with the former group receiving cooled, boiled water (three units), sterile water and sterile water or carbonated water (one unit each). No unit provided filtered water. Water in jugs was changed daily, twice daily or only when empty in 7, 3 and 4 units, respectively. Water jugs were dishwasher-dried in 7 units, dried naturally in 4 and by paper or cloth towels (two and one units, respectively). On 10 units patients were allowed to provide their own potable water, but no unit provided written advice to patients on PW.

The marked disparity in practice as identified in the regional survey contrasts sharply with the guidance given in the report, *Cryptosporidium in Water Supplies* (DETR, 3rd report, 1998), which states that, *all water, from whatever source, that might be consumed by immunocompromised persons should be brought to the boil and allowed to cool before use.*[1] Drinking water for immunocompromised patients on some units which follow these guidelines may be boiled (either using a geyser or kettle), left to cool in jugs on kitchen work surfaces and then cooled further in refrigerators before distribution to patients in accordance with these guidelines.

Boiling of large volumes of water on a daily basis has, however, significant health and safety implications. Because of the perceived risk to health care workers, the options for providing safe drinking water for immunocompromised cancer patients were reviewed. The aim was to

identify methods which, while aiming for optimal protection of patients from *Cryptosporidium* spp., environmental bacteria and fungi, would not compromise safety. This is discussed elsewhere. [5]

2. Optimal provision of potable water for immunocompromised patients

The criteria to be met in providing drinking water for immunocompromised patients are:

- Microbiological safety
- Respect for patient confidentiality (of particular importance for patients with AIDS-related malignancy nursed on general wards, as provision of cooled, boiled water, may result in the identification of these patients as HIV-positive by staff and, indeed, other patients)
- Organoleptic acceptability
- Preparation of water using methods which minimise risk staff
- Uniformity of approach to provision
- Cost-effectiveness

Options available

A number of options are available:

2.1 Untreated tap water

2.2 Boiled tap water

2.3 Sterile bottled water

2.4 Commercially available bottled water

2.5 Filtered tap water

2.1 Untreated tap water

Although untreated tap water is provided to immunocompromised cancer patients on many units [5] without any apparent problems, this practice is not consistent with UK national guidelines for the prevention of cryptosporidiosis in these individuals.[1] Moreover, tap water may contain other potentially harmful microorganisms such as environmental Gram-negatives and *Mycobacterium* spp and it would seem prudent not to expose vulnerable patients to these bacteria.

2.2 Boiled tap water

The major disadvantage of this option is that there are considerable health and safety implications for health care workers. In addition, preparation of cooled, boiled water places significant demands on staff time. Moreover, heating of the water and cooling it refrigerators have associated energy costs.

2.3 Sterile bottled water supplied by pharmacy

Two significant drawbacks are associated with this approach. Firstly, the organoleptic quality of this product is poor and this might lead to problems with patient acceptability. If some patients were to reject sterile bottled water as being unpalatable, then an alternative source of treated water would have to be made available. This would not meet the criterion of uniformity of practice. Secondly, there would be considerable logistical problems for delivery of water, storage of bottles on wards and collection of empty bottles. Many chemotherapy patients are advised to drink at least 4 litres of water daily to maintain adequate hydration. Assuming a "worst case scenario" of 20 patients on a given ward all undergoing chemotherapy, then pharmacy would supply the ward with at least 80 one-litre bottles each day. Space would have to be found to store these before distribution to patients. It is reasonable to assume that at some times, such as weekends, Bank and other holidays, that daily deliveries might not be possible, thus delivery of three day's supply to a ward (at least 240 bottles) might be necessary compounding storage problems.

2.4.1 Commercially available non-carbonated bottled water

This option has an important drawback in that water of this nature represents a significant hazard to many immunosuppressed patients. In particular, it may contain large numbers (in excess of 10^6 ml^{-1}) of Gram-negative bacteria such as *Stenotrophomonas maltophilia* [3] and environmental pseudomonads which may represent a particular risk for neutropenic individuals.

2.4.2 Commercially available carbonated bottled water

Carbonated bottled water is considerably safer than the non-carbonated variety because of the low pH of these products.[3] However, the low pH can result in poor patient acceptability in patients with chemotherapy-associated mucositis. As with sterile bottled, logistical problems in delivery and storage of water before distribution to patients may arise.

2.5 Filtered water

Filter devices in a self-contained cartridge are readily available from commercial sources and, if of the appropriate specification, produce water that is essentially sterile and, for this reason alone, filters are an attractive option. However, several aspects of this approach require further consideration

- Robust protocols for their use. Filter units should be changed according to the manufacturer's recommendations. There is thus a requirement to identify members of staff responsible for changing the filters who will change the devices as per the manufacturer's recommendations. There should be a system in place for recording when filter changes have been carried out. Regular audit of the system is also necessary.

- Microbiological safety. Although water produced by the filter is sterile, could "splash back" occur leading to bacterial/fungal colonisation of the cartridge distal to the filter?

- Patient acceptability of water quality

- End-user acceptability of providing water in this way

- Cost. Not only of the devices have themselves, but also this cost incurred in modifying, where necessary, taps to accommodate them.

To address these issues a one-month trial was conducted of end-line filter units on two wards at LTHT. Sinks in each ward kitchen which were to receive the filters were identified and taps were modified to accommodate the filter units (cost per tap £37:62 [2002 prices]). Designated persons who were to change the filters twice a week were identified on each ward. Education of nursing staff and ward housekeepers were conducted by a representative of the filter manufacturer and an ICN. Filters were swabbed inside and outside of exit nozzle after four days' use.

At the end of the trial, staff on wards which had previously provided cooled, boiled water for immunocompromised patients were very impressed with this method. The ward staff thought it saved time, was safer and that there was more space in a cooler working environment.

Staff on other wards where patients were previously given only tap water were, however, less impressed. There appeared to be an attitude of "why bother?" especially as it took the ward housekeeper longer to fill the jugs than before. There were concerns over the cost of the filters. Nevertheless, the acceptability of the filtered water for patients was very good.

The protocol for changing filters when time-expired was followed without difficulty.

Microbiological investigations revealed growth from only 2 of 22 specimens obtained from time-expired cartridges. In both instances, scanty coagulase-negative staphylococci were isolated. No specimen yielded Gram-negative bacteria. The former might have represented contamination from personnel handling the filters and might, in any case, be deemed of doubtful clinical significance for patients.

A comparison of selected options is given below. These assume that a given ward has twenty patients who are advised to drink 4 litres/day (2002 prices).

- <u>Sterile bottled water supplied by pharmacy</u>
  Cost - £3:56 for 6 X 1litre bottles
  Approx overall cost per ward - per day is £ 47:50
  - per week is £336

- Carbonated bottled water supplied by supplies
  Cost - £1:98 for 6 X 1litre bottles
  Approx overall cost per ward per day is £ 26:40
  - per week is £184:80

- Still bottled water supplied by supplies
  Cost - £1:98 for 6 X 1litre bottles
  Approx overall cost per ward per day is £ 26:40
  per week is £184:80

- Filtration at the point of use – PALL Aquasafe Water Filters
  Cost - £19:65 per filter (2 required per week*)
  Approx overall cost per ward - per week is £39:30*

(Not included in the above is the once-only cost, where appropriate, of converting taps to accommodate cartridges)

*Pall have now introduced a filter which requires to be changed every 7 days.

3. Overall conclusions

i) Provision of untreated tap water for immunocompromised cancer patients would be failing to comply with current UK guidelines.[1] Some form of treated water should, therefore, be made available to patients.

ii) Cooled, boiled water has several disadvantages, most notably relating to the health and safety of health care personnel.

iii) Bottled water has a number of drawbacks, including significant cost implications.

iv) Filtered water also has cost implications (although these are less than bottled water). It is sterile at point of production (unlike some types of bottled water) and has no obvious health and safety implications. Filters require to be changed every seven days and protocols should ensure that this occurs. N.B. water quality may influence significantly the operation of the filters – for example water which contains high levels of particulates may impair filter performance. Under these circumstances, remedial action should be taken before the filters are introduced. In wards where HIV/AIDS patients are cared for, provision of filtered water does not permit identification of these patients as does, for example, cooled, boiled water.

4. Recommendations

Taking into account the criteria outlined in section 2, filtered water is the most appropriate option for the provision of potable water for immunocompromised cancer patients.

5. Ice provided by commercial ice-making machines

Ice from ice-making machines is frequently contaminated with potentially pathogenic bacteria [6] and hospital-acquired infection form this source has long been recognised.[7] Accordingly, ice provided for immunocompromised cancer patients should be made only from microbiologically safe water.

6. Water from water coolers

Standalone water coolers are likely to yield water contaminated with environmental bacteria[8] and are not recommended for use on wards and other areas where immunocompromised cancer patients are cared for. Plumbed-in water coolers are less likely to yield water contaminated with Gram-negative bacteria, but still pose a risk of transmission of cryptosporidiosis as mains water is used. Water coolers for the use of staff should be sited away from patient care areas.

7. References

1. *Cryptosporidium and Water Supplies*. (The "Bouchier Report") Department of the Environment, Transport and the Regions & Department of Health, 1998, London (also available at http://www.dwi.gov.uk/pubs/bouchier/index.htm).

2. Centers for Disease Control and Prevention. Guidelines for *Preventing Opportunistic Infections Among Hematopoietic Stem Cell Transplant Recipients*. MMWR 2000 49 (RR10) 1-128. (also available at http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4910a1.htm).

3. Wilkinson, F.H. and Kerr, K.G. Bottled water as a source of multi-resistant *Stenotrophomonas* and *Pseudomonas species* for neutropenic patients. *European Journal of Cancer Care*. 1997; 7: 12-14.

4. Anaissie, E.J., Stratton, S.L., Dignani, M.C., Summerbell, R.C., Rex, J.H., Monson, T.P., Spencer, T., Kasai, M., Francesconi, A. and Walsh, T.J.
Pathogenic *Aspergillus* species recovered from a hospital water system: a 3-year prospective study. Clinical Infectious Diseases. 2002; 34:780-9.

5. Hall, J., Hodgson, G. and Kerr, K.G Provision of safe potable water for immunocompromised patients in hospital. *Journal of Hospital Infection* 2004. In press.

6. Wilson, I.G., Hogg, G.M. and Barr, J.G. Microbiological quality of ice in hospital and community. *Journal of Hospital Infection*. 1997; 36: 171-180.

7. Newsom, S.W.B. Hospital infection from contaminated ice. *Lancet* 1968; 2: 620-623.

8. Levesque, B., Simard, P., Gauvin, D., Gingras, S., Dewailly, E. and Letarte, R. Comparison of the microbiological quality of water coolers and that of municipal water systems. *Applied and Environmental Microbiology* 1994; 60: 1174-1178.

From: Howard Croft PPI
Sent: Thursday, March 19, 2015 9:09 AM
To: Brent Wright;Daugherty Johnson;Dayne Walling;donna. cole;gdn2@aol.com;Howard Croft;James Henry;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;Robert Nicholas;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green;Elizabeth Murphy;Robert Bincsik;Robert Case;Jason Lorenz;Kelly Rossman-McKinney;Sharon Emery;Gerald Ambrose
Subject: HC Letter & FAQ's
Attachments: Flint HC FAQ_Final.pdf; HC Letter Mayor.pdf

Technical Team Members,

Attached please find the final copy of a letter to the health community along with a Frequently Asked Question list.

These documents are ready for distribution among your peers and others. We anticipate mailing out the actual violation notice at the beginning of next week.

I will email everyone on this list when we determine a date for the next Technical Committee Meeting.

Thank you,

–
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
PPI

City of Flint Water FAQs

Is it currently safe to drink City of Flint water?

Yes. It's safe to drink, brush your teeth with, and bathe in the water. In the most recent water tests, in February 2015, all of the eight testing sites throughout the City were well below the maximum levels for total trihalomethanes (TTHM) recommended by the Environmental Protection Agency (EPA). You do not have to boil your water or take other corrective actions. The need to issue another violation notice is based entirely on high TTHM levels in the past. The water today is comparable to Detroit's in safety and quality.

Where is the City of Flint in addressing the water situation?

The City has made great strides in ensuring the safety of its water supply. The amount of TTHM in the water has decreased consistently in the last year and is currently at a safe level. While the water is safe to drink, some areas may experience harmless discoloration and possible odor. The City is continuing to address those aesthetic quality issues.

When was the last water test conducted?

The last water sampling test was conducted Feb. 21, 2015. The City of Flint received results from the state lab on Feb. 27, 2015. These results showed that February's quarterly results were well below the contaminant level (MCL). The City also monitors its water on a daily basis to ensure that water quality remains within the established guidelines.

What is considered to be a contaminant?

Contaminants in water may include microbial contaminants such as viruses and bacteria, and inorganic contaminants such as salts and metals, which can occur naturally. In this case it is trihalomethanes, which are a byproduct of disinfecting water. The disinfection process is regulated by the Safe Drinking Water Act and has played a crucial role in advancing public health. It's important to note that drinking water, including bottled water, is reasonably expected to contain slight amounts of some contaminants. But the presence of contaminants does not necessarily indicate that the water poses a health risk.

City of Flint Water FAQs

Will trihalomethanes make people sick?

For the majority of people, no. Individuals must consume excess amounts of contaminated water over many years to be susceptible to health risks, such as problems with the liver, kidneys, central nervous system, or increased risk of cancer. However, people with compromised immune systems – such as someone with HIV/AIDs, cancer, or other immune disorders – are more at risk and should speak to their health care provider. Trihalomethanes are more likely to cause effects when inhaled. To prevent this in situations such as showering (or other circumstances involving steam), simply open a door/window or turn on a fan. This is true with all public drinking water. It's not unique to water from the Flint River.

Is exposure to trihalomethanes bad for pregnant women?

While science has not established a causal relationship between trihalomethanes and adverse health effects among pregnant women, the City advises pregnant women to call the EPA's Safe Drinking Water Hotline at (800) 426-4791 about any concerns related to trihalomethanes.

Is it safer to drink bottled water?

Not necessarily. Although bottled water is regulated by the Food and Drug Administration (FDA), it undergoes much less rigorous testing than what the Environmental Protection Agency (EPA) requires for tap water. Also, the FDA does not regulate bottled water that is packaged and sold within a single state, even though 60-70% of bottled water falls into that category. The City of Flint's tap water is regulated by both the FDA and the EPA.

Where can I find official communications and updates on the Flint water issue?

The City posts information on the City of Flint website at www.cityofflint.com. There is a special section dedicated to addressing Flint water concerns and providing the latest updates. In addition, citizens may also call the Flint Water Plant & Facilities at 810-787-6537.

From: Howard Croft <hcroft@cityofflint.com>
Sent: Wednesday, April 01, 2015 8:09 AM
To: Brent Wright;Daugherty Johnson;Dayne Walling;donna. cole;Elizabeth Murphy;gdn2 @aol.com;Gerald Ambrose;Howard Croft;James Henry;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Michael Wright;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;rob.nicholas@veolia.com;Robert Bincsik;Robert Nicholas;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green
Subject: Technical Advisory Notice
Attachments: Drinking water notice watermark.pdf; Flint Letter Color Header to Water Customers Final (1).pdf

Technical Team,

I am sending everyone a copy of the TTHM notice and the associated letter that we have mailed. We expect this to begin reaching customer mailboxes over the next few days.

We are still evaluating when to hold the next technical meeting and what the format will be.

We will be in touch soon,

—
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, November 20 of 2014, and February 17, 2015). The average of the results at ANY of the eight locations must not exceed the maximum contaminant level (MCL) for TIHMs, otherwise our water system exceeds the MCL. The standard for TTHM is 80 micro grams per liter (ug/L). The location reporting the highest TTHM level was 105 ug/L; thus, our water system exceeds the TIHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess *of the MCL over many* years *may experience problems with their liver, kidneys, or central nervous* system, *and may have an increased risk of getting cancer.*

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem in 2015. Our most recent individual sample results were all less than half the 80 ug/L standard, however since compliance is calculated using a locational running annual average (LRAA) of the most recent four quarters, we are still out of compliance with the MCL at two of eight locations.

For more information, please contact Mr. Brent Wright at 810-787-6537, or the Flint Water Plant at 4500 North Dart Highway, Flint, Michigan 48505.

Please share this information with all *the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing* homes, *schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by the City of Flint.

Water Quality Update

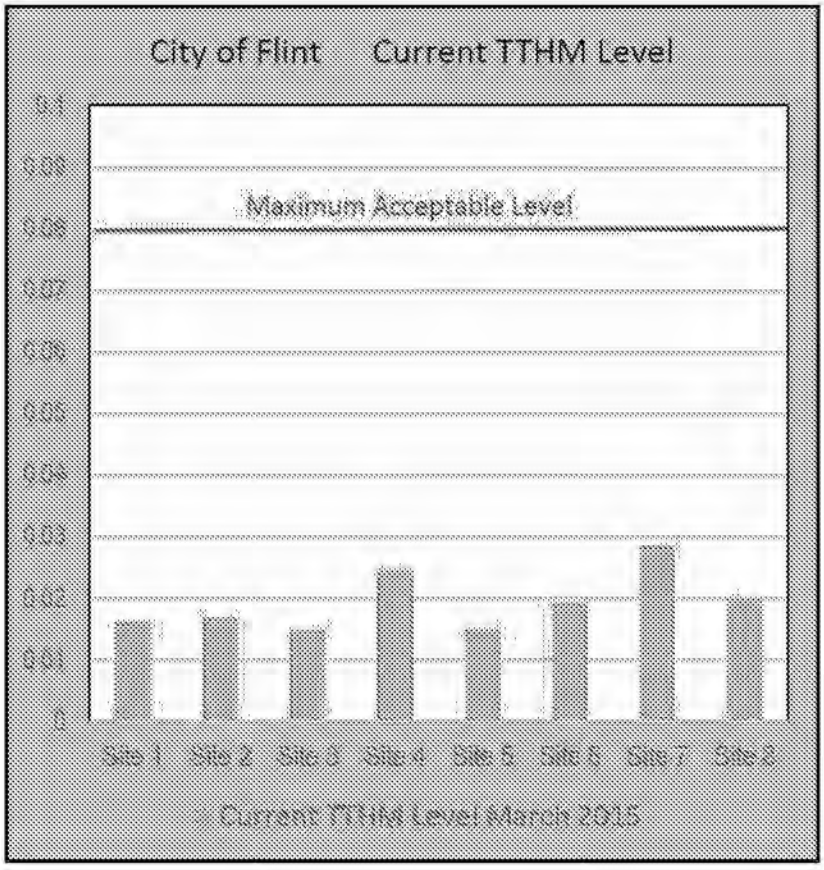
City of Flint Resident:

We are pleased to report that City of Flint water is safe and meets U.S. Environmental Protection Agency guidelines. While we continue to work on improving aesthetic qualities, such as discoloration or odor, you can be confident that the water provided to you today meets all safety standards. Maintaining safety and quality in our water is a top priority of the City.

We accomplished this by:

- Upgrading the ozone treatment process at the Water Treatment Plant
- Increasing water main/hydrant flushing to reduce stagnation
- Conducting additional testing of treatment to identify areas of improvement
- Improving water circulation by repairing valves and adjusting reservoir levels

Our most recent testing in February showed that every testing site was well below allowable levels, as shown below:

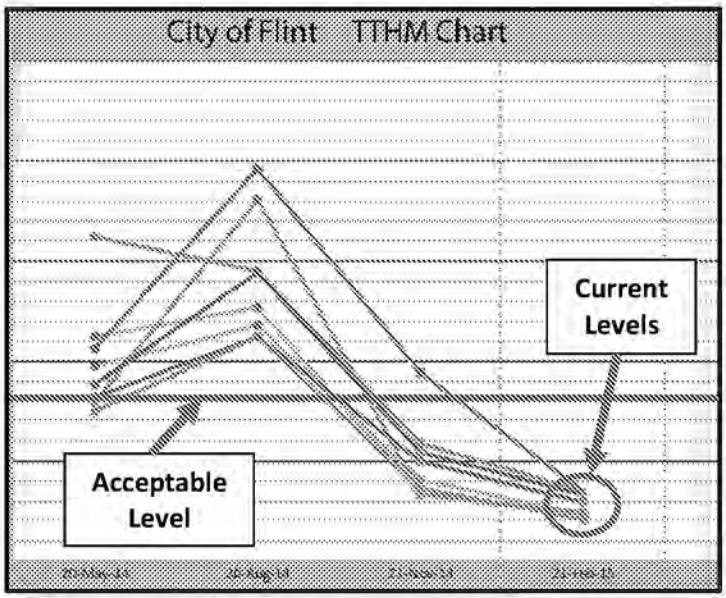


Water Quality Update

The Michigan Department of Environmental Quality (MDEQ) has acknowledged our progress:

"We are encouraged by the results from the most recent round of compliance samples collected on February 17, 2015, which now show individual TTHM levels at less than half of the 0.080 mg/L standard at all locations throughout the City's system. Operational Evaluation Reports from December 2014, and February 2015, have identified possible causes and corrective measures for the previous elevated TTHM levels, which we encourage the City to continue implementing." -MDEQ

Notification is based on four quarters of test results. Because of last year's test results, the City's *annual* quarterly testing average is not yet below the state's allowable average and the City is required to issue the attached notice ***("Important Information about Your Drinking Water")***.



If you have any questions about this report or would like a test done at your home, free of charge, please call us at 810-787-6537.

Maintaining safe water and improving its quality is a top priority for all of us at the City of Flint, and we apologize for the concerns these notices have raised. We have taken many steps to improve the safety and quality of our water supply and will be taking more. As you may know, we have recently received a series of recommendations from several sources, including a report from international urban water system consultant, Veolia North America. We will be taking further action steps to assure that water remains safe and that water quality is improved, and we will be working with our recently created Citizen Advisory Committee and our Technical Advisory Committee as we progress. Please track our progress on our website **cityofflint.com**.

From: Howard Croft PPI
Sent: Thursday, April 09, 2015 10:04 AM
To: Brent Wright;Daugherty Johnson;Dayne Walling;donna. cole;Elizabeth Murphy;gdn2 @aol.com;Gerald Ambrose;Howard Croft;James Henry;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Michael Wright;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;rob.nicholas@veolia.com;Robert Bincsik;Robert Nicholas;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green
Subject: Tech Team_Water Quality Update_April
Attachments: Water Quality Implementation Plan.pdf; Flint Water Improvements 2015.pdf

Team,

I am forwarding everyone a copy of our Water Quality Implementation Plan along with the accompanying press release. We are aggressively moving forward with the installation of Granulated Activated Carbon and expect to have it installed and working by mid-July.

We are contemplating holding our next Technical Advisory Meeting in May just prior to our next TTHM test period which is the third week in May. I will ensure that everyone has sufficient notice prior to the meeting date and we will plan on having a conference call number available.

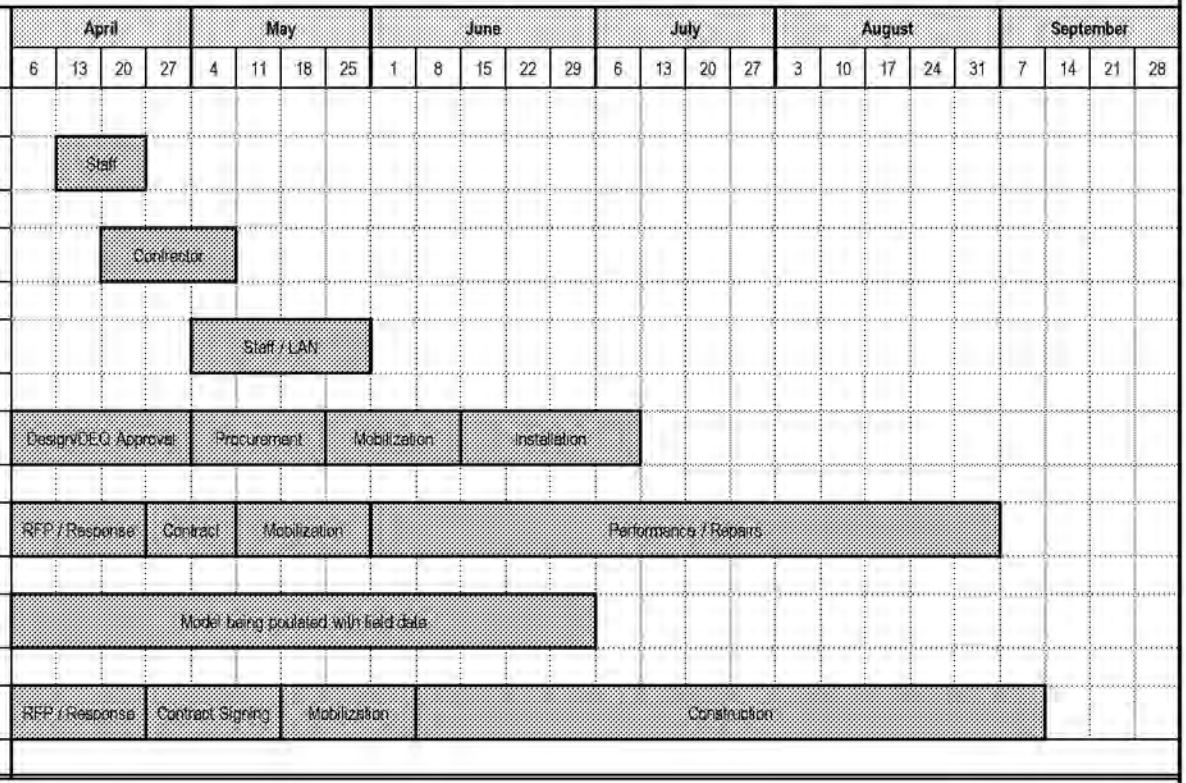
Please do not hesitate to email me if you have any questions.

Thank you,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
PPI

City of Flint
Water Quality Implementation Plan

Item	Cost	Owner & Support
Clean Plate Settlers	N/A	F-1 / DPW
Repair Clarifier	$10,000	F-1 / DPW
Chemical Dosing & Levels	TBD	F-1 / DPW
GAC Purchase & Installation	$1,600,000	LAN / DPW
Watermain Leak Detection	$900,000	S-1 / DPW
Hydraulic Model & Flushing Program	$173,700	LAN / DPW
2 Miles of Pipe Replacement	$2,163,000	S-1 / DPW
Total	**$4,846,700**	



From: Howard Croft <hcroft@cityofflint.com>
Sent: Wednesday, May 27, 2015 9:55 AM
To: Brent Wright;donna. cole;gdn2@aol.com;Gerald Ambrose;Howard Croft;James Henry;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Michael Wright;Mike Lane;Prysby, Mike (DEQ);Norb Birchmeier;Pete Levine;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green;Liz Murphy;Kaufman, Marty;Michael Sargent
Cc: Dayne Walling;Natasha Henderson
Subject: May_Technical Advisory meeting summary
Attachments: 2015-05-20 TAC Meeting Summary.pdf; Flint-water-age (1).pdf

Technical Advisory Team,

I want to thank each of you for another substantive and productive meeting last week and as a follow up, I have assembled a summary review of the meeting that also highlights the direction and timing of the next two meetings. Please take a moment and review the summary and feel free to send me any comments. I have also included a copy of the water age map that was requested at the meeting.

Please be aware that our May TTHM samples have been returned from the lab and we are officially under the Maximum Containment Level at all eight sites for the second straight quarter. There is one site where the running average remains over the limit and we will need to send a notice by July which we anticipate going out with our annual CCR report as discussed.

The TTHM results ranged from the low 30's up to 72 which highlights the importance of having Granulated Activated Carbon installed this summer. The installation is currently ahead of schedule and we are expecting this to play a significant role in our next quarterly tests.

Finally, the water page that was previewed at the meeting should be live on the City website this week and can be found under the "RESIDENTS" tab or on the PUBLIC WORKS - UTILITIES page.

Thank you all again,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

City of Flint
Technical Advisory Committee

5/20/2015 Meeting Summary

-Introductions

- ✓ Introduced the new Utilities Administrator Mike Glasgow
- ✓ Introduced the City Administrator Natasha Henderson
- ✓ Roundtable introductions of other participants

-Updates

- ✓ Update on current water status (Mike Glasgow, Utilities Administrator).
  - Water is not as hard (hardness between 150 – 180) down from 210- 230
  - Quarterly TTHM testing submitted and expecting all eight sites to be below the MCL
- ✓ Update on GAC installation (Samir Matta, LAN).
  - Installation ahead of schedule
  - Design has been submitted to DEQ, quick approval expected
  - Vendor is identified and capable of supply and installation
  - Vendor is testing flint water samples
  - Flint will install one filter ahead of time for actual results
  - Full installation now scheduled for late June (moved up from mid-July)
- ✓ Update on remaining initiatives, (Howard Croft, DPW Director).
  - Leak detection is expected to begin by July(will take 10 – 14 weeks to complete)
  - New pipe installation has been tentatively pushed back to a July start
  - Aggressive water meter installation (9,000 meters in one year) is on track to start in July
  - New "water webpage" chronicling all events set to launch in the next week

-Discussions

- ➢ Genessee County Health Department, Flint Water Plant, & Flint City Hall have received no water complaint calls in over 60 days.
- ➢ Health department has listed several items such as "hard water rash" on the front page of their website with explanations.
- ➢ Some attention has shifted to lead and copper concerns, recent internal testing numbers still show approximately 2 -3 out of 100 with high levels.
- ➢ Lead and copper issues trace back to household plumbing and service lines nationally.
- ➢ All independent area testing continues to show water quality to be in line with EPA standards.
- ➢ A question was raised about "Bromite" levels in the water, Mike Glasgow will address how the implementations are addressing this in the next meeting.
- ➢ The DEQ acknowledged that requirements for notifications are the minimum levels and additional efforts can be undertaken.

-Objectives

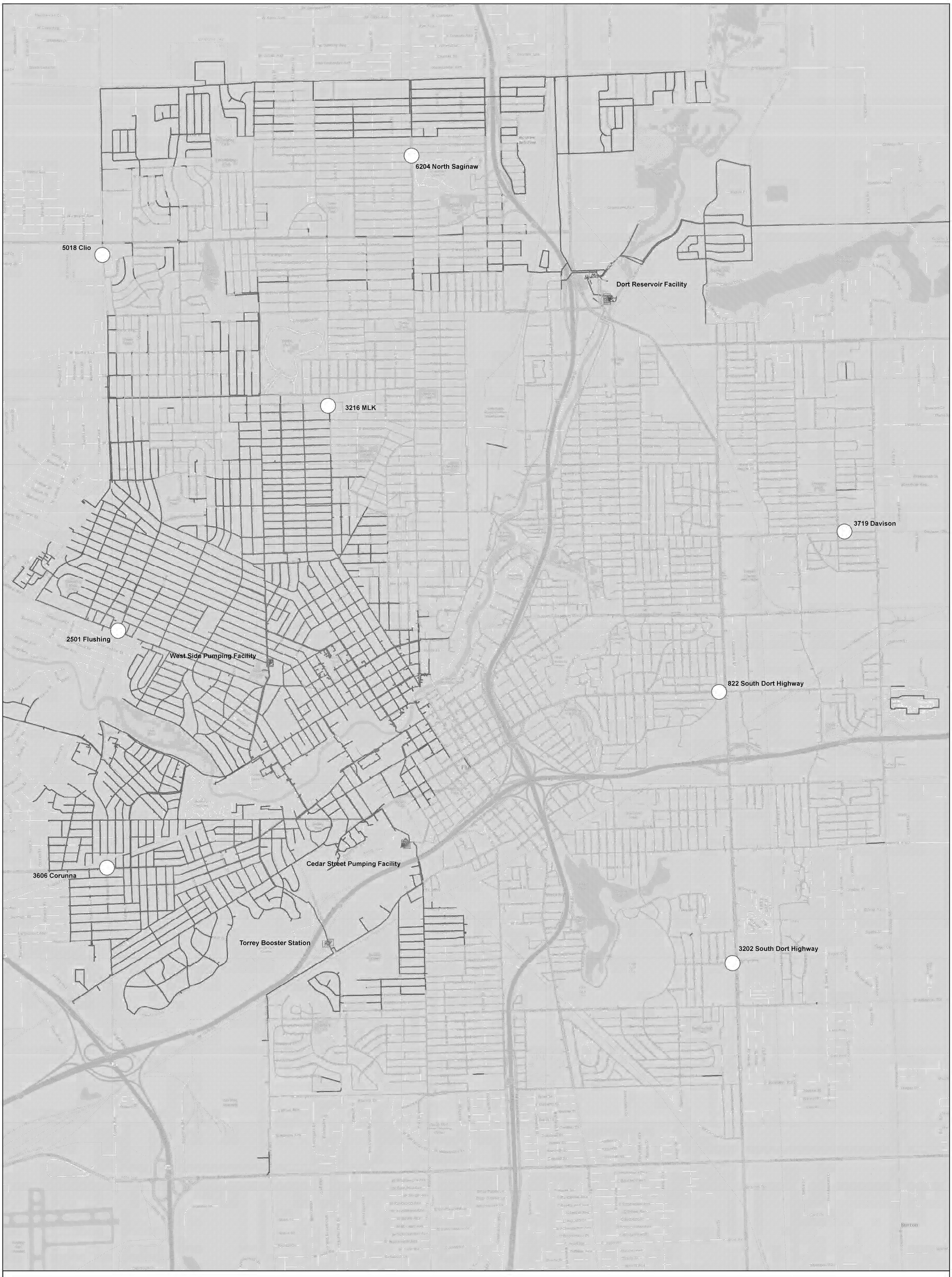
- ✓ The health department will present a proposal to the City of Flint DPW to partner in a social media campaign designed for community outreach.
- ✓ A plan was set to maintain a 24 hr. advance notification to this group of future low residuals, or potentials of boil water advisories.
- ✓ The annual Consumer Confidence report will go out in July and if a violation notice is required then it will go with this report. (DEQ agrees with this approach).

-Next Steps

- Next meeting is targeted for late July or Early August after the GAC has been installed.
- Meeting will focus on the results of the implementation measures and what internal testing is showing for water quality in the late summer months.
- We plan to invite several community leaders to participate in this forum, candidates are:
  - Mike Sargent – Flint Strong
  - Pastor Harris – Concerned Pastors
  - Rebecca Fedewa / Jack Minore – Flint River Watershed Coalition
- The subsequent meeting is targeted for September (after the late summer TTHM results are in) and we intend to start directing attention towards Lake Huron water and the upcoming transition to the KWA.

-Attendees

Hilda McShane - Genesee County Health Department
Jim Henry - Genesee County Health Department
Samir Matta – LAN Engineering
Warren Green – LAN Engineering
Larry Kohler – Mott Community College
Mike Lane – University of Michigan Flint
Rusty Hudson – McLaren Hospital
Norb Birchmeier – Hurley Hospital
Gerald Natzke – DO-Genesys Regional Medical Center
Kirk Smith – Greater Flint Health Coalition
Pete Levine – Genesee County Medical Society
Mike Prysby – Department of Environmental Quality
Dr. Michael Wright - Environmental Protection Agency
Mike Glasgow – City of Flint - Utilities Administrator
Howard Croft – City of Flint - DPW Director
Natasha Henderson – City of Flint - City Administrator



Legend
Water Quality (Hrs)

- less than 24.0
- 24.0 to 72.0
- 73.0 to 144.0
- greater than 144.0

Water sample location

CITY OF FLINT MAJOR WATER INFRASTRUCTURE

WATER AGE & WATER SAMPLE LOCATION MAP

January 21, 2015

N

0 550 1,100 2,200 3,300 4,400
Feet

From: Howard Croft <hcroft@cityofflint.com>
Sent: Friday, June 26, 2015 2:42 PM
To: Brent Wright;Dayne Walling;donna. cole;gdn2@aol.com;Gerald Ambrose;Howard Croft;James Henry;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Michael Wright;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green;Michael Sargent
Subject: Water Quality Update

Technical Team,

I am writing to provide you an update on the City's ongoing plan to improve the water quality in the City of Flint.

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which all eight sites were verified to be under the MCL but the running average at one site required a notice to be sent.

I will email everyone when we schedule the next TAC team meeting which we have currently targeted for mid-August.

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: gdn2@aol.com
Sent: Friday, June 26, 2015 3:51 PM
To: hcroft@cityofflint.com;dr.laura2@gmail.com
Cc: bwright@cityofflint.com;dwalling@cityofflint.com;donna.cole@genesys.org;gambrose@cityofflint.com;jhenry@gchd.us;jlorenz@cityofflint.com;jmikewright@yahoo.com;jherman@genesys.org;jfobrien@gcdcwws.com;ksmith@flint.org;larry.koehler@mcc.edu;mglasgow@cityofflint.com;Wright.Michael@epa.gov;mjlane@umflint.edu;Prysby, Mike (DEQ);nhenderson@cityofflint.com;nbirchm1@hurleymc.com;plevine@gcms.org;rbincsik@cityofflint.com;rosejo@msu.edu;Russell.Hudson@mclaren.org;SFMatta@lan-inc.com;jwgreen@lan-inc.com;mike49@sargentstitle.com
Subject: Re: Water Quality Update

Howard,

Is the Activated Carbon Filter the last stage in the system of treatment? If not, can or will chlorine be added to the water after that stage?

Best,

G. Natzke

-----Original Message-----
From: Howard Croft <hcroft@cityofflint.com>
To: Laura Sullivan <dr.laura2@gmail.com>
Cc: Brent Wright <bwright@cityofflint.com>; Dayne Walling <dwalling@cityofflint.com>; donna. cole <donna.cole@genesys.org>; gdn2 <gdn2@aol.com>; Gerald Ambrose <gambrose@cityofflint.com>; Howard Croft <hcroft@cityofflint.com>; James Henry <jhenry@gchd.us>; Jason Lorenz <jlorenz@cityofflint.com>; jmikewright <jmikewright@yahoo.com>; JoAnne Herman <jherman@genesys.org>; John O'Brien <jfobrien@gcdcwws.com>; Kirk Smith <ksmith@flint.org>; larry.koehler <larry.koehler@mcc.edu>; Michael Glasgow <mglasgow@cityofflint.com>; Michael Wright <Wright.Michael@epa.gov>; Mike Lane <mjlane@umflint.edu>; Mike Prysby (DEQ) <prysbym@michigan.gov>; Natasha Henderson <nhenderson@cityofflint.com>; Norb Birchmeier <nbirchm1@hurleymc.com>; Pete Levine <plevine@gcms.org>; Robert Bincsik <rbincsik@cityofflint.com>; rosejo <rosejo@msu.edu>; Russell Hudson <Russell.Hudson@mclaren.org>; Samir Matta <SFMatta@lan-inc.com>; Warren Green <jwgreen@lan-inc.com>; Michael Sargent <mike49@sargentstitle.com>
Sent: Fri, Jun 26, 2015 2:41 pm
Subject: Re: Water Quality Update

As a follow up to this afternoon's email, I am answering several questions that have subsequently been asked.

The vendor is " Calgon Carbon" with headquarters in Pennsylvania. They are both the supplier of the material and the installer as well. After initial designs were approved by the DEQ, various water samples from the Flint River were drawn and sent to Calgon for two weeks of testing under various conditions to try and gauge the effectiveness of the specific carbon filters chosen. Flow rate and temperature tests were performed by our engineering firm LAN at the water plant prior to the design being developed and forwarded to the DEQ. The filter media is Granulated Activated Carbon and the first filters are scheduled for installation to begin following the 4th of July weekend.

Pleas forward me any additional questions that may arise.

Thank you,

On Fri, Jun 26, 2015 at 3:25 PM, Laura Sullivan <dr.laura2@gmail.com> wrote:

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What is the identity of the filter media? Is it GAC?

Yours truly,
L Sullivan

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PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

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Laura L. Sullivan, Ph. D.
3101 Hawthorne Drive
Flint, Michigan 48503
dr.laura2@gmail.com

Human(kind). Be both.

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: PPI
Sent: Monday, July 20, 2015 5:30 PM
To:
Cc:

PPI

Subject: Re: Water Quality Update

Hello Howard,
As I haven't heard anything back, I am resending this inquiry.
Thanks,
Gerald Natzke DO

-----Original Message-----

PPI

Sent: Wed, Jul 15, 2015 7:55 pm
Subject: Re: Water Quality Update

Hello Howard,

Would you share with us whether the Granulated Activated Carbon system will remain in affect with the new water supply from Port Huron for the city of Flint (and possibly the county)? A patient of mine from Flushing asked and I could not answer. It would seem to be an excellent idea both from the standpoint of decreased toxic chemical/metal exposure, taste and safety of the citizens it could serve.

Thank you,

Gerald Natzke DO FAAEM
GCMS Board Representative

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PPI

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Sent: Fri, Jun 26, 2015 3:41 pm
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--
Laura L. Sullivan, Ph. D
3101 Hawthorne Drive
Flint, Michigan 48503
PPI
Human(kind) Be both.

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
PPI

From: Laura Sullivan <PPI>
Sent: Monday, July 20, 2015 10:40 PM
To: PPI
Cc:

PPI

Subject: Re: Water Quality Update

My reading of planning documents for the KWA suggests that once untreated water arrives in Flint, some of it will be sold to GM. Depending on residential water need, it will sometimes be necessary to add water from the Flint River to the remaining untreated KWA water prior to treatment for distribution to residents. Given this, it seems critical that filtration through GAC be considered permanent.

Veolia is pursuing privatization of Great Lakes water, and they specifically recommended that GAC be installed inline when making their report to Flint in February.

Laura Sullivan

On Wednesday, July 15, 2015, <gdn2@aol.com> wrote:
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Thank you,

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To: Laura Sullivan PPI

PPI

Sent: Fri, Jun 26, 2015 3:41 pm
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Laura L. Sullivan Ph. D
3101 Hawthorne Drive
Flint, Michigan 48503

PPI

Human(kind). Be both.

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hcroft@cityofflint.com

--
Laura L. Sullivan, Ph. D.
3101 Hawthorne Drive
Flint, Michigan 48503

PPI

Human(kind). Be both.

From: Howard Croft <hcroft@cityofflint.com>
Sent: Friday, September 25, 2015 12:42 PM
To: Brent Wright;Dayne Walling;donna. cole;edwardsm;Gerald (Jed) Natzke;Howard Croft;James Henry;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Michael Wright;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;schock.michael@epa.gov;Sean Kammer;Warren Green;Busch, Stephen (DEQ);lytle.darren@epa.gov;James Gaskin;Amy Hovey;Andy Leavitt
Subject: Re: Technical Advisory Meeting
Attachments: GCHD Lead in Water Fact Sheet.pdf; Information Plan.pdf; Lead Advisory Release.pdf

Technical Advisory Team,

Today the City of Flint along side of the Genesse County Health Department issued a lead advisory at a well attended press conference. The press conference lasted over an hour and a half with both the Health Department and the City answering numerous questions. I have included the documents that were released at the news conference and will continue to provide everyone with additional information as it becomes available. We will be coordinating closely with the health department to provide consistent information to the public and intend to increase our awareness campaign.

There is growing anticipation of our next Technical Advisory Meeting on October 7th and we are working to determine the best possible venue based on the attention that we expect. Jamie Gaskin, the United Way CEO has joined the team and I have also included Andy Leavitt of State Senator Ananich's office along with Amy Hovey from U.S. Congressman Kildee's team. We are developing a quarterly mailer that we will distribute to all water customers that will look a lot like our annual consumer confidence report and we intend to have input from the TAC team meeting to be included in the report. The mailer will go to the printer within days following our meeting.

Please look for location and agenda items to come next week, please feel free to email the group or me directly if there are any questions,

Thank you,

On Wed, Sep 23, 2015 at 3:52 PM, Howard Croft <hcroft@cityofflint.com> wrote:

Technical Advisory Team,

I am writing to inform everyone that we have scheduled the next Technical Advisory Committee meeting to be Wednesday October 7th. 2015 from 2:00 – 4:30 pm. We are extending invitations to Marc Edwards of Virginia Tech along with two lead experts from the EPA (Darren Lytle & Michael Schock) to become a part of the technical team and we are hopeful that they will all be present at the upcoming meeting.

At the meeting we will discuss an overview of the City water system, compliance with the Safe Drinking Water Act, lead concerns, corrosion control, water testing, public education, capital improvement plans, the KWA pipeline, and next steps.

I will forward a specific location and agenda in the near future but we are firmly committing to the time and date. As with previous meetings we look forward to this group having positive dialogue that will benefit the community.

Thank you,

--
Howard Croft
Public Works Director
City of Flint
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--
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Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

How does lead get into my tap water?

Under typical circumstances, lead will dissolve into the water. The concentration of lead in drinking water can vary greatly, depending on the corrosiveness of the water, the type and age of the plumbing materials and the length of time that the water stands in the pipes. The highest levels of lead occur when very corrosive water stands motionless in lead or lead soldered pipe for long periods of time.

How do I know if my tap water is contaminated with lead?

The only way to know whether your tap water contains lead is to have it tested. You cannot see, taste, or smell lead in drinking water. There are different sampling methods for sampling lead in drinking water. To determine your household risk, it is recommended to take a first draw sample.

Does lead in my tap water cause health effects?

Lead can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. Lead in water can be a special problem for infants, whose diets may be mostly liquids, such as baby formulas or concentrated juices mixed with water. Smaller bodies can absorb lead more rapidly than bigger ones. A child's mental and physical growth can be permanently harmed by too much lead. Risk will vary, depending on the individual, the circumstances, and the amount of water consumed.

What can I do to reduce or eliminate lead in my tap water?

Flush your cold-water pipes by running the water for approximately 5 minutes. The longer the water has been sitting in the pipes, the more lead it may contain. You can fill containers for later use, after the flushing process. Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels because it dissolves more lead.
You may choose to install a water filter that is NSF-certified for lead removal. If a water filter is installed, replace filters at least as often as recommended by the manufacturer.

Buy a lead-free faucet. The legal definition of "lead-free" still allows brass faucets to contain up to 8 percent lead. However, faucets marked with "NSF 61/9" and/or "California Proposition 65" meet stricter limits. Regularly clean particles from faucet aerators.

Is it safe to take a bath or shower, if my water has high lead levels?

Yes. Bathing and showering should be safe for you and your children, even if the water contains lead over EPA's action level. Human skin does not absorb lead in water. This information applies to most situations and to a large majority of the population, but individual circumstances may vary. Some situations, such as cases involving highly corrosive water, may require additional recommendations or more stringent actions.

Who do I contact for more information?

The local water authority is always your first source for testing and identifying lead contamination in your tap water. You can visit the City of Flint Website at www.cityofflint.com or contact the Flint Water Department at 810-787-6537.

WWW.EPA.GOV

WWW.MDEQ.GOV

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

Jason Lorenz
Public Information Officer
Office: (810) 237-2039
Cell: (810) 875-2576
jlorenz@cityofflint.com

For Immediate Release

City of Flint Issues Lead Advisory

Flint, Michigan – September 25, 2015 – The City of Flint is issuing a Lead Advisory for residents to be aware of lead levels in drinking water after hearing concerns from the medical community. While the City is in full compliance with the Federal Safe Drinking Water Act, this information is being shared as part of a public awareness campaign to ensure that everyone takes note that no level of lead is considered safe.

The Genesee County Health Department has issued a fact sheet regarding lead precautions for residents. The fact sheet can be found on their website at www.gchd.us. Here are a few of the suggestions the Health Department recommends:

- Flush your cold-water pipes by running the water for approximately 5 minutes
- Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula.
- Install a water filter that is NSF-certified for lead removal.

Lead contamination can leach into water from a home's lead water service lines, lead solder, and leaded plumbing materials including fixtures, faucets, and fittings. Older service lines with pipes and fixtures installed before 1986 can sometimes be more susceptible to lead issues due to materials used in the home such as lead based paint and lead pipes.

This message is meant as a precaution to residents and does not mean that all homes in the City will experience the same issue. Residents with concerns about lead service lines

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

and lead in home plumbing fixtures are encouraged to contact the City's Utilities Division to schedule a free water testing by calling the Water Treatment Plant at 810-787-6537 and pressing #1 after prompted or by emailing flintwater@cityofflint.com.

The City of Flint is working proactively along with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. An accelerated plan to add a corrosion control agent to our water within 30 to 60 days with expedited approval from the Michigan Department of Environmental Quality is already underway. This will reduce corrosion which can cause lead in old pipes to leach into the water.

This plan is in addition to Mayor Walling's letter requesting $30 Million in water infrastructure assistance funding from the State of Michigan. $10 Million of that request would be for the replacement of lead service lines in households to ensure that lead no longer presents a danger to the drinking water of our residents. As the letter states, "It is the City's position that the abatement of lead through the removal of lead containing pipes and fixtures in homes is the best long term solution to keeping our residents' water safe."

Mayor Walling further stated: "I am extremely concerned about the risks around lead with Flint's children and I will be working tirelessly to ensure the water is safe and all of our families have the information they need. I also will continue to pursue funding for infrastructure improvements and a comprehensive healthy homes initiative that addresses lead in paint and pipes. We have to get the lead out of our community to eliminate the threat of childhood lead poisoning."

The City of Flint continues working proactively with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. The City remains committed to working with all of our partners in the Water Technical Advisory Committee to address all

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

issues of public health and quality concerns that face the community. Updates on progress made in addressing this issue will be made during regular public meetings including City Council and other scheduled meetings. Information on this and all related matters will continue to be posted on the City of Flint's website, cityofflint.com.

–END–

From: Howard Croft <hcroft@cityofflint.com>
Sent: Monday, September 28, 2015 11:19 AM
To: Aaron Dionne;Amy Hovey;Brennan Elm Park Senior Community Corporation;Carma Lewis;catherine.sheppard;cbruett;Chris Zuwala;City Of Flint;Clarence Pierce;Clayton, Stacie (GOV);connie.russell;crmcclinton;ctomm;Diana Phillips;dpmgt;flintfreedom_fund;Florlisa Stebbins;gla;Jack Stock;Jackie Poplar;James Henry;Jamie Gaskin;Janet Van De Winkle;Jason Caya;jcurtis;jiking155;jmanse;John Waddell;johnsonreid;jwright@co.genesee.mi.us;kboles@valleyaaa.org;Kevin J. Keane;kevin.roach;khamlet;kittle.robert;kroddy;LaMonica Harris;Laura Sullivan;lisa.poma;mcarnevale;mddst;Melissa Mays;Mike Sargent;mmelenbrink;Montel Menifee;nkopek;Norb Birchmeier;rcarter;Rebecca Fedewa;repphelps@house.mi.gov;revalharris1;rstanley;Russell Hudson;sborrego;sheldonneeley;suptmarshall;Tony Martin;William Hammond;Elizabeth Murphy
Cc: Michael Glasgow;Brent Wright;Robert Bincsik;Jason Lorenz;lytle.darren@epa.gov;schock.michael@epa.gov;Marc Edwards;Prysby, Mike (DEQ)
Subject: Citizen Advisory Team Update

Dear Citizen Advisory Committee,

It has been some time since our last **citizen** advisory team meeting and we wanted to reach out at this time to those of you who were part of this committee and provide you direct information.

It was encouraging for us to successfully install the recommended Granulated Activated Carbon which led to the City being compliant with the Safe Drinking Water Act but we are now facing questions surrounding the amount of lead that is leaching into drinking water through plumbing and service lines in certain homes. A significant aspect of lead in drinking water is the public education that gives everyone a clear and proper understanding of how this occurs and what are the avenues to reduce the risk.

As we consider when it may be beneficial to reconvene another community meeting, we want to extend to everyone the opportunity to provide input, and to be aware of the latest information.

- Anyone requesting a water test can call 810-787-6537 or email flintwater@cityofflint.com
- Anyone requesting an opportunity to schedule a meeting can email lorenz@cityofflint.com
- Anyone that wants access to more information can visit the water page of the City website

We are aware that many of you have indicated the desire to no longer participate in this group but we still want to extend the opportunity for you to be involved and have access to information.

Please do not hesitate to email this group or **me directly** if you have any questions

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
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Sent:	Monday, September 28, 2015 3:54 PM
To:	Aaron Dionne;Amy Hovey;Brennan Elm Park Senior Community Corporation;Carma Lewis;catherine.sheppard;cbruett;Chris Zuwala;City Of Flint;Clarence Pierce;Clayton, Stacie (GOV);connie.russell;crmcclinton;ctomm;Diana Phillips;dpmgt;flintfreedom_fund;Florlisa Stebbins;gla;Jack Stock;Jackie Poplar;James Henry;Jamie Gaskin;Janet Van De Winkle;Jason Caya;jcurtis;jiking155;jmanse;John Waddell;johnsonreid;jwright@co.genesee.mi.us;kboles@valleyaaa.org;Kevin J. Keane;kevin.roach;khamlet;kittle.robert;kroddy;LaMonica Harris;Laura Sullivan;lisa.poma;mcarnevale;mddst;Melissa Mays;Mike Sargent;mmelenbrink;Montel Menifee;nkopek;Norb Birchmeier;rcarter;Rebecca Fedewa;repphelps@house.mi.gov;revalharris1;rstanley;Russell Hudson;sborrego;sheldonneeley;suptmarshall;Tony Martin;William Hammond;Elizabeth Murphy
Cc:	Michael Glasgow;Brent Wright;Jason Lorenz;schock.michael@epa.gov;lytle.darren@epa.gov;Prysby, Mike (DEQ);Marc Edwards;Robert Bincsik
Subject:	Re: Citizen Advisory Team Update
Attachments:	Lead Advisory Release.pdf; GCHD Lead in Water Fact Sheet.pdf

All,

As a follow up to the previous email I am forwarding a copy of the Lead Advisory that was issued by the City last week along with a "Lead in Water Fact Sheet" from the Health Department.
We will continue to disseminate releases and information through this email list as it becomes available.

Thank you ,

On Mon, Sep 28, 2015 at 11:19 AM, Howard Croft <hcroft@cityofflint.com> wrote:

Dear Citizen Advisory Committee,

It has been some time since our last **citizen** advisory team meeting and we wanted to reach out at this time to those of you who were part of this committee and provide you direct information.

It was encouraging for us to successfully install the recommended Granulated Activated Carbon which led to the City being compliant with the Safe Drinking Water Act but we are now facing questions surrounding the amount of lead that is leaching into drinking water through plumbing and service lines in certain homes. A significant aspect of lead in drinking water is the public education that gives everyone a clear and proper understanding of how this occurs and what are the avenues to reduce the risk.

As we consider when it may be beneficial to reconvene another community meeting, we want to extend to everyone the opportunity to provide input, and to be aware of the latest information.

- Anyone requesting a water test can call 810-787-6537 or email flintwater@cityofflint.com
- Anyone requesting an opportunity to schedule a meeting can email lorenz@cityofflint.com
- Anyone that wants access to more information can visit the water page of the City website

We are aware that many of you have indicated the desire to no longer participate in this group but we still want to extend the opportunity for you to be involved and have access to information.

Please do not hesitate to email this group or **me directly** if you have any questions

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

Jason Lorenz
Public Information Officer
Office: (810) 237-2039
Cell: PPI
jlorenz@cityofflint.com

For Immediate Release

City of Flint Issues Lead Advisory

Flint, Michigan – September 25, 2015 – The City of Flint is issuing a Lead Advisory for residents to be aware of lead levels in drinking water after hearing concerns from the medical community. While the City is in full compliance with the Federal Safe Drinking Water Act, this information is being shared as part of a public awareness campaign to ensure that everyone takes note that no level of lead is considered safe.

The Genesee County Health Department has issued a fact sheet regarding lead precautions for residents. The fact sheet can be found on their website at www.gchd.us. Here are a few of the suggestions the Health Department recommends:

- Flush your cold-water pipes by running the water for approximately 5 minutes
- Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula.
- Install a water filter that is NSF-certified for lead removal.

Lead contamination can leach into water from a home's lead water service lines, lead solder, and leaded plumbing materials including fixtures, faucets, and fittings. Older service lines with pipes and fixtures installed before 1986 can sometimes be more susceptible to lead issues due to materials used in the home such as lead based paint and lead pipes.

This message is meant as a precaution to residents and does not mean that all homes in the City will experience the same issue. Residents with concerns about lead service lines

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

and lead in home plumbing fixtures are encouraged to contact the City's Utilities Division to schedule a free water testing by calling the Water Treatment Plant at 810-787-6537 and pressing #1 after prompted or by emailing flintwater@cityofflint.com.

The City of Flint is working proactively along with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. An accelerated plan to add a corrosion control agent to our water within 30 to 60 days with expedited approval from the Michigan Department of Environmental Quality is already underway. This will reduce corrosion which can cause lead in old pipes to leach into the water.

This plan is in addition to Mayor Walling's letter requesting $30 Million in water infrastructure assistance funding from the State of Michigan. $10 Million of that request would be for the replacement of lead service lines in households to ensure that lead no longer presents a danger to the drinking water of our residents. As the letter states, "It is the City's position that the abatement of lead through the removal of lead containing pipes and fixtures in homes is the best long term solution to keeping our residents' water safe."

Mayor Walling further stated: "I am extremely concerned about the risks around lead with Flint's children and I will be working tirelessly to ensure the water is safe and all of our families have the information they need. I also will continue to pursue funding for infrastructure improvements and a comprehensive healthy homes initiative that addresses lead in paint and pipes. We have to get the lead out of our community to eliminate the threat of childhood lead poisoning."

The City of Flint continues working proactively with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. The City remains committed to working with all of our partners in the Water Technical Advisory Committee to address all

Dayne Walling
Mayor

Natasha L. Henderson
City Administrator

issues of public health and quality concerns that face the community. Updates on progress made in addressing this issue will be made during regular public meetings including City Council and other scheduled meetings. Information on this and all related matters will continue to be posted on the City of Flint's website, cityofflint.com.

–END–

Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

How does lead get into my tap water?

Under typical circumstances, lead will dissolve into the water. The concentration of lead in drinking water can vary greatly, depending on the corrosiveness of the water, the type and age of the plumbing materials and the length of time that the water stands in the pipes. The highest levels of lead occur when very corrosive water stands motionless in lead or lead soldered pipe for long periods of time.

How do I know if my tap water is contaminated with lead?

The only way to know whether your tap water contains lead is to have it tested. You cannot see, taste, or smell lead in drinking water. There are different sampling methods for sampling lead in drinking water. To determine your household risk, it is recommended to take a first draw sample.

Does lead in my tap water cause health effects?

Lead can cause damage to the brain, red blood cells and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development of growing bodies. Lead in water can be a special problem for infants, whose diets may be mostly liquids, such as baby formulas or concentrated juices mixed with water. Smaller bodies can absorb lead more rapidly than bigger ones. A child's mental and physical growth can be permanently harmed by too much lead. Risk will vary, depending on the individual, the circumstances, and the amount of water consumed.

What can I do to reduce or eliminate lead in my tap water?

Flush your cold-water pipes by running the water for approximately 5 minutes. The longer the water has been sitting in the pipes, the more lead it may contain. You can fill containers for later use, after the flushing process. Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is likely to contain higher levels because it dissolves more lead.
You may choose to install a water filter that is NSF-certified for lead removal. If a water filter is installed, replace filters at least as often as recommended by the manufacturer.

Buy a lead-free faucet. The legal definition of "lead-free" still allows brass faucets to contain up to 8 percent lead. However, faucets marked with "NSF 61/9" and/or "California Proposition 65" meet stricter limits. Regularly clean particles from faucet aerators.

Is it safe to take a bath or shower, if my water has high lead levels?

Yes. Bathing and showering should be safe for you and your children, even if the water contains lead over EPA's action level. Human skin does not absorb lead in water. This information applies to most situations and to a large majority of the population, but individual circumstances may vary. Some situations, such as cases involving highly corrosive water, may require additional recommendations or more stringent actions.

Who do I contact for more information?

The local water authority is always your first source for testing and identifying lead contamination in your tap water. You can visit the City of Flint Website at www.cityofflint.com or contact the Flint Water Department at 810-787-6537.

WWW.EPA.GOV

WWW.MDEQ.GOV

From: Wright, Michael <Wright.Michael@epa.gov>
Sent: Wednesday, October 07, 2015 4:45 PM
To: Howard Croft;Amy Hovey;Andy Leavitt;Brent Wright;Lytle, Darren;Dayne Walling;donna. cole;edwardsm;Gerald (Jed) Natzke;James Henry;Jamie Gaskin;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;Schock, Michael;Sean Kammer;Busch, Stephen (DEQ);Warren Green
Subject: RE: Technical Advisory Meeting

Howard
Thanks for setting up that call. I think we may have been speaking over each other towards the end there, but I wanted to make sure my last point was clear. If Lead is the primary concern right now (which is definitely should be), I hope there is no discussion of a boil advisory in response to the Lead issue. From an exposure assessment perspective, this makes little sense and will only exacerbate matters. This is because heating water can concentrate lead levels and increase exposures via drinking water. I hope this was clear especially to the clinicians in the room, if concerned patients are coming to them for advice (like they were with the THM situation). Again, I missed a lot of the conversation and may have mis-heard details on that. But, I just wanted to make sure this point was made *if* a boil advisory (presumably to combat microbial issues??) is really on that table.

Mike

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Monday, October 05, 2015 2:54 PM
To: Amy Hovey; Andy Leavitt; Brent Wright; Lytle, Darren; Dayne Walling; donna. cole; edwardsm; Gerald (Jed) Natzke; Howard Croft; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Wright, Michael; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green
Subject: Technical Advisory Meeting

All,

I am confirming that our Technical Advisory Meeting will be this Wednesday October 7th at 2:00 - 4:30 pm at City Hall.

The meeting will discuss the emergence of the lead concerns and we will have up to date discussion around the immediate response of filter distribution.

There will be expert discussion about corrosion control, the DWSD option, how the long term solution of line replacement would unfold, and details on the status of KWA. The agenda will be distributed at the meeting.

We look forward to everyone's attendance, please email me with any questions.

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street

Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Prysby, Mike (DEQ)
Sent: Thursday, October 08, 2015 7:28 AM
To: Sygo, Jim (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: FW: TAC Team Summary 10_7_15
Attachments: TAC Meeting Summary 10_7_15.pdf

Jim,

Below is a summary of the TAC meeting prepared by Howard Kroft for the Director's information.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Thursday, October 08, 2015 5:41 AM
To: Amy Hovey; Andy Leavitt; Brent Wright; Darren Lytle; Dayne Walling; donna. cole; edwardsm; Gerald (Jed) Natzke; Howard Croft; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Michael Wright; Mike Lane; Prysby, Mike (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; schock.michael@epa.gov; Sean Kammer; Busch, Stephen (DEQ); Warren Green; John Monsees; Kevin Keane
Subject: Re: TAC Team Summary 10_7_15

All,

Please find attached, the summary of Wednesday's meeting.

Thank you,

On Wed, Oct 7, 2015 at 9:42 PM, Howard Croft <hcroft@cityofflint.com> wrote:
All,

I want to personally thank everyone for participating in today's meeting, it is encouraging to see the commitment that exists to address the concerns around health. I apologize for the poor phone reception we experienced today, I will have that corrected at the next meeting.

I am sending a summary of today's meeting and have attempted to chronicle the highlights or major points that we discussed. I have also included an electronic version of Marc Edwards presentation and will forward any other documents that are requested.

From: Howard Croft <hcroft@cityofflint.com>
Sent: Wednesday, September 17, 2014 2:53 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: Boil Water Advisory Report
Attachments: Boil Water Overview_Memorandum.pdf

Mike,

I wanted you to have a copy of the report I sent to the Mayor and EM today as an overview of the recent biol water advisory. Please let me know if anything here appears amiss.

Thanks,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7346 Ext.2043
hcroft@cityofflint.com

CITY OF FLINT

Department of Public Works

Dayne Walling
Mayor

Darnell Earley, ICMA-CM, MPA
Emergency Manager

Howard Croft
Director

MEMORANDUM

TO: Darnell Earley, Emergency Manager
Dayne Walling, Mayor

FROM: Howard Croft, Public Works Director

DATE: September 16, 2014

RE: Recent Boil Water Advisory

Mr. Earley,

I have compiled a bullet point list of the pertinent events surrounding the recent boil water advisory in the City of Flint. I have separated the events into five categories and attempted to condense them into a comprehensive sequence for your review.

OVERVIEW

- On Friday September 5, 2014 the City of Flint issued a boil water advisory to residents in two of ten test areas around the city.
- The advisory was due to multiple positive tests for "total coliform" and the area covered approximately 9 square miles.
- On Sunday September 7, 2014 the City expanded the advisory to include another of the ten test areas due to a subsequent positive total coliform test.
- The boil water advisories were lifted on Tuesday September 9th at 5:00pm after consultation with the DEQ.

BACKGROUND

- State of Michigan Regulations requires that the City of Flint Water Treatment Plant perform testing of its water distribution system on a routine basis in ten different locations around the City.
- The tests take twenty four hours to produce valid results and are sent directly to the Department of Environmental Quality for review.
- Test results which show positive for "E.coli" or "fecal coliform" trigger boil water notices for the test area and the advisories usually remain in effect until three consecutive tests return negative results.
- A single positive test for "total coliform" does not generally result in a boil water advisory, rather it indicates that the environment is conducive for bacteria.
- Typically, investigation into possible causes followed by corrective measures such as flushing the affected area with open hydrants will cleanse the system.
- This process is overseen by an employee who is required to hold an F-1 State License and is listed as the Operator in Charge of the Water Plant and an employee who holds an S-1 State License which is required to maintain distribution systems of this municipal size.
- The City of Flint has over 500 miles of pipe in its distribution system, much of which is over 70 years old.
- The City of Flint has over ten-thousand valves throughout its distribution system.
- The City of Flint has a professional reliability study of its system which was updated in December 2013.

PROBLEM

- After detecting the initial positive test for total coliform, normal procedures did not clear the condition and multiple positive tests ensued.
- The continued positive total coliform tests were the cause for issuing the boil water notice.
- Additional discoveries showed that residual chlorine levels in the affected area were considerably lower than normal.

SOLUTION

- ✓ On Monday September 8, 2014 the City convened all licensed personnel, Utility Supervisors, and DPW Director to a single meeting location and held a brainstorming session with the DEQ on conference call.
- ✓ It was agreed that while not totally isolated, the concern was mainly present in a specific large transmission line that ran through all positive testing areas.
- ✓ It was determined to expand the hydrant flushing outside of the immediate impact area.
- ✓ It was found that a 24" valve which feeds this transition main was broken in the OFF position outside of the immediate impact area.
- ✓ The broken valve was preventing fresh water from being pushed directly into the impacted area while causing water to travel from the water plant around the entire city and preventing adequate circulation of fresh water.
- ✓ After repairing the broken valve, virtually all of the symptoms were erased over a 24 hour period and the chlorine count has steadily risen back to normal levels throughout the transmission main.

CONCLUSION

- ✓ It was determined that the broken valve was not the single cause of the problem but was a significant factor in the development of the problem.
- ✓ Other possible factors include:
  - Low usage in the area
  - Pipe size in relation to volume of usage
  - Temperature change of surface water
  - Water Pressure in the area
- ✓ It was determined that the broken valve was the main reason that normal remedies were ineffective.
- ✓ Throughout the event, the City was in direct contact with DEQ personnel daily.
- ✓ The positive tests were for "total coliform" only.
- ✓ The following statement about total coliform was approved by the DEQ and distributed to the public as part of the recent boil water advisory:

Total coliform bacteria are generally not harmful themselves. Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.
Usually, coliforms are a sign that there could be a problem with the treatment or

distribution system (pipes). Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or E. coli, are present. We did not find any of these bacteria in our subsequent testing. If we had, we would have notified you immediately. However, we are still finding coliforms in the drinking water.

- ✓ The City of Flint is in the first year of strategic budgetary investment in an infrastructure strategy.
- ✓ The City of Flint infrastructure strategy has been, and will continue to be developed with state licensed employees, industry experts, and proven experienced consultants.

Howard D. Croft
Public Works Director

From: Busch, Stephen (DEQ)
Sent: Tuesday, January 13, 2015 12:23 PM
To: Crooks, Jennifer
Cc: Benzie, Richard (DEQ);Poy, Thomas;Prysby, Mike (DEQ)
Subject: Re: question on Flint

Mike got a copy of the rate schedule last week. We figured around 7500 gallon per month usage on a 5/8 th inch meter was around $100 per month.

We can get you the full info tomorrow

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

Sent from my iPhone

On Jan 13, 2015, at 11:50 AM, Crooks, Jennifer <crooks.jennifer@epa.gov> wrote:

> I just talked with Tom Poy, and he heard on one of the news lines up there that the Emergency Manager is planning to hire a consultant for the drinking water supply.
>
> Yes, I think some people would definitely take their Internet and cellphone service over water anytime, but then complain to us—like what we saw happening in Detroit!
>
> Jen
>
> ---
>
> **From:** Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
> **Sent:** Tuesday, January 13, 2015 9:44 AM
> **To:** Crooks, Jennifer
> **Cc:** Poy, Thomas; Busch, Stephen (DEQ); Prysby, Mike (DEQ)
> **Subject:** RE: question on Flint
>
> Those bills seem high even if it includes sewerage. Do you know if it does include wastewater? If it does, be sure to point that out – that it is a combined bill that reflects both utilities, not just the cost of drinking water. But those bills sound almost as high as what most of those customers are probably paying for their internet and cellphone service or even their cable bills! I wonder which one they think is more essential.
>
> I believe there have been some significant wastewater treatment plant projects in the Genesee County system in recent years, so maybe a significant component of any increase is also on the wastewater side.
>
> Richard
>
> ---
>
> **From:** Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
> **Sent:** Tuesday, January 13, 2015 10:33 AM
> **To:** Benzie, Richard (DEQ)

Cc: Poy, Thomas
Subject: RE: question

Thanks for the update, Richard. The numerous people I talk to from Flint say their water bills are between $175-$200/month. Would DWSD have raised their rates that high? (Don't answer that; just pure conjecture ☺) I talked with a woman yesterday, whose pediatrician swears there has been an increase in kidney stones in his patients since April. I told her to have the pediatrician contact CDC in Atlanta. (I prepared a briefing this summer for ATSDR/CDC about the physical ailments people were complaining about to me, but without any expert or documentation, they didn't pick it up.) Talked to another man yesterday that's mounting a campaign to stop paying their water bills, and wants to organize against the City. And on it goes…
Jen

From: Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
Sent: Monday, January 12, 2015 5:08 PM
To: Crooks, Jennifer
Subject: RE: question

Still going on – even some council members talking about going back to Detroit at least until the KWA pipeline is available sometime in 2016. I don't know that the newspapers or media are advocating for one side or the other in this issue, but covering those individuals who are keeps the flames flickering.

I can't say the city wouldn't be better off to not have switched to the River, but I believe Flint was sure that DWSD was going to raise water rates significantly after the contract expired (by decree of DWSD) in order to recoup lost bonding costs or something similar. Flint did not want to be subjected to rates without any contractual controls.

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Monday, January 12, 2015 4:57 PM
To: Benzie, Richard (DEQ)
Subject: question

Richard—Last week when we were on the call with Jason, Wendy, and Tom Poleck, you made a passing comment about the newspaper getting into the stories about Flint drinking water, maybe elevating the issue in the public to fire them up? Perhaps talk of going back to Detroit water?
Jen

From: Bennett, Charles (DEQ)
Sent: Thursday, January 22, 2015 1:29 PM
To: Prysby, Mike (DEQ)
Cc: Rosenthal, Adam (DEQ)
Subject: flint water

article from last night's meeting!

http://www.mlive.com/news/flint/index.ssf/2015/01/state_water_officials_tell_fli.html#incart_2box

From: Benzie, Richard (DEQ)
Sent: Friday, January 30, 2015 10:14 AM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Subject: FW: Gillie's Coney Island offers up free well water for Flint residents | MLive.com

FYI – I hope they find out the well is safe and below the arsenic standard.

From: DeBruyn, Dana (DEQ)
Sent: Friday, January 30, 2015 8:46 AM
To: Ladouceur, Anita (DEQ)
Cc: Monosmith, Carrie (DEQ); Dettweiler, Dan (DEQ); Benzie, Richard (DEQ)
Subject: FW: Gillie's Coney Island offers up free well water for Flint residents | MLive.com

Anita,
Can you check watertrack on the sampling history of these good folks on Monday?
Dana

From: Dana Debruyn [mailto:diwils@yahoo.com]
Sent: Thursday, January 29, 2015 8:17 PM
To: DeBruyn, Dana (DEQ)
Subject: Gillie's Coney Island offers up free well water for Flint residents | MLive.com

http://www.mlive.com/news/flint/index.ssf/2015/01/gillies_coney_island_offers_up.html#incart_river_default

Sent from my Verizon Wireless 4G LTE DROID

From: Busch, Stephen (DEQ)
Sent: Tuesday, February 03, 2015 9:34 AM
To: Benzie, Richard (DEQ);Prysby, Mike (DEQ)
Subject: FW: Flint event on Tuesday
Attachments: 2 FDCVT Grant Awards draft.docx; ATT00001.htm; Briefing Flint grant announcement.docx; ATT00002.htm; RELEASE Flint water grants.docx; ATT00003.htm

FYI.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Wurfel, Brad (DEQ)
Sent: Monday, February 02, 2015 4:35 PM
To: Wyant, Dan (DEQ); Datema, Maggie (DEQ); Tommasulo, Karen (DEQ); Thelen, Mary Beth (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: Fwd: Flint event on Tuesday

All,
Here is some early information about the event tomorrow in Flint. State leaders, including director Wyant, Will announce $2 million in distress community grants. Based on what little I know so far, it sounds a little bit like SAW grants.
Will share more details when I get them.
b
Sent from my iPhone

Begin forwarded message:

> **From:** "Murray, David (GOV)" <MurrayD1@michigan.gov>
> **Date:** February 2, 2015 at 1:34:21 PM EST
> **To:** "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov>, "Wurfel, Sara (GOV)" <WurfelS@michigan.gov>, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>, "Biehl, Laura (GOV)" <BiehlL@michigan.gov>, "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>, "Clayton, Stacie (GOV)" <claytons3@michigan.gov>, "Walsh, John (GOV)" <WalshJ@michigan.gov>, "Brownfield, Michael (GOV)" <BrownfieldM2@michigan.gov>, "Allard, Claire (GOV)" <allardc1@michigan.gov>, "Rexford, Tori (GOV)" <rexfordt@michigan.gov>
> **Subject: Flint event on Tuesday**
>
> Good afternoon team,
>
> Just wanted to touch base on Tuesday's event in Flint. Unless told otherwise, I'm continuing to prepare for the event.
>
> I touched base with Harvey and Stacie, who recommended we proceed. Harvey is approaching some stakeholders about appearing at the event, and will forward those names to me later today.

I left a message with Dick Posthumus to see if he has any concerns about proceeding.

The Senate Democrats said Sen. Ananich will want to appear. Katie Carey from the House said she would forward information to Rep. Neeley and Phelps. I have not heard back from her yet.

I've attached the backgrounder and the draft releases from Governor's Communications and Treasury. I've sent a message to the mayor's office about a quote, but have not heard back yet.

Brad and I spoke about Director Wyant's role and potential comments. He will point out that there are things the state can do to help monitor the situation, but also will note that the city's water infrastructure is aging, which contributes to the problems.

We need some direction on an advisory. Should this be listed on a typical advisory from the governor's office, or come from Treasury? Do we even issue an advisory in favor of just contacting media directly in the morning?

Please give the draft releases a read for potential changes, or let me know of other concerns.

Thank you!

Dave

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
517-449-8343, PPI
Twitter:@michigandmurray

89 (Rev. 11-13)

STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

R. KEVIN CLINTON
STATE TREASURER

February 3, 2015

FOR IMMEDIATE RELEASE
www.michigan.gov/treasury

Contact: Terry Stanton, Treasury
(517) 335-2167
Dave Murray, Governor
(517) 335-6397

draft

Gov. Rick Snyder announces grants helping distressed municipalities with water, public safety, appraisal issues

$8 million awarded for projects aimed at improving services, quality of life

LANSING, Mich. -- Gov. Rick Snyder today awarded $8 million to six municipalities to fund various improvement projects, including water system and street lighting enhancements and technology upgrades through the Financially Distressed Cities, Villages, and Townships Grant Program.

Municipalities are eligible for the grants of they are experiencing one or more conditions indicative of "probable financial stress," as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

"Municipalities receiving this special funding are some of the areas hardest hit by the Great Recession," Snyder said. "I am pleased we can offer funding assistance to help these local governments improve various public services their taxpayers and residents expect and deserve."

Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability. There was $8 million appropriated for the program with a $2 million cap, per local unit.

The following communities will receive funding this year, with projects and amounts noted (alphabetical order):

Local Unit	Project Description	Amount
City of Benton Harbor	Complete a property reappraisal to provide updated and accurate assessing records. Additionally, community enhancement through blight management and sidewalk replacement.	$475,000
City of Benton Harbor	Water system enhancement through water main replacements and fire hydrant repairs.	$434,960
City of Ecorse	Public safety enhancement through improved street lighting.	$350,000

City of Flint	Water system enhancement through improved waste management.	$1,100,000
City of Flint	Water system enhancement through leak detection and pipe assessments.	$900,000
City of Hamtramck	Complete a property reappraisal to provide updated and accurate assessing records.	$167,860
City of Hamtramck	Upgrade City Hall security.	$50,000
City of Hamtramck	Public safety enhancement through improved street lighting.	$404,600
City of Highland Park	Water system enhancement through meter replacement, leak detection, and system repairs.	$2,000,000
City of Inkster	Complete a property reappraisal to provide updated and accurate assessing records.	$73,460
City of Inkster	Water system enhancement through fire hydrant repairs.	$150,000
City of Inkster	Provide a backup power source for public safety.	$30,000
City of Inkster	Public safety enhancement through the creation of a multi-jurisdictional narcotic team.	$240,000
City of Inkster	Public safety enhancement through police officer training.	$41,970
City of Inkster	Public safety enhancement through the deployment of an additional police officer.	$320,000
City of Lincoln Park	Public safety enhancement through updated technology.	$143,490
City of Melvindale	Public safety enhancement through fleet replacement of police vehicles and updated technology.	$88,000
City of Pontiac	Community enhancement through blight management.	$125,000
City of River Rouge	Public safety enhancement through improved street lighting. Additionally, infrastructure replacements to City Hall.	$591,508
Royal Oak Township	Public safety enhancement through improved street lighting	$86,559
Royal Oak Township	Public safety enhancement of police services.	$217,593

Applications for the next round of Financially Distressed Cities, Villages, and Townships Grant Program will be available on the Department of Treasury website this spring. Applications must be submitted to Treasury by the close of business on XXX, XXX 31, 2015.

Preference is generally given to applicants from local units in which:

- A financial emergency has been declared in the past five years;
- An approved deficit elimination plan for the general fund is currently in place; or,
- Two or more conditions indicating "probable financial distress" currently exist.

For more information about FDCVT grants, including an application for cities, villages, and townships, visit www.michigan.gov/revenuesharing.

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*Conditions of "probable financial distress" relating solely to school districts are not included as conditions for FDCVT, as school districts are not eligible.

Briefing: Grant announcement in Flint

Tuesday, Feb. 3, 2015, 3-4 p.m.
Haskell Community Center, 2201 Forest Hills Ave. Flint
Governor's communications: Dave Murray, murrayd1@michgian.gov, 517-449-8343
DEQ communications: Brad Wurfel, wurfelb@michigan.gov, 517-230-8006
Treasury communications: Terry Stanton, stantont@michigan.gov, 517-830-5807

Purpose

The state government is providing support for the Flint government as it addresses issues with its water system. The state on Tuesday is announcing that Flint is receiving two grants totaling $2 million related to water system improvements through the Financially Distressed Cities, Villages and Townships grant program. DEQ Director Dan Wyant will address ongoing efforts with his agency to test Flint water and explain why the city is facing some of its problems. Senate Minority Leader Jim Ananich, D-Flint, will discuss his appreciation for the ongoing support for the city and its residents.

Attending

- Harvey Hollins, director of the Michigan Office of Urban Initiatives
- Dan Wyant, director of the Michigan Department of Environmental Quality
- Wayne Workman, deputy treasurer, Michigan Department of Treasury
- Jerry Ambrose, Flint emergency manager
- Dayne Walling, Flint mayor
- State Sen. Jim Ananich
- State Rep. Sheldon Neeley
- State Rep. Phil Phelps

Agenda

3:00 PM – 3:05 PM:	Harvey Hollins announces that Flint has received two grants totaling $2 million.
3:05 PM – 3:10 PM:	Dan Wyant discusses the state's ongoing role in monitoring Flint's water and any assistance that has been provided and will continue to be provided.
3:10 PM – 3:15 PM:	Mayor Dayne Walling remarks about appreciation for state assistance.
3:15 PM – 3:20 PM:	Sen. Jim Ananich remarks about appreciation for state assistance.
3:20 PM – 3:25 PM:	Rep. Neeley remarks.
3:25 PM – 3:35 PM:	Harvey Hollins closing remarks, opens floor to media questions.
3:35 PM	Event ends, though this might be optimistic.

Background

- The quality of Flint water has been a high-profile concern in recent weeks, with residents complaining about the color, taste and smell of tap water since a switch to Flint River water as a temporary source as a pipeline is built to Lake Huron as a water source starting in 2016.
    - Residents have attended meetings with jugs of brownish water.
    - U.S. Kildee has worked with labor and community groups to distribute bottled water.
- Mayor Walling has issued a letter (included below) calling for state and federal assistance for the city, including forgiveness of some $20 million in debt through the Drinking Water Revolving Loan Fund and calling for the governor to come to Flint personally.
    - Walling also submitted a guest column to the Flint Journal with similar requests.

        - He said the loan forgiveness is needed for the city to upgrade its water treatment process.
    - Governor and Mayor Walling had a telephone conversation on Friday, and the mayor has pledged to work together on solutions.

- Rep. Sheldon Neeley also has sent the governor a letter, saying that his constituents "are on the verge of civil unrest."

- The Department of Environmental Quality has been monitoring the water situation, with a detailed backgrounder and talking points attached below.

- The Treasury Department is announcing Tuesday that Flint is among the cities receiving a combined $8 million the Financially Distressed Cities, Villages and Townships grant program.
    - The announcement of the other grants will follow the Flint announcement.
        - The Flint grants are $1.1 million to allow the city to replace the functions of the old incinerator with new water pollution control facility allowing for the disposal of waste to landfills.
        - The other is $900,000 to allow the city to hire a contractor to perform a leak detection survey, which will lead to prioritizing repairs.
    - A breakdown of the grants is included below.

Treasury breakdown of Flint grants

Flint Incinerator: The grant project entails shutting down the current Water Pollution Control Facility Incinerator (due to the incinerator not being up to new EPA standards). In order to meet EPA standards, it would cost roughly $8.8M in upgrades to the current incinerator. The grant funding will allow them to replace the functions of the old incinerator by constructing new facilities which will allow for the disposal of waste to landfills.

Budget Breakdown	
Construction Contractor	$1,050,000
Project Management	$50,000
Total	$1,100,000

Flint Leak Detection: The grant project will allow the city to hire a contractor to perform a leak detection survey of the city water lines. The city will receive a map of leak locations and an assessment of leak severity. This data will allow the city to prioritize leak repair. The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city's pipes. The assessment will guide the city's water main replacement program.

Budget Breakdown	
Project Planning	$90,000
Mobilization of Crew to Site	$27,000
Leak Detection < 16" diameter	$378,000
Leak Detection 16" diameter or >	$270,000
Pipe Condition Assessments	$135,000
Total	$900,000

DEQ backgrounder on Flint water

Following the formal approval of Flint into the KWA in 2012, DWSD sent Flint a letter saying their contract was thereby terminated (by early 2013).

Genesee County has been using DWSD water without a contract since May 2014. But Flint took the letter to imply a water cutoff, and promptly turned to DEQ with a proposal to use the Flint River (their historic backup system).

This proposed shift was pitched primarily as a money saver. But it put the city in the business of water production, where they historically had been in the business of water transmission. DEQ approved the use of the river as a source, based on the treatment plant's past performance as a standby facility and the improvements we outlined prior to a switchover.

Several municipalities around the state use surface water supplies (rivers): Blissfield near Monroe, Manistique, and Alma to name a few.

The city completed the upgrades at the water plant the facility and DEQ approved it April 2014.

There were some initial hiccups. Last summer, there were a couple of 'boil water' notices issued. One for a water test that showed e. coli, one for a break in the water main.

The challenge to using the Flint River as a source is that the condition of the water is variable and changes with season and weather. It has substantially more organic matter than deep lake sources like Lake Huron. This organic matter is mobilized by high water events, and warm weather also can account for more organic material in the water.

The treatment of the organic matter is done with chlorine. One might conclude that the continual answer is just to use more chlorine to achieve water safety. However, at some point on the continuum, the chlorine and organic matter create TTHM – total trihalomethanes – as a byproduct. When the standard for those is exceeded over several consecutive quarters of testing, the supply is required by law to issue public notice and submit an approved plan for addressing the situation.

You'll note that this regulatory approach means TTHM testing is done quarterly. That means people who use the system are exposed to TTHM for several months before the public notice is required. It's because TTHM is a chronic health threat. Over the long term (measured in decades), continued exposure can contribute to some known health problems. If this were an immediate health threat, customers would receive immediate notification to boil their water or not use it.

Put in context, the EPA (which established the standard and the rule) estimates the existence of the TTHM standard prevents an estimated 280 bladder cancer cases each year ... out of more than 330 million people who use public water supplies around the country.

It's not "nothing." State and federal law requires quarterly testing for TTHM and that the public be informed of it when the annual average of four quarters' worth of consecutive testing shows TTHM levels exceeding 80 parts per billion. Flint's results managed to exceed the annual average in three quarters, and they must develop a plan to address it.

But it's not like an eminent threat to public health. Unlike an e. Coli or even total coliform bacteria maximum contaminant level, which require immediate public notification and response and are part of daily / hourly testing of public water supplies, TTHMs pose a public health concern with chronic, long-term exposure.

It's clear the nature of the threat was communicated poorly. It's also clear that folks in Flint are concerned about other aspects of their water – taste, smell and color being among the top complaints.

The Safe Drinking Water Act requires public water supplies be tested for more than 90 regulated contaminants, including microbial contaminants. The act, and the program here in Michigan, work to ensure that water is safe to drink. The act does not regulate aesthetic values of water. Here are some factors affecting the aesthetics of water in Flint.

1. It's the Flint River. The water supplied by DWSD historically came from Lake Huron. It's softer. With hard water, you get a different flavor and feel. It's why General Motors suspended use of Flint Water – it was rusting their parts. Also, there's the 'organics' factor (discussed previously).
2. The system is old. Flint has more than 500 miles of water pipes. More than half of those pipe miles are more than 75 years old. Much of it is cast iron. Hard water can react with cast iron and exacerbates the rusty factor, which creates that brown water that angry residents were holding up in jugs for the media cameras last week. Valve failure has also been a key challenge. The system has an estimated 7,500+ valves. When they stick open or stick shut, it affects the hydraulics of the system and increase areas of stagnation. The city has a backlog of valves that need to be addressed. They've done half a dozen or so since November.
3. Flint is old. Many of the homes served by the system are old. Brown water complaints may also be attributable to cast iron pipes in customers' service connection to the city lines. The DEQ has been encouraging people with water coloration concerns to contact the city and see whether it is the service line or the City's line causing the issue. Again, discoloration is not an indicator of water quality or water safety, but we recognize that nobody likes it.

In summary, the City of Flint has tremendous need to address its water delivery system. We are not aware that they have any capital improvement funds for preventative maintenance in place, much less line replacement project monies that will require hundreds of millions.

The City was approved for a Revolving Fund loan in 2008 or 2009. As a Distressed Community, they qualified for flexible terms and 2 percent interest rate Revolving Fund Loan. After they were notified they were approved for the loan, they declined it. Previous SRF loans from the state to Flint bear an outstanding balance of $20.7 million today.

The DEQ continues working with the city to address the TTHM issue. They can take interim steps – from scrubbing the insides of transmission lines to carefully monitoring the hydraulic challenges in their system – to address customers' aesthetic concerns. Their TTHM numbers already are showing dramatic improvement; the November testing showed only one of seven sample points exceeding the standard.

The key now is that the standard is an average of three quarters' worth of results. It will be some time before they are officially "not in violation." However, depending on weather in 2015, it's not unforeseeable that we will be having this conversation again by next Christmas.

The key to the conversation is that TTHM is not a top health concern. That's key because residents need to understand TTHM in context, and it is key because it appears the mayor has seized on the public panic (sparked, frankly, by their poor communication of the violation notice) to ask the state for loan forgiveness and more money for their infrastructure improvement.

Another key thing to remember is that once the city connects to the new KWA system in 2016, this issue will fade in the rearview.

Key messages:

1. The DEQ Drinking Water program works with communities around the state to ensure that municipalities provide customers with clean, safe drinking water.
2. Municipal water supplies are tested rigorously and regularly for more than 90 regulated contaminants, including microbial contaminants that pose an immediate public health concern.

3. Flint's exceedance of the TTHM standard should reassure residents that the testing program is effective.
4. TTHM is not an immediate health threat. It is a chronic concern, one that can be problematic over the course of several decades of exposure. The public was notified because the law requires the city to make public notification, so that everyone can make informed decisions. This is particularly true for people with infants or those with compromised immune systems.
5. The DEQ is working with the City to address the situation. Recent tests show the TTHM numbers dropping rapidly. The department will continue working with the city in the months ahead, and residents should feel confident that their water is safe to drink unless the DEQ or City notifies them otherwise.
6. The discoloration and odor issues some Flint residents are experiencing are separate issues from the TTHM issue. TTHM is odorless, colorless and measured in parts per billion.
7. Flint water customers who have questions or concerns about their water should first contact the city to get answers and help. They also can contact the Michigan DEQ.

Mayor Walling's Facebook post

Friend,

Access to clean, safe, affordable water is a basic human right.

That's why I just sent Gov. Snyder my Flint Water Improvement Plan. It focuses on the areas of safety, quality, access, investment and education. My letter urges the governor to quickly implement these ideas so that Flint's water is 100% safe.

Please contact Gov. Snyder by calling (517) 335-6397 (or by clicking here) and ask him to take action immediately to implement my plan and ensure Flint's water is safe.

My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the state and federal levels. Here is my plan:

Safety & Quality

- 100% Safety is the standard
- City of Flint releases testing data to assure safety and expands testing to households with support from the Michigan Department of Environmental Quality
- Support alternatives for those advised not to drink the water by their doctors through the Michigan Health Endowment Fund and community partners to protect the vulnerable like seniors and infants
- Bring on experienced river water treatment operational management in the City of Flint
- Require water testing data to be released quarterly by law in all Michigan communities

Access

- Announce an amnesty program for turn-ons and reduce the turn-on cost in Flint
- Develop a revised payment plan policy to allow customers to come back on to the Flint system
- New Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for customers (modeled on Federal and State energy utility programs: Low Income Home Energy Assistance Program; Michigan Energy Assistance Program; State Emergency Relief)

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State Investments
- State approves City of Flint's Distressed Cities Fund applications
- Federal and State forgiveness of payment to Drinking Water Revolving Loan Fund

- Federal and State financing for future improvements
- City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

- Develop a community partnership to provide household and business customers with information on testing and conservation
- Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information on water assistance
- Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

The struggle with our water has gone on for too long. The state must take action and do its part. Please ask Gov. Snyder to take action immediately to implement my plan and ensure Flint's water is safe. Thank you for your ongoing support.

Links to coverage

- Mayor, governor have 'long, productive' talk about Flint's water problems, Jan. 30
- 2,000 more gallons of water headed to Flint for giveaway, Jan. 30, 2015
- Flint emergency manager says there are two big reasons not to reconnect Detroit water, Jan. 29
- Flint Democracy Defense League plans four meetings on city's water problems, Jan. 29
- Environmentalist sends out new warnings about Flint water, NBC, Jan. 27
- Erin Brockovich says on Facebook she's prepared to come to Flint, MLive, Jan. 27
- Mott Community College not waiting for Flint to ensure safe water, MLive, Jan. 26
- Detroit water chief says she's willing to sell emergency water to Flint -- no strings attached, Jan. 26
- Mayor says governor needs to visit Flint to see water crisis first hand, MLive, Jan. 26
- Need water? Flint groups collect 600 cases, plan distribution this week, MLive, Jan. 26
- Incoming Flint water expert would have 'continual oversight' until new pipeline connected, Jan. 25
- Looking back at Flint's water problems (photo gallery), MLive, Jan. 25
- Flint water problems: Switch aimed to save $5 million -- but at what cost?, MLive, Jan. 23
- State says its already 'working diligently' on Flint's water problems, MLive, Jan. 22
- Officials say Flint water is getting better, but many residents unsatisfied, MLive, Jan. 21

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

BRIAN CALLEY
LT. GOVERNOR

CONTACTS:	FOR IMMEDIATE RELEASE
Sara Wurfel or Dave Murray, Governor's Office 517-335-6397 Terry Stanton, Department of Treasury 517-335-2167	<< AUTODATE >>

Gov. Rick Snyder awards Flint $2 million in Distressed Cities grants for water system infrastructure improvements

Funding to be used for leak detection, waste incinerator replacement

LANSING, Mich. – Gov. Rick Snyder today awarded Flint $2 million in grants for water system infrastructure improvements, part of an overall $8 million plan to help cities through the Financially Distressed Cities, Villages, and Townships Grant Program.

Flint is among six municipalities receiving grants through the program. The city will use the funding to detect leaks in its water lines and replace its Water Pollution Control Facility Incinerator.

"There are opportunities for the state government to assist Flint city leaders as they address issues related to the city's water system," Snyder said. "These grants will help recovering cities improve public services and infrastructure, improving the quality of life for all residents."

The grants to Flint were announced today at the Haskell Community Center by Harvey Hollins, director of the state's Office of Urban Initiatives and Wayne Workman, the state's deputy treasurer. They were joined by Dan Wyant, director of the Michigan Department of Environmental Quality, Flint Emergency Manager Jerry Ambrose, Mayor Dayne Walling, state Senate Minority Leader Jim Ananich, state Reps. Sheldon Neeley and Phil Phelps.

Flint was awarded $900,000 to allow the city to hire a contractor to perform a leak detection survey of the city water lines. The city will receive a map of leak locations and an assessment of leak severity, allowing the city to prioritize leak repair. The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city's pipes. The assessment will guide the city's water main replacement program.

The city also was awarded $1.1 million to shut down its current Water Pollution Control Facility incinerator and replace it with new facilities which will allow for the disposal of waste in landfills. The existing facilities are not up to federal Environmental Protection Agency standards.

Municipalities are eligible for the grants of they are experiencing one or more conditions indicative of "probable financial stress," as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability. There was $8 million appropriated for the program with a $2 million cap, per local unit.

##

From: Bennett, Charles (DEQ)
Sent: Monday, February 09, 2015 1:28 PM
To: Rosenthal, Adam (DEQ);Prysby, Mike (DEQ)
Subject: more Flint news

Salvation is near! Erin Brockovitch will be sending her "water expert" to Flint to "make sure you get honest answers..."!

http://www.mlive.com/news/flint/index.ssf/2015/02/erin_brockovich_advisor_headin.html#incart_river

Charles Bennett, PE
DEQ Water Resources Division
Lansing District Office
BennettC4@michigan.gov
ph 517-284-6659; fax 517-241-3571

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Monday, February 09, 2015 2:30 PM
To: Benzie, Richard (DEQ);Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: RE: question on flushing/water rates in MI

Thank you, Richard. Yes, Steve B explained to me this morning, that the commodity charge is based upon the amount of water the resident is using; however, the base rate/service charge would include operation and maintenance costs, including flushing.
Jen

From: Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
Sent: Monday, February 09, 2015 12:57 PM
To: Crooks, Jennifer; Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: RE: question on flushing/water rates in MI

There currently is no regulatory oversight of rates in Michigan.

But be careful about saying residents aren't paying for water used for flushing -- as the overall costs of operating the water system have to be reflected in the revenue stream somewhere. The rates probably reflect the cost of producing "lost" water, just not in an accountable manner. If you say they are paying for it (even directly), it may still generate a negative reaction if they realize the costs are "hidden" and being borne by all customers.

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Monday, February 09, 2015 12:12 PM
To: Benzie, Richard (DEQ); Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: question on flushing/water rates in MI

Richard---I have a couple of questions for you regarding the citizen complaint on Flint, that I'm responding to.

Regarding the water rates part of this email, "Flint river. runs right through the city of flint. they have been opening the hydrants and letting water pour out of them to "purge" the system, **then charging consumers double for their mistake"**

I was going to remind the citizen that they are only charged based upon what the water meter reads at individual connection (home). The citizens aren't directly paying for what is being flushed. I was going to say that the flushing program removes stagnant water in the system, which can increases levels of trihalomethanes and increase bacteria growth, among other activities.

Also, who regulates water rates in Michigan? I don't think MI has a rate commission, right? Any oversight on individual water supply rates?

Jennifer

From: Crooks, Jennifer
Sent: Monday, February 09, 2015 8:22 AM
To: Richard Benzie; Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: FYI: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

Forgot to cc you all. Jen

From: Crooks, Jennifer
Sent: Monday, February 09, 2015 8:09 AM
To: Dee, Rhiannon
Cc: Poy, Thomas
Subject: RE: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

Rhiannon—Let me tell you, this Flint situation is a nasty issue—I've had people call me 4 letter words over the phone, yell at me, and call me a crook—yes, the last one was a play on my last name—I didn't think it was funny, though I'm developing a thick skin ☺.

I can respond to the Flint drinking water issue, and the water rate issue, and refer them back to the State if they have further questions. But I cannot respond to the sewerage dump (who receives the report when there is a sewer overflow?) or the chemical—though Richard is probably right—the 'toxic chemical' is probably chlorine—and that's what I'll say in my response. One citizen was confused about 'chlorides' being 'chlorine'....

Let me know if you would like me to respond to this citizen complaint as I explained above.

Jennifer

From: Dee, Rhiannon
Sent: Friday, February 06, 2015 10:50 AM
To: Benzie, Richard (DEQ)
Cc: ostiundp@michigan.gov; Busch, Stephen (DEQ); Prysby, Mike (DEQ); Crooks, Jennifer; Poy, Thomas; Vantil, Barbara
Subject: RE: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

Richard,

While I understand this complaint conflates various issues, my intention of forwarding it on to Pete and Barry was to relay the potential NPDES impacts of the complainants allegations.

Best,

Rhiannon Dee
Program Analyst
U.S. Environmental Protection Agency
Water Division, WC-15J
(312) 886-4882
dee.rhiannon@epa.gov

From: Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
Sent: Friday, February 06, 2015 9:38 AM
To: Dee, Rhiannon
Cc: ostiundp@michigan.gov; Busch, Stephen (DEQ); Prysby, Mike (DEQ); Crooks, Jennifer; Poy, Thomas
Subject: RE: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

I'm not sure what this complainant is alleging. Do you want Michigan to respond to the allegation that a "company or individual dumped millions of gallons of raw sewage into the city of Flint drinking water" or the allegation that "they(?) have dumped a potential cancer causing chemical into the city's drinking water" or the allegation that the city of Flint is flushing hydrants and charging customers double? The Office of Drinking Water and Municipal Assistance cannot address the issue surrounding the dumping of raw sewage and we don't interfere with water rates, but maybe an explanation of the issues that have confronted the city of Flint and their public water supply will help you understand the overall problem.

Last spring, the city of Flint decided to begin relying upon the Flint River as their source of drinking water using a treatment plant that was designed to do so. Last summer, they experienced difficulties with stagnation in some areas of the distribution system due to significantly reduced demands as a result of the loss of a significant percentage of their residential and industrial demands that accelerated over the last decade. During the summer of 2014, they also had a couple of monitoring periods where they detected total coliform at monitoring sites in these stagnant areas, and one time they detected E.coli present. The ensuing boil water advisories and public notification heightened customer concern about the quality of drinking water as a result of the switch from Detroit to the Flint River. Detroit supplied Flint with drinking water from Lake Huron, a much higher quality source than the Flint River. However, monitoring of the Flint water treatment plant tap has never indicated unacceptable water entering the distribution system. In response to these coliform detections and in an effort to prevent a recurrence, the city also increased flushing water mains in low flow areas and they have attempted to ensure the presence of a chlorine residual throughout the distribution system (is this the "potential cancer causing chemical" the complainant mentions?).

Compounding the problem of customer confidence was the initial monitoring for disinfection byproducts conducted by Flint under the Stage 2 DBR after their switch to the Flint River. The initial monitoring reported significantly elevated levels of total trihalomethane (TTHM) compounds throughout the city's distribution system. Our district office advised the city that they needed to immediately implement operational techniques at the treatment plant and in the distribution system to reduce the formation of these compounds. The steps the city of Flint has taken have been successful and have reduced TTHM concentrations to the point where the latest results are below the drinking water standard. However, the standard is calculated on a running annual average and it is likely to be another 3 to 6 months before the annual average at each monitoring station will (hopefully) meet the standard. Until then, the city has to continue to provide quarterly public notification, which will continue to concern residents despite the latest TTHM results.

The switch to the Flint River, the microbiological problems and the elevated TTHM concentrations experienced last year in Flint have caused a high level of customer dissatisfaction and distrust. The city is working diligently to restore that confidence, but it will not be accomplished easily or overnight. You should also know that the switch to the Flint River is an interim measure intended to last only until a 72-inch pipeline from Lake Huron to the Flint water treatment plant is completed. It is currently under construction and expected to be in operation in mid-2016. At that point, the city's drinking water should again be very similar in quality to what they were receiving from Detroit.

Although the subject(s) of this complaint are not clear to me, I suspect it is a result of the media coverage of the recent problems with the city's water supply. However, the information from your initial contact indicates a Grand Blanc, Michigan address, which is not in the city of Flint service area. As I mentioned, our Lansing district office has been dealing with city representatives on this issue. If you have further questions, feel free to contact either Michael Prysby or Steve Busch. They are receiving this message so you have their contact information. You may also wish to communicate with your Region 5 counterparts in the Office of Drinking Water & Ground Water, Jennifer Crooks or Tom Poy, who have received similar complaints and with whom we have communicated regularly on these issues.

Please let us know if someone from EPA will respond to the complainant, or if you expect Michigan DEQ to do so.

Richard Benzie, P.E., Chief
Field Operations Section
Office of Drinking Water and Municipal Assistance, MDEQ
517-284-6512

From: Ostlund, Peter (DEQ)
Sent: Friday, February 06, 2015 6:55 AM

To: Dee, Rhiannon
Cc: Selden, Barry (DEQ); Benzie, Richard (DEQ); Bartley, Cheryl (DEQ)
Subject: RE: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

Rhiannon, this is a drinking water complaint, not an NPDES compliant. Flint does have SSOs, and reports those. That's not the cause of this complaint.

There are public concerns with Flint's drinking water system, which switch from the city of Detroit supply to their own supply. Detroit's source water is much better, so the public may be noticing some changes.

I've copied Richard Benzie, how is the Field Operations Chief in our division that handles drinking water. If you need more follow up, he can provide it.

Thanks, Pete

Peter Ostlund
Field Operations Section Chief
Water Resources Division
Michigan Dept. of Environmental Quality
P.O. Box 30458
Lansing, Michigan 48909-7958
517-898-5128 (iPhone)
ostlundp@michigan.gov

From: Dee, Rhiannon [mailto:dee.Rhiannon@epa.gov]
Sent: Thursday, February 05, 2015 5:11 PM
To: Ostlund, Peter (DEQ); Selden, Barry (DEQ)
Subject: FW: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

Hi there,

Hope all is well. We received this complaint a while back. Complainant is alleging discharges into Flint River.

Let me know if you have any questions or if I should forward this on to someone else.

Best,

Rhiannon Dee
Program Analyst
U.S. Environmental Protection Agency
Water Division, WC-15J
(312) 886-4882
dee.rhiannon@epa.gov

From: howard.donna@epa.gov [mailto:howard.donna@epa.gov]
Sent: Monday, January 12, 2015 11:21 AM
To: Dee, Rhiannon
Cc: Beese, Jennifer
Subject: FWD: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

01/12/2015

SUBJECT: FWD: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

FROM: howard.donna@epa.gov
TO: Dee.Rhiannon@epa.gov
CC: Beese.Jennifer@epa.gov

-----Original Message-----

1/11/2015 10:55 AM

HQ LEAD NUMBER: FY15-124819-3709-CV

SUBJECT: Referred to Region - Michigan

FROM: sargent

TO:

Name: PPI

Address: PPI

City: grand blanc

State: Michigan

Zip: 48480

Phone: PPI

Alleged Violator's Name: city of flint michigan

Alleged Violator's Address: water department

Alleged Violator's City: flint

Alleged Violator's State: Michigan

Alleged Violator's Zip: 48503

Tip or Complaint: an individual or company dumped several million gallons of raw sewage into the city of flint Michigan drinking water and now they have dumped a potential cancer causing chemical into the water to cover up their negligent act. people are getting sick and skin rashes are becoming apparent, especially in the young and elderly. we will keep going until something is done to correct this "mistake"

Specific Directions: Flint river. runs right through the city of flint. they have been opening the hydrants and letting water pour out of them to "purge" the system, then charging consumers double for their mistake.

Violation Still Occurring? Yes

State DEP/DEQ/DEM Notified? Yes

Please look for continued communication from me as we work to move forward as fast as possible. I expect to have November and December dates selected very soon and will maintain the stream of information to this team as it becomes available.

Please do not hesitate to email or call me with any questions or requests.

Thank you,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

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Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

City of Flint
Technical Advisory Committee Meeting
Summary

Location: Flint City Hall
Date: Wednesday October 7, 2015
Time: 2:00 pm

Introductions

Everyone gave individual introductions in round table fashion

Comments

The City Administrator Natasha Henderson commented on the urgency of the situation stressing that time is of the essence and we hoped to achieve a consensus opinion from the Advisory Group.

System Overview/Update

DPW Director Howard Croft discussed the original formation of the group, the fact that the group was engaged throughout the TTHM concerns, and the value of having experts gathered to together along with the medical community for a substantive discussion. An additional goal is to have a more unified public voice all working to be solution driven with good communication.

VA Tech Findings

Marc Edwards of VA Tech (through a conference call in) narrated a presentation that he prepared for the meeting. (The presentation is provided on the email).

Laura Sullivan of Kettering translated a part of the presentation due to poor phone connection.

Q- John O'Brien of the Drain Commissioners office asked if the VA Tech study had compared Flint River water and water from DWSD running through comparable distribution systems. John also commented on the timetable and progress status of the KWA stating that 38 miles of pipe are in the ground and continues to be installed at ~5 miles a month projecting completion by mid-2016, weather permitting.

A – Marc Edwards's response was yes, the comparison was done on equal terms.

EPA Comments

Darren Lytle of the EPA spoke and said that he had toured the Flint Plant earlier in the day with Utilities Administrator Mike Glasgow and was comfortable with what he saw. His comments also touched on a technical nature which drew brief conversation from Warren Green of LAN.

Mr. Lytle agreed to stay involved through the implementation of KWA, requested more data to review and asked that Michael Schock of the EPA who could not attend today be considered one of the top lead experts in the nation and that we keep him updated at every step.

Mayor's Comments

DPW Director introduced Mayor Walling made comments thanking everyone for their participation and asked if anyone had a valid reason to NOT go back to DWSD.

There was no direct response but John O'Brien questioned what the expectations were going to be and that lead levels would not be reduced to zero. Several people responded that this was understood.

Dr. Lawrence Reynolds gave comments that focused on the short and long term impact of lead levels especially in children.

Pete Levine and Kirk Smith also commented that they saw no "pro" to staying on the Flint River as opposed to switching back to DWSD.

DWSD Option

City Administrator Natasha Henderson asked the committee to not look at cost but at the health and science of what is the best interim source of water for residents. She said she would like to go back to DWSD both as a resident and as City Administrator.

Warren Green of LAN asked that as an engineer, he would like to see the actual data that was derived from the VA Tech studies and brought up the need for corrosion control or the addition of phosphate regardless of the water source.

Corrosion Control

Discussion around corrosion control continued with Darren Lytle of the EPA, Marc Edwards, and Warren Green discussing dosing with each source and questioning the timetable of rebuilding a film layer.

Service Line Replacement

Skipping Filters for a moment, DPW Director Howard Croft displayed a draft copy of a Lead Service Line Replacement plan for Flint that mirrors the Washington D.C. model and looks for a grant funding source to assist with the homeowner side of the line. Mr. Croft also commented on the partnership formed with U of M Flint to get all of the lead service lines identified and put into GIS data points.

Update on Filters

Jamie Gaskin, United Way CEO gave a full update on how the United Way has been the hub for coordination efforts regarding distributing filters to residents. Jamie reiterated that they have made a request of the state to supply them with leadership support that has gone unfulfilled.

Jamie also addressed the early morning question of whether or not the 25,000 "Brita" filters that were being distributed would filter lead, this brand was purchased by the state and is being distributed by DHHS. Eden Wells the Michigan Chief Medical Official addressed that the research had been done and the filters were indeed NSF certified and filter lead.

Andy Leavitt commented on the scope of work that Jamie and the United Way undertook outside of their normal purview and their swift action.

Committee Recommendation

Howard Croft announced that as committee chair, given the meetings discussions, he was prepared to make a recommendation from the TAC tem to the City Administrator and Mayor that the city return to DWSD as a water source. (Pending any objections from the group – no objections were made)

Director also commented that providing water from the Treatment Plant was still under review and pro's and con's were being evaluated prior to a firm decision being brought forth.

Drawing the meeting to a close, the DPW Director committed that weekly updates would be provided to the Technical Advisory Committee and that November and December meetings would be set up to maintain better communication.

Meeting closed at approximately 4:15 pm.

Howard Croft
Public Works Director
City of Flint

From: Prysby, Mike (DEQ)
Sent: Monday, January 05, 2015 8:57 AM
To: Shekter Smith, Liane (DEQ)
Subject: Emergency Service Requirements
Attachments: Act 399 Capacity and Reliability Requirements.pdf

Liane,

Attached is our letter we sent to the city of Flint concerning emergency service requirements. Flint meets the required capacity under R 325.110204 and ability to provide water during electrical power interruptions under R 325.11206. Although additional emergency interconnections with other public water supplies are not required based on Flint meeting the above requirements, we encouraged the city to maintain all possible interconnections for emergency purposes. Steve & I anticipate that we have maintain the same position with Genesee County when they are treating water purchased from KWA. If you wish to go over any specifics prior to the call, I am available to meet with you prior to 10:30 (10:00 or 10:15).

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Elizabeth Murphy <emurphy@cityofflint.com>
Sent: Friday, February 06, 2015 1:22 PM
To: Prysby, Mike (DEQ)
Subject: Re: Water Supply Sources

Mike,
Thank you so much for looking that up. I will look for it today or Monday.
LIZ

On Fri, Feb 6, 2015 at 12:56 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Elizabeth,

Yes, a source water assessment was completed for the Flint River and a report is available. I will send it to you asap (later today or on Monday).

Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

From: Prysby, Mike (DEQ)
Sent: Friday, February 06, 2015 11:01 AM
To: 'emurphy@cityofflint.com'
Subject: FW: Water Supply Sources

Elizabeth,

Below is a link to our website that lists all of surface water systems in Michigan. You will need to scroll down to the bottom of the list to see the listing of supplies using a river as their source. Also, I am not aware of any source water assessment conducted for the Flint River watershed; however, I would like to confirm that. I will let you know asap once I obtain the confirmation.

http://www.michigan.gov/deq/0,4561,7-135-3313_3675_3691-9775--,00.html

Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

--

Liz Murphy
Assistant to the Emergency Manager
City of Flint
810 237 2025

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Wednesday, June 10, 2015 4:20 PM
To: Prysby, Mike (DEQ)
Cc: Brent Wright;Howard Croft
Subject: May 2015 MOR
Attachments: May 2015 MOR.pdf

Mike,

Here is a copy of the May MOR. A hard copy will go out in the mail today, but I like to get you a copy as soon as it is complete. I am still compiling the pool of samples for lead & copper monitoring. I had spoke with Adam a month or so ago about this same topic. I was planning on using the addresses where bottles were sent in the first round (2014). The hundred for which we have results is easy, it is the others that never returned the samples that is taking some time.

FYI - The CCR for Detroit water is complete and headed to the printer this week. Still developing the one for Flint water, but we will be using the same company and since the mailing list is the same, we could still make the July 1st deadline.

--
Mike Glasgow
Utilities Administrator
City of Flint

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow	May 2015
Operator-in-Charge	Month/Year
F-1R, F-2	F-1
Certification of Operator-in-Charge	Water Plant Classification
	Genesee
Signature of Operator-in-Charge	County

Treatment Rate and Filter Data

Maximum Treatment Rate:	28.3	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	69	Hours
Average Head Loss:	n/a	Feet *(filter head loss meters not operational)
Average Filtration Rate:	3.1	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	2.3	Gallons Per Square Feet per Minute
Average Wash Water Use:	3.5%	Percent of Treated Water

Chemical Data

Chlorine on hand:	24,000	lb.	Est. supply:	33 days
Primary Coagulant (Ferric Chloride) on hand:	126,000	lb.	Est. supply:	7 days
Lime (CaO) on hand:	289	tons	Est. supply:	24 days
Fluoride on Hand:	15,000	lb.	Est. supply:	40 days
Cost of All Chemicals per Million Gallons:	n/a	dollars		
Total Power Cost per Million Gallons:	n/a	dollars		

Remarks	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	0	0
Number of filter confluence samples collected:	229	229
Percent of filter confluence samples > 0.3 NTU:	0.0%	0.0%
Number of filter confluence samples > 1 NTU:	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? NO
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? NO
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? YES
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? NO
If yes, indicate date(s) and duration on a separate sheet.

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant May 2015

WSSN: 2310

Date	Million Gallons Treated	Ozone Dosage (mg/L)	Ferric as Fe3+ mg/L	Lime Dosage (mg/L)	PW-340 Catioinc Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
							Raw			Plate Settler	Applied
							Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	16.6	2.1	18.7	162.7	4.9	0.73	8	3.8	8.2	1.31	1.72
2	16.6	2.0	17.8	162.2	4.8	0.80	8	3.3	8.6	1.26	1.80
3	16.6	2.2	17.6	156.1	4.9	0.80	7	4.4	12.4	1.07	1.59
4	16.6	2.1	17.6	170.2	4.5	0.80	8	3.7	8.6	1.40	1.43
5	17.0	2.0	17.7	163.9	4.4	0.83	7	2.6	4.4	1.41	1.54
6	17.1	2.2	17.6	144.2	4.3	0.72	7	3.8	10.5	1.38	1.59
7	17.3	2.2	19.6	148.4	4.3	0.64	7	3.4	11.4	1.65	1.14
8	17.6	2.2	17.8	186.8	4.5	0.79	7	2.7	3.6	1.33	1.75
9	16.9	1.8	19.9	200.9	5.2	0.88	8	3.4	8.3	1.46	3.25
10	16.3	2.5	20.8	183.8	6.0	0.94	7	6.3	16.8	1.23	1.88
11	16.4	2.8	20.8	183.5	6.3	0.91	7	8.9	23.5	1.04	2.50
12	16.6	2.7	20.6	175.0	6.4	0.97	7	4.0	5.6	0.93	3.31
13	16.6	2.8	20.4	166.0	5.4	0.87	7	3.7	6.4	1.00	1.83
14	16.8	2.6	20.5	166.8	5.4	0.88	7	3.6	6.9	1.17	2.55
15	17.3	2.2	19.8	176.0	5.4	0.82	7	3.3	7.8	1.45	2.32
16	16.9	2.4	20.2	173.9	5.5	0.95	7	3.5	8.7	1.44	1.35
17	16.7	2.5	20.5	175.4	5.7	0.94	7	3.0	6.4	1.33	1.45
18	16.7	2.3	20.5	188.7	5.8	0.94	7	4.8	19.6	1.17	2.10
19	16.8	2.4	20.3	179.2	5.8	0.91	8	5.4	16.3	1.08	2.3
20	16.5	2.2	21.1	152.5	5.3	0.88	7	3.7	13.4	0.91	4.18
21	16.5	2.2	20.9	168.6	4.7	0.78	8	3.0	10.6	0.76	2.84
22	16.7	1.9	20.6	169.4	4.7	0.71	7	2.1	3.5	0.74	2.40
23	16.7	2.5	20.8	175.2	4.7	0.80	8	4.1	14.4	1.00	2.00
24	16.6	2.4	20.9	173.5	4.8	0.78	7	3.2	6.7	1.06	2.46
25	16.7	2.3	19.2	170.3	4.7	0.76	8	3.0	7.6	1.11	2.72
26	16.7	2.5	20.5	177.9	4.3	0.74	7	2.0	4.7	1.12	1.54
27	18.3	2.3	18.9	167.8	4.0	0.68	7	2.6	4.8	1.00	2.94
28	20.0	2.2	17.1	152.9	3.6	0.59	8	9.4	28.1	1.23	3.62
29	19.7	2.3	17.4	154.6	3.6	0.64	7	3.2	6.4	1.06	2.92
30	17.3	2.1	19.9	181.4	4.1	0.73	8	13.3	39.0	1.06	1.64
31	17.3	2.3	19.7	148.8	4.3	0.71	8	8.7	31.9	0.99	1.55
Avg.	17.0	2.3	19.5	169.6	4.9	0.80	7	4.4			2.20
Max.	20.0	2.8	21.1	200.9	6.4	0.97	8	13.3	39	1.65	4.18
Min.	16.3	1.8	17.1	144.2	3.6	0.59	7	2.0			1.14
Total	528.4										

Filter turbiditiy City of Flint Water Treatment Plant May 2015 Page 3

WSSN: 2310

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	8	0.07	0.09	6	0	0	8	0.07	0.08	6	0	0	0.07
2	8	0.06	0.09	6	0	0	8	0.06	0.08	6	0	0	0.06
3	8	0.07	0.11	6	0	0	8	0.07	0.08	6	0	0	0.07
4	8	0.08	0.09	6	0	0	8	0.07	0.09	6	0	0	0.07
5	7	0.08	0.09	6	0	0	7	0.07	0.08	6	0	0	0.07
6	7	0.08	0.11	6	0	0	7	0.08	0.12	6	0	0	0.08
7	6	0.08	0.11	6	0	0	6	0.07	0.09	6	0	0	0.07
8	7	0.07	0.08	6	0	0	7	0.08	0.09	6	0	0	0.07
9	8	0.08	0.09	6	0	0	8	0.07	0.08	6	0	0	0.07
10	8	0.06	0.08	6	0	0	8	0.06	0.07	6	0	0	0.06
11	7	0.06	0.06	6	0	0	7	0.06	0.09	6	0	0	0.06
12	7	0.08	0.12	6	0	0	7	0.07	0.09	6	0	0	0.08
13	7	0.07	0.09	6	0	0	7	0.07	0.09	6	0	0	0.06
14	7	0.06	0.08	6	0	0	7	0.07	0.12	6	0	0	0.06
15	6	0.06	0.07	6	0	0	6	0.06	0.11	6	0	0	0.07
16	7	0.07	0.09	6	0	0	7	0.07	0.08	6	0	0	0.07
17	7	0.07	0.09	6	0	0	7	0.06	0.07	6	0	0	0.07
18	4	0.07	0.09	5	0	0	4	0.06	0.07	5	0	0	0.07
19	8	0.07	0.09	5	0	0	8	0.07	0.09	5	0	0	0.08
20	8	0.07	0.08	4	0	0	8	0.07	0.08	4	0	0	0.08
21	7	0.06	0.07	6	0	0	7	0.06	0.07	6	0	0	0.08
22	7	0.07	0.12	6	0	0	7	0.07	0.08	6	0	0	0.07
23	8	0.08	0.18	6	0	0	8	0.07	0.08	6	0	0	0.08
24	8	0.08	0.10	6	0	0	8	0.08	0.11	6	0	0	0.08
25	8	0.07	0.09	6	0	0	8	0.06	0.08	6	0	0	0.07
26	8	0.08	0.10	6	0	0	8	0.08	0.10	6	0	0	0.08
27	8	0.08	0.11	6	0	0	8	0.08	0.09	6	0	0	0.08
28	8	0.09	0.11	6	0	0	8	0.08	0.09	6	0	0	0.11
29	8	0.10	0.18	6	0	0	8	0.08	0.10	6	0	0	0.09
30	7	0.09	0.12	6	0	0	7	0.09	0.13	6	0	0	0.11
31	7	0.08	0.11	6	0	0	7	0.08	0.10	6	0	0	0.10
Avg.	7	0.07	0.10	6	0	0	7	0.07	0.09	6	0	0	
Max.	8	0.10	0.18	6	0	0	8	0.09	0.13	6	0	0	0.11
Min.	4	0.06	0.06	4	0	0	4	0.06	0.07	4	0	0	

Fluoridation & Chlorination City of Flint Water Treatment Plant May 2015 Page 4

WSSN: 2310

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.5	0.19	0.69		1.9	2.5	4.4	0.6	0.8	2.0	2.4	1.7	2.0
2	0.6	0.19	0.74		1.4	2.9	4.3	0.2	0.5	1.8	2.0	1.6	1.8
3	0.6	0.20	0.75		1.4	3.1	4.5	0.2	0.4	1.8	2.0	1.8	2.0
4	0.5	0.19	0.74		1.4	3.2	4.6	0.2	0.4	2.1	2.3	2.0	2.3
5	0.5	0.20	0.73		1.4	3.0	4.4	0.3	0.5	2.0	2.2	2.0	2.2
6	0.5	0.21	0.69	0.69	1.2	2.9	4.1	0.4	0.6	1.8	2.1	1.6	1.8
7	0.5	0.19	0.70		1.2	3.1	4.3	0.3	0.5	1.8	2.1	1.7	1.9
8	0.5	0.20	0.68		1.1	3.3	4.4	0.6	0.8	1.7	2.1	1.4	1.7
9	0.6	0.20	0.75		1.1	3.5	4.6	0.5	0.6	1.7	1.9	1.7	1.9
10	0.6	0.18	0.74		1.1	3.2	4.3	0.4	0.7	1.8	2.2	1.3	1.6
11	0.6	0.19	0.78		1.0	3.5	4.5	0.4	0.6	1.5	1.8	1.1	1.4
12	0.6	0.19	0.79		0.7	3.9	4.6	0.4	0.5	1.7	2.1	1.6	2.0
13	0.6	0.19	0.79	0.74	0.7	4.1	4.8	0.4	0.6	2.1	2.4	1.8	2.0
14	0.6	0.20	0.79		0.7	3.4	4.1	0.3	0.4	1.9	2.3	1.8	2.2
15	0.6	0.20	0.82		0.7	3.4	4.1	0.4	0.5	1.6	2.0	1.5	1.9
16	0.6	0.20	0.82		0.7	3.4	4.1	0.4	0.6	1.8	2.1	1.7	2.1
17	0.5	0.17	0.76		0.7	3.2	3.9	0.3	0.5	1.5	1.8	1.5	1.8
18	0.6	0.20	0.76		0.7	3.6	4.3	0.3	0.5	1.8	2.1	1.3	1.5
19	0.6	0.18	0.73		0.7	3.5	4.2	0.5	0.6	1.8	2.0	1.7	1.9
20	0.5	0.18	0.75	0.73	0.9	2.4	3.3	0.4	0.5	1.9	2.2	0.6	0.8
21	0.6	0.19	0.78		1.6	3.2	4.8	0.5	0.7	1.9	2.2	1.8	2.1
22	0.5	0.20	0.78		1.6	3.0	4.6	0.2	0.8	2.0	2.4	0.9	1.1
23	0.5	0.19	0.72		1.7	4.0	5.7	0.5	0.6	1.6	1.9	1.6	1.7
24	0.6	0.19	0.76		2.0	2.8	4.8	0.4	0.6	1.6	1.7	1.6	1.8
25	0.6	0.21	0.79		2.0	2.5	4.5	0.5	0.7	1.9	2.2	1.7	2.0
26	0.6	0.20	0.79		2.2	2.9	5.1	0.3	0.5	1.4	1.6	1.4	1.6
27	0.5	0.18	0.74	0.73	2.1	3.2	5.3	0.6	0.9	1.6	1.8	1.5	1.9
28	0.5	0.20	0.70		2.5	3.1	5.6	0.5	0.6	1.9	2.2	1.8	2.2
29	0.5	0.22	0.75		2.7	2.8	5.5	0.6	0.8	1.8	2.2	1.8	2.2
30	0.6	0.18	0.78		2.9	3.2	6.1	0.4	0.5	1.6	1.8	1.6	1.8
31	0.6	0.18	0.77		2.8	2.8	5.6	0.3	0.5	2.2	2.5	2.3	2.5
Avg.	0.56	0.19	0.75	0.72	1.4	3.2	4.6	0.4	0.6	1.8	2.1	1.6	1.9
Max.	0.60	0.22	0.82	0.74	2.9	4.1	6.1	0.6	0.9	2.2	2.5	2.3	2.5
Min.	0.50	0.17	0.68	0.69	0.7	2.4	3.3	0.2	0.4	1.4	1.6	0.6	0.8

Chemical Analyses

City of Flint Water Treatment Plant

WSSN: 2310

May 2015

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	7.91	7.88	265	163	214	61	51	102	84.2	48.9	14.1	8.3	47	92
2	7.88	7.82	267	163	214	60	53	103	89.8	54.5	10.7	6.3	45	92
3	7.91	7.75	278	178	219	73	59	105	96.2	64.9	8.3	4.9	50	96
4	7.88	7.75	270	171	218	66	52	105	90.6	55.3	10.2	7.8	50	90
5	7.80	7.68	270	166	218	66	52	100	81.0	60.9	16.5	3.3	51	92
6	7.81	7.70	266	161	216	64	50	97	88.2	57.7	11.2	4.1	48	84
7	7.74	7.67	266	172	216	70	50	102	88.2	60.9	11.2	4.9	50	88
8	7.82	7.68	268	164	218	60	50	104	81.8	54.5	15.6	6.8	49	88
9	7.79	7.51	265	168	214	65	51	103	94.6	59.3	8.7	4.9	45	93
10	7.83	7.58	267	172	216	66	51	106	92.2	64.9	8.7	2.4	47	90
11	7.78	7.48	260	170	217	65	43	105	81.8	59.3	15.6	4.4	49	91
12	7.80	7.53	268	162	216	56	52	106	97.0	63.3	6.3	1.0	48	90
13	7.88	7.35	266	174	216	70	50	104	95.4	60.1	6.8	4.4	46	92
14	7.77	7.56	274	158	216	50	58	108	95.4	60.1	8.7	1.9	44	90
15	7.92	7.57	270	167	220	64	50	103	90.6	64.1	10.7	2.4	46	90
16	7.85	7.56	270	185	220	80	50	105	80.2	72.1	17.0	2.4	46	91
17	7.88	7.55	266	163	220	54	46	109	94.6	56.9	7.3	2.4	44	87
18	7.85	7.43	272	156	222	44	50	112	81.8	56.9	16.5	3.4	47	91
19	7.89	7.54	278	175	219	64	59	111	94.6	63.3	10.7	3.0	46	88
20	7.87	7.63	275	176	218	74	57	102	82.6	69.7	17.5	1.9	45	90
21	7.85	7.53	276	159	220	52	56	107	78.6	56.9	18.9	4.9	46	92
22	7.94	7.45	272	148	218	40	54	108	90.6	54.5	11.2	2.9	47	93
23	7.86	7.44	276	168	217	54	59	114	94.6	60.9	9.7	3.9	46	93
24	7.92	7.51	275	175	215	63	60	112	96.2	65.7	8.7	2.4	46	89
25	7.94	7.65	275	170	221	58	54	112	94.6	64.9	9.7	2.9	46	91
26	7.90	7.57	276	177	224	68	52	109	85.8	61.7	15.1	5.3	47	93
27	7.87	7.61	278	161	224	54	54	107	81.0	57.7	18.4	4.4	47	91
28	8.20	7.60	279	175	233	71	46	104	97.0	60.1	8.3	5.8	46	86
29	8.25	7.60	274	164	220	64	54	100	80.2	56.9	18.0	5.3	51	90
30	8.21	7.68	278	192	222	86	56	106	94.6	64.9	10.2	6.8	47	85
31	8.17	7.69	275	182	220	68	55	114	93.0	60.1	11.2	8.3	45	84
Avg.	7.90	7.60	271	169	219	63	53	106	89.3	60.4	12.0	4.3	47	90
Max.	8.25	7.88	279	192	233	86	60	114	97.0	72.1	18.9	8.3	51	96
Min.	7.74	7.35	260	148	214	40	43	97	78.6	48.9	6.3	1.0	44	84

Bacteriological & Physical Parameters

City of Flint Water Treatment Plant

WSSN: 2310

May 2015

Date	Total Coliform						Standard Plate Count (Simplate MPN)		Conductivity (mS)	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap	Tap	Raw	Raw	Tap	Raw	Tap
1	1	70	12	0	1	0	195	< 2	0.46	11.1				
2	1	61	12	0	1	0	239	< 2	0.45	11.9				
3	1	79	12	0	1	0	248	< 2	0.48	12.7				
4	1	88	12	0	1	0	202	< 2	0.46	14.3				
5	1	67	12	0	1	0	202	< 2	0.46	14.3				
6	1	86	12	0	1	0	231	< 2	0.46	13.9				
7	1	88	12	0	1	0	372	< 2	0.48	14.5				
8	1	142	12	1	1	0	392	< 2	0.46	14.4				
9	1	199	12	0	1	0	555	< 2	0.50	15.7				
10	1	138	12	1	1	0	440	< 2	0.47	15.7				
11	1	548	12	0	1	0	299	< 2	0.46	15.9				
12	1	921	12	3	1	0	738	< 2	0.46	15.4				
13	1	253	12	1	1	0	260	< 2	0.50	14.9				
14	1	225	12	6	1	0	738	< 2	0.44	14.7				
15	1	365	12	6	1	0	> 738	< 2	0.48	14.9				
16	1	722	12	4	1	0	> 738	< 2	0.47	15.1				
17	1	225	12	6	1	0	> 738	< 2	0.41	16.6				
18	1	262	12	2	1	0	2400	< 2	0.44	16.5				
19	1	292	12	2	1	0	1940	< 2	0.46	16.4				
20	1	134	12	0	1	0	830	< 2	0.46	16.2				
21	1	185	12	0	1	0	1160	< 2	0.47	15.8				
22	1	328	12	0	1	0	324	< 2	0.44	15.7				
23	1	199	12	0	1	0	150	< 2	0.48	16.7				
24	1	199	12	0	1	0	400	< 2	0.47	17.6				
25	1	272	12	0	1	0	590	< 2	0.46	17.0				
26	1	218	12	0	1	0	510	< 2	0.46	17.8				
27	1	365	12	0	1	0	470	< 2	0.43	18.3				
28	1	980	12	0	1	0	555	< 2	0.47	20.9				
29	1	909	12	0	1	0	1120	< 2	0.47	21.4				
30	1	5794	12	0	1	0	1040	< 2	0.49	22.7				
31	1	4884	12	0	1	0	1000	< 2	0.49	20.1				

Avg.									0.46	16.1				
Max.		5794					2400	< 2	0.50	22.7				
Min.									0.41	11.1				

Distribution System Monitoring

City of Flint Water Treatment Plant

WSSN: 2310

May 2015

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3											0
4											0
5	0.4	1.0	1.2	1.1	0.8	0.4	0.5	1.5	0.3	1.5	10
6	0.3	1.1	1.2	1.0	0.6	0.3	0.4	1.6	0.7	1.3	10
7	0.5	0.8	1.0	0.8	0.5	0.7	0.4	1.5	0.2	1.2	10
8											0
9											0
10											0
11											0
12	0.6	0.7	1.0	0.6	0.1	0.6	0.7	1.3	0.1	1.2	10
13	0.1	0.8	1.0	0.8	0.6	0.4	0.6	1.1	0.7	1.0	10
14	1.5	1.2	1.0	1.0	0.5	0.4	1.0	1.4	0.1	1.3	10
15											0
16											0
17											0
18	1.2	1.0	0.9	0.7	0.4	0.2	0.7	1.1	0.6	1.1	10
19											0
20	1.0	0.9	1.3	1.0	0.2	0.3	0.9	1.3	0.7	0.1	10
21											0
22											0
23											0
24											0
25											0
26	0.3	0.6	1.0	0.8	0.4	0.3	0.6	1.3	0.6	1.0	10
27	0.2	0.6	1.0	0.7	0.3	0.3	0.5	1.2	0.4	0.3	10
28											0
29											0
30											0
31											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	100
Total # of routine distribution samples required	100

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	0
Percent of routine distribution samples positive	0%

See page 9 for positive sample information.

Distribution Disinfectant Total Residual Summary	
Percentage of samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	0.76

Distribution System Monitoring

City of Flint Water Treatment Plant

WSSN: 2310

May 2015

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3											0
4											0
5	0.6	1.2	1.5	1.4	1.0	0.7	0.7	1.8	0.5	1.8	10
6	0.5	1.4	1.5	1.3	1.0	0.5	0.6	1.8	1.0	1.6	10
7	0.8	1.0	1.3	1.0	0.8	1.0	0.7	1.7	0.4	1.4	10
8											0
9											0
10											0
11											0
12	0.9	1.0	1.3	1.0	0.2	0.7	0.9	1.5	0.2	1.5	10
13	0.3	1.0	1.3	1.0	0.8	0.6	0.8	1.3	1.0	1.3	10
14	1.8	1.5	1.4	1.3	0.7	0.6	1.3	1.7	0.3	1.7	10
15											0
16											0
17											0
18	1.6	1.4	1.3	1.0	0.6	0.4	0.9	1.5	0.9	1.4	10
19											0
20	1.4	1.3	1.7	1.3	0.5	0.5	1.1	1.5	1.1	0.4	10
21											0
22											0
23											0
24											0
25											0
26	0.4	1.0	1.4	1.1	0.7	0.4	0.9	1.6	0.9	1.4	10
27	0.4	1.0	1.2	1.0	0.5	0.4	0.7	1.4	0.5	0.5	10
28											0
29											0
30											0
31											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.0

Positive Distribution Samples

Date	Monitoring station	Date	Repeat Monitoring Stations	Residual (mg/L) Free / Total	Present or Absent

From: Hansen, Jeff <jrhansen@lan-inc.com>
Sent: Saturday, June 13, 2015 12:52 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ);Cook, Pat (DEQ);Matta, Samir;Green, Warren;Brent Wright (bwright@cityofflint.com);mglasgow@cityofflint.com
Subject: Flint GAC 1 of 2
Attachments: GAC-basis-of-design.pdf

Mike,

Attached is our revised basis of design. I am going to send preliminary drawings in a separate email due to file sizes.

Thanks,

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 **C** [redacted]
www.lan-inc.com • JRHansen@lan-inc.com

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BASIS OF DESIGN
FILTER MEDIA REPLACEMENT WITH GRANULAR ACTIVATED CARBON (GAC)
CITY OF FLINT

1. GENERAL DESCRIPTION

As one measure to assist with the reduction of total trihalomethanes (TTHM) in the water system the City of Flint (City) proposes to replace the existing anthracite media with GAC for each of the 12 filters within the water treatment plant (WTP). Two layers of media were installed in the filters in 2005: 12" of sand and 18" of anthracite. Recent investigations have shown that the sand installed does not meet the original design specifications and some intermixing of sand and anthracite has occurred. Consequently, replacement of the sand layer for all 12 filters is also proposed.

It is anticipated that the GAC media will be biologically active and chlorine feed prior to filtration can adversely affect the GAC. Therefore, the intermediate chlorine feed point is proposed to be moved to the weir chamber immediately downstream of the filters. The existing chlorine piping and diffuser upstream of the filters will remain in place for future use either for disinfection of the filters if necessary or for general disinfection if/when the KWA supply is available and GAC media is no longer needed in terms of TTHM control.

Relevant design information is provided in this narrative and detailed calculations follow.

2. DESIGN CRITERIA

The Flint WTP began full time operation using the Flint River on April 25th, 2014. The following information was taken from monthly operating reports (MOR's) for the full year from May 2014 through April 2015:

A. Average daily demand (ADD) = 18.3 MGD
B. Maximum daily demand (MDD) = 25.4 MGD
C. Minimum monthly average chlorine feed at intermediate point = 1.8 mg/l
D. Average monthly chlorine feed at intermediate point = 2.9 mg/l
E. Average plant effluent pH = 7.8
F. Maximum monthly average plant effluent pH = 8.1

Selected WTP design flow = 24 MGD
Maximum WTP flow expected = 30 MGD
Minimum WTP flow expected = 8 MGD

3. MEDIA DESIGN

A. GAC Media
- 18" depth
- GAC media selected is Filtrasorb 400 manufactured by Calgon Carbon Corporation with an effective size of 0.65 mm, uniformity coefficient of 1.90 and specific gravity of 1.40.
- The Filtrasorb 400 characteristics vary slightly from Ten State Standards (TSS) which state an effective size of 0.45-0.55 mm and a maximum uniformity coefficient of 1.65. However, it is somewhat unclear if TSS apply

to GAC as a capping layer. Also, the Filtrasorb 400 does meet the AWWA standard B604-12 for Granular Activated Carbon.

- When the GAC adsorptive capacity is spent, the media will act strictly as a filtering media. The hope is that the KWA supply will be active by the time GAC adsorption is limited. However, Calgon has agreed to test the GAC capacity quarterly after installation for 1 year to evaluate performance and future need to regenerate or replace the GAC.

B. Sand Media

- 12″ depth
- Sand media shall have effective size of 0.50 mm, uniformity coefficient of 1.65 or less, and specific gravity of 2.5 or greater.

C. Dual Media Performance

- Sand settling velocity greater than GAC settling velocity
- D90 of GAC / D10 of sand < 4.0 to avoid excessive intermixing
- Adequate expansion of both medias during backwash without media loss
- Combined head loss of proposed medias less than combined head loss of existing sand and anthracite

4. INTERMEDIATE CHLORINE FEED

The new chlorine feed point will be within the first bay of the weir chamber. In order to avoid stripping of chlorine as the water cascades over the weir, a submerged drop pipe will be installed that outlets on the downstream side of the weir wall. Chlorine will be injected into this drop pipe. Contact time will begin in the second bay of the weir chamber.

CITY OF FLINT WTP
Filter Media Replacement
Basis of Design

					Notes
Max. Expected Flow Rate =	30.0 mgd =		20,833 gpm =	2,785 cft/min	
Max. Day May 2014 - April 2015 =	25.4 mgd =		17,639 gpm =	2,358 cft/min	
Avg. Day May 2014 - April 2015 =	18.3 mgd =		12,708 gpm =	1,699 cft/min	
Design Flow Rate =	24.0 mgd =		16,667 gpm =	2,228 cft/min	
Min. Expected Flow Rate =	8.0 mgd =		5,556 gpm =	743 cft/min	
Area / Filter =	700 sft				
Number of Filters =	12				

mgd	30.0	24.0	8.0
Loading (gpm/sft) =	2.48	1.98	0.66

Top of Underdrain elev =	723.58			
Washwater Trough Weir elev =	730.67			
Operating Water Level =	734.00			
Top of Filter Basin / Floor elev =	736.00			
Filter BW Dimensional D =	7.08			
Existing Sand D =	12.00 inches =		1.00 ft	
Existing Anthracite D =	18.00 inches =		1.50 ft	
Proposed Sand D =	12.00 inches =		1.00 ft	
Proposed GAC D =	18.00 inches =		1.50 ft	See following pages for details
Proposed Water Depth =			7.92 ft	
Max Cold BW Flow rate / filter =	7910 gpm =		11.3 gpm/sft	To match current BW flow rate
Max Warm BW Flow rate / filter =	11900 gpm =		17.0 gpm/sft	Use when water temp > 65 degrees
Max Sand Expanded D =	14.2 inches =		1.18 ft =	18% Occurs at cold temps
Max GAC Expanded D =	45.10 inches =		3.76 ft =	150%
Total BW Expanded D =	59.30 inches =		4.94 ft	
Proposed BW Freeboard =			2.14 ft	
Proposed # of Filters to Replace	12			
GAC Volume =	12,600 cft			
GAC apparent density =	33.7 lbs/cft			
GAC Total Weight =	424,620 lbs =		212.3 tons	

mgd	30.0	24.0	8.0
EBCT (min) =	4.5	5.7	17.0

Propose to relocate intermediate chlorine feed to inlet side of weir chamber following filtration
Intermediate CL2 feed point to remain in place as means to disinfect filters in the future, if needed

mgd	30.0	24.0	8.0	
Contact time (min) =	33.0	43.7	131.2	
CT =	59.5	78.7	236.1	Calculations attached separately

Required CT at 1.8 mg/l chlorine, less than 0.5 degrees C, and pH of 8.0 = 56 OK

Lockwood, Andrews & Newnam, Inc.
A LAN & DAVY COMPANY

CITY OF FLINT- DEPARTMENT OF PUBLIC UTILITIES

GAC Filter Evaluation
Filter Media Analysis 2015 1st Stage

Date: 06/03/15
By: JRH
Data Entry:

WATER INPUT DATA	
Backwash Rate (gpm/sf)	11.3
Water Temperature (F°)	32
Viscosity (centipoise)	1.79355
Dynamic Viscosity (# -sec/sf)	3.746E-05
Water Density (#/cf)	62.42
Mass Density (# -sec/ft^4)	1.940

COMMENTS

SITE LOCATION	10 States		Filtrasorb 400		Filtrasorb 300		300/400 Mix		New sand / 300		New sand / 400	
Media Type	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	New sand	GAC	New sand	GAC
Bed Depth (in)	12	18	12	18	12	18	12	18	12	18	12	18
Uniformity Coefficient	2.30	1.65	2.30	1.90	2.30	2.10	2.30	1.925	1.70	2.10	1.65	1.90
Effective Size (mm)	0.400	0.550	0.40	0.625	0.40	0.800	0.40	0.670	0.65	0.900	0.50	0.650
d60% Size (mm)	0.920	0.908	0.920	1.188	0.920	1.680	0.920	1.290	1.105	1.890	0.825	1.235
d90% Size (mm)	1.607	1.269	1.607	1.826	1.607	2.762	1.607	2.000	1.577	3.107	1.154	1.899
Porosity	0.40	0.50	0.40	0.614	0.40	0.586	0.40	0.55	0.40	0.586	0.40	0.586
Specific Gravity	2.554	1.45	2.554	1.40	2.554	1.40	2.554	1.45	2.500	1.40	2.500	1.40
Media Density (#/cf)	159.4	90.5	159.4	87.4	159.4	87.4	159.4	90.5	156.0	87.4	156.0	87.4
Min. Fluidization Rate (gpm/sf)	7.03	2.14	7.03	3.12	7.03	5.87	7.03	4.05	9.49	7.27	5.57	3.35
Reynolds Number	2.447	0.734	2.447	1.403	2.447	3.731	2.447	1.978	3.968	5.201	1.741	1.567
Correction Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Min. Fluidization Rate (gpm/sf)	7.03	2.14	7.03	3.12	7.03	5.87	7.03	4.05	9.49	7.27	5.57	3.35
Unhindered Settling Vel. (ft/sec)	20.68	6.20	20.68	11.85	20.68	31.53	20.68	16.71	33.53	43.95	14.71	13.24
Expansion Coefficient (n)	3.287	3.708	3.287	3.475	3.287	3.151	3.287	3.358	3.132	3.048	3.401	3.437
Bed Porosity Coefficient (k)	142.82	27.92	142.82	17.00	142.82	31.61	142.82	30.16	167.27	37.07	125.75	21.03
Porosity (expanded)	0.462	0.784	0.462	0.889	0.462	0.721	0.462	0.747	0.423	0.677	0.492	0.835
Bed Depth Expanded (in)	13.4	41.6	13.4	62.7	13.4	26.8	13.4	32.0	12.5	23.1	14.2	45.1
% Expanded Bed	11.6	131.0	11.6	248.3	11.6	48.6	11.6	77.5	4.0	28.3	18.2	150.3
d90gac/d10s Ratio	3.173		4.564		6.905		5.001		4.780		3.797	
Discussion/Notes									Use 18.2 gpm/sft BW		Use 11.3 gpm/sft BW	

Lockwood, Andrews & Newnam, Inc.
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CITY OF FLINT- DEPARTMENT OF PUBLIC UTILITIES

GAC Filter Evaluation
Filter Media Analysis 2015 1st Stage

Date: 06/03/15
By: JRH
Data Entry:

WATER INPUT DATA	
Backwash Rate (gpm/sf)	17.0
Water Temperature (F°)	80
Viscosity (centipoise)	0.86134
Dynamic Viscosity (# -sec/sf)	1.799E-05
Water Density (#/cf)	62.22
Mass Density (# -sec/ft^4)	1.927

COMMENTS

SITE LOCATION	10 States		Filtrasorb 400		Filtrasorb 300		300/400 Mix		New sand / 300		New sand / 400	
Media Type	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	New sand	GAC	New sand	GAC
Bed Depth (in)	12	18	12	18	12	18	12	18	12	18	12	18
Uniformity Coefficient	2.30	1.65	2.30	1.90	2.30	2.10	2.30	1.93	1.70	2.10	1.65	1.90
Effective Size (mm)	0.400	0.550	0.400	0.625	0.400	0.800	0.400	0.670	0.650	0.900	0.500	0.650
d60% Size (mm)	0.920	0.908	0.920	1.188	0.920	1.680	0.920	1.290	1.105	1.890	0.825	1.235
d90% Size (mm)	1.607	1.269	1.607	1.826	1.607	2.762	1.607	2.000	1.577	3.107	1.154	1.899
Porosity	0.40	0.50	0.40	0.61	0.40	0.586	0.40	0.550	0.40	0.59	0.40	0.59
Specific Gravity	2.554	1.45	2.554	1.40	2.554	1.40	2.554	1.45	2.500	1.40	2.500	1.40
Media Density (#/cf)	159.4	90.5	159.4	87.4	159.4	87.4	159.4	90.5	156.0	87.4	156.0	87.4
Min. Fluidization Rate (gpm/sf)	13.38	4.09	13.38	5.98	13.38	11.24	13.38	7.75	18.07	13.92	10.62	6.42
Reynolds Number	9.640	2.905	9.640	5.556	9.640	14.781	9.640	7.829	15.633	20.604	6.858	6.206
Correction Factor	1.000	1.000	1.000	1.000	1.000	0.853	1.000	1.000	0.840	0.779	1.000	1.000
Min. Fluidization Rate (gpm/sf)	13.38	4.09	13.38	5.98	13.38	9.59	13.38	7.75	15.18	10.85	10.62	6.42
Unhindered Settling Vel. (ft/sec)	81.46	24.55	81.46	46.95	81.46	124.90	81.46	66.16	132.10	174.11	57.95	52.44
Expansion Coefficient (n)	2.866	3.231	2.866	3.028	2.866	2.746	2.866	2.926	2.731	2.656	2.965	2.995
Bed Porosity Coefficient (k)	184.94	38.40	184.94	26.18	184.94	41.60	184.94	44.59	185.36	44.89	160.68	31.81
Porosity (expanded)	0.435	0.777	0.435	0.867	0.435	0.722	0.435	0.719	0.417	0.694	0.469	0.811
Bed Depth Expanded (in)	12.7	40.4	12.7	52.3	12.7	26.8	12.7	28.9	12.3	24.3	13.6	39.5
% Expanded Bed	6.2	124.3	6.2	190.5	6.2	48.9	6.2	60.3	2.9	35.2	13.0	119.3
d90gac/d10s Ratio	3.173		4.564		6.905		5.001		4.780		3.797	
Discussion/Notes									Use 20 gpm/sft BW		Use 16.5-17 gpm/sft BW	

Lockwood, Andrews & Newnam, Inc.
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CITY OF FLINT WTP

CT CALCS

TIME FROM FILTERS EFFLUENT TO 1ST TAP

Label	Location	Diameter m	Diameter ft	L ft	W ft	D ft	Bottom elev	Vol cft	Flow mgd	Flow cfs	Baffle Factor	Time hr	Vol cft	Flow mgd	Flow cfs	Time hr	Flow Rate mgd	Flow Rate cft/s	Time min
A	Weir chamber, pre-baffle			26.75	13.08	15.5	709.00	5423	30.0	46.4	1.0		#DIV/0!	24.0	37.1	2.43	8.0	12.4	7.30
B	Weir chamber, post-baffle			26.75	8.5	10.0	709.00	2274	30.0	46.4	1.0	0.82	0.55	24.0	37.1	1.02	8.0	12.4	3.06
	Effluent pipe																		
C	wc - bldg face	48	4.00	16.00				201	30.0	46.4	1.0	0.07	3.69	24.0	37.1	0.09	8.0	12.4	0.27
D	bldg face - junct well	48	4.00	401.00				5039	30.0	46.4	1.0	1.81	3.69	24.0	37.1	2.26	8.0	12.4	6.79
	Res. 3																		
E	Junct well			12.00	18.00	15.0	704.00	3240	30.0	46.4	0.50	0.58	0.34	24.0	37.1	0.73	8.0	12.4	2.18
F	Clear well			140.00	177	10.0	709.00	247,800	30.0	46.4	0.30	26.69	0.09	24.0	37.1	33.37	8.0	12.4	100.10
G	Transfer chamber			7.00	55.25	15.0	704.00	5,801	30.0	46.4	0.50	1.04	0.11	24.0	37.1	1.30	8.0	12.4	3.91
H	Suction well			9.00	25.75	15.0	704.00	3,476	30.0	46.4	0.50	0.62	0.24	24.0	37.1	0.78	8.0	12.4	2.34
	Pump																		
I	Suction pipe	36	3.00	12.00				85	30.0	46.4	1.0	0.03	6.57	24.0	37.1	0.04	8.0	12.4	0.11
J	Discharge pipe	30	2.50	20.00				98	30.0	46.4	1.0	0.04	9.46	24.0	37.1	0.04	8.0	12.4	0.13
K	Dis. pipe (to bldg face)	42	3.50	34.00				327	30.0	46.4	1.0	0.12	4.82	24.0	37.1	0.15	8.0	12.4	0.44
	Finish main 1																		
L1	bldg face - 1st tee	42	3.50	208.00				2001	30.0	46.4	1.0	0.72	4.82	24.0	37.1	0.90	8.0	12.4	2.69
M1	tee - WTP tap	42	3.50	223.00				2146	30.0	46.4	1.0	0.77	4.82	24.0	37.1	0.96	8.0	12.4	2.89
N1	WTP tap - oldg face	12	1.00	19.00				15	30.0	46.4	1.0	0.005	59.10	24.0	37.1	0.01	8.0	12.4	0.02
	Subtotal											1.49				1.87			5.60
	Finish main 2																		
L2	bldg face - 1st tee	42	3.50	73.00				702	30.0	46.4	1.0	0.25	4.82	24.0	37.1	0.32	8.0	12.4	0.95
M2	tee - 1st split	42	3.50	277.00				2665	30.0	46.4	1.0	0.96	4.82	24.0	37.1	1.20	8.0	12.4	3.59
	Subtotal											1.21				1.51			4.53
								Total CT time	@ 30 mgd =			33.0		@ 24 mgd =		43.7	@ 12 mgd =		131.2

	2014								2015							
Month	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr		Min	Avg	Max
Cl2	5.0	4.7	3.9	3.3	3.1	2.5	2.0	1.8	1.8	2.1	2.4	2.0		1.8	2.9	5.0
pH	7.37	7.48	7.62	7.78	7.82	7.71	7.87	8.07	7.74	7.84	7.89	7.83		7.4	7.8	8.1
Flow (mgd)	30.0	24.0	30.0													
CT =	82.5	78.7	286.1													

Lockwood, Andrews & Newnam, Inc.
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Table C-1. CT Values for Inactivation of *Giardia* Cysts by Free Chlorine at 0.5°C or Lower

CHLORINE CONCENTRATION	pH<=6 Log Inactivation						pH=6.5 Log Inactivation						pH=7.0 Log Inactivation						pH=7.5 Log Inactivation					
(mg/L)	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0
<=0.4	23	46	69	91	114	137	27	54	82	109	136	163	33	65	98	130	163	195	40	79	119	158	198	237
0.6	24	47	71	94	118	141	28	56	84	112	140	169	33	67	100	133	167	200	40	80	120	159	199	239
0.8	24	48	73	97	121	145	29	57	86	115	143	172	34	68	103	137	171	205	41	82	123	164	205	246
1	25	49	74	99	123	148	29	59	88	117	147	176	35	70	105	140	175	210	42	84	127	169	211	253
1.2	25	51	76	101	127	152	30	60	90	120	150	180	36	72	108	143	179	215	43	86	130	173	216	259
1.4	26	52	78	103	129	155	31	61	92	123	153	184	37	74	111	147	184	221	44	89	133	177	222	266
1.6	26	52	79	105	131	157	32	63	95	126	155	189	38	75	113	151	188	226	46	91	137	182	228	273
1.8	27	54	81	108	135	162	32	64	97	129	161	193	39	77	116	154	193	231	47	93	140	186	233	279
2	28	55	83	110	138	165	33	66	99	131	164	197	39	79	118	157	197	236	48	95	143	191	238	286
2.2	28	56	85	113	141	169	34	67	101	134	169	201	40	81	121	161	202	242	50	99	149	198	248	297
2.4	29	57	86	115	143	172	34	68	103	137	171	205	41	82	124	165	206	247	50	99	149	199	248	298
2.6	29	58	88	117	146	175	35	70	105	139	174	209	42	84	126	168	210	252	51	101	152	203	253	304
2.8	30	59	89	119	148	178	36	71	107	142	178	213	43	86	129	171	214	257	52	103	155	207	258	310
3	30	60	91	121	151	181	36	72	109	145	181	217	44	87	131	174	218	261	53	105	158	211	263	316
CHLORINE CONCENTRATION	pH=8.0 Log Inactivation						pH=8.5 Log Inactivation						pH=9.0 Log Inactivation											
(mg/L)	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0						
<=0.4	46	92	139	185	231	277	55	110	165	219	274	329	65	130	195	260	325	390						
0.6	48	95	143	191	238	286	57	114	171	228	285	342	68	136	204	271	339	407						
0.8	49	98	148	197	246	295	59	113	177	236	295	354	70	141	211	281	352	422						
1	51	101	152	203	253	304	61	122	183	243	304	365	73	146	219	291	364	437						
1.2	52	104	157	209	261	313	63	125	188	251	313	376	75	150	226	301	376	451						
1.4	54	107	161	214	268	321	65	129	194	258	323	387	77	155	232	309	387	464						
1.6	55	110	165	219	274	329	66	132	199	265	331	397	80	159	239	318	398	477						
1.8	56	113	169	225	282	338	68	136	204	271	339	407	82	163	245	326	408	489						
2	55	115	173	231	288	346	70	139	209	278	348	417	83	167	250	333	417	500						
2.2	59	118	177	235	294	353	71	142	213	284	355	426	85	170	256	341	426	511						
2.4	60	120	181	241	301	361	73	145	218	290	363	435	87	174	261	348	435	522						
2.6	61	123	184	245	307	368	74	148	222	296	370	444	89	178	267	355	444	533						
2.8	63	125	188	250	313	375	75	151	226	301	377	452	91	181	272	362	453	543						
3	64	127	191	255	318	382	77	153	230	307	383	460	92	184	276	369	460	552						

Source: AWWA, 1991.

Lockwood, Andrews & Newnam, Inc.
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DESIGN NOTES AND COMPUTATIONS

SUBJECT: FLINT WTP - GAC SHEET NO. OF

HEAD LOSS THROUGH MEDIA

$$h_L = \frac{1.067\, V^2 D}{\phi\, g\, \epsilon^4} \cdot \frac{C_D f}{d}$$ (ROSE EQUATION)

V = flow velocity (fps)
D = media depth (ft)
d = particle dia. (ft)
C_D = drag coefficient $= \frac{24}{R} + \frac{3}{\sqrt{R}} + 0.34$

$R = \frac{\phi d V}{\mu \text{ (kinematic)}}$

ϕ = shape factor
(0.82 - sand)
(0.80 - GAC)
(0.73 - crushed, angular sand)

ϵ = porosity

f = mass fraction of sand particles @ dia. (d)

V_{max} @ 3 gpm/sf

$$\frac{3 \text{ gal}}{\text{min} \cdot \text{sf}} \left| \frac{\text{cft}}{7.48052 \text{ gal}} \right| \frac{1 \text{ min}}{60 \text{ sec}} = 0.006684 \text{ fps}$$

SEE SPREADSHEET CALCS FOR EACH MEDIA

PREPARED BY VRH DATE 5/29/15 CHECKED BY DATE PROJECT NUMBER D-005

CITY OF FLINT- DEPARTMENT OF PUBLIC UTILITIES

GAC Filter Evaluation

Filter Media Analysis 2015 1st Stage

WATER CHARACTERISTICS	
Flow Rate (gpm/sf)	3.00
Velocity (fps)	0.006684
Water Temperature (F°)	32
Kinematic Viscosity (ft^2/s)	1.931E-05
Dynamic Viscosity (# -sec/sf)	3.746E-05
Water Density (#/cf)	62.42
Mass Density (# -sec/ft^4)	1.940
g (ft/sec^2) =	32.2

32 5/27/2015 field measurements
40 time: 2:30
50 Filter #7
60 water depth in service 98 inches = 8.17 ft
70 Flow as per panel 1160 gpm
80 8 filters in service
90 MOR plant flow

Existing Sand
Shape factor 0.82
Porosity = 0.4
Depth = 12 in = 1.0 ft

Mesh #	d mm	d in	d ft	f % passing	f % retained	f Cumulative	R	Cd	(Cd)(f)/d	
8	2	0.07874	0.00656	1	0	0	1.862	15.4	0.0	
16	1.18	0.04646	0.00387	0.9925	0.0075	0.0075	1.099	25.0	48.5	
30	0.6	0.02362	0.00197	0.3076	0.6849	0.6924	0.559	47.3	16,460	
50	0.3	0.01181	0.00098	0.0256	0.282	0.9744	0.279	91.9	26,337	
100	0.15	0.00591	0.00049	0.0087	0.0169	0.9913	0.140	180.2	6,188	
200	0.075	0.00295	0.00025	0.005	0.0037	0.995	0.070	355.3	5,343	
	0.0312	0.00123	0.00010	0	0.005	1	0.029	844.0		lost by wash
									54,376	

Head loss = 3.83 ft

Anthracite
Shape factor 0.7
Porosity = 0.45
Depth = 18 in = 1.5 ft

Mesh #	d mm	d in	d ft	f % passing	f % retained	f Cumulative	R	Cd	(Cd)(f)/d
8	2.38	0.09370	0.00781	0.95	0.05	0.05	2.162	13.5	86.3
18	1	0.03937	0.00328	0.1	0.9	0.950	0.909	29.9	8,203
30	0.6	0.02362	0.00197	0.04	0.01	0.960	0.545	48.4	246
40	0.4	0.01575	0.00131	0.01	0.03	0.990	0.363	71.4	1,631
100	0.15	0.00591	0.00049	0.0075	0.0025	0.993	0.136	184.6	938
200	0.075	0.00295	0.00025	0.005	0.0025	0.995	0.068	364.1	3,699
	0.0312	0.00123	0.00010	0	0.005	1	0.028	864.9	
									14,803

Head loss = 1.15 ft = 13.7 in

Ex. mixed media HL = 4.98 ft

Proposed Sand w/ 400
Shape factor 0.82
Porosity = 0.4
Depth = 12 in = 1.0 ft

Mesh #	d mm	d in	d ft	f % passing	f % retained	f Cumulative	R	Cd	(Cd)(f)/d	
~16	1.154	0.0454	0.00379	0.9	0.1	0.1	1.075	25.6	675	
~20	0.825	0.0325	0.00271	0.6	0.4	0.5	0.768	35.0	5,173	
35	0.5	0.0197	0.00164	0.1	0.4	0.9	0.466	56.3	13,724	
50	0.3	0.0118	0.00098	0.05	0.05	0.95	0.279	91.9	4,670	
100	0.15	0.0059	0.00049	0.005	0.045	0.995	0.140	180.2	16,476	
200	0.075	0.0030	0.00025	0.005	0	0.995	0.070	355.3	0	
	0.0312	0.0012	0.00010	0	0.005	1	0.029	844.0		lost by wash
									40,718	

Head loss = 2.87 ft

GAC - Filtrsorb 400
Shape factor 0.8
Porosity = 0.614
Depth = 18 in = 1.5 ft

Mesh #	d mm	d in	d ft	f % passing	f % retained	f Cumulative	R	Cd	(Cd)(f)/d
8	2.38	0.0937	0.00781	0.99	0.01	0.01	2.162	13.5	17.3
12	1.68	0.0661	0.00551	0.95	0.04	0.05	1.526	18.5	134.2
30	0.6	0.0236	0.00197	0.1	0.85	0.9	0.545	48.4	20,913
40	0.4	0.0157	0.00131	0.04	0.06	0.96	0.363	71.4	3,263
100	0.15	0.0059	0.00049	0.01	0.03	0.99	0.136	184.6	11,252
200	0.075	0.0030	0.00025	0.005	0.005	0.995	0.068	364.1	7,398
	0.0312	0.0012	0.00010	0	0.005	1	0.028	864.9	
									42,976

Head loss = 0.84 ft = 10.1 in

Pr. mixed media HL = 3.71 ft

001215

FILTER NO. 12 | FILTER NO. 10 | FILTER NO. 8 | FILTER NO. 6 | FILTER NO. 4 | FILTER NO. 2

FILTER NO. 11 | FILTER NO. 9 | FILTER NO. 7 | FILTER NO. 5 | FILTER NO. 3 | FILTER NO. 1

N

WASH WATER VALVE INDICATION PANEL (103)

20" X 16" REDUCER

FROM 42" CONC. MAIN

20" (112) (111) 12" WATER SUPPLY

FLOOR ELEV. 718'-0"

FLOOR ELEV. 709'-0"

UP

DOWN

FLOOR ELEV. 718'-0"

24" B.F.

DH

1 FT08 FT12 FT09 FT10

2 FT08 FT13 FT09 FT10

36" TRANSITION PIECE

RELOCATED 6" ROOF DRAIN

22'-7"

25'-9"

16'-1"

C

48" EFFLUENT

36" WASH WATER DRAIN

36" WASH WATER DRAIN TO STORM SEWER (FUTURE RESIDUALS HANDLING)

48" EFFLUENT TO RESERVOIR NO. 4

8 FT08 FT15 FT09 FT10

10 FT08 FT15 FT09 FT10

9 FT08 FT15 FT09 FT10

7 FT08 FT15 FT09 FT10

4 FT08 FT14 FT09 FT10

6 FT08 FT14 FT09 FT10

5 FT08 FT14 FT09 FT10

3 FT08 FT14 FT09 FT10

11 FT08 FT16 FT09 FT10

15 FT08 FT16 FT09 FT10

14 FT08 FT16 FT09 FT10

13 FT08 FT16 FT09 FT10

12 FT08 FT16 FT09 FT10

1 FT08 FT08

MAINTAIN 3" PIPING FROM FILTER CLASSIFICATION AREA TO 36" WASH WATER DRAIN CONCRETE ENCASEMENT (TYPICAL OF 2)

10" WASH AIR

5' X 6' ACCESS HATCH ABOVE

LADDER TO WEST WASH WATER SUPPLY PLATFORM

℄ FILTER GALLERY

DEHUMIDIFIER ON DEHUMIDIFIER STAND. SEE DETAIL SHEET FT23.

24" NORTH EFFLUENT

4" INFLUENT CHANNEL DRAIN

36" WASH WATER DRAIN

24" SOUTH EFFLUENT

2" INFLUENT CHANNEL DRAIN

30" NORTH EFFLUENT

30" SOUTH EFFLUENT

RELOCATED SUMP PUMP

RELOCATED SUMP PUMP PIPING

5'-6" DIA. SUMP (BELOW)

36" DRAIN

4' DIA. SAN. SEWER M.H.

12" SAN. SEWER

SEE 30" WASH WATER DRAIN DETAIL.

CONTRACTOR SHALL COMPLETE ALL EFFLUENT PIPING TO WEST OF SPOOL PIECE AND SUCCESSFULLY PRESSURE TEST IN PRESENCE OF ENGINEER PRIOR TO PLACEMENT OF THIS NORTH EFFLUENT SPOOL PIECE.

36" NORTH EFFLUENT

4" INFLUENT CHANNEL DRAIN

36" WASH WATER DRAIN

CONTRACTOR SHALL COMPLETE ALL EFFLUENT PIPING TO WEST OF SPOOL PIECE AND SUCCESSFULLY PRESSURE TEST IN PRESENCE OF ENGINEER PRIOR TO PLACEMENT OF THIS SOUTH EFFLUENT SPOOL PIECE.

36" SOUTH EFFLUENT

36" WASH WATER DRAIN

℄ OF WATER PLANT

FILTER PLAN – EL. 720'-0"

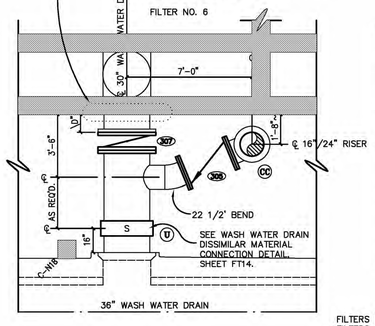
SCALE : 1/8" = 1'-0"

FILTER GALLERY PIPING LEGEND

ID	DESCRIPTION	EXISTING	NEW
P	WASH WATER SUPPLY – GALLERY SERVING FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
Q	REWASH FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	NO
R	EFFLUENT FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
S	NORTH EFFLUENT	YES	YES
T	SOUTH EFFLUENT	YES	YES
U	WASH WATER DRAIN FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
V	INFLUENT FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
W	SURFACE WASH FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	NO
X	PLANT WATER AND SURFACE WASH	YES	NO
AA	WASH AIR SUPPLY – GALLERY	YES	NO
BB	WASH AIR SUPPLY FILTERS NO. 5 – NO. 12, INCLUSIVE	NO	YES
CC	FILTER TO WASTE SERVING FILTERS NO. 5 – NO. 12, INCLUSIVE	NO	YES
DD	PROCESS WATER	NO	YES
EE	WASH WATER SUPPLY – WEST	NO	YES

FLANGE CONNECTION @ FILTER BOX WALL

ANY DAMAGED OR SPALLING CONCRETE SHALL BE REMOVED. ANY EXPOSED INTEGRALLY CAST HARDWARE AT FLANGE AT FILTER BOX WALL SHALL BE CLEANED BY SSPC–SP–6 COMMERCIAL BLAST, EPOXY COATED WITH TNEMEC SERIES 66, AND PATCHED WITH DURATHIN SINGLE COMPONENT POLYMER–REINFORCED HIGH STRENGTH CEMENT BASED PATCHING MATERIAL OR ENGINEER–APPROVED EQUAL. ORIGINAL PLANAR WALL SURFACE SHALL BE RESTORED.



30" WASH WATER DRAIN DETAIL

SCALE : 1/4" = 1'-0"

EXISTING CAST IRON WASH WATER DRAIN DISTANCE FROM FILTER BOX WALL TO FLANGE/ FLANGE FACE	
FILTER NO.	DISTANCE "D"
5	8.5"±
6	10"±
7	8.5"±
8	8.5"±
9	9.5"±
10	8"±
11	9.75"±
12	9.5"±

FILTERS NO. 7, 9, & 11 SIMILAR.
FILTERS NO. 5, 8, 10, & 12 OPPOSITE HAND.

GENERAL NOTE

ALL DRAWINGS ARE A REPRESENTATION OF ACTUAL CONDITIONS BASED ON 1952 CONSTRUCTION PLAN DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, SIZES, AND LOCATIONS OF ALL RELEVANT ITEMS.

GENERAL NOTE NO. 1

THIS NOTE APPLIES TO DRAWINGS FT01 THROUGH FT28

THE WORK ARE FOR ALL CONCRETE SURFACES THAT ARE REPAIRED, INFILLED OR PATCHED SHALL BE SMOOTH AND FLUSH WITH SURROUNDING CONCRETE SURFACES. IF NECESSARY THE CONTRACTOR SHALL GRIND THE NEW SURFACES TO BE FLUSH WITH THE ADJOINING SURFACES.

GENERAL CONSTRUCTION NOTE

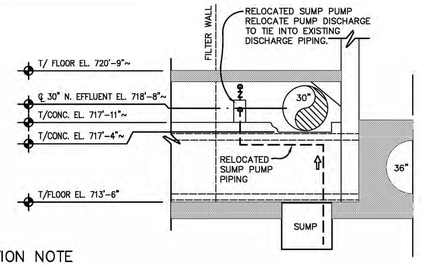
NO MOUNTING OR FASTENING OF ANY TEMPORARY OR PERMANENT EQUIPMENT, SUPPORTS, OR DEVICES TO THE CONCRETE OF THE FILTER BOXES OR INFLUENT CHANNEL IS PERMITTED.

PIPE END CONFIGURATION LEGEND

FLANGE

GROOVED END COUPLING

SLEEVE TYPE COUPLING

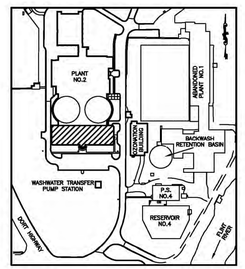


SECTION 1

SCALE : 1/4" = 1'-0" FT08 | FT08

NOTES :

1. FILTER INTERNALS NOT SHOWN FOR CLARITY.
2. SUPPORT MECHANISMS FOR VALVES, ACTUATORS, & PIPING NOT SHOWN FOR CLARITY. REFER TO 1/4 SCALE SECTIONS FOR SUPPORT LOCATIONS.
3. HANDRAIL NOT SHOWN FOR CLARITY. SEE NEW FILTER GALLERY SECTION FOR NEW HANDRAIL AT FLOOR ELEV. 718'± AT TOP OF 36" WASH WATER DRAIN CONCRETE ENCASEMENT.



KEY PLAN

NTS

THE DLZ TEAM
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
1425 KEYSTONE AVE., LANSING, MI 48911
TELE. (517) 393-4080 • FAX (517) 272-7390

FLINT MICHIGAN

CITY OF FLINT
DEPARTMENT OF PUBLIC WORKS & UTILITIES

WATER TREATMENT PLANT REHABILITATION PHASE I, SEGMENT 4

FILTER REHABILITATION NEW FILTER PLAN – EL. 720'-0"

DRAWN	J.B.P.
CHK'D.	C.A.P.
APPRV'D	C.A.P.
DATE	JUNE 2002
PROJECT NUMBER	7019–04

NO.	REVISION	BY	DATE
1	ADDENDUM NO. 1 REVISION	JO	10/03
	AS–BUILT	DJV	8/05

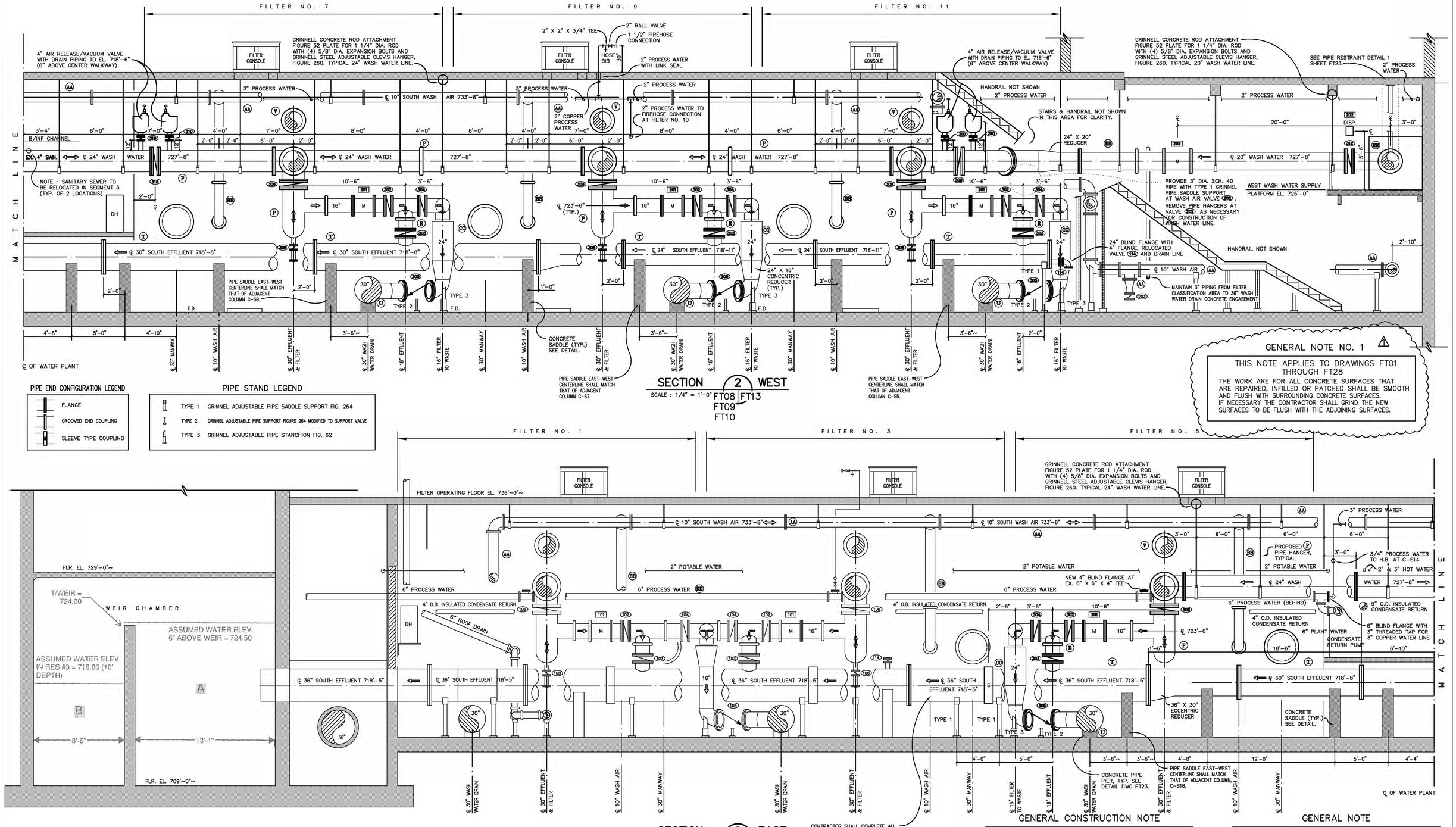
SHEET

OF

DRAWING NUMBER

FT08

001216



SECTION 2 WEST

SCALE : 1/4" = 1'-0"

FT08 | FT13
FT09
FT10

PIPE END CONFIGURATION LEGEND

- FLANGE
- GROOVED END COUPLING
- SLEEVE TYPE COUPLING

PIPE STAND LEGEND

- TYPE 1 GRINNEL ADJUSTABLE PIPE SADDLE SUPPORT FIG. 264
- TYPE 2 GRINNEL ADJUSTABLE PIPE SUPPORT FIGURE 264 MODIFIED TO SUPPORT VALVE
- TYPE 3 GRINNEL ADJUSTABLE PIPE STANCHION FIG. 62

GENERAL NOTE NO. 1

THIS NOTE APPLIES TO DRAWINGS FT01 THROUGH FT28

THE WORK ARE FOR ALL CONCRETE SURFACES THAT ARE REPAIRED, INFILLED OR PATCHED SHALL BE SMOOTH AND FLUSH WITH SURROUNDING CONCRETE SURFACES. IF NECESSARY THE CONTRACTOR SHALL GRIND THE NEW SURFACES TO BE FLUSH WITH THE ADJOINING SURFACES.

SECTION 2 EAST

SCALE : 1/4" = 1'-0"

FT08 | FT13
FT09
FT10

GENERAL CONSTRUCTION NOTE

NO MOUNTING OR FASTENING OF ANY TEMPORARY OR PERMANENT EQUIPMENT, SUPPORTS, OR DEVICES TO THE CONCRETE OF THE FILTER BOXES OR INFLUENT CHANNEL IS PERMITTED.

GENERAL NOTE

ALL DRAWINGS ARE A REPRESENTATION OF ACTUAL CONDITIONS BASED ON 1952 CONSTRUCTION PLAN DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, SIZES, AND LOCATIONS OF ALL RELEVANT ITEMS.

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FLINT MICHIGAN

CITY OF FLINT
DEPARTMENT OF PUBLIC WORKS & UTILITIES

WATER TREATMENT PLANT REHABILITATION PHASE I, SEGMENT 4

FILTER REHABILITATION NEW FILTER GALLERY SECTIONS

DRAWN	J.B.P.
CHK'D.	C.A.P.
APPRV'D	C.A.P.
DATE	JUNE 2002
PROJECT NUMBER	7019-04

NO.	REVISION	BY	DATE
1	ADDENDUM NO. 1 REVISION	JO	10/03
	AS-BUILT	DJV	8/05

SHEET
OF
DRAWING NUMBER
FT13

001217

OZONE BLDG

PLANT NO. 1
(ABANDONED)

CHLORINE
CONTACT

LOADING RAMP

GATE

GATE

GROUND OBSCURED

N1
M1
M2
D
L1
L2
E
F
L

MH #50
RIM = 727.21

MH #51
RIM = 726.18

MH #88
RIM = 725.08

WVMH #04
RIM = 726.35

HV7
720.31

54" RAW WATER
48" WATER
42" RAW WATER
42" H.S. DISCHARGE HEADER
48" RAW WATER LOW SERVICE
48" RAW WATER LOW SERVICE
36" OVERFLOW DRAIN
72" INTAKE CONDUIT
6" SLUDGE FORCE MAIN
6" SLUDGE FORCE MAIN
6" SLUDGE FORCE MAIN
6" SLUDGE FORCE MAIN
6" WATER
6" WATER (ABD.)
8" DECANT
14" F.M.
36" STORM
36" WATER
24" WATER
36" WATER
24" WATER
36" SEWER
36" SEWER
24" TO PARK
24" DISTRIBUTION LINE
24" OD CI WATER
24" OD CI WATER
6" SS
6" SS
6" SS
6" SS
8" SS
8" SS
24" SD
24" SD
24" SAN SEWER
6" SLUDGE FORCE MAIN
8" SS
8" SS
8" SS

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

GENERAL PLAN

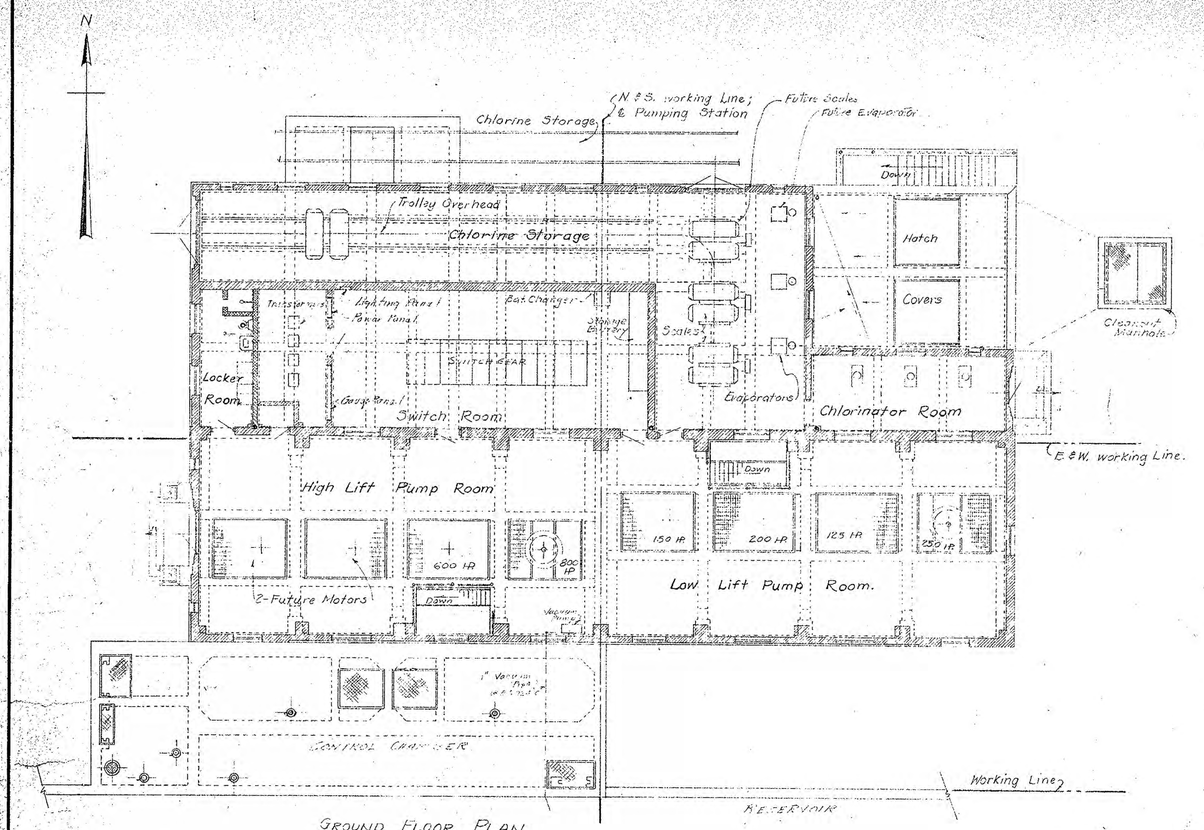
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

SCALE: 1"=20'-0"

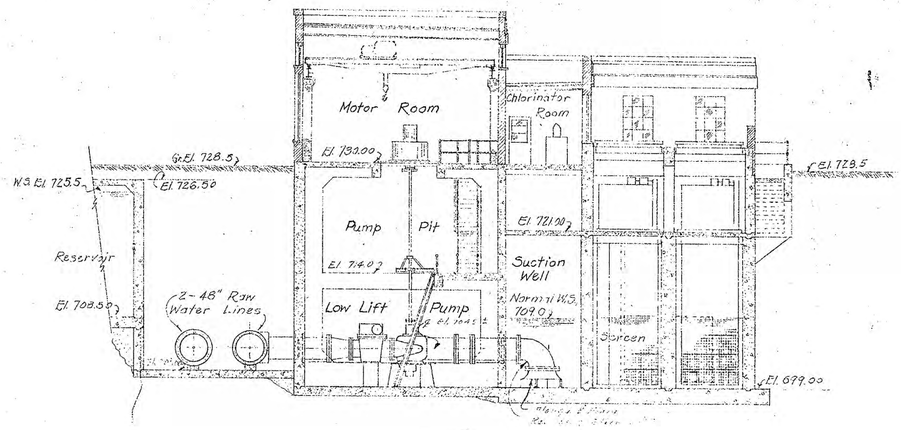
JUNE 1948

22101-2

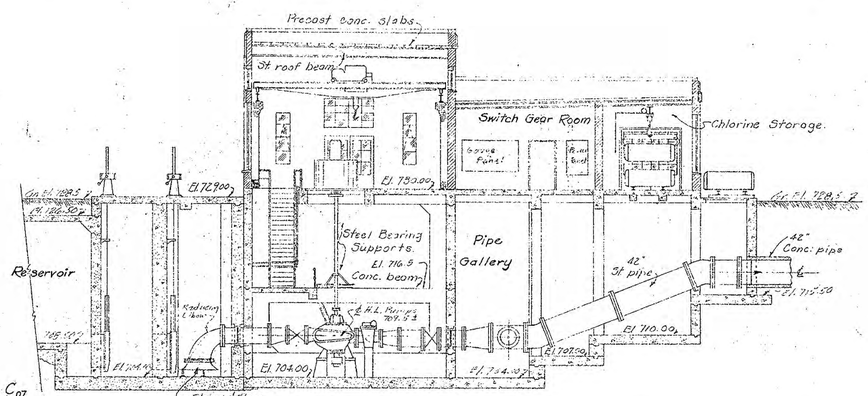
001219



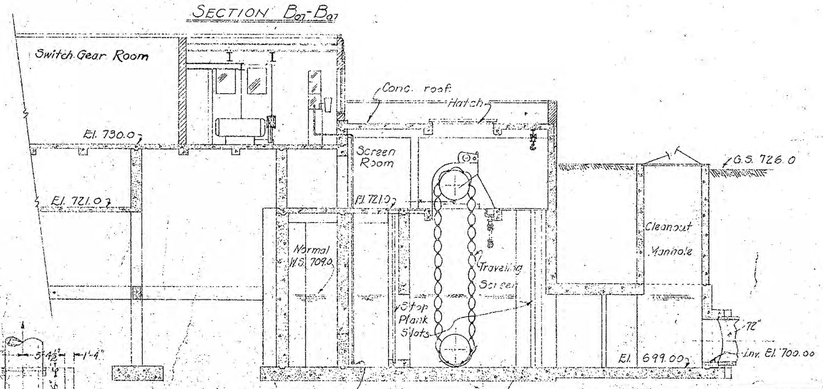
GROUND FLOOR PLAN



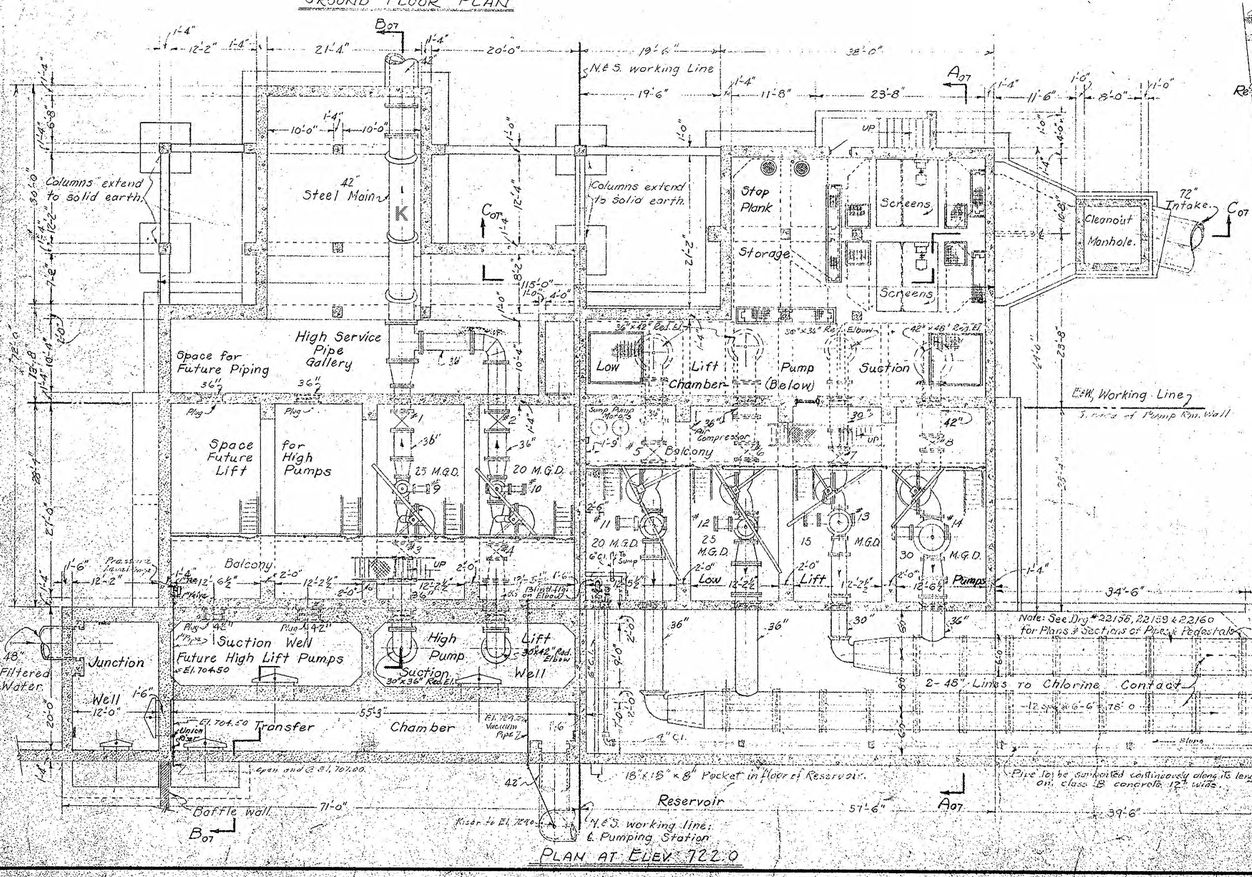
SECTION A_{07}-A_{07}



SECTION B_{07}-B_{07}



SECTION C_{07}-C_{07}



PLAN AT ELEV. 722.0

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

PUMPING STATION NO. 3
GENERAL PLAN

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

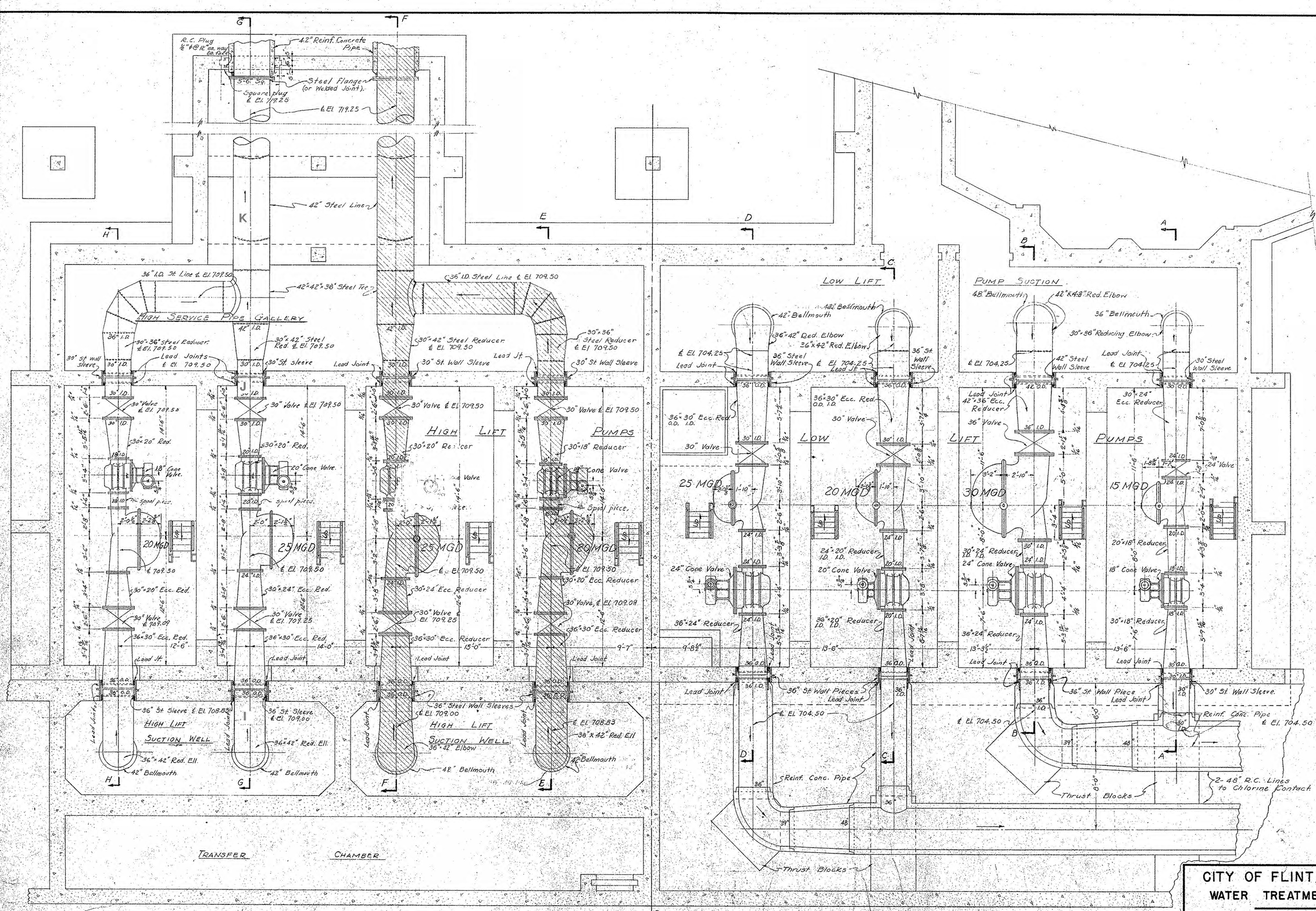
REV. 2	8-12-48	REVISED TO CONFORM ADDENDUM #2 AS ISSUED
REV. 1	6-8-48	ORIGINAL ISSUE

DRAWN BY: M.R.D. CHECKED BY:

SCALE: 1"= 10'-0" JUNE 1948

22107-2

001220



℄ Pumping Station
(North-South working line)

PARTIAL SECTIONAL PLAN @ El. 711 ℄
(SHOWING HIGH & LOW LIFT PIPING)
Scale: ¼"=1'-0"

NOTE:
Layout of pipe in Pump Station is for Steel pipe.
▨ Denotes Future High Lift Pumps & Pipes

REV.	5	MAR'49	Dimension Changes	S.E.M.
REV.	4	FEB'49	Relocate High Lift Pumps	M.A.D.
REV.	3	JAN'49	Relocate LLift Valves	M.A.D.
REV.	2	DEC'48	Complete Details	M.A.D.
REV.	1	Oct '48	Original Issue	
DRAWN BY:		M.A.D.	CHECKED BY:	

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

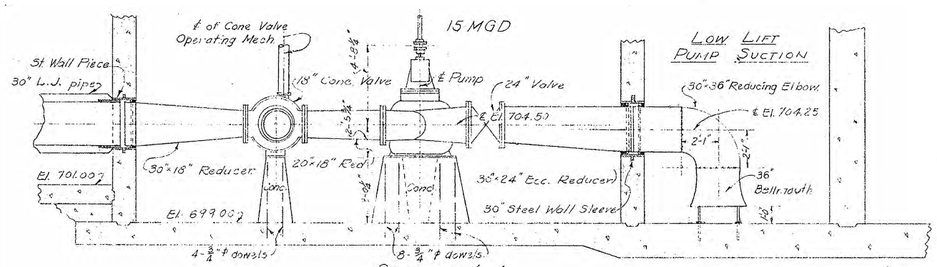
PUMPING STATION NO. 3
PLAN OF PUMP PIPING

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

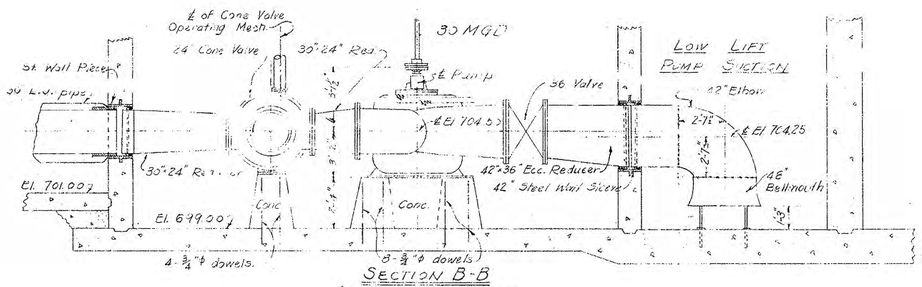
SCALE: AS SHOWN
NOV. 1948

S 22107-A4

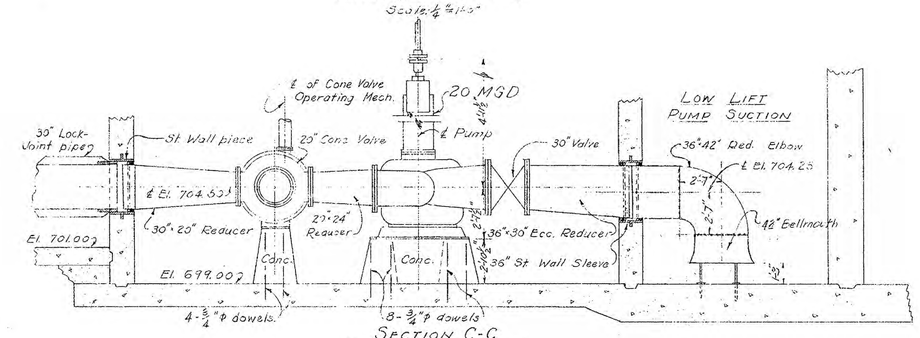
001221



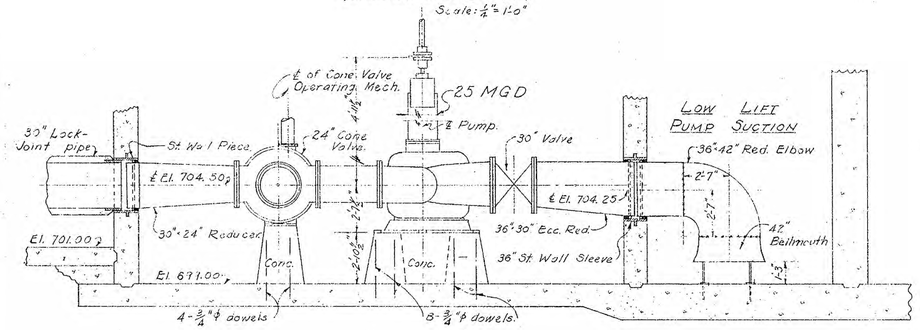
SECTION A-A
(SHOWING 15 MGD PUMP)
Scale: ¼"=1'-0"



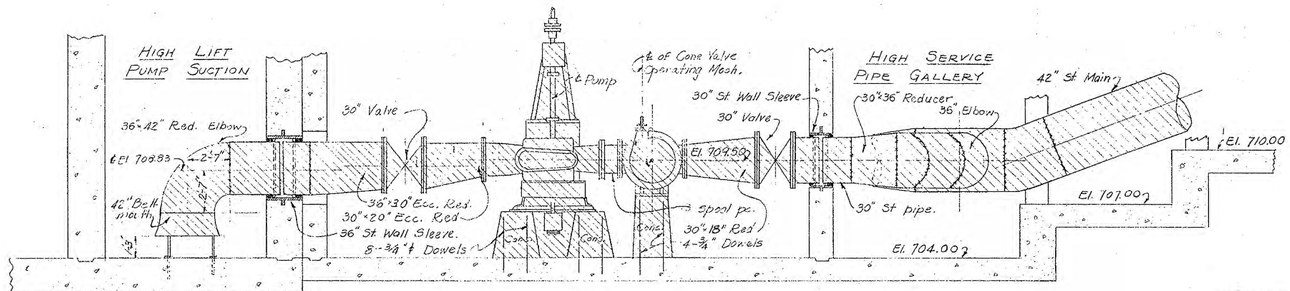
SECTION B-B
(SHOWING 30 MGD PUMP)
Scale: ¼"=1'-0"



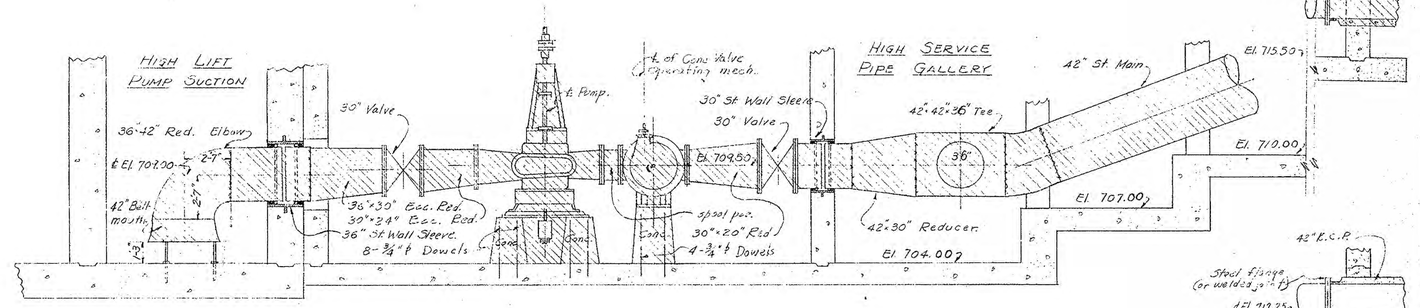
SECTION C-C
(SHOWING 20 MGD PUMP)
Scale: ¼"=1'-0"



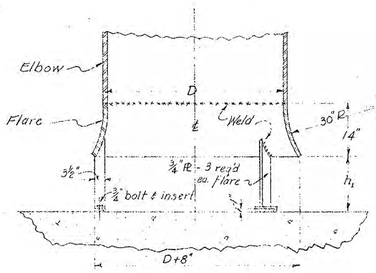
SECTION D-D
(SHOWING 25 MGD PUMP)
Scale: ¼"=1'-0"



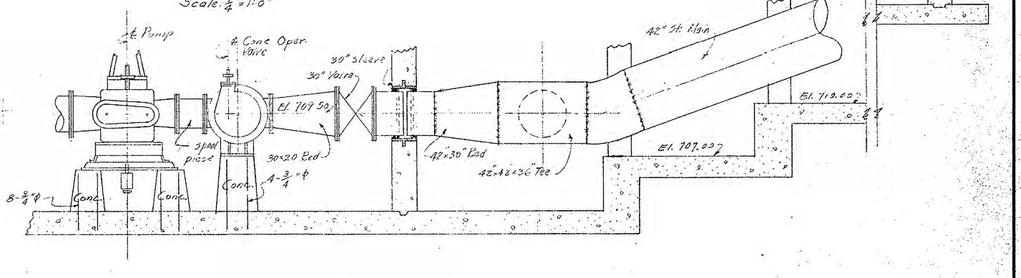
SECTION E-E
(SHOWING 20 MGD PUMP)
Scale: ¼"=1'-0"



SECTION F-F
(SHOWING 25 MGD PUMP)
Scale: ¼"=1'-0"

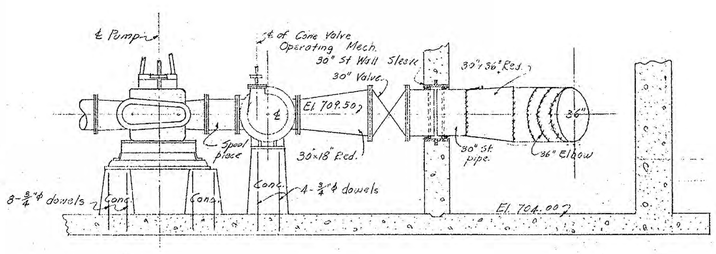


BELLMOUTH & SUPPORT DETAILS
No Scale



SECTION G-G
(SHOWING 25 MGD PUMP DISCHARGE)
Scale: ¼"=1'-0"

HIGH SERVICE	D	D+8"	h_1
25 M.G.D. Pump	42"	50"	1'-3"
20 M.G.D. Pump	42"	50"	1'-3"
LOW SERVICE	D	D+8"	h_1
15 M.G.D Pump	36"	44"	1'-0"
20 M.G.D. Pump	42"	50"	1'-3"
25 M.G.D. Pump	42"	50"	1'-3"
30 M.G.D. Pump	48"	56"	1'-3"



SECTION H-H
(SHOWING 20 MGD Pump DISCHARGE)
Scale: ¼"=1'-0"

NOTE:
1. ▨ Denotes Future HIGH LIFT Pumps & PIPES.
2. Suction piping for HIGH LIFT Pumps is as shown in SECTS E-E & F-F.

REV.	5	MAR. '49	Spool Piece Notations S.B.M.
REV.	4	FEB. '49	Relocate H Lift Pumps M.A.M.
REV.	3	JAN. '49	Relocate L Lift Valves M.A.M.
REV	2	DEC. '48	Complete Details M.A.M.
REV	1	Oct '48	Original Issue
DRAWN BY:		M.A.M.	CHECKED BY:

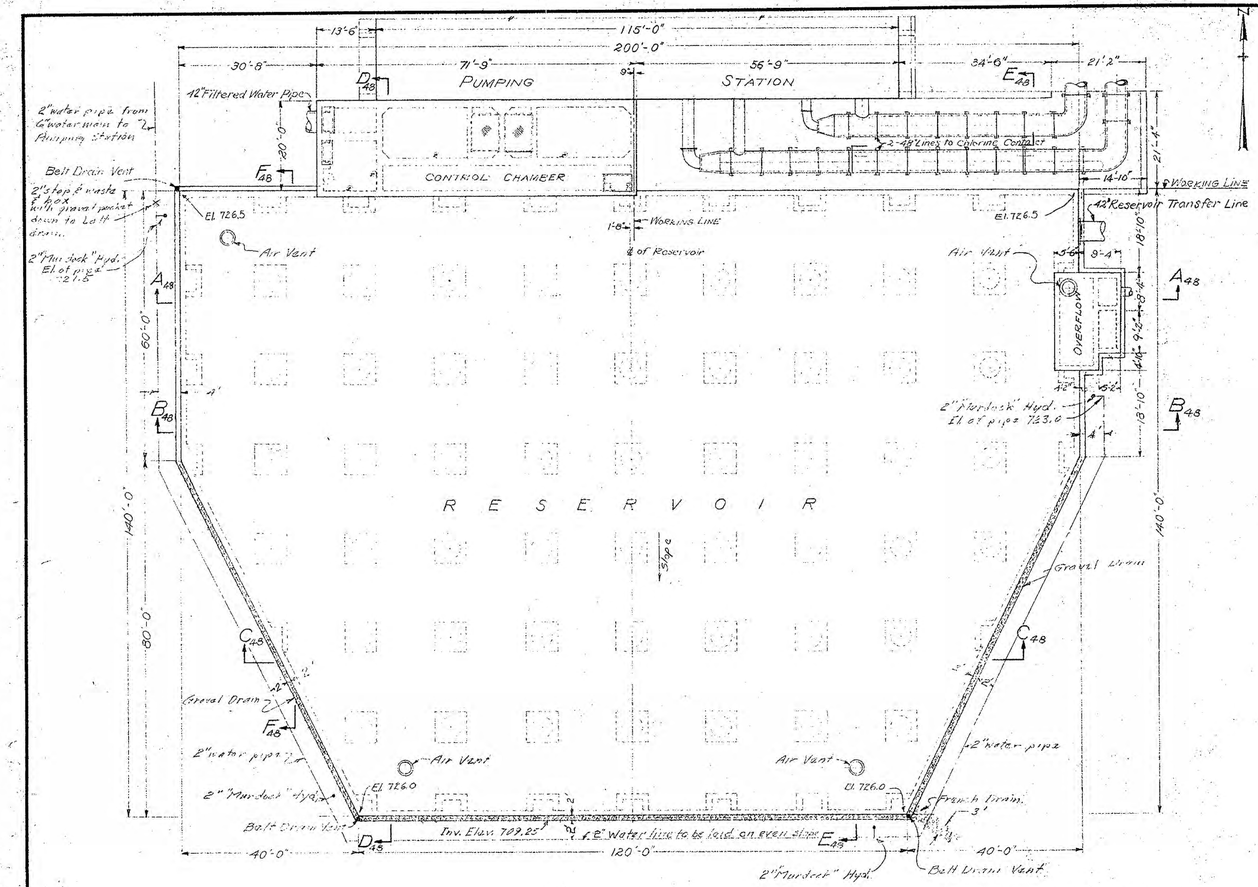
CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

PUMPING STATION NO. 3
SECTIONS OF PUMP PIPING

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

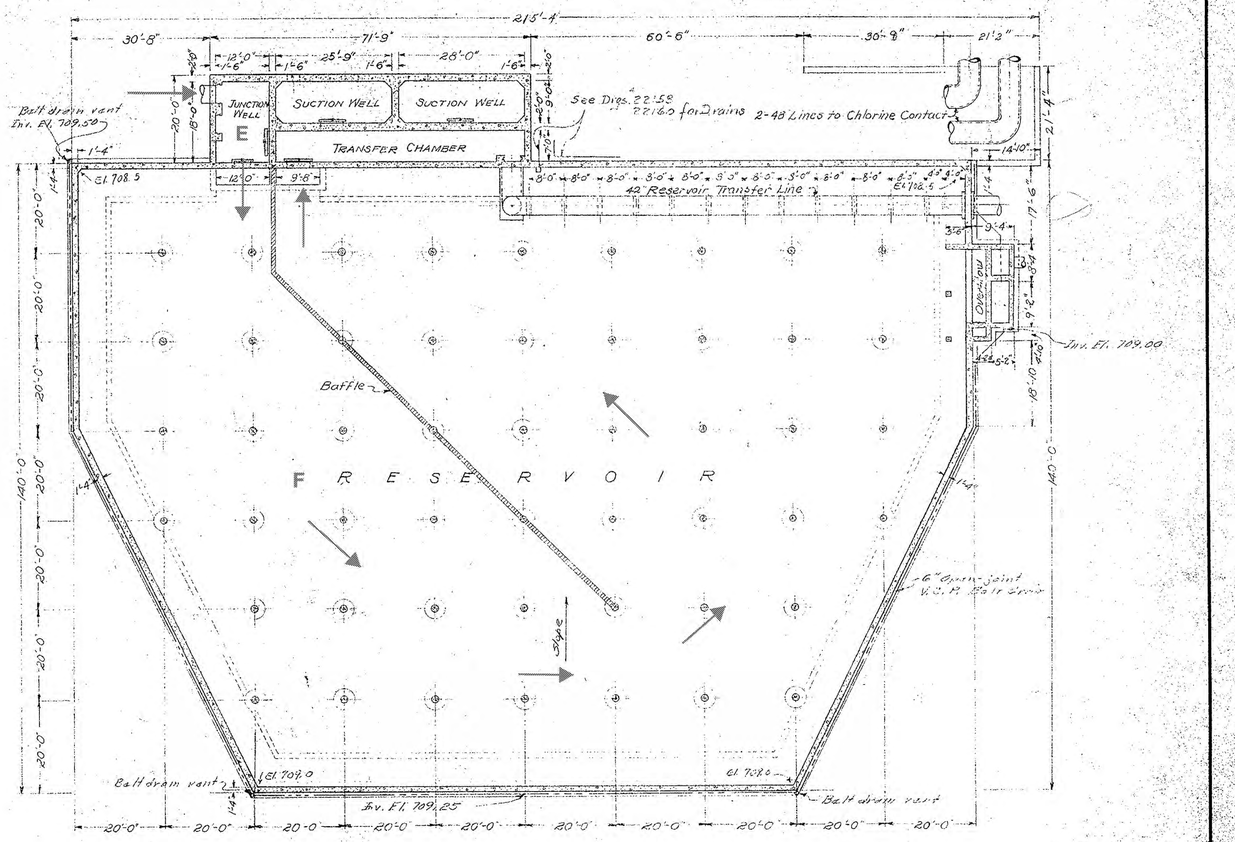
SCALE: AS SHOWN NOV. 1948

S 22107-B4

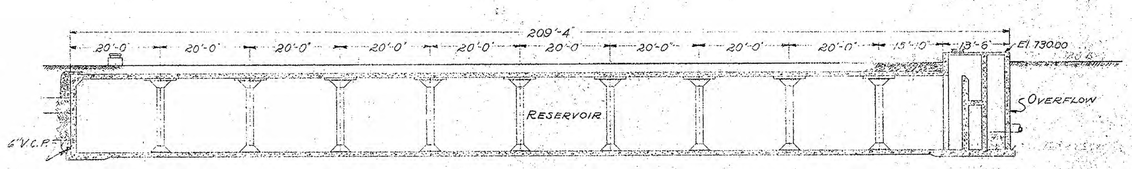


PLAN VIEW OF RESERVOIR

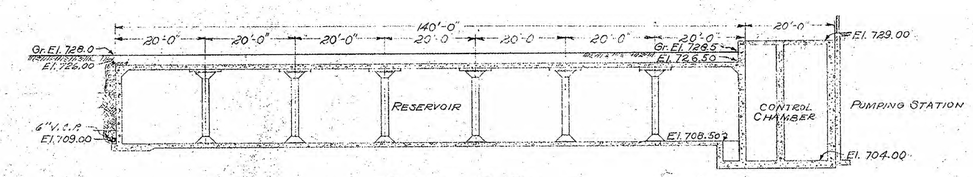
AVG W = $\frac{(200' \times 60') + [(200'+120')/2 \times (80')]}{140'} = 177'$



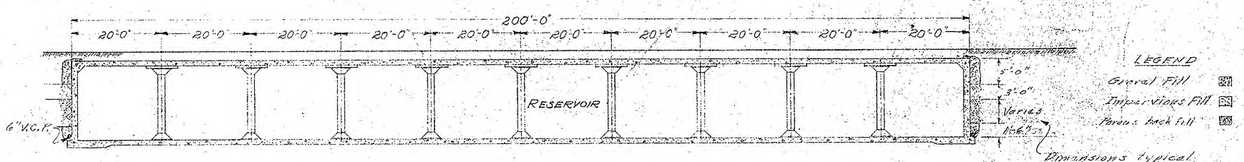
PLAN OF FLOOR-SLAB



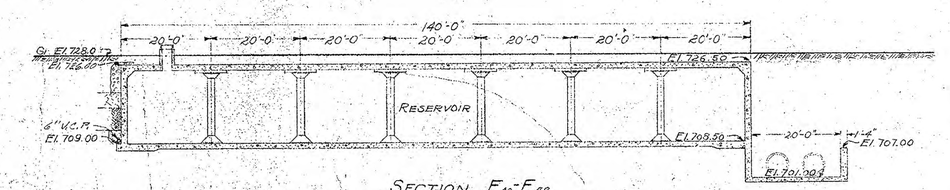
SECTION A_{48}-A_{48}



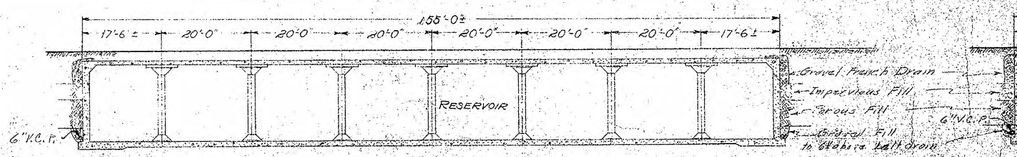
SECTION D_{48}-D_{48}



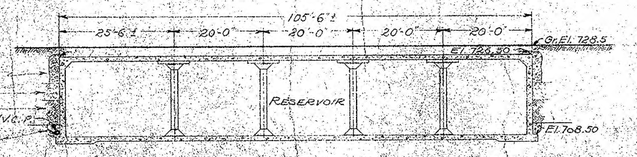
SECTION B_{48}-B_{48}



SECTION E_{48}-E_{48}



SECTION C_{48}-C_{48}



SECTION F_{48}-F_{48}

REV. 2	6-18-48	ADD DRAINS & VENTS	C.E.S.
REV. 1	6-8-48	ORIGINAL ISSUE	
DRAWN BY R.T.		CHECKED BY	

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

RESERVOIR NO. 3
GENERAL PLANS & SECTIONS

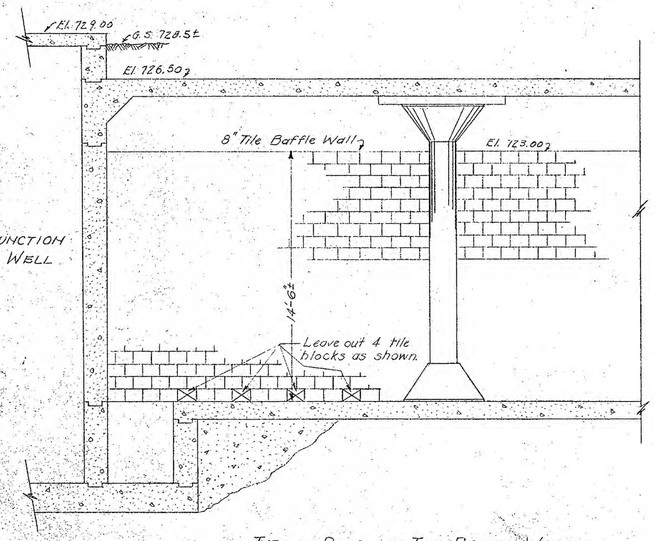
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

SCALE: 1/16" = 1'-0"

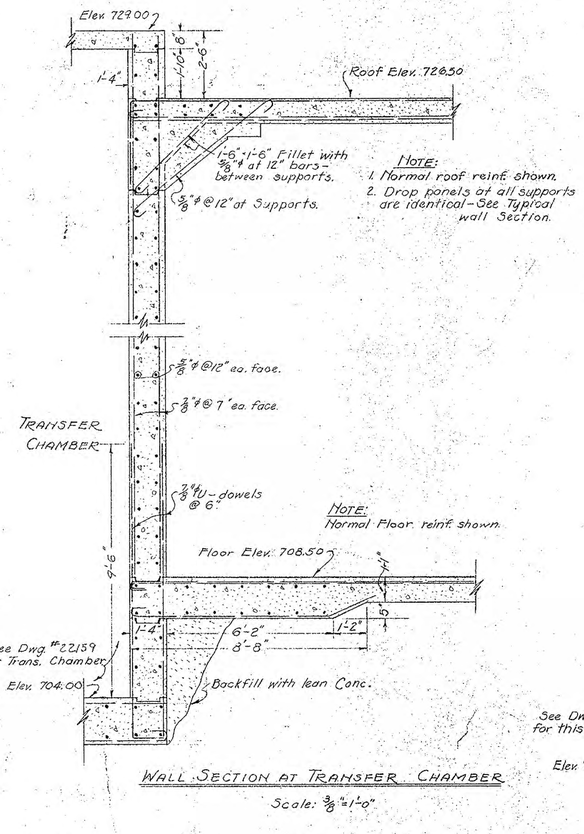
JUNE 1948

22148-2

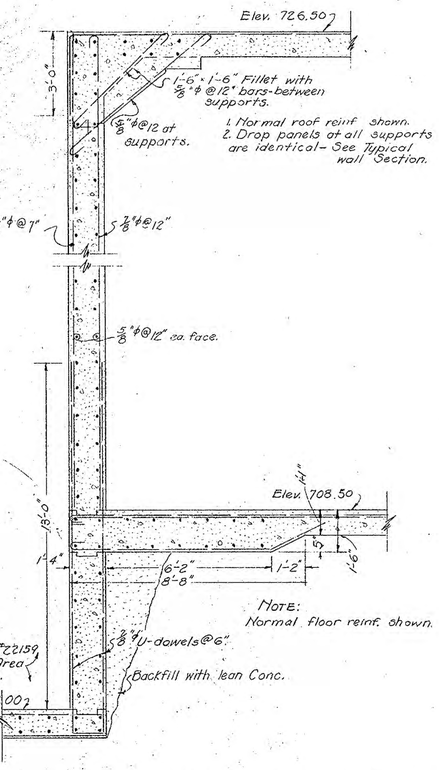
001223



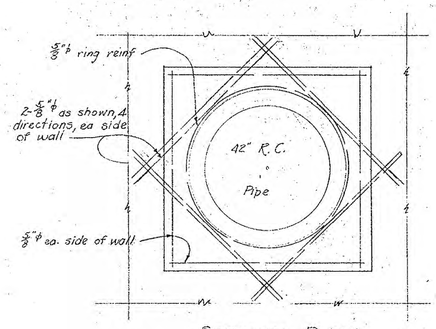
TYPICAL DETAIL OF TILE BAFFLE WALL
Scale: ½"=1'-0"



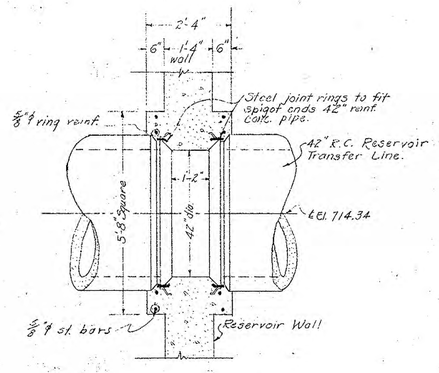
WALL SECTION AT TRANSFER CHAMBER
Scale: ⅜"=1'-0"



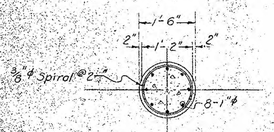
WALL SECTION EAST OF TRANSFER CHAMBER
Scale: ⅜"=1'-0"



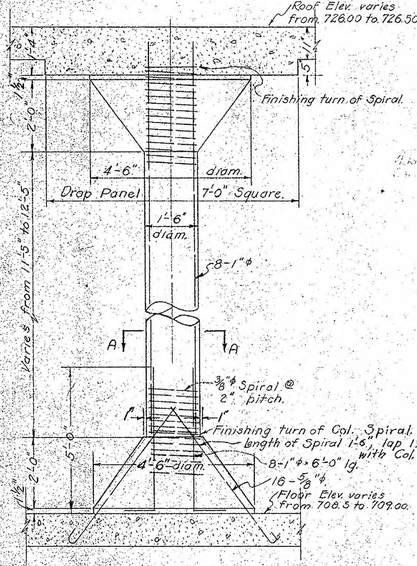
SECTIONAL PLAN
42" TRANSFER LINE AT RESERVOIR WALL
Scale: ½"=1'-0"



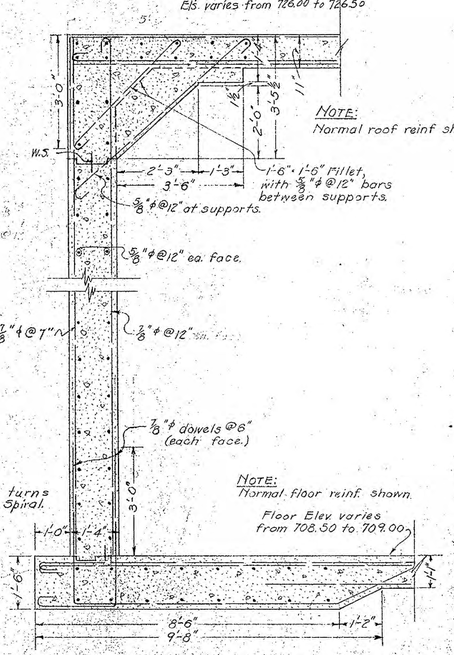
SECTIONAL ELEVATION
DETAIL 42" R.C. TRANSFER LINE AT RESERVOIR WALL
Scale: ½"=1'-0"



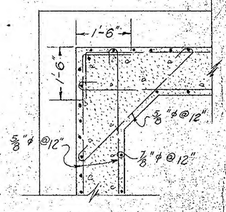
SECTIONAL PLAN A-A



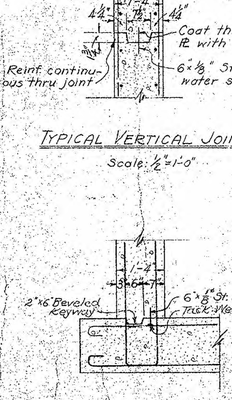
ELEVATION OF TYPICAL COLUMN
Scale: ½"=1'-0"



TYPICAL WALL SECTION
(Where wall varies, See other Sections)
Scale: ½"=1'-0"

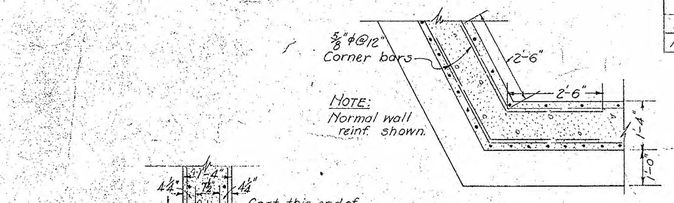


TYPICAL NORTH CORNER DETAILS
Scale: ½"=1'-0"

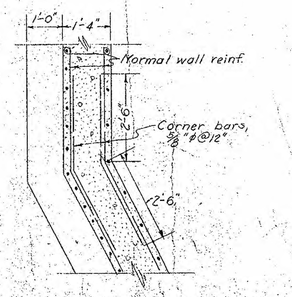


TYPICAL VERTICAL JOINT
Scale: ½"=1'-0"

HORIZONTAL WATER STOP
Scale: ½"=1'-0"

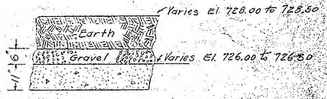


TYPICAL FOR CORNERS 1 & 6
Scale: ½"=1'-0"

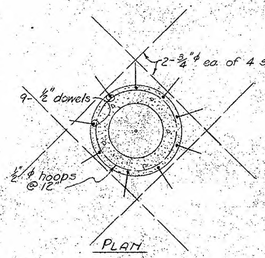


TYPICAL FOR CORNERS 2 & 5
Scale: ½"=1'-0"

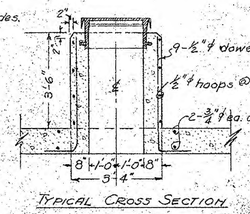
CONCRETE COVER FOR REINFORCING STEEL	
3"	For bottom face of all footings & base slabs
2"	For all slabs and vertical walls.
1½"	For all faces of exposed dry slabs & beams



ROOF FILL DETAIL
No Scale



PLAN



TYPICAL CROSS SECTION

NOTE:
For location of Air Vents see Dwg #22148

AIR VENT DETAIL
Scale: ¾"=1'-0"

Note: See concrete cover for reinforcing steel this sheet.

REV.		ORIGINAL ISSUE
DRAWN BY: M.A.D.		CHECKED BY:

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT
RESERVOIR NO.3
DETAILS
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN
SCALE: AS NOTED JULY 1948

22157 - 1

001224

PUMPING STATION

PLAN

SECTIONAL PLAN AT EL. 718.00

RESERVOIR

CONTROL CHAMBER

JUNCTION WELL E

SUCTION WELL FUTURE HIGH LIFT PUMPS H

SUCTION WELL HIGH LIFT PUMPS G

TRANSFER CHAMBER

Type 5 - Hatch

Type 6 - Hatch

Type 3 - Hatch

Type 4 - Hatch

Floor Stand

Floor Stands

Manhole Frame & Cover, Clow F-3370 or equal

Working Line

Reservoir

6" Drain, connect to sump. For construction of well see Drg. # 22160

Flanged Elbow. Connect 1'-6" pc. of flanged pipe to elbow.

Blind Flange on elbow

Drain Well

M.H. Steps, Clow F-3650 or equal

48" Filtered Water Pipe N.I.C.

Stop Logs

48" C.I. Solid Sleeve & Plug

5'-0"×5'-0" Sluice Gate @ El. 707.50

3'-6"×3'-6" Sluice Gate @ El. 706.75

5'-0"×5'-0" Sluice Gate @ El. 707.50

5'-0"×5'-0" Sluice Gate @ El. 706.50

5'-0"×5'-0" Sluice Gate @ El. 707.50

Wall detail similar to detail at Sec. G_{59}-G_{59} Plugged. Wallpipes for future connections (@ El. to be determined)

High Lift Pump connections (@ El. to be determined)

1" Add. Bars spa. same as North Wall - M.H. Steps

1" Add. Bars at corners spa. same as North Wall - All corners

1" See Sec. A-A for spacing

1" @ 10 each face

1" @ 10 from El. 708.0 to 710.0
1" @ 5 from El. 710.0 to 720.0
1" @ 10 from El. 720.0 to 729.0
Same for opposite wall

1" @ 10 Down

1" @ 10 Dowels

W.S.

Working Line

See Sec. C-D for reinf.

See Drg. # 22160 for Detail of Pedestal "B"

See Drg. # 22160 for Detail of Pedestal "C"

2-48" Lines to Chlorine Contact (Lock Joint)

4" C.I.

Water Stop 1" @ 12" Dowels

Invert El. 707.83

18" × 18" × 8" deep Pocket in floor of reservoir

Pipe to be supported continuously along its length on Class B concrete 12" wide

To Reservoir Overflow

Inv. El. 704.34

Inv. El. 704.83

1" @ 5 up to El. 720.0
1" @ 10 from El. 720.0 to El. 729.0

NOTE: All Vert. bars shown above are $\frac{5}{8}$" @ 12" each face.

REV.	2	8-16-48	Drain Well & Piping Added.
REV.	1		ORIGINAL ISSUE
DRAWN BY: K.T.		CHECKED BY:	

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

RESERVOIR NO. 3
CONTROL CHAMBER PLANS

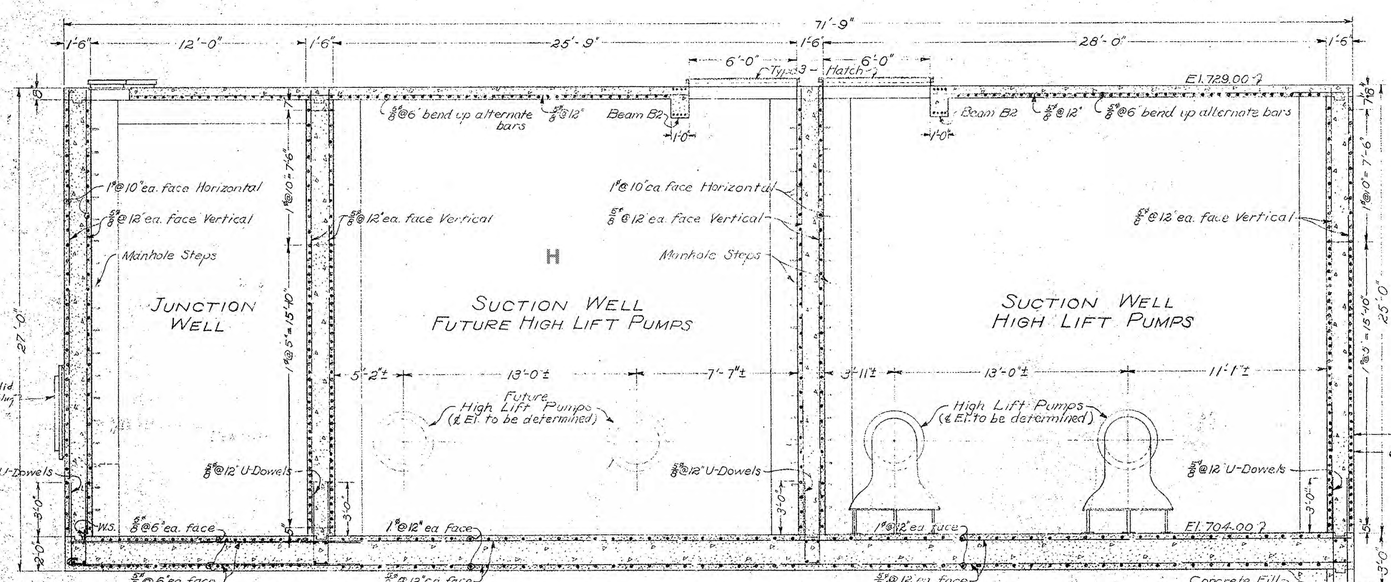
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

SCALE: $\frac{1}{4}$"=1'-0" JULY 1948

22158-2

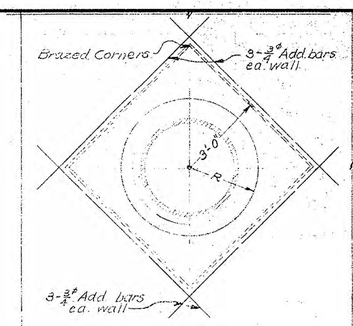
PRINT - W.T.P. - RESERVOIR CHAMBER - PLANS

001225



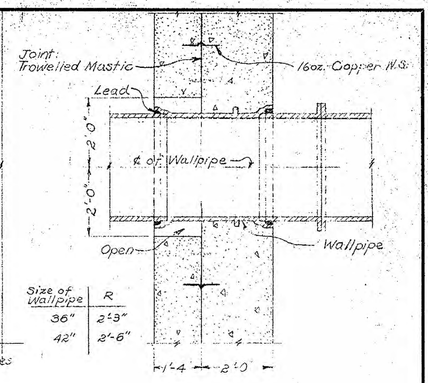
SECTION A_{59}-A_{59}

SECTION F_{59}-F_{59}



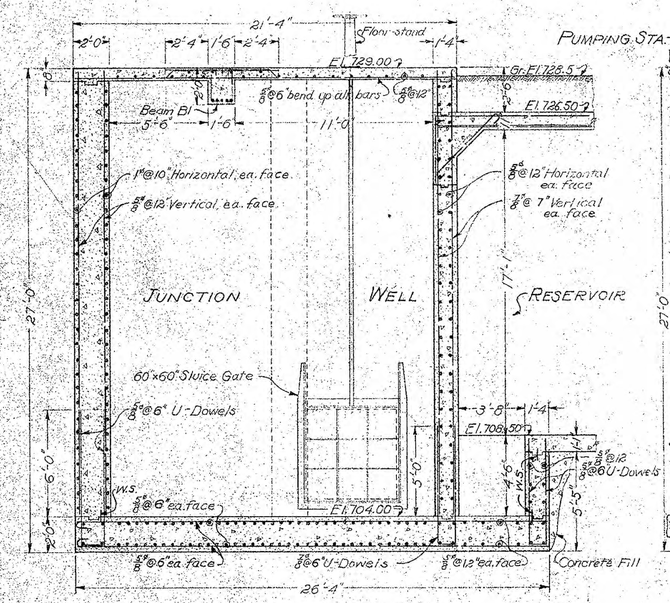
Note:- Construction detail for 36" & 42" Wallpipes are identical except for the size of the wallpipe

FRONT VIEW
Scale: 1/2"=1'-0"

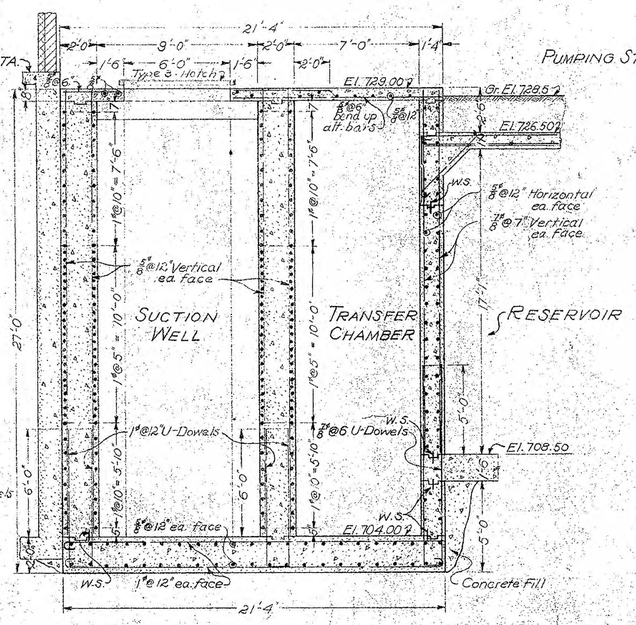


Size of Wallpipe	R
36"	2'-3"
42"	2'-6"

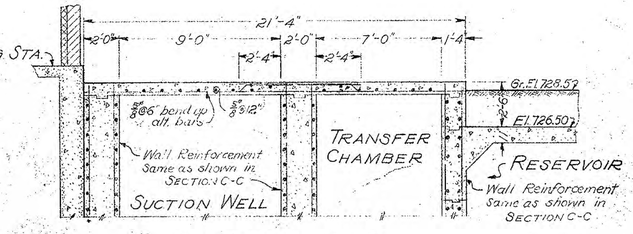
SECTION G_{59}-G_{59}
Scale: 1/2"=1'-0"



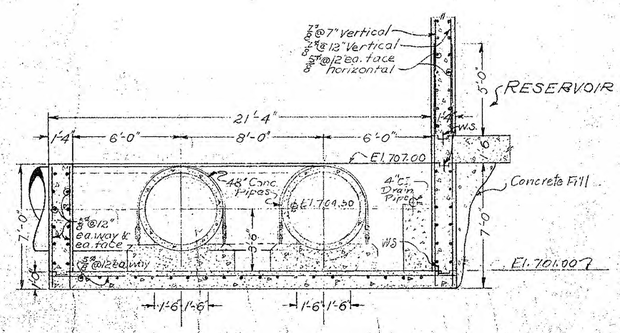
SECTION B_{59}-B_{59}



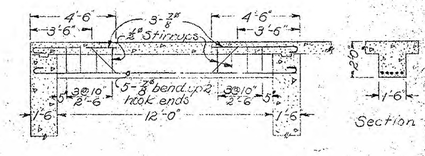
SECTION C_{59}-C_{59}



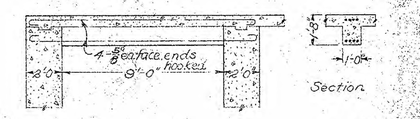
SECTION D_{59}-D_{59}



SECTION E_{59}-E_{59}



DETAIL OF BEAM B1



DETAIL OF BEAM B2

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

RESERVOIR NO.3
CONTROL CHAMBER SECTIONS

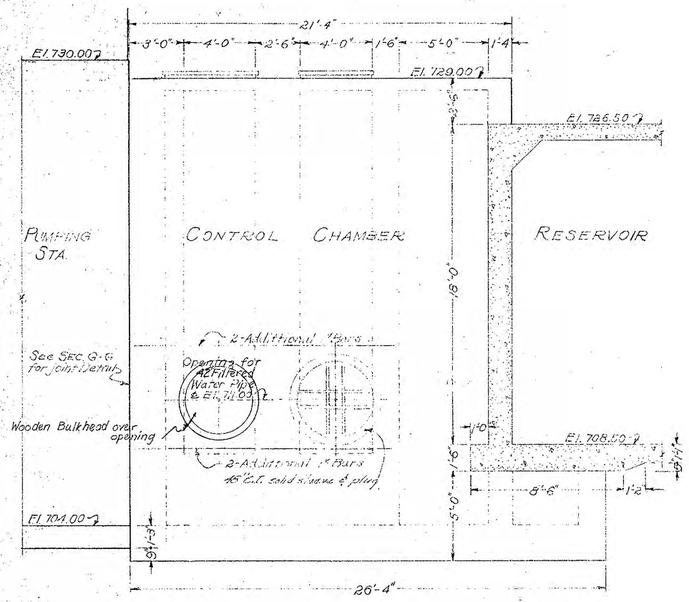
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

#1 REV.	2-6-48	4" Drain Pipe in Sec. E-E & F-F added
REV.		ORIGINAL ISSUE
DRAWN BY: K.T.		CHECKED BY:

SCALE: 1/4"=1'-0" UNLESS NOTED — JULY, 1948

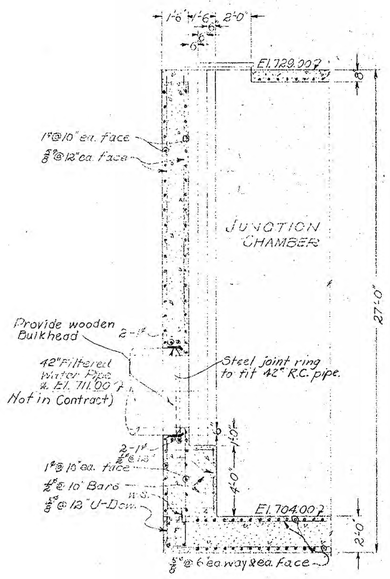
22159 -2

001226



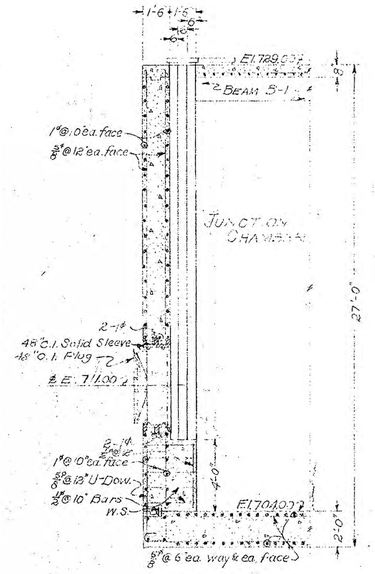
SECTION H_{60}-H_{60}

Scale: $\frac{1}{4}$"=1'-0"



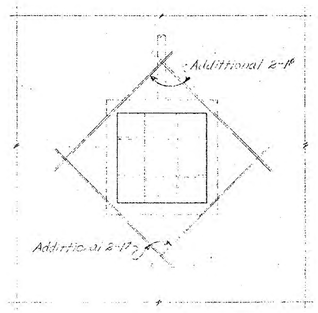
SECTION I_{60}-I_{60}

Scale: $\frac{1}{4}$"-1'-0"

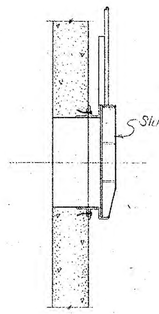


SECTION J_{60}-J_{60}

Scale: $\frac{1}{4}$"=1'-0"

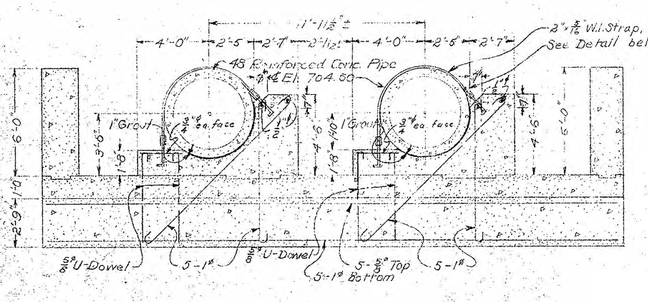


FRONT VIEW



SECTION

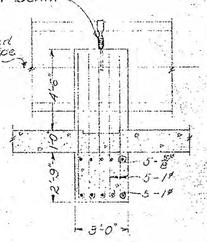
TYPICAL SLUICE GATE INSTALLATION



PEDESTAL "B"

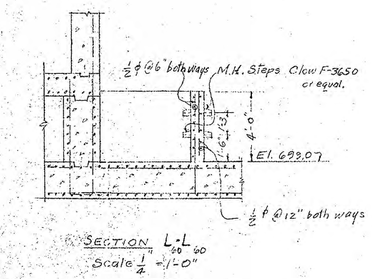
SECTION K_{60}-K_{60}

Scale: $\frac{1}{4}$"=1'-0"



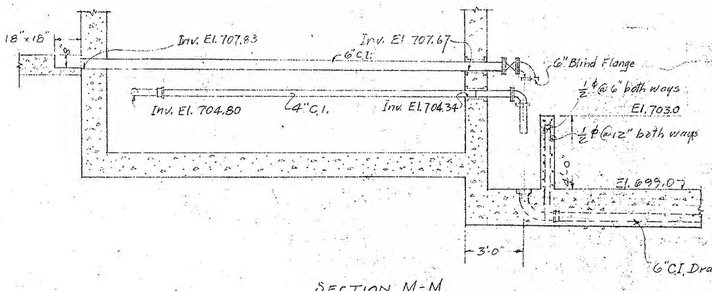
SECTIONAL VIEW

Scale: $\frac{1}{2}$"=1'-0"



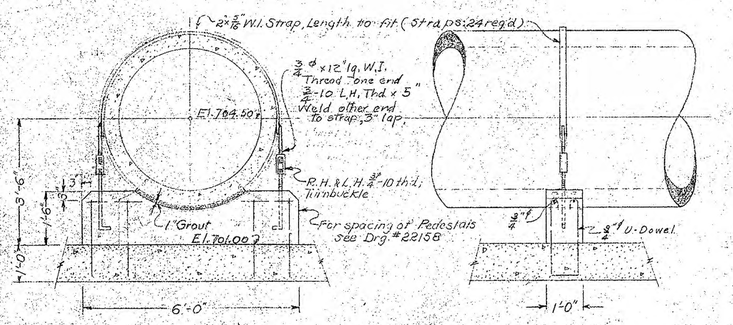
SECTION L_{60}-L_{60}

Scale: $\frac{1}{4}$"=1'-0"



SECTION M_{60}-M_{60}

Scale $\frac{1}{4}$"=1'-0"



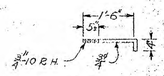
FRONT VIEW

SIDE VIEW

(24 Required)

DETAIL OF PEDESTAL "C"

Scale: $\frac{1}{2}$"=1'-0"



(48 Required)

ANCHOR BOLT DETAIL

Scale: $\frac{1}{2}$"-1'-0"

Rev.	2	8-16-48	Sec L-60 & Sec M-60 Added.
Rev.	1		ORIGINAL ISSUE

DRAWN By: K.T. CHECKED By:

CITY OF FLINT, MICHIGAN

WATER TREATMENT PLANT

RESERVOIR NO. 3

CONTROL CHAMBER DETAILS

AYRES, LEWIS, NORRIS & MAY

CONSULTING ENGINEERS

ANN ARBOR, MICHIGAN

SCALE: $\frac{1}{4}$" = 1'-0" UNLESS NOTED JULY 1948

22160 - 2

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Wednesday, July 01, 2015 8:07 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ);Rosenthal, Adam (DEQ)
Subject: LT2 Plan
Attachments: LT2 Plan.pdf

Mike,

Here is a copy of The City of Flint Water Treatment Plant LT2 Monitoring Plan. Brent should have sent a hard copy out on Monday the 29th after we had determined the source identification number for the Flint River (IN001).

--
Mike Glasgow
Utilities Administrator
City of Flint
1101 S. Saginaw St.
Flint, MI 48502
(810)766-7135 ext. 2602

From: Matta, Samir <[PPI]
Sent: Monday, October 26, 2015 10:43 AM
To: Prysby, Mike (DEQ)
Subject: City of Flint Corrosion System Review.

Hi Mike,

I have been asked whether the MDEQ/EPA is going to have a formal response/review comments to what is needed for us to obtain the permit. I mentioned that based on our discussion that if we provide the information below, we will be able to get the permit issued.

- City of Detroit residual is around 0.4 to 0.5 mg/L as PO4
- MDEQ wants Flint to maintain a residual of approximately 1.0 mg/L as PO4
- Feed pump capacity should be sized to address a max dose of 2.0 mg/L as PO4
- Cut sheets and MSDS from the City's supplier

Please let me know if you require anything else and/or if a formal response will be forthcoming.

Thanks.

Samir F. Matta, PE
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2121 University Park Dr, Suite 100 • Okemos, MI 48864-6901
T 517.203.5437 **D** 517.203.5437
www.lan-inc.com • SFMatta@lan-inc.com

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From: Matta, Samir [PPI]
Sent: Thursday, October 29, 2015 2:25 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ);Natasha Henderson (nhenderson@cityofflint.com);hcroft@cityofflint.com;Green, Warren;Mike Glasgow (MGlasgow@CityofFlint.com);Brent Wright (bwright@cityofflint.com);Hansen, Jeff
Subject: FW: Flint WTP PH2 SEG4 - Corrosion Control
Attachments: LMI Series C Pumps.pdf; NSFPhosAcidSpecs.pdf; PhosAcidSafetyDataSheet.pdf; Flint Phosphate Calculations - Revision 4.pdf

Hi Mike,

I just wanted to follow up on the email below and get your estimation on when the permit will be issued. Are you requiring any additional data before a decision can be made?

The calculation that we developed meets with the requirement of the feed rates as agreed to between your office and the EPA based on the email from Stephen Busch to the EPA on November 22, 2015. The pumps were resized to handle the anticipated Max feed rates requested. We are assuming that since we are using the chemical used by DWSD or corrosion control, we are not required to go thru a study phase.

Additionally, during our review of the email trail with EPA, we noticed that the EPA did recommend that Jar Testing be done to evaluate the impact of the orthophosphate dose on turbidity of the DWSD water. Stephen has also noted that a treatability study will need to be conducted on the KWA water in conjunction with the Flint WTP processes to optimize the corrosion control treatment needed before use in the system.

Does the permit to be issued going to highlight more specific requirements on the duration(s), method(s) and reporting needed for each of the testing required before implementation is allowed into the system?

Your assistance and feedback are greatly appreciated to make sure that our timeline for the introduction of the initial corrosion control into the DWSD water and its future implementation into the KWA Raw feed can be accurately depicted in our discussions with the City and KWA.

Thank you very much for your continued support.

Samir F. Matta, PE
Team Leader

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
2121 University Park Dr, Suite 100 • Okemos, MI 48864-6901
D 517.819.2367 **C** 517.819.2367
www.lan-inc.com • s[PPI]

From: Matta, Samir
Sent: Tuesday, October 27, 2015 4:12 PM
To: prysbym@michigan.gov
Cc: Brent Wright (bwright@cityofflint.com); Mike Glasgow (MGlasgow@CityofFlint.com)
Subject: FW: Flint WTP PH2 SEG4 - Corrosion Control

Hi Mike,

I have included the updated calculations, Proposed Pump Cut Sheet as well as the MSDS and the fact sheet for the chemical to be used.

Please let me know if this satisfy your needs to issue the permit.

Thanks.

Samir F. Matta, PE
Team Leader

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Series C Chemical Metering Pumps

Series C Chemical Metering Pumps

Series C Chemical Metering Pumps have been an industry standard for over 20 years. Designed for Municipal/ Industrial applications, the familiar yellow and black pumps have a rugged, totally enclosed, chemically resistant housing for protection in the harshest environments. Encapsulated electronics and a rigid housing and stroke bracket ensure years of precise, repeatable performance

High Resolution Image

Request a Quote

Features Tab Information Tab Options Tab

Adjustable stroke frequency and the flexibility of up to 1000:1 turndown ratio

Manually adjustable stroke length provides accurate pump output adjustment

NEMA 4X / IP65 enclosures for protection against corrosive environments

Time tested electronics for reliable, repeatable performance

Totally encapsulated electronics for protection against moisture and corrosive conditions

Inputs for low level switch available on certain models

Models with external pacing for flow proportional applications

Advanced control options for simplified system integration (pulse multiply/divide, 4-20 mA, remote on/off)

*UL, *CUL, NSF 50, NSF 51, *CE Certifications

Control Codes:
1 – Dual Manual Control (speed and stroke length)
7 – Pulse Input / Dual Manual Control
9 – Pulse/Analog Input / Dual Manual Control

Output Codes with standard liquid end	
Max Capacity:	Max Pressure:
*CX0 – 1.3 GPH (4.9 l/h)	300 psi (20.7 Bar)
*CX1 – 2.5 GPH (9.5 l/h)	150 psi (10.3 Bar)
*CX2 – 4.0 GPH (15.1 l/h)	100 psi (6.9 Bar)
*CX3 – 8.0 GPH (30.3 l/h)	60 psi (4.1 Bar)
*CX4 – 20 GPH (75.7 l/h)	25 psi (1.7 Bar)
C76 – 4.0 GPH (15.1 l/h)	175 psi (12.1 Bar)
C77 – 10.0 GPH (38.0 l/h)	80 psi (5.5 Bar)
C78 – 25 GPH (95.0 l/h)	30 psi (2.07 Bar)

Four Function Valve
AUTOPRIME™ Liquid End
High Viscosity Liquid End
Low Level Float Switch
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Repair & Preventive Maintenance Kits
Calibration Columns

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WL Performance Products LP

PRODUCT DATA SHEET

PRODUCT: Phosphoric Acid, 75%

NSF

GRADE: Technical

CODE: 750

GENERAL DESCRIPTION: Clear colorless liquid with no foreign odor

FORMULA: H_3PO_4

MOLECULAR WEIGHT: 98.0

CAS NO.: 7664-38-2

DATE EFFECTIVE: November 5, 2005

CHARACTERISTICS	SPECIFICATION LIMITS
Specific Gravity @ 25°/15.5°C	1.574 Minimum
Equivalent H_3PO_4, %	75.0 Minimum
Equivalent P_2O_5, %	54.3 Minimum
Color, APHA	20 Maximum

NOTE: Specification Limits are subject to change from time to time. Please contact us for current data sheet.

Plant Location: Carondelet (St. Louis), MO; Carteret, NJ; Lawrence, KS

Packaging: 3000 gal. tank truck; 14,000 gal. tank cars.
15 gal.(200 lb.) & 55 gal. (700 lb.) plastic drums (nonreturnable)

Labeling Requirements: Product Label and DOT CORROSIVE label required by law.

Shipping Classification:
1. Single package of 5000 lbs. or more:
   Phosphoric Acid
   CORROSIVE MATERIAL, UN 1805, RQ
   STCC4930248
2. Single package of less than 5000 lbs.:
   Phosphoric Acid
   CORROSIVE MATERIAL, UN 1805
   STCC4930248

Distributed By:
PVS NOLWOOD CHEMICALS, INC.
10900 Harper Avenue
Detroit, MI. 48213
(313) 925-0300

PVS ITEM #	PVS TECH DATA #
10495	10495

Handling Precautions:

NOT FOR FOOD OR DRUG USE. CORROSIVE TO MILD STEEL. DANGER! CAUSES BURNS TO EYES AND SKIN. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

FIRST AID: If in eyes or on skin, immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

IN CASE OF SPILL OR LEAK: Contain spill or leak to prevent discharge to environment. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

This Product Data Sheet is subject to the terms and conditions on the reverse side hereof.

CONTROLLED DOCUMENT
IF STAMPED IN RED

PHOSPHORIC ACID , 75%; TECHNICAL GRADE

Key Properties:

- Phosphoric acid is relatively non-volatile and stable at elevated temperatures; it is a much milder acid than sulfuric, nitric, or hydrochloric acids.
- Heavy, viscous liquid, 13.1 to 13.2 lbs./gal.
- Remains liquid at very low temperatures: Freezing point, -18°C (0.5°F)
- Shelf-life •-• 24 months

Applications:

- Bonding agent for refractory materials
- Industrial and institutional cleaning and sanitizing products
- Liquid fertilizers
- Aluminum bright-dipping
- Metal treating and phosphatizing
- Flameproofing agent
- Catalyst in chemical processes
- Effluent treatment
- Animal feed supplement
- Potable Water Treatment: ICL Performance Products LP Phosphoric Acid, 75%, conforms to the requirements of ANSI / NSF Standard 60; used for corrosion and scale control. Maximum Use Level = 13 mg/L.

FOR MORE COMPLETE INFORMATION ON PROPERTIES AND SAFE HANDLING OF THIS MATERIAL, SEE THE ICL PERFORMANCE PRODUCTS LP MATERIAL SAFETY DATA SHEET (MSDS).

NOTICE: Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, ICL Performance Products LP makes no representations or warranties as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will ICL Performance Products LP be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information or the product to which Information refers. Nothing contained herein is to be construed as a recommendation to use any product, process, equipment or formulation in conflict with any patent, and ICL Performance Products LP makes no representation or warranty, express or implied, that the use thereof will not infringe any patent. The data set forth herein are based on samples tested and are not guaranteed for all samples or applications. Such data are intended as guides and do not reflect product specifications for any particular product. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

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Corporate Offices:

622 Emerson Road
Suite 500
St. Louis, Missouri 63141
314-983-7500

For order assistance, please call our Customer Service Department Toll Free: 1-800-244-6169

Flint Phosphate Calculations

Chemical will be 75% NSF certified Phosphoric acid

75% acid has a density of 13.17 #/gal. (5,974 g/gal) 13.17×453.5923

Of this 75% is Phosphoric acid (H_3PO_4) = 4,480 g H_3PO_4/gal 5,974 × 0.75

Molecular weight of H_3PO_4 is 97.9913 g/mole

Moles H_3PO_4 / gal = 45.72 4,480/97.9913

Moles H_3PO_4 = Moles Orthophosphate (PO_4^{-3}) = Moles Phosphorus (P)

Species	Molecular Wt.	Moles / gal	g/gal
H_3PO_4	97.9913	45.72	4,480
PO_4^{-3}	94.9676	45.72	4341.92
P	30.97	45.72	1407.72

Proposed Operating Parameters

Assumptions per DEQ:

- City of Detroit residual is 0.39 mg/l as P
- MDEQ wants Flint to maintain a residual of approximately 1.0 mg/l as P
- Feed pump capacity should be sized for a max dose of 2.0 mg/l as P

	Plant Flow	Dosage as PO_4^{-3}*	Dosage as P
Maximum	25 MGD	6.13 mg/l	2.0 mg/l
Average	16 MGD	3.07 mg/l	1.0 mg/l
Minimum	8 MGD	1.53 mg/	0.5 mg/l

*Equivalent dosage to P dosage

Feed Rate Calculations

Maximum feed rate (Max Flow × Max Dosage)

25 MGD × 3782 g/gal H_2O × 2.0 ppm / 1,408 g/gal = 134.30 gpd Phosphoric Acid

Average feed rate (Avg Flow × Avg Dosage)

16 MGD × 3782 g/gal H_2O × (1.0 ppm – 0.39 ppm) / 1,408 g/gal = 26.21 gpd Phosphoric Acid

Minimum feed rate (Min Flow × Min Dosage)

8 MGD × 3782 g/gal H_2O × (1.0 ppm – 0.39 ppm) / 1,408 g/gal = 13.10 gpd Phosphoric Acid

Storage Requirements

30 days supply at average flow and dosage = 26.21 gpd × 30 days = 786 gal.

Assuming the use of 275 gal semi-bulk totes, 3 totes required (recommend 2 in service, 1 spare)

From: Prysby, Mike (DEQ)
Sent: Monday, December 08, 2014 1:48 PM
To: Rosenthal, Adam (DEQ);Busch, Stephen (DEQ)
Subject: Flint TTHM letter
Attachments: Flint DBP MCL 4Q14 draft.doc

Adam, Steve

I made some tweaks to the draft letter for consideration and can be tweaked further as needed. Changes are noted in red.....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

[Date]

Mr. Brent Wright, Operation Supervisor
City Of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, MI 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Violation Notice – Maximum Contaminant Level for Total Trihalomethanes, 3rd Quarter of 2014

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the City of Flint is in violation of the Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels* (MCL) *for disinfection byproducts*, of the 1979 Administrative Code.

In accordance with R.325.10610, *MCLs for disinfection byproducts*, of the 1979 Administrative Code, the MCL for disinfection byproduct total trihalomethanes (TTHM) is 0.080 milligrams per liter (mg/l). Our records show that the City of Flint's highest TTHM locational running annual average (LRAA), based on the last three quarters ending November 30, 2014, is 0.099 mg/l which exceeds the standard. Also, with receipt of the third quarter monitoring results, an Operational Evaluation Level (OEL) was calculated for each of the eight TTHM monitoring locations by adding twice the current quarter's result to the results of the previous two quarters and dividing the total by four. The OEL exceeded the 0.080 mg/l TTHM standard at four of the eight locations.

Administrative rule R 325.10403 of Act 399 requires that suppliers provide public notice as soon as practical but no later than thirty (30) days after the supplier learns of the violation, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not normally reached by mail. Enclosed is a sample public notice (PN). **Please notify your consumers by January 10, 2015, and send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the public notice.** This violation must be included in your Consumer Confidence Report (CCR,) due by July 1, 2015. The public notification must be repeated every quarter until you no longer exceed the TTHM standard. **Failure to issue a PN for this violation will result in a fine of at least $1,000 per event, with a maximum of $5,000 per violation.** Contact our office for a more complete summary of our fines policies.

Our investigation consisted of a review of ODWMA files for laboratory reports received for compliance monitoring. Our investigation is considered complete. This violation began on December 1, 2014, and will continue until TTHM LRAA is below the MCL.

If you have any factual information you would like us to consider regarding the violation identified in this Notice, please provide them in a written response by December XX, 2014.

Water systems who exceed the OEL must complete and submit an Operational Evaluation in accordance with Administrative Rule 7191(R325.101791) within 90 days since the start of the violation. The Operational Evaluation must identify possible causes and corrective measures for the elevated TTHM levels. We recently received a draft Operational Evaluation from the city and our review comments will be provided to the city shortly. The Operational Evaluation must be completed and received by our office by no later than March 1, 2015.

We anticipate and appreciate your cooperation in resolving this matter. If you have any questions regarding this Violation Notice, please contact us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water & Municipal Assistance
517-290-8817

Adam Rosenthal, EQA
Lansing District Office
Office of Drinking Water & Municipal Assistance
517-284-6644

MFP:AR:JR

Enclosures

cc:

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, and November 20 of 2014). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the MCL. The standard for TTHMs is 80 µg/L. The location reporting the highest TTHM level was 99 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem by 2015.

For more information, please contact Mr. Brent Wright at 517-787-6537 or the Flint Water Plant at 4500 North Dort Highway, Flint, MI 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Wednesday, December 10, 2014 12:42 PM
To: Prysby, Mike (DEQ)
Subject: Re: Stage 2 DBP Monitoring Plan
Attachments: Nov 2014 MOR Scan.pdf; DBP Distribution System Sampling Site Locations.docx

Mike,

Good afternoon. I don't believe we sent a formal copy of our DBP monitoring plan to reflect the change for full time operation. Prior to April 2014, the Stage 2 DBP monitoring sites were: DBP 1 - 3719 Davison Rd, DBP 2 - 3302 S. Dort Hwy., DBP 3 - 6204 N. Saginaw St., DBP 4 - 2501 Flushing Rd. After April, our monitoring schedule showed that we had to collect 8 DBP samples quarterly. With only 8 distribution sites (disregarding the reservoirs) we use every site in Bacteriological Sample Site Plan. Site #1 is now DBP 1, Site #2 is now DBP 2, an so on. We continued on the same sample time schedule as before April: The 3rd full week of February, May, August, & November. I have attached a copy of the "rough" DBP sample monitoring plan.

I have also attached a copy of the November 2014 MOR, a hard copy will be sent out today.

On Tue, Dec 9, 2014 at 11:15 AM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Brent, Michael

Can you e-mail us a copy of Flint's most recent Stage 2 DDBP monitoring plan (updated plan to reflect full-time operation of the WTP – after April 25th)? We need to confirm site codes for the various TTHM/HAA5 sampling locations. Thanks…

Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow	November 2014
Operator-in-Charge	Month/Year
F-1R, F-2	F-1
Certification of Operator-in-Charge	Water Plant Classification
Michael Glasgow	Genesee
Signature of Operator-in-Charge	County

Treatment Rate and Filter Data

Maximum Treatment Rate:	18.7	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	76	Hours
Average Head Loss:	n/a	Feet *(filter head loss meters not operational)
Average Filtration Rate:	2.1	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.2	Gallons Per Square Feet per Minute
Average Wash Water Use:	3.2%	Percent of Treated Water

Chemical Data

Chlorine on hand:	12,000	lb.	Est. supply:	15 days
Primary Coagulant (Ferric Chloride) on hand:	194,500	lb.	Est. supply:	22 days
Lime (CaO) on hand:	393	tons	Est. supply:	38 days
Fluoride on Hand:	15,000	lb.	Est. supply:	40 days
Cost of All Chemicals per Million Gallons:	n/a	dollars		
Total Power Cost per Million Gallons:	n/a	dollars		

Remarks	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	0	0
Number of filter confluence samples collected:	227	227
Percent of filter confluence samples > 0.3 NTU:	0.0%	0.0%
Number of filter confluence samples > 1 NTU	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? NO
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? NO
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? YES
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? NO
If yes, indicate date(s) and duration on a separate sheet.

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant November 2014 Page 2

WSSN: 2310

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Lime Dosage (mg/L)	PW-340 Catioinc Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
						Raw			Plate Settler	Applied
						Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	17.9	8.1	141.8	3.0	0.88	8	7.3	8.5	0.67	1.13
2	17.7	8.7	135.0	2.9	0.89	8	12.1	33.4	1.04	1.47
3	15.9	9.8	141.5	3.0	0.90	8	7.7	11.3	0.63	1.69
4	14.1	9.1	162.2	3.4	0.94	8	7.5	9.2	0.51	1.61
5	13.7	9.1	167.6	3.6	0.98	8	7.0	8.1	0.47	1.39
6	13.7	8.7	160.9	3.5	0.98	8	8.1	9.3	0.52	1.42
7	13.6	8.7	144.6	3.7	0.98	8	7.1	7.4	0.51	1.48
8	13.6	8.7	147.9	4.0	0.98	8	7.3	8.1	0.55	1.81
9	13.5	8.8	136.8	4.0	0.99	8	7.8	11.2	0.54	1.16
10	13.3	9.0	140.0	4.0	1.00	8	7.9	12.2	0.68	1.77
11	12.6	9.3	148.5	4.0	1.03	8	6.7	7.7	0.51	7.80
12	12.5	9.4	133.0	4.2	0.87	8	7.9	18.8	0.47	4.48
13	13.3	8.9	138.5	4.0	0.81	8	5.9	6.6	0.58	2.42
14	14.3	8.0	139.0	3.8	0.77	8	5.3	5.8	0.80	2.29
15	14.4	8.4	142.4	3.9	0.77	8	4.9	5.4	1.01	1.11
16	14.5	8.8	135.2	3.7	0.75	8	6.5	14.1	1.02	1.81
17	12.0	8.6	126.8	3.2	0.65	8	7.4	16.6	0.69	3.78
18	6.0	8.4	132.8	2.9	0.52	8	9.1	36.3	0.81	5.92
19	17.8	10.0	104.7	3.3	0.61	8	4.0	4.4	1.09	2.33
20	17.8	10.7	102.7	3.4	0.61	8	4.1	6.8	1.15	1.83
21	17.6	10.9	104.7	3.6	0.69	8	2.9	3.7	0.89	1.42
22	17.7	10.7	100.9	3.6	0.86	8	2.5	2.9	0.93	2.24
23	17.7	10.9	97.8	3.0	0.59	8	4.5	6.2	1.16	3.32
24	17.7	10.7	88.8	3.0	0.55	8	8.5	27.2	1.13	2.92
25	17.1	11.0	94.1	3.5	0.49	8	4.5	5.1	0.76	3.20
26	16.8	10.0	95.9	3.4	0.39	8	3.7	5.9	0.77	2.31
27	10.9	10.4	92.1	3.7	0.78	8	4.3	9.3	0.84	7.47
28	16.8	9.9	99.7	4.1	1.03	8	3.1	3.3	0.92	1.45
29	16.8	12.2	100.4	4.0	1.03	8	3.8	4.2	0.88	1.15
30	16.7	12.3	96.5	4.3	1.03	8	5.8	16.0	1.00	2.23

Avg.	14.9	9.6	125.1	3.6	0.81	8	6.17			2.55
Max.	17.9	12.3	167.6	4.3	1.03	8	12.1	36.3	1.16	7.80
Min.	6.0	8.0	88.8	2.9	0.39	8	2.50			1.11
Total	448.0									

Filter turbiditiy

City of Flint Water Treatment Plant

November 2014 Page 3

WSSN: 2310

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	8	0.09	0.14	6	0	0	8	0.10	0.12	6	0	0	0.11
2	8	0.10	0.13	6	0	0	8	0.09	0.11	6	0	0	0.10
3	8	0.10	0.13	6	0	0	8	0.10	0.13	6	0	0	0.11
4	8	0.10	0.11	6	0	0	8	0.11	0.13	6	0	0	0.12
5	8	0.08	0.11	6	0	0	8	0.08	0.09	6	0	0	0.09
6	8	0.09	0.11	6	0	0	8	0.09	0.11	6	0	0	0.11
7	8	0.10	0.12	6	0	0	8	0.10	0.12	6	0	0	0.12
8	8	0.10	0.17	6	0	0	8	0.09	0.12	6	0	0	0.11
9	8	0.11	0.13	6	0	0	8	0.10	0.13	6	0	0	0.11
10	8	0.11	0.15	6	0	0	8	0.10	0.15	6	0	0	0.12
11	8	0.10	0.18	6	0	0	8	0.09	0.14	6	0	0	0.11
12	8	0.10	0.14	6	0	0	8	0.08	0.10	6	0	0	0.10
13	8	0.08	0.09	6	0	0	8	0.07	0.09	6	0	0	0.09
14	8	0.07	0.09	6	0	0	8	0.07	0.09	6	0	0	0.09
15	8	0.07	0.08	6	0	0	8	0.07	0.09	6	0	0	0.08
16	8	0.07	0.09	6	0	0	8	0.08	0.13	6	0	0	0.08
17	5	0.07	0.09	5	0	0	5	0.07	0.09	5	0	0	0.07
18	2	0.10	0.12	2	0	0	2	0.08	0.10	2	0	0	0.07
19	8	0.08	0.10	6	0	0	8	0.07	0.09	6	0	0	0.07
20	8	0.08	0.10	6	0	0	8	0.06	0.07	6	0	0	0.07
21	8	0.08	0.09	6	0	0	8	0.07	0.09	6	0	0	0.08
22	8	0.08	0.12	6	0	0	8	0.07	0.09	6	0	0	0.07
23	8	0.08	0.08	6	0	0	8	0.08	0.09	6	0	0	0.07
24	8	0.08	0.12	6	0	0	8	0.08	0.09	6	0	0	0.08
25	8	0.09	0.12	6	0	0	8	0.08	0.10	6	0	0	0.07
26	8	0.09	0.10	6	0	0	8	0.08	0.10	6	0	0	0.07
27	4	0.08	0.09	4	0	0	4	0.07	0.09	4	0	0	0.07
28	8	0.08	0.09	6	0	0	8	0.08	0.11	6	0	0	0.06
29	8	0.08	0.08	6	0	0	8	0.08	0.15	6	0	0	0.06
30	8	0.09	0.11	6	0	0	8	0.09	0.11	6	0	0	0.08
Avg.	8	0.09	0.11	6	0	0	8	0.08	0.11	6	0	0	
Max.	8	0.11	0.18	6	0	0	8	0.11	0.15	6	0	0	0.12
Min.	2	0.07	0.08	2	0	0	2	0.06	0.07	2	0	0	

Fluoridation & Chlorination City of Flint Water Treatment Plant November 2014 Page 4

WSSN: 2310

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.50	0.18	0.64		2.4	3.6	6.0	0.8	1.1	3.2	3.5	2.4	2.9
2	0.50	0.21	0.73		2.2	3.3	5.4	0.9	1.3	3.2	3.5	3.0	3.5
3	0.50	0.21	0.76		2.4	3.5	5.9	0.9	1.3	3.2	3.5	3.2	3.5
4	0.45	0.22	0.72	0.69	2.5	3.5	6.0	0.8	1.1	3.2	3.5	2.9	3.3
5	0.45	0.22	0.70		2.4	3.2	5.6	0.9	1.1	3.2	3.5	2.1	2.5
6	0.45	0.22	0.72		2.3	3.6	5.9	0.7	1.0	3.2	3.5	2.4	2.8
7	0.45	0.22	0.75		2.4	4.1	6.5	0.8	1.1	2.5	3.1	1.8	2.4
8	0.40	0.23	0.69		2.3	3.9	6.2	0.9	1.1	3.0	3.5	2.5	2.9
9	0.40	0.23	0.67		2.2	3.8	6.0	0.8	1.0	3.0	3.5	3.0	3.5
10	0.40	0.22	0.63		2.2	4.1	6.3	0.7	1.0	3.0	3.5	3.0	3.5
11	0.45	0.26	0.71	0.68	1.6	4.2	5.8	0.8	1.1	3.0	3.5	3.0	3.5
12	0.40	0.21	0.63		1.7	3.6	5.3	0.8	1.0	2.6	3.0	2.1	2.5
13	0.35	0.21	0.55		2.1	3.6	5.7	0.8	1.1	3.0	3.5	2.9	3.2
14	0.40	0.22	0.58		2.0	3.7	5.7	0.8	1.1	3.2	3.5	2.3	3.0
15	0.40	0.23	0.61		1.8	3.7	5.5	0.7	0.9	3.0	3.5	2.5	3.0
16	0.35	0.21	0.54		1.8	3.7	5.5	0.5	0.8	3.2	3.5	2.7	3.0
17	0.35	0.22	0.63		1.6	3.5	5.1	0.5	0.8	3.2	3.5	2.9	3.2
18	0.35	0.22	0.61	0.59	1.9	2.9	4.8	0.2	0.3	3.0	3.2	2.8	3.3
19	0.30	0.22	0.46		1.9	2.9	4.8	0.5	0.8	2.5	3.0	2.2	2.8
20	0.40	0.22	0.60		1.9	3.0	4.9	0.5	0.7	3.0	3.4	2.1	2.4
21	0.45	0.21	0.66		1.8	2.9	4.7	0.6	0.9	2.7	3.1	2.2	2.6
22	0.40	0.20	0.61		2.0	3.0	5.0	0.5	0.8	2.5	3.0	2.0	2.5
23	0.35	0.21	0.59		2.1	2.8	4.9	0.6	0.9	3.0	3.5	2.7	3.2
24	0.40	0.21	0.62		2.0	2.7	4.7	0.8	1.1	2.8	3.2	2.7	3.2
25	0.40	0.23	0.64		2.2	2.8	5.0	0.7	1.0	2.6	3.1	2.4	3.0
26	0.40	0.22	0.63		2.0	2.7	4.7	0.7	1.0	2.9	3.4	2.5	2.9
27	0.40	0.22	0.63		1.5	2.6	4.1	0.7	1.0	3.0	3.5	2.8	3.2
28	0.40	0.20	0.61		2.0	2.9	4.9	0.7	0.9	2.7	3.3	2.1	2.6
29	0.40	0.21	0.62		2.1	3.3	5.4	0.6	0.8	2.4	3.1	2.2	2.5
30	0.40	0.21	0.69		2.1	3.8	5.9	0.6	0.9	3.0	3.5	3.0	3.5
Avg.	0.41	0.22	0.64	0.65	2.0	3.4	5.4	0.7	1.0	2.9	3.4	2.5	3.0
Max.	0.50	0.26	0.76	0.69	2.5	4.2	6.5	0.9	1.3	3.2	3.5	3.2	3.5
Min.	0.30	0.18	0.46	0.59	1.5	2.6	4.1	0.2	0.3	2.4	3.0	1.8	2.4

Chemical Analyses City of Flint Water Treatment Plant November 2014 Page 5

WSSN: 2310

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.32	7.75	281	168	225	91	56	77	101.8	64.1	6.8	1.0	45	67
2	8.43	8.17	286	163	238	81	48	82	89.8	47.3	15.1	10.7	44	67
3	8.41	8.11	285	175	230	84	55	91	93.0	49.7	12.6	11.7	45	70
4	8.39	7.29	285	172	233	78	52	94	93.0	54.5	13.1	9.2	46	70
5	8.41	7.61	290	162	240	81	50	81	90.6	51.3	15.6	8.7	49	72
6	8.40	7.72	288	160	235	81	53	79	89.0	46.5	15.6	9.2	46	69
7	8.41	7.71	289	167	236	82	53	85	102.6	59.9	8.3	4.9	45	68
8	8.41	7.77	291	164	232	78	59	86	102.6	60.1	8.3	3.4	47	69
9	8.46	7.80	297	160	236	78	61	82	86.6	42.5	19.4	13.1	48	71
10	8.44	7.82	294	166	241	83	53	83	93.0	43.3	14.6	14.1	47	70
11	8.52	8.09	296	168	237	84	59	84	107.4	60.1	7.3	3.4	48	70
12	8.50	7.81	297	167	244	81	53	86	96.2	50.5	13.1	9.2	45	71
13	8.51	7.39	300	163	241	78	59	85	112.2	59.3	4.9	4.4	48	70
14	8.53	7.59	301	148	241	60	60	88	115.4	59.3	3.4	1.5	46	69
15	8.54	7.77	302	146	235	64	67	82	109.0	52.1	7.8	4.9	47	68
16	8.54	8.13	301	149	247	64	54	85	100.2	41.7	11.7	10.2	49	72
17	8.57	7.57	313	152	249	64	64	88	101.8	40.9	13.6	11.2	47	71
18	8.48	7.53	307	152	254	70	53	82	95.4	44.9	17.5	8.7	47	72
19	8.51	7.59	308	183	248	90	60	93	104.2	65.7	11.7	3.9	47	68
20	8.42	7.50	313	187	248	95	65	92	104.2	64.9	12.2	5.8	47	73
21	8.31	8.14	310	191	251	100	59	91	113.8	70.5	6.8	2.9	47	72
22	8.31	7.92	308	202	249	113	59	89	103.4	68.9	12.2	6.8	48	74
23	8.38	7.97	321	213	252	122	69	91	101.0	64.1	17.0	12.6	48	76
24	8.36	8.34	312	211	246	121	66	90	85.0	56.1	23.8	18.0	50	75
25	8.25	7.85	311	209	250	111	61	98	105.0	70.1	11.2	6.8	50	75
26	8.22	8.29	311	196	251	108	60	88	107.4	71.3	10.2	4.4	47	72
27	8.40	8.24	310	189	255	100	55	89	99.4	54.5	14.6	12.6	48	72
28	8.32	8.23	304	179	248	100	56	79	116.2	64.9	3.9	1.0	48	69
29	8.16	8.45	302	192	245	102	57	90	109.8	64.1	7.3	7.3	47	72
30	8.20	8.04	309	197	149	102	160	95	102.6	61.7	12.6	10.2	46	77
Avg.	8.40	7.87	301	175	240	88	61	87	101.1	56.8	11.7	7.7	47	71
Max.	8.57	8.45	321	213	255	122	160	98	116.2	71.3	23.8	18.0	50	77
Min.	8.16	7.29	281	146	149	60	48	77	85.0	40.9	3.4	1.0	44	67

Bacteriological & Physical Parameters

City of Flint Water Treatment Plant

WSSN: 2310

November 2014

Date	Total Coliform						Standard Plate Count (Simplate MPN)		Conductivity (mS)	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap	Tap	Raw	Raw	Tap	Raw	Tap
1	1	564	12	0	1	0	860	< 2	0.39	10.8				
2	1	654	12	0	1	0	1060	< 2	0.38	8.8				
3	1	296	12	0	1	0	190	< 2	0.39	8.9				
4	1	218	12	0	1	0	160	< 2	0.36	9.6				
5	1	486	12	0	1	0	3780	< 2	0.36	9.0				
6	1	194	12	0	1	0	3660	< 2	0.36	9.8				
7	1	268	12	0	1	0	1770	< 2	0.40	10.2				
8	1	194	12	0	1	0	4180	< 2	0.37	9.3				
9	1	296	12	0	1	0	3420	< 2	0.39	8.1				
10	1	172	12	0	1	0	4460	2	0.40	8.8				
11	1	296	12	0	1	0	1720	< 2	0.40	8.3				
12	1	218	12	0	1	0	1600	< 2	0.37	7.7				
13	1	40	12	0	1	0	1420	< 2	0.39	7.0				
14	1	126	12	0	1	0	800	< 2	0.37	6.4				
15	1	104	12	0	1	0	420	< 2	0.37	6.3				
16	1	82	12	0	1	0	560	< 2	0.36	5.5				
17	1	104	10	0	1	0	340	< 2	0.37	4.7				
18	1	104	4	0	1	0	160	< 2	0.33	4.0				
19	1	40	12	0	1	0	40	< 2	0.40	4.9				
20	1	40	12	0	1	0	520	< 2	0.41	5.3				
21	1	20	12	0	1	0	80	2	0.42	5.4				
22	1	82	12	0	1	0	80	< 2	0.44	5.9				
23	1	168	12	0	1	0	340	2	0.46	5.8				
24	1	768	12	0	1	0	660	< 2	0.46	6.4				
25	1	596	12	0	1	0	420	< 2	0.46	6.2				
26	1	1008	12	0	1	0	340	< 2	0.43	5.6				
27	1	1240	8	0	1	0	460	2	0.36	5.1				
28	1	7308	12	0	1	0	2240	< 2	0.37	5.4				
29	1	9768	12	0	1	0	3120	< 2	0.38	6.3				
30	1	19608	12	0	1	0	5140	< 2	0.37	6.5				
Avg.									0.39	7.1				
Max.							5140	2	0.46	10.8				
Min.									0.33	4.0				

WSSN: 2310

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3											0
4	0.4	1.6	1.2	1.5	0.8	0.1	0.3	1.9	0.8	1.8	10
5											0
6	0.3	1.2	1.1	1.6	1.0	0.1	0.2	1.5	1.5	1.0	10
7											0
8											0
9											0
10											0
11	0.5	1.4	1.7	1.8	0.9	0.1	0.5	1.8	1.2	2.0	10
12	0.1	1.0	1.1	1.6	0.5	0.1	0.1	2.7	0.8	0.7	10
13	0.5	1.1	1.5	1.8	0.3	0.1	0.5	2.2	1.7	0.5	10
14									0.6	1.8	2
15											0
16											0
17										1.3	1
18	0.1	0.3	1.7	0.4	0.4	0.1	0.2	1.7	0.3	0.7	10
19	0.5	0.3	1.3	1.8	0.5	0.1	1.0	1.8	3.5	1.5	10
20	0.7	1.3	1.4	1.9	0.5	0.1	0.7	1.7	1.7	1.8	10
21											0
22											0
23											0
24									1.1	0.5	2
25	0.5	1.6	1.6	0.9	0.3	0.1	1.5	1.5	0.9	1.6	10
26	0.6	0.7	1.9	1.7	1.0	0.2	0.6	1.7	1.8	1.7	10
27											0
28	0.1	0.8	1.5	1.4	0.6	0.6	1.5	1.7	0.7	1.4	10
29											0
30											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	115
Total # of routine distribution samples required	100

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	0
Percent of routine distribution samples positive	0%

Distribution Disinfectant Total Residual Summary	
Percentage of samples with a detectable disinfectant residual	97%
Average disinfectant residual this month	1.0

See page 9 for positive sample information.

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3											0
4	0.7	1.8	1.4	1.7	1.0	1.5	0.5	2.3	1.2	2.1	10
5											0
6	0.5	1.5	1.5	1.9	1.3	0.2	0.3	2.0	1.8	1.4	10
7											0
8											0
9											0
10											0
11	0.9	1.7	2.2	2.1	1.3	0.2	0.8	2.2	1.5	2.3	10
12	0.3	1.3	1.4	1.9	0.8	0.2	0.3	3.2	1.1	1.0	10
13	0.8	1.5	1.8	2.0	0.5	0.2	0.9	2.5	2.0	0.8	10
14									0.8	2.1	2
15											0
16											0
17										1.6	1
18	0.2	0.5	2.0	0.6	0.6	0.2	0.3	2.2	0.5	1.0	10
19	0.8	0.5	1.7	2.3	0.8	0.4	1.4	2.2	3.5	1.8	10
20	1.0	1.6	1.7	2.2	0.8	0.2	1.1	2.1	1.9	2.4	10
21											0
22											0
23											0
24									1.4	0.8	2
25	0.8	1.9	2.0	1.3	0.6	0.3	1.8	1.8	1.3	2.0	10
26	1.1	1.0	1.7	2.1	1.3	0.3	0.9	2.1	2.1	2.0	10
27											0
28	0.2	1.2	1.8	1.7	0.9	0.9	1.8	2.1	1.1	1.7	10
29											0
30											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.3

Positive Distribution Samples

Date	Monitoring station	Date	Repeat Monitoring Stations	Residual (mg/L) Free / Total	Present or Absent

City of Flint Water Plant DBP
Distribution System Sampling Site Locations

Site ID #	Routine Site Name & Address	Up-Stream Site Name & Address	Down-Stream Site Name & Address
DBP #1 (previously DBP 1)	McDonalds Restaurant 3719 Davison Rd. Flint, MI 48506	Arby's Restaurant 3742 Davison Rd. Flint MI 48506	Admiral Gas Station 3802 Davison Rd. Flint, MI 48506
DBP #2	BP Gas Station 822 S. Dort Hwy. Flint, MI 48503	Advasure Insurance 810 S. Dort Hwy. Flint, MI 48507	Rite-Aid Pharmacy 2838 E. Court St. Flint, MI 48506
DBP #3 (previously DBP 2)	Liquor Palace 3302 S. Dort Hwy. Flint, MI 48507	Mattress Savers 3124 S. Dort Hwy. Flint, MI 48507	Premier Insurance 3316 S. Dort Hwy. Flint, MI 48507
DBP #4	Taco Bell 3606 Corunna Rd. Flint, MI 48532	Rite Aid Pharmacy 3521 Corunna Rd. Flint, MI 48532	McFalls Collision 3614 Corunna Rd. Flint, MI. 48532
DBP #5 (previously DBP 4)	University Market 2501 Flushing Rd. Flint, MI. 48504	Consumer Services 2702 Flushing Rd. Flint, MI. 48504	Rube's Bar 1117 N. Chevrolet Ave. Flint, MI. 48504
DBP #6	Salem Housing 3216 M. L. King Blvd. Flint, MI 48505	BP Gas Station 3317 M.L. King Blvd. Flint, MI. 48505	Hinky Dinky Market 3110 M.L. King Blvd. Flint, MI. 48505
DBP #7	Rite-Aid Pharmacy 5018 Clio Rd. Flint, MI 48504	Urban League of Flint 5005 Cloverlawn Dr. Flint, MI. 48504	Clio Coin Laundry 4930 Clio Rd. Flint, MI. 48504
DBP #8 (previously DBP 3)	North Flint Automotive 6204 N. Saginaw St. Flint, MI 48505	Al & Jerry's Mini-mart 6101 N. Saginaw St. Flint, MI 48505	Hutchinson's Food & Drug 6509 N. Saginaw St. Flint, MI 48505

DBP Sampling Frequency – 8 samples quarterly

- Routine samples are collected during the 3rd full week of February, May, August, & November.
- Prior to April 2014, four (4) samples were required under EPA Stage 2 DBP. Those sites are included in our current 8 samples, and are changes in site codes are indicated in red.
- Due to initial high levels of TTHM after full time operation in April, extra samples have been collected from our Cedar St. & West Side pump stations/reservoirs, to help us determine beneficial operational procedures.

From: Busch, Stephen (DEQ)
Sent: Tuesday, January 06, 2015 12:07 PM
To: Shoven, Heather;Crooks, Jennifer;Prysby, Mike (DEQ)
Subject: RE: Discussion with Michigan citizen regarding the Flint Drinking Water TTHM Standard Violation

No problem.

As this is a chronic contaminant with a standard based on a locational running annual average, from a technical perspective it is important to keep in mind that analysis of samples collected from the last round in November do show levels currently below the 80 ppb standard at 7 of the 8 locations.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Shoven, Heather [mailto:shoven.heather@epa.gov]
Sent: Tuesday, January 06, 2015 11:44 AM
To: Busch, Stephen (DEQ); Crooks, Jennifer; Prysby, Mike (DEQ)
Subject: RE: Discussion with Michigan citizen regarding the Flint Drinking Water TTHM Standard Violation

Hi Steve,

Thank you for your quick response. I am relieved to see that the "water is safe to drink" is not in the notice.

Best wishes,
Heather

Heather A. Shoven
Compliance and Enforcement Team Leader
Ground Water and Drinking Water Branch
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Blvd (WG-15J), Chicago, IL 60604
Phone: (312) 886-0153 / Email: shoven.heather@epa.gov

From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Tuesday, January 06, 2015 10:40 AM
To: Shoven, Heather; Crooks, Jennifer; Prysby, Mike (DEQ)
Subject: RE: Discussion with Michigan citizen regarding the Flint Drinking Water TTHM Standard Violation

Here is the PN posting from the City's website:
http://www.cityofflint.com/upload/TTHM%20Notification%20Final.PDF

Stephen Busch, P.E.
Lansing and Jackson District Supervisor

Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Shoven, Heather [mailto:shoven.heather@epa.gov]
Sent: Tuesday, January 06, 2015 11:35 AM
To: Crooks, Jennifer; Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: RE: Discussion with Michigan citizen regarding the Flint Drinking Water TTHM Standard Violation
Importance: High

Hi Steve and Mike,

I appreciate your work on this issue. Would you have a copy of the PN that was posted for the TTHM MCL? If they used the MDEQ template sent with the NOV, it should not include a line that the water is safe, which is quoted in the news article.

The notice from the city says Flint water is safe to drink but warns those with "a severely compromised immune system, (who) have an infant or are elderly" that they "may be at increased risk and should seek advice about drinking water from your health care provider."
http://www.mlive.com/news/flint/index.ssf/2015/01/flint_water_has_high_disinfect.html

I appreciate your time.

Best wishes,
Heather

Heather A. Shoven
Compliance and Enforcement Team Leader
Ground Water and Drinking Water Branch
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Blvd (WG-15J), Chicago, IL 60604
Phone: (312) 886-0153 / Email: shoven.heather@epa.gov

From: Crooks, Jennifer
Sent: Monday, January 05, 2015 2:13 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Shoven, Heather
Subject: RE: Discussion with Michigan citizen regarding the Flint Drinking Water TTHM Standard Violation

Steve and Mike: Thank you, Steve, for giving us the heads up on the TTHM violation in December. I guess the public notice went out recently; we've been inundated with calls from the SDWA hotline, as I'm sure you are too. One caller this morning wanted to know more about how EPA would get involved in the enforcement process, so I referred him to Heather Shoven, our Enforcement Chief. Below is her communication with Mr. Arthur Woodson, FYI.

I'm not sure if I asked you in December, Steve, but could you send me a copy of Flint's corrective action plan for the TTHM MCL violation when you receive it?

Thank you both for risking developing high blood pressure in dealing with Flint....

Jennifer

From: Shoven, Heather
Sent: Monday, January 05, 2015 1:53 PM
To: Crooks, Jennifer
Cc: Murphy, Thomas; Damato, Nicholas; Poy, Thomas; Bair, Rita; Deltoral, Miguel
Subject: FYI: Discussion with Michigan citizen regarding the Flint Drinking Water TTHM Standard Violation

Hi Jennifer,

I wanted to follow-up on our phone conversation by documenting my discussion with Mr. Arthur Woodson (810-288-1286) this morning regarding EPA enforcement and the recent TTHM MCL violation at the Flint PWS in Michigan (NOV that you provided is attached).

He was concerned about the contents of the news article at http://www.mlive.com/news/flint/index.ssf/2015/01/flint_water_has_high_disinfect.html. Specifically, his uncle has cancer and the doctor mentioned that the DBPs in the water may be contributing to his uncle's health problems. I explained the health effects of DBPs and it being a chronic contaminant.

Mr. Woodson stated that there is a Flint City Council Meeting this evening and he would like to talk about this issue during it. He wanted to know if EPA could take enforcement action if the state and the system are not doing anything to address the contamination. I explained the basics of primacy and SDWA enforcement and how EPA is able to issue a notice of violation to a public water system. I told him that we are aware of the violation and mentioned that the state NOV provides the opportunity for the PWS to develop a corrective action plan to address the MCL violation by March 1, 2015 and the next round of DBP samples will be collected in February.

I'll let you know if I hear anything else from Mr. Woodson. I appreciate you following up with MDEQ to request a copy of the PWS's corrective action plan for the TTHM MCL violation once it's received.

Best wishes,
Heather

Heather A. Shoven
Compliance and Enforcement Team Leader
Ground Water and Drinking Water Branch
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Blvd (WG-15J), Chicago, IL 60604
Phone: (312) 886-0153 / Email: shoven.heather@epa.gov

From: Crooks, Jennifer
Sent: Tuesday, December 16, 2014 10:09 AM
To: Poy, Thomas; Bair, Rita; Damato, Nicholas; Shoven, Heather; Murphy, Thomas
Cc: Kuefler, Janet; Deltoral, Miguel; Noureldin, Mostafa; Porter, Andrea
Subject: FW: Flint Drinking Water TTHM Standard Violation

Attached is the Notice of Violation letter sent to Flint TODAY RE: TTHM violation.
Jennifer

From: Busch, Stephen (DEQ) [mailto:BUSCH5@michigan.gov]
Sent: Tuesday, December 16, 2014 9:18 AM
To: Crooks, Jennifer
Subject: FW: Flint Drinking Water TTHM Standard Violation

Jennifer,

Our TTHM Violation Notice to Flint is attached in case you get any calls. If you have any questions give us a call.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Busch, Stephen (DEQ)
Sent: Tuesday, December 16, 2014 10:16 AM
To: Datema, Maggie (DEQ); 'Wurfel, Brad (DEQ) (WurfelB@michigan.gov)'
Cc: prysbym@michigan.gov; Richard Benzie P.E. (BENZIER@michigan.gov); Shekter Smith, Liane (DEQ) (SHEKTERL@michigan.gov); Adam Rosenthal (rosenthala@michigan.gov)
Subject: Flint Drinking Water TTHM Standard Violation

Attached is a copy of the Violation Notice and Public Notice Template being mailed to the City of Flint by the DEQ Office of Drinking Water and Municipal Assistance regarding an exceedance of the Maximum Contaminant Level standard for Total Trihalomethanes at certain locations within the City's drinking water distribution system.

You are being provided an electronic copy of this notice as exceedance of this drinking water standard is expected to generate inquiries from water system customers, news media, and the general public.

Maggie Datema will be informing members of the Michigan legislature.

If you have any questions or would like any additional information, you may contact Michael Prysby, District Engineer, DEQ-ODWMA at 517-290-8817, or you may contact me at the number below.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 21, 2015 2:07 PM
To: Prysby, Mike (DEQ)
Subject: Flint presentation with PN page
Attachments: FlintPublicMeeting-DEQ.pptx

PN page notes added.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

Michigan Department of Environmental Quality Community Water Supply

Information Regarding Total Trihalomethane (TTHM) Disinfection Byproducts

DEQ - Community Water Supply

- Regulatory Authority over Public Water Systems
- Michigan Safe Drinking Water Act
- 1400 Community Supplies in MI (like Flint)
- Lansing Jackson Districts – 300 in 13 counties
- Oversight through:
  - Inspection
  - Monitoring
  - Construction Permitting
  - Planning
- Partnership and Compliance Assistance

What are TTHM's

Trihalomethanes occur when natural organic matter in the water react with chlorine disinfectants. (Byproduct of disinfection process)

4 Chemical Compounds made up of these elements:

- Carbon
- Hydrogen
- Bromine
- Chlorine

TTHM Standard

- Based on chronic exposure to low doses
- 80 parts per billion (0.080 ppm)
- Locational Running Annual Average (LRAA)
- Quarterly monitoring at each location
- Location and timing based on highest risk
- Running = over last 4 quarters, not calendar yr
- Total sum of 4 quarters not to exceed 320 ppb

Flint TTHM Results

TTHM Results (mg/L)					
	5/21/14	8/21/14	11/20/14	LRAA	OEL
DBP1 McDonalds 3719 Davison	**0.162**	**0.145**	0.059	**0.092**	**0.106**
DBP2 Liquor Palace 3302 S. Dort Highway	**0.112**	**0.127**	0.033	0.068	0.076
DBP3 North Flint Auto 6204 N. Saginaw St.	**0.097**	**0.118**	0.041	0.064	0.074
DBP4 University Market 2501 Flushing Road	**0.106**	**0.196**	**0.094**	**0.099**	**0.122**
DBP5 Taco Bell 3606 Corunna Road	0.079	**0.181**	0.034	0.074	**0.082**
DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.088**	**0.144**	0.054	0.072	**0.085**
DBP7 Salem Housing 3216 MLK Boulevard	**0.082**	**0.112**	0.050	0.061	0.074
DBP8 BP Gas Station 822 S. Dort Highway	0.075	**0.112**	0.036	0.056	0.065

Potential Health Effects Related to TTHM

- Federal Language
- Some people who drink water containing TTHM in excess of the MCL over many years could experience liver, kidney, or central nervous system problems and increased risk of cancer.

Health Effect Basis by EPA

- Toxicology Studies - Uncertainty in using results of high-dose studies in animals to estimate risk to humans from chronic exposure to low doses in drinking water
- Epidemiology – Findings are contradictory. No conclusion of causal link between exposure and health effects.
- EPA determined evidence supports a potential hazard concern and establishment of standard.
- Considered best course of action at this time to reduce potential risks.

TTHM Violation Requirements

- Water supply must take steps to reduce the amount of TTHM so that they are below the standard.
- Water supply must notify customers of the violation within 30 days of after learning of the violation.

Operational Evaluation

- System treatment practices
- System distribution practices
- Storage tank operations
- Excess storage capacity
- Distribution system flushing
- Source water quality
- Treatment changes
- TTHM contributions
- Steps to minimize future standard violations

Public Notification

- Designed to provide information to the customer to make more informed decisions
- Short term exposure to long term contaminant has different impact on each individual based on their background
- If health effects had been acute notification would be provided in 24 hours with specific actions for customers

From: Busch, Stephen (DEQ)
Sent: Friday, January 23, 2015 9:31 AM
To: Wurfel, Brad (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: RE: Talked with Ambrose.
Attachments: City of Flint VN - MCL TTHM 12_16_14.pdf; TTHM - OEL letter.pdf

Brad,

Under the Act 399 Rules, the City is required to conduct an Operational Evaluation and make adjustments to their system to reduce TTHM levels. They have 90 days from the violation to complete the report (due date is March 1). This was outlined in the violation notice (attached).

When results from August continued to show high levels of TTHM and the likelihood that a violation of the standard would occur in the future, the City was asked to proactively complete an Operational Evaluation at that time to try and reduce levels (see attached September OEL compliance communication). The City did complete the evaluation, and this, in part, is why levels from November showed such a significant reduction. A copy of this Operational Evaluation can be provided.

It should also be noted that the Operational Evaluation from one monitoring period to another are separate required reports. An Operational Evaluation for a subsequent period can utilize information from a previous report, but can't be a resubmittal of the same report. It must take into account the most current data.

The City has contracted with LAN Engineering to conduct the Operational Evaluations and produce the reports.

It is the City's responsibility to evaluate their system and provide solutions.

Also keep in mind that the long term solution will continue to be connection to KWA. Such long term solutions have been acceptable for other communities to address this type of standard violation.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Wurfel, Brad (DEQ)
Sent: Thursday, January 22, 2015 9:49 PM
To: Busch, Stephen (DEQ)
Subject: Fwd: Talked with Ambrose.

Do we have a shareable briefing document?

Sent from my iPhone

Begin forwarded message:

From: "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov>
Date: January 22, 2015 at 5:00:19 PM EST
To: "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
Subject: RE: Talked with Ambrose.

Do you have any TPs, bullets, etc. on what's been done thus far in Flint to address the water issue...from DEQ perspective?

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 11:46 AM
To: Stanton, Terry A. (Treasury)
Subject: Talked with Ambrose.

THAT's why his name is familiar. He's been down there for years!
Turns out, he's got this thing handled. Just had a good conversation.
Let me know if I can be of help. Two of our best guys will be there from the drinking water program.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713

PPI

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

DAN WYANT
DIRECTOR

December 16, 2014

Mr. Brent Wright, Operation Supervisor
City Of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, MI 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Violation Notice – Maximum Contaminant Level for Total Trihalomethanes
Operational Evaluation – Total Trihalomethanes
4th Quarter 2014 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the City of Flint is in violation of the Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels* (MCL) *for disinfection byproducts*, of the 1979 Administrative Code.

In accordance with R.325.10610, *MCLs for disinfection byproducts*, of the 1979 Administrative Code, the MCL for disinfection byproduct total trihalomethanes (TTHM) is 0.080 milligrams per liter (mg/L) as a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the City of Flint's highest TTHM locational running annual average (LRAA), based on the last three quarters, ending November 30, 2014, is 0.099 mg/l which exceeds the standard, and that two of the eight sample site locations exceed the standard of 0.080 mg/L.

Further, in accordance with R325.10719l, *Disinfection byproducts: operational evaluation levels*, of the 1979 Administrative Code, when an operational evaluation level (OEL) at a monitoring location for TTHM exceeds 0.080 mg/L, a supply shall conduct an operational evaluation and submit a written report of the evaluation to the department not later than 90 days after being notified of the analytical result that causes the supply to exceed the operational evaluation level. As listed in the table below, our records show that TTHM operational evaluation levels for the City of Flint exceed 0.080 mg/L at four of the City's eight sample site locations.

TTHM Results (mg/L)					
	5/21/14	8/21/14	11/20/14	LRAA	OEL
DBP1 McDonalds 3719 Davison	**0.162**	**0.145**	0.059	**0.092**	**0.106**
DBP2 Liquor Palace 3302 S. Dort Highway	**0.112**	**0.127**	0.033	0.068	0.076
DBP3 North Flint Auto 6204 N. Saginaw St.	**0.097**	**0.118**	0.041	0.064	0.074
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DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.088**	**0.144**	0.054	0.072	**0.085**
DBP7 Salem Housing 3216 MLK Boulevard	**0.082**	**0.112**	0.050	0.061	0.074
DBP8 BP Gas Station 822 S. Dort Highway	0.075	**0.112**	0.036	0.056	0.065

Our investigation consisted of a review of ODWMA files for laboratory reports received for compliance monitoring. Our investigation is considered complete. This violation began on December 1, 2014, and will continue until TTHM LRAA is below the MCL at all sample sites.

We acknowledge and appreciate the city's cooperation with our recommendation to preemptively conduct an Operational Evaluation following the City's second quarterly round of monitoring in August. That Operational Evaluation report has identified possible causes and corrective measures for the elevated TTHM levels which we encourage the City continue implementing. These modifications have likely contributed in part to the reduction in TTHM levels reported in the most recent quarter, and suggest the City may be able to achieve compliance with the TTHM standard.

Our office is continuing to review the Operational Evaluation report that was submitted on December 1, 2014, and will provide the City and their consultant comments as needed to help address this MCL violation.

Water systems that exceed the OEL must complete and submit an Operational Evaluation in accordance with Administrative Rule 719l (R325.10719l) within 90 days of being notified of the violation. **An updated Operational Evaluation report, which incorporates the most recent sample results, must now be completed and received by our office by no later than March 1, 2015**.

If you have any other factual information you would like us to consider regarding the violation identified in this Violation Notice (VN), please provide them in a written response by January 16, 2015.

Administrative rule R 325.10403 of Act 399 requires that suppliers provide public notice (PN) as soon as practical, but no later than thirty (30) days after the supplier learns of this type of violation, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not normally reached by mail. Enclosed is a sample PN

which contains the minimum required language. The City is encouraged to include additional information regarding its response to this violation. **Please notify your consumers by January 10, 2015, and send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the public notice.** This violation must also be included in your 2014 Consumer Confidence Report (CCR), due by July 1, 2015. The PN must be repeated every quarter until you no longer exceed the TTHM standard. Failure to issue a PN for this violation will result in a fine of at least $1,000 per event, with a maximum of $5,000 per violation.

We anticipate and appreciate your continued cooperation in resolving this matter. If you have any questions regarding this VN, please contact us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water & Municipal Assistance
517-290-8817

Adam Rosenthal, EQA
Lansing District Office
Office of Drinking Water & Municipal Assistance
517-284-6644

mfp/ar/jlr
Enclosure

cc: Mr. Darnell Early, Emergency Manager, City of Flint
Mr. Daughtry Johnson, City of Flint
Mr. Howard Croft, City of Flint
Mr. Robert Bincsik, City of Flint
Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Genesee County Health Department
Ms. Liane Shekter Smith, P.E., DEQ
Mr. Richard Benzie, P.E., DEQ
Mr. Stephen Busch, P.E., DEQ

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, and November 20 of 2014). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the Maximum Contaminant Level (MCL). The standard for TTHMs is 80 µg/L. The location reporting the highest TTHM level was 99 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem by 2015.

For more information, please contact Mr. Brent Wright at 517-787-6537 or the Flint Water Plant at 4500 North Dort Highway, Flint, MI 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Busch, Stephen (DEQ)
Sent: Monday, January 26, 2015 1:43 PM
To: Prysby, Mike (DEQ)
Subject: FW: Flint Mayor request to Governor regarding Flint Water
Attachments: Flint Mayor Letter to Governor.pdf

See attached letter.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 21, 2015 10:50 AM
To: Shekter Smith, Liane (DEQ); Wurfel, Brad (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Datema, Maggie (DEQ); Howes, Sarah (DEQ); Sygo, Jim (DEQ)
Subject: RE: Flint Mayor request to Governor regarding Flint Water

Copy attached.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Shekter Smith, Liane (DEQ)
Sent: Wednesday, January 21, 2015 10:41 AM
To: Wurfel, Brad (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Datema, Maggie (DEQ); Howes, Sarah (DEQ); Sygo, Jim (DEQ)
Subject: RE: Flint Mayor request to Governor regarding Flint Water

First I heard about the letter was on NPR this morning.

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 10:39 AM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Datema, Maggie (DEQ); Howes, Sarah (DEQ); Sygo, Jim (DEQ)
Subject: RE: Flint Mayor request to Governor regarding Flint Water

Ooops. Thanks.
Need a copy of the letter if we have it. Want to make sure the Governor's office knows to send calls about this to us, and give them a quick briefing on the situation.
Thanks.

b

From: Shekter Smith, Liane (DEQ)
Sent: Wednesday, January 21, 2015 10:37 AM
To: Wurfel, Brad (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Datema, Maggie (DEQ); Howes, Sarah (DEQ); Sygo, Jim (DEQ)
Subject: RE: Flint Mayor request to Governor regarding Flint Water

That is the first option listed.

Changes made to date have reduced the formation of DBPs; but because of the way the standard is calculated the violation is anticipated to remain until at least late summer. However, it is difficult to predict whether the operational changes will be effective enough to address seasonal water quality changes that occur during the summer. It is possible to have a spike in August that could cause the city additional problems. But for now, all indications are that DBP levels in the distribution system are within an acceptable range.

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 10:31 AM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Datema, Maggie (DEQ); Howes, Sarah (DEQ); Sygo, Jim (DEQ)
Subject: RE: Flint Mayor request to Governor regarding Flint Water

Would a third option be to make adjustments to the plant that address the current water supply effectively?

From: Shekter Smith, Liane (DEQ)
Sent: Wednesday, January 21, 2015 10:26 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Datema, Maggie (DEQ); Howes, Sarah (DEQ); Wurfel, Brad (DEQ); Sygo, Jim (DEQ)
Subject: RE: Flint Mayor request to Governor regarding Flint Water

In light of the Mayor's letter, this could be quite uncomfortable for us tonight.

Our position has always been that we do not dictate which acceptable option(s) a water supply may choose. Our responsibility is to see that operations are managed properly, regulations are met, and safe water is delivered. For example, when Flint decided to leave Detroit and operate using the River, our role wasn't to tell them our opinion; only what steps would be necessary to make the switch.

Now that there is a violation of a drinking water standard, we have been treating Flint as we would any other supply. It is up to them to propose a solution/corrective action. Our role is to determine the reasonableness of that proposal. One option available to them is to continue to use the river until the KWA source is available as long as they implement operational changes to mitigate the formation of DBPs. Another acceptable option is to return to Detroit (GLWA) until the KWA source is available. And third option could certainly be returning to GLWA permanently.

The Mayor is saying that since there is an EM, the state (Governor) has responsibility for decisions being made (not our position). It will be very important for DEQ staff to limit our discussion to our role under the Safe Drinking Water Act. Hopefully, the EM will be prepared to respond if and when the conversation veers off into this other arena.

Liane J. Shekter Smith, P.E., Chief
Office of Drinking Water and Municipal Assistance
Michigan Department of Environmental Quality
517-284-6543

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 21, 2015 8:41 AM
To: Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Cc: Datema, Maggie (DEQ); Howes, Sarah (DEQ)
Subject: Flint Mayor request to Governor regarding Flint Water

FYI. Please see the link below. The mayor of Flint has requested the state provide assistance through a number of specific initiatives.

http://www.mlive.com/news/flint/index.ssf/2015/01/flint_mayor_asks_governor_for.html

As we are scheduled to participate in the meeting in Flint this evening please let me know if we need to further discuss these requests.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

CITY OF FLINT

Dayne Walling
Mayor

January 18, 2015

The Honorable Rick Snyder
Governor, State of Michigan
P.O. Box 30013
Lansing, MI 48909

RE: Flint Water Improvement Plan

Dear Governor Snyder:

On behalf of the Flint community, I am writing to convey serious concerns about water quality and to request your support for my proposed Flint Water Improvement Plan. Access to safe and clean water is a basic human right, and, therefore, policy and budget decisions need to ensure that water is affordable and secure for everyone in Flint and all across Michigan It is essential there is City, State and Federal cooperation to address the challenges here and to meet the needs of vulnerable populations.

The Flint Water Improvement Plan is focused in five areas: safety, quality, access, investment and education. The plan puts safety and quality first because this is fundamental. It is designed to be a sustainable solution for the City of Flint and the community as we move towards a new permanent water supply from Lake Huron through the Karegnondi Water Authority. My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the State and Federal levels.

Safety & Quality

- 100% Safety is the standard
- City of Flint reports testing data to the public to assure safety and expands testing sites and frequency
- Bring on experienced river water treatment operational management in the City of Flint

Access

- Announce an amnesty program for Flint water service turn-ons and reduce the turn-on fee
- Develop a revised affordable payment plan policy to encourage customers to return
- Design Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for the elderly and vulnerable families

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State investments
    - State approves City of Flint's Distressed Cities Fund applications

  - Federal and State support for replacement or forgiveness of payment to the Drinking Water Revolving Loan Fund due to Flint's status as a distressed community
  - Federal and State grants for infrastructure improvements in alignment with the Flint Master Plan
- City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

- Develop a community partnership with universities to provide household and business customers with information on testing and conservation
- Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information and water assistance with the Keep the Water Flowing Fund and support services
- Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

It is also critical to restore the public confidence in Flint Water. The implementation of this plan must be accompanied by extensive community engagement including local elected officials. My objective is to work with you and your appointed officials, State Senator Ananich, State Representatives Phelps and Neeley, Congressman Kildee, community groups, businesses, churches, foundations, the Flint City Council, and all of the City of Flint and government personnel.

It is imperative that we communicate better and provide residents more information. I understand representatives from the Michigan Department of Environmental Quality will be joining a public forum this week at City Hall. This engagement going forward is vital so thank you for supporting their efforts. I think this issue of transparency is important for communities all across the State. I recommend a review of the applicable laws and policies and, at a minimum, a new requirement that water testing data be reported publicly no less than quarterly by law in all Michigan communities in Flint's population category.

Thank you for the consideration Governor. There is nothing more important in Flint right now than fixing the water problems. We must work together to identify funds to repair and update the water treatment facilities and city-wide infrastructure and to help those persons without access to clean water so that the entire Flint community has sustainable, safe, secure and affordable water now and into the future. This is an important issue for the state of our State of Michigan and I urge you to work with us to implement solutions.

Sincerely,

Dayne Walling, Mayor
City of Flint

CC: Flint City Council President Joshua Freeman; Congressman Dan Kildee; State Senator Jim Ananich; State Representative Sheldon Neeley; State Representative Phil Phelps; Flint Emergency Manager Jerry Ambrose

From: Howard Croft <hcroft@cityofflint.com>
Sent: Saturday, March 21, 2015 11:02 AM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Cc: Natasha Henderson;Daugherty Johnson;Jason Lorenz;Brent Wright;Michael Glasgow
Subject: TTHM Violation
Attachments: Letter to Water Customers 3.20.15FINAL.docx

Mike,

I am sending you and Steve a copy of the letter that we plan to include with the violation notice. This is set to go out early next week and I wanted to get your opinion. We have considered some type of water summary to accompany this as well but I am not certain if I can pull that together in time unless you have a specific recommendation.

We continue to post the Monthly Operation Reports online within two weeks after the end of each month.

Thank you,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

Water Quality Update

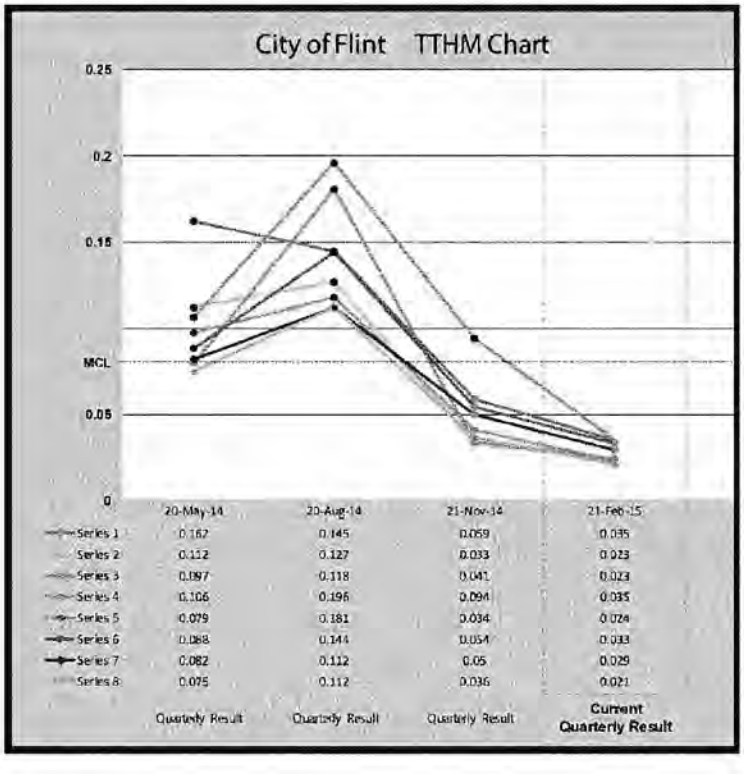
City of Flint Resident:

In January we alerted you to the presence at that time of excess TTHM (total trihalomethanes) in Flint's public water supply. TTHM – a byproduct of the water chlorination process – was found to be in excess of state guidelines (80 parts per billion) beginning in May 2014 and continuing into August. As soon as this excess concentration was discovered, we began taking steps to reduce it to within acceptable guidelines.

We are pleased to report that we have succeeded in bringing the water to within acceptable guidelines. While we continue to work on improving aesthetic qualities, such as discoloration or odor, you can be confident that the water provided to you today meets all state standards.

How did we did do this? With the help of LAN engineering, we upgraded the ozone treatment process at the Water Treatment Plant; increased water main/hydrant flushing to reduce stagnation; conducted small-scale testing of treatment to identify areas of improvement; improved overall plant operations; and enhanced the distribution system through water-circulation modeling.

By November, all but one testing site was below the allowable levels and **our most recent testing in February showed that every testing site was well below allowable levels, as shown below:**



City of Flint

Water Quality Update

The Michigan Department of Environmental Quality (MDEQ) has been monitoring our progress, as noted in its March 5, 2015 letter to the city:

> *"We are encouraged by the results from the most recent round of compliance samples collected on February 17, 2015, which now show individual TTHM levels at less than half of the 0.080 mg/L standard at all locations throughout the City's system. Operational Evaluation Reports from December 2014, and February 2015, have identified possible causes and corrective measures for the previous elevated TTHM levels, which we encourage the City to continue implementing. These modifications have likely contributed in part to the reduction in TTHM levels reported in the most recent quarter, and suggest the City may be able to achieve compliance with the TTHM standard at all sites by continuing these efforts." MDEQ*

However, because MDEQ monitoring of excess concentrations is based on four quarters of test results, we are required to again notify you that based on the most recent four quarters of test results (which includes excess concentrations beginning in April), the City's *annual* quarterly testing average is not yet below the state's allowable average.

The attached notice ***("Important Information about Your Drinking Water")*** includes legally required language that summarizes the situation. Please review it and contact us with any questions.

In addition, included in this mailing is a list of Frequently Asked Questions. We also have created a place for regular updates on the city's website at **cityofflint.com**. We encourage residents who have concerns about the quality of their water to contact us immediately so on-site testing can be scheduled.

If you have questions about this report or would like a test done at your home, free of charge, please call us at 810-787-6537.

Maintaining safe water and improving its quality is a top priority, and we apologize for the concerns these notices have raised. We have taken many steps to improve the safety and quality of our water supply and will be taking more. As you may know, we have recently received a series of recommendations from several sources, including a report from international urban water system consultants, Veolia North America. We will be working with our recently created Citizen Advisory Committee and our Technical Advisory Committee to continue making improvements. Please track our progress on our website at cityofflint.com.

Sincerely,

??????

City of Flint

From: Hansen, Jeff PPI
Sent: Friday, May 29, 2015 10:05 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ);Brent Wright (bwright@cityofflint.com);mglasgow@cityofflint.com;Matta, Samir;Green, Warren
Subject: OER
Attachments: Flint-TTHM-OER-FINAL-3-01.pdf; March 1st, 2015 OEL Report - DEQ Comments.doc

Hi Mike,

You will be receiving hard copies of the attached OER today. I also wanted to respond to the written comments you provided on the last OER submitted. The following correspond to your numbered comments which I have also attached:

1. All tables in the report have been revised to correlate the TTHM results to the sample site numbers matching MDEQ records. References to the number of exceedences have also been revised accordingly.
2. The average ozone dosage for April 2015 was 2.4 mg/l. The system is capable of much more than that, but higher dosages are not necessary and bromate formation is a concern.
3. The current model is adequate to evaluate the transmission main size along Dupont and Bishop from a conservative standpoint. Although all model domestic demands have not been revised yet, the fire flow demand is much larger and dictates the main size. Additionally, domestic demands will be decreasing.
4. Veolia provided recommendations in a Technical Memo dated 3/30/15. In that memo Veolia recommended a permanganate dosage of about 1.0 mg/l and referred to 10% TOC removal improvement. Pages 4 and 17 of the report have been revised accordingly.
5. Comment noted – no changes to report needed.
6. City staff are investigating the existence of valves shown on the system map for the pressure zone.
7. Comment noted – no changes to report needed.
8. Agree. Options in the report to reduce storage used have been revised so as not to limit the volume of Reservoir #3.
9. Comment noted – no changes to report needed.

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
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T 810.820.2682
www.lan-inc.com • PPI

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Operational Evaluation Report

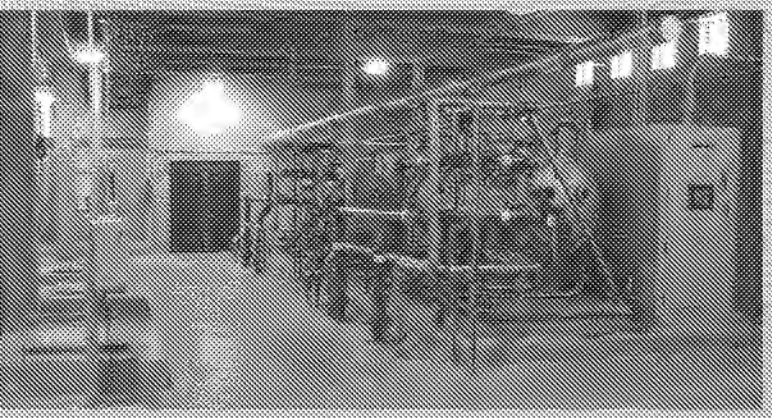
City of Flint

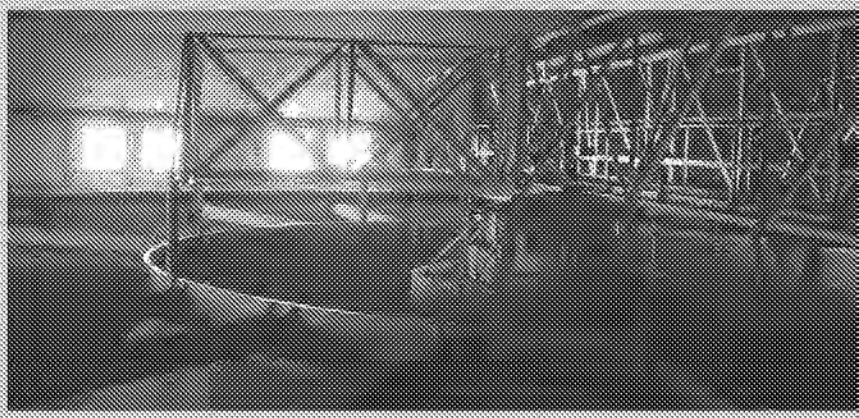
FINAL

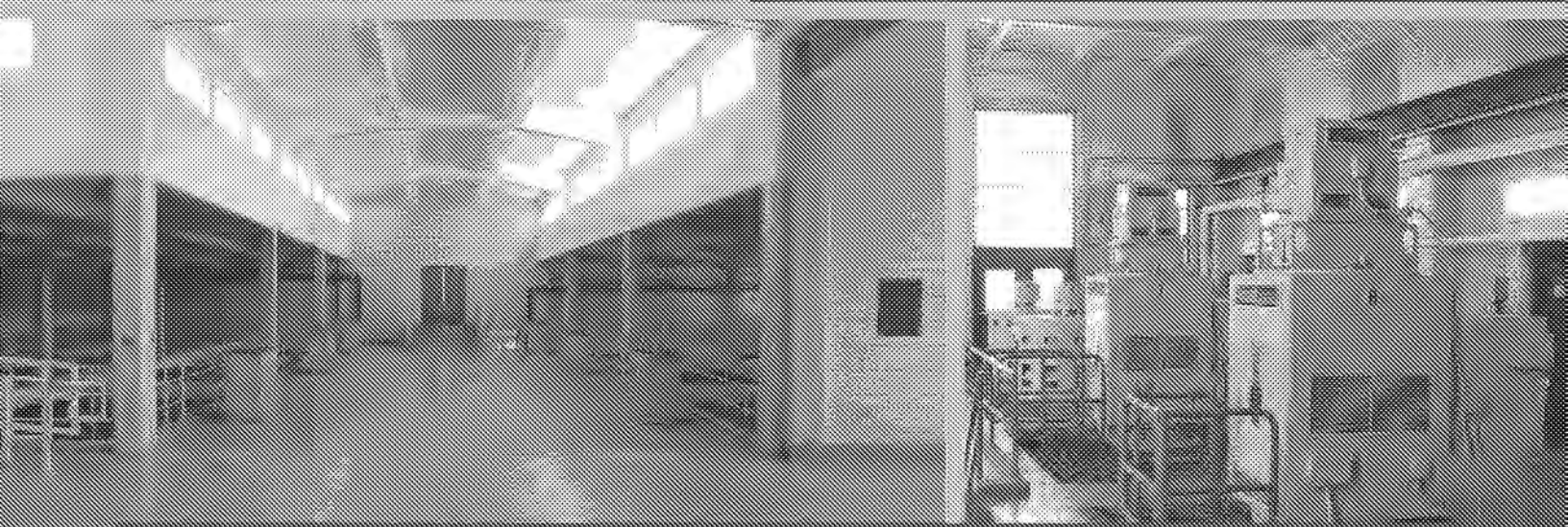
Trihalomethane Formation Concern

May 29, 2015

In Response to February 2015 Sample Results







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EXECUTIVE SUMMARY

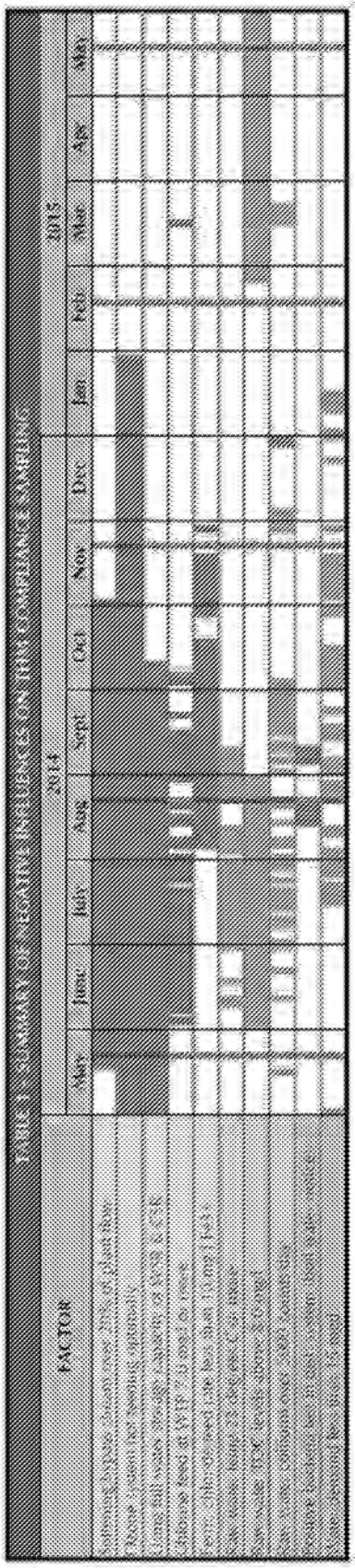
Environmental Protection Agency (EPA) and Michigan Department of Environmental Quality (MDEQ) regulations require that public water suppliers test drinking water quarterly throughout the distribution system for disinfectant by-products (DBP's). Two categories of DBP's, tri-halomethanes (THM) and halo-acetic acids (HAA5), are regulated and must be tested for. The City of Flint began operation of their water treatment plant (WTP) full time with the Flint River as the source on April 25, 2014. Since that time, five quarters of samples taken have resulted in annual average violations for total THM. Prior to the first violation (Nov. 2014), the City hired Lockwood, Andrews & Newnam, Inc. (LAN) to complete this Operational Evaluation Report (OER) in conformance with EPA guidelines with the goal to determine the cause(s) of high levels of THM and evaluate possible solutions.

The EPA promulgated the Stage 2 Disinfectants and Disinfection By-Products Rule (DBPR) in January 2006 which set maximum contaminant levels (MCLs) for total trihalomethanes (TTHM) and HAA5 based on an annual running average, tested quarterly, for a given sampling location. The City of Flint reports levels from 8 sampling test locations. Of the five quarterly sampling cycles since Flint began operating the WTP full time, HAA5 levels have been acceptable but TTHM levels have exceeded the MCL. Four sampling sites were in violation following the third sampling cycle and those sites in violation have been reduced to a single site for the most recent cycle.

A number of issues were identified as possibly contributing to the high THM levels measured.

1. Inefficient ozone system functionality which led to in increased chlorine feed.
2. Upstream source influences in terms of increased chlorine demand.
3. Bypass stream around softening contributed to chlorine demand and increased total organic carbon (TOC) levels in the effluent.
4. Unlined cast iron pipes in the distribution system contributing to chlorine demand.
5. High water age in the distribution system due to:
    a. Broken valves causing less than ideal flow patterns
    b. Inefficient pump station pressure zones
    c. Water storage volumes in excess of that needed for today's demands
    d. Oversized water mains
    e. Low water demands
6. High chlorine demand in filters.
7. High THM formation potential (THMFP) in source water.
8. Less than optimal removal of THM precursors.

A graphical representation of how the factors above relate to the timing of THM compliance sampling is shown as Table 1. Compliance sampling dates are hatched. Each row in Table 1 describes a factor than can lead to increased THM levels and the table defines when each of those factors applied. Note the convergence of nearly all factors around the second sampling period on August 21, 2014 to create what appears to be a worst case scenario. The table also shows that the factors listed as those that the City can control have been addressed prior to 2015 sampling periods. Monthly operating report data up to May 1, 2015 is depicted on the Table.



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ACTION PLAN

The City of Flint has signed an agreement with the Karegnondi Water Authority (KWA) to purchase raw water drawn from Lake Huron. The KWA system is currently under construction and expected to be operational by late 2016. The water supply from Lake Huron will have entirely different water quality characteristics from the Flint River and those characteristics are expected to yield drastically reduced DPB formation. With that, non-structural options to help reduce THM levels are much preferred over solutions requiring new construction. Therefore, two categories of actions have been devised: Stage 1 being actions that can be completed relatively quickly without major construction and Stage 2 consisting of either long term actions or solutions requiring major construction. The City is actively working to complete Stage 1 actions as soon as possible. Stage 2 actions are to be implemented only if Stage 1 actions are ineffective in adequately reducing TTHM levels and therefore Stage 2 is contingent upon the outcome of Stage 1. As of the date of this report, status updates for action items are shown in red.

Stage 1 – Immediate Actions

- Hire third party water quality expert to complete independent 'water audit'
  - The City hired Veolia Water to review all water quality related operations, procedures, actions taken and planned responses. Recommendations from Veolia were provided in a report and technical memo dated 3/12/15 and 3/30/15 respectively.
- Obtain an in house THM analyzer to allow regular operational monitoring of THM levels
  - THM analyzer was installed 2/17/15.
- Hire ozone system manufacturer to troubleshoot ozone system
  - Manufacturer and controls programmers performed on site evaluations followed by corrective modifications in January 2015.
- Bench scale jar testing
  - Match existing process and assess possible areas of improvement
    - Existing process was simulated and an evaluation of existing chemical feed dosages has been completed by LAN.
    - Existing process TOC profile was developed by Veolia.
  - Simulate potential modifications to treatment process
    - Soda ash softening evaluation completed and PAC feed testing completed by LAN.
  - Evaluate coagulation and flocculation polymer aid feeds to assist with TOC removal
    - Evaluations of polymer aids completed by LAN and PVS Technologies.
- WTP operational changes
  - Discontinue softening bypass stream to reduce chlorine demand
    - Operational directive has been set to soften no less than 80% of flow.
  - Disinfection of filter beds to reduce chlorine demand
    - Utility Service Group contracted by City and condition assessment completed. Controls improvements have been completed.
  - Begin coagulation and flocculation polymer aid feeds to assist with TOC removal if bench scale test results are positive
    - Jar testing completed to date has not indicated a meaningful benefit to feeding coagulation/flocculation polymer aids. Increased ferric doses have been implemented at the WTP based on positive jar test results.

- Increase water main flushing efforts to minimize stagnant water
  - Flushing efforts are ongoing as needed based on chlorine residual levels measured in the system.
- Water system modeling to identify areas with high water age and potential solutions
  - The water model has been improved and preliminary results, including system wide water age, have been produced. Water demand updates and reconciliation with operator's data are underway with expected completion in mid June, 2015.
  - Cedar Street Pump Station potential recirculation
    - Water model analysis to be completed in June 2015.
  - West Side Pump Station potential recirculation
    - Water model analysis to be completed in June 2015
  - Storage tank volume use
    - Operating levels of West Side and Cedar Street reservoirs have been lowered to reduce water age
  - Possible broken closed valve locations
    - Model has been updated with known broken valve locations. Model results are being evaluated for indications of other possible broken valves. City has also initiated valve assessment program.
  - Locations in need of flushing
    - High water age areas have been identified in the water model. Further evaluation is expected to be done by July 1, 2015 to determine most effective flushing points.

Stage 2 – Contingent Actions

- Fix ozone system
  - Repairs have been made to gauges and programming and the system is producing proper ozone and functioning under manual operation. Further minor repairs are planned for the 1st quarter 2015 to allow automatic operation.
- Start feeding coagulation and flocculation polymer aids to lower TOC, if not completed in Stage 1
  - Polymers evaluated by LAN did not demonstrate notable benefit.
  - PVS Technologies evaluated a proprietary polymer that showed little benefit.
- Convert to lime and soda ash softening
  - Cost effective analysis to be developed, if necessary, based on effectiveness of new GAC filter media.
- Change disinfectant to chloramine or chlorine dioxide until KWA
  - Cost effective analysis to be developed, if necessary, based on effectiveness of new GAC filter media.
- Install pre-oxidant feed at intake to optimize ozone disinfection
  - Permanganate feed at intake was evaluated and recommended by Veolia to help with TOC removal.
- Replace filter media with granular activated carbon (GAC) media
  - Design of filter anthracite media replacement with GAC media is in progress. GAC media is expected to be installed by mid July 2015.
- Implement advanced treatment for THM precursor removal
  - Cost effective analysis to be developed, if necessary, based on effectiveness of new GAC filter media.

- Increased main flushing based on water modeling results
  - Water model analysis to be completed in June 2015.
- Continue valve replacements with water model assistance
  - Water model analysis to be completed in June 2015
- Emphasize cast iron pipes on water main replacement priority list
  - Flint has bid replacement of over 2 miles of 24" steel pipe along Dupont and Bishop Streets to be completed this coming construction season if the City can allocate funds. The water main section is considered a critical transmission main, and is expected to contribute to decreases in water age when complete.

THM samples have been taken and tested 5 times for regulatory reporting since the City began using the Flint River for supply. Numerous additional sets of samples have been taken by the City for internal operational monitoring. Compliance samples were taken in May 2014, August 2014, November 2014, January 2015, February 2015, and May 2015. The average of all eight sample sites in May 2014 was 100.2 ug/l and the most recent average of samples taken in May 2015 was 56.7 ug/l. The MCL defined by the EPA is 80 ug/l.

I. BACKGROUND

The City of Detroit Water and Sewer Department (DWSD) has historically provided drinking water for the City of Flint and Genesee County. In the late 1990's growing concern regarding the reliability of the DWSD supply prompted the City of Flint to upgrade their existing water treatment plant (WTP). Those improvements, defined as Phase I, were completed in 2005 and were intended to allow the Flint WTP to operate, using the Flint River as the source, for an extended period of time in the event that supply from the DWSD was temporarily interrupted. Additionally, the Phase I improvements set the stage for Flint to break free from dependence on the DWSD supply and water charges over which they had no control.

A. WATER SUPPLY TRANSITION

1. Detroit Water and Sewer Department (DWSD)

Until recently the Genesee County and Flint region had been provided drinking water by the DWSD. However, due to excessive cost increases and reliability issues with the DWSD system other options had to be explored.

2. Karegnondi Water Authority (KWA)

In 2010 the Karegnondi Water Authority (KWA) was formed for the purpose of developing a new water supply from Lake Huron to serve the region in lieu of the DWSD supply and the City of Flint elected to join. The KWA expects the new system which is currently being constructed to become operational by the fall of 2016.

3. Flint River – Interim Period

With a renewing water supply agreement between Flint and the DWSD being terminated by the DWSD (effective April 30, 2014) and the KWA system not expected to be operational until late 2016, the City of Flint decided to initiate operation of the existing WTP full time utilizing the Flint River as the interim water source. A variety of WTP improvements were necessary for the Flint plant to become a full time plant. For purposes of this report, Phase II improvements to the Flint WTP are improvements intended to allow the plant to operate full time with either the Flint River as the source or the KWA supply as the source.

B. TTHM VIOLATIONS

The EPA and MDEQ method of determining if TTHM sample results exceed the MCL uses a locational running annual average (LRAA). Flint's first TTHM violation was cited by the MDEQ following the third cycle of sampling completed in November 2014. Of the 8 sampling sites, 4 were in violation. At that time the MDEQ used the following calculation for determining if the MCL had been violated:

(2 x current quarter value + previous 2 quarter values) / 4 = Operational Evaluation Value

Flint has now completed tests for 5 quarters and a straight annual running average applies. Based on samples taken on May 18, 2015 the number of sites in violation of the THM MCL limit has decreased to one. The May 2014 average across all test sites was 100.2 ug/l and the May 2015 average is 56.7 ug/l with the highest individual site result of 72.4 ug/l. Test results are tabulated in Table 2. HAA5 sample results are shown in Table 3, of which Flint has had no violations.

TABLE 2 – TTHM TEST RESULTS (ug/L)							
Sample Location	5/21/14	8/21/14	11/21/14	2/17/15	5/18/15	Feb/15 LRAA	May/15 LRAA
WTP Tap	56	86	33	-	~35	n/a	n/a
1) 3719 Davison McDonalds	162.4	145.3	58.6	16.2	51.4	95.6	67.9
2) 822 S. Dort Hwy BP Gas Sta.	75.1	112.0	36.2	19.9	46.1	60.8	53.6
3) 3302 S. Dort Hwy Liquor Palace	111.6	127.2	33.3	16.8	63.5	72.2	60.2
4) 3606 Corunna Taco Bell	79.2	181.3	33.9	18.1	54.7	78.1	72.0
5) 2501 Flushing Univ. Market	106.4	196.2	93.6	24.5	59.8	105.2	93.5
6) 3216 MLK Salem Housing	82.2	112.4	50.1	28.5	72.7	68.3	65.9
7) 5018 Clio Rite Aid	88.2	144.4	53.6	19.2	60.5	76.4	69.4
8) 6204 N. Saginaw N. Flint Auto	96.5	118.3	41.1	14.9	45.2	67.7	54.9

TTHM MCL = 80 ug/l

TABLE 3 – HAA5 TEST RESULTS (ug/L)							
Sample Location	5/21/14	8/21/14	11/21/14	2/17/15	5/18/15	Feb/15 LRAA	May/15 LRAA
WTP Tap	36 (taken June 14, 2014)					n/a	n/a
1) 3719 Davison McDonalds	64	43	16	9.0	16	33.0	21.0
2) 822 S. Dort Hwy BP Gas Sta.	38	40	21	9.0	16	27.0	21.5
3) 3302 S. Dort Hwy Liquor Palace	52	31	15	9.0	17	26.8	18.0
4) 3606 Corunna Taco Bell	50	24	15	9.0	16	24.5	16.0
5) 2501 Flushing Univ. Market	55	17	24	9.0	15	26.3	16.3
6) 3216 MLK Salem Housing	41	25	5	2.0	10	18.3	10.5
7) 5018 Clio Rite Aid	49	30	17	9.0	22	26.3	19.5
8) 6204 N. Saginaw N. Flint Auto	48	37	18	9.0	17	28.0	20.3

HAA5 MCL = 60 ug/l

C. WATER TREATMENT PLANT RECENT IMPROVEMENTS & STATUS

1. Phase I WTP Improvements

Since 1965, the Flint WTP has remained a secondary or backup supply system to the DWSD primary supply. Typically the secondary supply for a public water system is expected to be needed only during emergency situations and normally is designed for short term operation such as providing the average daily demand for a few days. Conversely, Phase I improvements were designed with the intent to upgrade the Flint WTP in order to allow for an extended short term period (6 weeks) because of the perceived high risk that the DWSD supply would fail and remain out of service for an

extended duration. Regardless, the Flint WTP was still intended to serve as a standby plant and as such the Phase I improvements lacked redundancies that would be required for a primary supply WTP.

2. Past Pilot Study & Testing

During design of the Phase I improvements a treatability study was completed by Alvord, Burdick & Howson, LLC (AB&H) in 2002. The Treatability Study evaluated the current treatment processes that are in place at the Flint WTP today with the Flint River as the source. The report recommended the following:

TABLE 4 – 2002 WTP TREATMENT RECOMMENDATIONS

Treatment	Purpose	Point of Application	Dosage (mg/l)
Sodium permanganate	Zebra mussel control	Intake	0.3
Ozone	Taste & odor removal, disinfection	Diffusor basin	1.5
Ferric chloride	Coagulation	Rapid mix	40
Coag aid polymer	Turbidity & TOC removal	Rapid mix	2.0
Floc aid polymer	Turbidity & TOC removal	Floc basin	0.05
Lime	Softening	Softening basin	175
Soda ash	Softening	Softening basin	52
Carbon dioxide	pH adjustment	Recarb basin	37
Media filters	Filtration	N/A	Na
Chlorine	Disinfection	Filter effluent	1.0

Of the recommended items, zebra mussel control, coagulant and flocculation polymer aids, and soda ash feed have not been incorporated into the treatment process.

3. Phase II WTP Improvements for Full Time Operation

Phase II WTP improvements are those needed to convert the Flint WTP from a back-up supply to a primary supply plant. A number of improvements have already been constructed as they were necessary to operate full time when treating water from the Flint River. The improvements under the title of Phase II that have been completed or are nearly complete include installation of the future raw water feed connection point and valving for the KWA supply, upgrades to the lime sludge lagoon, the lime sludge lagoon decant and disposal system, decant pump station and force main, installation of mid-point chlorination before filtration, and upgrade of the electric feed sub-station.

Additional improvements to the Flint WTP that are to be completed to become part of the normal treatment process using water supplied by the KWA are:

- New oxygen and nitrogen storage facilities for the ozone system (under construction)
- New coagulant feed system
- Electrical
  - Pump Station #4 upgrades (under construction)
  - SCADA and controls upgrades
  - Filter transfer pump station feeders
- Pump replacements and VFD installation in the low and high service pump station (under construction)
- Filter transfer pump station to Dort Reservoir
- Facility security improvements

II. SOURCE WATER EVALUATION

A. DATA ANALYSIS

Based on past data collected and the 2002 Treatability Study by AB&H, the Flint River water quality varies seasonally with higher hardness and alkalinity experienced in the winter. Higher magnesium concentrations are also experienced in the winter, adding difficulty to the settling process due to neutrally buoyant floc. General water quality average characteristics recorded for the 2002 Treatability Study as compared with average characteristics recorded in 2014 are shown in Table 5 below.

TABLE 5 – FLINT RIVER WATER QUALITY CHARACTERISTICS

Period	Turbidity NTU	TOC Mg/l	Alk. Mg/l	Hardness Mg/l as CaCO3	pH	Total Col. Count/day	THMFP Mg/l
2001 Apr–Oct	7.9	9.4	215	272	8.1	870-1230 (7300 max)	410
2014 May–Oct	8.3	10.3 5/22/14	207	252	8.2	1900-9000 (48,300 max)	187

The Flint River characteristics do not appear to have changed significantly over the past 10+ years. Note that near the time Flint initiated withdrawal from the Flint River investigation by City staff revealed a sewer leak upstream of the plant that may have contributed to the total Coliform count. The leak was subsequently repaired.

B. CONCLUSIONS

Considering the minor changes in Flint River water quality, much of the information contained in the 2002 Treatability Study by AB&H remains relevant today. Data from that report assumed to be consistent today include the following:

- Flint River is influenced by groundwater from a dolomitic aquifer
- Hardness varies seasonally with higher hardness and alkalinity in the winter
- Hardness, alkalinity, magnesium concentrations tend to be reduced by run-off

In development of the 2002 Treatability Study, processes were simulated which resulted in low THM levels. Therefore, information contained in that report was used to assist with establishing a baseline jar testing procedure as discussed further in Section III.

III. TREATMENT PROCESS EVALUATION

A. EXISTING PROCESS DESCRIPTION

The existing WTP consists of an intake with screening from the Flint River, low lift pumping, ozonation, rapid mix, flocculation, settling, softening, recarbonation, filtration, storage and high service pumping. A process diagram is shown as Figure 1.

1. Intake

A 72" diameter pipe draws water from the Flint River through 2 traveling screens to the low lift pump structure. No chemicals are currently fed for Zebra mussel control or pre-oxidation as recommended by the 2002 Treatability Study. Manual removal of zebra mussels is more economical than installation of chemical feed equipment considering the short term need.

2. Ozone

There are 2 ozone generators designed to provide adequate ozone for a WTP flow of up to 36 mgd. There are 3 ozone contact basins. The ozone generators were designed to produce 900 lbs/day at 10% concentration and up to 1300 lbs/day at 6% concentration each. Prior to recent repairs, readings indicated a production rate of approximately 700 lbs/day at 4% concentration. It is possible that before the recent improvements the ozone feed might not have been optimized. In fact, it is known that less than optimal ozonation previously led to increased chlorine feed which would have contributed to THM formation.

3. Rapid Mix

East and West rapid mix chambers allow chemical feed prior to the flocculation basins. Each rapid mix chamber is equipped with a 5 hp mixer.

4. Coagulation / Flocculation

The WTP contains two equally sized flocculation basins, east and west, and each basin provides tapered or gradually slowed mixing from inlet to outlet. There are fifteen 2 hp mixers for each basin with VFDs to control mixing speed. The 2002 Treatability Study recommended feeding both coagulation and flocculation polymer aids. Neither polymer aid is being used today because turbidity and TOC removals have been sufficient to meet regulatory requirements.

5. Settling

Primary clarification takes place within 3 basins containing plate settlers. The settlers are operating as designed but are due for cleaning.

6. Softening

Again, there are two basins for softening: east and west. Each basin is 120' in diameter and contains a solids contact softening unit. Each softening basin/unit has a design capacity of 18 mgd. The east clarifier has an effluent weir imbalance that the City intends to fix when low demands allow for construction. Low lift pumping limitations, flow control to the basins, malfunctioning polymer feed pumps, control restrictions on residuals removal, and fluctuating demands have made it difficult for WTP staff to stabilize the softening process. Softening is accomplished by feeding lime. The decision was made by the City not to feed soda ash in order to remove non-carbonate hardness because acceptable hardness levels could be achieved with lime feed only and softening is short term until Lake Huron water becomes available. Lime and soda ash softening is a possible consideration to assist with TOC removal and thus reduce THM formation.

7. Recarbonation

Recarbonation for pH adjustment is accomplished in east and west recarbonation basins between and to the north of the softening basins. Carbon dioxide storage and feed equipment is located west of the recarbonation basins.

8. Filtration

Filtration is accomplished with 12 dual media filters, equally sized and designed to filter 3.0 mgd each. Media consists of 12" of sand and 18" of anthracite. The filters have been operated intermittently over the years due to the standby nature of the WTP and until recently, chlorine injection took place downstream of the filters. It is possible some microbial growth had developed in the filters leading to increased chlorine demand. Late 2014, the City recently hired a contractor to upgrade the electrical controls for the filters and that work has been completed.

9. Disinfection

Disinfection is provided by ozonation and by feeding chlorine. Ozonation occurs at the front end of the WTP. Chlorine is fed prior to filtration and prior to finish water storage / high service pumping. The intermediate chlorine injection location was recently constructed under the Phase II, Segment 1 contract.

10. Clear Well & Pumping

The pump building sits adjacent to a 3 MG clear well and contains both low and high service pumps.

B. JAR TESTS / EXPERIMENTS

1. Approach

There are several well practiced methods by which DBPs can be reduced. First, the disinfectant can be changed to an alternate that has a lower tendency to form DBPs. Second, additional treatment systems such as activated carbon or air stripping (depending on the nature of the precursors) can be added to remove DBP precursors. Lastly, the existing treatment processes can be optimized to remove as much DBP precursor as possible. Of these options, optimizing existing treatment processes is the only strategy that does not require the construction of new and expensive facilities. It is anticipated that Flint will be receiving Lake Huron water by late 2016 and this water will have a completely different chemistry from the Flint River. Major process changes instituted to address THM levels using Flint River water are likely to be unnecessary for Lake Huron water and may even be inappropriate. Therefore, those options which require addition of new treatment processes are undesirable at this time. In recognition of this upcoming change in water source, efforts for this study have concentrated on improving the existing processes, rather than adding new ones. New treatment processes will only be recommended if operational changes to the existing treatment train prove ineffective.

Recent sample test results suggest that most of the DBPs are formed in the distribution system rather than within the treatment plant. Therefore, the most logical approach is to reduce the DBP formation potential (DBPFP) rather than simply lowering the levels of DBPs leaving the plant. During bench scale testing, formation potential (FP) levels were the primary indicator of success or failure of proposed process modifications.

2. Protocol

Bench scale pilot testing is intended to reflect actual plant operating and hydraulic conditions so the bench scale treatment units were sized based on various

dimensionless factors to ensure the pilot treatment matched the actual system. Bench scale ozonation was not practical due to time and cost limitations. Therefore, water samples were withdrawn from the plant ozone basin effluent. These samples were transported to the laboratory and dispensed into square testing jars. The jars were used to simulate rapid mix, three-stage flocculation, and settling. Rapid mix and flocculation conditions were matched to the plant based on "Gt" values. The "G" value is a measure of the mixing intensity and is a function of mix time, viscosity of the liquid, and mixing power applied to the water. "Gt" then, is a size scaling factor where time has been accounted for. Settling time was scaled to match the shorter settling depth of the testing jars. After settling, samples were decanted from the test jars. The decanted samples were then lime softened; softening conditions were similarly matched on the basis of "Gt". Carbon dioxide was sparged into the samples to reduce the pH. The water was then vacuum filtered through filter paper, sized to simulate the plant's dual media filters. The samples were dosed with excess chlorine and allowed to react for seven days at 25° C before testing for DBPs to determine the formation potential.

The following conditions were applied during testing to properly match small scale testing to actual plant processes.

TABLE 6 – BENCH SCALE TEST MIXING INTENSITIES

Process	G	Duration	Mix RPM
Ozonation	Plant	-	-
Rapid Mix	200	44 sec	160
Flocculation, Stage 1	50	9 min	55
Flocculation, Stage 1	25	9 min	30
Flocculation, Stage 1	12	9 min	19
Settling	N/A	10 min	-
Softening	TBD	10 min	-
Recarbonation	N/A	N/A	-

The primary variables during testing were chemical additions and chemical dosages. Specific chemicals and dosages used for initial testing conditions were selected to reflect current plant usage and the recommendations of the 2002 Treatability Study:

TABLE 7 – BENCH SCALE TEST CHEMICAL FEED RATES

Chemical	Current Usage	2002 Study	Test Values
Ozonation	4.66 mg/l	1.5 mg/l	
Ferric Chloride	7.7 mg/l Fe3+	40 mg/l Fe3+	7.7 – 80 mg/l Fe3+
Coagulant Aid Polymer	Not used	2.0 mg/l	1 – 2 mg/l
Flocculation Aid Polymer	Not used	0.05 mg/l	0 – 0.05 mg/l
Powdered Activated Carbon	Not used	N/A	20 – 100 mg/l
Lime	120 mg/l	175 mg/l	120 – 175 mg/l
Soda Ash	Not used	52 mg/l	0 – 52 mg/l
Cationic Softening Polymer	3.13 mg/l	Not used	3.13 mg/l
Anionic Softening Polymer	0.88 mg/l	Not used	0.88 mg/l
Fluoride	0.45 mg/l	1 mg/l	Not used
Carbon Dioxide	32 mg/l	37 mg/l	Fed to reach pH of 7.5 +- 0.3
Chlorine	6.3 mg/l	1 mg/l	10 mg/l

3. Considerations

The 2002 Treatability Study did not note significant formation of DBPs. This may be a function of different Flint River water chemistry at that time. However, recognizing the considerable differences in chemical usage and dosages between that study and current operations, those differences in chemical use and dosage are an obvious starting point for optimizing treatment to prevent DBP limit exceedance.

Although it is believed that optimization of current treatment can correct the DBP issue, should optimization of present treatment prove insufficient, alternate residual disinfectants (chloramines and chlorine dioxide) will be investigated as additional treatment measures.

4. LAN Test Results

Two rounds of jar testing were completed by LAN during the weeks of December 15, 2014 and January 26, 2015. Detailed test data is included in Appendix A. Testing results can be summarized as follows:

- Increased dosages of ferric chloride resulted in higher reduction of THMFP.
- The currently utilized feed rate of lime at 120 mg/l is appropriate
- Softening with soda ash in addition to lime resulted in minor additional THMFP reduction – in the range of 0% - 10%.
- The benefits of using a cationic polymer during softening at a dosage range of 0.31 - 3.13 mg/l to help reduce THM's are unclear
- The benefits of using an anionic polymer during softening at a dosage range of 0.09 – 0.88 mg/l to help reduce THM's are unclear
- Feeding PAC was ineffective in reducing THMFP within the dosage range of 20 – 100 mg/l.

5. Testing by Others

In addition to jar testing completed by LAN, the chemical supplier who provides ferric chloride for the City, PVS Technologies, ran tests using their recommended flocculant polymer aid. Plus, Veolia Water completed jars testing of their own the week of February 16th to analyze other process details and current WTP parameters. Experiments completed by PVS Technologies showed very little TOC removal beyond that obtained with straight ferric chloride feed.

6. Conclusions

Increasing the dose rate of ferric chloride is an operational change that can easily be implemented without the need for any additional equipment. Test results show that over 40% THMFP removal can be obtained with a dosage of 60 mg/l Fe3+ or higher. Increased dosing of ferric chloride would be most ideal coupled with regular raw water TOC monitoring so that TOC levels would dictate the appropriate ferric chloride feed rate.

Softening with soda ash in addition to lime is another option the City should consider if increased ferric chloride doses are not adequate to maintain THM levels under the MCL, particularly during warmer months. Again, monitoring of TOC in the raw water could provide useful information of when lime/soda ash softening is necessary.

IV. DISTRIBUTION SYSTEM EVALUATION

EPA guidance for the distribution evaluation portion of an OER is focused on identification and isolation of a specific portion of the distribution system that led to the exceedance. The circumstances of Flint's apparent pending TTHM exeedances are unusual in that a new supply has been implemented which clearly corresponds to the high TTHM sample results. Although the new source is one element in increased TTHM levels, value remains in evaluating the distribution system since water age is also a critical factor. Additionally, there may be distribution improvements that can be made to help alleviate the problem.

A. INFRASTRUCTURE

1. Piping

According to the most recent MDEQ Sanitary Survey, the distribution system is estimated to contain 70% cast iron, 20% ductile iron, 2% concrete and 8% steel water mains. Based on discussions with City staff, the percentage of cast iron pipe may be higher than that stated in the MDEQ Sanitary Survey. Unlined cast iron pipe can become pitted, allowing colonization sites for microorganisms leading to chlorine demand. Additionally, much of the piping in the system is aged and in poor condition. Increased chlorine demand could be resulting from biofilm in older pipes and from main breaks/repairs. The extent of contribution is not known but any water main replacement project will decrease chlorine demand somewhat if constructed properly. Unfortunately, water main breaks may also assist with decreasing water age by providing unintentional flushing. All things considered, it is impossible to quantify the impact existing piping has on THM formation.

The City utilizes City Point software and GPS equipment to document main breaks and prioritize replacements. However, main break information is more pertinent to rusty water complaints and has little relevance to THM levels. Areas that have been targeted for main replacements include the transmission main from the WTP west to Dupont and south to the West Side reservoir, Fenton Road, Atherton Road, Dort Highway, Averil Street, and Boulevard Drive.

2. Storage

There are 4 finish water storage tanks and 1 raw water tank as tabulated below:

TABLE 8 – STORAGE TANKS

Name	Type	Water	Volume (MG)	Operating		Absolute	
				LWL	HWL	Bottom	OF
Dort Reservoir	Ground	Raw	20	-	-	730	750
WTP Tank	Elevated	Finished	2	883.0	896.0	863.0	898.0
WTP Clear Well – PS #4	Ground	Finished	3	11′	15′	708.5	726.0
Cedar Street Reservoir	Ground	Finished	20	-	11′	737.2	757.2
Westside Reservoir	Ground	Finished	12	-	12′	761.8	779.0

The MDEQ typically recommends providing a minimum finish water storage volume of 1/3 the maximum daily demand (MDD). According to the 2013 MDEQ Sanitary Survey, the 5 and 10 year MDDs are 21.57 mgd and 30.05 mgd respectively. A common rule of thumb for clear well storage volume at a WTP is 10% of the design flow rate. Another general guideline for reliability is to provide total storage to allow for 2 X the average daily demand plus fire flow demand. For this analysis, fire flow is assumed to be 2,500 gpm for either one industrial fire (2,500 gpm) or a combination of one residential (1,000 gpm) and one commercial (1,500 gpm) fire at a 4 hour duration which results in a total volume of 600,000 gallons. These go-by

approximations are summarized below with the applicable flow rates and are compared to the existing storage volumes currently being utilized.

Common Practice	Flow Rate	Recommended Volume by ROT	Volume In Use
Clear well 10% of Design Flow	18 MGD	1.8 MG	3.0 MG
Finish Storage = 1/3 MDD	30.05 MGD	10.0 MG	37 MG
Total Storage = 2 * ADD + FFD	13.87 MGD	28.3 MG	57 MG

Based on the values above, it appears the storage volume used in the Flint system could be decreased without negatively effecting reliability. The appropriate volumes of individual tanks will be further evaluated using the water system model and discussed in Section V (C).

All reservoirs have baffling to minimize stagnant water. Also, all tanks have been maintained and are in reasonable condition. The Westside reservoir has an exposed roof that is in need of rehabilitation, but its current condition has no influence on THM formation.

3. Pump Stations

All pump stations are in good condition but pumps are generally oversized. As an independent consideration, oversized pumps are not a contributing factor to high THM levels. Control of pumps and pressure zones are discussed in detail below.

B. OPERATIONS AND MAINTENANCE

1. Pump Station & Storage Operations

Pump stations and storage tank levels are controlled as shown in Table 9.

TABLE 9 – PUMP STATION CONTROLS

PS Name	Control Point	On Point	Off Point
PS No. 4 Raw	Operator	-	-
PS No. 4 Finish	Match plant flow	-	-
Westside	System pressure (elevated tank)	22.5′	33′
Cedar Street	System pressure (elevated tank)	22.5′	33′
Torrey Road	Distr. – Brown/Bradley	< 45 psi	> 45 psi

Cedar Street and Westside pump stations are operated as needed and they are alternated. Typically, Cedar Street is run in the morning and Westside is run in the evening and reservoirs for each are filled during low demand periods at night.

Westside, Cedar Street and Torrey Road pump stations are used to boost system pressure when high demands warrant it, but there are not well defined pressure zones within the system. Therefore, the possibility exists that water is being recirculated allowing for increased water age.

2. Booster Disinfection Practices

Booster disinfection is provided at the Cedar Street and Westside pump stations. When sustained residuals are not provided by chlorine feed at the WTP, sodium hypochlorite is applied at the reservoirs while being filled.

3. Changes in System Demands

Water demands in the City have been declining since the 1960's as the population has dropped. As a result, many of the water system components are oversized including storage tanks and water mains which both increase the time for water to reach the user.

From a short term perspective, Flint demands tend to increase in summer as is ordinarily expected but also in the winter due to water main breaks. The MDD for Flint often occurs in winter. Regarding THM formation, with lower temperatures and higher flows in the winter, THM levels taken at the distribution sample points are expected to be lowest for February sampling quarters than all others.

C. WATER SYSTEM HYDRAULIC MODELING

As part of this report, the City provided a hydraulic water model, originally developed by Potter Consulting, for LAN to update. Thus far, LAN has modified the model to be capable of extended period simulations, modified controls to reflect current operations, revised the piping to include known broken valve locations, updated pump curves, checked pipe diameters, and developed preliminary water age results throughout the entire system. Water age shown in the revised model corresponds for the most part to TTHM levels at the sampling sites. However, LAN has also identified several deficiencies within the model that require further adjustments to allow for usable and reliable results. Those model deficiencies include outdated demands, improperly located appurtenances, and incorrect flow patterns. Preliminary water age results are presented in Table 10. Revised results will be provided when the hydraulic model has been fully updated.

TABLE 10 – PRELIMINARY WATER AGE FROM WATER MODEL

Sample Point	Location	Address	Water Age (Hrs)	May/15 LRAA THM (ug/l)
1	McDonalds	3719 Davison	23	68
2	BP Gas Station	822 S. Dort Hwy	18	54
3	Liquor Palace	3302 S. Dort Hwy	15	60
4	Taco Bell	3606 Corunna	128	72
5	Univ. Market	2501 Flushing	178	94
6	Salem Housing	3216 MLK	50	66
7	Rite Aid	5018 Clio	78	69
8	N. Flint Auto	6204 N. Saginaw	71	55

It is anticipated that topics shown below in italicized font will be detailed after the model is updated in March 2015.

1. Simulation of Existing System

Match existing conditions. Chlorine and THM data may be used to verify model results. We have chlorine feed data at plant and residuals at 10 locations in each MOR, May 2014 – April 2015.

2. Identification of Water System Deficiencies

Specific issues to look at:

- *Worst case at minimum daily demands*
- *Water age in entire system*
- *Possible recirculating water through pump stations*
- *Use of storage tanks – volumes in particular*
- *Indications of broken valves*
- *Effectiveness of booster disinfection*

V. RECOMMENDATIONS TO MINIMIZE FUTURE OEL EXCEEDANCES

A. SOURCE

The City of Flint has already committed to the change from the Flint River as the water source to Lake Huron under the KWA system, planned for late 2016. The risk of future TTHM limit violations will decline substantially with the use of water from Lake Huron due to much lower DBP precursors. It is important to recognize that the Flint River will become strictly an emergency supply when the KWA supply becomes available and any investments toward the Flint River should be contemplated accordingly. Recommendations discussed below in this section apply to the Flint River as the source.

Reverting to supply from the DWSD until the KWA supply is available as an option. However, based on information provided by the City of Flint, the annual cost to receive water from the DWSD would be at least $16,000,000/year or $1,333,000/month. Therefore, utilizing the DWSD for interim supply is cost prohibitive under the terms defined by the DWSD.

1. Watershed Management

A volunteer group entitled the Watershed Coalition performs various tasks related to managing the Flint River watershed such as spring cleanups and annual benthic studies to evaluate the river 'health'. No additional action is recommended at this time.

2. Monitoring

The City documents daily raw water flow, pH, alkalinity, carbonate and non-carbonate hardness, chloride, temperature, turbidity and coliform count as part of standard preparation of Monthly Operating Reports (MOR). WTP staff have obtained and installed TOC and THM analyzers. The THM analyzer is set up as an on-line plant tap monitor and operations personnel have begun taking samples most days to track TOC levels throughout the treatment process. It is recommended to implement TOC tracking as a strict daily procedure which would provide staff the data needed to establish correlations to predict distribution system THM formation.

3. Intake Operations

The 2002 Treatability Study recommended pre-oxidation in the form of sodium permanganate as a feed at the intake. It is possible the addition of a pre-oxidant such as hydrogen peroxide or some type of permanganate could enhance the ozone process. Veolia evaluated permanganate demand during jar testing the week of February 16th, 2014 and recommended implementation at a dosage of 0.5 mg/l – 1.2 mg/l to achieve 10% additional TOC removal.

4. Seasonal Strategies

Past data indicates the Flint River is influenced by groundwater and in particular, dolomitic spring water. The result is hard water with high concentrations of magnesium and sulfate. Also, hardness and alkalinity are higher during the winter. Upon initiation of supply from the Flint River, the City made the decision to soften with just lime to focus on removal of carbonate hardness. One potential modification that could assist with TOC removal and thus decrease THMFP would be lime and soda ash softening. A temporary caustic soda feed system is recommended to be put in place in case the need for optimized softening arises.

5. Upstream Contamination Issues

Upstream contamination issues are extremely difficult to prevent and even if detected are difficult to locate. Evaluation of raw water data collected for MORs is the easiest manner in which to detect upstream contamination issues because the data is already collected for treatment purposes. In fact, high total Coliform readings in the past have signaled potential issues that the City was able to identify and remove.

An upstream monitoring and warning system could be established to attempt to detect water quality issues or spill event type contamination early enough to adjust treatment procedures or cease intake prior to the contamination reaching the WTP. However, given the imminent conversion to the KWA supply, the period of full time use would likely be far too short to achieve payback on the capital expenditures.

B. TREATMENT PROCESS

1. Operational Recommendations

- Increase ferric chloride dosage: Previous testing in the 2002 Treatability Study, jar testing completed by LAN, and a review of 2014 ferric chloride dosages compared to THM levels leaving the WTP support that increasing the ferric chloride dosage would help reduce THM formation.
- Increased monitoring: Currently, the MDEQ does not require daily reporting of raw water TOC or finished water TTHM levels. However, daily tracking of such levels would allow the City to develop a correlation between the two, thus providing a predictive tool to help manage TTHM levels.
- Coagulation and flocculation polymer aids: The 2002 Treatability Study suggested the use of coagulation and flocculation polymer aids. These polymer aids were shown in the 2002 Treatability Study to increase TOC removal and thereby reduce THMFP but jar testing by LAN and PVS Technologies did not indicate clearly defined benefits. Addition of coagulation and flocculation polymer aids should be categorized as a future consideration that would require further evaluation.
- Discontinue softening bypass: In early summer of 2014 the City was bypassing a portion of flow around the softening basins because hardness levels did not warrant softening of the full stream. However, this practice was discontinued because it was believed the bypass stream was contributing to chlorine demand and preliminary data has supported that belief. Chlorine demand dropped 0.5 – 1.0 mg/l following elimination of the bypass stream in early November 2014.
- Soften with lime and soda ash: Research has shown that enhanced softening with both lime and soda ash may provide additional TOC removal. Veolia did not recommend this option after conducting jar tests.
- Disinfection of filter beds: In case there has been microbial growth it is recommended the filters be 'shock' treated with chlorine and rinsed. A chlorine injection point was added upstream of the filters during the first segment of Phase II so future growth in the filters should not be an issue.
- Optimization of all existing treatment processes: Depending on bench scale testing conditions and results, slight modifications to all treatment processes might in order to replicate lower DPBFP.
- Discontinue or adjust softening anionic polymer feed: Some anionic polymers have been found to increase TOC. However, Veolia provided no recommendation to change polymers following their evaluation.

2. Infrastructure Change Recommendations

- Fix and/or replace faulty ozone equipment: Since the ozone equipment was installed it had not been used extensively on a full time basis. Following minor complications, the City hired the equipment manufacturer and a programmer to troubleshoot the system. Replacement of faulty gauges and redesign of the control program have allowed the system to operate properly since January 2015.
- Replace filter media with GAC media: GAC media could help reduce THM levels by reducing both TOC and chlorine demand. For this consideration, the intermediate chlorine feed location should be relocated to a point downstream of the filters. The City has elected to pursue this option and design is currently underway by LAN with installation expected in mid July 2015. Provisions are also being considered for adding more GAC media and/or regeneration of media next summer.
- Change disinfectant to chloramine or chlorine dioxide: If other options prove to be ineffective, conversion to another disinfectant should be fully evaluated. Various characteristics of chloramination indicate an advantage over chlorine dioxide, but a full analysis would provide clarity as to which would be preferred.
- Install pre-oxidant chemical feed: Hydrogen peroxide or a form of permanganate as a pre-oxidant can enhance the activity of the ozone. Chemical feed could be installed at the intake structure or low service pump station, depending on the reaction time required. Use of a pre-oxidant at the intake might also provide the additional benefit of disinfection credit for ozonation with the MDEQ if an ozone residual can be obtained at the ozone process effluent as a result.
- Repair upstream sewer leak: a sewer leak upstream of the WTP intake was discovered in early summer 2014 and has been repaired by the City.

C. DISTRIBUTION SYSTEM

Potential distribution issues related to water quality issues discussed in Section IV included old cast iron pipe, oversized infrastructure, and remote storage/pump station locations and operations that might be less than ideal. Recommendations to address those issues are offered in this section.

1. Manage Water Age

a) Storage Tanks

Considering the excess storage capacity discussed in Section IV, in the short term it is recommended that operational changes be implemented immediately to reduce the overall volume of water stored to decrease water age. Immediate operational recommendations include lowering high water levels of reservoirs other than the elevated tank, to reduce the total system wide usable storage volume to 30-37 MG.

In the long term, LAN recommends development of the most ideal options for water model evaluation. Excess storage volume and tank locations within the water system afford Flint numerous options to reduce the amount of storage volume utilized. As a starting point, two recommendations are presented below.

Option 1
- Take West Side reservoir and pump station out of service
- Cut storage volume used in half at Cedar Street reservoir
- Adjusted system wide storage volume would be 35 MG

Option 2
- Take Cedar Street reservoir and pump station out of service
- Adjusted system wide storage volume would be 37 MG

b) Residence Time in Pipes

Completely redesigning and replacing the water system to match today's demands is not feasible financially and would be a waste of infrastructure with remaining useful life. Going forward, it is recommended that any future main replacement projects be evaluated for possible downsizing. When the water model is fully updated, it will provide a valuable tool in determining which mains can be downsized and to what extent. Replacement of broken valves and valve exercising are also recommended, which are programs that have already been implemented into Flint's regular operations.

Operationally, hydrant flushing is recommended as needed to minimize water age in low flow areas. Again, the updated water model should be used to locate high water age areas and optimal flushing points.

2. Reduce Disinfectant Demand

Recommendations to reduce disinfectant demand are similar to those described above to reduce water age. Replacement of old cast iron pipes would lead to a reduction of disinfectant demand on the distribution side, but realistically can only be accomplished over a prolonged period of time. In the meantime, hydrant flushing is the most viable means of reducing disinfectant demand in piping. From a storage standpoint, all reservoirs and tanks should be regularly inspected and maintained to prevent entrance of any outside contamination that would contribute to disinfectant demand. Cleaning of all tanks is recommended as well as investigation into stagnant water prevention options.

3. Water Modeling of Recommendations [yet to be completed]

Determine best flushing locations to reduce water age
Evaluate changes in storage tank operations to reduce water age
Valves to close/add to improve pressure zones, reduce recirculation
Optimization of pump station use – smaller pumps? Shut down?
Evaluate booster disinfection

D. BOOSTER DISINFECTION

Decreasing chlorine feed at the WTP and adding booster disinfection in the distribution system is an alternative intended to reduce the reaction time at higher concentrations of chlorine to reduce DPB formation. Extensive looping and branching within the existing system complicate how to best implement and utilize booster disinfection. Water system modeling is recommended to gage the effectiveness of existing feed point locations and dosages. Further discussion and details will be provided when the distribution evaluation results are available.

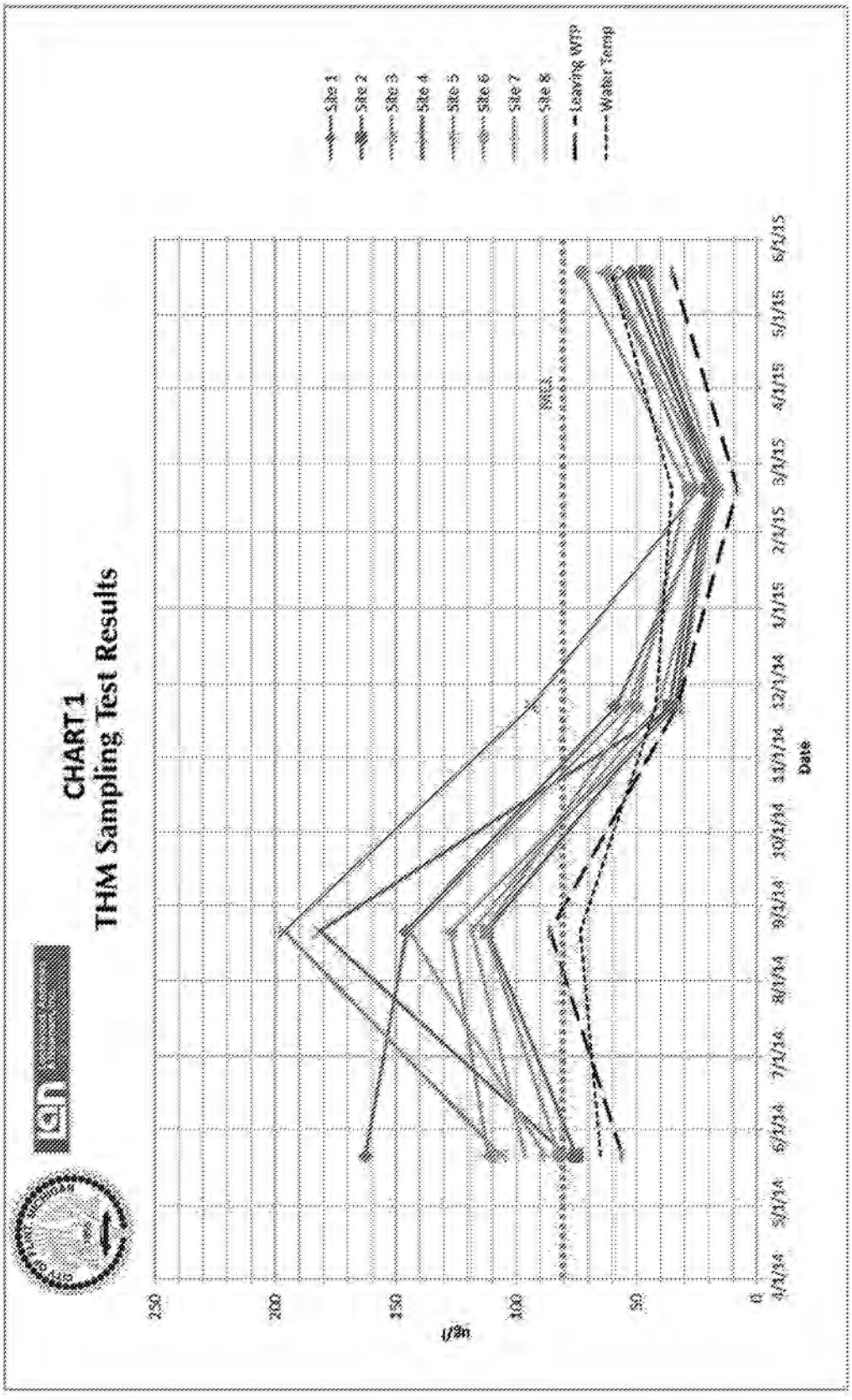
E. CATEGORIZATION OF ACTIONS

Considering that the Flint River is being used as the water source only until the KWA supply is available (expected late 2016), options to address high THM formation that require new construction or extensive time to implement are not preferred. On the other hand, the City understands THM sample results to date dictate that some action is necessary. Two categories have been developed to assist the City in prioritizing actions to take. Stage 1 consists of actions that can be completed relatively quickly without major construction and Stage 2 actions are either long term actions or solutions requiring major construction. Stage 1 actions are to be completed first followed by evaluation of the results prior to consideration of Stage 2 actions. Grouping of actions are shown in the table below.

TABLE 11 – ACTION PLAN

	Action	Purpose	Status
Stage 1	Hire water consultant to complete 'water audit'	Third party review of actions and operations to make sure no options are being missed	Complete
	Increased water quality monitoring – obtain THM and TOC analyzers	Provide information needed to adjust WTP operations to match changing raw water quality	Complete
	Troubleshoot ozone feed system	Reduce chlorine feed and increase TOC removal	Complete
	Bench scale jar testing	Optimize treatment process and evaluate possible modifications	Complete
	Discontinue softening bypass	Reduce chlorine demand	Complete
	Disinfect filters	Reduce chlorine demand	Incomplete
	Increased water main flushing	Reduce water age / stagnant water	Ongoing
	Water system modeling evaluation	Determine areas with high water age and reasons	Partially complete
	Modify booster disinfection feeds, if appropriate	Decrease water age	Not yet evaluated
Stage 2	Repair ozone system	Reduce chlorine feed and increase TOC removal	Complete
	Continue increased water main flushing	Reduce water age / stagnant water	Ongoing
	Convert to lime and soda ash softening	Increase TOC removal	Future consideration
	Continue valve replacements based on water model	Reduce water age / stagnant water	Ongoing
	Replace filter media with GAC	Reduce TOC and chlorine demand	Design underway
	Change disinfectant to chlorine dioxide	Reduce THMFP	Future consideration
	Install pre-oxidant feed at intake	Optimize ozone disinfection, reduce chlorine	Future consideration
	Implement coag. & floc. polymer aids, if appropriate	Increase TOC removal	Future consideration
	Place priority on replacing cast iron water mains	Reduce chlorine demand	Ongoing

Samples were taken May 18th, 2015 for the latest round of quarterly testing. The City has implemented many of the Stage 1 actions and THM test results have significantly improved (decreased) since May and August 2014. All sampling results are shown on Chart 1.



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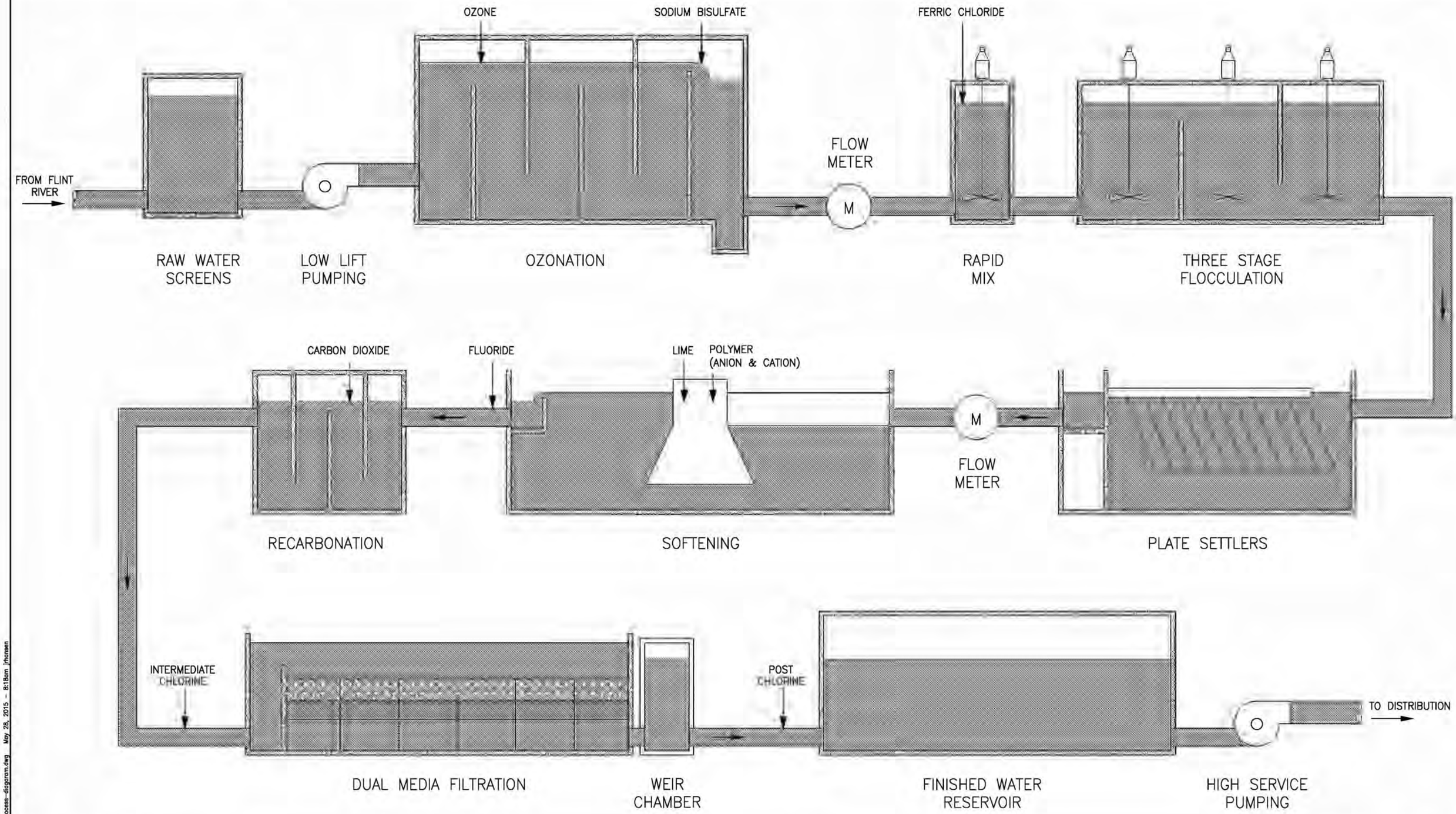
001305

001306



C:\projectwise\jhonsen\d0263766\Process--diagram.dwg May 28, 2015 - 8:18am jhonsen

Genesee County

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
1311 S. Linden Road, Suite B
Tel 810-820-2682 Fax 810-820-2703
www.lan-inc.com

CITY OF FLINT
WATER TREATMENT PLANT

REVISIONS			FILE LOG	
NO.	DESCRIPTION	DATE	ACTIVITY	BY
			Manager	JWO
			Design	
			Drawn	JRH
			Check	JRH

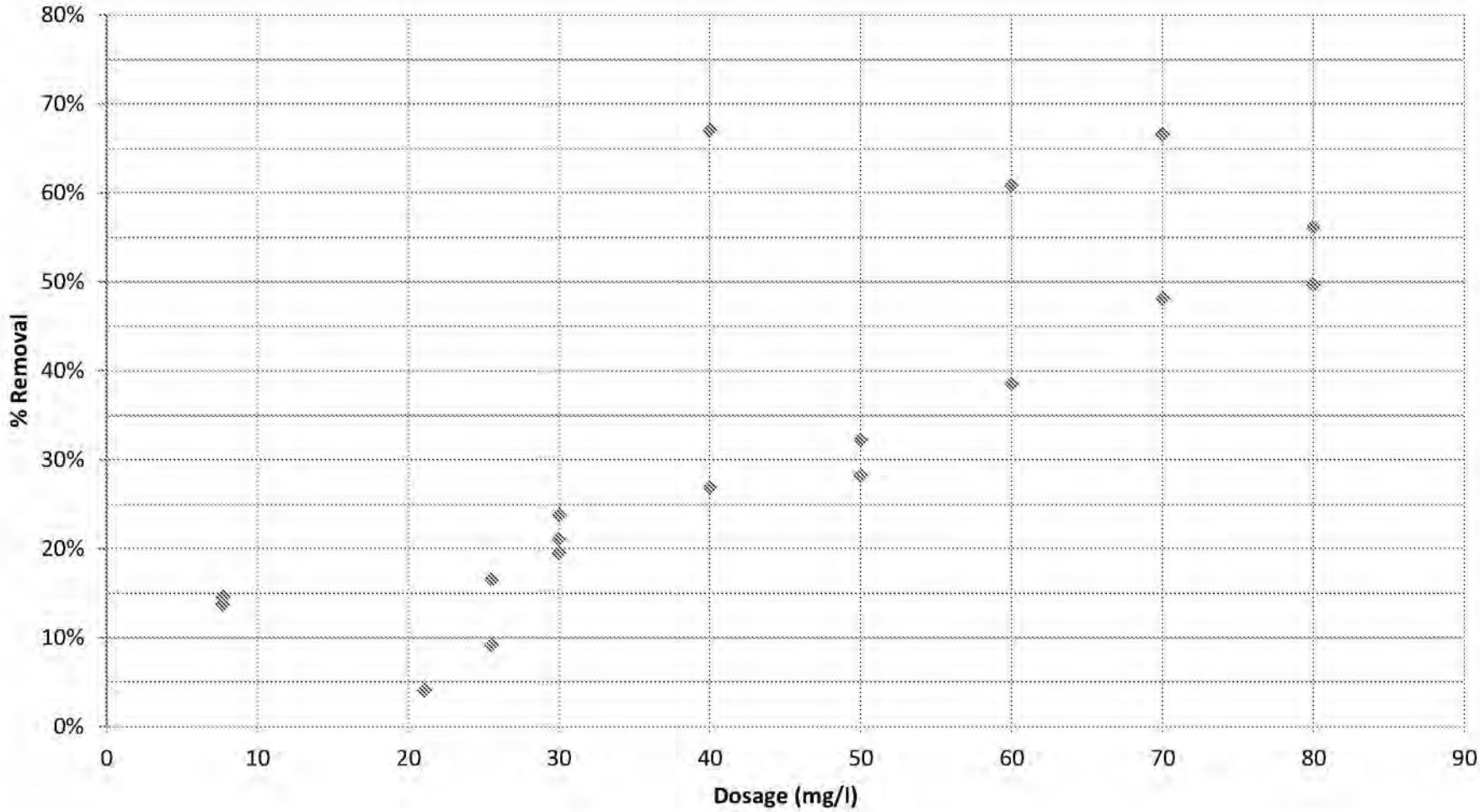
WATER TREATMENT PLANT
PROCESS DIAGRAM

Project No. 130-10701-001
Date Nov. 21, 2014
Sheet
FIG 1

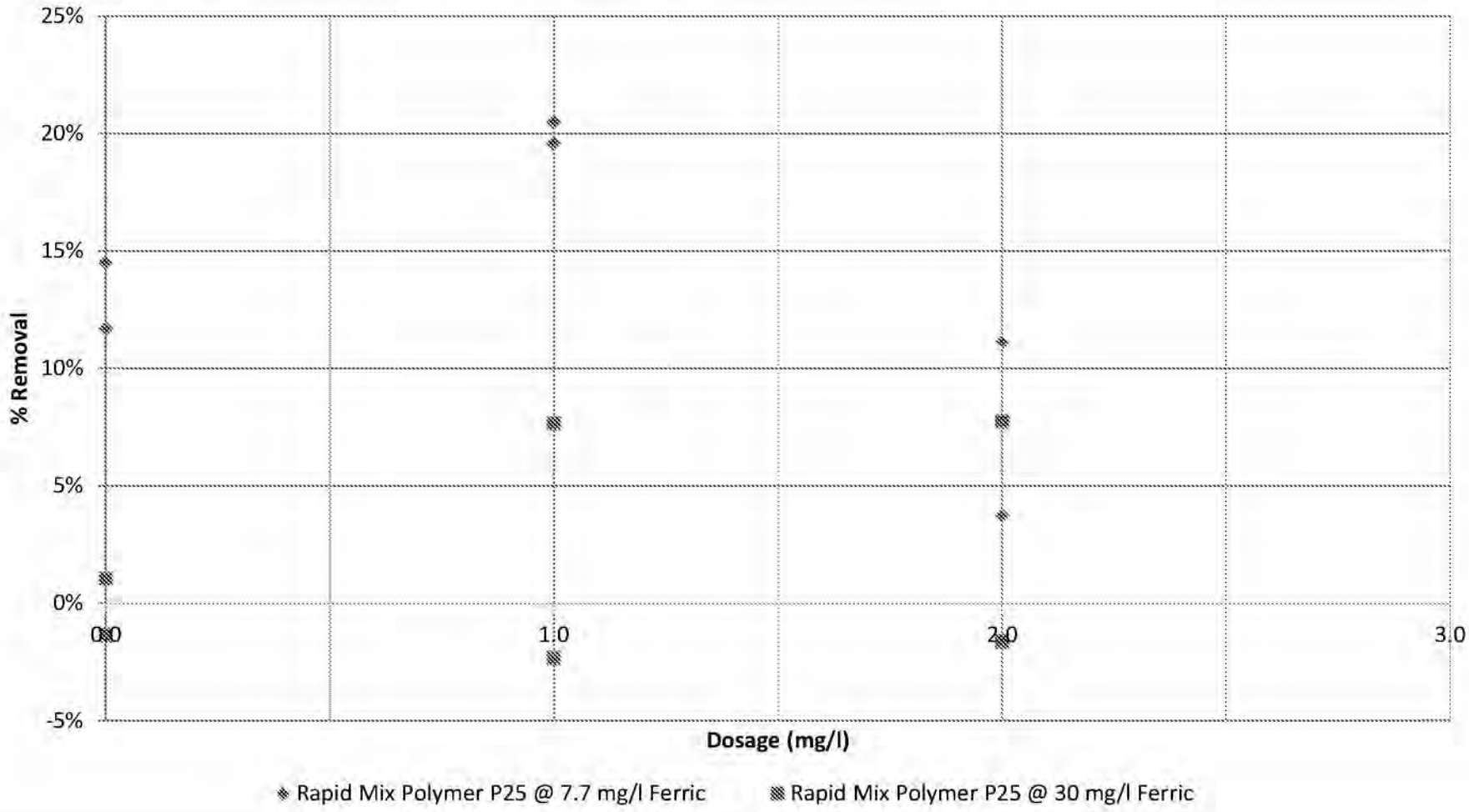
© LEO A DALY Company 2013

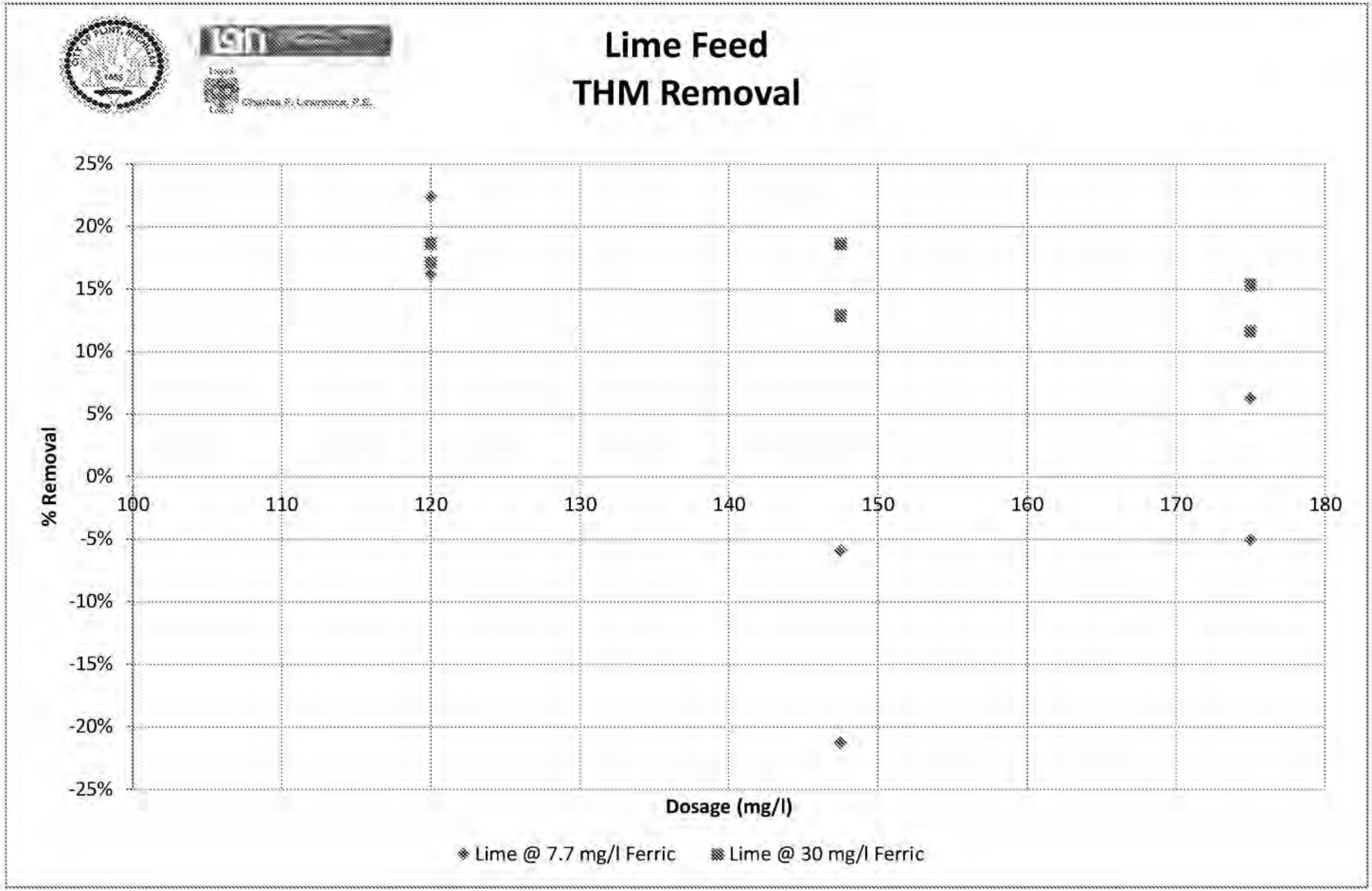
APPENDIX A
JAR TEST DATA

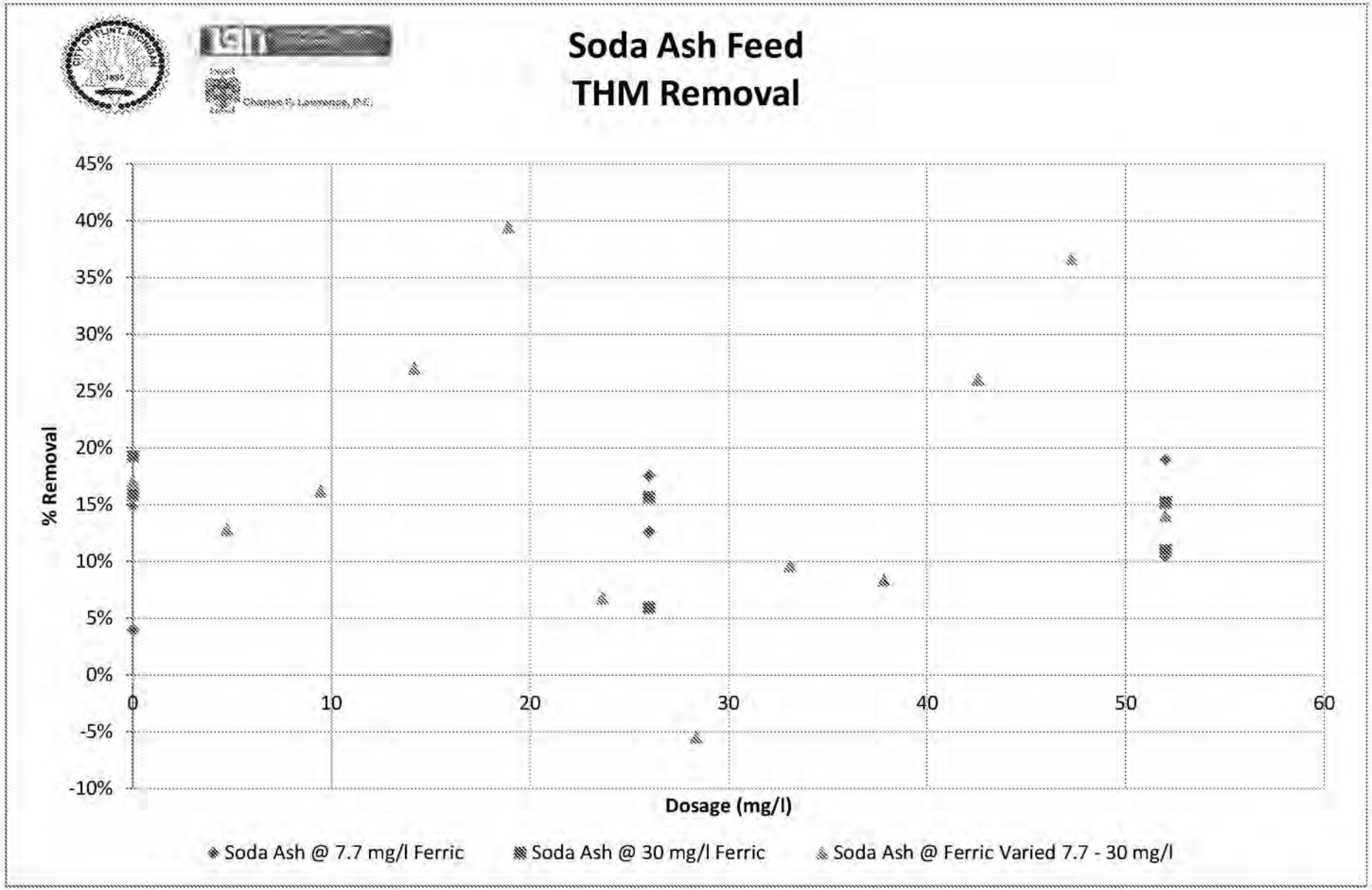
Ferric Chloride Feed
THM Removal



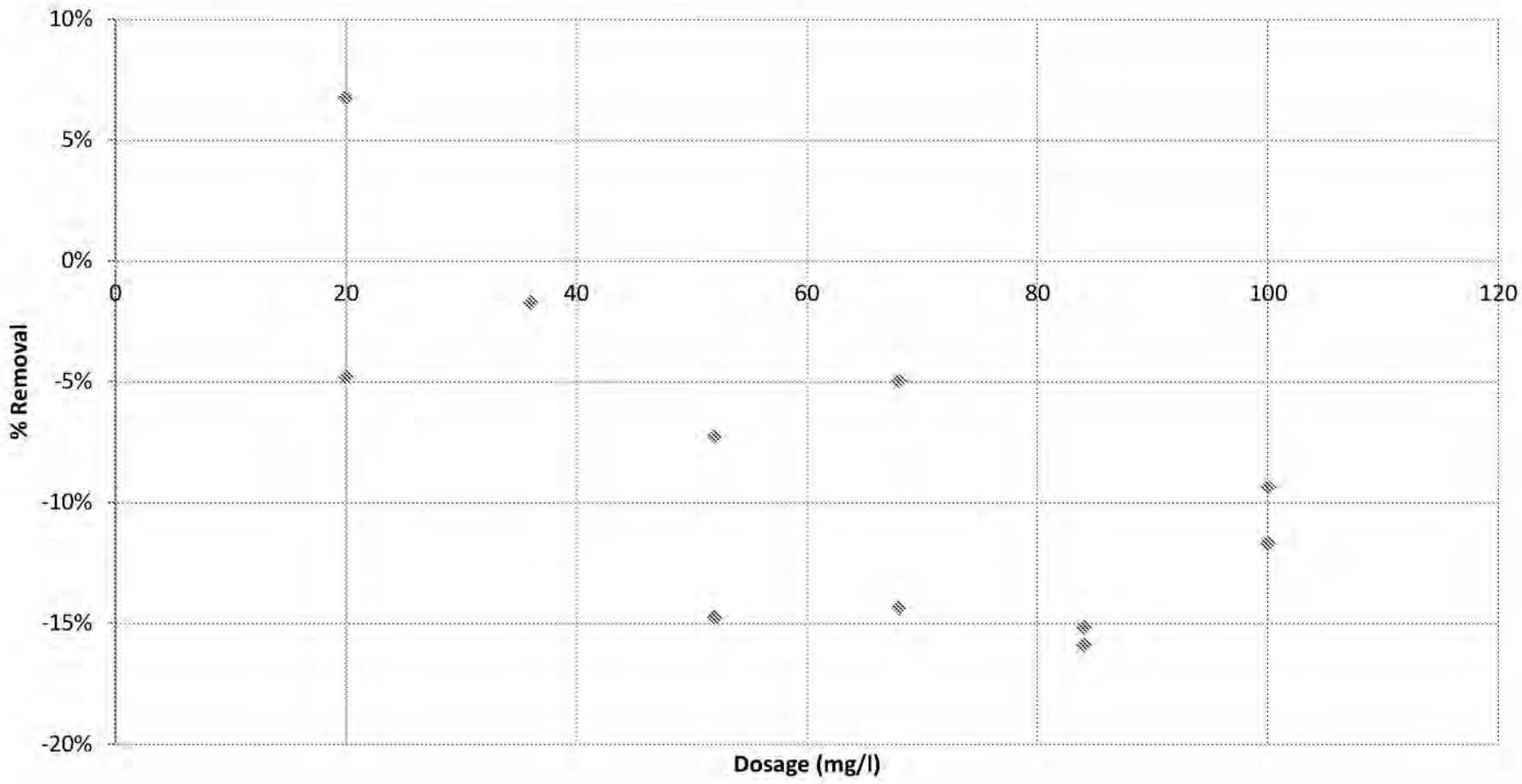
Coag/Floc Polymer Aid
THM Removal



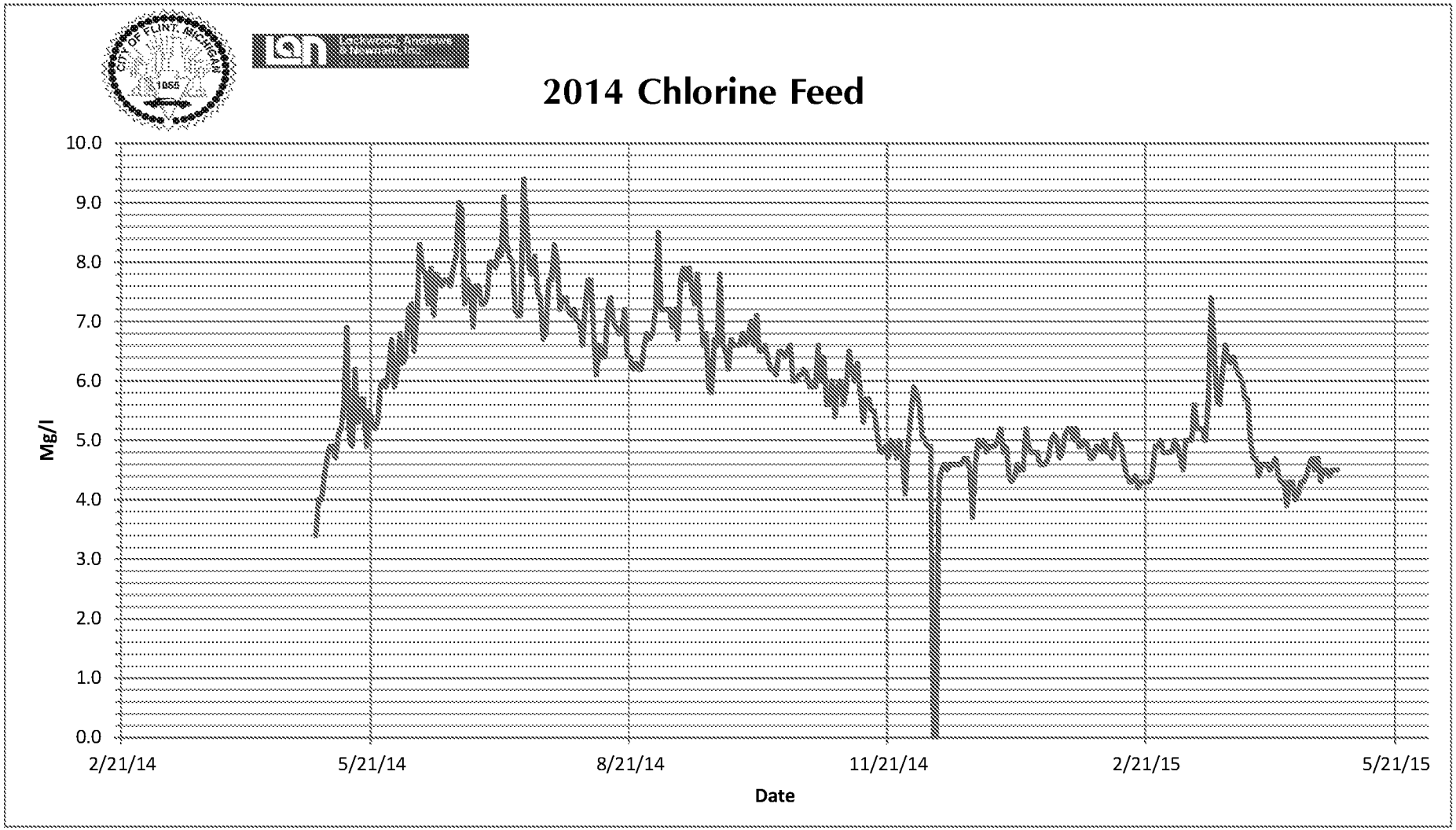

Lime Feed
THM Removal
25%
20%
15%
10%
5%
0%
-5%
-10%
-15%
-20%
-25%
% Removal
100
110
120
130
140
150
160
170
180
Dosage (mg/l)
Lime @ 7.7 mg/l Ferric
Lime @ 30 mg/l Ferric

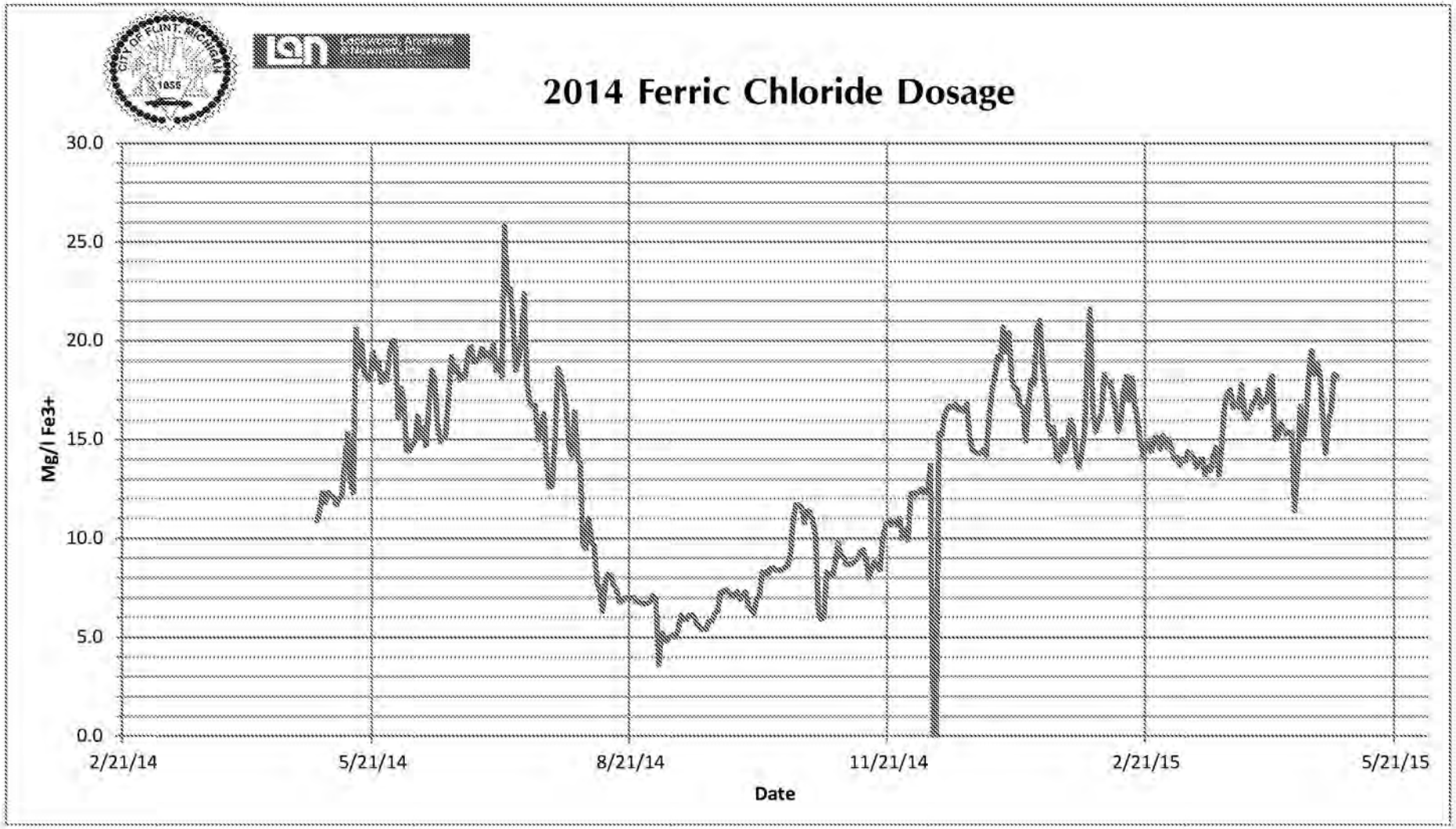

Soda Ash Feed
THM Removal
% Removal
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
-5%
-10%
0
10
20
30
40
50
60
Dosage (mg/l)
Soda Ash @ 7.7 mg/l Ferric
Soda Ash @ 30 mg/l Ferric
Soda Ash @ Ferric Varied 7.7 - 30 mg/l

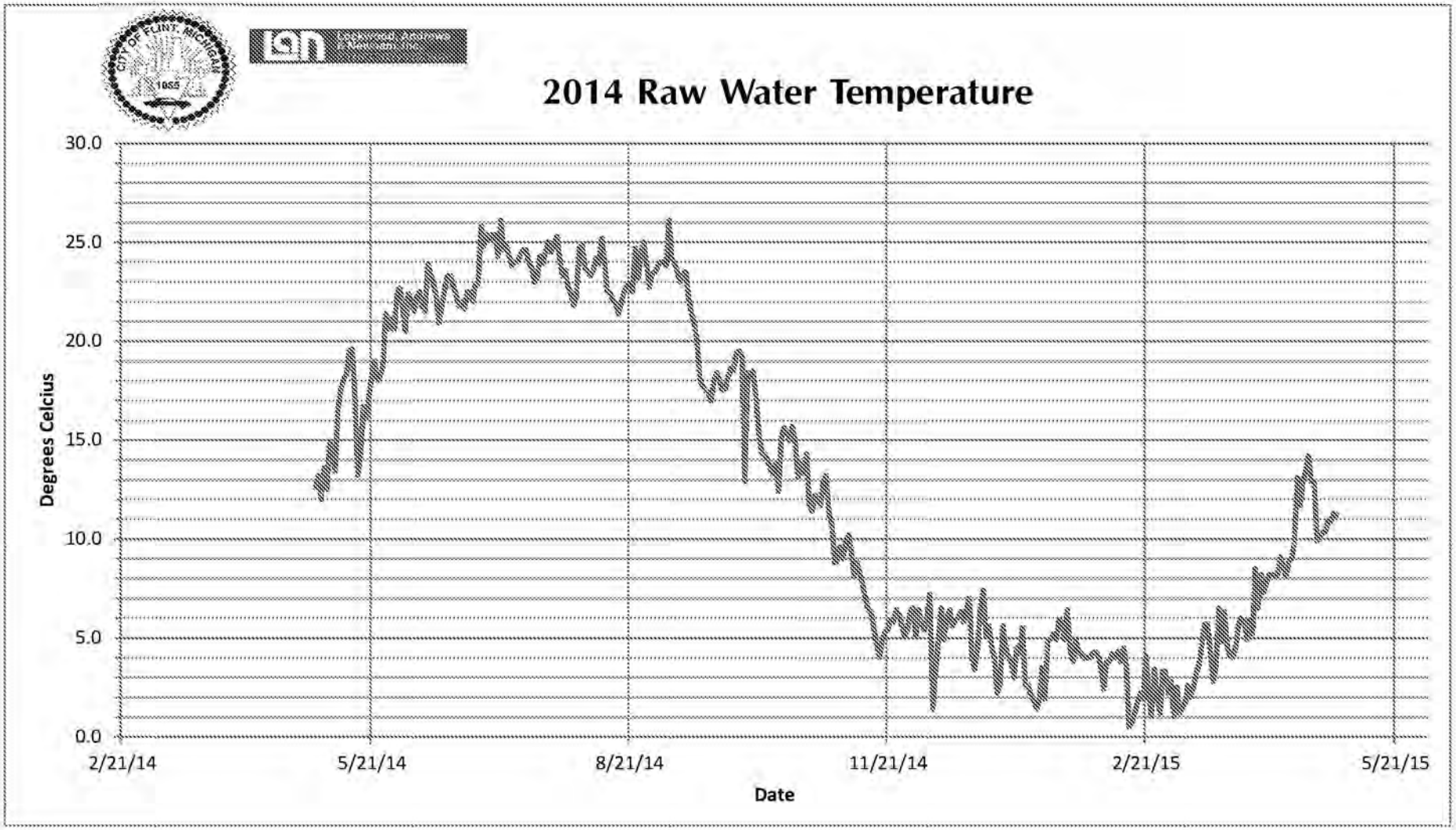
PAC Feed
THM Removal

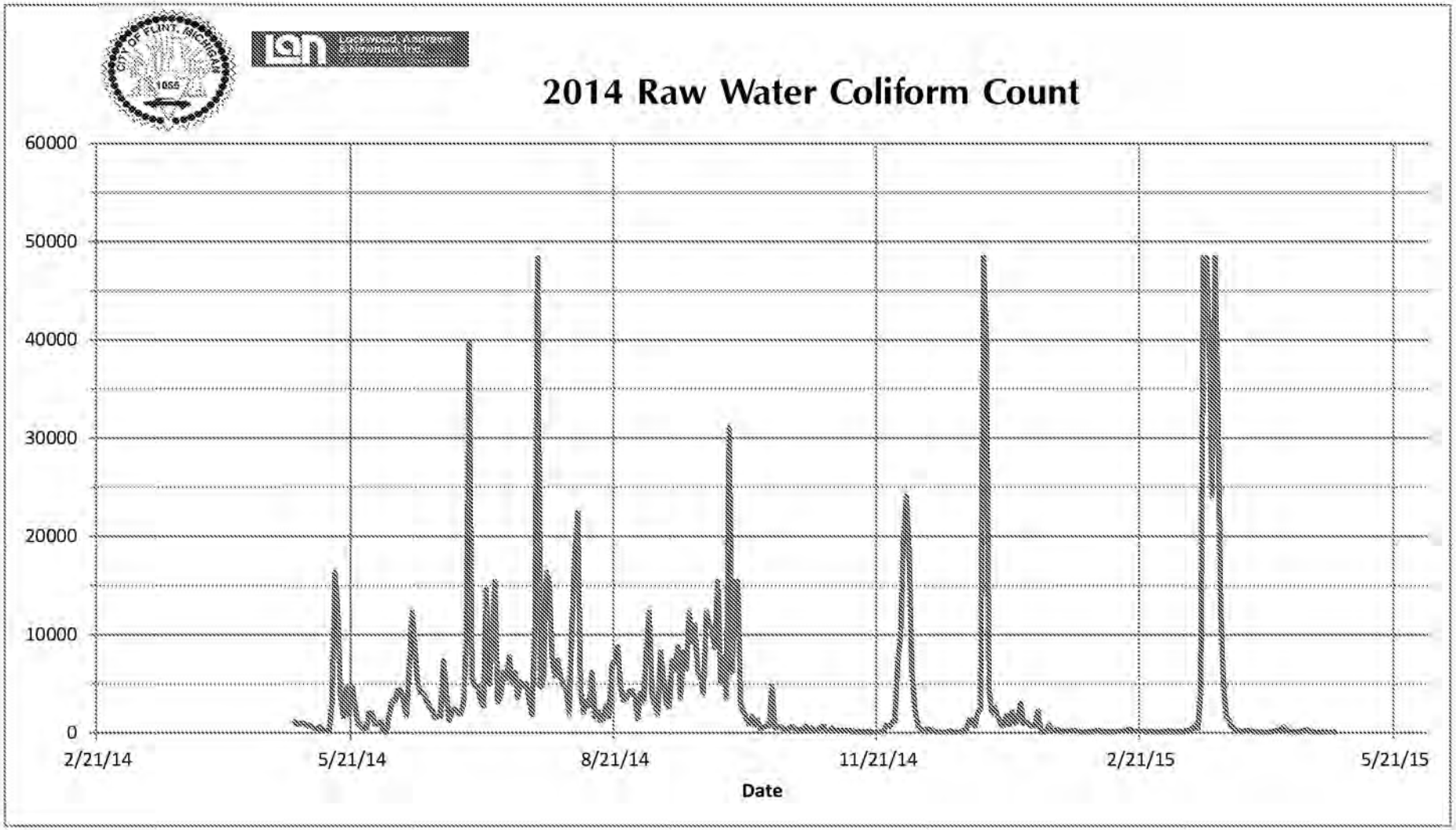


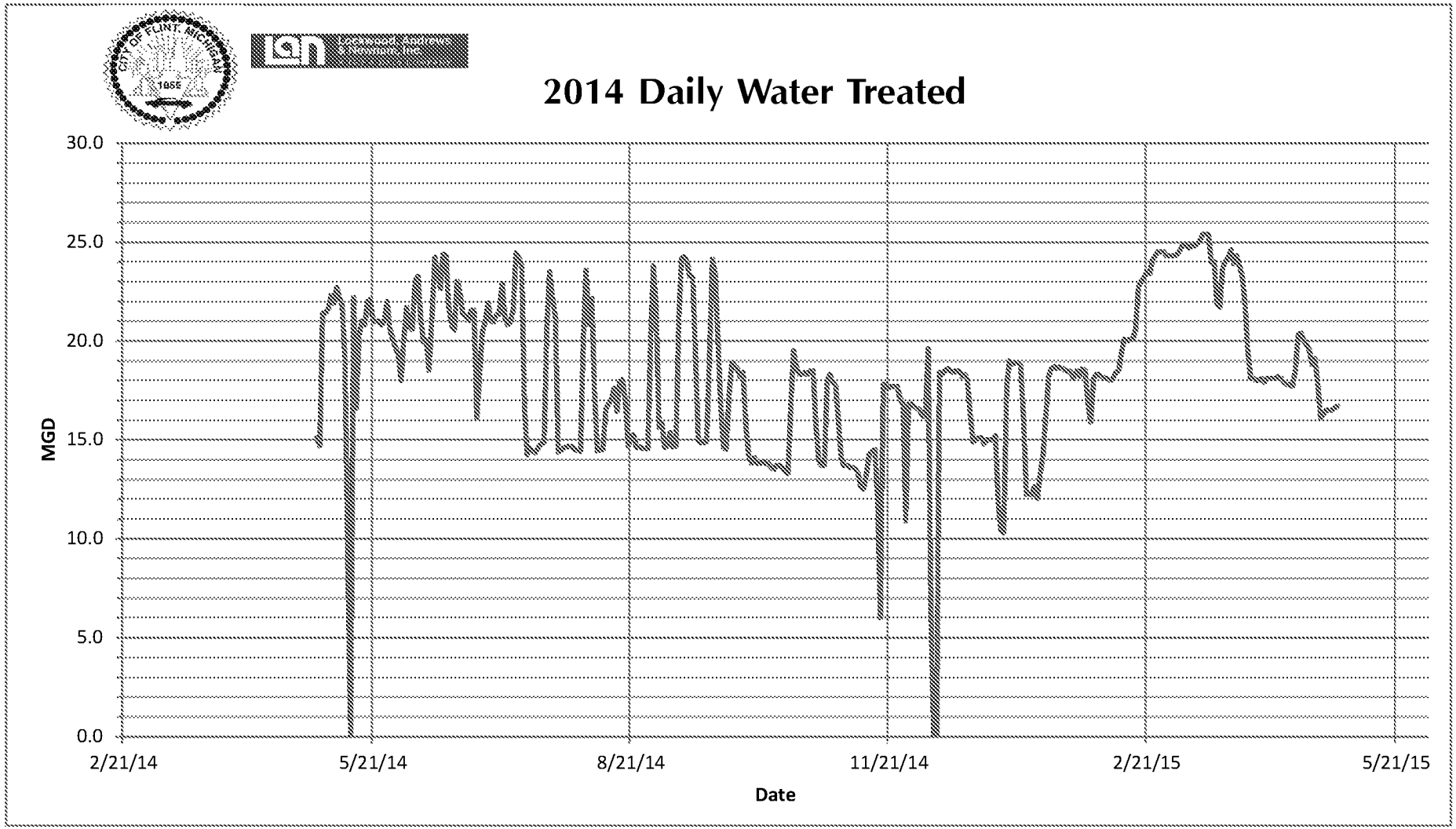
APPENDIX B
WTP DATA


2014 Chlorine Feed
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Mg/l
2/21/14
5/21/14
8/21/14
11/21/14
2/21/15
5/21/15
Date


2014 Ferric Chloride Dosage
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Mg/l Fe3+
2/21/14
5/21/14
8/21/14
11/21/14
2/21/15
5/21/15
Date


2014 Raw Water Temperature
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Degrees Celcius
2/21/14
5/21/14
8/21/14
11/21/14
2/21/15
5/21/15
Date


2014 Raw Water Coliform Count
60000
50000
40000
30000
20000
10000
0
2/21/14
5/21/14
8/21/14
11/21/14
2/21/15
5/21/15
Date


2014 Daily Water Treated
30.0
25.0
20.0
15.0
10.0
5.0
0.0
MGD
2/21/14
5/21/14
8/21/14
11/21/14
2/21/15
5/21/15
Date

City of Flint
Operational Evaluation Report
March 1, 2015
MDEQ Comments

1. Revise Tables 2 and 3 on Page 7 to account for proper alignment of DDBP samples (results, location, site code). Also, revise statement on Page 1 regarding the number of sites exceeding the TTHM MCL following the 4th quarter sample cycle.

2. The ozone system was recently repaired. (Page 10 & 19). What is the ozone system's current production rate?

3. The city's hydraulic model (prepared by Potter Consulting) is being updated (Page 16). Is the model currently sufficient in determining proper sizing for the transmission main replacement in DuPont & Bishop Street corridor? (currently sized at 24-inch) (Pages 5, 16, and 20)

4. Are the potassium permanganate results & conclusions available? (Pages 4 and 17)

5. We agree that some reduction in storage volume could be achieved without compromising reliability; however given high usage, main breaks, and "let runs" during the winter, storage volume remains important. We agree with the need to determine adequate storage volume which will likely differ between summer and winter. (Page 15)

6. We agree with the concern of re-circulation of water pumped from the booster pump stations; however, we were recently informed of existing distribution system check valves to prevent recirculation. These appurtenances and their condition need to be confirmed. The hydraulic model may also need to be updated to include these valves. (Page 15)

7. We concur with the recommendation to provide the ability to monitor raw water TOC and PTAP TTHM. (Pages 17 & 18)

8. Page 20 provides 2 options to manage water age and each option includes reducing the utilized storage volume of the 3 MGAL well to 2 MGAL. The reduction in storage volume limits the WTP's ability to meet CT under worst case conditions (low temp, high pH, 30 MGD pumping rate from reservoir).

9. Table 11 on Page 21 outlines an Action Plan for Stage 1 and Stage 2 actions. Several actions listed in Stage 2 including; repair of ozone system, continued valve replacement, and replacement of deteriorated watermains are longer term solutions; however, they need to proceed regardless of the outcome of TTHM reduction.

From: Scherbarth, John (AG)
Sent: Tuesday, July 28, 2015 12:12 PM
To: Prysby, Mike (DEQ)

Attorney-Client Privilege

John C. Scherbarth

From: Prysby, Mike (DEQ)
Sent: Tuesday, July 28, 2015 12:02 PM
To: Scherbarth, John (AG)
Cc: Rosenthal, Adam (DEQ)

Attorney-Client Privilege

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Scherbarth, John (AG)
Sent: Tuesday, July 28, 2015 11:26 AM
To: Prysby, Mike (DEQ)
Cc: Rosenthal, Adam (DEQ)

Attorney-Client Privilege

Attorney-Client Privilege

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, July 28, 2015 11:14 AM
To: Scherbarth, John (AG)
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ)

Attorney-Client Privilege

Adam Rosenthal, EQA
MDEQ – Office of Drinking Water and Municipal Assistance
Lansing District – Constitution Hall 1SW
PO Box 30242
Lansing, MI 48909
517-284-6644
fax: 517-241-3571

For MORs, Lab Results & Reporting Forms:
DEQ-DWMA-Lansing@michigan.gov

From: Busch, Stephen (DEQ)
Sent: Tuesday, June 09, 2015 12:39 PM
To: Howes, Sarah (DEQ); Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Rosenthal, Adam (DEQ); Thelen, Mary Beth (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

Attached is a copy of the Violation Notice and Public Notice Template being mailed to the City of Flint by the DEQ Office of Drinking Water and Municipal Assistance regarding an exceedance of the Maximum Contaminant Level (MCL) standard for Total Trihalomethanes at certain locations within the City's drinking water distribution system.

This violation notice is in response to updated monitoring completed in May 2015, which shows the locational running annual average for one of the City's eight compliance sampling locations continues to exceed MCL standard of 0.080 mg/L. It is however, important to note that all individual compliance sample results collected in both May and February were below the 0.080 mg/L levels.

You are being provided an electronic copy of this notice as exceedance of this drinking water standard is expected to generate inquiries from water system customers, news media, and the general public.

Sarah Howes or Maggie Pallone will be informing members of the Michigan legislature.

If you have any questions or would like any additional information, you may contact Michael Prysby, District Engineer, DEQ-ODWMA at 517-290-8817, or you may contact me at the number below.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance

MDEQ
517-643-2314

From: Scherbarth, John (AG)
Sent: Tuesday, July 28, 2015 12:51 PM
To: Prysby, Mike (DEQ)

Attorney-Client Privilege

From: Prysby, Mike (DEQ)
Sent: Tuesday, July 28, 2015 12:37 PM
To: Scherbarth, John (AG)
Cc: Rosenthal, Adam (DEQ); Busch, Stephen (DEQ)

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Attorney-Client Privilege

MDEQ – Office of Drinking Water and Municipal Assistance
Lansing District – Constitution Hall 1SW
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Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Scherbarth, John (AG)
Sent: Wednesday, July 29, 2015 3:44 PM
To: Prysby, Mike (DEQ)

Attorney-Client Privilege

From: Prysby, Mike (DEQ)
Sent: Wednesday, July 29, 2015 1:44 PM
To: Scherbarth, John (AG)

Attorney-Client Privilege

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District Engineer
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Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Hansen, Jeff <jrhansen@lan-inc.com>
Sent: Tuesday, September 01, 2015 3:42 PM
To: Prysby, Mike (DEQ)
Cc: hcroft@cityofflint.com;mglasgow@cityofflint.com;Brent Wright (bwright@cityofflint.com);Robert Bincsik (rbincsik@cityofflint.com);Matta, Samir;Green, Warren;Luoma, Steve
Subject: Flint OER - Response to May 2015 TTHM Sampling
Attachments: Flint-TTHM-OER-FINAL-4-01.pdf

Hi Mike,

On behalf of the City of Flint, attached is a PDF version of the latest Operational Evaluation Report required in response to the TTHM violation in May 2015. Hard copies will be sent out today.

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682
www.lan-inc.com
PPI

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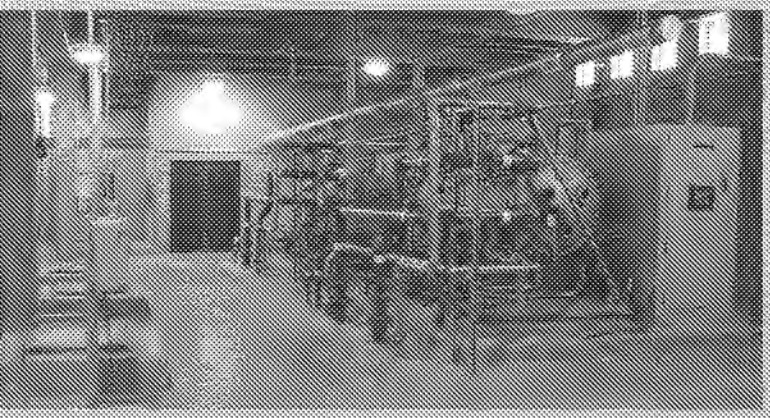
Operational Evaluation Report

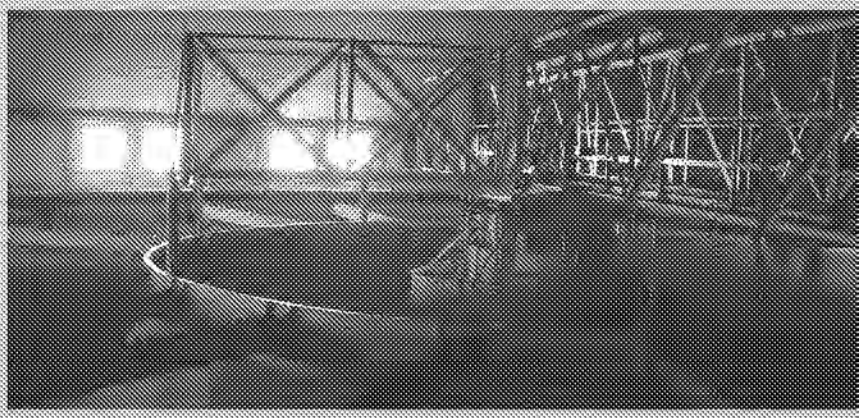
City of Flint

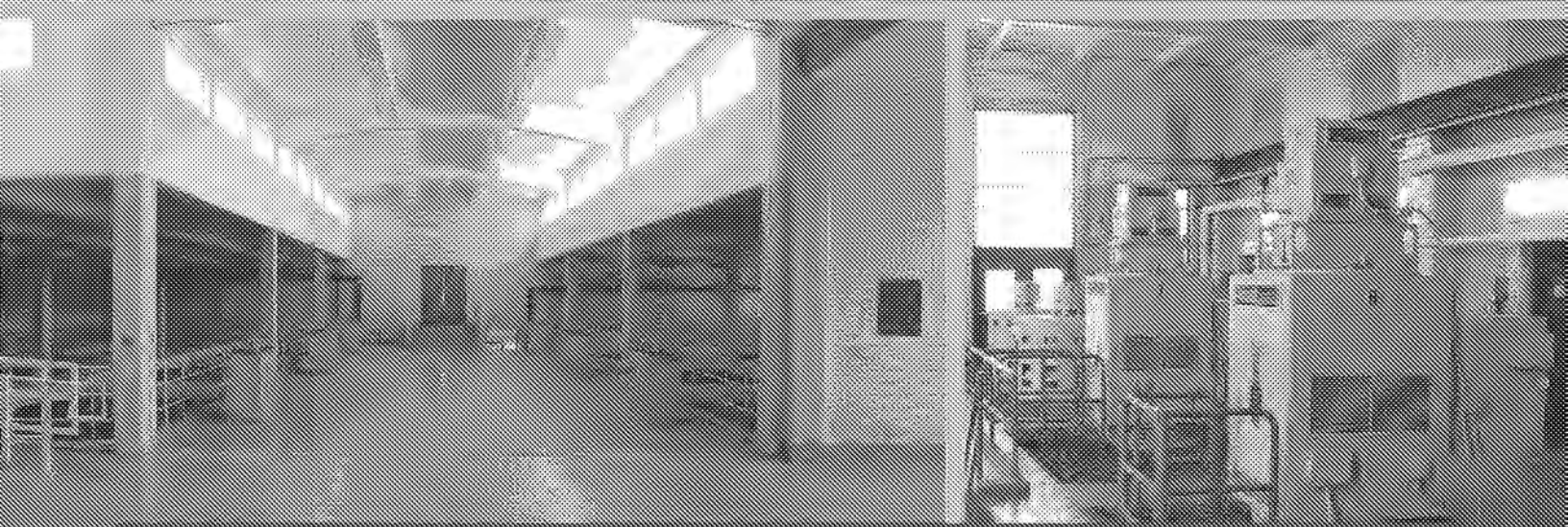
FINAL

Trihalomethane Formation Concern

August 27, 2015
In Response to May 2015 Sample Results







Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

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11. Action Plan 22

EXECUTIVE SUMMARY

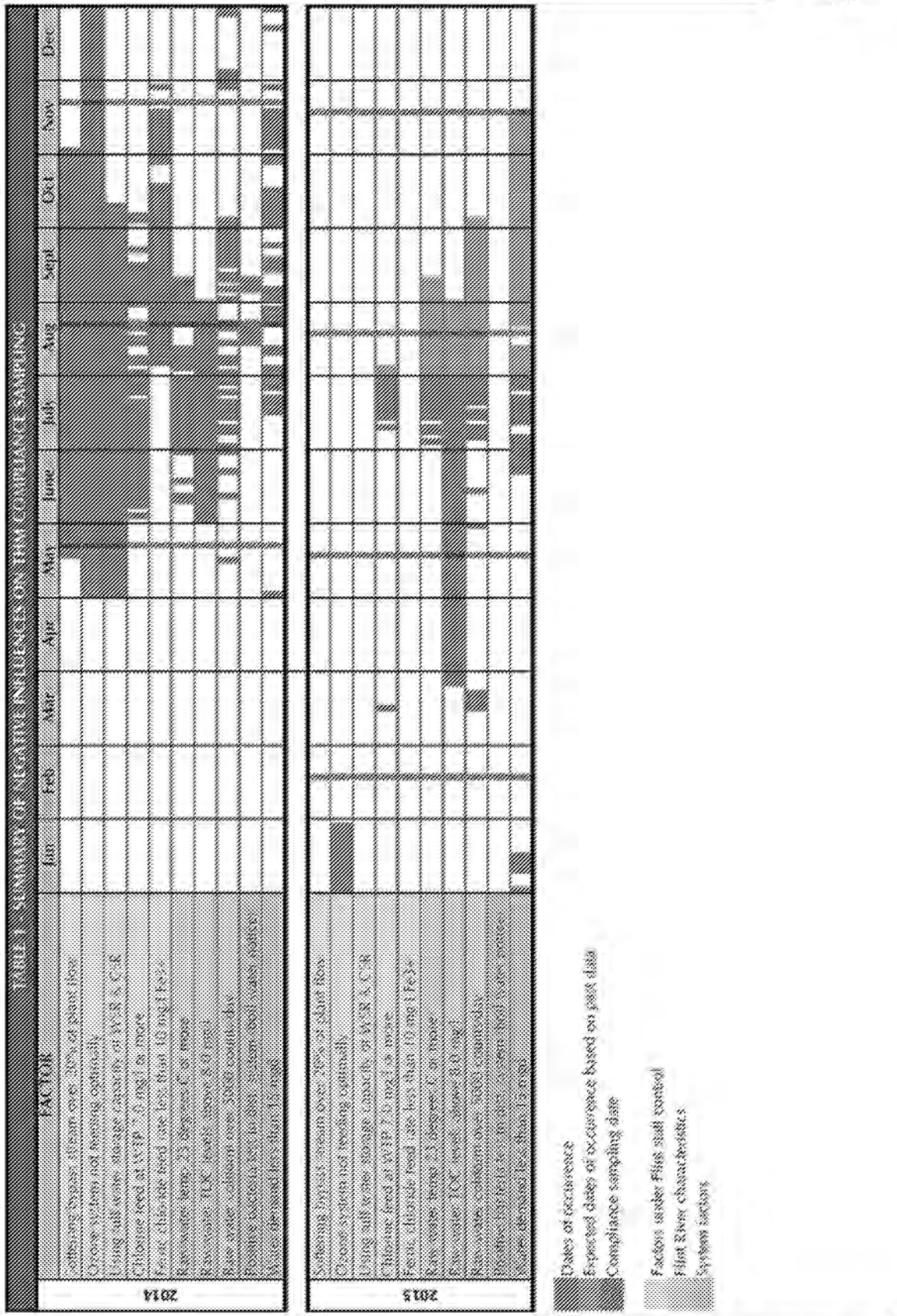
Environmental Protection Agency (EPA) and Michigan Department of Environmental Quality (MDEQ) regulations require that public water suppliers test drinking water quarterly throughout the distribution system for disinfectant by-products (DBP's). Two categories of DBP's, tri-halomethanes (THM) and halo-acetic acids (HAA5), are regulated and must be tested for. The City of Flint began operation of their water treatment plant (WTP) full time with the Flint River as the source on April 25, 2014. Since that time, six quarters of samples taken have resulted in annual average violations for total THM. Prior to the first violation (Nov. 2014), the City hired Lockwood, Andrews & Newnam, Inc. (LAN) to complete this Operational Evaluation Report (OER) in conformance with EPA guidelines with the goal to determine the cause(s) of high levels of THM and evaluate possible solutions.

The EPA promulgated the Stage 2 Disinfectants and Disinfection By-Products Rule (DBPR) in January 2006 which set maximum contaminant levels (MCLs) for total trihalomethanes (TTHM) and HAA5 based on an annual running average, tested quarterly, for a given sampling location. The City of Flint reports levels from 8 sampling test locations. Of the six quarterly sampling cycles since Flint began operating the WTP full time, HAA5 levels have been acceptable but TTHM levels have exceeded the MCL. One sampling site was in violation following the May 2015 sampling cycle and results from August 2015 sampling indicate all sites are now within compliance.

A number of issues were identified as possibly contributing to the initial high THM levels measured.

1. Inefficient ozone system functionality which led to in increased chlorine feed.
2. Upstream source influences in terms of increased chlorine demand.
3. Bypass stream around softening contributed to chlorine demand and increased total organic carbon (TOC) levels in the effluent.
4. Unlined cast iron pipes in the distribution system contributing to chlorine demand.
5. High water age in the distribution system due to:
    a. Broken valves causing less than ideal flow patterns
    b. Inefficient pump station pressure zones
    c. Water storage volumes in excess of that needed for today's demands
    d. Oversized water mains
    e. Low water demands
6. High chlorine demand in filters.
7. High THM formation potential (THMFP) in source water.
8. Less than optimal removal of THM precursors.

A graphical representation of how the factors above relate to the timing of THM compliance sampling is shown as Table 1. Compliance sampling dates are hatched. Each row in Table 1 describes a factor that can lead to increased THM levels and the table defines when each of those factors applied. Note the convergence of nearly all factors around the second sampling period on August 21, 2014 to create what appears to have been a worst case scenario. The table also shows that the factors listed as those that the City can control have been addressed prior to 2015 sampling periods. Monthly operating report data up to August 1, 2015 is depicted on the Table.



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ACTION PLAN

The City of Flint has signed an agreement with the Karegnondi Water Authority (KWA) to purchase raw water drawn from Lake Huron. The KWA system is currently under construction and expected to be operational by late 2016. The water supply from Lake Huron will have entirely different water quality characteristics from the Flint River and those characteristics are expected to yield drastically reduced DPB formation. With that, non-structural options to help reduce THM levels are much preferred over solutions requiring new construction. Therefore, two categories of actions have been devised: Stage 1 being actions that can be completed relatively quickly without major construction and Stage 2 consisting of either long term actions or solutions requiring major construction. The City is actively working to complete Stage 1 actions as soon as possible. Stage 2 actions are to be implemented only if Stage 1 actions are ineffective in adequately reducing TTHM levels and therefore Stage 2 is contingent upon the outcome of Stage 1. As of the date of this report, status updates for action items are shown in red.

Stage 1 – Immediate Actions

- Hire third party water quality expert to complete independent 'water audit'
  - The City hired Veolia Water to review all water quality related operations, procedures, actions taken and planned responses. Recommendations from Veolia were provided in a report and technical memo dated 3/12/15 and 3/30/15 respectively.
- Obtain an in house THM analyzer to allow regular operational monitoring of THM levels
  - THM analyzer was installed 2/17/15.
- Hire ozone system manufacturer to troubleshoot ozone system
  - Manufacturer and controls programmers performed on site evaluations followed by corrective modifications in January 2015.
- Bench scale jar testing
  - Match existing process and assess possible areas of improvement
    - Existing process was simulated and an evaluation of existing chemical feed dosages was completed by LAN.
    - Existing process TOC profile was developed by Veolia.
  - Simulate potential modifications to treatment process
    - Soda ash softening evaluation completed and PAC feed testing was completed by LAN.
  - Evaluate coagulation and flocculation polymer aid feeds to assist with TOC removal
    - Evaluations of polymer aids completed by LAN and PVS Technologies.
- WTP operational changes
  - Discontinue softening bypass stream to reduce chlorine demand
    - Operational directive has been set to soften no less than 80% of flow.
  - Disinfection of filter beds to reduce chlorine demand
    - Utility Service Group contracted by City and condition assessment completed. Controls improvements have been completed.
  - Begin coagulation and flocculation polymer aid feeds to assist with TOC removal if bench scale test results are positive
    - Jar testing completed to date has not indicated a meaningful benefit to feeding coagulation/flocculation polymer aids. Increased ferric doses have been implemented at the WTP based on positive jar test results.

- Increase water main flushing efforts to minimize stagnant water
  - Flushing efforts are ongoing as needed based on chlorine residual levels measured in the system.
- Water system modeling to identify areas with high water age and potential solutions
  - The water model has been improved and preliminary results, including system wide water age, have been produced. Water demand updates and reconciliation with operator's data are underway with expected completion in mid June, 2015.
  - Cedar Street Pump Station potential recirculation
    - Water model analysis to be completed Sept-Oct, 2015.
  - West Side Pump Station potential recirculation
    - Water model analysis to be completed Sept-Oct, 2015.
  - Storage tank volume use
    - Operating levels of West Side and Cedar Street reservoirs have been lowered to reduce water age. Possible elimination of WS or CS to be evaluated Sept-Oct, 2015.
  - Possible broken closed valve locations
    - Model has been updated with known broken valve locations. Model results are being evaluated for indications of other possible broken valves. City has also initiated valve assessment program.
  - Locations in need of flushing
    - High water age areas have been identified in the water model. Further evaluation is expected to be done by November 1, 2015 to determine most effective flushing points.

Stage 2 – Contingent Actions

- Replace filter media with granular activated carbon (GAC) media
  - Filter anthracite media was replaced with GAC media July – August 2015.
- Fix ozone system
  - Repairs have been made to gauges and programming and the system is producing proper ozone and functioning under manual operation. Further minor repairs are planned for the 1st quarter 2015 to allow automatic operation.
- Start feeding coagulation and flocculation polymer aids to lower TOC, if not completed in Stage 1
  - Polymers evaluated by LAN did not demonstrate notable benefit.
  - PVS Technologies evaluated a proprietary polymer that showed little benefit.
- Convert to lime and soda ash softening
  - Option deemed unnecessary due to effectiveness of new GAC media.
- Change disinfectant to chloramine or chlorine dioxide until KWA
  - Option deemed unnecessary due to effectiveness of new GAC media.
- Install pre-oxidant feed (permanganate) at intake to optimize ozone disinfection
  - Option deemed unnecessary due to effectiveness of new GAC media.
- Implement advanced treatment for THM precursor removal
  - Option deemed unnecessary due to effectiveness of new GAC media.

- Increased main flushing based on water modeling results
  - Water model analysis to be completed Sept-Oct, 2015.
- Continue valve replacements with water model assistance
  - Water model analysis to be completed Sept-Oct, 2015.
- Emphasize cast iron pipes on water main replacement priority list
  - Flint has bid replacement of over 2 miles of 24" steel pipe along Dupont and Bishop Streets to be completed when and if the City can allocate funds. The water main section is considered a critical transmission main, and is expected to contribute to decreases in water age when complete.

THM samples have been taken and tested 6 times for regulatory reporting since the City began using the Flint River for supply. Numerous additional sets of samples have been taken by the City for internal operational monitoring. Compliance samples were taken in May 2014, August 2014, November 2014, January 2015, February 2015, May 2015, and August 2015. The average of all eight sample sites in August 2014 was 142.1 ug/l and the most recent average of samples taken in August 2015 was 63.6 ug/l. The MCL defined by the EPA is 80 ug/l.

I. BACKGROUND

The City of Detroit Water and Sewer Department (DWSD) has historically provided drinking water for the City of Flint and Genesee County. In the late 1990's growing concern regarding the reliability of the DWSD supply prompted the City of Flint to upgrade their existing water treatment plant (WTP). Those improvements, defined as Phase I, were completed in 2005 and were intended to allow the Flint WTP to operate, using the Flint River as the source, for an extended period of time in the event that supply from the DWSD was temporarily interrupted. Additionally, the Phase I improvements set the stage for Flint to break free from dependence on the DWSD supply and water charges over which they had no control.

A. WATER SUPPLY TRANSITION

1. Detroit Water and Sewer Department (DWSD)

Prior to spring of 2014, the Genesee County and Flint region had been provided drinking water by the DWSD. However, due to excessive cost increases and reliability issues with the DWSD system other options had to be explored.

2. Karegnondi Water Authority (KWA)

In 2010 the Karegnondi Water Authority (KWA) was formed for the purpose of developing a new water supply from Lake Huron to serve the region in lieu of the DWSD supply and the City of Flint elected to join. The KWA expects the new system which is currently being constructed to become operational by the fall of 2016.

3. Flint River – Interim Period

With a renewing water supply agreement between Flint and the DWSD being terminated by the DWSD (effective April 30, 2014) and the KWA system not expected to be operational until late 2016, the City of Flint decided to initiate operation of the existing WTP full time utilizing the Flint River as the interim water source. A variety of WTP improvements were necessary for the Flint plant to become a full time plant. For purposes of this report, Phase II improvements to the Flint WTP are improvements intended to allow the plant to operate full time with either the Flint River as the source or the KWA supply as the source.

B. TTHM VIOLATIONS

The EPA and MDEQ method of determining if TTHM sample results exceed the MCL uses a locational running annual average (LRAA). Flint's first TTHM violation was cited by the MDEQ following the third cycle of sampling completed in November 2014. Of the 8 sampling sites, 4 were in violation. At that time the MDEQ used the following calculation for determining if the MCL had been violated:

(2 x current quarter value + previous 2 quarter values) / 4 = Operational Evaluation Value

Flint has now completed tests for 6 quarters and a straight annual running average applies. Based on samples taken on August 18, 2015 there are no longer any sites in violation of the THM MCL limit. The August 2014 average across all test sites was 142.1 ug/l and the August 2015 average is 63.6 ug/l. Test results are tabulated in Table 2. HAA5 sample results are shown in Table 3, of which Flint has had no violations.

TABLE 2 – TTHM TEST RESULTS (ug/L)								
Sample Location	5/21/14	8/21/14	11/21/14	2/17/15	5/18/15	8/18/15	May/15 LRAA	Aug/15 LRAA
WTP Tap	56	86	33	-	~35	~25	n/a	n/a
1) 3719 Davison McDonalds	162.4	145.3	58.6	16.2	51.4	75.5	67.9	50.4
2) 822 S. Dort Hwy BP Gas Sta.	75.1	112.0	36.2	19.9	46.1	54.9	53.6	39.3
3) 3302 S. Dort Hwy Liquor Palace	111.6	127.2	33.3	16.8	63.5	53.2	60.2	41.7
4) 3606 Corunna Taco Bell	79.2	181.3	33.9	18.1	54.7	61.9	72.0	42.2
5) 2501 Flushing Univ. Market	106.4	196.2	93.6	24.5	59.8	70.6	93.5	62.1
6) 3216 MLK Salem Housing	82.2	112.4	50.1	28.5	72.7	90.3	65.9	60.4
7) 5018 Clio Rite Aid	88.2	144.4	53.6	19.2	60.5	59.5	69.4	48.2
8) 6204 N. Saginaw N. Flint Auto	96.5	118.3	41.1	14.9	45.2	42.6	54.9	36.0

TTHM MCL = 80 ug/l

TABLE 3 – HAA5 TEST RESULTS (ug/L)								
Sample Location	5/21/14	8/21/14	11/21/14	2/17/15	5/18/15	8/18/15	May/15 LRAA	Aug/15 LRAA
WTP Tap	36 (taken June 14, 2014)						n/a	n/a
1) 3719 Davison McDonalds	64	43	16	9.0	16	15	21.0	14.0
2) 822 S. Dort Hwy BP Gas Sta.	38	40	21	9.0	16	11	21.5	14.3
3) 3302 S. Dort Hwy Liquor Palace	52	31	15	9.0	17	14	18.0	13.8
4) 3606 Corunna Taco Bell	50	24	15	9.0	16	13	16.0	13.3
5) 2501 Flushing Univ. Market	55	17	24	9.0	15	13	16.3	15.3
6) 3216 MLK Salem Housing	41	25	5	2.0	10	2	10.5	4.8
7) 5018 Clio Rite Aid	49	30	17	9.0	22	15	19.5	15.8
8) 6204 N. Saginaw N. Flint Auto	48	37	18	9.0	17	10	20.3	13.5

HAA5 MCL = 60 ug/l

C. WATER TREATMENT PLANT RECENT IMPROVEMENTS & STATUS

1. Phase I WTP Improvements

Since 1965, the Flint WTP has remained a secondary or backup supply system to the DWSD primary supply. Typically the secondary supply for a public water system is expected to be needed only during emergency situations and normally is designed for short term operation such as providing the average daily demand for a few days. Conversely, Phase I improvements were designed with the intent to upgrade the Flint WTP in order to allow for an extended short term period (6 weeks) because of the perceived high risk that the DWSD supply would fail and remain out of service for an

extended duration. Regardless, the Flint WTP was still intended to serve as a standby plant and as such the Phase I improvements lacked redundancies that would be required for a primary supply WTP.

2. Past Pilot Study & Testing

During design of the Phase I improvements a treatability study was completed by Alvord, Burdick & Howson, LLC (AB&H) in 2002. The Treatability Study evaluated the current treatment processes that are in place at the Flint WTP today with the Flint River as the source. The report recommended the following:

TABLE 4 – 2002 WTP TREATMENT RECOMMENDATIONS

Treatment	Purpose	Point of Application	Dosage (mg/l)
Sodium permanganate	Zebra mussel control	Intake	0.3
Ozone	Taste & odor removal, disinfection	Diffusor basin	1.5
Ferric chloride	Coagulation	Rapid mix	40
Coag aid polymer	Turbidity & TOC removal	Rapid mix	2.0
Floc aid polymer	Turbidity & TOC removal	Floc basin	0.05
Lime	Softening	Softening basin	175
Soda ash	Softening	Softening basin	52
Carbon dioxide	pH adjustment	Recarb basin	37
Media filters	Filtration	N/A	Na
Chlorine	Disinfection	Filter effluent	1.0

Of the recommended items, zebra mussel control, coagulant and flocculation polymer aids, and soda ash feed have not been incorporated into the treatment process.

3. Phase II WTP Improvements for Full Time Operation

Phase II WTP improvements are those needed to convert the Flint WTP from a back-up supply to a primary supply plant. A number of improvements have already been constructed as they were necessary to operate full time when treating water from the Flint River. The improvements under the title of Phase II that have been completed or are nearly complete include installation of the future raw water feed connection point and valving for the KWA supply, upgrades to the lime sludge lagoon, the lime sludge lagoon decant and disposal system, decant pump station and force main, installation of mid-point chlorination before filtration, new oxygen / nitrogen storage facilities for the ozone system, and upgrade of the electric feed sub-station.

Additional improvements to the Flint WTP that are to be completed to become part of the normal treatment process using water supplied by the KWA are:

- New coagulant feed system
- Electrical
  - Pump Station #4 upgrades (under construction)
  - SCADA and controls upgrades
  - Filter transfer pump station feeders
- Pump replacements and VFD installation in the low and high service pump station (under construction)
- Filter transfer pump station to Dort Reservoir
- Facility security improvements

II. SOURCE WATER EVALUATION

A. DATA ANALYSIS

Based on past data collected and the 2002 Treatability Study by AB&H, the Flint River water quality varies seasonally with higher hardness and alkalinity experienced in the winter. Higher magnesium concentrations are also experienced in the winter, adding difficulty to the settling process due to neutrally buoyant floc. General water quality average characteristics recorded for the 2002 Treatability Study as compared with average characteristics recorded in 2014 are shown in Table 5 below.

TABLE 5 – FLINT RIVER WATER QUALITY CHARACTERISTICS

Period	Turbidity NTU	TOC Mg/l	Alk. Mg/l	Hardness Mg/l as CaCO3	pH	Total Col. Count/day	THMFP Mg/l
2001 Apr–Oct	7.9	9.4	215	272	8.1	870-1230 (7300 max)	410
2014 May–Oct	8.3	10.3 5/22/14	207	252	8.2	1900-9000 (48,300 max)	187

The Flint River characteristics do not appear to have changed significantly over the past 10+ years. Note that near the time Flint initiated withdrawal from the Flint River investigation by City staff revealed a sewer leak upstream of the plant that may have contributed to the total Coliform count. The leak was subsequently repaired.

B. CONCLUSIONS

Considering the minor changes in Flint River water quality, much of the information contained in the 2002 Treatability Study by AB&H remains relevant today. Data from that report assumed to be consistent today include the following:

- Flint River is influenced by groundwater from a dolomitic aquifer
- Hardness varies seasonally with higher hardness and alkalinity in the winter
- Hardness, alkalinity, magnesium concentrations tend to be reduced by run-off

In development of the 2002 Treatability Study, processes were simulated which resulted in low THM levels. Therefore, information contained in that report was used to assist with establishing a baseline jar testing procedure as discussed further in Section III.

III. TREATMENT PROCESS EVALUATION

A. EXISTING PROCESS DESCRIPTION

The existing WTP consists of an intake with screening from the Flint River, low lift pumping, ozonation, rapid mix, flocculation, settling, softening, recarbonation, filtration, storage and high service pumping. A process diagram is shown as Figure 1.

1. Intake

A 72" diameter pipe draws water from the Flint River through 2 traveling screens to the low lift pump structure. No chemicals are currently fed for Zebra mussel control or pre-oxidation as recommended by the 2002 Treatability Study. Manual removal of zebra mussels is more economical than installation of chemical feed equipment considering the short term need.

2. Ozone

There are 2 ozone generators designed to provide adequate ozone for a WTP flow of up to 36 mgd. There are 3 ozone contact basins. The ozone generators were designed to produce 900 lbs/day at 10% concentration and up to 1300 lbs/day at 6% concentration each. Prior to recent repairs, readings indicated a production rate of approximately 700 lbs/day at 4% concentration. It is possible that before the recent improvements the ozone feed might not have been optimized. In fact, it is known that less than optimal ozonation previously led to increased chlorine feed which would have contributed to THM formation.

3. Rapid Mix

East and West rapid mix chambers allow chemical feed prior to the flocculation basins. Each rapid mix chamber is equipped with a 5 hp mixer.

4. Coagulation / Flocculation

The WTP contains two equally sized flocculation basins, east and west, and each basin provides tapered or gradually slowed mixing from inlet to outlet. There are fifteen 2 hp mixers for each basin with VFDs to control mixing speed. The 2002 Treatability Study recommended feeding both coagulation and flocculation polymer aids. Neither polymer aid is being used today because turbidity and TOC removals have been sufficient to meet regulatory requirements.

5. Settling

Primary clarification takes place within 3 basins containing plate settlers. The settlers are operating as designed but are due for cleaning.

6. Softening

Again, there are two basins for softening: east and west. Each basin is 120' in diameter and contains a solids contact softening unit. Each softening basin/unit has a design capacity of 18 mgd. The east clarifier has an effluent weir imbalance that the City intends to fix when low demands allow for construction. Low lift pumping limitations, flow control to the basins, malfunctioning polymer feed pumps, control restrictions on residuals removal, and fluctuating demands have made it difficult for WTP staff to stabilize the softening process. Softening is accomplished by feeding lime. The decision was made by the City not to feed soda ash in order to remove non-carbonate hardness because acceptable hardness levels could be achieved with lime feed only and softening is short term until Lake Huron water becomes available. Lime and soda ash softening is a possible consideration to assist with TOC removal and thus reduce THM formation.

7. Recarbonation

Recarbonation for pH adjustment is accomplished in east and west recarbonation basins between and to the north of the softening basins. Carbon dioxide storage and feed equipment is located west of the recarbonation basins.

8. Filtration

Filtration is accomplished with 12 dual media filters, equally sized and designed to filter 3.0 mgd each. Sand and anthracite media was replaced in July and August 2015 with new sand and GAC at depths of 12" and 18" respectively. Prior to spring of 2014, the filters had been operated intermittently over the years due to the standby nature of the WTP and until recently, chlorine injection took place downstream of the filters. It is possible some microbial growth had developed in the filters leading to increased chlorine demand which could have contributed elevated TTHM. Late 2014, the City recently hired a contractor to upgrade the electrical controls for the filters and that work has been completed.

9. Disinfection

Disinfection is provided by ozonation and by feeding chlorine. Ozonation occurs at the front end of the WTP. Chlorine is fed prior to filtration and prior to finish water storage / high service pumping. The intermediate chlorine injection location was recently constructed under the Phase II, Segment 1 contract.

10. Clear Well & Pumping

The pump building sits adjacent to a 3 MG clear well and contains both low and high service pumps.

B. JAR TESTS / EXPERIMENTS

1. Approach

There are several well practiced methods by which DBPs can be reduced. First, the disinfectant can be changed to an alternate that has a lower tendency to form DBPs. Second, additional treatment systems such as activated carbon or air stripping (depending on the nature of the precursors) can be added to remove DBP precursors. Lastly, the existing treatment processes can be optimized to remove as much DBP precursor as possible. Of these options, optimizing existing treatment processes is the only strategy that does not require the construction of new and expensive facilities. It is anticipated that Flint will be receiving Lake Huron water by late 2016 and this water will have a completely different chemistry from the Flint River. Major process changes instituted to address THM levels using Flint River water are likely to be unnecessary for Lake Huron water and may even be inappropriate. Therefore, those options which require addition of new treatment processes are undesirable at this time. In recognition of this upcoming change in water source, efforts for this study have concentrated on improving the existing processes, rather than adding new ones. New treatment processes will only be recommended if operational changes to the existing treatment train prove ineffective.

Recent sample test results suggest that most of the DBPs are formed in the distribution system rather than within the treatment plant. Therefore, the most logical approach is to reduce the DBP formation potential (DBPFP) rather than simply lowering the levels of DBPs leaving the plant. During bench scale testing, formation potential (FP) levels were the primary indicator of success or failure of proposed process modifications.

2. Protocol

Bench scale pilot testing is intended to reflect actual plant operating and hydraulic conditions so the bench scale treatment units were sized based on various dimensionless factors to ensure the pilot treatment matched the actual system. Bench scale ozonation was not practical due to time and cost limitations. Therefore, water samples were withdrawn from the plant ozone basin effluent. These samples were transported to the laboratory and dispensed into square testing jars. The jars were used to simulate rapid mix, three-stage flocculation, and settling. Rapid mix and flocculation conditions were matched to the plant based on "Gt" values. The "G" value is a measure of the mixing intensity and is a function of mix time, viscosity of the liquid, and mixing power applied to the water. "Gt" then, is a size scaling factor where time has been accounted for. Settling time was scaled to match the shorter settling depth of the testing jars. After settling, samples were decanted from the test jars. The decanted samples were then lime softened; softening conditions were similarly matched on the basis of "Gt". Carbon dioxide was sparged into the samples to reduce the pH. The water was then vacuum filtered through filter paper, sized to simulate the plant's dual media filters. The samples were dosed with excess chlorine and allowed to react for seven days at 25° C before testing for DBPs to determine the formation potential.

The following conditions were applied during testing to properly match small scale testing to actual plant processes.

TABLE 6 – BENCH SCALE TEST MIXING INTENSITIES			
Process	G	Duration	Mix RPM
Ozonation	Plant	-	-
Rapid Mix	200	44 sec	160
Flocculation, Stage 1	50	9 min	55
Flocculation, Stage 1	25	9 min	30
Flocculation, Stage 1	12	9 min	19
Settling	N/A	10 min	-
Softening	TBD	10 min	-
Recarbonation	N/A	N/A	-

The primary variables during testing were chemical additions and chemical dosages. Specific chemicals and dosages used for initial testing conditions were selected to reflect current plant usage and the recommendations of the 2002 Treatability Study:

TABLE 7 – BENCH SCALE TEST CHEMICAL FEED RATES			
Chemical	Current Usage	2002 Study	Test Values
Ozonation	4.66 mg/l	1.5 mg/l	
Ferric Chloride	7.7 mg/l Fe3+	40 mg/l Fe3+	7.7 – 80 mg/l Fe3+
Coagulant Aid Polymer	Not used	2.0 mg/l	1 – 2 mg/l
Flocculation Aid Polymer	Not used	0.05 mg/l	0 – 0.05 mg/l
Powdered Activated Carbon	Not used	N/A	20 – 100 mg/l
Lime	120 mg/l	175 mg/l	120 – 175 mg/l
Soda Ash	Not used	52 mg/l	0 – 52 mg/l
Cationic Softening Polymer	3.13 mg/l	Not used	3.13 mg/l
Anionic Softening Polymer	0.88 mg/l	Not used	0.88 mg/l
Fluoride	0.45 mg/l	1 mg/l	Not used
Carbon Dioxide	32 mg/l	37 mg/l	Fed to reach pH of 7.5 +- 0.3
Chlorine	6.3 mg/l	1 mg/l	10 mg/l

3. Considerations

The 2002 Treatability Study did not note significant formation of DBPs. This may be a function of different Flint River water chemistry at that time. However, recognizing the considerable differences in chemical usage and dosages between that study and current operations, those differences in chemical use and dosage are an obvious starting point for optimizing treatment to prevent DBP limit exceedance.

Although it is believed that optimization of current treatment can correct the DBP issue, should optimization of present treatment prove insufficient, alternate residual disinfectants (chloramines and chlorine dioxide) could be investigated as additional treatment measures.

4. LAN Test Results

Two rounds of jar testing were completed by LAN during the weeks of December 15, 2014 and January 26, 2015. Detailed test data is included in Appendix A. Testing results can be summarized as follows:

- Increased dosages of ferric chloride resulted in higher reduction of THMFP.
- The currently utilized feed rate of lime at 120 mg/l is appropriate
- Softening with soda ash in addition to lime resulted in minor additional THMFP reduction – in the range of 0% - 10%.
- The benefits of using a cationic polymer during softening at a dosage range of 0.31 - 3.13 mg/l to help reduce THM's are unclear
- The benefits of using an anionic polymer during softening at a dosage range of 0.09 – 0.88 mg/l to help reduce THM's are unclear
- Feeding PAC was ineffective in reducing THMFP within the dosage range of 20 – 100 mg/l.

5. Testing by Others

In addition to jar testing completed by LAN, the chemical supplier who provides ferric chloride for the City, PVS Technologies, ran tests using their recommended flocculant polymer aid. Plus, Veolia Water completed jars testing of their own the week of February 16th to analyze other process details and current WTP parameters. Experiments completed by PVS Technologies showed very little TOC removal beyond that obtained with straight ferric chloride feed.

6. Conclusions

Increasing the dose rate of ferric chloride is an operational change that can easily be implemented without the need for any additional equipment. Test results show that over 40% THMFP removal can be obtained with a dosage of 60 mg/l Fe3+ or higher. Increased dosing of ferric chloride would be most ideal coupled with regular raw water TOC monitoring so that TOC levels would dictate the appropriate ferric chloride feed rate.

Softening with soda ash in addition to lime is another option the City should consider if increased ferric chloride doses are not adequate to maintain THM levels under the MCL, particularly during warmer months. Again, monitoring of TOC in the raw water could provide useful information of when lime/soda ash softening is necessary.

IV. DISTRIBUTION SYSTEM EVALUATION

EPA guidance for the distribution evaluation portion of an OER is focused on identification and isolation of a specific portion of the distribution system that led to the exceedance. The circumstances of Flint's apparent pending TTHM exeedances are unusual in that a new supply has been implemented which clearly corresponds to the high TTHM sample results. Although the new source is one element in increased TTHM levels, value remains in evaluating the distribution system since water age is also a critical factor. Additionally, there may be distribution improvements that can be made to help alleviate the problem.

A. INFRASTRUCTURE

1. Piping

According to the most recent MDEQ Sanitary Survey, the distribution system is estimated to contain 70% cast iron, 20% ductile iron, 2% concrete and 8% steel water mains. Based on discussions with City staff, the percentage of cast iron pipe may be higher than that stated in the MDEQ Sanitary Survey. Unlined cast iron pipe can become pitted, allowing colonization sites for microorganisms leading to chlorine demand. Additionally, much of the piping in the system is aged and in poor condition. Increased chlorine demand could be resulting from biofilm in older pipes and from main breaks/repairs. The extent of contribution is not known but any water main replacement project will decrease chlorine demand somewhat if constructed properly. Unfortunately, water main breaks may also assist with decreasing water age by providing unintentional flushing. All things considered, it is impossible to quantify the impact existing piping has on THM formation without extensive research and long term study.

The City utilizes City Point software and GPS equipment to document main breaks and prioritize replacements. However, main break information is more pertinent to rusty water complaints and has little relevance to THM levels. Areas that have been targeted for main replacements include the transmission main from the WTP west to Dupont and south to the West Side reservoir, Fenton Road, Atherton Road, Dort Highway, Averil Street, and Boulevard Drive.

2. Storage

There are 4 finish water storage tanks and 1 raw water tank as tabulated below:

TABLE 8 – STORAGE TANKS

Name	Type	Water	Volume (MG)	Operating		Absolute	
				LWL	HWL	Bottom	OF
Dort Reservoir	Ground	Raw	20	-	-	730	750
WTP Tank	Elevated	Finished	2	883.0	896.0	863.0	898.0
WTP Clear Well – PS #4	Ground	Finished	3	11′	15′	708.5	726.0
Cedar Street Reservoir	Ground	Finished	20	-	11′	737.2	757.2
Westside Reservoir	Ground	Finished	12	-	12′	761.8	779.0

The MDEQ typically recommends providing a minimum finish water storage volume of 1/3 the maximum daily demand (MDD). According to the 2013 MDEQ Sanitary Survey, the 5 and 10 year MDDs are 21.57 mgd and 30.05 mgd respectively. A common rule of thumb for clear well storage volume at a WTP is 10% of the design flow rate. Another general guideline for reliability is to provide total storage to allow for 2 X the average daily demand plus fire flow demand. For this analysis, fire flow is assumed to be 2,500 gpm for either one industrial fire (2,500 gpm) or a combination of one residential (1,000 gpm) and one commercial (1,500 gpm) fire at a 4 hour

duration which results in a total volume of 600,000 gallons. These go-by approximations are summarized below with the applicable flow rates and are compared to the existing storage volumes currently being utilized.

Common Practice	Flow Rate	Recommended Volume by ROT	Volume In Use
Clear well 10% of Design Flow	18 MGD	1.8 MG	3.0 MG
Finish Storage = 1/3 MDD	30.05 MGD	10.0 MG	37 MG
Total Storage = 2 * ADD + FFD	13.87 MGD	28.3 MG	57 MG

Based on the values above, it appears the storage volume used in the Flint system could be decreased without negatively effecting reliability. The appropriate volumes of individual tanks will be further evaluated using the water system model and discussed in Section V (C).

All reservoirs have baffling to minimize stagnant water. Also, all tanks have been maintained and are in reasonable condition. The Westside reservoir has an exposed roof that is in need of rehabilitation, but its current condition has no influence on THM formation.

3. Pump Stations

All pump stations are in good condition but pumps are generally oversized. As an independent consideration, oversized pumps are not a contributing factor to high THM levels. Control of pumps and pressure zones are discussed in detail below.

B. OPERATIONS AND MAINTENANCE

1. Pump Station & Storage Operations

Pump stations and storage tank levels are controlled as shown in Table 9.

TABLE 9 – PUMP STATION CONTROLS

PS Name	Control Point	On Point	Off Point
PS No. 4 Raw	Operator	-	-
PS No. 4 Finish	Match plant flow	-	-
Westside	System pressure (elevated tank)	22.5′	33′
Cedar Street	System pressure (elevated tank)	22.5′	33′
Torrey Road	Distr. – Brown/Bradley	< 45 psi	> 45 psi

Prior to the first TTHM violation, Cedar Street and Westside pump stations were operated as needed and were alternated. Typically, Cedar Street was run in the morning and Westside was run in the evening and reservoirs for each were filled during low demand periods at night.

Westside, Cedar Street and Torrey Road pump stations are used to boost system pressure when high demands warrant it, but there are not well defined pressure zones within the system. Therefore, the possibility exists that water is being recirculated allowing for increased water age.

2. Booster Disinfection Practices

Booster disinfection is provided at the Cedar Street and Westside pump stations. When sustained residuals are not provided by chlorine feed at the WTP, sodium hypochlorite is applied at the reservoirs while being filled.

3. Changes in System Demands

Water demands in the City have been declining since the 1960's as the population has dropped. As a result, many of the water system components are oversized including storage tanks and water mains which both increase the time for water to reach the user.

From a short term perspective, Flint demands tend to increase in summer as is ordinarily expected but also in the winter due to water main breaks. The MDD for Flint often occurs in winter. Regarding THM formation, with lower temperatures and higher flows in the winter, THM levels taken at the distribution sample points are expected to be lowest for February sampling quarters than all others.

C. WATER SYSTEM HYDRAULIC MODELING

As part of this report, the City provided a hydraulic water model, originally developed by Potter Consulting, for LAN to update. Thus far, LAN has modified the model to be capable of extended period simulations, modified controls to reflect current operations, revised the piping to include known broken valve locations, updated pump curves, checked pipe diameters, updated system demands, and developed preliminary water age results throughout the entire system. Water age shown in the revised model corresponds for the most part to TTHM levels at the sampling sites. However, LAN has also identified several issues affecting the model that require further attention to allow for usable and reliable results. Those issues include accurate quantification of lost water and confirmation of the status of valves throughout the system. Preliminary water age results are presented in Table 10. Revised results will be provided when the hydraulic model has been fully updated.

TABLE 10 – PRELIMINARY WATER AGE FROM WATER MODEL

Sample Point	Location	Address	Water Age (Hrs)	May/15 LRAA THM (ug/l)
1	McDonalds	3719 Davison	25	68
2	BP Gas Station	822 S. Dort Hwy	18	54
3	Liquor Palace	3302 S. Dort Hwy	14	60
4	Taco Bell	3606 Corunna	340	72
5	Univ. Market	2501 Flushing	305	94
6	Salem Housing	3216 MLK	45	66
7	Rite Aid	5018 Clio	41	69
8	N. Flint Auto	6204 N. Saginaw	37	55

It is anticipated that topics shown below in italicized font will be detailed after the model is updated in Sept-Oct, 2015.

1. Simulation of Existing System

Match existing conditions. Chlorine and THM data may be used to verify model results. We have chlorine feed data at plant and residuals at 10 locations in each MOR, May 2014 – July 2015.

2. *Identification of Water System Deficiencies*

Specific issues to look at:

- *Water age in entire system*
- *Possible recirculating water through pump stations*
- *Use of storage tanks – volumes in particular*
- *Indications of broken valves*
- *Effectiveness of booster disinfection*

V. RECOMMENDATIONS TO MINIMIZE FUTURE OEL EXCEEDANCES

A. SOURCE

The City of Flint has already committed to the change from the Flint River as the water source to Lake Huron under the KWA system, planned for late 2016. The risk of future TTHM limit violations will decline substantially with the use of water from Lake Huron due to much lower DBP precursors. It is important to recognize that the Flint River will become strictly an emergency supply when the KWA supply becomes available and any investments toward the Flint River should be contemplated accordingly. Recommendations discussed below in this section apply to the Flint River as the source.

Reverting to supply from the DWSD until the KWA supply is available as an option. However, based on information provided by the City of Flint, the annual cost to receive water from the DWSD would be at least $16,000,000/year or $1,333,000/month. Therefore, utilizing the DWSD for interim supply is cost prohibitive under the terms defined by the DWSD.

1. Watershed Management

A volunteer group entitled the Watershed Coalition performs various tasks related to managing the Flint River watershed such as spring cleanups and annual benthic studies to evaluate the river 'health'. No additional action is recommended at this time.

2. Monitoring

The City documents daily raw water flow, pH, alkalinity, carbonate and non-carbonate hardness, chloride, temperature, turbidity and coliform count as part of standard preparation of Monthly Operating Reports (MOR). WTP staff have obtained and installed TOC and THM analyzers. The THM analyzer is set up as an on-line plant tap monitor and operations personnel have begun taking samples most days to track TOC levels throughout the treatment process. It is recommended to implement TOC tracking as a strict daily procedure which would provide staff the data needed to establish correlations to predict distribution system THM formation.

3. Intake Operations

The 2002 Treatability Study recommended pre-oxidation in the form of sodium permanganate as a feed at the intake. It is possible the addition of a pre-oxidant such as hydrogen peroxide or some type of permanganate could enhance the ozone process. Veolia evaluated permanganate demand during jar testing the week of February 16th, 2014 and recommended implementation at a dosage of 0.5 mg/l – 1.2 mg/l to achieve 10% additional TOC removal.

4. Seasonal Strategies

Past data indicates the Flint River is influenced by groundwater and in particular, dolomitic spring water. The result is hard water with high concentrations of magnesium and sulfate. Also, hardness and alkalinity are higher during the winter. Upon initiation of supply from the Flint River, the City made the decision to soften with just lime to focus on removal of carbonate hardness. One potential modification that could assist with TOC removal and thus decrease THMFP would be lime and soda ash softening. A temporary caustic soda feed system is recommended to be put in place in case the need for optimized softening arises.

5. Upstream Contamination Issues

Upstream contamination issues are extremely difficult to prevent and even if detected are difficult to locate. Evaluation of raw water data collected for MORs is the easiest manner in which to detect upstream contamination issues because the data is already collected for treatment purposes. In fact, high total Coliform readings in the past have signaled potential issues that the City was able to identify and remove.

An upstream monitoring and warning system could be established to attempt to detect water quality issues or spill event type contamination early enough to adjust treatment procedures or cease intake prior to the contamination reaching the WTP. However, given the imminent conversion to the KWA supply, the period of full time use would likely be far too short to achieve payback on the capital expenditures.

B. TREATMENT PROCESS

1. Operational Recommendations

- Increase ferric chloride dosage: Previous testing in the 2002 Treatability Study, jar testing completed by LAN, and a review of 2014 ferric chloride dosages compared to THM levels leaving the WTP support that increasing the ferric chloride dosage would help reduce THM formation.
- Increased monitoring: Currently, the MDEQ does not require daily reporting of raw water TOC or finished water TTHM levels. However, daily tracking of such levels would allow the City to develop a correlation between the two, thus providing a predictive tool to help manage TTHM levels.
- Coagulation and flocculation polymer aids: The 2002 Treatability Study suggested the use of coagulation and flocculation polymer aids. These polymer aids were shown in the 2002 Treatability Study to increase TOC removal and thereby reduce THMFP but jar testing by LAN and PVS Technologies did not indicate clearly defined benefits. Addition of coagulation and flocculation polymer aids should be categorized as a future consideration that would require further evaluation.
- Discontinue softening bypass: In early summer of 2014 the City was bypassing a portion of flow around the softening basins because hardness levels did not warrant softening of the full stream. However, this practice was discontinued because it was believed the bypass stream was contributing to chlorine demand and preliminary data has supported that belief. Chlorine demand dropped 0.5 – 1.0 mg/l following elimination of the bypass stream in early November 2014.
- Soften with lime and soda ash: Research has shown that enhanced softening with both lime and soda ash may provide additional TOC removal. Veolia did not recommend this option after conducting jar tests.
- Disinfection of filter beds: Recommendation is no longer applicable since media has been replaced.
- Optimization of all existing treatment processes: Depending on bench scale testing conditions and results, slight modifications to all treatment processes might in order to replicate lower DPBFP.
- Discontinue or adjust softening anionic polymer feed: Some anionic polymers have been found to increase TOC. However, Veolia provided no recommendation to change polymers following their evaluation.

2. Infrastructure Change Recommendations

- Fix and/or replace faulty ozone equipment: Since the ozone equipment was installed it had not been used extensively on a full time basis. Following minor complications, the City hired the equipment manufacturer and a programmer to troubleshoot the system. Replacement of faulty gauges and redesign of the control program have allowed the system to operate properly since January 2015.
- Replace filter media with GAC media: GAC media could help reduce THM levels by reducing both TOC and chlorine demand. For this consideration, the intermediate chlorine feed location should be relocated to a point downstream of the filters. The City elected to pursue this option and 6 filters were completed in July 2015 and the remaining 6 were completed in August 2015. Provisions are also being considered for adding more GAC media and/or regeneration of media next summer.
- Change disinfectant to chloramine or chlorine dioxide: If other options prove to be ineffective, conversion to another disinfectant should be fully evaluated. Various characteristics of chloramination indicate an advantage over chlorine dioxide, but a full analysis would provide clarity as to which would be preferred.
- Install pre-oxidant chemical feed: Hydrogen peroxide or a form of permanganate as a pre-oxidant can enhance the activity of the ozone. Chemical feed could be installed at the intake structure or low service pump station, depending on the reaction time required. Use of a pre-oxidant at the intake might also provide the additional benefit of disinfection credit for ozonation with the MDEQ if an ozone residual can be obtained at the ozone process effluent as a result.
- Repair upstream sewer leak: a sewer leak upstream of the WTP intake was discovered in early summer 2014 and has been repaired by the City.

C. DISTRIBUTION SYSTEM

Potential distribution issues related to water quality issues discussed in Section IV included old cast iron pipe, oversized infrastructure, and remote storage/pump station locations and operations that might be less than ideal. Recommendations to address those issues are offered in this section.

1. Manage Water Age

a) Storage Tanks

Considering the excess storage capacity discussed in Section IV, in the short term it is recommended that operational changes be implemented immediately to reduce the overall volume of water stored to decrease water age. Immediate operational recommendations include lowering high water levels of reservoirs other than the elevated tank, to reduce the total system wide usable storage volume to 30-37 MG.

In the long term, LAN recommends development of the most ideal options for water model evaluation. Excess storage volume and tank locations within the water system afford Flint numerous options to reduce the amount of storage volume utilized. As a starting point, two recommendations are presented below.

Option 1
- Take West Side reservoir and pump station out of service
- Cut storage volume used in half at Cedar Street reservoir
- Adjusted system wide storage volume would be 35 MG

Option 2
- Take Cedar Street reservoir and pump station out of service
- Adjusted system wide storage volume would be 37 MG

b) Residence Time in Pipes

Completely redesigning and replacing the water system to match today's demands is not feasible financially and would be a waste of infrastructure with remaining useful life. Going forward, it is recommended that any future main replacement projects be evaluated for possible downsizing. When the water model is fully updated, it will provide a valuable tool in determining which mains can be downsized and to what extent. Replacement of broken valves and valve exercising are also recommended, which are programs that have already been implemented into Flint's regular operations.

Operationally, hydrant flushing is recommended as needed to minimize water age in low flow areas. Again, the updated water model should be used to locate high water age areas and optimal flushing points.

2. Reduce Disinfectant Demand

Recommendations to reduce disinfectant demand are similar to those described above to reduce water age. Replacement of old cast iron pipes would lead to a reduction of disinfectant demand on the distribution side, but realistically can only be accomplished over a prolonged period of time. In the meantime, hydrant flushing is the most viable means of reducing disinfectant demand in piping. From a storage standpoint, all reservoirs and tanks should be regularly inspected and maintained to prevent entrance of any outside contamination that would contribute to disinfectant demand. Cleaning of all tanks is recommended as well as investigation into stagnant water prevention options.

3. Water Modeling of Recommendations [yet to be completed]

Determine best flushing locations to reduce water age
Evaluate changes in storage tank operations to reduce water age
Valves to close/add to improve pressure zones, reduce recirculation
Optimization of pump station use – smaller pumps? Shut down?
Evaluate booster disinfection

D. BOOSTER DISINFECTION

Decreasing chlorine feed at the WTP and adding booster disinfection in the distribution system is an alternative intended to reduce the reaction time at higher concentrations of chlorine to reduce DPB formation. Extensive looping and branching within the existing system complicate how to best implement and utilize booster disinfection. Water system modeling is recommended to gage the effectiveness of existing feed point locations and dosages. Further discussion and details will be provided when the distribution evaluation results are available.

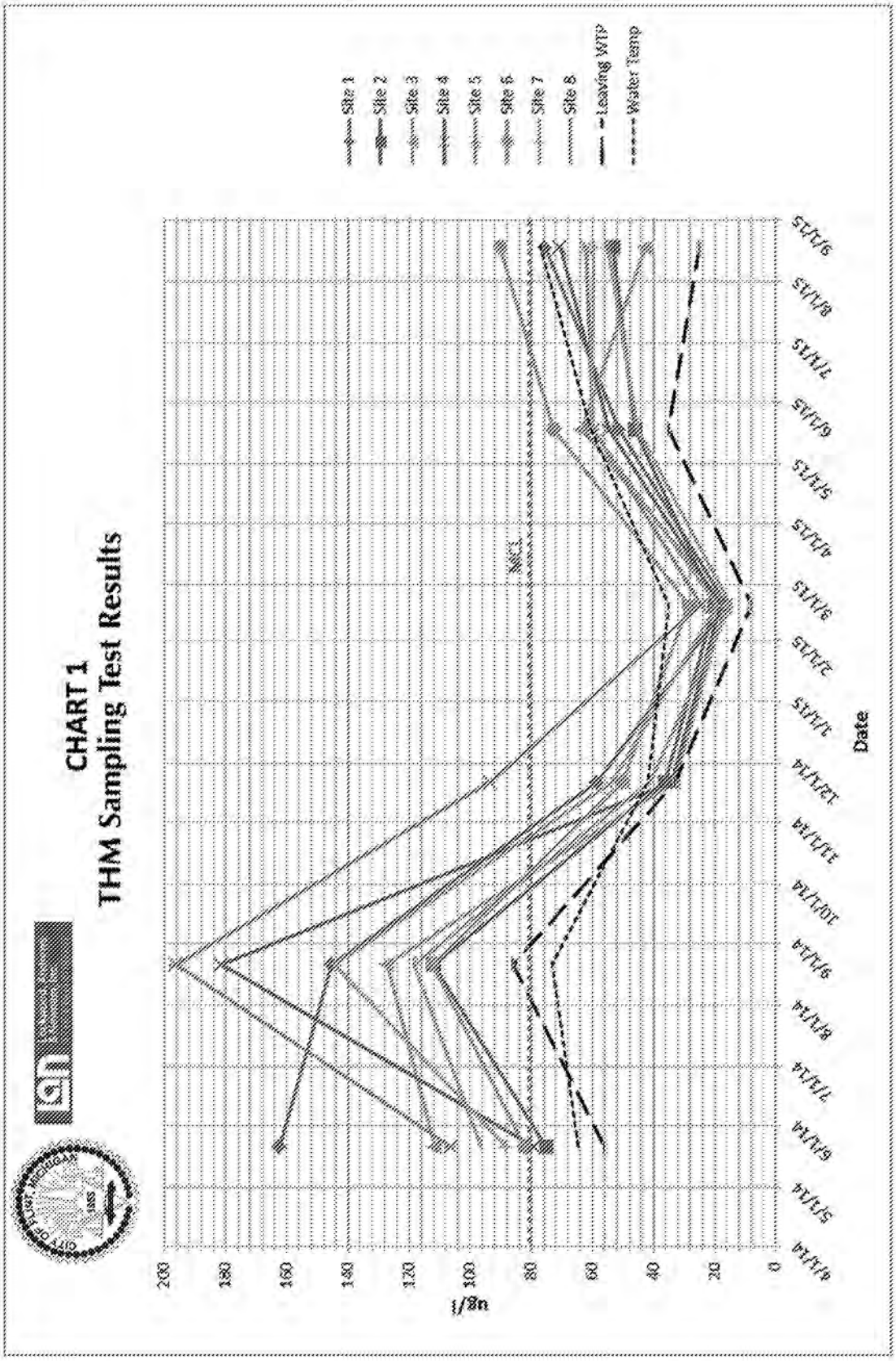
E. CATEGORIZATION OF ACTIONS

Considering that the Flint River is being used as the water source only until the KWA supply is available (expected late 2016), options to address high THM formation that require new construction or extensive time to implement are not preferred. On the other hand, the City understands THM sample results to date dictate that some action is necessary. Two categories have been developed to assist the City in prioritizing actions to take. Stage 1 consists of actions that can be completed relatively quickly without major construction and Stage 2 actions are either long term actions or solutions requiring major construction. Stage 1 actions are to be completed first followed by evaluation of the results prior to consideration of Stage 2 actions. Grouping of actions are shown in the table below.

TABLE 11 – ACTION PLAN

	Action	Purpose	Status
Stage 1	Hire water consultant to complete 'water audit'	Third party review of actions and operations to make sure no options are being missed	Complete
	Increased water quality monitoring – obtain THM and TOC analyzers	Provide information needed to adjust WTP operations to match changing raw water quality	Complete
	Troubleshoot ozone feed system	Reduce chlorine feed and increase TOC removal	Complete
	Bench scale jar testing	Optimize treatment process and evaluate possible modifications	Complete
	Discontinue softening bypass	Reduce chlorine demand	Complete
	Disinfect filters	Reduce chlorine demand	Complete
	Increased water main flushing	Reduce water age / stagnant water	Ongoing
	Water system modeling evaluation	Determine areas with high water age and reasons	Partially complete
	Modify booster disinfection feeds, if appropriate	Decrease water age	Not yet evaluated
Stage 2	Repair ozone system	Reduce chlorine feed and increase TOC removal	Complete
	Continue increased water main flushing	Reduce water age / stagnant water	Ongoing
	Replace filter media with GAC	Reduce TOC and chlorine demand	Complete
	Continue valve replacements based on water model	Reduce water age / stagnant water	Ongoing
	Convert to lime and soda ash softening	Increase TOC removal	Future consideration
	Change disinfectant to chlorine dioxide	Reduce THMFP	Future consideration
	Install pre-oxidant feed at intake	Optimize ozone disinfection, reduce chlorine	Future consideration
	Implement coag. & floc. polymer aids, if appropriate	Increase TOC removal	Future consideration
	Place priority on replacing cast iron water mains	Reduce chlorine demand	Ongoing

Samples were taken August 18th, 2015 for the latest round of quarterly testing. The City has implemented many of the Stage 1 actions and installed GAC media in the filters and THM test results have significantly improved (decreased) since May and August 2014. All sampling results are shown on Chart 1.



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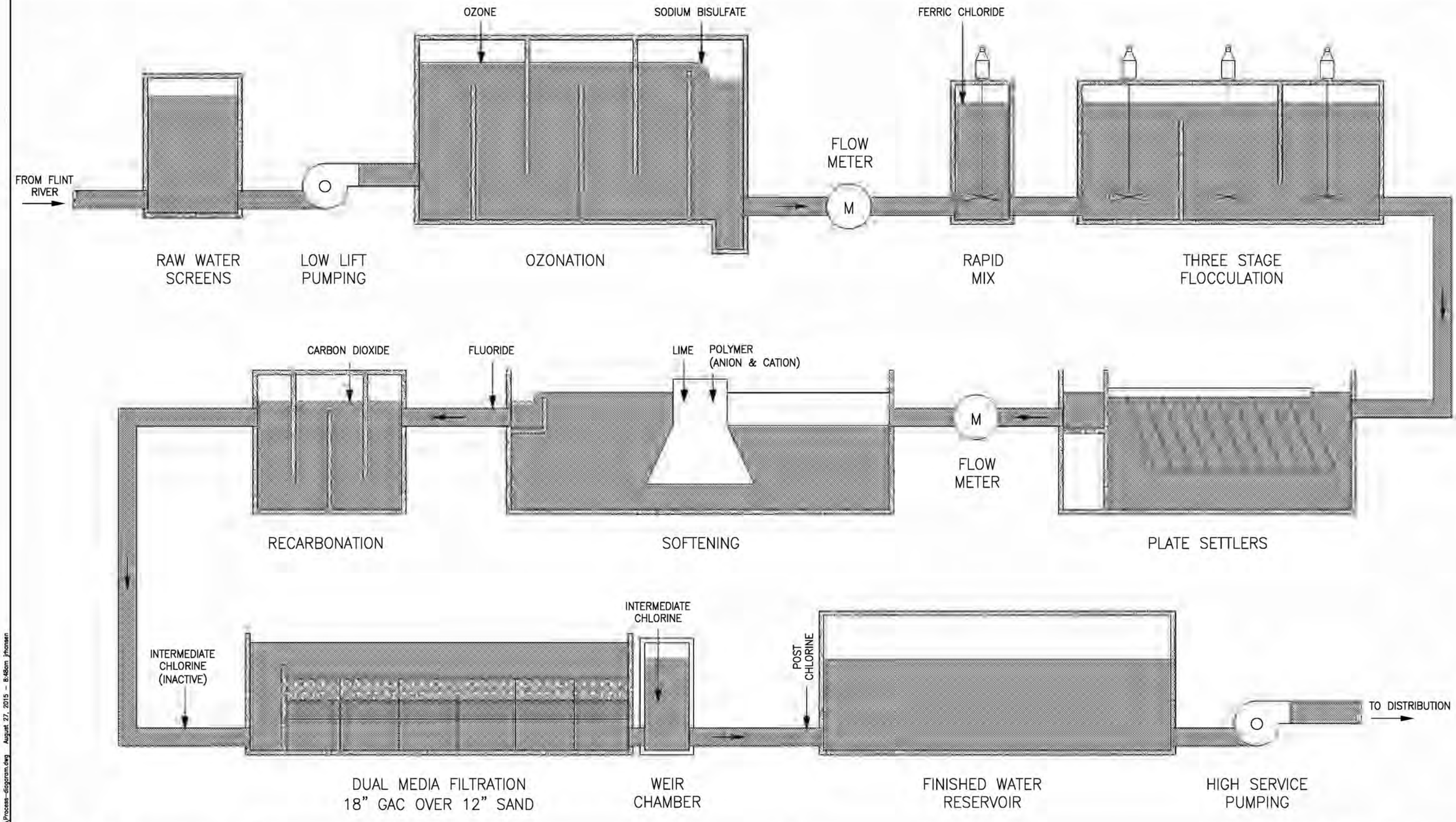

C:\projectwise\jrhansen\d0263766\Process-diagaram.dwg August 27, 2015 - 8:48am jrhansen

Genesee County

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www.lan-inc.com

CITY OF FLINT
WATER TREATMENT PLANT

REVISIONS			FILE LOG	
NO.	DESCRIPTION	DATE	ACTIVITY	BY
			Manager	JWG
			Design	
			Drawn	JRH
			Check	JRH

WATER TREATMENT PLANT
PROCESS DIAGRAM

Project No. 130-10701-001
Date Aug. 27, 2015

Sheet
FIG 1

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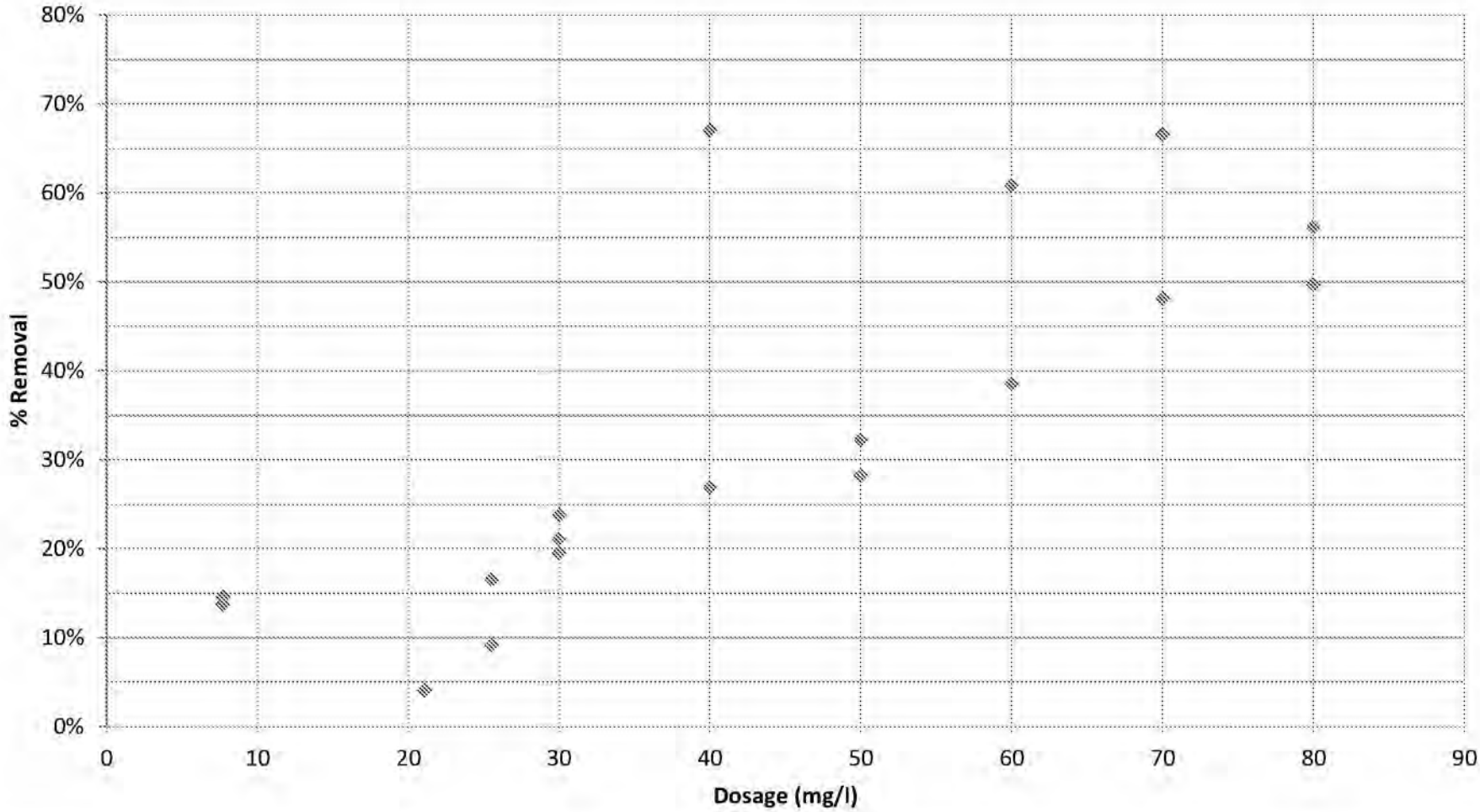
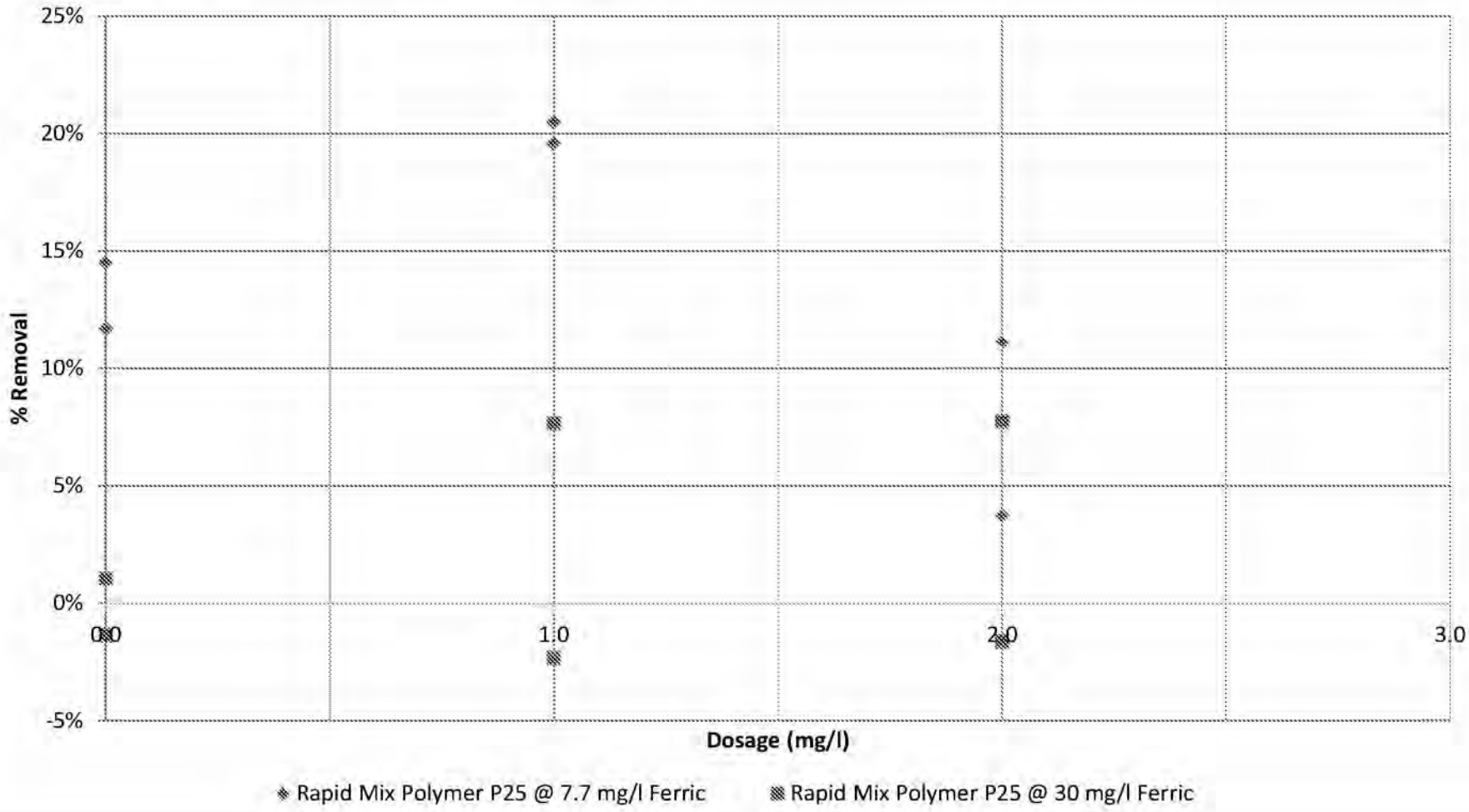
APPENDIX A
JAR TEST DATA

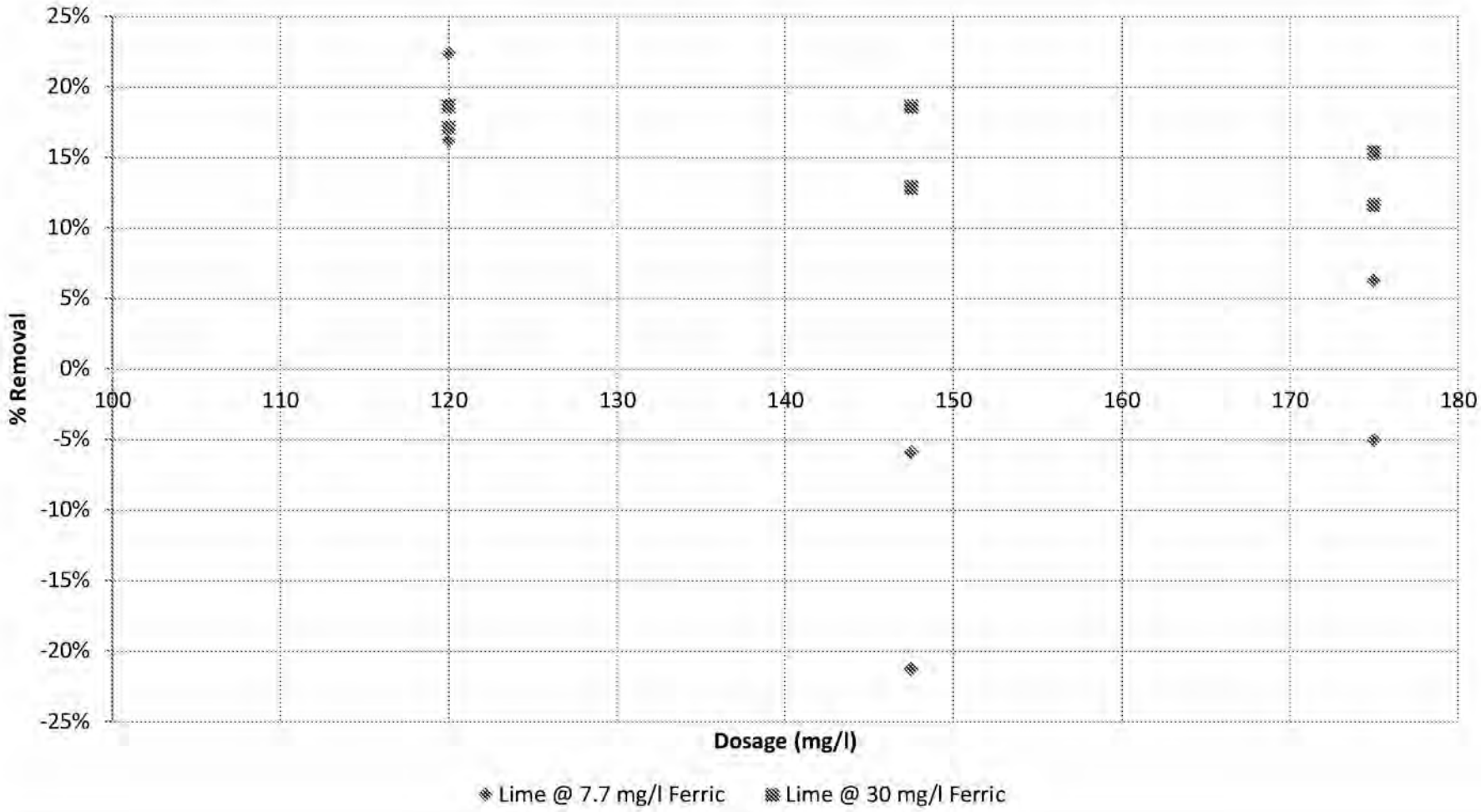
Ferric Chloride Feed
THM Removal

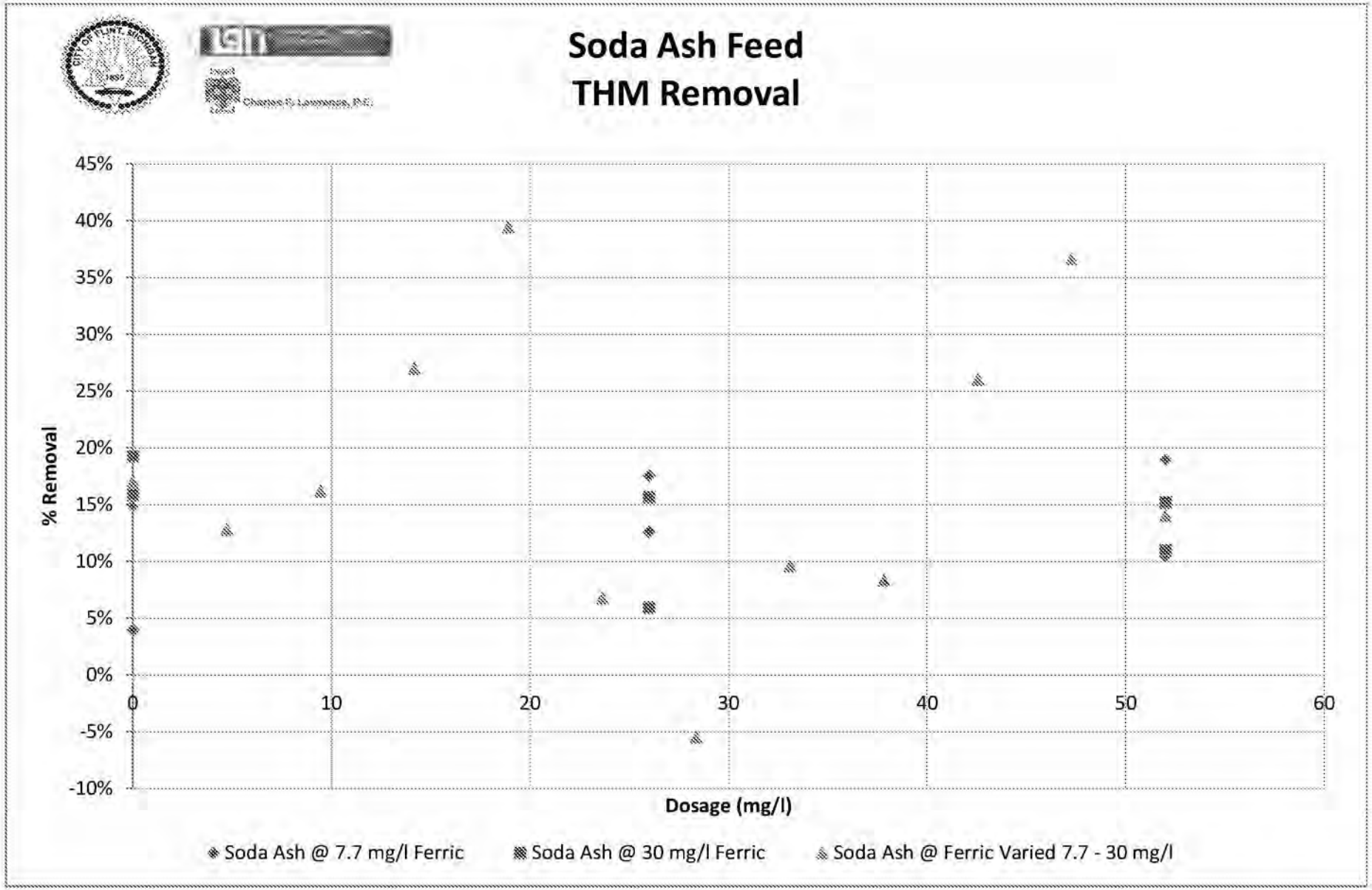


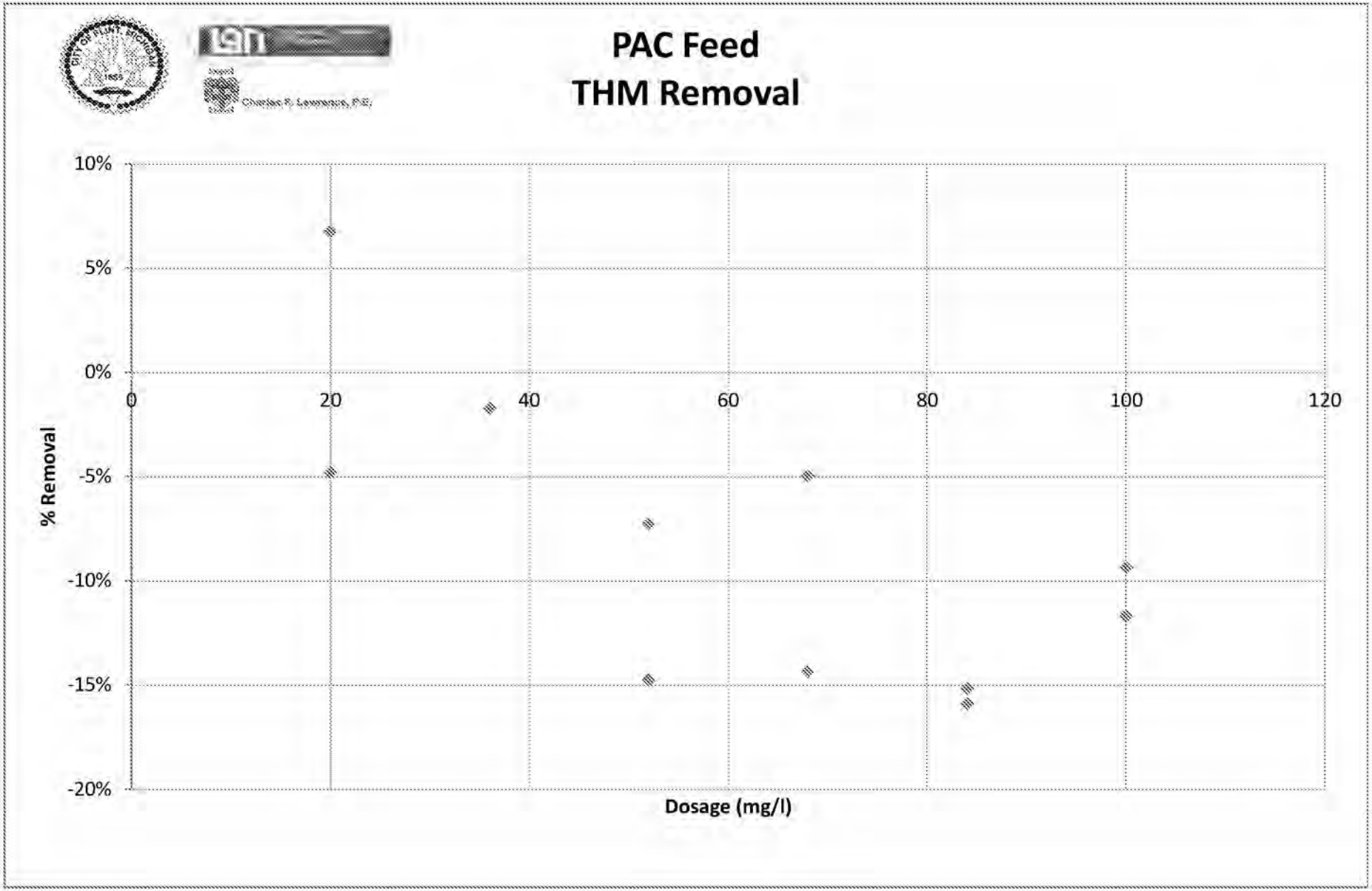
Coag/Floc Polymer Aid
THM Removal



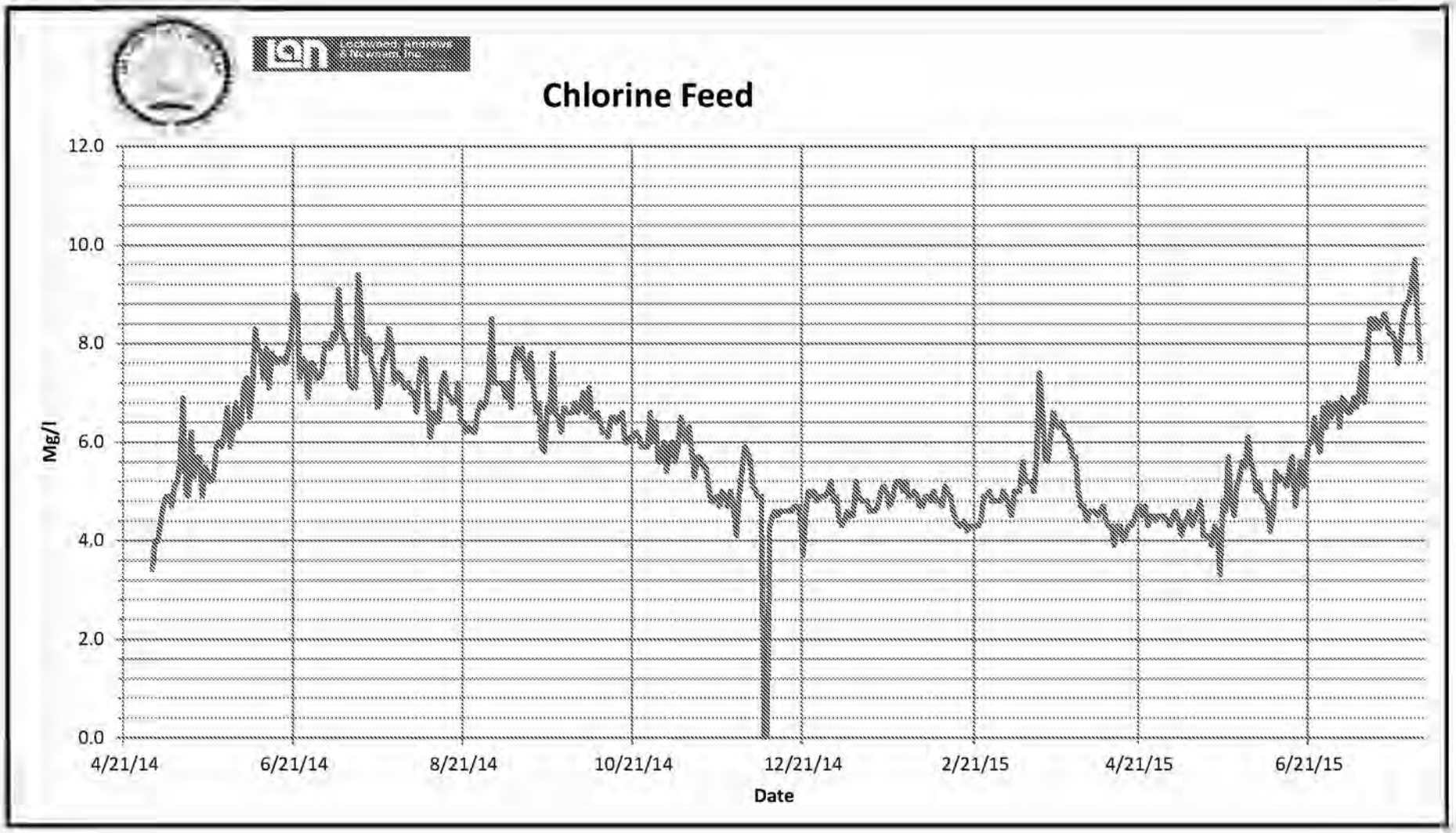
Lime Feed
THM Removal




Soda Ash Feed
THM Removal
% Removal
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
-5%
-10%
0
10
20
30
40
50
60
Dosage (mg/l)
Soda Ash @ 7.7 mg/l Ferric
Soda Ash @ 30 mg/l Ferric
Soda Ash @ Ferric Varied 7.7 - 30 mg/l


PAC Feed
THM Removal
10%
5%
0%
-5%
-10%
-15%
-20%
0
20
40
60
80
100
120
% Removal
Dosage (mg/l)

APPENDIX B
WTP DATA


Chlorine Feed
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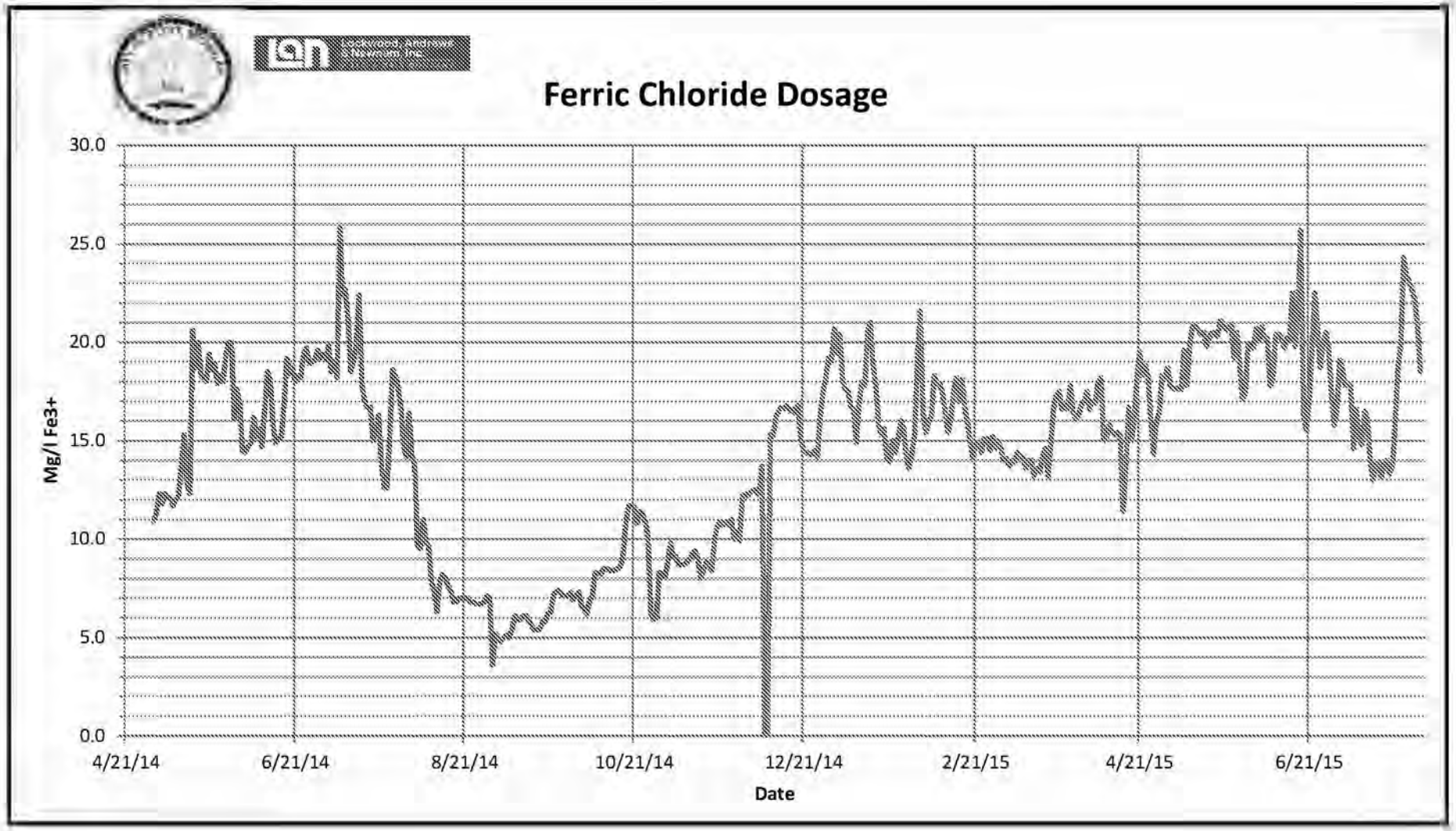
10.0
8.0
6.0
4.0
2.0
0.0
Mg/l
4/21/14
6/21/14
8/21/14
10/21/14
12/21/14
2/21/15
4/21/15
6/21/15
Date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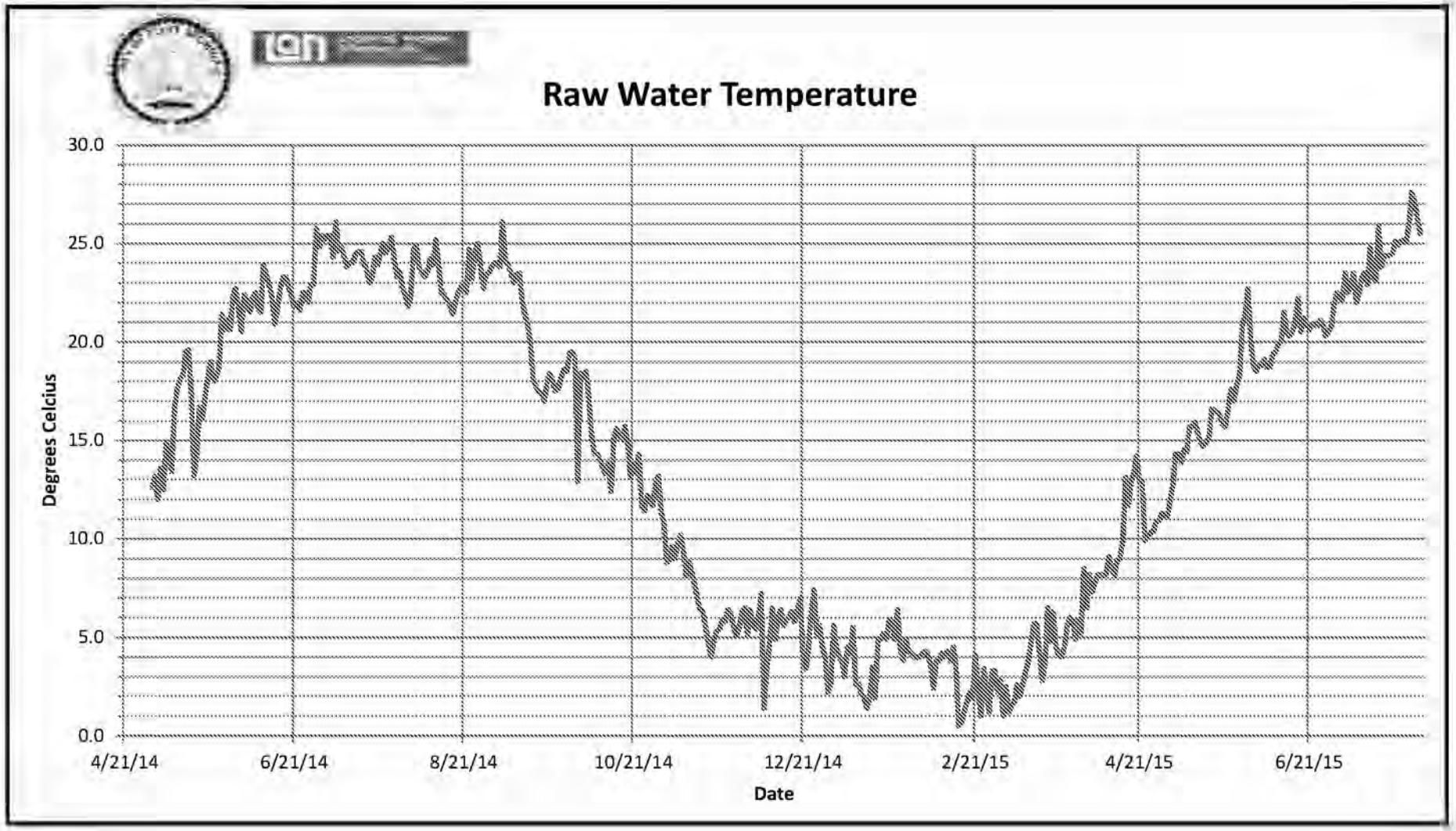
Ferric Chloride Dosage
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Mg/l Fe3+
4/21/14
6/21/14
8/21/14
10/21/14
12/21/14
2/21/15
4/21/15
6/21/15
Date


Raw Water Temperature
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Degrees Celcius
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6/21/14
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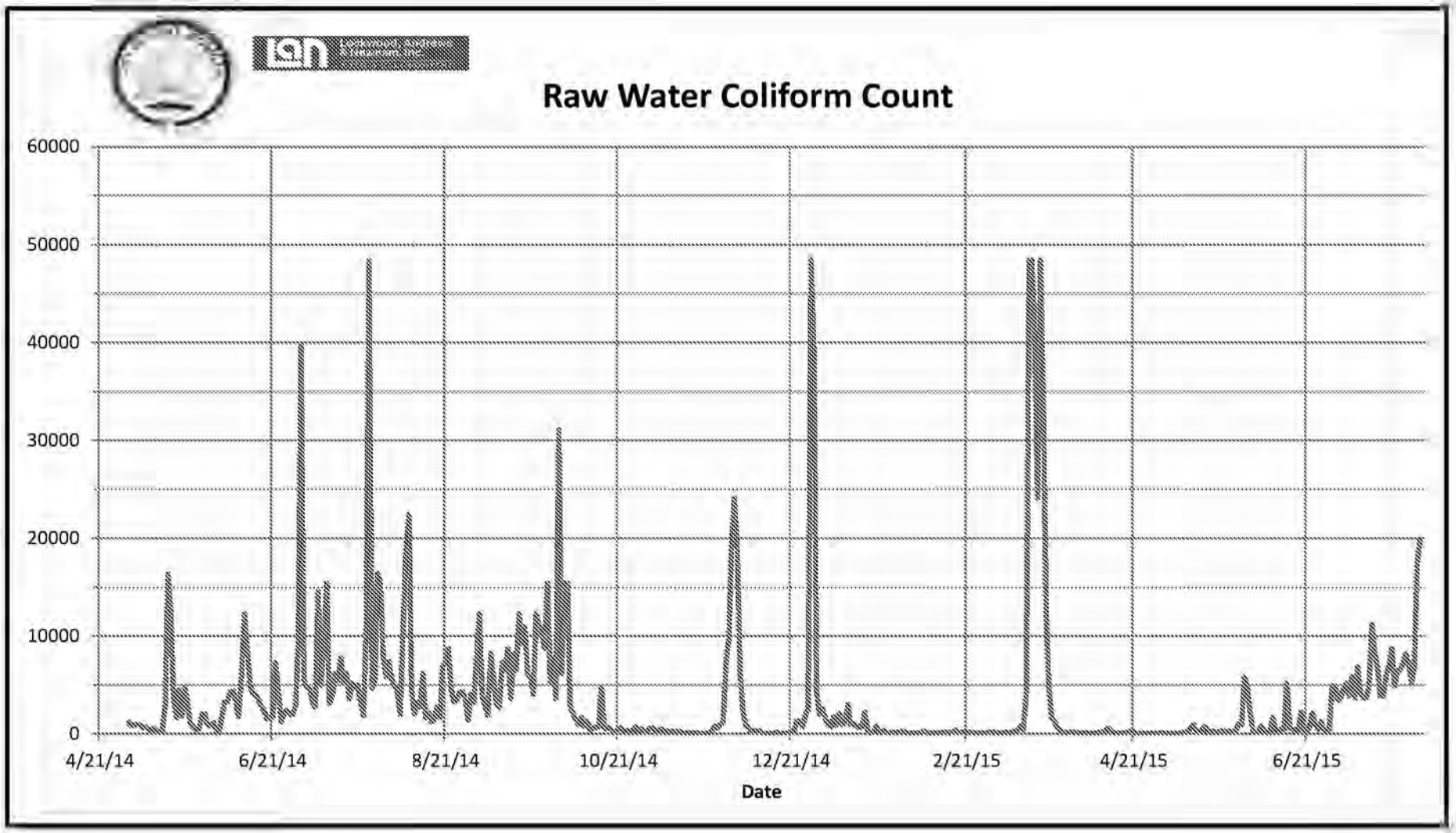
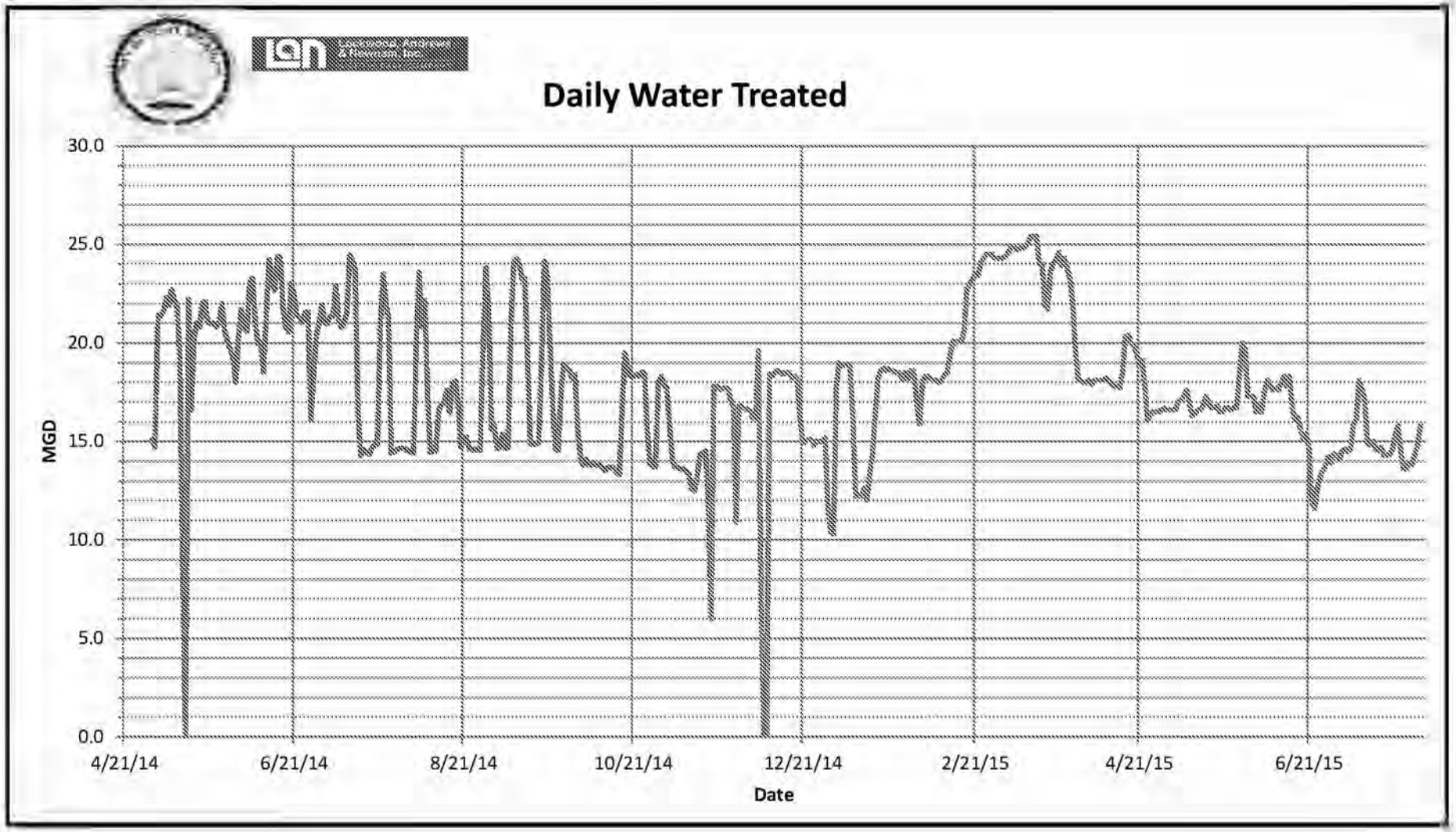
6/21/15
Date


Raw Water Coliform Count
60000
50000
40000
30000
20000
10000
0
4/21/14
6/21/14
8/21/14
10/21/14
12/21/14
2/21/15
4/21/15
6/21/15
Date


Daily Water Treated
30.0
25.0
20.0
15.0
10.0
5.0
0.0
MGD
4/21/14
6/21/14
8/21/14
10/21/14
12/21/14
2/21/15
4/21/15
6/21/15
Date

Operational Evaluation Report
Trihalomethane Formation Concern

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Michigan
Flint
Lansing

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From: Rennaker, Joanne (DEQ)
Sent: Thursday, September 03, 2015 9:07 AM
To: Prysby, Mike (DEQ)
Subject: FW: Flint TTHM 3rd quarter letter
Attachments: Flint DBP 3Q15-revised.doc

For your records.

From: Busch, Stephen (DEQ)
Sent: Wednesday, September 02, 2015 9:14 AM
To: Rennaker, Joanne (DEQ)
Cc: Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: Flint TTHM 3rd quarter letter

Jo Anne,

I believe the attached is ready to be finalized.

I would like a pdf of the signed letter to email over to members of the legislature.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

September 2, 2015

Mr. Brent Wright, Operations Supervisor
City Of Flint – Department of Public Works
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: City of Flint – Water Supply
Return to Compliance Total Trihalomethanes (TTHM)
3rd Quarter 2015 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the City of Flint (City) has returned to compliance with the Michigan Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels for disinfection byproducts (MCLs)*, of the 1979 Administrative Code.

In accordance with Administrative Rule 610 (R 325.10610, *MCLs for disinfection byproducts*), the MCL for the disinfection byproduct TTHM is 0.080 milligrams per liter (mg/L). Compliance is determined based on a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the LRAA all eight of the City's TTHM compliance sampling sites now comply with this standard based on the last four quarterly monitoring periods, ending August 31, 2015. This return to compliance regarding TTHM's began on September 1, 2015, and will continue as long as the LRAA at each of the City's TTHM compliance sampling sites remain below this standard.

TTHM Results (mg/L)						
	11/20/14	2/17/15	5/18/15	8/18/15	LRAA	OEL
DBP1 McDonalds 3719 Davison	0.059	0.0162	0.0514	0.0755	0.050	0.055
DBP2 Liquor Palace 3302 South Dort Highway	0.033	0.0168	0.0635	0.0532	0.042	0.047
DBP3 North Flint Auto 6204 North Saginaw St.	0.041	0.0149	0.0452	0.0426	0.036	0.036
DBP4 University Market 2501 Flushing Road	**0.094**	0.0245	0.0598	0.0706	0.062	0.056
DBP5 Taco Bell 3606 Corunna Road	0.034	0.0151	0.0547	0.0619	0.042	0.049
DBP6 Rite-Aid Pharmacy 5018 Clio Road	0.054	0.0192	0.0605	0.0595	0.048	0.050
DBP7 Salem Housing 3216 MLK Boulevard	0.050	0.0285	0.0727	**0.0903**	0.060	0.070
DBP8 BP Gas Station	0.036	0.0199	0.0461	0.0549	0.039	0.044

822 South Dort Highway						

Corrective measures by the City have been successful in achieving compliance with this standard. These measures have included replacement of anthracite filter media with granular activated carbon as well as the optimization of water treatment plant and distribution system processes and operations as recommended through Operational Evaluations conducted by the City. It is important that the City continue to follow these recommendations in order to limit disinfection byproduct formation and maintain compliance with the MCL LRAA standards. While the MCL LRAA standard has now been met at all eight compliance sampling sites, an individual TTHM concentration above 0.080 mg/L was measured at one location, DBP 7, during peak month sampling in August 2015.

The DEQ encourages the City to continue informing customers about this updated water quality information and compliance with the TTHM MCL standard.

If you have any questions regarding this letter, please contact us at the numbers below; at prysbym@michigan.gov; or rosenthala@michigan.gov.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-290-8817

Adam Rosenthal, Environmental Quality
Analyst
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-284-6644

cc: Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Mr. Robert Bincsik, City of Flint
Mr. Howard Croft, City of Flint
Mr. Michael Glascow, City of Flint
Genesee County Health Department
Mr. Stephen Busch, DEQ

From: Pallone, Maggie (DEQ)
Sent: Tuesday, May 26, 2015 4:27 PM
To: Busch, Stephen (DEQ)
Cc: Howes, Sarah (DEQ);Benzie, Richard (DEQ);Devereaux, Tracy Jo (DEQ);Shaler, Karen (DEQ);Potter, Jodi (DEQ);Prysby, Mike (DEQ);Shekter Smith, Liane (DEQ)
Subject: Re: Communications between City of Flint and DEQ

Yes. Sorry I shovel have been more specific. It is just for their drinking water.

On May 26, 2015, at 3:29 PM, Busch, Stephen (DEQ) <BUSCHS@michigan.gov> wrote:

> Maggie and Sarah,
>
> Is this specific to the City's drinking water? (your email just says DEQ in general)
>
> Stephen Busch, P.E.
> Lansing and Jackson District Supervisor
> Office of Drinking Water and Municipal Assistance
> MDEQ
> 517-643-2314
>
> ---
>
> **From:** Shekter Smith, Liane (DEQ)
> **Sent:** Tuesday, May 26, 2015 1:59 PM
> **To:** Busch, Stephen (DEQ); Prysby, Mike (DEQ)
> **Cc:** Benzie, Richard (DEQ); Devereaux, Tracy Jo (DEQ); Howes, Sarah (DEQ); Shaler, Karen (DEQ); Potter, Jodi (DEQ)
> **Subject:** FW: Communications between City of Flint and DEQ
> **Importance:** High
>
> Note the deadline of COB Thursday to Sarah.
>
> ---
>
> **From:** Pallone, Maggie (DEQ)
> **Sent:** Tuesday, May 26, 2015 1:21 PM
> **To:** Shekter Smith, Liane (DEQ)
> **Cc:** Wurfel, Brad (DEQ); Wyant, Dan (DEQ); Howes, Sarah (DEQ); Thelen, Mary Beth (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ); DEQ-Legislative-Contact; Potter, Jodi (DEQ)
> **Subject:** Communications between City of Flint and DEQ
>
> Liane,
> Rep Neely has requested any communications that DEQ has had with City of Flint between February 2015 and today. Could you please pull that information together and get it to Sarah by COB on Thursday? She will then forward it the Representative's office.
>
> Please let me know if you need any additional details.
>
> Thanks,

Maggie

Maggie Pallone
Director of Legislative Affairs
Department of Environmental Quality
PPI
PalloneM6@michigan.gov

From: Prysby, Mike (DEQ)
Sent: Tuesday, June 09, 2015 10:14 AM
To: Michael Glasgow
Cc: 'bwright@cityofflint.com'
Subject: Lead-Copper info

Mike,

I was trying to contact you regarding Lead and Copper info that we may need. I don't have your cell number....and the WTP main phone was not switching over to the option to have my incoming call forwarded to the lab. I wish to discuss the following:

1. Basically, we need a listing of Flint's PB&CU sampling pool (around 120 sites) with the Tier designation (Tier 1, Tier 2, or Tier 3) and those sites with lead services. It is possible that you may have sent us this information last summer as part of revising the lead & copper monitoring program.
2. The lead & copper reporting form for the July 2014 – Dec 2014 monitoring period states that not all sites were Tier 1; however, the listing of all 100 locations on the subsequent pages show all locations being Tier 1. Please clarify
3. Please provide us a copy of the consumer lead notice that was mailed to each customer in your sampling pool....we only need a copy of one notice.
4. We have received 28 of the 100 samples for the Jan-June 2015 round of lead/copper monitoring. Four of the samples were above the lead action level; however the PURPOSE of monitoring for two of these was noted as "OTHER" instead of ROUTINE MONITORING. The address of these 2 locations are: 625 S. Grand Traverse (Utility Sink) and 625 S. Grand Traverse (Bathroom). Is this site part of the sampling pool or was this location sampled based on a customer complaint and/or concern?

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Monday, August 10, 2015 3:27 PM
To: Rennaker, Joanne (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: Flint PB/Cu communication
Attachments: Flint Lead & Copper; RE: Lead-Copper info

Joanne,

Attached are two additional emails that I sent to the city concerning lead and copper. I spent approx 1 hr today on this and 1 hour discussing this matter with Richard during the week of July 27th immediately after receiving the FOIA.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Wednesday, June 10, 2015 9:49 AM
To: Michael Glasgow;'bwright@cityofflint.com'
Subject: Flint Lead & Copper

Michael, Brent

Any info yet on my email from yesterday? Hate to bug you; however, I have an 11am meeting today that includes Flint's lead & copper status….

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Wednesday, June 10, 2015 10:40 AM
To: Michael Glasgow
Subject: RE: Lead-Copper info

Thanks Michael

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Michael Glasgow [mailto:mglasgow@cityofflint.com]
Sent: Wednesday, June 10, 2015 10:37 AM
To: Prysby, Mike (DEQ)
Subject: Re: Lead-Copper info

Mike,

To answer your questions:

1. I'm trying to compile the list.

2. There were a couple of Apartment residences that were used in the first sampling pool. These would be tier 2 sites. the majority were Tier 1.

3. A copy of the consumer notice is attached below.

4. This was in response to a customer complaint, and it is a business. I would only use the Utility sink as a site if we are short a sample, and would be a Tier 3. This is not in our sample pool, but is served by lead service line.

On Tue, Jun 9, 2015 at 10:14 AM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Mike,

I was trying to contact you regarding Lead and Copper info that we may need. I don't have your cell number....and the WTP main phone was not switching over to the option to have my incoming call forwarded to the lab. I wish to discuss the following:

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Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

--
Mike Glasgow
Utilities Administrator
City of Flint

From: Prysby, Mike (DEQ)
Sent: Wednesday, September 02, 2015 3:39 PM
To: Busch, Stephen (DEQ)
Subject: Flint PBCU 90th letter
Attachments: PB-CU 90th Q1-2 2015.pdf

Steve,

Attached is a signed PDF of our PBCU 90th letter to Flint.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

DAN WYANT
DIRECTOR

September 2, 2015

Mr. Brent Wright, Operations Supervisor
City Of Flint – Department of Public Works
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: City of Flint – Water Supply
Return to Compliance Total Trihalomethanes (TTHM)
3rd Quarter 2015 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the City of Flint (City) has returned to compliance with the Michigan Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels for disinfection byproducts (MCLs)*, of the 1979 Administrative Code.

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Corrective measures by the City have been successful in achieving compliance with this standard. These measures have included replacement of anthracite filter media with granular activated carbon as well as the optimization of water treatment plant and distribution system processes and operations as recommended through Operational Evaluations conducted by the City. It is important that the City continue to follow these recommendations in order to limit disinfection byproduct formation and maintain compliance with the MCL LRAA standards. While the MCL LRAA standard has now been met at all eight compliance sampling sites, an individual TTHM concentration above 0.080 mg/L was measured at one location, DBP 7, during peak month sampling in August 2015.

The DEQ encourages the City to continue informing customers about this updated water quality information and compliance with the TTHM MCL standard.

If you have any questions regarding this letter, please contact us at the numbers below; at prysbym@michigan.gov; or rosenthala@michigan.gov.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-290-8817

Adam Rosenthal, Environmental Quality
Analyst
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-284-6644

cc: Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Mr. Robert Bincsik, City of Flint
Mr. Howard Croft, City of Flint
Mr. Michael Glascow, City of Flint
Genesee County Health Department
Mr. Stephen Busch, DEQ

From: Prysby, Mike (DEQ)
Sent: Thursday, September 24, 2015 4:06 PM
To: Busch, Stephen (DEQ);Benzie, Richard (DEQ)
Subject: Flint draft lead advisory
Attachments: DRAFT_Lead Advisory.docx

Steve, Richard,

Although I've been in the field most of the day...I thought it was prudent to review Flint's Public Health Advisory (draft) regarding lead in drinking water, at the city's request. Attached is the draft advisory with my tracked revisions. Feel free to comment or make any further revisions as needed.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Public Health Advisory Regarding Lead in Drinking Water

The City of Flint is issuing a Public Health Advisory for residents to be aware of lead levels in drinking water. While the City ~~is in full compliance with the Federal Safe Drinking Water Act~~ has not exceeded the lead Action Level (15 parts per billion), this advisory is being issued as part of a public information campaign to ensure that everyone takes note that no level of lead is considered safe.

Lead ~~contamination~~ can leach into water from a home's lead water service lines, lead solder, and leaded plumbing materials including fixtures, faucets, and fittings. Older service lines with pipes and fixtures installed before 1986 can sometimes be more susceptible to lead issues due to materials used in the home such as lead based paint and lead pipes. This message is meant as a precaution to residents and does not mean that all homes in the City will experience the same issue.

In an effort to minimalize any potential risk, the City of Flint Public Works Department advises the public to take the following precautions:

- Flush water for at least five minutes prior to use.
- Only use cold water for cooking and drinking.
- Have your water tested (see information below).

For more specific questions about lead related issues please visit the Genesee County Health Department website at www.gchd.us . The City of Flint is working proactively along with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. Activities include instituting corrosion control treatment at the Water Treatment Plant to reduce corrosion of lead from lead service lines and leaded plumbing materials into the drinking water. We expect to have corrosion control treatment in place by January 2016.

The City's Utilities Division continues to offer free water testing by calling the Water Treatment Plant at 810-787-6537 and pressing #1 after prompted or by emailing flintwater@cityofflint.com.

From: Prysby, Mike (DEQ)
Sent: Friday, September 25, 2015 8:40 AM
To: Pallone, Maggie (DEQ)
Subject: FW: Consumer Notice (draft) - city of Flint
Attachments: DRAFT_Lead Advisory.docx

Maggie

My original e-mail did not get sent to you due to typo when I was entering your name in the address box; thus, I am re-sending the message to you separately. If you do not receive the attachment, let me know. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Friday, September 25, 2015 8:30 AM
To: Wurfel, Brad (DEQ); Fields, Maggie (DEQ)
Cc: Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: Consumer Notice (draft) - city of Flint

Brad, Maggie

Mr. Howard Kroft from the city of Flint has prepared a draft Public Health Advisory regarding lead in drinking water that he intends to publish today. Mr. Kroft requested us to review the draft advisory and make any revisions as needed. Attached is a copy of the draft advisory along with our tracked changes. If there are any further edits you see fit, let me know. Also, I will be out of the office today after 11am. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Consumer Awareness Notice ~~Public Health Advisory~~ Regarding Lead in Drinking Water

The City of Flint is issuing a Public Health Advisory for residents to be aware of lead levels in drinking water. While the City ~~is in full compliance with the Federal Safe Drinking Water Act~~ has not exceeded the lead Action Level (15 parts per billion), this advisory is being issued as part of a public information campaign to ensure that everyone takes note that no level of lead is considered safe.

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The City's Utilities Division continues to offer free water testing by calling the Water Treatment Plant at 810-787-6537 and pressing #1 after prompted or by emailing flintwater@cityofflint.com.

From: Kevin VanSickle <kvansickle@gcdcwws.com>
Sent: Wednesday, September 30, 2015 11:27 AM
To: Prysby, Mike (DEQ)
Cc: David Jansen
Subject: KWA Needs Survey
Attachments: KWA Needs Survey and Documentation, 2015.pdf

Mike,

I have attached the needs survey for the Karegnondi Water Authority. If you need additional information about the cost that is included let me know.

Sincerely,

Kevin VanSickle
Water Plant Superintendent
Genesee County Drain Comminssioner's Office
Division of Water & Waste Services
G-4610 Beecher Rd.
Flint, MI 48532

Direct: 810-600-4150
Mobile: **PPI**

2015 Drinking Water Infrastructure Needs Survey And Assessment

U.S. Environmental Protection Agency
Washington, DC 20460

OMB Control No.: 2040-0274
Approval Expires: 06/30/2018

MI0003563

Federal PWSID No.:

Please verify or correct the following information:

		Check if Correct as Printed	Corrected Information *(Fill in only if preprinted information is missing or incorrect)*
Name of System (Community):	KAREGNONDI WATER AUTHORITY	☑	
Name of Contact: Street Address: City, State, and Zip:	Kevin VanSickle G-4610 Beecher Rd. Flint, MI 48532	☐	
Population Served (if wholesaler, include consecutive population as appropriate):	254,245	☑	
Number of Connections (not including consecutive systems):	0	☐	
Total System Design Capacity (in MGD):	60.00	☐	
Total Length of Pipe in System (in Feet):	331,796	☐	
Source Water Type (Ground, Surface/GWUDI, etc.):	Surface/GWUDI	Check All That Apply:	☐ Ground ☑ Surface/GWUDI ☐ Purchased Ground ☐ Purchased Surface/GWUDI
Ownership Type:	Public	Check All That Apply:	☑ Public ☐ Investor-Owned or Private Non-Profit ☐ Federal Government

Public reporting burden for this collection of information is estimated to average 5.53 hours per response. This estimate includes time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collected. Burden means the total time, effort, or financial resources expended by person(s) to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information; adjust the existing ways to comply with any previously applicable instructions; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, OPPI, Regulatory Information Division, U.S. Environmental Protection Agency (1804A), Ariel Rios Building, 1200 Pennsylvania Ave., NW, Washington, DC 20460; and Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, N.W., Washington, DC 20503.

State Use Only
State Reviewer: _____ **Telephone Number:** _____

Information provided for this survey can be requested by the public. It is our experience that this information is rarely requested.

Project Table

Federal PWSID No.:

Project Number	Project Name	Type of Need	Reason for Need	N,E,R,H (New Expand Replace ReHab)	C or F (Current Future)	Regulation	Design Capacity (MG, MGD, or kW)	Diameter (inches)	Length (feet)	Number Needed	Cost Estimate	Cost Date (mm/yyyy)	Documentation	Remove Modify or Validate
1001	Replace raw water pump	R8	A1	R	F	4A				1	$633,300	02/2014	4	
1002	Replace raw water pump	R8	A1	R	F	4A				1	$452,600	02/2014	4	
2001	Replace defective transmission main	X1	A1	R	F	4A		66.00	5,280		$2,204,350	10/2014	4	
2002	Replace defective transmission main	X1	A1	R	F	4A		60.00	5,280		$2,106,100	08/2014	4	
2003	Replace defective transmission main	X1	A1	R	F	4A		30.00	5,280		$943,960	05/2014	4	
2004	Hydrant Monitoring System	W10	A11	N	C	4A					$190,000	09/2015	8	

Source, Treatment, Storage, and Pumping Inventory

To ensure all potential source, treatment, and storage projects are considered, it may be helpful to complete some or all of this inventory table. However, completion of this table is not required.

- **Source Projects** are all projects related to collecting and pumping raw water. This includes wells, surface water intakes, springs, off-stream raw water storage, and pumps.
- **Treatment Projects** are all projects related to disinfection, filtration, or other treatment processes for ground or surface water sources, or for treatment applied in the distribution system.
- **Storage and Pumping Projects** are related to finished or treated water storage, and booster pump stations.

Surface Water			
Inventory	**Needing Replacement**	**Needing Rehabilitation**	**New Infrastructure Needs**
Total Number and Capacity of Existing Wells or Springs:	Wells (pumps included) or Springs:	Wells (pumps included) or Springs:	Does your system have additional source water capacity needs to meet the needs of current users? ☐ Yes ☐ No If yes, how many additional sources are necessary?
Total Number and Capacity of Existing Surface Water Sources:	Existing Surface Water Intakes (excluding pumps):	Existing Surface Water Intakes (excluding pumps):	
Total Number and Capacity of Existing Pumps (excluding booster pump stations)	Existing Groundwater Pumps (if wells not listed):	Existing Groundwater Pumps (if wells not listed):	
	Existing Raw Surface Water Pumps:	Existing Raw Surface Water Pumps:	
Treatment			
Inventory	**Needing Replacement**	**Needing Expansion/Upgrading or Rehabilitation**	**New Infrastructure Needs**
For the sources identified above, enter the number of locations where the following treatment is applied:			Does your system have additional treatment needs for provisions of additional public health protection or for aesthetic concerns? ☐ Yes ☐ No If yes, how much additional treatment is necessary?
Disinfection (including booster disinfection):	Disinfection:	Disinfection:	
Filtration:	Filtration:	Filtration:	
Chemical removal or addition:	Chemical treatment:	Chemical treatment:	
Storage and Pumping			
Inventory	**Needing Replacement**	**Needing Rehabilitation**	**New Infrastructure Needs**
Total Number and Capacity of Existing Storage Tanks:	Number of Existing Elevated or Ground-Level Storage Tanks:	Number of Existing Elevated or Ground-Level Storage Tanks:	Does your system have additional storage capacity and/or booster pumping needs to meet the needs of current users? ☐ Yes ☐ No If yes, how much additional finished water storage or booster pumping capacity is necessary?
Total Number and Capacity of Existing Booster Pump Stations:	Number of Existing Booster Pump Stations:	Number of Existing Booster Pump Stations:	

Transmission and Distribution Inventory

Transmission and distribution projects are the piping needs of a water system. Projects for **valves, backflow prevention devices and assemblies, and meters** that are not part of a transmission or distribution project listed in this table should be recorded in the table under the tab titled "Inventory Table 3".

On the table below, please provide an estimate of the total feet or miles of pipe in your system, if possible. Completion of this table is not required, but it may be helpful to ensure all potential transmission and distribution pipe projects are considered.

Note: The total feet or miles of pipe in your system is required information if any pipe projects are submitted based solely on survey-generated documentation (documentation codes 10 or 11).

☐ feet ☐ miles **Total Pipe in System** (Check feet or miles)

	Total Pipe in System (Check feet or miles)		<=6 inch	8-12 inch	15-42 inch	>=48 inch
Plastic	☐ feet ☐ miles	Amount of PVC by pipe size	☐ feet ☐ miles	☐ feet ☐ miles	☐ feet ☐ miles	☐ feet ☐ miles
	% of total pipe	% of this category/size pipe currently in poor condition or beyond useful life	%	%	%	%
Ductile Iron	☐ feet ☐ miles	Amount of ductile iron by pipe size	☐ feet ☐ miles	☐ feet ☐ miles	☐ feet ☐ miles	☐ feet ☐ miles
	% of total pipe	% of this category/size pipe currently in poor condition or beyond useful life	%	%	%	%
Cast Iron	☐ feet ☐ miles	Amount of cast iron by pipe size	☐ feet ☐ miles	☐ feet ☐ miles	☐ feet ☐ miles	☐ feet ☐ miles
	% of total pipe	% of this category/size pipe currently in poor condition or beyond useful life	%	%	%	%
Asbestos Cement	☐ feet ☐ miles	Amount of asbestos cement by pipe size	☐ feet ☐ miles	☐ feet ☐ miles	☐ feet ☐ miles	☐ feet ☐ miles
	% of total pipe	% of this category/size pipe currently in poor condition or beyond useful life	%	%	%	%
Other	331,796 ☑ feet ☐ miles	Amount of other by pipe size	☐ feet ☐ miles	☐ feet ☐ miles	73,325 ☑ feet ☐ miles	258,471 ☑ feet ☐ miles
	% of total pipe	% of other currently in poor condition or beyond useful life	%	%	0 %	0 %

Meters, Service Lines, Backflow Prevention Devices/Assemblies, Valves, etc.

Projects for meters, service lines, backflow prevention devices and assemblies, valves, and other miscellaneous projects are recorded in this section to accommodate entries of multiple identical items on one line in the project table.

Record only projects that are not a part of another project (e.g., water main replacement projects will already include valves and other appurtenances).
EPA requires documentation of all projects provided. Applicable types of documentation are presented in List 4 of the Lists of Codes.
Use only existing documentation of cost. We do not expect you to develop new cost estimates.

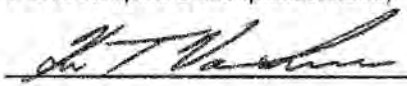
To ensure all potential projects are considered, it may be helpful to complete some or all of this inventory table. However, completion of this table is not required.

Inventory	Needing Replacement	New Infrastructure Needs
Total Number of Existing Water Meters:	Number of Water Meters:	Number of Water Meters:
Total Number of Existing Backflow Prevention Devices/Assemblies:	Number of Backflow Prevention Devices/Assemblies:	Number of Backflow Prevention Devices/Assemblies:
Total Number of Valves:	Number of Valves:	Number of Valves:
Total Number of Lead Service Lines:		

Respondent Information

Please provide the following information in case we need to contact you for clarification or additional explanation of any of your responses.

Contact Person (Person who completed this questionnaire):

Signature:		Telephone Number:	810-732-7870
Name (please print):	Kevin VanSickle	Fax Number:	
Title:	Water Plant Superintendent	E-mail Address:	kvansickle@gcdcwws.com
Mailing Address:	Genesee County Water & Waste System	Best Time to Reach You:	
(Street Address)	G-4610 Beecher Rd.		
	Flint, MI 48532		

If you have any questions, contact your state coordinator.

CLOSING: Thank you for your help. Did you remember to?

- ☑ Identify, by project number, available documentation for all needs and costs reported?
- ☑ Email the questionnaire and email or mail the documentation to your state?

	Summary of Survey-Generated and Independent Documentation for Each Project			Federal PWSID No.:	
Project Number	***Project Name***	***Documen-tation Code(s)***	***State/System Survey-Generated Statement***	***Independent Document Name***	***Independent Documentation Page Number(s)***
1001	Replace raw water pump	4	For the replacement of on vertical turbine pump at the Lake Huron Pump Station	EXHIBIT C-1	1
1002	Replace raw water pump	4	For the replacement of on vertical turbine pump at the Intermediate Pump Station	EXHIBIT C-2	1
2001	Replace defective transmission main	4	For the replacement of one mile of defective pipe	KWA PIPE PROJECT COST	1
2002	Replace defective transmission main	4	For the replacement of one mile of defective pipe	KWA PIPE PROJECT COST	included in above
2003	Replace defective transmission main	4	For the replacement of one mile of defective pipe	KWA PIPE PROJECT COST	included in above
2004	Hydrant Monitoring System	8	For monitoring hydrant use	SILVERSMITH QUOTE	1

2015 Drinking Water Infrastructure Needs Survey

Karegnondi Water Authority

Project 1001 and 1002 are for the replacement of one vertical turbine pump and motor at each of the two raw water pumping stations. This is included in case a pump at each station does need replacement. The cost shown is from the bid documents from Flow Serve for the pumps

Projects 2001, 2002, and 2003 are for the replacement of defective raw water transmission main pipe. All the pipe is new as of 2014 and 2015 but some may not have been installed properly which will require replacement. The cost spreadsheet lists each of the pipe projects, along with the size and bid prices for the pipe and installation. The cost for each type of pipe includes the pipe bid price and the installation bid price.

Project 2004 is for a hydrant monitoring system. Hydrants are specifically excluded as an infrastructure project but this system is for monitoring each hydrants for a wetted barrel. This will enable the staff to know when a hydrant has been used so that is can be checked. All the hydrants are in a rural area and uses of the hydrants may not be reported. This system will help the prevent freeze ups of hydrants.

Project 1001

EXHIBIT C-1

S.4001a PUMP EQUIPMENT BID FORM

Bidder shall provide the Equipment in accordance with the Contract Documents for the following price(s):

Item #	Description	Qty.	Unit	Unit Price	Subtotal
1.	Lake Huron P.S. Const. Speed Package Price	3	EA	$ 564,138	$ 1,692,414
RVS A.	Reduced Voltage Starter Mfr. and Model # used in above price			Mfr. Rockwell	Model
2.	Lake Huron P.S. VFD Driven Package Price	1	EA	$ 840,722	$ 840,722
VFD A.	VFD Manufacturer and Model # used in above price			Mfr. Rockwell	Model
Pump Mfr.	Pump Manufacturer and Model # used in above price for 1&2			Mfr. Flowserve	Model 39ELL
Mtr. A	Driver Motor Manufacturer and Model # used in above price for 1&2			Mfr. US Motors	Model

Combined Subtotal Price of 1 and 2 (written in figures) [1]: $ 2,533,136 ÷ 4 = 633,284

Total (written in words): Two Million Five Hundred Thirty Three Thousand One Hundred Thirty Six

and --/100) Dollars

ALTERNATE BID ITEMS[1]

Mtr. B.	Alt. Driver Motor Mfr. and Model #		Mfr. GE	Model
	Add or Deduct per pump (Cross out One)	ADD	~~DEDUCT~~	$ 66,578.63
Mtr. C	Alt. Driver Motor Mfr. and Model #		Mfr. Baldor	Model
	Add or Deduct per pump (Cross out One)	ADD	~~DEDUCT~~	$ 97,230.86
RVS B.	Alt. Reduced Voltage Starter Mfr. and Model #		Mfr. Eaton	Model
	Add or Deduct per pump (Cross out One)	ADD	~~DEDUCT~~	$ 20,532.00
RVS C	Alt. Reduced Voltage Starter Mfr. and Model #		Mfr. Schneider D	Model
	Add or Deduct per pump (Cross out One)	ADD	~~DEDUCT~~	$ 84,252.00
~~VFD B~~	~~Alt. VFD Manufacturer and Model #~~		~~Mfr.~~	~~Model~~
	~~Add or Deduct per pump~~ (Cross out One)	~~ADD~~	~~DEDUCT~~	$

[1]Note that Owner reserves the right to select whichever Motor, Starter or VFD is in their best interest.

Project 1002

EXHIBIT C-2

S.4004a PUMP EQUIPMENT BID FORM

Bidder shall provide the Equipment in accordance with the Contract Documents for the following price(s):

Item #	Description	Qty.	Unit	Unit Price	Subtotal
1.	Intermediate P.S. Const. Speed Package Price	4	EA	$ 452,550	$ 1,810,202
Pump Mfr.	Pump Manufacturer and Model # used in above price			Mfr. Flowserve	Model 37SKL
RVS A.	Reduced Voltage Starter Mfr. and Model # used in above price			Mfr. Rockwell	Model
Mtr. A	Driver Motor Manufacturer and Model # used in above price			Mfr. US Motors	Model

Combined Subtotal Price of 1 and 2 (written in figures)[1]: $ 1,810,202.00 ÷ 4 = 452,550

Total (written in words): One Million Eight Hundred Ten Thousand Two Hundred and Two

and --/100) Dollars

ALTERNATE BID ITEMS[1]

Mtr. B.	Alt. Driver Motor Mfr. and Model #		Mfr. GE	Model
	Add or Deduct per pump (Cross out One)	ADD	~~DEDUCT~~	$ 16,148.23
Mtr. C	Alt. Driver Motor Mfr. and Model #		Mfr. Baldor	Model
	Add or Deduct per pump (Cross out One)	ADD	~~DEDUCT~~	$ 82,175.61
RVS B.	Alt. Reduced Voltage Starter Mfr. and Model #		Mfr. Eaton	Model
	Add or Deduct per pump (Cross out One)	ADD	~~DEDUCT~~	$ 24,074.55
RVS C	Alt. Reduced Voltage Starter Mfr. and Model #		Mfr. Schneider	Model
	Add or Deduct per pump (Cross out One)	ADD	~~DEDUCT~~	$ 90,753.75

[1]Note that Owner reserves the right to select whichever Motor or Starter is in their best interest.

KERGNONDI WATER AUTHORITY PIPE PROJECT COSTS

4002		**66-INCH**
61,704	feet	
$17,819,949.45	material price	
$13,361,610.55	total bid price	Bid Date 8/2014
$123.80	per foot install price	
$288.80	per foot material price	
$216.54	per foot from total bid price	
$505.34	per foot material and per foot bid price	
4003		**66-INCH**
64,027	feet	
$18,207,694.50	material price	
$14,984,173.50	total bid price	Bid Date 10/2014
$138.00	per foot install price	
$284.38	per foot material price	**AVERAGE INSTALL PRICE = $417.49**
$234.03	per foot from total bid price	
$518.40	per foot material and per foot bid price	

Project 201

4005		**60-INCH**
62,583	feet	
$16,425,726.00	material price	
$14,878,322.01	total bid price	Bid Date 7/2014
$133.31	per foot install price	
$262.46	per foot material price	
$237.74	per foot from total bid price	
$500.20	per foot material and per foot bid price	
4006		**60-INCH**
68,520	feet	
$17,625,635.00	material price	
$16,477,040.68	total bid price	Bid Date 8/2014
$144.25	per foot install price	
$257.23	per foot material price	**AVERAGE INSTALL PRICE = $398.88**
$240.47	per foot from total bid price	
$497.70	per foot material and per foot bid price	

Project 202

4007		**30-INCH**
73,325	feet	
$9,538,826.22	material price	
$7,078,835.16	total bid price	Bid Date 5/2014
$48.69	per foot install price	
$130.09	per foot material price	**INSTALL PRICE = $178.78**
$96.54	per foot from total bid price	
$226.63	per foot material and per foot bid price	

Project 203

LENGTH OF PIPE 4002 TO 4007 PROJECTS = 330,159 FEET

LENGTH OF PIPE 4001 AND 4004 PROJECTS (PUMP STATIONS) = 1,637 FEET

TOTAL LENGTH OF PIPE = 331,796

TOTAL LENGTH OF PIPE < 15-42 INCH = 73,325

TOTAL LENGTH OF PIPE > 48 INCH = 258,471

Quote

silversmith

Page 1/1
Quote QTE00000000695
Date 9/25/2015

Project 2004

P.O. Box 1934
1370 Milbocker Rd.
Gaylord MI 49735

Bill To: Division of Water and Waste Services
Attn: Kevin VanSickle
G-4610 Beecher Rd.
Flint, MI 48532

Ship To: Division of Water and Waste Services
Attn: Kevin VanSickle
G-4610 Beecher Rd.
Flint, MI 48532

Purchase Order No.	Customer ID	Salesperson ID	Shipping Method	Payment Terms	Req Ship Date	Master No.
	ELEI000	0102		NET 30	0/0/0000	44,773

Quantity	Item Number	Description	UOM	Discount	Unit Price	Ext. Price
1.00	PROJECT	Project: Raw Water Pipeline Project	HR		$0.00	$0.00
0.00					$0.00000	$0.00
1.00	DESCRIPTION	Description: CHAPS System	HR		$0.00	$0.00
20	NON-300-000	Repeater 900MHz	EA		$1,800.00	$36,000.00
4	NON-300-000	IPHost w/Cellular Data Transmission	EA		$2,950.00	$11,800.00
20	NON-300-000	Communication Pole 40'	EA		$2,200.00	$44,000.00
3	NON-300-000	100' Communication Tower	EA		$15,565.00	$46,695.00
87	NON-300-000	CHAPS Hydrant Monitor	EA		$295.00	$25,665.00
0.00					$0.00000	$0.00
275.00	SER-100-195	Technician #100-195 Service	HR		$80.00	$22,000.00
30	SER-100-230	Overnight Service	EA		$150.0000	$4,500.00

Estimate is for hardware, labor and overnight stays only. Travel and mileage will be billed in addition.

Subtotal	$190,660.00
Misc	$0.00
Tax	$0.00
Freight	$0.00
Trade Discount	$0.00
Total	$190,660.00

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Thursday, February 26, 2015 10:53 AM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Poy, Thomas;Deltoral, Miguel
Subject: HIGH LEAD: FLINT Water testing Results
Attachments: 212 Browning (Pb & Cu).pdf; Flint Technical Advisory Team List_R1.pdf

Hi, Steve and Mike. Thanks for talking with me yesterday, Steve, about the most recent TTHM results. We'll look forward to receiving them whenever you get them back from the lab.

However, the main purpose of my email is to alert you to the high lead levels reported to a citizen yesterday by Flint Water Dept. I have been discussing the water situation with LeeAnn Walters since January, and she has been talking with Mike Glasgow at the plant about the black sediment in her water. (HUGE KUDOs to MIKE!!) He did test it to find that the iron levels were greater than his test would go; GT 3.3. But, because the iron levels were so high, he suggested testing for lead and copper. WOW!!!! Did he find the LEAD! **104 ppb.** She has 2 children under the age of 3… Big worries here.

So, Steve, this goes back to what you and I were talking about yesterday. That the different chemistry water is leaching out contaminants from the insides of the biofilms inside the pipes. I think Lead is a good indication that other contaminants are also present in the tap water, that obviously were not present in the compliance samples taken at the plant. VOC/SOC and inorganics/metals would be good samples to start with to take at the tap. And since Ms. Walters' drinking water is showing the high lead levels, her tap water would be a good place to start, I think.

We also talked about Dr. Joan Rose from Michigan State being on the Flint Tech Advisory Committee—you also mentioned that someone from the Dept of Community Health was on the Committee. I'm thinking that Dr. Rose would want to dive further into this, since there's actual evidence that the water is leaching contaminants from the biofilms; or Dept of Community Health would want to get involved and look at this from an epidemiological perspective. (She and her family are also exhibiting the rashes when exposed to the water, and her daughter's hair is falling out in clumps.)

Maybe MSU could authorize the payment of the analyses for these samples? Or Dept of Community Health?

The citizen's name is:

PPI

Jennifer

From: Lea Moste [mailto:lwalters313@gmail.com]
Sent: Thursday, February 26, 2015 9:08 AM
To: Crooks, Jennifer
Subject: Fwd: Re: Water testing Results

---------- Forwarded message ----------
From: "Michael Glasgow" <mglasgow@cityofflint.com>
Date: Feb 26, 2015 7:55 AM
Subject: Re: Water testing Results
To: "Lea Moste" <[redacted]@gmail.com>
Cc:

Lee,

Here are your Lead & Copper Results. This number is very high, 104 ppb of lead. In the last few months over 100 samples have been tested and only 2 were over the 15 ppb regulatory limit, and the highest level I have seen is 37 ppb. I will pass this info to Mr. Croft so he is aware. I will send the sample I collected from your kitchen faucet today for a complete metals test (12 different metals), to see what the level is without letting the water stagnate over night. I'm hoping that value will be much, but we will have to see. Sorry for this news, but I wanted to let you know right away.

Mike

On Tue, Feb 24, 2015 at 1:50 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:

> Lee,
>
> I will bring a copy of last years annual report when I stop by tomorrow. The annual report from 2014 must be delivered to residents by July 1st of this year. I imagine we may have it complete by June.
>
> Mike
>
> On Fri, Feb 20, 2015 at 1:00 AM, Lea Moste <[redacted]@gmail.com> wrote:
>
> > Mike,
> > Thank you for the water reports and we already planned to see you on the 25th at 10:00am. I was wondering if you know who I need to talk to in the water plant to obtain the Annual Drinking Water Report from last year. According to the EPA website there is link to access but when you click on it, it cannot be accessed. Was also curious if there is an expected time frame for this years report due to the switch. If you can be of any assistance I would appreciate it.
> >
> > Thank You
> > LeeAnne Walters
> >
> > On Thu, Feb 19, 2015 at 12:47 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:
> >
> > > Lee & Dennis,
> > >
> > > Here is a list of test results from water sampled at your home over the last 2 weeks. I have sent in your lead and copper sample, and also a sample from the toilet tank for manganese. I should hopefully have results from this testing early next week. I'll plan on stopping over on Wednesday (the 25th) around 10 am again to give you these results & sample again.
> > >
> > > Mike

Consumer Notice of Lead & Copper Results in Drinking Water

Water Supply Name: City of Flint

County: Genesee WSSN: 2310

Sample Location: 212 Browning Date Sampled: 2/18/2015

Thank you for participating in the lead and copper monitoring of drinking water. The levels of lead and copper found at your location are in the table below.

Key to Table	Contaminant	AL	MCLG	Your Result
Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow. **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water which there is no known or expected risk to health. MCLG's allow for a margin of safety. **ppb:** parts per billion or micrograms per liter.	Lead (ppb)	15	0	104
	Copper (ppb)	1300	1300	Not Detected

Lead can cause serious health problem if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and it can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects on the brain with lower IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

To reduce exposure to lead in drinking water:

- *Run your water to flush out lead.* Run the water until it becomes cold.
- *Use cold water for cooking and preparing baby formula.* Do not cook with or drink water from the hot tap; lead dissolves more easily in hot water.
- *Do not boil water to remove lead.* Boiling water will not reduce lead levels.
- *Look for an alternative sources or treatment of water.* If your lead result is above 15 ppb, you may want to consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved to reduce lead or contact NSF International at 800-NSF-8010, or www.nsf.org for information on performance standards for water filters.
- *Identify if your plumbing fixtures contain lead.* New faucets, fittings, and valves, may contain up to 8 percent lead including those advertised as lead-free" and may contribute lead to drinking water. Consumers should be aware of this when choosing fixtures and take appropriate precautions.

Although the primary sources of lead exposure for most children are deteriorating lead-based paint, lead-contaminated dust, and lead contaminated soil, the U.S. EPA estimates that 10 to 20 percent of human exposure to lead may come from drinking water.

For more information, contact us at: ***City of Flint Water Plant (810)787-6537.***

For more information on reducing lead exposure around your home ant the health effects of lead, visit the U.S. EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY

USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LF54945

Official Laboratory Report

Report To: MIKE GLASGOW
4500 N DORT HWY
FLINT MI 48505

System Name/Owner:	CITY OF FLINT	WSSN/Pool ID:	2310	
Collection Address:	212 BROWNING AVE,FLINT	Source:	TYPE I	
Collected By:	LEANNE WALTERS	Site Code:		
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	02/18/2015	07:15
Sample Point:	KITCHEN	Date Received:	02/19/2015	11:13
Water System:	Treated Public Distribution System	Purpose:	Routine Monitoring	

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	Not detected	02/20/2015	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.104	02/20/2015	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminant Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

City of Flint / Veolia Technical Advisory Committee

	COMPANY	NAME	TITLE	PHONE	DESIGNEE	CONTACT INFO	
1	General Motors	Randy Tanner	Head of Engineering	810-577-8552			Yes
2	MSU - Lansing	Dr. Joan Rose	Chair in Water Research	517-432-4412	Dr. Joan Rose	rosejo@msu.edu	Yes
3	Greater Flint Health Coalition	Kirk Smith	President	810-232-2228	Kirk Smith	ksmith@flint.org	Yes
4	County Drain Commissioner	Jeff Wright	Deputy Drain Commissioner	810-732-7870	John O'Brien	jfobrien@gcdcwws.com	Yes
5	U of M Flint	Michael Lane	Dir. Environmental Health & Safety	810-766-6763	Michael Lane	milane@umflint.edu	Yes
6	Mott Community	Larry Kohler	Executive Director		Larry Koehler	larry.koehler@mcc.edu	Yes
7	Genesys Pace Hospital	Donna Cole	Property Manager	810-606-5611	Donna Cole	donna.cole@genesys.org	Yes
8	Hurley Hospital	Melanie Gavulic	President / CEO		Norb Birchmier	mgavuli1@hurleymc.com	Yes
9	McLaren Hospital	Don Kooy	President / CEO		Russell Hudson	don.kooy@mclaren.org	Yes
10	Genesee County Medical Society	Pete Levine	Executive Director	810-733-9925	Gerald Natzke	plevine@gcms.org	Yes
11	Dept. of Environemental Quality	Mike Prysby	District Supervisor	517-290-8817	Mike Prysby	prysbym@michigan.gov	Yes
12	Genesee Health Department	Jim Henry			Jim Henry	jhenry@gchd.com	Yes
	City of Flint	Howard Croft	DPW Director	810-577-1202	Howard Croft	hcroft@cityofflint.com	Yes
	City of Flint	Daugherty Johnson	Utilities Administrator	810-577-8906	Duffy Johnson	djohnson@cityofflint.com	Yes
	City of Flint	Brent Wright	Plant Supervisor	810-787-6537	Brent Wright	bwright@cityofflint.com	Yes
	City of Flint	Mike Glasgow	Asstant Plant Supervisor		Mike Glasgow	mglasgow@cityofflint.com	Yes

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Wednesday, May 27, 2015 1:58 PM
To: Cook, Pat (DEQ);Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Cc: Benzie, Richard (DEQ);Philip, Kris (DEQ);Deltoral, Miguel;Poy, Thomas
Subject: Flint sample results/2 houses for (dw) metals (Cu, Pb, Zn)
Attachments: 1505003_work order.pdf; 1505003,1505004 FINAL EXCEL 26 May 15 0943.xls; 1505003,1505004 FINAL May 26 15 0943.PDF; 1505004_work order.pdf

Importance: High

Pat, Steve, Mike: When Miguel was in Flint observing Ms Walters' service line being replaced, he also sampled 2 homes connected to the water main Ms. Walters' home was connected to. The Excel spreadsheet attached provides the sample results, 15 samples per house. The 5th column, Sample No., is from 1-15 which is Home 1, then the numbers start again at 1 and go through 15, which is Home 2. These are the 2 homes connected to the water main that Ms. Walters' 136 ft service line (iron pipe) was connected to. Her home also had the lead line connecting the shut-off to the main, as does Home 1. I know I talked with Pat about the sequential sampling in late April at Ms. Walters' home, prior to her service line being replaced, but I don't think I sent you those sample results—they were in the thousands of ppb, probably particulate lead. I will get with Miguel and communicate with you his ideas concerning the source of this lead in Ms. Walters' service line. See Miguel's email below regarding these 2 homes' sample results.
If you have questions, please let me or Miguel know.
Jennifer
312-886-0244
Miguel
312-886-5253

From: Deltoral, Miguel
Sent: Tuesday, May 26, 2015 11:42 AM
To: Poy, Thomas
Cc: Porter, Andrea; Marc Edwards; Schock, Michael
Subject: Fw: 1505003 & 1505004; ICP-MS (dw) metals (Cu, Pb, Zn); Flint MI

Here are the results from the two homes sampled in Flint. Nothing horrific which is good. One home does not appear to have a LSL at all (Home 2). The other home (Home 1) appears to have a short LSL, consistent with the practice in Flint (curb to main only). Highest result from the LSL home (Home 1) was 22 ug/L using the standard analytical protocol. They will now get shipped to Marc Edwards at Virginia Tech to see if our protocol is missing particulate lead, which made up the majority of the lead in Ms. Walters sample results.

I forgot to mention that all along the block where Ms. Walters lives, there are patches in the street from non-water-related utility excavation right up to the curb, so fairly recent physical disturbances to Ms. Walters service line are likely. I think it was gas work, but I have to check.

Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)

Chicago, IL 60604
Phone: (312) 886-5253

From: Griffin, Sylvia
Sent: Tuesday, May 26, 2015 10:03 AM
To: Deltoral, Miguel
Cc: Wroble, Amanda
Subject: FW: 1505003 & 1505004; ICP-MS (dw) metals (Cu, Pb, Zn); Flint MI

Please see the attached final results reports. Should you have any questions regarding this transmittal, please email or call me.

Thank you.

-Sylvia
3-9073

From: Wroble, Amanda
Sent: Tuesday, May 26, 2015 9:58 AM
To: Griffin, Sylvia
Subject: 1505003 & 1505004; ICP-MS (dw) metals (Cu, Pb, Zn); Flint MI

Amanda Wroble, Ph.D.
Chemist and Sample Coordinator
USEPA Region 5 Chicago Regional Laboratory
536 S. Clark St. ML-10C
Chicago, IL 60605
(312) 353-0375

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 5/18/2015 2:55:56PM**

1505003

US EPA Region 5 Chicago Regional Laboratory

Client:	**Water Division, Drinking Water**	**Project Manager:**	**Greg Mitsakopoulos**
Project:	**Flint, Michigan**	**Project Number:**	**[none]**

Report To:

Miguel Del Toral	77 West Jackson Boulevard	Phone: (312) 886-5253
Water Division, Drinking Water	Chicago, IL 60604	Fax: (312) 886-2001

Date Due:	Jul-12-15 15:00 (60 day TAT)		
Received By:	Robert Snyder	Date Received:	May-11-15 10:12
Logged In By:	Robert Snyder	Date Logged In:	May-11-15 16:42

Samples Received at:	21.8°C
Sample tags/labels	Yes
Seals Intact	Yes
Received on ice	No
Paperwork Included	Yes

Analysis	Due	TAT	Expires	Comments
1505003-01 1 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-02 2 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-03 3 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-04 4 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-05 5 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	

WORK ORDER

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1505003

US EPA Region 5 Chicago Regional Laboratory

Client:	**Water Division, Drinking Water**	**Project Manager:**	**Greg Mitsakopoulos**
Project:	**Flint, Michigan**	**Project Number:**	**[none]**

Analysis	Due	TAT	Expires	Comments
1505003-06 6 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-07 7 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-08 8 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-09 9 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-10 10 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-11 11 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-12 12 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-13 13 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
1505003-14 14 [Water] Sampled May-06-15 07:20 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:20	

WORK ORDER

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1505003

US EPA Region 5 Chicago Regional Laboratory

Client:	**Water Division, Drinking Water**	**Project Manager:**	**Greg Mitsakopoulos**
Project:	**Flint, Michigan**	**Project Number:**	**[none]**

Analysis	Due	TAT	Expires	Comments
1505003-15 15 [Water] Sampled May-06-15 07:25 (GMT-06:00) Central Time (US & Canada)				**pH = 7**
Metals ICP-MS (DW)	Jul-12-15 12:00	60	Nov-02-15 07:25	
Metals ICP (DW)	Jul-12-15 12:00	60	Nov-02-15 07:25	

Reviewed By

Date

SAMPDATA

	A	B	C	D	E	F	G	H
1	CLIENT	PROJECT	PROJECTNUM	LabName	SAMPLENAME	LABSAMPID	MATRIX	RPTMATRIX
2	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	1	1505003-01	Water	Water
3	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	1	1505003-01	Water	Water
4	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	1	1505003-01	Water	Water
5	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	2	1505003-02	Water	Water
6	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	2	1505003-02	Water	Water
7	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	2	1505003-02	Water	Water
8	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	3	1505003-03	Water	Water
9	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	3	1505003-03	Water	Water
10	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	3	1505003-03	Water	Water
11	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	4	1505003-04	Water	Water
12	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	4	1505003-04	Water	Water
13	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	4	1505003-04	Water	Water
14	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	5	1505003-05	Water	Water
15	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	5	1505003-05	Water	Water
16	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	5	1505003-05	Water	Water
17	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	6	1505003-06	Water	Water
18	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	6	1505003-06	Water	Water
19	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	6	1505003-06	Water	Water
20	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	7	1505003-07	Water	Water
21	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	7	1505003-07	Water	Water
22	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	7	1505003-07	Water	Water
23	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	8	1505003-08	Water	Water
24	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	8	1505003-08	Water	Water
25	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	8	1505003-08	Water	Water
26	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	9	1505003-09	Water	Water
27	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	9	1505003-09	Water	Water
28	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	9	1505003-09	Water	Water
29	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	10	1505003-10	Water	Water
30	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	10	1505003-10	Water	Water
31	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	10	1505003-10	Water	Water
32	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	11	1505003-11	Water	Water
33	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	11	1505003-11	Water	Water
34	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	11	1505003-11	Water	Water
35	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	12	1505003-12	Water	Water
36	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	12	1505003-12	Water	Water
37	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	12	1505003-12	Water	Water
38	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	13	1505003-13	Water	Water
39	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	13	1505003-13	Water	Water
40	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	13	1505003-13	Water	Water
41	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	14	1505003-14	Water	Water
42	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	14	1505003-14	Water	Water
43	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	14	1505003-14	Water	Water
44	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	15	1505003-15	Water	Water
45	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	15	1505003-15	Water	Water
46	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	15	1505003-15	Water	Water
47	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	1	1505004-01	Water	Water
48	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	1	1505004-01	Water	Water

SAMPDATA

	I	J	K	L	M	N	O	P	Q	R
1	SAMPDATE	PREPDATE	ANADATE	BATCH	METHODCODE	METHODNAME	PREPNAME	ANALYTE	CASNUMBER	SURROGATE
2	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:16:34	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
3	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:16:34	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
4	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:16:34	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
5	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:25:59	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
6	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:25:59	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
7	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:25:59	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
8	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:29:09	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
9	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:29:09	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
10	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:29:09	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
11	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:32:21	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
12	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:32:21	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
13	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:32:21	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
14	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:35:30	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
15	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:35:30	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
16	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:35:30	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
17	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:54:24	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
18	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:54:24	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
19	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:54:24	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
20	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:57:36	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
21	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:57:36	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
22	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 10:57:36	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
23	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:00:45	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
24	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:00:45	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
25	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:00:45	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
26	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:03:54	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
27	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:03:54	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
28	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:03:54	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
29	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:10:25	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
30	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:10:25	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
31	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:10:25	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
32	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:13:34	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
33	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:13:34	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
34	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:13:34	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
35	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:22:58	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
36	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:22:58	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
37	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:22:58	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
38	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:41:50	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
39	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:41:50	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
40	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:41:50	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
41	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:44:59	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
42	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:44:59	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
43	05/06/2015 07:20:00	05/18/2015 07:48:00	05/18/2015 11:44:59	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
44	05/06/2015 07:25:00	05/18/2015 07:48:00	05/18/2015 11:48:10	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
45	05/06/2015 07:25:00	05/18/2015 07:48:00	05/18/2015 11:48:10	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
46	05/06/2015 07:25:00	05/18/2015 07:48:00	05/18/2015 11:48:10	B15E026	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
47	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 12:00:49	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
48	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 12:00:49	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE

SAMPDATA

	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
1	TIC	Result	DL	RL	UNITS	RPToMDL	BASIS	DILUTION	SPIKELEVEL	RECOVERY	UPPERCL	LOWERCL	ANALYST	PSOLIDS	LNOTE	ANOTE
2	FALSE	2.63	0.0140	0.500	ug/L	FALSE	NA	1					AW			
3	FALSE	40.7	0.0220	1.00	ug/L	FALSE	NA	1					AW			
4	FALSE	132	0.190	10.0	ug/L	FALSE	NA	1					AW			
5	FALSE	4.77	0.0140	0.500	ug/L	FALSE	NA	1					AW			
6	FALSE	44.4	0.0220	1.00	ug/L	FALSE	NA	1					AW			
7	FALSE	55.3	0.190	10.0	ug/L	FALSE	NA	1					AW			
8	FALSE	4.79	0.0140	0.500	ug/L	FALSE	NA	1					AW			
9	FALSE	39.3	0.0220	1.00	ug/L	FALSE	NA	1					AW			
10	FALSE	88.8	0.190	10.0	ug/L	FALSE	NA	1					AW			
11	FALSE	6.26	0.0140	0.500	ug/L	FALSE	NA	1					AW			
12	FALSE	66.8	0.0220	1.00	ug/L	FALSE	NA	1					AW			
13	FALSE	57.2	0.190	10.0	ug/L	FALSE	NA	1					AW			
14	FALSE	3.07	0.0140	0.500	ug/L	FALSE	NA	1					AW			
15	FALSE	272	0.0220	1.00	ug/L	FALSE	NA	1					AW			
16	FALSE	34.2	0.190	10.0	ug/L	FALSE	NA	1					AW			
17	FALSE	3.70	0.0140	0.500	ug/L	FALSE	NA	1					AW			
18	FALSE	362	0.0220	1.00	ug/L	FALSE	NA	1					AW			
19	FALSE	21.4	0.190	10.0	ug/L	FALSE	NA	1					AW			
20	FALSE	11.7	0.0140	0.500	ug/L	FALSE	NA	1					AW			
21	FALSE	331	0.0220	1.00	ug/L	FALSE	NA	1					AW			
22	FALSE	19.5	0.190	10.0	ug/L	FALSE	NA	1					AW			
23	FALSE	22.5	0.0140	0.500	ug/L	FALSE	NA	1					AW			
24	FALSE	69.9	0.0220	1.00	ug/L	FALSE	NA	1					AW			
25	FALSE	16.6	0.190	10.0	ug/L	FALSE	NA	1					AW			
26	FALSE	12.7	0.0140	0.500	ug/L	FALSE	NA	1					AW			
27	FALSE	42.5	0.0220	1.00	ug/L	FALSE	NA	1					AW			
28	FALSE	15.1	0.190	10.0	ug/L	FALSE	NA	1					AW			
29	FALSE	3.94	0.0140	0.500	ug/L	FALSE	NA	1					AW			
30	FALSE	38.4	0.0220	1.00	ug/L	FALSE	NA	1					AW			
31	FALSE	14.4	0.190	10.0	ug/L	FALSE	NA	1					AW			
32	FALSE	3.72	0.0140	0.500	ug/L	FALSE	NA	1					AW			
33	FALSE	37.5	0.0220	1.00	ug/L	FALSE	NA	1					AW			
34	FALSE	14.5	0.190	10.0	ug/L	FALSE	NA	1					AW			
35	FALSE	3.39	0.0140	0.500	ug/L	FALSE	NA	1					AW			
36	FALSE	34.8	0.0220	1.00	ug/L	FALSE	NA	1					AW			
37	FALSE	13.6	0.190	10.0	ug/L	FALSE	NA	1					AW			
38	FALSE	3.23	0.0140	0.500	ug/L	FALSE	NA	1					AW			
39	FALSE	33.1	0.0220	1.00	ug/L	FALSE	NA	1					AW			
40	FALSE	13.1	0.190	10.0	ug/L	FALSE	NA	1					AW			
41	FALSE	3.20	0.0140	0.500	ug/L	FALSE	NA	1					AW			
42	FALSE	32.8	0.0220	1.00	ug/L	FALSE	NA	1					AW			
43	FALSE	13.0	0.190	10.0	ug/L	FALSE	NA	1					AW			
44	FALSE	3.00	0.0140	0.500	ug/L	FALSE	NA	1					AW			
45	FALSE	31.4	0.0220	1.00	ug/L	FALSE	NA	1					AW			
46	FALSE	12.3	0.190	10.0	ug/L	FALSE	NA	1					AW			
47	FALSE	8.11	0.0140	0.500	ug/L	FALSE	NA	1					AW			
48	FALSE	31.1	0.0220	1.00	ug/L	FALSE	NA	1					AW			

SAMPDATA

	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV
1	LATITUDE	LONGITUDE	sComment	SNOTE1	SNOTE2	SNOTE3	SNOTE4	SNOTE5	SNOTE6	SNOTE7	SNOTE8	SNOTE9	SNOTE10	ANALYTEORDER
2			pH = 7											1
3			pH = 7											2
4			pH = 7											4
5			pH = 7											1
6			pH = 7											2
7			pH = 7											4
8			pH = 7											1
9			pH = 7											2
10			pH = 7											4
11			pH = 7											1
12			pH = 7											2
13			pH = 7											4
14			pH = 7											1
15			pH = 7											2
16			pH = 7											4
17			pH = 7											1
18			pH = 7											2
19			pH = 7											4
20			pH = 7											1
21			pH = 7											2
22			pH = 7											4
23			pH = 7											1
24			pH = 7											2
25			pH = 7											4
26			pH = 7											1
27			pH = 7											2
28			pH = 7											4
29			pH = 7											1
30			pH = 7											2
31			pH = 7											4
32			pH = 7											1
33			pH = 7											2
34			pH = 7											4
35			pH = 7											1
36			pH = 7											2
37			pH = 7											4
38			pH = 7											1
39			pH = 7											2
40			pH = 7											4
41			pH = 7											1
42			pH = 7											2
43			pH = 7											4
44			pH = 7											1
45			pH = 7											2
46			pH = 7											4
47			pH = 7											1
48			pH = 7											2

SAMPDATA

	A	B	C	D	E	F	G	H
49	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	1	1505004-01	Water	Water
50	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	2	1505004-02	Water	Water
51	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	2	1505004-02	Water	Water
52	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	2	1505004-02	Water	Water
53	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	3	1505004-03	Water	Water
54	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	3	1505004-03	Water	Water
55	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	3	1505004-03	Water	Water
56	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	4	1505004-04	Water	Water
57	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	4	1505004-04	Water	Water
58	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	4	1505004-04	Water	Water
59	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	5	1505004-05	Water	Water
60	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	5	1505004-05	Water	Water
61	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	5	1505004-05	Water	Water
62	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	6	1505004-06	Water	Water
63	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	6	1505004-06	Water	Water
64	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	6	1505004-06	Water	Water
65	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	7	1505004-07	Water	Water
66	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	7	1505004-07	Water	Water
67	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	7	1505004-07	Water	Water
68	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	8	1505004-08	Water	Water
69	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	8	1505004-08	Water	Water
70	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	8	1505004-08	Water	Water
71	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	9	1505004-09	Water	Water
72	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	9	1505004-09	Water	Water
73	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	9	1505004-09	Water	Water
74	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	10	1505004-10	Water	Water
75	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	10	1505004-10	Water	Water
76	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	10	1505004-10	Water	Water
77	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	11	1505004-11	Water	Water
78	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	11	1505004-11	Water	Water
79	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	11	1505004-11	Water	Water
80	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	12	1505004-12	Water	Water
81	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	12	1505004-12	Water	Water
82	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	12	1505004-12	Water	Water
83	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	13	1505004-13	Water	Water
84	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	13	1505004-13	Water	Water
85	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	13	1505004-13	Water	Water
86	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	14	1505004-14	Water	Water
87	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	14	1505004-14	Water	Water
88	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	14	1505004-14	Water	Water
89	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	15	1505004-15	Water	Water
90	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	15	1505004-15	Water	Water
91	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	15	1505004-15	Water	Water

SAMPDATA

	I	J	K	L	M	N	O	P	Q	R
49	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 12:00:49	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
50	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 12:10:15	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
51	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 12:10:15	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
52	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 12:10:15	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
53	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 14:56:23	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
54	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 14:56:23	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
55	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 14:56:23	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
56	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 14:59:32	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
57	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 14:59:32	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
58	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 14:59:32	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
59	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:02:45	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
60	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:02:45	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
61	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:02:45	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
62	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:05:55	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
63	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:05:55	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
64	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:05:55	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
65	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:09:08	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
66	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:09:08	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
67	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:09:08	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
68	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:12:17	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
69	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:12:17	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
70	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:12:17	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
71	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:15:30	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
72	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:15:30	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
73	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:15:30	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
74	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:18:40	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
75	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:18:40	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
76	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:18:40	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
77	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:21:54	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
78	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:21:54	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
79	05/11/2015 07:00:00	05/18/2015 07:50:00	05/18/2015 15:21:54	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
80	05/11/2015 07:00:00	05/18/2015 07:50:00	05/19/2015 10:49:29	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
81	05/11/2015 07:00:00	05/18/2015 07:50:00	05/19/2015 10:49:29	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
82	05/11/2015 07:00:00	05/18/2015 07:50:00	05/19/2015 10:49:29	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
83	05/11/2015 07:00:00	05/18/2015 07:50:00	05/19/2015 10:52:37	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
84	05/11/2015 07:00:00	05/18/2015 07:50:00	05/19/2015 10:52:37	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
85	05/11/2015 07:00:00	05/18/2015 07:50:00	05/19/2015 10:52:37	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
86	05/11/2015 07:00:00	05/18/2015 07:50:00	05/19/2015 10:55:46	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
87	05/11/2015 07:00:00	05/18/2015 07:50:00	05/19/2015 10:55:46	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
88	05/11/2015 07:00:00	05/18/2015 07:50:00	05/19/2015 10:55:46	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
89	05/11/2015 07:05:00	05/18/2015 07:50:00	05/19/2015 10:58:54	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
90	05/11/2015 07:05:00	05/18/2015 07:50:00	05/19/2015 10:58:54	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
91	05/11/2015 07:05:00	05/18/2015 07:50:00	05/19/2015 10:58:54	B15E027	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE

SAMPDATA

	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
49	FALSE	64.0	0.190	10.0	ug/L	FALSE	NA	1					AW			
50	FALSE	1.46	0.0140	0.500	ug/L	FALSE	NA	1					AW			
51	FALSE	14.7	0.0220	1.00	ug/L	FALSE	NA	1					AW			
52	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
53	FALSE	1.72	0.0140	0.500	ug/L	FALSE	NA	1					AW			
54	FALSE	20.0	0.0220	1.00	ug/L	FALSE	NA	1					AW			
55	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
56	FALSE	0.933	0.0140	0.500	ug/L	FALSE	NA	1					AW			
57	FALSE	13.0	0.0220	1.00	ug/L	FALSE	NA	1					AW			
58	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
59	FALSE	0.862	0.0140	0.500	ug/L	FALSE	NA	1					AW			
60	FALSE	12.3	0.0220	1.00	ug/L	FALSE	NA	1					AW			
61	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
62	FALSE	0.795	0.0140	0.500	ug/L	FALSE	NA	1					AW			
63	FALSE	14.2	0.0220	1.00	ug/L	FALSE	NA	1					AW			
64	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
65	FALSE	0.769	0.0140	0.500	ug/L	FALSE	NA	1					AW			
66	FALSE	14.2	0.0220	1.00	ug/L	FALSE	NA	1					AW			
67	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
68	FALSE	0.691	0.0140	0.500	ug/L	FALSE	NA	1					AW			
69	FALSE	13.3	0.0220	1.00	ug/L	FALSE	NA	1					AW			
70	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
71	FALSE	0.774	0.0140	0.500	ug/L	FALSE	NA	1					AW			
72	FALSE	9.60	0.0220	1.00	ug/L	FALSE	NA	1					AW			
73	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
74	FALSE	0.715	0.0140	0.500	ug/L	FALSE	NA	1					AW			
75	FALSE	7.57	0.0220	1.00	ug/L	FALSE	NA	1					AW			
76	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
77	FALSE	0.611	0.0140	0.500	ug/L	FALSE	NA	1					AW			
78	FALSE	7.04	0.0220	1.00	ug/L	FALSE	NA	1					AW			
79	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
80	FALSE	0.655	0.0140	0.500	ug/L	FALSE	NA	1					AW			
81	FALSE	7.30	0.0220	1.00	ug/L	FALSE	NA	1					AW			
82	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
83	FALSE	0.644	0.0140	0.500	ug/L	FALSE	NA	1					AW			
84	FALSE	7.37	0.0220	1.00	ug/L	FALSE	NA	1					AW			
85	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
86	FALSE	0.631	0.0140	0.500	ug/L	FALSE	NA	1					AW			
87	FALSE	7.09	0.0220	1.00	ug/L	FALSE	NA	1					AW			
88	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
89	FALSE	0.621	0.0140	0.500	ug/L	FALSE	NA	1					AW			
90	FALSE	7.05	0.0220	1.00	ug/L	FALSE	NA	1					AW			
91	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			

SAMPDATA

	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV
49			pH = 7											4
50			pH = 7											1
51			pH = 7											2
52			pH = 7											4
53			pH = 7											1
54			pH = 7											2
55			pH = 7											4
56			pH = 7											1
57			pH = 7											2
58			pH = 7											4
59			pH = 7											1
60			pH = 7											2
61			pH = 7											4
62			pH = 7											1
63			pH = 7											2
64			pH = 7											4
65			pH = 7											1
66			pH = 7											2
67			pH = 7											4
68			pH = 7											1
69			pH = 7											2
70			pH = 7											4
71			pH = 7											1
72			pH = 7											2
73			pH = 7											4
74			pH = 7											1
75			pH = 7											2
76			pH = 7											4
77			pH = 7											1
78			pH = 7											2
79			pH = 7											4
80			pH = 7											1
81			pH = 7											2
82			pH = 7											4
83			pH = 7											1
84			pH = 7											2
85			pH = 7											4
86			pH = 7											1
87			pH = 7											2
88			pH = 7											4
89			pH = 7											1
90			pH = 7											2
91			pH = 7											4

QCDATA

	A	B	C	D	E	F	G	H
1	LABNAME	LABSAMPID	QCTYPE	MATRIX	PREPDATE	ANADATE	BATCH	METHODCODE
2	US EPA Region 5 Chicago Regional Laboratory	B15E026-BLK1	Blank	Water	05/18/2015 07:48:00	05/18/2015 10:10:17	B15E026	Metals ICP-MS (DW)
3	US EPA Region 5 Chicago Regional Laboratory	B15E026-BLK1	Blank	Water	05/18/2015 07:48:00	05/18/2015 10:10:17	B15E026	Metals ICP-MS (DW)
4	US EPA Region 5 Chicago Regional Laboratory	B15E026-BLK1	Blank	Water	05/18/2015 07:48:00	05/18/2015 10:10:17	B15E026	Metals ICP-MS (DW)
5	US EPA Region 5 Chicago Regional Laboratory	B15E026-BS1	LCS	Water	05/18/2015 07:48:00	05/18/2015 10:13:30	B15E026	Metals ICP-MS (DW)
6	US EPA Region 5 Chicago Regional Laboratory	B15E026-BS1	LCS	Water	05/18/2015 07:48:00	05/18/2015 10:13:30	B15E026	Metals ICP-MS (DW)
7	US EPA Region 5 Chicago Regional Laboratory	B15E026-BS1	LCS	Water	05/18/2015 07:48:00	05/18/2015 10:13:30	B15E026	Metals ICP-MS (DW)
8	US EPA Region 5 Chicago Regional Laboratory	B15E026-DUP1	Duplicate	Water	05/18/2015 07:48:00	05/18/2015 10:19:46	B15E026	Metals ICP-MS (DW)
9	US EPA Region 5 Chicago Regional Laboratory	B15E026-DUP1	Duplicate	Water	05/18/2015 07:48:00	05/18/2015 10:19:46	B15E026	Metals ICP-MS (DW)
10	US EPA Region 5 Chicago Regional Laboratory	B15E026-DUP1	Duplicate	Water	05/18/2015 07:48:00	05/18/2015 10:19:46	B15E026	Metals ICP-MS (DW)
11	US EPA Region 5 Chicago Regional Laboratory	B15E026-DUP2	Duplicate	Water	05/18/2015 07:48:00	05/18/2015 11:16:45	B15E026	Metals ICP-MS (DW)
12	US EPA Region 5 Chicago Regional Laboratory	B15E026-DUP2	Duplicate	Water	05/18/2015 07:48:00	05/18/2015 11:16:45	B15E026	Metals ICP-MS (DW)
13	US EPA Region 5 Chicago Regional Laboratory	B15E026-DUP2	Duplicate	Water	05/18/2015 07:48:00	05/18/2015 11:16:45	B15E026	Metals ICP-MS (DW)
14	US EPA Region 5 Chicago Regional Laboratory	B15E026-MS1	Matrix Spike	Water	05/18/2015 07:48:00	05/18/2015 10:22:56	B15E026	Metals ICP-MS (DW)
15	US EPA Region 5 Chicago Regional Laboratory	B15E026-MS1	Matrix Spike	Water	05/18/2015 07:48:00	05/18/2015 10:22:56	B15E026	Metals ICP-MS (DW)
16	US EPA Region 5 Chicago Regional Laboratory	B15E026-MS1	Matrix Spike	Water	05/18/2015 07:48:00	05/18/2015 10:22:56	B15E026	Metals ICP-MS (DW)
17	US EPA Region 5 Chicago Regional Laboratory	B15E026-MS2	Matrix Spike	Water	05/18/2015 07:48:00	05/18/2015 11:19:54	B15E026	Metals ICP-MS (DW)
18	US EPA Region 5 Chicago Regional Laboratory	B15E026-MS2	Matrix Spike	Water	05/18/2015 07:48:00	05/18/2015 11:19:54	B15E026	Metals ICP-MS (DW)
19	US EPA Region 5 Chicago Regional Laboratory	B15E026-MS2	Matrix Spike	Water	05/18/2015 07:48:00	05/18/2015 11:19:54	B15E026	Metals ICP-MS (DW)
20	US EPA Region 5 Chicago Regional Laboratory	B15E027-BLK1	Blank	Water	05/18/2015 07:50:00	05/18/2015 11:54:32	B15E027	Metals ICP-MS (DW)
21	US EPA Region 5 Chicago Regional Laboratory	B15E027-BLK1	Blank	Water	05/18/2015 07:50:00	05/18/2015 11:54:32	B15E027	Metals ICP-MS (DW)
22	US EPA Region 5 Chicago Regional Laboratory	B15E027-BLK1	Blank	Water	05/18/2015 07:50:00	05/18/2015 11:54:32	B15E027	Metals ICP-MS (DW)
23	US EPA Region 5 Chicago Regional Laboratory	B15E027-BS1	LCS	Water	05/18/2015 07:50:00	05/18/2015 11:57:43	B15E027	Metals ICP-MS (DW)
24	US EPA Region 5 Chicago Regional Laboratory	B15E027-BS1	LCS	Water	05/18/2015 07:50:00	05/18/2015 11:57:43	B15E027	Metals ICP-MS (DW)
25	US EPA Region 5 Chicago Regional Laboratory	B15E027-BS1	LCS	Water	05/18/2015 07:50:00	05/18/2015 11:57:43	B15E027	Metals ICP-MS (DW)
26	US EPA Region 5 Chicago Regional Laboratory	B15E027-DUP1	Duplicate	Water	05/18/2015 07:50:00	05/18/2015 12:03:59	B15E027	Metals ICP-MS (DW)
27	US EPA Region 5 Chicago Regional Laboratory	B15E027-DUP1	Duplicate	Water	05/18/2015 07:50:00	05/18/2015 12:03:59	B15E027	Metals ICP-MS (DW)
28	US EPA Region 5 Chicago Regional Laboratory	B15E027-DUP1	Duplicate	Water	05/18/2015 07:50:00	05/18/2015 12:03:59	B15E027	Metals ICP-MS (DW)
29	US EPA Region 5 Chicago Regional Laboratory	B15E027-DUP2	Duplicate	Water	05/18/2015 07:50:00	05/19/2015 10:43:18	B15E027	Metals ICP-MS (DW)
30	US EPA Region 5 Chicago Regional Laboratory	B15E027-DUP2	Duplicate	Water	05/18/2015 07:50:00	05/19/2015 10:43:18	B15E027	Metals ICP-MS (DW)
31	US EPA Region 5 Chicago Regional Laboratory	B15E027-DUP2	Duplicate	Water	05/18/2015 07:50:00	05/19/2015 10:43:18	B15E027	Metals ICP-MS (DW)
32	US EPA Region 5 Chicago Regional Laboratory	B15E027-MS1	Matrix Spike	Water	05/18/2015 07:50:00	05/18/2015 12:07:11	B15E027	Metals ICP-MS (DW)
33	US EPA Region 5 Chicago Regional Laboratory	B15E027-MS1	Matrix Spike	Water	05/18/2015 07:50:00	05/18/2015 12:07:11	B15E027	Metals ICP-MS (DW)
34	US EPA Region 5 Chicago Regional Laboratory	B15E027-MS1	Matrix Spike	Water	05/18/2015 07:50:00	05/18/2015 12:07:11	B15E027	Metals ICP-MS (DW)
35	US EPA Region 5 Chicago Regional Laboratory	B15E027-MS2	Matrix Spike	Water	05/18/2015 07:50:00	05/19/2015 10:46:26	B15E027	Metals ICP-MS (DW)
36	US EPA Region 5 Chicago Regional Laboratory	B15E027-MS2	Matrix Spike	Water	05/18/2015 07:50:00	05/19/2015 10:46:26	B15E027	Metals ICP-MS (DW)
37	US EPA Region 5 Chicago Regional Laboratory	B15E027-MS2	Matrix Spike	Water	05/18/2015 07:50:00	05/19/2015 10:46:26	B15E027	Metals ICP-MS (DW)

QCDATA

	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	METHODNAME	PREPNAME	ANALYTE	CASNUMBER	SURROGATE	TIC	RESULT	DL	RL	UNITS	RPToMDL	BASIS	DILUTION	SOURCEID
2		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	U	0.0140	0.500	ug/L	FALSE	NA	1	
3		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	U	0.0220	1.00	ug/L	FALSE	NA	1	
4		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1	
5		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	19.3	0.0140	0.500	ug/L	FALSE	NA	1	
6		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	19.1	0.0220	1.00	ug/L	FALSE	NA	1	
7		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	19.0	0.190	10.0	ug/L	FALSE	NA	1	
8		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	2.60	0.0140	0.500	ug/L	FALSE	NA	1	1505003-01
9		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	40.9	0.0220	1.00	ug/L	FALSE	NA	1	1505003-01
10		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	131	0.190	10.0	ug/L	FALSE	NA	1	1505003-01
11		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	3.55	0.0140	0.500	ug/L	FALSE	NA	1	1505003-11
12		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	36.4	0.0220	1.00	ug/L	FALSE	NA	1	1505003-11
13		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	14.1	0.190	10.0	ug/L	FALSE	NA	1	1505003-11
14		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	22.9	0.0140	0.500	ug/L	FALSE	NA	1	1505003-01
15		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	61.0	0.0220	1.00	ug/L	FALSE	NA	1	1505003-01
16		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	153	0.190	10.0	ug/L	FALSE	NA	1	1505003-01
17		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	23.5	0.0140	0.500	ug/L	FALSE	NA	1	1505003-11
18		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	56.3	0.0220	1.00	ug/L	FALSE	NA	1	1505003-11
19		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	33.8	0.190	10.0	ug/L	FALSE	NA	1	1505003-11
20		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	U	0.0140	0.500	ug/L	FALSE	NA	1	
21		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	U	0.0220	1.00	ug/L	FALSE	NA	1	
22		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1	
23		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	19.4	0.0140	0.500	ug/L	FALSE	NA	1	
24		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	18.3	0.0220	1.00	ug/L	FALSE	NA	1	
25		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	18.6	0.190	10.0	ug/L	FALSE	NA	1	
26		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	8.13	0.0140	0.500	ug/L	FALSE	NA	1	1505004-01
27		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	31.4	0.0220	1.00	ug/L	FALSE	NA	1	1505004-01
28		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	64.7	0.190	10.0	ug/L	FALSE	NA	1	1505004-01
29		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	0.734	0.0140	0.500	ug/L	FALSE	NA	1	1505004-11
30		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	7.43	0.0220	1.00	ug/L	FALSE	NA	1	1505004-11
31		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	3.23	0.190	10.0	ug/L	FALSE	NA	1	1505004-11
32		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	28.4	0.0140	0.500	ug/L	FALSE	NA	1	1505004-01
33		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	50.7	0.0220	1.00	ug/L	FALSE	NA	1	1505004-01
34		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	84.3	0.190	10.0	ug/L	FALSE	NA	1	1505004-01
35		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	21.1	0.0140	0.500	ug/L	FALSE	NA	1	1505004-11
36		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	26.6	0.0220	1.00	ug/L	FALSE	NA	1	1505004-11
37		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	23.1	0.190	10.0	ug/L	FALSE	NA	1	1505004-11

QCDATA

	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
1	SOURCERES	SPIKELEVEL	RECOVERY	RPD	UPPERCL	LOWERCL	RPDCL	ANALYST	PSOLIDS	LNOTE	ANOTE	ANALYTEORDER
2								AW				1
3								AW				2
4								AW				4
5		20.00	96.6		115	85		AW				1
6		20.00	95.4		115	85		AW				2
7		20.00	95.2		115	85		AW				4
8	2.63			1.27			20	AW				1
9	40.7			0.294			20	AW				2
10	132			0.892			20	AW				4
11	3.72			4.68			20	AW				1
12	37.5			2.94			20	AW				2
13	14.5			2.36			20	AW				4
14	2.63	20.00	101		125	75		AW				1
15	40.7	20.00	101		125	75		AW				2
16	132	20.00	105		125	75		AW				4
17	3.72	20.00	98.8		125	75		AW				1
18	37.5	20.00	93.9		125	75		AW				2
19	14.5	20.00	96.9		125	75		AW				4
20								AW				1
21								AW				2
22								AW				4
23		20.00	97.2		115	85		AW				1
24		20.00	91.6		115	85		AW				2
25		20.00	93.1		115	85		AW				4
26	8.11			0.278			20	AW				1
27	31.1			1.09			20	AW				2
28	64.0			1.01			20	AW				4
29	0.611			18.3			20	AW				1
30	7.04			5.32			20	AW				2
31	3.04			6.13			20	AW				4
32	8.11	20.00	101		125	75		AW				1
33	31.1	20.00	98.2		125	75		AW				2
34	64.0	20.00	101		125	75		AW				4
35	0.611	20.00	102		125	75		AW				1
36	7.04	20.00	97.8		125	75		AW				2
37	3.04	20.00	100		125	75		AW				4

	A	B
1	QUALIFIER	DESCRIPTION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: 5/26/2015

Subject: Review of Region 5 Data for Flint, Michigan

To: Water Division, Drinking Water
77 West Jackson Boulevard
Chicago, IL 60604

From: Amanda Wroble, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with EPA's *Guidance on Environmental Data Verification and Data Validation* (Document EPA QA/G-8), CRL verified and validated the data but does not perform data quality assessment based on project plans.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X _____

Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Flint, Michigan

/ /

Data Management Coordinator and DateTransmitted

Analyses included in this report:

Metals ICP-MS (DW)

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

ANALYSIS CASE NARRATIVE

GENERAL INFORMATION

CRL received 30 drinking water samples for copper, lead, and zinc analysis by inductively coupled plasma-mass spectrometry (ICP-MS) on 11 May 2015 that were assigned to work orders 1505003 and 1505004. The designated analyst for these samples, Amanda Wroble, can be reached at 312.353.0375.

The samples were received unpreserved. Therefore, 2 mL of nitric acid was added to each 1 L sample. At least twenty-four hours elapsed before subsampling began. All holding times were met.

No digestion is required for drinking water samples. Samples were analyzed in batches B15E026 and B15E027 over three runs using CRL SOP METALS001 (EPA Method 200.8), Revision 3.

Work orders 1505003 and 1505004 were analyzed together. All supporting data are filed under work order 1505003.

SAMPLE ANALYSIS AND RESULTS

The data reported herein meet the data quality objectives referenced in personal email communication with the project manager dated May 12, 2015 and the quality assurance project plan "Impacts on Lead Concentration in Drinking Water Samples Due to Sample Location and Sample Collection Protocols" dated January 20, 2011 referenced therein.

QUALITY CONTROL

All quality control audits were within CRL limits for the requested analytes or did not result in qualification of the data.

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1	1505003-01	Water	May-06-15 07:20	May-11-15 10:12
2	1505003-02	Water	May-06-15 07:20	May-11-15 10:12
3	1505003-03	Water	May-06-15 07:20	May-11-15 10:12
4	1505003-04	Water	May-06-15 07:20	May-11-15 10:12
5	1505003-05	Water	May-06-15 07:20	May-11-15 10:12
6	1505003-06	Water	May-06-15 07:20	May-11-15 10:12
7	1505003-07	Water	May-06-15 07:20	May-11-15 10:12
8	1505003-08	Water	May-06-15 07:20	May-11-15 10:12
9	1505003-09	Water	May-06-15 07:20	May-11-15 10:12
10	1505003-10	Water	May-06-15 07:20	May-11-15 10:12
11	1505003-11	Water	May-06-15 07:20	May-11-15 10:12
12	1505003-12	Water	May-06-15 07:20	May-11-15 10:12
13	1505003-13	Water	May-06-15 07:20	May-11-15 10:12
14	1505003-14	Water	May-06-15 07:20	May-11-15 10:12
15	1505003-15	Water	May-06-15 07:25	May-11-15 10:12
1	1505004-01	Water	May-11-15 07:00	May-11-15 10:12
2	1505004-02	Water	May-11-15 07:00	May-11-15 10:12
3	1505004-03	Water	May-11-15 07:00	May-11-15 10:12
4	1505004-04	Water	May-11-15 07:00	May-11-15 10:12
5	1505004-05	Water	May-11-15 07:00	May-11-15 10:12
6	1505004-06	Water	May-11-15 07:00	May-11-15 10:12
7	1505004-07	Water	May-11-15 07:00	May-11-15 10:12
8	1505004-08	Water	May-11-15 07:00	May-11-15 10:12

Environmental Protection Agency Region 5

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Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

9	1505004-09	Water	May-11-15 07:00	May-11-15 10:12
10	1505004-10	Water	May-11-15 07:00	May-11-15 10:12
11	1505004-11	Water	May-11-15 07:00	May-11-15 10:12
12	1505004-12	Water	May-11-15 07:00	May-11-15 10:12
13	1505004-13	Water	May-11-15 07:00	May-11-15 10:12
14	1505004-14	Water	May-11-15 07:00	May-11-15 10:12
15	1505004-15	Water	May-11-15 07:05	May-11-15 10:12

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

1 (1505003-01) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	2.63			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	40.7			1.00	"	"	"	"	"
Zinc	132			10.0	"	"	"	"	"

2 (1505003-02) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	4.77			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	44.4			1.00	"	"	"	"	"
Zinc	55.3			10.0	"	"	"	"	"

3 (1505003-03) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	4.79			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	39.3			1.00	"	"	"	"	"
Zinc	88.8			10.0	"	"	"	"	"

4 (1505003-04) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	6.26			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	66.8			1.00	"	"	"	"	"
Zinc	57.2			10.0	"	"	"	"	"

5 (1505003-05) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.07			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	272			1.00	"	"	"	"	"
Zinc	34.2			10.0	"	"	"	"	"

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

6 (1505003-06) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.70			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	362			1.00	"	"	"	"	"
Zinc	21.4			10.0	"	"	"	"	"

7 (1505003-07) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	11.7			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	331			1.00	"	"	"	"	"
Zinc	19.5			10.0	"	"	"	"	"

8 (1505003-08) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	22.5			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	69.9			1.00	"	"	"	"	"
Zinc	16.6			10.0	"	"	"	"	"

9 (1505003-09) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	12.7			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	42.5			1.00	"	"	"	"	"
Zinc	15.1			10.0	"	"	"	"	"

10 (1505003-10) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.94			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	38.4			1.00	"	"	"	"	"
Zinc	14.4			10.0	"	"	"	"	"

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

11 (1505003-11) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.72			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	37.5			1.00	"	"	"	"	"
Zinc	14.5			10.0	"	"	"	"	"

12 (1505003-12) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.39			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	34.8			1.00	"	"	"	"	"
Zinc	13.6			10.0	"	"	"	"	"

13 (1505003-13) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.23			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	33.1			1.00	"	"	"	"	"
Zinc	13.1			10.0	"	"	"	"	"

14 (1505003-14) Water Sampled: May-06-15 07:20 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.20			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	32.8			1.00	"	"	"	"	"
Zinc	13.0			10.0	"	"	"	"	"

15 (1505003-15) Water Sampled: May-06-15 07:25 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.00			0.500	ug/L	1	B15E026	May-18-15	May-18-15
Copper	31.4			1.00	"	"	"	"	"
Zinc	12.3			10.0	"	"	"	"	"

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

1 (1505004-01) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**8.11**			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	**31.1**			1.00	"	"	"	"	"
Zinc	**64.0**			10.0	"	"	"	"	"

2 (1505004-02) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**1.46**			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	**14.7**			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

3 (1505004-03) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**1.72**			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	**20.0**			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

4 (1505004-04) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**0.933**			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	**13.0**			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

5 (1505004-05) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**0.862**			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	**12.3**			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

6 (1505004-06) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.795			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	14.2			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

7 (1505004-07) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.769			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	14.2			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

8 (1505004-08) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.691			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	13.3			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

9 (1505004-09) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.774			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	9.60			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

10 (1505004-10) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.715			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	7.57			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

11 (1505004-11) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.611			0.500	ug/L	1	B15E027	May-18-15	May-18-15
Copper	7.04			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

12 (1505004-12) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.655			0.500	ug/L	1	B15E027	May-18-15	May-19-15
Copper	7.30			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

13 (1505004-13) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.644			0.500	ug/L	1	B15E027	May-18-15	May-19-15
Copper	7.37			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

14 (1505004-14) Water Sampled: May-11-15 07:00 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.631			0.500	ug/L	1	B15E027	May-18-15	May-19-15
Copper	7.09			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

15 (1505004-15) Water Sampled: May-11-15 07:05 Received: May-11-15 10:12

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.621			0.500	ug/L	1	B15E027	May-18-15	May-19-15
Copper	7.05			1.00	"	"	"	"	"
Zinc	U			10.0	"	"	"	"	"

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Metals by ICP-MS using EPA 200.8 (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B15E026 - 200.8/no digestion

Blank (B15E026-BLK1) — **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	U			0.500	ug/L						
Copper	U			1.00	"						
Zinc	U			10.0	"						

LCS (B15E026-BS1) — **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	19.3			0.500	ug/L	20.00		96.6%	85-115		
Copper	19.1			1.00	"	20.00		95.4%	85-115		
Zinc	19.0			10.0	"	20.00		95.2%	85-115		

Duplicate (B15E026-DUP1) — **Source: 1505003-01** — **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	2.60			0.500	ug/L		2.63			1.27	20
Copper	40.9			1.00	"		40.7			0.294	20
Zinc	131			10.0	"		132			0.892	20

Duplicate (B15E026-DUP2) — **Source: 1505003-11** — **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	3.55			0.500	ug/L		3.72			4.68	20
Copper	36.4			1.00	"		37.5			2.94	20
Zinc	14.1			10.0	"		14.5			2.36	20

Matrix Spike (B15E026-MS1) — **Source: 1505003-01** — **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	22.9			0.500	ug/L	20.00	2.63	101%	75-125		
Copper	61.0			1.00	"	20.00	40.7	101%	75-125		
Zinc	153			10.0	"	20.00	132	105%	75-125		

Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Metals by ICP-MS using EPA 200.8 (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B15E026 - 200.8/no digestion

Matrix Spike (B15E026-MS2) **Source: 1505003-11** **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	**23.5**			0.500	ug/L	20.00	3.72	98.8%	75-125		
Copper	**56.3**			1.00	"	20.00	37.5	93.9%	75-125		
Zinc	**33.8**			10.0	"	20.00	14.5	96.9%	75-125		

Batch B15E027 - 200.8/no digestion

Blank (B15E027-BLK1) **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	U			0.500	ug/L						
Copper	U			1.00	"						
Zinc	U			10.0	"						

LCS (B15E027-BS1) **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	**19.4**			0.500	ug/L	20.00		97.2%	85-115		
Copper	**18.3**			1.00	"	20.00		91.6%	85-115		
Zinc	**18.6**			10.0	"	20.00		93.1%	85-115		

Duplicate (B15E027-DUP1) **Source: 1505004-01** **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	**8.13**			0.500	ug/L		8.11			0.278	20
Copper	**31.4**			1.00	"		31.1			1.09	20
Zinc	**64.7**			10.0	"		64.0			1.01	20

Duplicate (B15E027-DUP2) **Source: 1505004-11** **Prepared: May-18-15 Analyzed: May-19-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	**0.734**			0.500	ug/L		0.611			18.3	20
Copper	**7.43**			1.00	"		7.04			5.32	20
Zinc	**3.23**			10.0	"		3.04			6.13	20

Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Metals by ICP-MS using EPA 200.8 (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B15E027 - 200.8/no digestion

Matrix Spike (B15E027-MS1) **Source: 1505004-01** **Prepared & Analyzed: May-18-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	**28.4**			0.500	ug/L	20.00	8.11	101%	75-125		
Copper	**50.7**			1.00	"	20.00	31.1	98.2%	75-125		
Zinc	**84.3**			10.0	"	20.00	64.0	101%	75-125		

Matrix Spike (B15E027-MS2) **Source: 1505004-11** **Prepared: May-18-15 Analyzed: May-19-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	**21.1**			0.500	ug/L	20.00	0.611	102%	75-125		
Copper	**26.6**			1.00	"	20.00	7.04	97.8%	75-125		
Zinc	**23.1**			10.0	"	20.00	3.04	100%	75-125		

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Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-26-15 09:43

Notes and Definitions

U	Not Detected
NR	Not Reported

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Tuesday, June 02, 2015 8:18 AM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ);Cook, Pat (DEQ)
Cc: Benzie, Richard (DEQ);Philip, Kris (DEQ);Shekter Smith, Liane (DEQ)
Subject: FW: Ms. Walters' Follow-up sampling results
Attachments: 1505006 FINAL EXCEL 28 May 15 1621.xls; 1505006 FINAL May 28 15 1621.PDF; 1505006_work order.pdf

FYI from Miguel.

From: Deltoral, Miguel
Sent: Thursday, May 28, 2015 5:49 PM
To: Poy, Thomas
Cc: Bair, Rita; Damato, Nicholas; Porter, Andrea; Crooks, Jennifer
Subject: Ms. Walters' Follow-up sampling results

Attached are the results from Ms. Walters' testing following the replacement of her service line. Lead levels look good and copper is less than 1/2 the action level through the new copper service line.

The first 15 samples were the sequential samples (kitchen tap to water main) which came back fine. Sample 16 is the bathroom tap which came back fine. Samples 17 and 18 were from the hot water heater where one result was high, likely from residual particulate lead from before the service line work.

Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Griffin, Sylvia
Sent: Thursday, May 28, 2015 04:29 PM
To: Deltoral, Miguel
Cc: Wroble, Amanda
Subject: FW: 1505006; ICP-MS metals (DW) (Cu, Pb, Zn); Flint, MI

Please see the final results report. Should you encounter any problems with this transmittal, please email or give me a call.

Thank you.

-Sylvia

From: Wroble, Amanda
Sent: Thursday, May 28, 2015 4:26 PM

To: Griffin, Sylvia
Subject: 1505006; ICP-MS metals (DW) (Cu, Pb, Zn); Flint, MI

Amanda Wroble, Ph.D.
Chemist and Sample Coordinator
USEPA Region 5 Chicago Regional Laboratory
536 S. Clark St. ML-10C
Chicago, IL 60605
(312) 353-0375

SAMPDATA

	A	B	C	D	E	F	G	H
1	CLIENT	PROJECT	PROJECTNUM	LabName	SAMPLENAME	LABSAMPID	MATRIX	RPTMATRIX
2	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	1	1505006-01	Water	Water
3	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	1	1505006-01	Water	Water
4	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	1	1505006-01	Water	Water
5	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	2	1505006-02	Water	Water
6	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	2	1505006-02	Water	Water
7	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	2	1505006-02	Water	Water
8	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	3	1505006-03	Water	Water
9	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	3	1505006-03	Water	Water
10	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	3	1505006-03	Water	Water
11	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	4	1505006-04	Water	Water
12	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	4	1505006-04	Water	Water
13	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	4	1505006-04	Water	Water
14	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	5	1505006-05	Water	Water
15	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	5	1505006-05	Water	Water
16	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	5	1505006-05	Water	Water
17	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	6	1505006-06	Water	Water
18	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	6	1505006-06	Water	Water
19	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	6	1505006-06	Water	Water
20	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	7	1505006-07	Water	Water
21	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	7	1505006-07	Water	Water
22	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	7	1505006-07	Water	Water
23	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	8	1505006-08	Water	Water
24	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	8	1505006-08	Water	Water
25	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	8	1505006-08	Water	Water
26	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	9	1505006-09	Water	Water
27	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	9	1505006-09	Water	Water
28	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	9	1505006-09	Water	Water
29	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	10	1505006-10	Water	Water
30	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	10	1505006-10	Water	Water
31	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	10	1505006-10	Water	Water
32	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	11	1505006-11	Water	Water
33	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	11	1505006-11	Water	Water
34	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	11	1505006-11	Water	Water
35	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	12	1505006-12	Water	Water
36	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	12	1505006-12	Water	Water
37	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	12	1505006-12	Water	Water
38	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	13	1505006-13	Water	Water
39	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	13	1505006-13	Water	Water
40	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	13	1505006-13	Water	Water
41	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	14	1505006-14	Water	Water
42	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	14	1505006-14	Water	Water
43	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	14	1505006-14	Water	Water
44	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	15	1505006-15	Water	Water
45	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	15	1505006-15	Water	Water
46	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	15	1505006-15	Water	Water
47	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	16	1505006-16	Water	Water
48	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	16	1505006-16	Water	Water

SAMPDATA

	I	J	K	L	M	N	O	P	Q	R
1	SAMPDATE	PREPDATE	ANADATE	BATCH	METHODCODE	METHODNAME	PREPNAME	ANALYTE	CASNUMBER	SURROGATE
2	05/13/2015 09:00:00	05/19/2015 15:10:00	05/19/2015 16:15:59	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
3	05/13/2015 09:00:00	05/19/2015 15:10:00	05/19/2015 16:15:59	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
4	05/13/2015 09:00:00	05/19/2015 15:10:00	05/19/2015 16:15:59	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
5	05/13/2015 09:00:00	05/19/2015 15:10:00	05/19/2015 16:25:17	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
6	05/13/2015 09:00:00	05/19/2015 15:10:00	05/19/2015 16:25:17	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
7	05/13/2015 09:00:00	05/19/2015 15:10:00	05/19/2015 16:25:17	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
8	05/13/2015 09:01:00	05/19/2015 15:10:00	05/19/2015 16:28:26	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
9	05/13/2015 09:01:00	05/19/2015 15:10:00	05/19/2015 16:28:26	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
10	05/13/2015 09:01:00	05/19/2015 15:10:00	05/19/2015 16:28:26	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
11	05/13/2015 09:01:00	05/19/2015 15:10:00	05/19/2015 16:31:33	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
12	05/13/2015 09:01:00	05/19/2015 15:10:00	05/19/2015 16:31:33	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
13	05/13/2015 09:01:00	05/19/2015 15:10:00	05/19/2015 16:31:33	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
14	05/13/2015 09:02:00	05/19/2015 15:10:00	05/19/2015 16:34:42	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
15	05/13/2015 09:02:00	05/19/2015 15:10:00	05/19/2015 16:34:42	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
16	05/13/2015 09:02:00	05/19/2015 15:10:00	05/19/2015 16:34:42	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
17	05/13/2015 09:02:00	05/19/2015 15:10:00	05/19/2015 16:53:20	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
18	05/13/2015 09:02:00	05/19/2015 15:10:00	05/19/2015 16:53:20	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
19	05/13/2015 09:02:00	05/19/2015 15:10:00	05/19/2015 16:53:20	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
20	05/13/2015 09:03:00	05/19/2015 15:10:00	05/19/2015 16:56:25	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
21	05/13/2015 09:03:00	05/19/2015 15:10:00	05/20/2015 09:47:43	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
22	05/13/2015 09:03:00	05/19/2015 15:10:00	05/19/2015 16:56:25	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
23	05/13/2015 09:03:00	05/19/2015 15:10:00	05/19/2015 16:59:33	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
24	05/13/2015 09:03:00	05/19/2015 15:10:00	05/20/2015 09:50:52	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
25	05/13/2015 09:03:00	05/19/2015 15:10:00	05/19/2015 16:59:33	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
26	05/13/2015 09:04:00	05/19/2015 15:10:00	05/19/2015 17:02:40	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
27	05/13/2015 09:04:00	05/19/2015 15:10:00	05/20/2015 09:53:58	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
28	05/13/2015 09:04:00	05/19/2015 15:10:00	05/19/2015 17:02:40	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
29	05/13/2015 09:04:00	05/19/2015 15:10:00	05/19/2015 17:05:48	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
30	05/13/2015 09:04:00	05/19/2015 15:10:00	05/19/2015 17:05:48	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
31	05/13/2015 09:04:00	05/19/2015 15:10:00	05/19/2015 17:05:48	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
32	05/13/2015 09:05:00	05/19/2015 15:10:00	05/19/2015 17:08:54	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
33	05/13/2015 09:05:00	05/19/2015 15:10:00	05/19/2015 17:08:54	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
34	05/13/2015 09:05:00	05/19/2015 15:10:00	05/19/2015 17:08:54	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
35	05/13/2015 09:05:00	05/19/2015 15:10:00	05/19/2015 17:18:14	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
36	05/13/2015 09:05:00	05/19/2015 15:10:00	05/19/2015 17:18:14	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
37	05/13/2015 09:05:00	05/19/2015 15:10:00	05/19/2015 17:18:14	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
38	05/13/2015 09:07:00	05/19/2015 15:10:00	05/19/2015 17:21:20	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
39	05/13/2015 09:07:00	05/19/2015 15:10:00	05/19/2015 17:21:20	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
40	05/13/2015 09:07:00	05/19/2015 15:10:00	05/19/2015 17:21:20	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
41	05/13/2015 09:07:00	05/19/2015 15:10:00	05/19/2015 17:40:00	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
42	05/13/2015 09:07:00	05/19/2015 15:10:00	05/19/2015 17:40:00	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
43	05/13/2015 09:07:00	05/19/2015 15:10:00	05/19/2015 17:40:00	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
44	05/13/2015 09:08:00	05/19/2015 15:10:00	05/19/2015 17:43:09	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
45	05/13/2015 09:08:00	05/19/2015 15:10:00	05/19/2015 17:43:09	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
46	05/13/2015 09:08:00	05/19/2015 15:10:00	05/19/2015 17:43:09	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
47	05/13/2015 20:15:00	05/19/2015 15:10:00	05/19/2015 17:46:16	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
48	05/13/2015 20:15:00	05/19/2015 15:10:00	05/19/2015 17:46:16	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE

SAMPDATA

	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
1	TIC	Result	DL	RL	UNITS	RPToMDL	BASIS	DILUTION	SPIKELEVEL	RECOVERY	UPPERCL	LOWERCL	ANALYST	PSOLIDS	LNOTE	ANOTE
2	FALSE	1.30	0.0140	0.500	ug/L	FALSE	NA	1					AW			
3	FALSE	13.1	0.0220	1.00	ug/L	FALSE	NA	1					AW			
4	FALSE	70.9	0.190	10.0	ug/L	FALSE	NA	1					AW			
5	FALSE	0.687	0.0140	0.500	ug/L	FALSE	NA	1					AW			
6	FALSE	20.1	0.0220	1.00	ug/L	FALSE	NA	1					AW			
7	FALSE	23.2	0.190	10.0	ug/L	FALSE	NA	1					AW			
8	FALSE	3.01	0.0140	0.500	ug/L	FALSE	NA	1					AW			
9	FALSE	141	0.0220	1.00	ug/L	FALSE	NA	1					AW			
10	FALSE	76.8	0.190	10.0	ug/L	FALSE	NA	1					AW			
11	FALSE	1.76	0.0140	0.500	ug/L	FALSE	NA	1					AW			
12	FALSE	336	0.0220	1.00	ug/L	FALSE	NA	1					AW			
13	FALSE	45.4	0.190	10.0	ug/L	FALSE	NA	1					AW			
14	FALSE	1.17	0.0140	0.500	ug/L	FALSE	NA	1					AW			
15	FALSE	419	0.0220	1.00	ug/L	FALSE	NA	1					AW			
16	FALSE	32.2	0.190	10.0	ug/L	FALSE	NA	1					AW			
17	FALSE	1.03	0.0140	0.500	ug/L	FALSE	NA	1					AW			
18	FALSE	463	0.0220	1.00	ug/L	FALSE	NA	1					AW			
19	FALSE	24.8	0.190	10.0	ug/L	FALSE	NA	1					AW			
20	FALSE	0.800	0.0140	0.500	ug/L	FALSE	NA	1					AW			
21	FALSE	529	0.220	10.0	ug/L	FALSE	NA	10					AW			
22	FALSE	19.6	0.190	10.0	ug/L	FALSE	NA	1					AW			
23	FALSE	0.666	0.0140	0.500	ug/L	FALSE	NA	1					AW			
24	FALSE	554	0.220	10.0	ug/L	FALSE	NA	10					AW			
25	FALSE	14.9	0.190	10.0	ug/L	FALSE	NA	1					AW			
26	FALSE	3.07	0.0140	0.500	ug/L	FALSE	NA	1					AW			
27	FALSE	571	0.220	10.0	ug/L	FALSE	NA	10					AW			
28	FALSE	11.6	0.190	10.0	ug/L	FALSE	NA	1					AW			
29	FALSE	3.93	0.0140	0.500	ug/L	FALSE	NA	1					AW			
30	FALSE	345	0.0220	1.00	ug/L	FALSE	NA	1					AW			
31	FALSE	10.3	0.190	10.0	ug/L	FALSE	NA	1					AW			
32	FALSE	1.94	0.0140	0.500	ug/L	FALSE	NA	1					AW			
33	FALSE	233	0.0220	1.00	ug/L	FALSE	NA	1					AW			
34	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
35	FALSE	1.17	0.0140	0.500	ug/L	FALSE	NA	1					AW			
36	FALSE	171	0.0220	1.00	ug/L	FALSE	NA	1					AW			
37	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
38	FALSE	0.864	0.0140	0.500	ug/L	FALSE	NA	1					AW			
39	FALSE	139	0.0220	1.00	ug/L	FALSE	NA	1					AW			
40	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
41	FALSE	0.670	0.0140	0.500	ug/L	FALSE	NA	1					AW			
42	FALSE	110	0.0220	1.00	ug/L	FALSE	NA	1					AW			
43	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
44	FALSE	0.505	0.0140	0.500	ug/L	FALSE	NA	1					AW			
45	FALSE	91.5	0.0220	1.00	ug/L	FALSE	NA	1					AW			
46	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1					AW			
47	FALSE	5.52	0.0140	0.500	ug/L	FALSE	NA	1					AW			
48	FALSE	29.7	0.0220	1.00	ug/L	FALSE	NA	1					AW			

SAMPDATA

	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV
1	LATITUDE	LONGITUDE	sComment	SNOTE1	SNOTE2	SNOTE3	SNOTE4	SNOTE5	SNOTE6	SNOTE7	SNOTE8	SNOTE9	SNOTE10	ANALYTEORDER
2														1
3														2
4														4
5														1
6														2
7														4
8														1
9														2
10														4
11														1
12														2
13														4
14														1
15														2
16														4
17														1
18														2
19														4
20														1
21														2
22														4
23														1
24														2
25														4
26														1
27														2
28														4
29														1
30														2
31														4
32														1
33														2
34														4
35														1
36														2
37														4
38														1
39														2
40														4
41														1
42														2
43														4
44														1
45														2
46														4
47														1
48														2

SAMPDATA

	A	B	C	D	E	F	G	H
49	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	16	1505006-16	Water	Water
50	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	17	1505006-17	Water	Water
51	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	17	1505006-17	Water	Water
52	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	17	1505006-17	Water	Water
53	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	18	1505006-18	Water	Water
54	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	18	1505006-18	Water	Water
55	Water Division, Drinking Water	Flint, Michigan	[none]	US EPA Region 5 Chicago Regional Laboratory	18	1505006-18	Water	Water

SAMPDATA

	I	J	K	L	M	N	O	P	Q	R
49	05/13/2015 20:15:00	05/19/2015 15:10:00	05/19/2015 17:46:16	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
50	05/13/2015 20:16:00	05/19/2015 15:10:00	05/19/2015 17:49:26	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
51	05/13/2015 20:16:00	05/19/2015 15:10:00	05/19/2015 17:49:26	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
52	05/13/2015 20:16:00	05/19/2015 15:10:00	05/20/2015 09:57:07	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE
53	05/13/2015 21:19:00	05/19/2015 15:10:00	05/19/2015 17:52:29	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Lead	7439-92-1	FALSE
54	05/13/2015 21:19:00	05/19/2015 15:10:00	05/19/2015 17:52:29	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Copper	7440-50-8	FALSE
55	05/13/2015 21:19:00	05/19/2015 15:10:00	05/19/2015 17:52:29	B15E029	Metals ICP-MS (DW)		200.8/no digestion	Zinc	7440-66-6	FALSE

SAMPDATA

	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
49	FALSE	71.3	0.190	10.0	ug/L	FALSE	NA	1					AW			
50	FALSE	31.7	0.0140	0.500	ug/L	FALSE	NA	1					AW			
51	FALSE	70.4	0.0220	1.00	ug/L	FALSE	NA	1					AW			
52	FALSE	883	1.90	100	ug/L	FALSE	NA	10					AW			
53	FALSE	9.74	0.0140	0.500	ug/L	FALSE	NA	1					AW			
54	FALSE	35.0	0.0220	1.00	ug/L	FALSE	NA	1					AW			
55	FALSE	346	0.190	10.0	ug/L	FALSE	NA	1					AW			

SAMPDATA

	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV
49														4
50														1
51														2
52														4
53														1
54														2
55														4

QCDATA

	A	B	C	D	E	F	G	H
1	LABNAME	LABSAMPID	QCTYPE	MATRIX	PREPDATE	ANADATE	BATCH	METHODCODE
2	US EPA Region 5 Chicago Regional Laboratory	B15E029-BLK1	Blank	Water	05/19/2015 15:10:00	05/19/2015 16:09:45	B15E029	Metals ICP-MS (DW)
3	US EPA Region 5 Chicago Regional Laboratory	B15E029-BLK1	Blank	Water	05/19/2015 15:10:00	05/19/2015 16:09:45	B15E029	Metals ICP-MS (DW)
4	US EPA Region 5 Chicago Regional Laboratory	B15E029-BLK1	Blank	Water	05/19/2015 15:10:00	05/19/2015 16:09:45	B15E029	Metals ICP-MS (DW)
5	US EPA Region 5 Chicago Regional Laboratory	B15E029-BS1	LCS	Water	05/19/2015 15:10:00	05/19/2015 16:12:54	B15E029	Metals ICP-MS (DW)
6	US EPA Region 5 Chicago Regional Laboratory	B15E029-BS1	LCS	Water	05/19/2015 15:10:00	05/19/2015 16:12:54	B15E029	Metals ICP-MS (DW)
7	US EPA Region 5 Chicago Regional Laboratory	B15E029-BS1	LCS	Water	05/19/2015 15:10:00	05/19/2015 16:12:54	B15E029	Metals ICP-MS (DW)
8	US EPA Region 5 Chicago Regional Laboratory	B15E029-DUP1	Duplicate	Water	05/19/2015 15:10:00	05/19/2015 16:19:06	B15E029	Metals ICP-MS (DW)
9	US EPA Region 5 Chicago Regional Laboratory	B15E029-DUP1	Duplicate	Water	05/19/2015 15:10:00	05/19/2015 16:19:06	B15E029	Metals ICP-MS (DW)
10	US EPA Region 5 Chicago Regional Laboratory	B15E029-DUP1	Duplicate	Water	05/19/2015 15:10:00	05/19/2015 16:19:06	B15E029	Metals ICP-MS (DW)
11	US EPA Region 5 Chicago Regional Laboratory	B15E029-DUP2	Duplicate	Water	05/19/2015 15:10:00	05/19/2015 17:12:04	B15E029	Metals ICP-MS (DW)
12	US EPA Region 5 Chicago Regional Laboratory	B15E029-DUP2	Duplicate	Water	05/19/2015 15:10:00	05/19/2015 17:12:04	B15E029	Metals ICP-MS (DW)
13	US EPA Region 5 Chicago Regional Laboratory	B15E029-DUP2	Duplicate	Water	05/19/2015 15:10:00	05/19/2015 17:12:04	B15E029	Metals ICP-MS (DW)
14	US EPA Region 5 Chicago Regional Laboratory	B15E029-MS1	Matrix Spike	Water	05/19/2015 15:10:00	05/19/2015 16:22:16	B15E029	Metals ICP-MS (DW)
15	US EPA Region 5 Chicago Regional Laboratory	B15E029-MS1	Matrix Spike	Water	05/19/2015 15:10:00	05/19/2015 16:22:16	B15E029	Metals ICP-MS (DW)
16	US EPA Region 5 Chicago Regional Laboratory	B15E029-MS1	Matrix Spike	Water	05/19/2015 15:10:00	05/19/2015 16:22:16	B15E029	Metals ICP-MS (DW)
17	US EPA Region 5 Chicago Regional Laboratory	B15E029-MS2	Matrix Spike	Water	05/19/2015 15:10:00	05/19/2015 17:15:10	B15E029	Metals ICP-MS (DW)
18	US EPA Region 5 Chicago Regional Laboratory	B15E029-MS2	Matrix Spike	Water	05/19/2015 15:10:00	05/19/2015 17:15:10	B15E029	Metals ICP-MS (DW)
19	US EPA Region 5 Chicago Regional Laboratory	B15E029-MS2	Matrix Spike	Water	05/19/2015 15:10:00	05/19/2015 17:15:10	B15E029	Metals ICP-MS (DW)

QCDATA

	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	METHODNAME	PREPNAME	ANALYTE	CASNUMBER	SURROGATE	TIC	RESULT	DL	RL	UNITS	RPToMDL	BASIS	DILUTION	SOURCEID
2		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	U	0.0140	0.500	ug/L	FALSE	NA	1	
3		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	U	0.0220	1.00	ug/L	FALSE	NA	1	
4		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	U	0.190	10.0	ug/L	FALSE	NA	1	
5		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	18.9	0.0140	0.500	ug/L	FALSE	NA	1	
6		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	18.9	0.0220	1.00	ug/L	FALSE	NA	1	
7		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	18.9	0.190	10.0	ug/L	FALSE	NA	1	
8		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	1.28	0.0140	0.500	ug/L	FALSE	NA	1	1505006-01
9		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	13.0	0.0220	1.00	ug/L	FALSE	NA	1	1505006-01
10		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	70.9	0.190	10.0	ug/L	FALSE	NA	1	1505006-01
11		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	1.94	0.0140	0.500	ug/L	FALSE	NA	1	1505006-11
12		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	237	0.0220	1.00	ug/L	FALSE	NA	1	1505006-11
13		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	8.23	0.190	10.0	ug/L	FALSE	NA	1	1505006-11
14		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	21.2	0.0140	0.500	ug/L	FALSE	NA	1	1505006-01
15		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	32.9	0.0220	1.00	ug/L	FALSE	NA	1	1505006-01
16		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	92.3	0.190	10.0	ug/L	FALSE	NA	1	1505006-01
17		200.8/no digestion	Lead	7439-92-1	FALSE	FALSE	22.1	0.0140	0.500	ug/L	FALSE	NA	1	1505006-11
18		200.8/no digestion	Copper	7440-50-8	FALSE	FALSE	256	0.0220	1.00	ug/L	FALSE	NA	1	1505006-11
19		200.8/no digestion	Zinc	7440-66-6	FALSE	FALSE	28.8	0.190	10.0	ug/L	FALSE	NA	1	1505006-11

QCDATA

	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
1	SOURCERES	SPIKELEVEL	RECOVERY	RPD	UPPERCL	LOWERCL	RPDCL	ANALYST	PSOLIDS	LNOTE	ANOTE	ANALYTEORDER
2								AW				1
3								AW				2
4								AW				4
5		20.00	94.4		115	85		AW				1
6		20.00	94.6		115	85		AW				2
7		20.00	94.5		115	85		AW				4
8	1.30			1.77			20	AW				1
9	13.1			0.326			20	AW				2
10	70.9			0.0163			20	AW				4
11	1.94			0.129			20	AW				1
12	233			1.76			20	AW				2
13	8.14			1.11			20	AW				4
14	1.30	20.00	99.6		125	75		AW				1
15	13.1	20.00	99.2		125	75		AW				2
16	70.9	20.00	107		125	75		AW				4
17	1.94	20.00	101		125	75		AW				1
18	233	20.00	115		125	75		AW				2
19	8.14	20.00	103		125	75		AW				4

	A	B
1	QUALIFIER	DESCRIPTION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: 5/28/2015

Subject: Review of Region 5 Data for Flint, Michigan

To: Water Division, Drinking Water
77 West Jackson Boulevard
Chicago, IL 60604

From: Amanda Wroble, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with EPA's *Guidance on Environmental Data Verification and Data Validation* (Document EPA QA/G-8), CRL verified and validated the data but does not perform data quality assessment based on project plans.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X _____

Please contact the analyst with any technical report issues, Amanda Wroble at (312)-353-0375 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Flint, Michigan

/ /

Data Management Coordinator and DateTransmitted

Analyses included in this report:

Metals ICP-MS (DW)

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-28-15 16:21

ANALYSIS CASE NARRATIVE

GENERAL INFORMATION

CRL received 18 drinking water samples for copper, lead, and zinc analysis by inductively coupled plasma-mass spectrometry (ICP-MS) on 14 May 2015 that were assigned to work order 1505006. The designated analyst for these samples, Amanda Wroble, can be reached at 312.353.0375.

The samples were received unpreserved. Therefore, 2 mL of nitric acid was added to each 1 L sample. At least twenty-four hours elapsed before subsampling began. All holding times were met.

No digestion is required for drinking water samples. Samples were analyzed in batch B15E029 over two runs using CRL SOP METALS001 (EPA Method 200.8), Revision 3. Copper dilutions for samples 1505006-07 thru -09 and a zinc dilution for sample 1505006-17 were reported from Run 2.

SAMPLE ANALYSIS AND RESULTS

The data reported herein meet the data quality objectives referenced in personal email communication with the project manager dated May 12, 2015 and the quality assurance project plan "Impacts on Lead Concentration in Drinking Water Samples Due to Sample Location and Sample Collection Protocols" dated January 20, 2011 referenced therein.

QUALITY CONTROL

All quality control audits were within CRL limits for the requested analytes or did not result in qualification of the data.

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-28-15 16:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1	1505006-01	Water	May-13-15 09:00	May-14-15 11:00
2	1505006-02	Water	May-13-15 09:00	May-14-15 11:00
3	1505006-03	Water	May-13-15 09:01	May-14-15 11:00
4	1505006-04	Water	May-13-15 09:01	May-14-15 11:00
5	1505006-05	Water	May-13-15 09:02	May-14-15 11:00
6	1505006-06	Water	May-13-15 09:02	May-14-15 11:00
7	1505006-07	Water	May-13-15 09:03	May-14-15 11:00
8	1505006-08	Water	May-13-15 09:03	May-14-15 11:00
9	1505006-09	Water	May-13-15 09:04	May-14-15 11:00
10	1505006-10	Water	May-13-15 09:04	May-14-15 11:00
11	1505006-11	Water	May-13-15 09:05	May-14-15 11:00
12	1505006-12	Water	May-13-15 09:05	May-14-15 11:00
13	1505006-13	Water	May-13-15 09:07	May-14-15 11:00
14	1505006-14	Water	May-13-15 09:07	May-14-15 11:00
15	1505006-15	Water	May-13-15 09:08	May-14-15 11:00
16	1505006-16	Water	May-13-15 20:15	May-14-15 11:00
17	1505006-17	Water	May-13-15 20:16	May-14-15 11:00
18	1505006-18	Water	May-13-15 21:19	May-14-15 11:00

Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-28-15 16:21

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

1 (1505006-01) Water Sampled: May-13-15 09:00 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	1.30			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	13.1			1.00	"	"	"	"	"
Zinc	70.9			10.0	"	"	"	"	"

2 (1505006-02) Water Sampled: May-13-15 09:00 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.687			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	20.1			1.00	"	"	"	"	"
Zinc	23.2			10.0	"	"	"	"	"

3 (1505006-03) Water Sampled: May-13-15 09:01 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.01			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	141			1.00	"	"	"	"	"
Zinc	76.8			10.0	"	"	"	"	"

4 (1505006-04) Water Sampled: May-13-15 09:01 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	1.76			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	336			1.00	"	"	"	"	"
Zinc	45.4			10.0	"	"	"	"	"

5 (1505006-05) Water Sampled: May-13-15 09:02 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	1.17			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	419			1.00	"	"	"	"	"
Zinc	32.2			10.0	"	"	"	"	"

Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-28-15 16:21

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

6 (1505006-06) Water Sampled: May-13-15 09:02 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	1.03			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	463			1.00	"	"	"	"	"
Zinc	24.8			10.0	"	"	"	"	"

7 (1505006-07) Water Sampled: May-13-15 09:03 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.800			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	529			10.0	"	10	"	"	May-20-15
Zinc	19.6			10.0	"	1	"	"	May-19-15

8 (1505006-08) Water Sampled: May-13-15 09:03 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	0.666			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	554			10.0	"	10	"	"	May-20-15
Zinc	14.9			10.0	"	1	"	"	May-19-15

9 (1505006-09) Water Sampled: May-13-15 09:04 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.07			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	571			10.0	"	10	"	"	May-20-15
Zinc	11.6			10.0	"	1	"	"	May-19-15

10 (1505006-10) Water Sampled: May-13-15 09:04 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	3.93			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	345			1.00	"	"	"	"	"
Zinc	10.3			10.0	"	"	"	"	"

Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-28-15 16:21

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

11 (1505006-11) Water Sampled: May-13-15 09:05 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**1.94**			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	**233**			1.00	"	"	"	"	"
Zinc	**U**			10.0	"	"	"	"	"

12 (1505006-12) Water Sampled: May-13-15 09:05 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**1.17**			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	**171**			1.00	"	"	"	"	"
Zinc	**U**			10.0	"	"	"	"	"

13 (1505006-13) Water Sampled: May-13-15 09:07 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**0.864**			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	**139**			1.00	"	"	"	"	"
Zinc	**U**			10.0	"	"	"	"	"

14 (1505006-14) Water Sampled: May-13-15 09:07 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**0.670**			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	**110**			1.00	"	"	"	"	"
Zinc	**U**			10.0	"	"	"	"	"

15 (1505006-15) Water Sampled: May-13-15 09:08 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**0.505**			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	**91.5**			1.00	"	"	"	"	"
Zinc	**U**			10.0	"	"	"	"	"

Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-28-15 16:21

Metals by ICP-MS using EPA 200.8 (modified)
US EPA Region 5 Chicago Regional Laboratory

16 (1505006-16) Water Sampled: May-13-15 20:15 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**5.52**			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	**29.7**			1.00	"	"	"	"	"
Zinc	**71.3**			10.0	"	"	"	"	"

17 (1505006-17) Water Sampled: May-13-15 20:16 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**31.7**			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	**70.4**			1.00	"	"	"	"	"
Zinc	**883**			100	"	10	"	"	May-20-15

18 (1505006-18) Water Sampled: May-13-15 21:19 Received: May-14-15 11:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Lead	**9.74**			0.500	ug/L	1	B15E029	May-19-15	May-19-15
Copper	**35.0**			1.00	"	"	"	"	"
Zinc	**346**			10.0	"	"	"	"	"

Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-28-15 16:21

Metals by ICP-MS using EPA 200.8 (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B15E029 - 200.8/no digestion

Blank (B15E029-BLK1) — **Prepared & Analyzed: May-19-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	U			0.500	ug/L						
Copper	U			1.00	"						
Zinc	U			10.0	"						

LCS (B15E029-BS1) — **Prepared & Analyzed: May-19-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	18.9			0.500	ug/L	20.00		94.4%	85-115		
Copper	18.9			1.00	"	20.00		94.6%	85-115		
Zinc	18.9			10.0	"	20.00		94.5%	85-115		

Duplicate (B15E029-DUP1) — **Source: 1505006-01** — **Prepared & Analyzed: May-19-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	1.28			0.500	ug/L		1.30			1.77	20
Copper	13.0			1.00	"		13.1			0.326	20
Zinc	70.9			10.0	"		70.9			0.0163	20

Duplicate (B15E029-DUP2) — **Source: 1505006-11** — **Prepared & Analyzed: May-19-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	1.94			0.500	ug/L		1.94			0.129	20
Copper	237			1.00	"		233			1.76	20
Zinc	8.23			10.0	"		8.14			1.11	20

Matrix Spike (B15E029-MS1) — **Source: 1505006-01** — **Prepared & Analyzed: May-19-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	21.2			0.500	ug/L	20.00	1.30	99.6%	75-125		
Copper	32.9			1.00	"	20.00	13.1	99.2%	75-125		
Zinc	92.3			10.0	"	20.00	70.9	107%	75-125		

Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-28-15 16:21

Metals by ICP-MS using EPA 200.8 (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B15E029 - 200.8/no digestion

Matrix Spike (B15E029-MS2) **Source: 1505006-11** **Prepared & Analyzed: May-19-15**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Lead	**22.1**			0.500	ug/L	20.00	1.94	101%	75-125		
Copper	**256**			1.00	"	20.00	233	115%	75-125		
Zinc	**28.8**			10.0	"	20.00	8.14	103%	75-125		

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Water Division, Drinking Water	Project: Flint, Michigan	
77 West Jackson Boulevard	Project Number: [none]	**Reported:**
Chicago IL, 60604	Project Manager: Miguel Del Toral	May-28-15 16:21

Notes and Definitions

U	Not Detected
NR	Not Reported

Environmental Protection Agency Region 5

Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER **Printed: 5/20/2015 8:35:08AM**

1505006

US EPA Region 5 Chicago Regional Laboratory

Client:	**Water Division, Drinking Water**	**Project Manager:**	**Greg Mitsakopoulos**
Project:	**Flint, Michigan**	**Project Number:**	**[none]**

Report To:

Miguel Del Toral
Water Division, Drinking Water

77 West Jackson Boulevard
Chicago, IL 60604

Phone: (312) 886-5253
Fax: (312) 886-2001

Date Due:	Jul-15-15 15:00 (60 day TAT)		
Received By:	Robert Snyder	Date Received:	May-14-15 11:00
Logged In By:	Robert Snyder	Date Logged In:	May-14-15 16:20

Samples Received at:	17.9°C
Sample tags/labels	Yes
Seals Intact	Yes
Received on ice	No
Paperwork Included	Yes

Analysis	Due	TAT	Expires	Comments
1505006-01 1 [Water] Sampled May-13-15 09:00 (GMT-06:00) Central Time (US & Canada)				
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:00	pH = 6
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:00	pH = 6
1505006-02 2 [Water] Sampled May-13-15 09:00 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:00	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:00	pH = 6
1505006-03 3 [Water] Sampled May-13-15 09:01 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:01	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:01	pH = 6
1505006-04 4 [Water] Sampled May-13-15 09:01 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:01	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:01	pH = 6
1505006-05 5 [Water] Sampled May-13-15 09:02 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:02	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:02	pH = 6

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Client: Water Division, Drinking Water
Project: Flint, Michigan
Project Manager: Greg Mitsakopoulos
Project Number: [none]

Analysis	Due	TAT	Expires	Comments
1505006-06 6 [Water] Sampled May-13-15 09:02 (GMT-06:00) Central Time (US & Canada)				
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:02	pH = 6
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:02	pH = 6
1505006-07 7 [Water] Sampled May-13-15 09:03 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:03	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:03	pH = 6
1505006-08 8 [Water] Sampled May-13-15 09:03 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:03	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:03	pH = 6
1505006-09 9 [Water] Sampled May-13-15 09:04 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:04	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:04	pH = 6
1505006-10 10 [Water] Sampled May-13-15 09:04 (GMT-06:00) Central Time (US & Canada)				
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:04	pH = 6
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:04	pH = 6
1505006-11 11 [Water] Sampled May-13-15 09:05 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:05	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:05	pH = 6
1505006-12 12 [Water] Sampled May-13-15 09:05 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:05	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:05	pH = 6
1505006-13 13 [Water] Sampled May-13-15 09:07 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:07	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:07	pH = 6
1505006-14 14 [Water] Sampled May-13-15 09:07 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:07	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:07	pH = 6

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US EPA Region 5 Chicago Regional Laboratory

Client:	**Water Division, Drinking Water**	**Project Manager:**	**Greg Mitsakopoulos**
Project:	**Flint, Michigan**	**Project Number:**	**[none]**

Analysis	Due	TAT	Expires	Comments
1505006-15 15 [Water] Sampled May-13-15 09:08 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 09:08	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 09:08	pH = 6
1505006-16 16 [Water] Sampled May-13-15 20:15 (GMT-06:00) Central Time (US & Canada)				
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 20:15	pH = 6
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 20:15	pH = 6
1505006-17 17 [Water] Sampled May-13-15 20:16 (GMT-06:00) Central Time (US & Canada)				
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 20:16	pH = 6
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 20:16	pH = 6
1505006-18 18 [Water] Sampled May-13-15 21:19 (GMT-06:00) Central Time (US & Canada)				
Metals ICP (DW)	Jul-15-15 12:00	60	Nov-09-15 21:19	pH = 6
Metals ICP-MS (DW)	Jul-15-15 12:00	60	Nov-09-15 21:19	pH = 6

Reviewed By

Date

From: Sygo, Jim (DEQ)
Sent: Friday, October 23, 2015 5:17 PM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ);Cook, Pat (DEQ);Shekter Smith, Liane (DEQ)
Subject: FW: Flint WTP PH2 SEG4 - Corrosion Control

This is Bob Kaplan's latest note. Let me know if you have any concerns with the highlighted additions.

From: Kaplan, Robert [mailto:kaplan.robert@epa.gov]
Sent: Friday, October 23, 2015 4:23 PM
To: Sygo, Jim (DEQ)
Subject: RE: Flint WTP PH2 SEG4 - Corrosion Control

Jim –

We are very close. I checked with the Task Force on the plan you sent to us incorporating EPA's comments. See annotations below. There are several changes (in red italics) that EPA feels need to be incorporated into the text to reflect our earlier comments (from Mike and Darren) and the subsequent call. Additionally, there is a recommendation at the end that was discussed but not incorporated into the writeup you sent which we also feel should be incorporated.

Please feel free to get back with me if you have any questions. We appreciate the opportunity to provide input and your willingness to address our comments.

- Bob

This will summarize our phone conversation of 10/19 and provide clarification regarding the previous comments.

The City of Flint converted back to purchasing of Detroit Water and Sewerage Department water on Friday October 16, 2015. No indications of upset in the distribution system have been reported to date.

Detroit Water and Sewerage Department (DWSD) has confirmed the use of Innophos "Phosphoric Acid 75% Technical" product which is NSF Standard 60 certified with a maximum allowable feed rate of 13 mg/L as product.

The City of Flint will need to supply a similar phosphoric acid product, NSF Standard 60 approved with allowable maximum dosage.

DWSD supplied water is currently dosed at 0.39 mg/L as P (1.2 mg/L as PO4) slightly above DWSD's OCCT requirement to dose a minimum of 0.9 mg/L as PO4 and have a minimum plant tap residual of 0.8 mg/L as PO4. DWSD plant tap residuals have been shown to consistently be at 0.39 mg/L as P (1.2 mg/L as PO4). In addition water supply entering Flint has been tested and so far shown to contain approximately 0.39 mg/L as P (1.2 mg/L as PO4) as well. *Flint will need to test to ensure that pH is not significantly affected at the PO4 target dosage.*

To achieve pipe passivation Flint will boost orthophosphate dosage to establish a minimum distribution residual of 1.0 mg/L as P (3.1 mg/L as PO4). The chemical feed system will be sized to achieve a dose up to 2.0 mg/L as P (6.1 mg/L as PO4) in case orthophosphate loss is observed.

Flint will continue Water Quality Parameter Monitoring in accordance with the LCR at the same 25 distribution locations used under the Flint River. In addition 10 of these locations also serve as total coliform monitoring sites, including disinfectant residual, and Flint will be told to, for the purpose of assessing water stability, conduct water quality parameter monitoring *for pH, alkalinity, orthophosphate*, along with turbidity and iron sampling will be at these 10

locations on a weekly basis as suggested. This will also ensure that a minimum recommended pH levels are being maintained throughout the system.

EPA ORD staff will provide instructions to the City of Flint for creating test loops to help confirm effectiveness of the corrosion control treatment. This data will help in rebuilding public trust.

The County Health Department and MI Department of Health and Human Services will be conducting blood lead level testing of children in Flint. Children with elevated blood lead levels will be offered exposure assessments of their homes. These assessments should include the contribution of lead from service line and interior plumbing sources. Such diagnostic testing should help further substantiate the effectiveness of corrosion control treatment. Procedures recommended by EPA should be shared with the Michigan Department of Health and Human Services.

The University of Michigan in Ann Arbor had previously expressed interest in assisting the City of Flint. Both the Department of Civil and Environmental Engineering, and School of Public Health should be contacted to determine if that interest still exists with potential to assist in both test loop construction and monitoring, and exposure assessment monitoring in homes. Any water analysis should occur at a certified laboratory.

The City will be required to complete a 6 month round of lead and copper compliance monitoring in the January – June 2016 period. The City continues to offer all residents a first draw lead sample collection and analysis. Any additional staggered monitoring suggestions should be brought before the City's Technical Advisory Committee.

Criteria for deeming the treatment optimized must be established as the LCR only requires compliance with the lead and copper Action Levels once this determination has been made.

The City of Flint is continuing to digitize service line index card records into a Geographic Information System to confirm the location of lead service lines. EPA can provide additional information to the City regarding a sampling procedure to verify lead service line sites.

The City's engineering consultant will need to evaluate KWA water in conjunction with the City of Flint treatment plant processes to determine any necessary adjustments in optimized corrosion control treatment prior to initiating service to customers. Full scale testing may not be feasible.

Lastly, we discussed additional lead drinking water monitoring Flint should do to better assess lead exposure, determine effectiveness of water source change and corrosion control, and identify lead sources. That discussion does not appear to be captured here.

Robert Kaplan
Deputy Regional Administrator
U.S. EPA Region 5
Phone: (312) 886-1499
Cell: PPI
Fax: (312) 692-2075

From: Sygo, Jim (DEQ) [mailto:SygoJ@michigan.gov]
Sent: Friday, October 23, 2015 11:39 AM
To: Kaplan, Robert <kaplan.robert@epa.gov>
Subject: RE: Flint WTP PH2 SEG4 - Corrosion Control

Sounds Good.
Met with the Mayor today and he seems to be under the impression that the City Administrator is on this task force as well. I told him I would check but this was intended to make sure that the state and EPA are taking consistent technical positions. Let me know if I'm wrong about that.

From: Kaplan, Robert [mailto:kaplan.robert@epa.gov]
Sent: Friday, October 23, 2015 10:37 AM
To: Sygo, Jim (DEQ)
Subject: RE: Flint WTP PH2 SEG4 - Corrosion Control

Jim,

Thanks for the note. There does appear to be agreement. I will confirm that with the Task Force team members today just to make certain we haven't missed anything.

This is good news. I'm glad we're moving quickly, and working together. The Task Force will discuss the "test loops" and make sure we have agreement on the protocol.

I'm setting up a call for next week to discuss this weekend's school sampling effort.

- Bob

Robert Kaplan
Deputy Regional Administrator
U.S. EPA Region 5
Phone: (312) 886-1499
Cell: [PPI]
Fax: (312) 692-2075

From: Sygo, Jim (DEQ) [mailto:SygoJ@michigan.gov]
Sent: Thursday, October 22, 2015 4:39 PM
To: Kaplan, Robert <kaplan.robert@epa.gov>
Subject: FW: Flint WTP PH2 SEG4 - Corrosion Control

Bob,
There appears to be agreement on the optimization of corrosion control for the City of Flint. This is the note provided to me by staff after a discussion with members of your task force.

From: Busch, Stephen (DEQ)
Sent: Thursday, October 22, 2015 12:58 PM
To: Schock, Michael; Lytle, Darren
Cc: Kempic, Jeffrey; Prysby, Mike (DEQ); kaplan.robert@epa.gov; Krisztian, George (DEQ); Sygo, Jim (DEQ)
Subject: RE: Flint WTP PH2 SEG4 - Corrosion Control

This will summarize our phone conversation of 10/19 and provide clarification regarding the previous comments.

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EPA ORD staff will provide instructions to the City of Flint for creating test loops to help confirm effectiveness of the corrosion control treatment. This data will help in rebuilding public trust.

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Criteria for deeming the treatment optimized must be established as the LCR only requires compliance with the lead and copper Action Levels once this determination has been made.

The City of Flint is continuing to digitize service line index card records into a Geographic Information System to confirm the location of lead service lines. EPA can provide additional information to the City regarding a sampling procedure to verify lead service line sites.

The City's engineering consultant will need to evaluate KWA water in conjunction with the City of Flint treatment plant processes to determine any necessary adjustments in optimized corrosion control treatment prior to initiating service to customers. Full scale testing may not be feasible.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Lytle, Darren [mailto:Lytle.Darren@epa.gov]
Sent: Monday, October 19, 2015 12:05 PM
To: Prysby, Mike (DEQ)
Cc: Schock, Michael; Kempic, Jeffrey; Busch, Stephen (DEQ)
Subject: RE: Flint WTP PH2 SEG4 - Corrosion Control

Mike,

Thank-you for giving us the opportunity to review the city of Flint's corrosion control plan.

We believe it is necessary that Flint boosts orthophosphate dosage. Given that the distribution system has not received orthophosphate in over a year, we expect that orthophosphate will need to be boosted to 1) meet the demand of the distribution system, 2) reach the service lines and other lead-containing components in premise plumbing, and 3) accelerate lead reduction at the consumer's taps. Orthophosphate should preferably be added in the same form as the Detroit source which is phosphoric acid from our understanding. This is the proposed case here, however, a simple test should be performed to make sure that the pH is not impacted in a significant way at the desired target dose.

We have not been able to obtain comprehensive water quality data for the finished water characteristics of the Detroit water that will be fed to Flint, to assess ranges of major chemical characteristic fluctuations. However, based upon the email trail, Detroit water entering the Flint system appears to only contain around 0.4 PO4/L. This concentration range is entirely too low compared to that needed in studies presented and published in the last 20+ years that have focused on lead released directly from lead pipes, and the solubility of the most likely lead orthophosphate pipes scales. We also strongly feel that targeted dose of 0.8 mg PO4/L is also too low, for the very same reason. We would be glad to share with you numerous standard corrosion control and treatment reference works, best practices guides and published results from US and international lead corrosion control field and pilot studies. Secondly, the basis for that target (other communities using Lake Huron source use the same dose) is not scientifically derived nor does it consider water quality and the current state of Flint's distribution system. We have reviewed the original Detroit corrosion study and have seen some of the LCR monitoring data, and besides the fact that it did not directly pertain to this water source, few dosages were tested in the cited 1994 pipe loop study, and the higher dosage than the one implemented in the field currently was more effective. Based on the limited amount of data on the quality of Detroit water, what we know about the history of Detroit corrosion control, we think an orthophosphate residual of 3 to 4 mg PO4/L should be the minimum starting test target residual for pipe passivation. It is likely that, at least initially a higher dosage will be necessary to reach the far ends of the distribution system and sufficiently reduce lead solubility and release from all lead sources. To allow flexibility, we feel the design of the chemical feed and storage systems should be able to consistently deliver a maximum dose of 5 to 6 mg PO4/L, if substantial orthophosphate loss is observed, if the starting dose is set for the desired residual level of 3 to 4 mg/L as PO4. We suggest that jar tests be performed in advance of orthophosphate addition to Detroit water to evaluate the impact of orthophosphate dose on turbidity that could result from interactions between orthophosphate and background Detroit water quality parameters (e.g., aluminum, calcium, etc.).

We want to stress that immediately shifting to Detroit water and adding orthophosphate will not necessarily translate to immediate improvements. Furthermore, this is a change, albeit a return to past conditions. Nonetheless, a period of system upset should be anticipated. The need for a communication strategy and a distribution system plan are critical.

Lastly, we see no mention of a water quality monitoring program. Two programs need to be put in place immediately (before return to Detroit water) to 1) identify lead sources, 2) assess treatment effectiveness against lead release from all of the simultaneously operating mechanisms (solubility, particulate release, galvanic corrosion), and 3) assess orthophosphate levels and stability of water quality in the distribution system.

There are multiple sources of lead in the Flint distribution system to the consumers' taps, such as: pipes; leaded brass; leaded solder; accumulations on old galvanized steel pipes; possibly accumulated on copper or some plastic pipes. It is critical that the fate of orthophosphate in the distribution system is understood, and how effective it is against each type of lead source, so dosing adjustment can be properly made. For this purpose, we recommend that a number of residences throughout Flint that meet the following plumbing criteria, be identified for an assessment of the contribution lead from the different potential service line and interior plumbing sources, through detailed mapping of plumbing materials, lengths, sizes, and location and type of inline devices and faucets using profile sampling. For confidence in interpretation, probably at least 5 sites from each of the configurations will be necessary. The configurations we would estimate to be most important (but should be changed or added to if local construction practice indicates it's necessary): Lead service line, galvanized steel interior plumbing; lead service line, copper with leaded solder joints; lead service line, plastic interior plumbing. It is also possible that interior plumbing may differ from the material used for the customer-side service line segment. We would be glad to discuss the specifics of this sampling effort.
For the purpose of assessing stability of water quality in the distribution system and to inform on orthophosphate residual adjustment, we suggest that 8 to 10 locations in the distribution system be selected to measure pH, alkalinity, orthophosphate, turbidity and iron on a weekly basis. These could be collected from TCR sampling locations, or other readily-accessible buildings, should be located at a distribution of locations in the distribution system and should be collected after a flush sufficiently long to assure that "fresh" distribution system water is being measured. Research has shown that over time, orthophosphate can reduce disinfectant demand associated with corroding metallic distribution system materials. These measurements need to be performed in the field and can simply be done with a portable HACH test kit or spectrophotometer.

A lead sampling plan needs to be in place to access the effectiveness of water change and treatment boost. LCR monitoring sites with confirmed lead service lines can be in the sampling pool. Sampling should consist of a 1 liter first draw sample (LCR sample without 5 minute pre-flush), followed by an additional flushed sample or two depending on profile sample results which is intended to capture major lead source(s). The specific details of this effort need to be worked out by the technical committee as soon as possible. We would gladly work with Flint on establishing a water sampling program to identity and verify lead service line sites. The plan and initial sampling effort should be performed before the switch so that one baseline sample set is collected.

Lastly, our strength does not fall under full-scale pump and chemical feed delivery systems. We would only say that the systems need to be scaled-up in size to accommodate our suggested dosing needs. Also, there is the some discussion about diverting water to the Dort reservoir and an associated orthophosphate feed system. We are not familiar with the reservoir but are wondering if it is an open reservoir?

Of course this is a lot of information to share and we would gladly be available to discuss the technical and scientific basis for our suggestions.

Let us know if you have any questions and thanks again,

Darren and Mike

Darren A. Lytle, Ph.D., P.E.
Branch Chief (Acting)
U.S. Environmental Protection Agency
26 West Martin Luther King Dr.
Cincinnati, Ohio 45268
Phone: (513) 569-7432
Fax: (513) 487-2543
email: lytle.darren@epa.gov

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Friday, October 16, 2015 1:32 PM
To: Lytle, Darren <Lytle.Darren@epa.gov>; Schock, Michael <Schock.Michael@epa.gov>
Cc: Busch, Stephen (DEQ) <BUSCHS@michigan.gov>
Subject: FW: Flint WTP PH2 SEG4 - Corrosion Control

Darren, Michael

We have received Flint's corrosion control proposal from their consultant. If you have comments, please provide them to me by Monday morning.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Matta, Samir [mailto:SFMatta@lan-inc.com]
Sent: Friday, October 16, 2015 12:02 AM
To: Prysby, Mike (DEQ)
Subject: Flint WTP PH2 SEG4 - Corrosion Control

Hi Mike,

Please see attached plans for the Corrosion Control Plan for the City of Flint. I will have the official submittal package to you tomorrow afternoon after I get Brent or Mike's signature on the permit application. I will call you when I get back in Lansing to drop the package. Is three sets of full size plans adequate? Would you like some half size plans? Let me know.

Basis of Design

Given that Flint will require lead and copper corrosion control and given that Detroit utilizes orthophosphate for their corrosion control methodology, and that Flint will be receiving Detroit water for the immediate future, orthophosphate is the appropriate corrosion control methodology for Flint. A dosage of 0.8 mg/l as PO_4 has been recommended for the Detroit water. Numerous utilities utilizing Lake Michigan water have a target dosage of 0.9 mg/l as PO_4. Therefore, a target dosage in the range of 0.8 to 0.9 mg/l appears appropriate.

It is expected that, at least initially, there will be a significant PO_4 demand in the system. This will require a significantly higher dosage until this demand is satisfied and the target residual can be maintained. We are therefore designing for capability of a maximum dosage of 1.5 mg/l.
The arriving Detroit water will likely have some residual PO_4 when it arrives at Flint. It has been reported that this residual will be approximately 0.4 mg/l. The system must therefore be capable of a minimum dosage of 0.4 mg/l.

Based upon the usage of 75% Phosphoric Acid and a flow range of 4 MGD to 25 MGD, with an average day of 16 MGD, the expected feed rate will be 1.35 to 32 gpd. Average Phosphoric Acid feed is expected to be 10.8 gpd, requiring 30 days storage of 325 gal.

Orthophosphate will need to be applied at two locations. Detroit water will enter the Flint system at Control Station CS2, and supplementary phosphate will be applied there. However, on occasion some incoming water may need to be diverted to the Dort Reservoir, bypassing CS2. This water would then be introduced to the system through High Service Pump Station PS4 and phosphate would be introduced at this location.

Please let me know if the information is adequate or you require additional information.

Thanks.

Samir F. Matta, PE
Team Leader

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

1311 South Linden Road, Suite B • Flint, MI 48532
2121 University Park Dr, Suite 100 • Okemos, MI 48864-6901
D 517.819.2367 **C** [redacted] PPI
www.lan-inc.com • sfmatta@lan-inc.com

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From: Sygo, Jim (DEQ)
Sent: Saturday, October 24, 2015 3:01 PM
To: Shekter Smith, Liane (DEQ);Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Shaler, Karen (DEQ);Krisztian, George (DEQ)
Subject: Fwd: One further comment

Please review and let's discuss next week.

Sent from my iPhone

Begin forwarded message:

> **From:** "Kaplan, Robert" <kaplan.robert@epa.gov>
> **Date:** October 24, 2015 at 8:58:12 AM EDT
> **To:** Jim Sygo <SygoJ@michigan.gov>
> **Subject: One further comment**
>
> Jim, I'm sorry that we have a straggler. This morning I received one last comment. I ordinary would say "too late" but this comment reflects deep knowledge of the Flint system (esp. the residence at issue). Pls let me know if there are any issues. Again, sorry for the late and unconsolidated comment.
>
> Bob
>
> 1) Has anyone evaluated where the water quality parameter monitoring is being conducted by Flint? If not, we might want to do that to make sure that the sites selected are representattive of the water quality throughout the city. My concern is that the chlorine residual range reported by the City in their October 2015 water quality report is given as 0.2 – 4.0(https://www.cityofflint.com/public-works/utilitieswater/water-treatment-plant/).However, we know that in at least one area of the city, even after flushing the tap for 8 hours, there was no detectable chlorine residudal. Repeated tests over 18 days (last one was September 3) show the same. These measurements were done after the replacement of the old service line, so the chlorine is not getting to this area (http://flintwaterstudy.org/information-for-flint-residents/chlorine-monitoring-in-flint-resident-ms-leeanne-walters-home/)
>
> 2) The recommendations in the final report on the sampling we did in Flint are linked to the corrosion control treatment. The lead concentrations in the scale/sediment are orders of magnitude higher that what we typically see in drinking water samples, so I think from a risk perspective, we need to better understand the composition and stability of the scales withn the pipes to to assess the stability of the scales and inform the treatment. Although the release of scale/sediment is not unique to Flint, the dislodging of scale/sediment would pose the greatest risk to residents by far. Our final report will be posted in the near future so should we include the assessment sampling in our comments on corrosion control (see below)?

Recommendations

As indicated by the results from the Walters' home and previous EPA work, the presence of lead pipes over many years has likely resulted in the accumulation of lead in the scales within non-lead pipes downstream of the lead pipe and physical disturbances to the leaded or non-leaded portions of the service lines have the potential to release large amounts of scale and sediment that could pose an immediate and acute health hazard to the residents. Consequently, even with corrosion control treatment in place in the future, physical disturbances will be capable of dislodging the high lead-bearing scale and sediment from non-lead pipes as well as lead pipes, as was the case in the earlier EPA study.

Obtaining information on the lead reservoirs in the scales within the lead and non-leaded portions of intact service lines is essential for determining the potential risk to residents from lead-bearing scale released as lead lines are replaced as well as the risk that may remain following removal of the lead lines, where the non-leaded portions of service lines are left in place.

As the Walters' service line was very long compared to the length of most typical service lines, it is important to assess the potential risk posed by the scale reservoirs in more typical lengths of service lines by extracting both the leaded and non-leaded portions of service lines which have not been physically disturbed. The service lines chosen for extraction and analysis should be representative of the materials commonly used downstream of the lead pipe (e.g., galvanized iron, copper, plastic). Extraction/handling procedures should be developed by EPA to ensure that damage to the scales from the excavation, extraction and delivery of the service line segments is minimized. Sequential sampling should also be conducted on a representative group of homes with common plumbing materials (e.g., galvanized iron, copper, plastic) to determine the extent to which the lead from the service line has seeded the interior plumbing in homes.

It is also critically important to develop and incorporate ongoing training and public education on the potential for high lead release from the scales as a result of any future physical disturbances to service lines and mitigative actions that residents can take to lower their exposure risk. The training and educational material should be assessed for clarity, meaningfulness, and accessibility by a group of residents and health experts to ensure the effectiveness of the communications.

At a minimum, immediate training and public education on the potential risks posed by physical disturbances to service lines should be developed by communications experts and provided to residents, community groups, elected officials, health departments, pediatricians and gynecologists, water and non-water utilities (gas, electric, cable, etc.), plumbing organizations and contractors. Residents should be notified of scheduled work by water and non-water utilities and informed of the potential risk of increased lead levels due to these disturbances.

Sent from my iPhone

From: Deltoral, Miguel <deltoral.miguel@epa.gov>
Sent: Friday, February 27, 2015 5:59 AM
To: Crooks, Jennifer;Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ);Rosenthal, Adam (DEQ);Poy, Thomas;Schock, Michael;Porter, Andrea
Subject: Re: HIGH LEAD: FLINT Water testing Results

Jen/all - I think things got garbled in translation...
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- Leaded brasses and solder can also release particulate lead under certain circumstances.
- The particulate can contain very high concentrations of lead (hundreds to thousands of ppb Pb) which is a much higher concentration than lead paint, so even small particles can result in high lead values.
- If the lead service line was disturbed (water main repair/replacement, meter installation repair/replacement, service line leak repairs, etc.) you can have VERY high lead levels in the scale and sediment that is dislodged from the inside of lead service lines. Here in Chicago, during a partial lead service line replacement, we collected the scale and sediment that came into the home and we found 300,000+ ug/L lead in the scale; 125,000 ug/L Pb in the sediment. Very dangerous.
- Higher levels of PO4 (3-4 mg/L Ortho) seem to reduce the amount of particulate Pb that is released in the absence of physical disturbances to the lead lines. Doesn't stop it entirely, but should generally reduce the occurrence. Caveat – Other water quality issues can change the chemical complexes that form on the pipe, so cleaner sources with more consistent WQ form more predictable scale complexes.

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Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Crooks, Jennifer
Sent: Thursday, February 26, 2015 04:15 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Deltoral, Miguel; Poy, Thomas
Subject: HIGH LEAD: FLINT Water testing Results

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Please feel free to contact Miguel directly—312-886-5253; Deltoral.miguel@epa.gov.

Jennifer

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, February 26, 2015 10:25 AM
To: Crooks, Jennifer
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: HIGH LEAD: FLINT Water testing Results

Jennifer,

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Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

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Sent: Thursday, February 26, 2015 10:53 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Poy, Thomas; Deltoral, Miguel
Subject: HIGH LEAD: FLINT Water testing Results

Hi, Steve and Mike. Thanks for talking with me yesterday, Steve, about the most recent TTHM results. We'll look forward to receiving them whenever you get them back from the lab.

However, the main purpose of my email is to alert you to the high lead levels reported to a citizen yesterday by Flint Water Dept. I have been discussing the water situation with LeeAnn Walters since January, and she has been talking with Mike Glasgow at the plant about the black sediment in her water. (HUGE KUDOs to MIKE!!) He did test it to find that the iron levels were greater than his test would go; GT 3.3. But, because the iron levels were so high, he suggested testing for lead and copper. WOW!!!! Did he find the LEAD! **104 ppb.** She has 2 children under the age of 3… Big worries here.

So, Steve, this goes back to what you and I were talking about yesterday. That the different chemistry water is leaching out contaminants from the insides of the biofilms inside the pipes. I think Lead is a good indication that other contaminants are also present in the tap water, that obviously were not present in the compliance samples taken at the plant. VOC/SOC and inorganics/metals would be good samples to start with to take at the tap. And since Ms. Walters' drinking water is showing the high lead levels, her tap water would be a good place to start, I think.

We also talked about Dr. Joan Rose from Michigan State being on the Flint Tech Advisory Committee—you also mentioned that someone from the Dept of Community Health was on the Committee. I'm thinking that Dr. Rose would want to dive further into this, since there's actual evidence that the water is leaching contaminants from the biofilms; or Dept of Community Health would want to get involved and look at this from an epidemiological perspective. (She and her family are also exhibiting the rashes when exposed to the water, and her daughter's hair is falling out in clumps.)

Maybe MSU could authorize the payment of the analyses for these samples? Or Dept of Community Health?

The citizen's name is:

LeeAnn Walters

212 Browning Ave

Flint, MI 48507

616-212-6233

Lwalters313@gmail.com

Jennifer

From: Lea Moste [mailto:lwalters313@gmail.com]
Sent: Thursday, February 26, 2015 9:08 AM
To: Crooks, Jennifer
Subject: Fwd: Re: Water testing Results

---------- Forwarded message ----------
From: "Michael Glasgow" <mglasgow@cityofflint.com>
Date: Feb 26, 2015 7:55 AM
Subject: Re: Water testing Results
To: "Lea Moste" <lwalters313@gmail.com>
Cc:

Lee,

Here are your Lead & Copper Results. This number is very high, 104 ppb of lead. In the last few months over 100 samples have been tested and only 2 were over the 15 ppb regulatory limit, and the highest level I have seen is 37 ppb. I will pass this info to Mr. Croft so he is aware. I will send the sample I collected from your kitchen faucet today for a complete metals test (12 different metals), to see what the level is without letting the water stagnate over night. I'm hoping that value will be much, but we will have to see. Sorry for this news, but I wanted to let you know right away.

Mike

On Tue, Feb 24, 2015 at 1:50 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:

> Lee,
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> I will bring a copy of last years annual report when I stop by tomorrow. The annual report from 2014 must be delivered to residents by July 1st of this year. I imagine we may have it complete by June.
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Was also curious if there is an expected time frame for this years report due to the switch. If you can be of any assistance I would appreciate it.

Thank You

LeeAnne Walters

On Thu, Feb 19, 2015 at 12:47 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:

Lee & Dennis,

Here is a list of test results from water sampled at your home over the last 2 weeks. I have sent in your lead and copper sample, and also a sample from the toilet tank for manganese. I should hopefully have results from this testing early next week. I'll plan on stopping over on Wednesday (the 25th) around 10 am again to give you these results & sample again.

Mike

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Friday, February 27, 2015 11:05 AM
To: Deltoral, Miguel;Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ);Rosenthal, Adam (DEQ);Poy, Thomas;Porter, Andrea
Subject: Re: HIGH LEAD: FLINT Water testing Results

Hi, Steve and Mike. I talked with Miguel, and he said if you all would be interested in getting input from our expert, Mike Schock at EPA Cincinnatti Research, on the Flint distribution system issues and dealing with lead and DBP's together, you should contact Mike directly--here is his information.
schock.michael@epa.gov
(513) 569-7412
Jennifer

From: Deltoral, Miguel
Sent: Friday, February 27, 2015 4:58 AM
To: Crooks, Jennifer; Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Poy, Thomas; Schock, Michael; Porter, Andrea
Subject: Re: HIGH LEAD: FLINT Water testing Results
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Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Deltoral, Miguel; Poy, Thomas
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From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Tuesday, March 03, 2015 12:45 PM
To: Busch, Stephen (DEQ);Deltoral, Miguel
Cc: Rosenthal, Adam (DEQ);Poy, Thomas;Porter, Andrea;Prysby, Mike (DEQ)
Subject: Re: HIGH LEAD: FLINT Water testing Results

Hi, Steve. I found that interesting that the Walters' interior piping is all PVC, and they have an iron pre-filter at the service connection. I remember in a discussion with Miguel, and maybe he can explain further, that systems with iron removal treatment had higher levels of lead at the tap, especially if the bacteria had been allowed to overgrow the filter. Seems there was a higher amount of lead particulate in the system. Miguel said in his email to us on 2/27 at 4:58am, that:

"Fe/Mn can transport lead from the lead service lines into the home. The lead sorbs onto the Fe/Mn particles. In SW systems, the Fe typically is released from the water mains."

Perhaps the iron pre-filter is contributing to the high lead levels?

Jennifer

From: Busch, Stephen (DEQ)
Sent: Friday, February 27, 2015 12:48 PM
To: Crooks, Jennifer; Deltoral, Miguel
Cc: Rosenthal, Adam (DEQ); Poy, Thomas; Porter, Andrea; Prysby, Mike (DEQ); Benzie, Richard (DEQ); shekterl@michigan.gov
Subject: RE: HIGH LEAD: FLINT Water testing Results

Miguel and Jennifer,

Thank you for this information, we will take it under consideration.

The City of Flint:

- Has a 90th percentile lead level of 6.0 ppb based on 100 samples collected in its most recent monitoring period of 7/1/2014 – 12/31/2014, with 2 samples (23 & 37 ppb) over the AL.
- Has a 90th percentile copper level of 110 ppb based on 100 samples collected in its most recent monitoring period of 7/1/2014 – 12/31/2014, with no samples over the Cu AL.
- Has an Optimized Corrosion Control Program
- Conducts quarterly Water Quality Parameter monitoring at 25 sites and has not had any unusual results
- Has never had a 90th percentile lead AL exceedance
- Continues to meet all applicable plant tap standards and treatment technique requirements at its WTP
- Has developed and implemented an Operational Evaluation of its treatment and distribution systems, and continues to adjust and update this OE based on updated quarterly results

My understanding from Ben Grumbles and the LCR Short Term Revisions is that "EPA regulations require water systems to develop a targeted sampling pool, focused on those sites with the greatest risk of lead leaching. All compliance samples used to determine the 90th percentile must come from that sampling pool." [40 CFR 141.80(c)(1)], 56 Fed Reg. 26518 (June, 7, 1991), [40CFR 141.90(a)(1)(v), and 40 CFR 141.90(h)(2)]. Our office continues to work with our community water systems to follow these and all other requirements of the current lead and copper regulations.

212 Browning, the site in question, is not part of the City's established sample site pool. The residence consists of PVC plumbing materials, and has an iron pre-filter at the service connection.

Regarding TTHM, the most recent quarter monitoring from February 2015 was issued today by the lab. While 2 of the 8 DBP compliance sites continue to have an LRAA that exceeds the standard, quarterly results at all 8 DBP compliance sites were below less than half the standard level of 80 ppb, the highest being 28.5 ppb. Only one site now has an OEL over 80 ppb, at 85 ppb.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

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To: Deltoral, Miguel; Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Poy, Thomas; Porter, Andrea
Subject: Re: HIGH LEAD: FLINT Water testing Results

Hi, Steve and Mike. I talked with Miguel, and he said if you all would be interested in getting input from our expert, Mike Schock at EPA Cincinnatti Research, on the Flint distribution system issues and dealing with lead and DBP's together, you should contact Mike directly--here is his information.

schock.michael@epa.gov
(513) 569-7412

Jennifer

From: Deltoral, Miguel
Sent: Friday, February 27, 2015 4:58 AM
To: Crooks, Jennifer; Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Poy, Thomas; Schock, Michael; Porter, Andrea
Subject: Re: HIGH LEAD: FLINT Water testing Results

Jen/all - I think things got garbled in translation...

What I was saying is that where you find Pb values that high, it is usually due to particulate lead. Not always, but generally. Particulate lead is released sporadically from lead service lines, leaded solder and leaded brass in a number of ways and folks tend to discount these values as anomalies, but particulate lead release is a normal part of the corrosion process and it is universal (common) in all systems. It's just that it is not captured as often by the infrequent LCR sampling. If systems are pre-flushing the tap the night before collec on thisting LCR compliance samples (MDEQ still provides these instructions to public water systems) this clears particulate lead out of the plumbing and biases the results low by eliminating the highest lead values. If systems are pre-flushing and still finding particulate lead, the amount of particulate lead in the system can be higher than what is being detected using these 'pre-flushed' first-draw samples. My point on that was that people are exposed to the particulate lead on a daily basis, but the particulate lead is being flushed away before collecting compliance samples which provides false assurance to residents about the true lead levels in the water.

Some quick notes on particulate lead release:

- Fe/Mn can transport lead from the lead service lines into the home. The lead sorbs onto the Fe/Mn particles. In GW systems, Fe/Mn can come from the source water and more Fe from the water mains. In SW systems, the Fe typically is released from the water mains.
- Lead released from lead service lines can also 'seed' galvanized iron pipes inside the homes. Again, the lead sorbs onto the iron on the pipes and be released sporadically. Generally, the higher the flow, the more Fe and Fe+Pb particulate you will likely get.
- If there is a partial lead service line (lead connected to copper) you can get additional lead release due to galvanic corrosion.
- Leaded brasses and solder can also release particulate lead under certain circumstances.
- The particulate can contain very high concentrations of lead (hundreds to thousands of ppb Pb) which is a much higher concentration than lead paint, so even small particles can result in high lead values.
- If the lead service line was disturbed (water main repair/replacement, meter installation repair/replacement, service line leak repairs, etc.) you can have VERY high lead levels in the scale and sediment that is dislodged from the inside of lead service lines. Here in Chicago, during a partial lead service line replacement, we collected the scale and sediment that came into the home and we found 300,000+ ug/L lead in the scale; 125,000 ug/L Pb in the sediment. Very dangerous.
- Higher levels of PO4 (3-4 mg/L Ortho) seem to reduce the amount of particulate Pb that is released in the absence of physical disturbances to the lead lines. Doesn't stop it entirely, but should generally reduce the occurrence. Caveat – Other water quality issues can change the chemical complexes that form on the pipe, so cleaner sources with more consistent WQ form more predictable scale complexes.

If I remember correctly, Detroit is feeding PO4 for the LCR, but since Flint is no longer part of that interconnection, I was wondering what their OCCT was. They are required to have OCCT in place which is why I was asking what they were using.

Mike Schock is our resident expert and may be able to help out with the simultaneous compliance (Pb & DBPs) so I would suggest that folks give him a call.

Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Crooks, Jennifer
Sent: Thursday, February 26, 2015 04:15 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Deltoral, Miguel; Poy, Thomas
Subject: HIGH LEAD: FLINT Water testing Results

Thank you, Mike. These results are dated 2/18/15, so they're probably different results than the results Adam had, but they still have to be included in with compliance calculation of the 90th percentile. What dates are the earlier compliance samples?

Yes, the stagnation of the water would increase the lead levels, and I'm glad you're following up with the City to get the lead levels reduced for Mrs. Walters' home—which will hopefully be effective for her neighbors because they are also most likely being exposed to these high lead levels. Miguel reminded me this morning, there are no safe levels of lead in drinking water.

I talked with Miguel Del Toral about his knowledge on research on lead. He said that high levels of iron, usually bring high levels of lead. The large amount of black sediment at Mrs. Walters' home, is most likely particulate lead, Miguel said, where the lead actually bonds to the iron sediment. While the particulates of lead/iron are small, they're very highly concentrated with lead—up to 95% lead.

Miguel was wondering if Flint is feeding Phosphates. Flint must have Optimal Corrosion Control Treatment—is it Phosphates? Or is it pH/Alkalinity Adjustment? The reason he asks, is because systems using the pH/Alkalinity adjustment have problems with lead levels in the 100's or higher—and they have problems with random lead particulate matter in the distribution system. Miguel said that we all know that flushing regularly helps reduce the lead concentrations, but not immediately. The City can't just flush in advance of taking the compliance samples, they have to flush the lines on a regular schedule.
The problem with high lead issues, is that the water has so many different variables, that it's hard to pinpoint what is causing what problem where. From a public health perspective, can we assume that the high lead levels in Mrs. Walters' neighborhood are isolated to just her area? Or are they more widespread?

Please feel free to contact Miguel directly—312-886-5253; Deltoral.miguel@epa.gov.

Jennifer

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, February 26, 2015 10:25 AM
To: Crooks, Jennifer
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: HIGH LEAD: FLINT Water testing Results

Jennifer,

I recall Adam showing me a high lead/copper sample result (perhaps it was this one)....as part of the city's routine lead-copper monitoring. If so, it was a stagnated sample as part of the sampling protocol. Adam mentioned that all other samples were below the AL...and the city will not exceed the lead AL. I will confirm this. The city; however, needs to take further action to help address Ms. Walter's concern. The type of plumbing needs to be identified and sample tap location within the premise plumbing. They should offer to re-sample for PB after flushing the tap to demonstrate that flushing the tap will reduce the lead concentration. The city also needs to provide other lead-reduction strategies to Mrs. Walters.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Thursday, February 26, 2015 10:53 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Poy, Thomas; Deltoral, Miguel
Subject: HIGH LEAD: FLINT Water testing Results

Hi, Steve and Mike. Thanks for talking with me yesterday, Steve, about the most recent TTHM results. We'll look forward to receiving them whenever you get them back from the lab.

However, the main purpose of my email is to alert you to the high lead levels reported to a citizen yesterday by Flint Water Dept. I have been discussing the water situation with LeeAnn Walters since January, and she has been talking with Mike Glasgow at the plant about the black sediment in her water. (HUGE KUDOs to MIKE!!) He did test it to find that the iron levels were greater than his test would go; GT 3.3. But, because the iron levels were so high, he suggested testing for lead and copper. WOW!!!! Did he find the LEAD! **104 ppb.** She has 2 children under the age of 3… Big worries here.

So, Steve, this goes back to what you and I were talking about yesterday. That the different chemistry water is leaching out contaminants from the insides of the biofilms inside the pipes. I think Lead is a good indication that other contaminants are also present in the tap water, that obviously were not present in the compliance samples taken at the plant. VOC/SOC and inorganics/metals would be good samples to start with to take at the tap. And since Ms. Walters' drinking water is showing the high lead levels, her tap water would be a good place to start, I think.

We also talked about Dr. Joan Rose from Michigan State being on the Flint Tech Advisory Committee—you also mentioned that someone from the Dept of Community Health was on the Committee. I'm thinking that Dr. Rose would want to dive further into this, since there's actual evidence that the water is leaching contaminants from the biofilms; or Dept of Community Health would want to get involved and look at this from an epidemiological perspective. (She and her family are also exhibiting the rashes when exposed to the water, and her daughter's hair is falling out in clumps.)

Maybe MSU could authorize the payment of the analyses for these samples? Or Dept of Community Health?

The citizen's name is:
LeeAnn Walters
212 Browning Ave
Flint, MI 48507
616-212-6233
Lwalters313@gmail.com

Jennifer

From: Lea Moste [mailto:lwalters313@gmail.com]
Sent: Thursday, February 26, 2015 9:08 AM
To: Crooks, Jennifer
Subject: Fwd: Re: Water testing Results

---------- Forwarded message ----------
From: "Michael Glasgow" <mglasgow@cityofflint.com>
Date: Feb 26, 2015 7:55 AM
Subject: Re: Water testing Results
To: "Lea Moste" <lwalters313@gmail.com>
Cc:
Lee,

Here are your Lead & Copper Results. This number is very high, 104 ppb of lead. In the last few months over 100 samples have been tested and only 2 were over the 15 ppb regulatory limit, and the highest level I have seen is 37 ppb. I will pass this info to Mr. Croft so he is aware. I will send the sample I collected from your kitchen faucet today for a complete metals test (12 different metals), to see what the level is without letting the water stagnate over night. I'm hoping that value will be much, but we will have to see. Sorry for this news, but I wanted to let you know right away.

Mike

On Tue, Feb 24, 2015 at 1:50 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:

> Lee,
>
> I will bring a copy of last years annual report when I stop by tomorrow. The annual report from 2014 must be delivered to residents by July 1st of this year. I imagine we may have it complete by June.
>
> Mike
>
> On Fri, Feb 20, 2015 at 1:00 AM, Lea Moste <lwalters313@gmail.com> wrote:
>
> > Mike,
> > Thank you for the water reports and we already planned to see you on the 25th at 10:00am. I was wondering if you know who I need to talk to in the water plant to obtain the Annual Drinking Water Report from last year. According to the EPA website there is link to access but when you click on it, it cannot be accessed. Was also curious if there is an expected time frame for this years report due to the switch. If you can be of any assistance I would appreciate it.
> >
> > Thank You
> > LeeAnne Walters
> >
> > On Thu, Feb 19, 2015 at 12:47 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:
> >
> > > Lee & Dennis,
> > >
> > > Here is a list of test results from water sampled at your home over the last 2 weeks. I have sent in your lead and copper sample, and also a sample from the toilet tank for manganese. I should hopefully have results from this testing early next week. I'll plan on stopping over on Wednesday (the 25th) around 10 am again to give you these results & sample again.
> > >
> > > Mike

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Tuesday, March 10, 2015 5:52 PM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: Update: Call with White House Flint Liaison

Update on what's been happening here regarding Flint:

Paul Joice is the White House Flint Liaison for HUD, living in Flint and working in the mayor's office. He needed some background on the Flint drinking water issues, so Tom and I---along with 4 managers from Headquarters, briefed him. Tom prepared a summary of notes taken at the meeting FYI---see below.

Becki Clark for the Office of Ground Water and Drinking Water at HQ, requested that Dr. Michael Wright, toxicologist/epidemiologist, from Office of Research and Development, sit on the Flint Technical Advisory Counsel. I believe Mike Prysby is sitting on the committee too. Since Mike is out of the office until April, did you sit in on the first meeting of this Advisory Council, Steve? What did you think of the meeting?

I have also been inundated with controlled correspondence emails referred to me from the White House. Several have had some questions about the health effects, so I have been including a paragraph explaining the health effects, which I think provide exactly the right info related to TTHMs being a chronic contaminant. I have cc'd Mike and Steve on the letters, so you all will get them, but here is the paragraph FYI:

"In your e-mail, you noted concerns regarding the health effects of TTHMs. By law, the City must inform consumers of health standard exceedances. The TTHM health standard was exceeded so the City must let consumers know the potential risk, to give consumers the opportunity to make informed decisions. The risk of developing long-term health problems, such as liver, kidney, central nervous system, and cancer, is low for those in general good health and the concern for these illnesses are only after years of ingestion. The risk of developing health problems is higher for some sub-populations, such as the immune-compromised and pregnant women; therefore, this group may want to seek alternative sources of water, such as bottled water, or purchase a home water treatment device. Consumers may want to talk with their doctors to help them make individual health decisions."

Thank you all for keeping us in the loop from your seat in Lansing.

Jennifer

From: Poy, Thomas
Sent: Monday, March 09, 2015 3:10 PM
To: Hyde, Tinka; Henry, Timothy
Cc: Crooks, Jennifer
Subject: Call with White House Flint Liaison

Tinka/Tim: We (R5 and OGWDW) had a call with the White House Strong Cities/Strong Communications Flint Liaison this morning. Below are my notes of the discussion.

Flint Drinking Water Conference Call – 3/9/15
Participants: R5/GWDWB – Tom Poy, Jennifer Crooks

HQ/OGWDW – Eric Burneson, Elizabeth Corr, Becki Clark, Roy Simon
White House Strong Cities/Strong Communications Flint Liaison – Paul Joice (HUD) (works directly with Flint's mayor)

Tom Poy summarized what has gone on with Flint's Drinking Water:

- Switching from finished Detroit water (Lake Huron source) to Flint River in April 2014.
- Karegondi pipeline will provide Flint with raw water from Lake Huron when completed in 2016.
- MDEQ has been working with Flint from the start to get their treatment plant running properly.
- Summer 2014, Flint had an E coli detect because of distribution system issues (broken valves causing stagnation of water).
    - o Chlorine levels increased which increases potential of forming disinfection byproducts when chlorine reacts with organic carbon.
    - o Flushing increased which can stir up sediment in the water mains.
- December 2014, Flint exceeded the MCL for TTHM which is based on a running annual average (RAA) (avg of 4 quarterly samples).
- MDEQ has worked with Flint since August 2014 when chlorine levels were increased, to tweak operations to reduce TTHM formation.
- February 2015 sampling has TTHM concentrations well below the MCL but since compliance is based on an RAA, it will take another quarter or two of lower concentrations to make the average go down below the MCL.
- Flint has hired a consultant to help with their PWS.
- Flint has formed a Technical Advisory Committee (TAC) to help with their PWS; Dr. Michael Wright (ORD toxicologist) is EPA's representative.
- The Technical Advisory Committee met last week for the first time.

Paul Joice said that he was at the TAC meeting but did not participate as there were not enough seats for the large crowd. He heard that it was a good meeting. Paul said that he would like Dr. Wright to be able to make a public statement about health effects. The public notice for the TTHM violations say that sensitive subpopulations should consult their physicians but the physicians don't have any info on TTHMs.

Paul had questions about Flint's drinking water:

1) What are the health effects of TTHMs and what level of exposure is a concern?
2) What message should be provided on TTHMs?
3) What can be done about Flint's aging infrastructure and falling population base?
4) What about citizen complaints about their water looking funny, tasting funny, and smelling funny?

Paul said that having Dr. Wright on the TAC will help resolve Q1 and Q2.
Paul said on Q4, that he lives in the city and his water looks and tastes fine. I said that taste and odor issues could be the result of the flushing that Flint had done due to the bacteria and TTHM problems. Flushing can stir up sediment in the pipes. I said that there have also been complaints about rashes from using the water but that this may not be solely due to high TTHM levels. It could be because of increased chlorine in the water, changes in water chemistry (pH, hardness, etc.). It would take some investigative work to determine what part of the distribution system is having these problems and would need additional health/medical data to try to figure out a cause. Paul said that many of the people who complained did not want to give out their home addresses.
On Q3, I said that many systems across the country have aging infrastructure and while there is SRF monies available, this money does not cover the needs out there. Paul asked about regionalization. Eric Burneson acknowledged that there are economies of scale with regionalization but the benefits are realized more for smaller systems than ones the size of Flint. We could not generalize whether regionalization was a good idea for Flint and other communities in Genessee County because it is a very site specific issue.

Paul said that our conference call helped him under the Flint situation better.

Tom Poy
Chief, Ground Water and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Wednesday, March 18, 2015 11:38 AM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ);Benzie, Richard (DEQ)
Cc: Poy, Thomas;Deltoral, Miguel;Harris, Kimberly
Subject: Lead levels still high at Ms. Walters' home

I just received a call from LeeAnn Walters' home in Flint. She had her water tested again—this time the lead levels came back at 397 ppb. I will ask her to fax me the official lab results she has. Are you aware if the City flushed her system after the last test? Any thoughts on how to respond to her? I'm running out of ideas.
Jennifer

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Thursday, April 16, 2015 5:42 PM
To: Shekter Smith, Liane (DEQ);Benzie, Richard (DEQ);Busch, Stephen (DEQ);Prysby, Mike (DEQ);Philip, Kris (DEQ)
Subject: FINAL BRIEFING: Flint Hot Issue
Attachments: Flint Hot Issue 4-15.doc

FYI

From: Poy, Thomas
Sent: Thursday, April 16, 2015 3:22 PM
To: Crooks, Jennifer; Glowacki, Joanna
Subject: Flint Hot Issue

Here is the Flint Hot Issue item that was sent forward. I believe this is what Susan got.

Tom

Tom Poy
Chief, Ground Water and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

Issue: Flint Drinking Water Issues

Background/Status: Flint has been having issues since changing the source of their drinking water – from purchasing finished water from Detroit (which comes from Lake Huron) to treating Flint River water themselves at the end of April 2014. The quality of the water in the Flint River is different than that from Lake Huron, and requires additional treatment to ensure an acceptable quality drinking water. The Michigan Department of Environmental Quality (MDEQ) has been working closely with the Operator-in-Charge at Flint's Water Treatment plant to ensure that the citizens of Flint are provided drinking water that meets health standards. The use of Flint River water is an interim decision as Flint plans to connect to the Karegnondi pipeline, which will draw water from Lake Huron, in 2016.

Flint exceeded the health standard for *E. coli* in August 2014 and total coliform in September 2014 due to issues with malfunctioning valves in the distribution system creating stagnated water flow in certain areas. Additional chlorine was added to deal with the bacteria problem and these two violations have returned to compliance. However, the additional chlorine has likely contributed to a Disinfection Byproduct violation – Total Trihalomethane (TTHM) - in the fourth quarter of 2014. Compliance with the TTHM health standard is based upon the average of one year of quarterly sample data. The initial monitoring in summer 2014 reported elevated levels of TTHM compounds throughout the City's distribution system. MDEQ staff has worked with Flint to implement operational techniques to reduce TTHM levels. Current levels are below the MCL but consumers will continue to receive public notice of a violation until the running annual average gets below the MCL.

In addition to the MCL violations, there have been other potential issues that have been attributed to the water including, complaints about rashes when using the water to bathe, one home has very high lead in the drinking water (R5 is working with Flint and the homeowner; not sure if this is system-wide issue), and the Genesee County Health Department is looking into an increase in the number of reported cases of Legionaire's Disease in the county in 2014 (still in the investigative stage by the Health Dept – not public knowledge yet). Flint has hired a consultant to help with their drinking water utility. Also, a technical advisory committee has been formed, including Dr. Michael Wright, an EPA-ORD toxicologist, who is providing assistance on health effects.

Congressman Kildee requested clarification to whether the Drinking Water State Revolving Fund (DWSRF) allowed forgiveness of principal and if Flint would be eligible to receive it for older loans ($22M in loans from 1999, 2000, 2001, 2003). While forgiveness of principal is part of the DWSRF program, Flint would not be eligible to receive it on the older loans. This is the same response provided to Flint by the MDEQ SRF program. Flint may qualify for forgiveness of principal for new loans depending on the state criteria for allocating it.

Message:

- Flint switched from purchasing treated Lake Huron water from Detroit to treating Flint River water themselves until a pipeline being constructed can provide them with raw Lake Huron water to treat in 2016.
- Flint has/had MCL violations and has been working with MDEQ staff, a consultant, and a technical advisory committee to improve operations.
- Flint is not eligible for principal forgiveness on their existing loans.

Contact: Tom Poy, Water Division, (312) 886-5991, poy.thomas@epa.gov

From: Matta, Samir [SFMatta@lan-inc.com]
Sent: Thursday, May 21, 2015 5:04 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: Flint WTP - GAC

Sound Good, Mike.

Thanks.

Samir F. Matta
Senior Project Manager

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D 517.819.2367 **C** [PPI]
www.lan-inc.com • sfmatta@lan-inc.com

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, May 21, 2015 1:23 PM
To: Matta, Samir
Cc: Busch, Stephen (DEQ)
Subject: RE: Flint WTP - GAC

3:30pm should work and would give us an hour or so....unless I hear differently from Steve, I will schedule it.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Matta, Samir [mailto:SFMatta@lan-inc.com]
Sent: Thursday, May 21, 2015 12:46 PM
To: Prysby, Mike (DEQ); Hansen, Jeff
Subject: RE: Flint WTP - GAC

Hi Mike,

I have a regularly scheduled meeting at 1:00pm on Tuesday afternoon. Would 3:30pm or 4:00 be a problem?

We can also meet on Wednesday morning.

Let me know.

Samir F. Matta
Senior Project Manager

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From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, May 21, 2015 11:34 AM
To: Hansen, Jeff; Matta, Samir
Subject: Flint WTP - GAC

Jeff, Samir

Steve and I are available next Tues at our office to discuss the GAC proposal and basis of design. Steve may have commitments in the morning.....so afternoon is a better bet.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

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From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Tuesday, June 02, 2015 8:28 AM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ);Cook, Pat (DEQ)
Cc: Benzie, Richard (DEQ);Philip, Kris (DEQ);Shekter Smith, Liane (DEQ)
Subject: April 27 Flint Sampling Update from Miguel

Mea culpa.... I totally missed this email. Just saw it today. You already know the general information, but here is directly from Miguel.
Jennifer

From: Deltoral, Miguel
Sent: Monday, April 27, 2015 6:53 AM
To: Poy, Thomas
Cc: Porter, Andrea; Bair, Rita; Crooks, Jennifer
Subject: Flint Sampling Update

Good morning, Tom
Just an update on the Flint sampling so folks know what's going on. As we had initially discussed, the only way to really see what the lead levels are throughout and where the lead is actually coming from at Ms. Walters' place is to do sequential sampling prior to the removal of the LSL. I spoke to Ms. Walters and she said that the water was shut off inside her home, so it can actually be turned back on, so Jennifer and I picked up sample bottles from the R5 office and we will be dropping them off at Ms. Walters place today on the way home from the MDEQ RTCR meeting. Pat Cook has confirmed that following the disconnection from Detroit, Flint has not been operating any corrosion control treatment, which is very concerning given the likelihood of LSLs in the city. We do not know how many LSLs there are in Flint and according to Ms. Walters, neither does the city. She said that they do not know where any LSLs are, based on their records, so other than what appears to be a very long one at Ms. Walters' place, we don't have confirmation of any others at this point. Since they were used extensively here in R5, it is likely there are more. No idea how many, though.
Marc Edwards (from Virginia Tech) was kind enough to offer to analyze this round of samples so she will shipping the samples to Marc for analysis. I asked that he measure phosphate as well, so that we have some data on that. As we discussed, R5 will send an additional set of bottles to Ms. Walters for the follow-up monitoring once the LSL is removed. I spoke to Mike Prysby on Friday and he said that the city was going to remove the LSL fully this Wednesday. I also brought a camera with me and will take some pictures while we are at Ms. Walters place as well.
Apparently, according to Ms. Walters, the water director appears to be telling residents that the high lead from Ms. Walters residence is from the internal plumbing and that a reporter she was talking to, as well as others, has confirmed that this is what residents are being told. Ms. Walters indicated that the line coming into the home appears to be galvanized pipe. If this is true, it is possible that her portion of the service line, from the home to the property line, is not lead and that the city-owned portion of the service line is the only source of lead here. The sample results should help to clarify where the lead is coming from.
Call me on the cell if you need to: PPI

Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Deltoral, Miguel <deltoral.miguel@epa.gov>
Sent: Friday, June 05, 2015 7:09 AM
To: Crooks, Jennifer;Busch, Stephen (DEQ);Prysby, Mike (DEQ);Cook, Pat (DEQ)
Cc: Poy, Thomas
Subject: Re: more customer lead samples over the AL?

Slight correction...most old pipe from the home ***to the shut-off*** is galvanized, and the majority of lead they have seen is from the shut-off to the main. Apologies for not getting this report written up, but I keep getting sidetracked with NDWAC LCR and RTCR primacy packages. I will try to get that written up and out to you in the next week.

If I get copies of the latest results I will forward them, but my understanding is that the DEQ lab runs the samples, so they should be available within DEQ as well.

Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Crooks, Jennifer
Sent: Thursday, June 4, 2015 03:05 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); cookp@michigan.gov
Cc: Deltoral, Miguel; Poy, Thomas
Subject: more customer lead samples over the AL?

I talked with Miguel this week; he learned that there have been 2 more customer-requested lead samples that have come back over the AL: 22ppb and 40 ppb. These were customer-requested samples taken by Mike Glasgow and analyzed at the Flint lab. When I receive the lab reports, I'll email them to you—or Mike Glasgow should have copies of all the customer-requested lead sample results he's taken. Greg Waldorf, the contractor that replaced Ms. Walters' service line on Wed May 6, said that many of the customer services are galvanized from the customer to the water main, but they also have a lead line that connects the shut-off valve with the water main—which would make the lead piping City-owned.
Jennifer

From: PPI @aol.com
Sent: Friday, June 26, 2015 3:51 PM
To: hcroft@cityofflint.com;dr. PPI @gmail.com
Cc: bwright@cityofflint.com;dwalling@cityofflint.com;donna.cole@genesys.org;gambrose@cityofflint.com;jhenry@gchd.us;jlorenz@cityofflint.com;jm PPI yahoo.com;jherman@genesys.org;jfobrien@gcdcwws.com;ksmith@flint.org;larry.koehler@mcc.edu;mglasgow@cityofflint.com;Wright.Michael@epa.gov;mjlane@umflint.edu;Prysby, Mike (DEQ);nhenderson@cityofflint.com;nbirchm1@hurleymc.com;plevine@gcms.org;rbincsik@cityofflint.com;rosejo@msu.edu;Russell.Hudson@mclaren.org;SFMatta@lan-inc.com;jwgreen@lan-inc.com;mike49@sargentstitle.com
Subject: Re: Water Quality Update

Howard,

Is the Activated Carbon Filter the last stage in the system of treatment? If not, can or will chlorine be added to the water after that stage?

Best,

G. Natzke

-----Original Message-----
From: Howard Croft
To: Laura Sullivan
Cc: Brent Wright ; Dayne Walling ; donna. cole ; gdn2 ; Gerald Ambrose ; Howard Croft ; James Henry ; Jason Lorenz ; jmikewright ; JoAnne Herman ; John O'Brien ; Kirk Smith ; larry.koehler ; Michael Glasgow ; Michael Wright ; Mike Lane ; Mike Prysby (DEQ) ; Natasha Henderson ; Norb Birchmeier ; Pete Levine ; Robert Bincsik ; rosejo ; Russell Hudson ; Samir Matta ; Warren Green ; Michael Sargent
Sent: Fri, Jun 26, 2015 2:41 pm
Subject: Re: Water Quality Update

As a follow up to this afternoon's email, I am answering several questions that have subsequently been asked.

The vendor is " Calgon Carbon" with headquarters in Pennsylvania. They are both the supplier of the material and the installer as well. After initial designs were approved by the DEQ, various water samples from the Flint River were drawn and sent to Calgon for two weeks of testing under various conditions to try and gauge the effectiveness of the specific carbon filters chosen. Flow rate and temperature tests were performed by our engineering firm LAN at the water plant prior to the design being developed and forwarded to the DEQ. The filter media is Granulated Activated Carbon and the first filters are scheduled for installation to begin following the 4th of July weekend.

Pleas forward me any additional questions that may arise.

Thank you,

On Fri, Jun 26, 2015 at 3:25 PM, Laura Sullivan <PPI> wrote:
Hello Howard,

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What tests have been conducted and under what circumstances (flow rate, temperature)? From what location was the water used in these tests collected?

What is the identity of the filter media? Is it GAC?

Yours truly,
L Sullivan

On Friday, June 26, 2015, Howard Croft < hcroft@cityofflint.com> wrote:
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Our annual Consumer Confidence Report will be distributed in early July and will contain significant information about the water system. We will also include the notice of our recent quarterly testing in which all eight sites were verified to be under the MCL but the running average at one site required a notice to be sent.
I will email everyone when we schedule the next TAC team meeting which we have currently targeted for mid-August.

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

--
Laura L. Sullivan, Ph. D.
3101 Hawthorne Drive
Flint, Michigan 48503
PPI

Human(kind). Be both.

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043

ncrofi@cityoffl int.com

From: PPI@aol.com
Sent: Monday, July 20, 2015 5:30 PM
To: hcroft@cityofflint.com; PPI@gmail.com
Cc: bwright@cityofflint.com;dwalling@cityofflint.com;donna.cole@genesys.org;gambrose@cityofflint.com;jhenry@gchd.us;jlorenz@cityofflint.com;jmikewright@yahoo.com;jherman@genesys.org;jfobrien@gcdcwws.com;ksmith@flint.org;larry.koehler@mcc.edu;mglasgow@cityofflint.com;Wright.Michael@epa.gov;mjlane@umflint.edu;Prysby, Mike (DEQ);nhenderson@cityofflint.com;nbirchm1@hurleymc.com;plevine@gcms.org;rbincsik@cityofflint.com;rosejo@msu.edu;Russell.Hudson@mclaren.org;SFMatta@lan-inc.com;jwgreen@lan-inc.com;mike49@sargentstitle.com
Subject: Re: Water Quality Update

Hello Howard,
As I haven't heard anything back, I am resending this inquiry.
Thanks,
Gerald Natzke DO

-----Original Message-----
From: gdn2
To: hcroft ; dr.laura2
Cc: bwright ; dwalling ; donna.cole ; gambrose ; jhenry ; jlorenz ; jmikewright ; jherman ; jfobrien ; ksmith ; larry.koehler ; mglasgow ; Wright.Michael ; mjlane ; prysbym ; nhenderson ; nbirchm1 ; plevine ; rbincsik ; rosejo ; Russell.Hudson ; SFMatta ; jwgreen ; mike49
Sent: Wed, Jul 15, 2015 7:55 pm
Subject: Re: Water Quality Update

Hello Howard,

Would you share with us whether the Granulated Activated Carbon system will remain in affect with the new water supply from Port Huron for the city of Flint (and possibly the county)? A patient of mine from Flushing asked and I could not answer. It would seem to be an excellent idea both from the standpoint of decreased toxic chemical/metal exposure, taste and safety of the citizens it could serve.

Thank you,

Gerald Natzke DO FAAEM
GCMS Board Representative

-----Original Message-----
From: Howard Croft <hcroft@cityofflint.com>
To: Laura Sullivan <PPI>
Cc: Brent Wright <bwright@cityofflint.com>; Dayne Walling <dwalling@cityofflint.com>; donna. cole <donna.cole@genesys.org>; gdn2 <PPI>; Gerald Ambrose <gambrose@cityofflint.com>; Howard Croft <hcroft@cityofflint.com>; James Henry <jhenry@gchd.us>; Jason Lorenz <jlorenz@cityofflint.com>; jmikewright <PPI>; JoAnne Herman <jherman@genesys.org>; John O'Brien <jfobrien@gcdcwws.com>; Kirk Smith <ksmith@flint.org>; larry.koehler <larry.koehler@mcc.edu>; Michael Glasgow <mglasgow@cityofflint.com>; Michael Wright <Wright.Michael@epa.gov>; Mike Lane <mjlane@umflint.edu>; Mike Prysby (DEQ) <prysbym@michigan.gov>; Natasha Henderson <nhenderson@cityofflint.com>; Norb Birchmeier

<nbirchm1@hurleymc.com>; Pete Levine <plevine@gcms.org>; Robert Bincsik <rbincsik@cityofflint.com>; rosejo <rosejo@msu.edu>; Russell Hudson <Russell.Hudson@mclaren.org>; Samir Matta <SFMatta@lan-inc.com>; Warren Green <jwgreen@lan-inc.com>; Michael Sargent <mike49@sargentstitle.com>
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L Sullivan

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Howard Croft
Public Works Director

City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

--
Laura L. Sullivan Ph. D
3101 Hawthorne Drive
Flint, Michigan 48503
PPI

Human(kind) Be both

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Laura Sullivan <[PPI]>
Sent: Monday, July 20, 2015 10:40 PM
To: gdn2@aol.com
Cc: hcroft@cityofflint.com;bwright@cityofflint.com;dwalling@cityofflint.com;donna.cole@genesys.org;gambrose@cityofflint.com;jhenry@gchd.us;jlorenz@cityofflint.com;[PPI]@yahoo.com;jherman@genesys.org;jfobrien@gcdcwws.com;ksmith@flint.org;larry.koehler@mcc.edu;mglasgow@cityofflint.com;Wright.Michael@epa.gov;mjlane@umflint.edu;Prysby, Mike (DEQ);nhenderson@cityofflint.com;nbirchm1@hurleymc.com;plevine@gcms.org;rbincsik@cityofflint.com;rosejo@msu.edu;Russell.Hudson@mclaren.org;SFMatta@lan-inc.com;jwgreen@lan-inc.com;mike49@sargentstitle.com
Subject: Re: Water Quality Update

My reading of planning documents for the KWA suggests that once untreated water arrives in Flint, some of it will be sold to GM. Depending on residential water need, it will sometimes be necessary to add water from the Flint River to the remaining untreated KWA water prior to treatment for distribution to residents. Given this, it seems critical that filtration through GAC be considered permanent.

Veolia is pursuing privatization of Great Lakes water, and they specifically recommended that GAC be installed inline when making their report to Flint in February.

Laura Sullivan

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GCMS Board Representative

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Cc: Brent Wright <bwright@cityofflint.com>; Dayne Walling <dwalling@cityofflint.com>; donna. cole <donna.cole@genesys.org>; gdn2 <[PPI]>; Gerald Ambrose <gambrose@cityofflint.com>; Howard Croft <hcroft@cityofflint.com>; James Henry <jhenry@gchd.us>; Jason Lorenz <jlorenz@cityofflint.com>; jmikewright <[PPI]>; JoAnne Herman <jherman@genesys.org>; John O'Brien <jfobrien@gcdcwws.com>; Kirk Smith <ksmith@flint.org>; larry.koehler <larry.koehler@mcc.edu>; Michael Glasgow <mglasgow@cityofflint.com>; Michael Wright <Wright.Michael@epa.gov>; Mike Lane <mjlane@umflint.edu>; Mike Prysby (DEQ) <prysbym@michigan.gov>; Natasha Henderson <nhenderson@cityofflint.com>; Norb Birchmeier <nbirchm1@hurleymc.com>; Pete Levine <plevine@gcms.org>; Robert Bincsik <rbincsik@cityofflint.com>; rosejo <rosejo@msu.edu>; Russell Hudson <Russell.Hudson@mclaren.org>; Samir Matta <SFMatta@lan-inc.com>; Warren Green <jwgreen@lan-inc.com>; Michael Sargent <mike49@sargentstitle.com>

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Howard Croft
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1101 S. Saginaw Street
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PH# 810.766.7135 Ext.2043

hcrofl@cityofflint.com

--
Laura L. Sullivan, Ph. D.
3101 Hawthorne Drive
Flint, Michigan 48503

PPI

Human(kind). Be both.

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcrofl@cityofflint.com

--
Laura L. Sullivan, Ph. D.
3101 Hawthorne Drive
Flint, Michigan 48503

PPI

Human(kind). Be both.

From: Howard Croft <hcroft@cityofflint.com>
Sent: Thursday, September 03, 2015 12:28 PM
To: Brent Wright;Dayne Walling;donna. cole;Gerald (Jed) Natzke;Gerald Ambrose;Howard Croft;James Henry;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Michael Wright;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green
Subject: Flint Water

Technical Advisory Team,

I am pleased to report that the City of Flint has officially returned to compliance with the Michigan Safe Drinking Water Act and we have received confirming documentation from the DEQ today. The GAC filtering was installed on time and was instrumental in our ability to maintain an average level under the MCL. We anticipate that we will have no further notices going out.

Recent testing has raised questions regarding the amount of lead that is being found in the water and I wanted to report to you our current status.

At the onset of our plant design, optimization for lead was addressed and discussed with the engineering firm and with the DEQ. It was determined that having more data was advisable prior to the commitment of a specific optimization method. Most chemicals used in this process are phosphate based and phosphate can be a "food" for bacteria. We have performed over one hundred and sixty lead tests throughout the city since switching over to the Flint River and remain within the EPA standards.

We are currently designing an optimization plan with the engineering firm that will be presented to the DEQ and upon approval we expect to have it implemented by January 2016. It is worthwhile to note that the DEQ has reported that other cities have taken years to complete an optimization plan and we anticipate having a plan in place over the next four months.

It is also worth noting to this group that there are different lead testing methods used within industry and the city remains consistent with the most recent EPA approved testing method which can produce different results than other methods.

We hope to schedule another TAC team meeting for late September or early October, I will attempt to keep everyone informed and look for the best dates. We are inviting additional EPA experts to become a part of this committee.

Thank you,

—

Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Henry, James <jhenry@gchd.us>
Sent: Thursday, October 01, 2015 3:57 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: FW: Public Health Emergency Declaration
Attachments: public health emergency announcement 10-1-15.pdf

From: Sandlin, Mary
Sent: Thursday, October 1, 2015 2:33 PM
To: GCHD-Everyone
Subject: Public Health Emergency Declaration

Mary E. Sandlin
Clerical Coordinator
Genesee County Health Department
630 S. Saginaw Street, Suite 4
Flint, MI 48502-1540
(810) 257-3812 FAX: (810) 257-3147
msandlin@gchd.us

Genesee County Health Department

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us

Genesee County Board of Commissioners

1101 BEACH STREET, ROOM 312 FLINT, MICHIGAN 48502

TELEPHONE: (810) 257-3020
FAX: (810) 257-3908

COMMISSIONERS:

BRYANT HOLDEN
DISTRICT 2

BRENDA CLACK
DISTRICT 3

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DISTRICT 4

CHELNORTHRUP
DISTRICT 5

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DISTRICT 6

TONY BROWN
DISTRICT 7

MICHAEL LYNCH
DISTRICT 8

TED HENRY
DISTRICT 9

PEGGIE ADAMS
DISTRICT 10

October 1, 2015

Public Health Emergency Declaration for People Using the Flint City Water Supply with the Flint River as the Source

The County is issuing an Emergency Advisory recommending that people not drink the water coming from the City of Flint using the Flint River as the water source unless:

It has been tested to assure it does not contain elevated levels of lead.

It is being filtered through a National Sanitation Foundation (NSF) approved filter certified to remove lead that meets ANSI standard 53.

Findings reported in the Detroit Free Press September 30, 2015 indicate that Governor Snyder has publically acknowledged that Flint's water supply "appears" to have problems. Snyder has conceded that "it appears that (water) lead levels could be higher or have increased," and that there are "probably things that weren't fully understood when the switch was made." This is in direct contrast to previous reports from the State that downplayed the severity of the situation and conflicted with local data released by researchers at Hurley Medical Center.

Young children are most vulnerable to leads effects, because prior to age six, their brain and central nervous system are still forming and easily susceptible to damage. For an adult to suffer significant health effects, exposure to lead would have to be sustained and more intense. Most adults who are affected by lead have been exposed in an occupational setting, such as working as a house painter or in a battery recycling plant.

Pregnant women are at special risk because the lead they absorb crosses the placenta and enters the fetus.

It's important to remember that there is no known safe level of lead in a human body. Experts now use a reference level of 5 micrograms per deciliter to identify children with blood lead levels that are much higher than most children's levels. This new level is based on the U.S. population of children ages 1-5 years who are in the highest 2.5% of children when tested for lead in their blood.

Lead in water can contribute to a child's blood lead level. The Michigan Department of Environmental Quality, who regulates municipal water supplies, has assured us that the water leaving the Flint Water Plant meets all Federal and State requirements. The City of Flint has a documented problem with lead in its drinking water due to service and household lines that may contain lead or lead solder which can leach lead because of the corrosivity of the water since changing to the Flint River as the source supply. Generally, those who are most vulnerable

to leads health effects from exposure to unfiltered tap water are the very youngest children. For this reason, if you are not sure about the lead content in your tap water, it's best to either use a filter that has been found to be effective for reducing or eliminating lead, or to use bottled water instead. Water filters should be National Sanitation Foundation (NSF) certified to remove lead and meet ANSI standard 53. If these options are not available to you, then it's best to let the water run for at least five minutes before using it for either drinking or cooking purposes. Always use cold water instead of hot water for drinking and cooking.

It's especially important to avoid using untested or unfiltered tap water for mixing infant formula unless you can assure your water is lead free.

When leaded gasoline was in widespread use in this country, the lead came out the tail pipe and was deposited in yards near the roads. That lead may still be in those yards. In addition, lead paint continues to be a major source of childhood lead poisoning and can be found in homes built before 1978 when lead paint was banned in the U.S. and may be a hazard inside and outside the home especially where paint is worn or flaking.

There are many other potential sources of lead exposure, including:

- "Home remedies" and cosmetics imported from other countries
- Tamarind or chili-based candies from Mexico
- Stained glass windows
- Fishing sinkers
- Firing ranges
- Old, deteriorated mini-blinds
- Bean pots and painted ceramics
- Crystal decanters
- Lead crystal glassware

Since no safe level has been identified it is in everyone's interest to reduce exposure to lead as much as possible. Recommendations on ways to reduce lead exposure can be found on the Genesee County Health Department website www.gchd.us and Center for Disease Control and Prevention website: http://www.cdc.gov/nceh/lead/tips.htm .

Recent data provided by Hurley researchers has indicated a significant increase in blood lead levels in children after the switch to Flint River water. The County Health Officer has requested that MDHHS provide specific data to support their claim that state data is more comprehensive and does not show a significant increase. To date the state has failed to provide the requested data by the September 30, 2015 deadline in our previous request to the state.

COUNTY OF GENESEE

BY: _____ Date: 10-1-15

Jamie W. Curtis, Chairperson
Board of Commissioners

BY: _____ Date: 10-1-15

Brenda Clack, Chairperson
Human Services Committee
Board of Commissioners

BY: _____ Date: 10-1-15

Bryant W. Nolden, Vice Chairperson
Board of Commissioners

GENESEE COUNTY HEALTH DEPARTMENT

BY: _____ Date: 10-1-15

Mark Valacak, M.P.H.
Health Officer

From: Henry, James <jhenry@gchd.us>
Sent: Thursday, October 01, 2015 4:00 PM
To: Prysby, Mike (DEQ)
Subject: FW: MDEQ Water Testing for Flint Community Schools
Attachments: Lead_Copper_Sampling_Instructions_329915_7.pdf; Flint School List.pdf

From: Henry, James
Sent: Thursday, October 1, 2015 1:53 PM
To: 'Sitko, Anthony M'; Busch, Stephen (DEQ); Tawwab, Bilal; Lisa Ermak
Cc: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

Good afternoon, below is the message that I sent to GCHD staff today. Please let me know if there are questions or concerns.

Thanks Jim

Attached is the school list w/assignments and sampling protocol. If the school locations are more geographical convenient for someone else, please feel free to switch.

Plan

- Report to GCHD tomorrow morning at regular scheduled time to pick up the water bottles and forms.
- Report to first school office w/identification (approx. 8:30am). They will have designated three sample locations per school. The school will have followed their part of the sampling protocol.
- Follow our part of the sampling protocol. Be very specific when identifying the location on the MDEQ sample form i.e. classroom numbers, NSEW, ect.
- Return to office with samples. MDEQ will pick up samples for analysis.

Let me know if there are questions/concerns. Thanks for helping to expedite the schools sampling.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/

From: Sitko, Anthony M [mailto:tsitko@flintschools.org]
Sent: Wednesday, September 30, 2015 11:10 AM
To: Henry, James; Busch, Stephen (DEQ); Tawwab, Bilal; Lisa Ermak
Cc: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

Thank you.

We ask that the GCHD staff collecting samples please report to the main office of each school site to sign in as visitors and present GCHD identification. Principals will identify the selected fountains and direct you to their locations.

Respectfully,
Tony

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Wednesday, September 30, 2015 10:07 AM
To: Busch, Stephen (DEQ); Tawwab, Bilal; Sitko, Anthony M
Cc: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

Got it, Thanks

GCHD staff will collect samples Friday morning, if it works for the schools. I will follow up with more detailed information.

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/

From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Wednesday, September 30, 2015 9:31 AM
To: Henry, James; btawwab@flintschools.org; tsitko@flintschools.org
Cc: Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

A school based sampling instruction sheet is attached. We will provide copies to the Genesee County Health Department with sampling units.

A sheet should be completed for each sample. As discussed yesterday the plan is to collect 3 samples from each facility.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Pallone, Maggie (DEQ)
Sent: Tuesday, September 29, 2015 5:16 PM
To: Busch, Stephen (DEQ); Wurfel, Brad (DEQ)
Subject: FW: MDEQ Water Testing for Flint Community Schools

Steve-
Can you work on putting together the quick info they will need?
Thanks,
Maggie

From: Sitko, Anthony M [mailto:tsitko@flintschools.org]
Sent: Tuesday, September 29, 2015 5:15 PM
To: Pallone, Maggie (DEQ) <PalloneM@michigan.gov>

Cc: Tawwab, Bilal <btawwab@flintschools.org>; Lisa Ermak <lermak@bvrumfisk.com>
Subject: RE: MDEQ Water Testing for Flint Community Schools

Greetings Maggie,

Mr. Tawwab our Superintendent has a principal meeting tomorrow morning with our district principals.

If at all possible it would be good for us to be able to present them with the information needed (protocols) to prepare for the County Health Department to get the water samples from the schools on Thursday and/or Friday.

Mr. Tawwab would like to get them a memo communication in the morning to this effect. Therefore, please send the needed information that we discussed in the conference call as early as you can tomorrow for this important communication to our district principals.

Thanking you in advance,
Tony

From: Pallone, Maggie (DEQ) [mailto:PalloneM@michigan.gov]
Sent: Tuesday, September 29, 2015 3:12 PM
To: Sitko, Anthony M
Cc: Tawwab, Bilal; FARRIS SHARRECE; Lisa Ermak; Busch, Stephen (DEQ); Tommasulo, Karen (DEQ); Pallone, Maggie (DEQ)
Subject: RE: MDEQ Water Testing for Flint Community Schools

We would like to have this call at 4:00.

Conference call info: **PPI**
Access Code: **PPI**

Please let me know if you have any questions.

Thanks!
Heather Feuerstein for Maggie Pallone
Management Assistant to
Maggie Pallone, Deputy Director and
Brad Wurfel, Communications Director
Department of Environmental Quality
517.284.6715

From: Sitko, Anthony M [mailto:tsitko@flintschools.org]
Sent: Tuesday, September 29, 2015 1:23 PM
To: Pallone, Maggie (DEQ)
Cc: Tawwab, Bilal; FARRIS SHARRECE; Lisa Ermak
Subject: MDEQ Water Testing for Flint Community Schools
Importance: High

Greetings, Maggie,

Thank you for taking the time to talk with me this afternoon regarding water testing for our schools. Please find the attached list of sites within the Flint Community Schools at which Superintendent Tawwab would like water tested.

Per our discussion on the phone this afternoon, the list of school buildings is attached and I will be available between 3:00PM and 5:00PM for a conference call with yourself and the identified other parties.

I await your reply on the time for the conference call.

Regards,
Tony

FLINT COMMUNITY SCHOOLS
Expect More. Achieve More.

923 E. Kearsley Street ' Flint, MI 48503
Phone: (810) 760-1000 / Fax: (810) 760-7601
www.flintschools.org

SCHOOL INFORMATION
2015-2016

SCHOOL	PHONE	FAX	ADDRESS	PRINCIPAL	
SECONDARY SCHOOLS					
Northwestern High School	760-1780	760-6809	G-2138 W. Carpenter Rd., 48505	Tim Green	ANDREW
Accellerated Learning Academy (ALA)	760-8500	760-6809	G-2138 W. Carpenter Rd., 48505	Eddie Thomas	
Southwestern Classical Academy	760-1400	760-7772	1420 W. Twelfth St., 48507	Cheryl Tate	DAWN
ELEMENTARY SCHOOLS					
Brownell K-2 STEM Academy	760-1643	760-1538	6302 Oxley Dr., 48504	Darryl Grace	ANDREW
Doyle Ryder Elementary	760-5266	760-5118	1040 N. Saginaw St., 48503	Robert Bueche	BILL
Durant-Tuuri-Mott Elementary	760-1594	760-7729	1518 University Ave., 48504	Shelly Umphrey	BILL
Eisenhower Elementary	760-1607	760-7457	1235 Pershing St., 48503	Rachel Turner	TONY
Freeman Elementary	760-1797	760-6882	4001 Ogema St., 48507	Anita Miller	TONY
Holmes 3-6 STEM Academy	760-1968	760-1624	6602 Oxley Dr., 48504	Anna Johnson	ANDREW
Neithercut Elementary	760-1359	760-5133	2010 Crestbrook Ln., 48507	Debra Jackson-Noble	BRIAN
Pierce Elementary	760-1386	760-7147	1101 W. Vernon Dr., 48503	Shalonda Byas	SHERYL
Potter Elementary	760-1813	760-5156	2500 N. Averill Ave., 48506	Gretchen Shafer	BRIAN
OTHER BUILDINGS					
Administration Building	760-1000	760-7601	923 E. Kearsley St., 48503		JIM
Central Kitchen	760-1073	760-7073	305 Walnut , 48503		TINA

From: Henry, James <jhenry@gchd.us>
Sent: Tuesday, October 06, 2015 12:31 PM
To: Prysby, Mike (DEQ)
Subject: Flint Schools

Mike, do you have water results for Flint schools?

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/

From: PPI @aol.com
Sent: Sunday, October 11, 2015 5:57 PM
To: aleavitt@senatedems.org;edwardsm@vt.edu;hcroft@cityofflint.com;Amy.Hovey@mail.house.gov;bwright@cityofflint.com;lytle.darren@epa.gov;dwalling@cityofflint.com;donna.cole@genesys.org;Dykema, Linda D. (DHHS);Krisztian, George (DEQ);jhenry@gchd.us;jgaskin@unitedwaygenesee.org;jlorenz@cityofflint.com; PPI @yahoo.com;jherman@genesys.org;jfobrien@gcdcwws.com;ksmith@flint.org;larry.koehler@mcc.edu;dr. PPI @gmail.com;LawrenceR@mottchc.org;reynolds@mottchc.org;mglasgow@cityofflint.com;Wright.Michael@epa.gov;mjlane@umflint.edu;Prysby, Mike (DEQ);nhenderson@cityofflint.com;nbirchm1@hurleymc.com;plevine@gcms.org;rbincsik@cityofflint.com;rosejo@msu.edu;Russell.Hudson@mclaren.org;SFMatta@lan-inc.com;schock.michael@epa.gov;skammer@cityofflint.com;Busch, Stephen (DEQ);jwgreen@lan-inc.com;Wurfel, Brad (DEQ);achubb@cityofflint.com;KEVIN.KEANE@cmsenergy.com
Subject: Re: 3rd Quarter Water Report

Hi Howard,
The thoughts that both Andy and Marc shared sound wise. I'm curious though as to whether the TAC could be privy to the actual results of the Flint City water testing prior to the switch and this years values? Also, it would seem prudent to obtain the present Detroit Water System testing if available as well?
Thank you,
Gerald Natzke DO

-----Original Message-----
From: Andy Leavitt
To: Marc Edwards ; Howard Croft ; Amy Hovey ; Brent Wright ; Darren Lytle ; Dayne Walling ; donna. cole ; dykemal ; George Krisztian (DEQ) ; Gerald (Jed) Natzke ; James Henry ; Jamie Gaskin ; Jason Lorenz ; jmikewright ; JoAnne Herman ; John O'Brien ; Kirk Smith ; larry.koehler ; Laura Sullivan ; Lawrence Reynolds ; Lawrence Reynolds ; Michael Glasgow ; Michael Wright ; Mike Lane ; Mike Prysby (DEQ) ; Natasha Henderson ; Norb Birchmeier ; Pete Levine ; Robert Bincsik ; rosejo ; Russell Hudson ; Samir Matta ; schock.michael ; Sean Kammer ; Stephen Busch (DEQ) ; Warren Green Wurfel, Brad (DEQ) (DEQ) ; Anthony Chubb ; Kevin Keane
Sent: Sat, Oct 10, 2015 12:09 pm
Subject: Re: 3rd Quarter Water Report

I would echo Marc's sentiment on the bold language agreeing with his points but I would also add that trust needs to be rebuilt and the public simply will not believe anything in the document if you start by telling them it still meets standards. They do not differentiate between regs and rules but they know the water does not meet the standard of the physician community.

I would also recommend opening with timeline of going back to Detroit and what steps people can take to mitigate lead issues. Preferably with an excerpt from a physician.

The technical information matters for transparency but the trust gap is so wide that most people will be skeptical of all of it.
On Sat, Oct 10, 2015 at 11:48 AM Marc Edwards <edwardsm@vt.edu> wrote:

> Hi Howard,
> I think it is universally acknowledged now, that 30 seconds to 2 minutes flushing are not adequate, and **all public education should say 5 minutes flushing.**
> I also think that given results of our team sampling 277 homes, the high levels of lead MDEQ detected in the Flint schools (a 90%'ile over 15 ppb..which is horrible because they are not tier 1 plumbing sites), and the problems in the official LCR sampling conducted in late 2014-2015, that the following statement (in bold) is not really helpful in getting the message out about the current health risks. The bold statement seems more like wishful thinking or a legal position, and detracts from the goal of telling the public about the known problems.

*After 16 months of treating water from the Flint River, the City became aware that the while **still meeting all Safe Drinking Water Standards**, the level of corrosiveness could result in more lead leaching from service lines and household plumbing.*

That is my input. I am available at 540 231-7236 or 540 320-8740, if anyone should have questions about this.

Best Regards,

Marc Edwards

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Saturday, October 10, 2015 8:33 AM
To: Amy Hovey; Andy Leavitt; Brent Wright; Darren Lytle; Dayne Walling; donna. cole; dykemal; edwardsm; George Krisztian (DEQ); Gerald (Jed) Natzke; Howard Croft; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Michael Wright; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; schock.michael@epa.gov; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

Subject: 3rd Quarter Water Report
Team,
Included in this email is a copy of the first quarter water quality report that has been developed by the Utilities Division. Please take a look and offer any comments that you may have regarding content. There will be an additional one page insert containing three months test data inserted prior to distribution.
The purpose of the quarterly mailer is to increase communication, provide more transparency, and put more information into the hands of the public about what's occurring within the water system and with the infrastructure.
I will be putting together a separate weekly report for this Committee.
Thank you,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Laura Sullivan <PPI>
Sent: Tuesday, October 13, 2015 7:00 PM
To: Howard Croft
Cc: Gerald (Jed) Natzke;Andy Leavitt;Marc Edwards;Amy Hovey;Brent Wright;Lytle, Darren;Flint Mayor;donna.cole;Dykema, Linda D. (DHHS);Krisztian, George (DEQ);Henry, James;James Gaskin;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Lawrence Reynolds;Lawrence Reynolds;Michael Glasgow;Wright, Michael;Lane, Mike;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;schock.michael@epa.gov;Sean Kammer;Busch, Stephen (DEQ);Warren Green;Wurfel, Brad (DEQ);Anthony Chubb;Kevin Keane
Subject: Re: 3rd Quarter Water Report

Howard,

Am I reading this correctly? Does this say that only 16 of 189 water test samples collected between January and September had lead levels exceeding 15 ppb?

What was the 90th percentile value?

Could you provide the committee with the sample collection date, lead level, and address for these 189 residences? If not that, then the zip codes and collection dates for each?

Laura Sullivan

On Monday, October 12, 2015, Howard Croft <hcroft@cityofflint.com> wrote:
All,

In addition to the text, here is the single page of data that will accompany the mailer.
We can add any specific information that is requested.

We will be tracking all of the Flint River testing data prior to the switch and it will be available to this group.
We will work with Genesee County to obtain any water data that they have as well.

On Sun, Oct 11, 2015 at 5:57 PM, <PPI@aol.com> wrote:
Hi Howard,
The thoughts that both Andy and Marc shared sound wise. I'm curious though as to whether the TAC could be privy to the actual results of the Flint City water testing prior to the switch and this years values? Also, it would seem prudent to obtain the present Detroit Water System testing if available as well?
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-----Original Message-----
From: Andy Leavitt <aleavitt@senatedems.org>
To: Marc Edwards <edwardsm@vt.edu>; Howard Croft <hcroft@cityofflint.com>; Amy Hovey <Amy.Hovey@mail.house.gov>; Brent Wright <bwright@cityofflint.com>; Darren Lytle <lytle.darren@epa.gov>; Dayne

Walling <dwalling@cityofflint.com>; donna. cole <donna.cole@genesys.org>; dykemal <dykemal@mich.gov>; George Krisztian (DEQ) <krisztiang@michigan.gov>; Gerald (Jed) Natzke <[redacted]>; James Henry <jhenry@gchd.us>; Jamie Gaskin <jgaskin@unitedwaygenesee.org>; Jason Lorenz <jlorenz@cityofflint.com>; jmikewright <[redacted]>; JoAnne Herman <jherman@genesys.org>; John O'Brien <jfobrien@gcdcwws.com>; Kirk Smith <ksmith@mnt.org>; larry.koehler <larry.koehler@mcc.edu>; Laura Sullivan <[redacted]>; Lawrence Reynolds <LawrenceR@mottchc.org>; Lawrence Reynolds <reynolds@mottchc.org>; Michael Glasgow <mglasgow@cityofflint.com>; Michael Wright <Wright.Michael@epa.gov>; Mike Lane <mjlane@umflint.edu>; Mike Prysby (DEQ) <prysbym@michigan.gov>; Natasha Henderson <nhenderson@cityofflint.com>; Norb Birchmeier <nbirchm1@hurleymc.com>; Pete Levine <plevine@gcms.org>; Robert Bincsik <rbincsik@cityofflint.com>; rosejo <rosejo@msu.edu>; Russell Hudson <Russell.Hudson@mclaren.org>; Samir Matta <SFMatta@lan-inc.com>; schock.michael <schock.michael@epa.gov>; Sean Kammer <skammer@cityofflint.com>; Stephen Busch (DEQ) <BUSCHS@michigan.gov>; Warren Green <jwgreen@lan-inc.com>; Wurfel, Brad (DEQ) (DEQ) <WurfelB@michigan.gov>; Anthony Chubb <achubb@cityofflint.com>; Kevin Keane <KEVIN.KEANE@cmsenergy.com>
Sent: Sat, Oct 10, 2015 12:09 pm
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From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Saturday, October 10, 2015 8:33 AM
To: Amy Hovey; Andy Leavitt; Brent Wright; Darren Lytle; Dayne Walling; donna. cole; dykemal; edwardsm; George Krisztian (DEQ); Gerald (Jed) Natzke; Howard Croft; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Michael Wright; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; schock.michael@epa.gov; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

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Thank you,

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Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

--
Laura L. Sullivan, Ph. D.
3101 Hawthorne Drive
Flint, Michigan 48503
PPI

Human(kind). Be both.

From: Henry, James <jhenry@gchd.us>
Sent: Wednesday, October 14, 2015 12:55 PM
To: Howard Croft;Reynolds, Lawrence
Cc: Lane, Mike;Lytle, Darren;Andy Leavitt;Marc Edwards;Amy Hovey;Brent Wright;Dayne Walling;donna. cole;Dykema, Linda D. (DHHS);Krisztian, George (DEQ);Gerald (Jed) Natzke;Jamie Gaskin;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Wright, Michael;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;Schock, Michael;Sean Kammer;Busch, Stephen (DEQ);Warren Green;Wurfel, Brad (DEQ);Anthony Chubb;Kevin Keane;Valacak, Mark
Subject: RE: 3rd Quarter Water Report
Attachments: CDC - Lead - Tips - Sources of Lead - Water.website; EPA Is there lead in my drinking water.pdf; MDH Let it Run.pdf; WI DNR Lead in Drinking Water.pdf; Lead Brochure.pdf

Hello everyone,

Similar to many of your organizations the Genesee County Health Department has been receiving many specific questions regarding risks from lead. We have partnered with MDEQ's Toxicology Division to try to get some answers. Our research has provided only limited information. Attached are EPA, CDC and a few other documents that have been extremely helpful, but they do not address many of the specific questions. Also, copied below is a CDC response to some of the questions.

Please feel free to comment and add to the list below. If anyone has official, scientific or generally accepted guidance, please share it. I'll compile a comprehensive FAQ document and share it back with the group.

Public FAQ's

- Is it ok to wash fruits and vegetables?
- Is it ok to wash dishes?
- Is it ok to wash hands and then handle or eat food?
- Is it ok to wash clothes? (skin irritations)
- What are risks to pets (any particular pet that may be more susceptible) i.e. canary?

Hamilton Health Center Questions w/ CDC response below:

1. Can Flint River water be used to wipe down surfaces, counter tops?
2. Is it ok to utilize the water for cleaning of instruments?
3. Is it ok to use the water in autoclaving?

Dr. Arias wrote: We know of no formal guidance on this issue. However, lead in water is measured in parts per billion. Ambient contamination of surfaces and metals in general is much higher. Lead is also not well absorbed through skin. Our SMEs would not expect any problems with this practice unless the water is ingested. I'm copying Mary Jean Brown here who would be available if you have additional questions or need some other follow up.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4

Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Tuesday, October 13, 2015 5:59 PM
To: Reynolds, Lawrence
Cc: Lane, Mike; Lytle, Darren; Andy Leavitt; Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; Henry, James; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Wright, Michael; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane; Valacak, Mark
Subject: Re: 3rd Quarter Water Report

All,

The comments continue to be helpful and I am making adjustments as we go. I spent two hours at the Health Department today at their board meeting and we have greatly enhanced the communication between the City and the GCHD. I will be attending their future board meetings and will keep Mark and Jim not just appraised but involved in directional decisions as we continue to craft short and long term plans.

On Tue, Oct 13, 2015 at 10:39 AM, Reynolds, Lawrence <LawrenceR@mottchc.org> wrote:

Thank you Mr. Lane. These points will help medical providers stay on message with information our families can act on .

From: Lane, Mike [mailto:mjlane@umflint.edu]
Sent: Tuesday, October 13, 2015 9:53 AM
To: 'Lytle, Darren'; Howard Croft; Andy Leavitt
Cc: Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Reynolds, Lawrence; Reynolds, Lawrence; Michael Glasgow; Wright, Michael; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

Subject: RE: 3rd Quarter Water Report

Howard,

I agree with Darren that it may be a good idea to let the community know and prepare them that while switching back to Detroit water in the near future they will likely see discolored water, particulates, etc. during the transition.

Also, providing specific details on how to sample water in their homes would be helpful… the first draw, how long to flush before taking the second sample, how long water should sit in pipes before the first draw, etc.

It would further help to rebuild trust with the community to share the City's plan/timeline of more aggressive water quality sampling, specifically as it relates to lead exposure in homes and schools. Is there a timeline that can be shared which the City is working with to identify homes with lead service lines, and how can the City and State work together to assist those homeowners with mitigation. Perhaps indicating that the issue of lead is and will remain a high priority for the City until all households, schools, etc. have reliable/safe water quality regardless of whether the source of lead is from city transmission lines or a property owner's service line and home fixtures would also be helpful.

Mike

** ** ** ** ** ** ** **

Michael Lane

Director, Environment, Health and Safety

The University of Michigan-Flint

810-766-6763

PPI cell

mjlane@umflint.edu

From: Lytle, Darren [mailto:Lytle.Darren@epa.gov]
Sent: Tuesday, October 13, 2015 7:40 AM
To: Howard Croft; Andy Leavitt
Cc: Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Wright, Michael; Lane, Mike; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane
Subject: RE: 3rd Quarter Water Report

Howard,

I am in agreement with past comments and suggestions. Is this the time to let the public know your future plans? Are you expecting to be back to Detroit water next quarter? If so, that does not necessarily come without issues. It is a change and the potential for a brief upset (e.g., "red" water, particles, etc) exists. Would it be worth letting the public know in advance? Under "current drinking water issues", do you want to let residents know how and where to take samples here? A sampling plan (beyond LCR compliance sampling) is very important to understand the relative lead source (brass , solder and service lines) contributions, assess the current situation and the effectiveness of the return to Detroit water to reduce lead. You could state that on is being developed.

Darren

Darren A. Lytle, Ph.D., P.E.

Branch Chief (Acting)

U.S. Environmental Protection Agency

26 West Martin Luther King Dr.

Cincinnati, Ohio 45268

Phone: (513) 569-7432

Fax: (513) 487-2543

email: lytle.darren@epa.gov

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Sunday, October 11, 2015 7:29 AM
To: Andy Leavitt
Cc: Marc Edwards; Amy Hovey; Brent Wright; Lytle, Darren; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Wright, Michael; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane
Subject: Re: 3rd Quarter Water Report

All,

The comments were very helpful and I have made several revisions to the report that was sent yesterday, please review the amendments and forward any additional recommendations. I would like to solicit comments from anyone in the medical community that is willing to be quoted.

On Sat, Oct 10, 2015 at 12:03 PM, Andy Leavitt <aleavitt@senatedems.org> wrote:

> I would echo Marc's sentiment on the bold language agreeing with his points but I would also add that trust needs to be rebuilt and the public simply will not believe anything in the document if you start by telling them it still meets standards. They do not differentiate between regs and rules but they know the water does not meet the standard of the physician community.
>
> I would also recommend opening with timeline of going back to Detroit and what steps people can take to mitigate lead issues. Preferably with an excerpt from a physician.
>
> The technical information matters for transparency but the trust gap is so wide that most people will be skeptical of all of it.
>
> On Sat, Oct 10, 2015 at 11:48 AM Marc Edwards <edwardsm@vt.edu> wrote:

Hi Howard,

I think it is universally acknowledged now, that 30 seconds to 2 minutes flushing are not adequate, and **all public education should say 5 minutes flushing.**

I also think that given results of our team sampling 277 homes, the high levels of lead MDEQ detected in the Flint schools (a 90%'ile over 15 ppb..which is horrible because they are not tier 1 plumbing sites), and the problems in the official LCR sampling conducted in late 2014-2015, that the following statement (in bold) is not really helpful in getting the message out about the current health risks. The bold statement seems more like wishful thinking or a legal position, and detracts from the goal of telling the public about the known problems.

After 16 months of treating water from the Flint River, the City became aware that the while ***still meeting all Safe Drinking Water Standards****, the level of corrosiveness could result in more lead leaching from service lines and household plumbing.*

That is my input. I am available at 540 231-7236 or 540 320-8740, if anyone should have questions about this.

Best Regards,

Marc Edwards

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Saturday, October 10, 2015 8:33 AM
To: Amy Hovey; Andy Leavitt; Brent Wright; Darren Lytle; Dayne Walling; donna. cole; dykemal; edwardsm; George Krisztian (DEQ); Gerald (Jed) Natzke; Howard Croft; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan;

Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Michael Wright; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; schock.michael@epa.gov; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

Subject: 3rd Quarter Water Report

Team,

Included in this email is a copy of the first quarter water quality report that has been developed by the Utilities Division. Please take a look and offer any comments that you may have regarding content. There will be an additional one page insert containing three months test data inserted prior to distribution.

The purpose of the quarterly mailer is to increase communication, provide more transparency, and put more information into the hands of the public about what's occurring within the water system and with the infrastructure.

I will be putting together a separate weekly report for this Committee.

Thank you,

--

Howard Croft

Public Works Director

City of Flint

1101 S. Saginaw Street

Flint, MI 48502

PH# 810.766.7135 Ext.2043

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WHAT IS LEAD?

- Lead is a toxic metal that is harmful if inhaled or swallowed.
- Lead can be found in air, soil, dust, food, and water.

HOW CAN I BE EXPOSED TO LEAD?

- The greatest exposure to lead is swallowing or breathing in lead paint chips and dust.
- Lead also can be found in some household plumbing materials and water service lines.

WHO IS AT RISK?

- Children ages 6 and under are at the greatest risk. Pregnant women and nursing mothers should avoid exposure to lead to protect their children.
- Exposure to lead can result in delays in physical and mental development.

Your child is also at risk if:

- your home or a home that your child spends a lot of time in was built before lead paint was banned in 1978.
- renovation work is being done in such a home.
- the adults in the home work with lead.

HOTLINES & INFORMATION

EPA Safe Drinking Water Hotline:
800-426-4791

National Lead Information Center:
800-424-LEAD
www.epa.gov/lead

NSF International:
www.nsf.org

Lead in Drinking Water Web Site:
www.epa.gov/safewater/lead

Additional Information:

Read the annual report you get from your water utility to find out about how they are working to reduce levels of lead in drinking water and other information about your drinking water. Call them if you have any questions.

Contact your local public health department or talk to your doctor about reducing your family's exposure to lead.

Office of Water (4606 M)
EPA 816-F-05-001
February 2005

Printed on Recycled Paper

EPA United States Environmental Protection Agency

IS THERE LEAD IN MY DRINKING WATER?

You can reduce the risk of lead exposure from drinking water in your home.

Tips For Protecting Your Family's Health

HOW DOES LEAD GET INTO WATER?

Lead enters the water ("leaches") through contact with the plumbing.

Lead leaches into water through:

- Corrosion* of
  - Pipes
  - Solder
  - Fixtures and Faucets (brass)
  - Fittings

*Corrosion is a dissolving or wearing away of metal caused by a chemical reaction between water and your plumbing.

The amount of lead in your water also depends on the types and amounts of minerals in the water, how long the water stays in the pipes, the amount of wear in the pipes, the water's acidity and its temperature.

HEALTH TIP

To help block the storage of lead in your child's body, serve your family meals that are low in fat and high in calcium and iron, including dairy products and green vegetables.

What should I do if I suspect that my water contains high lead levels?

- If you want to know if your home's drinking water contains unsafe levels of lead, have your water tested.

- Testing is the only way to confirm if lead is present or absent.

- Most water systems test for lead as a regular part of water monitoring. These tests give a system-wide picture and do not reflect conditions at a specific drinking water outlet.

- For more information on testing your water, call EPA's Safe Drinking Water Hotline at 800-426-4791.

Should I test my children for exposure to lead?

- Children at risk of exposure to lead should be tested.

- Your doctor or local health center can perform a simple blood test to determine your child's blood-lead level.

- If your child has a blood lead level at or above 10ug/dl, should take preventive measures.

QUICK TIPS TO REDUCE YOUR FAMILY'S EXPOSURE TO LEAD

Boiling your water will not get rid of lead.

- Use cold water for drinking or cooking. Never cook or mix infant formula using hot water from the tap.

- Make it a practice to **run the water at each tap** before use.

- Do not consume water that has sat in your home's plumbing for more than six hours. First, make sure to **run the water** until you feel the temperature change before cooking, drinking, or brushing your teeth, unless otherwise instructed by your utility.

- Some faucet and pitcher filters can remove lead from drinking water. If you use a filter, be sure you get one that is certified to remove lead by the NSF International.

Let it run. . . and get the lead out!

Important information on how to protect your health

Lead is a common metal that has been in many consumer products but is now known to be harmful to human health if ingested or inhaled. It can be found in lead-based paint, air, soil, household dust, food, some types of pottery, and drinking water. When people come in contact with lead, it may enter their bodies and accumulate over time, resulting in damage to the brain, nervous system, red blood cells, and kidneys.

The following is information about lead in drinking water: why it is a cause for concern, how it enters water, and most importantly, simple precautions you can take to protect you and your family.

Why is lead in drinking water a problem?

Drinking water is not our only source of lead exposure. However, combined with other sources, lead in water can increase the build-up of lead in our bodies. Lead in water can be a special problem for infants, whose diets may be mostly liquids, such as baby formulas or concentrated juices mixed with water. Smaller bodies can absorb lead more rapidly than bigger ones, so amounts of lead that won't hurt an adult can be very harmful to a child. A child's mental and physical growth can be permanently harmed by too much lead.

How does lead get into my drinking water?

Lead is rarely found in natural sources of water such as rivers and lakes or underground aquifers. However, it may work its way into drinking water after the water has left the treatment plant and is on its way to people's faucets. This usually happens through the corrosion of materials containing lead in household plumbing. These materials include brass faucets, lead solder on copper pipes, lead pipes, or lead service lines connecting the water main to the inside plumbing.

Lead pipes are no longer installed for service lines or in household plumbing, and lead solder has been outlawed in Minnesota since 1985. The amount of lead allowed in brass faucets has also been limited, but can still contribute some lead to drinking water (note that many faucets are made of brass even if they do not have a "brass" color). Even with these restrictions in place, some homes—especially older homes—may still have significant amounts of lead in their plumbing systems.

How can I reduce lead in my drinking water?

Let It Run. Flush taps before using water from them for drinking or cooking. Water that stands idle in pipes for long periods of time—such as overnight or during the day when people are gone to work and school—is more likely to absorb materials from the plumbing system. The best way to rid the pipes of water that may contain lead is to let the cold-water faucet run until you feel that the water is as cold as it will get. The amount of time this takes will depend on your home and how its plumbing is arranged—but you should always run the water for at least 60 seconds. If your home has a lead service line (which you can determine by asking your local water utility), you should flush water for an additional 2 to 3 minutes to make sure you are getting fresh water from the water main. Be sure to flush standing water before using any water for drinking or cooking purposes.

Tips for flushing:

- Other household water uses will also help clear standing water from your home's plumbing. For example, you may want to establish a routine of doing household tasks that use water—such as showering, flushing the toilet, or running the dishwasher—first thing in the morning before using water for drinking or cooking. Keep in mind that you'll still need to flush individual faucets for a short time before using them for drinking water.

- The water you run from drinking water taps does not have to be wasted. You can use this water for cleaning purposes or for watering plants.

- You may want to keep a container of drinking water in your refrigerator, so you don't have to run water every time you need it.

Use Only Cold Water for Cooking and Drinking. Hot water dissolves lead more quickly than cold water, so don't use water from your hot-water faucet for cooking or drinking. If you need hot water for cooking or drinking, take water from the cold tap and heat it. It is especially important not to use the hot water for making baby formula.

Will water treatment devices help?

Some treatment devices can reduce the amount of lead in your drinking water. Reverse-osmosis and distillation units can be used for that purpose. A few types of water filters also remove lead. Check the product literature to be sure it has been certified for lead removal by NSF International (http://nsf.org). Also, you must follow the manufacturer's recommendations for operation and maintenance to ensure that the treatment equipment works correctly.

Let it run!

How can I get my water tested for lead?

Testing for lead can help determine if there is too much in your drinking water. Many laboratories can test your water to see if there is a lead problem. Fees will vary between labs. Check your Yellow Pages under "Laboratories-Testing."

Minnesota Department of Health *Division of Environmental Health*
625 North Robert Street P. O. Box 64975 St. Paul, Minnesota 55164-0975
http://www.health.state.mn.us/divs/eh/water

141-0715
September 2007

What is the State of Wisconsin doing about the problem of lead in drinking water?

- DNR rules establish a lead "action level" of 15 ug/L (micrograms per liter) in public water systems.
- All community and non-transient non-community water system owners are required under DNR rules to regularly test high-risk locations for lead. If more than ten percent of the locations exceed the action level the system owner must conduct a public education program and install system-wide treatment to reduce corrosion.
- DNR well and facility construction rules currently prohibit the use of lead in wells, pumps, and other water system components.
- Department of Commerce rules currently restricts the use of lead in solder, fluxes and plumbing system piping.
- DNR will continue to work with community water systems to reduce the corrosivity of the water through central treatment. System-wide corrosion control can be designed to either reduce the actual corrosivity of the water, or to coat the piping with an additive which acts as a barrier between the pipe and the water.
- DNR will continue to provide updated information on the issue of lead in drinking water.

Where can I get more information?

The DNR has more information about drinking water and groundwater protection on its website at dnr.wi.gov. Choose "Drinking Water & Groundwater" from the drop-down program menu and select from a variety of listed topics.

Northern Region
810 W. Maple Street
Spooner, WI 54801
(715) 635-2101
OR
107 Sutliff Avenue
Rhinelander, WI 54501
(715) 365-8900

South Central Region
3911 Fish Hatchery Road
Fitchburg, WI 53711
(608) 275-3266

West Central Region
1300 W. Clairemont
PO Box 4001
Eau Claire, WI 54702-4001
(715) 839-3700

Southeast Region
2300 N. Dr. Martin
Luther King, Jr. Drive
Milwaukee, WI 53212
(414) 263-8500

Northeast Region
2984 Shawano Avenue
P.O. Box 10448
Green Bay, WI 54307-0448
(920) 662-5100

Central Office
101 S. Webster
P.O. Box 7921
Madison, WI 53707-7921
(608) 266-0821

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services and functions under an Affirmative Action Plan. If you have any questions, please write to: Equal Opportunity Office, Department of the Interior, Washington, D.C. 20240.

This publication is available in alternative format (large print, Braille, audiotape, etc.) upon request. Please call (608) 266-0821 for more information.

PUB-DG-015 2008

PRINTED ON RECYCLED PAPER

Lead in Drinking Water

This brochure tells of growing evidence that even moderate levels of lead can be harmful to human health, and particularly to the health of small children and developing fetuses. For this reason, Wisconsin residents are advised to:

1) run your water in the morning for two or three minutes, or until it gets as cold as it will get, before you drink it, or
2) find out how much lead your water is dissolving from your plumbing system.

Whether your water comes from a community water system or your own private well, this brochure will discuss the lead issue in some detail, and will provide some specific recommendations for a variety of situations.

The Wisconsin Department of Natural Resources Bureau of Drinking Water & Groundwater would like to thank the Groundwater Coordinating Council (GCC) Education Sub-Committee for their part in the development and editing of this publication. For more information on the GCC, it's member organizations and programming, please visit wisconsin.gov. Choose "Government," "State Agencies," followed by "List of Agencies" then select "Groundwater Coordinating Council."

Wisconsin Department of Natural Resources
Bureau of Drinking Water & Groundwater

What is Lead? How can I be exposed?

Lead is a toxic metal which has been used in the construction of most household plumbing systems in Wisconsin. Water within the plumbing system will continuously dissolve the lead it contacts. The rate can vary greatly with variations in natural water quality and the age of the plumbing system. Most water in Wisconsin is corrosive enough to dissolve some amount of lead. When the water stands for extended periods of time, such as overnight, lead concentrations in the water can increase greatly.

Lead is widespread in the environment, and people absorb lead from a variety of sources every day. Although lead has been used in numerous consumer products, the most important sources of lead exposure to the general population are:

- Lead-based paint
- Food (which can be contaminated by lead in the air or in food containers, particularly lead-soldered food containers)
- Soil and dust (which has been contaminated by air, and includes dust both inside and outside the home)
- Outside air from vehicle emissions and other sources. These have been reduced significantly since placing federal controls on lead in gasoline
- Drinking water (from the corrosion of plumbing systems)

It is estimated that lead in drinking water contributes between 10 and 20% of total lead exposure in young children. Food is the greatest single source of lead for the average adult.

How does lead get into my water supply?

Most Wisconsin drinking water sources, either wells or lake water intakes, have little or no measurable lead. The source of lead in drinking water is most likely lead pipe or solder in the house water supply plumbing, or lead service lines which join buildings to street water mains.

Under typical circumstances, lead will dissolve into the water. The concentration of lead in drinking water can vary greatly, depending on the corrosivity of the water, the type and age of the plumbing materials used in the house, and the length of time that the water stands in the pipes. The highest levels of lead occur when very corrosive water stands motionless in lead or lead-soldered copper pipe for long periods of time.

Corrosivity varies greatly with water quality, but hard water is generally less corrosive than soft water. Nevertheless, hard water alone does not always guarantee that there will be no elevated lead levels.

A greenish discoloration and unpleasant taste of tap water are indications that copper pipes are corroding, but significant corrosion can occur even if there are no visible indications.

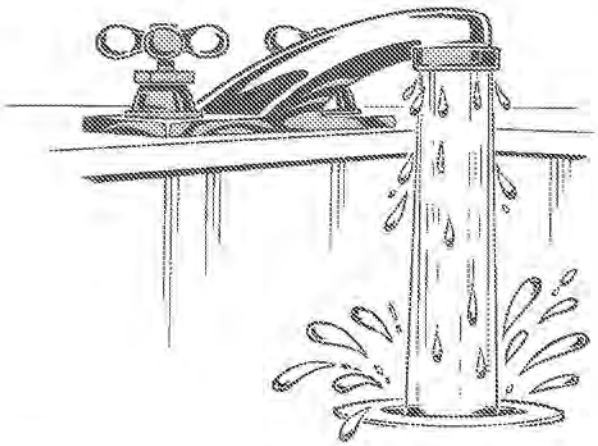
The age of a house relates to the type of plumbing system that can be expected. Through the early 1900s, lead pipes were commonly used for interior plumbing in some areas. Until the 1940s, lead piping was often used for the service lines that join buildings to street water mains. Lead piping can be recognized as a dull-grey metal which is soft enough to be easily scratched with a key or screwdriver. Scratched lead will be shiny underneath.

In the 1930s, copper pipes or galvanized steel pipes replaced lead pipes in most residential plumbing. However, the use of 50/50 tin/lead solder and lead-containing fluxes to join copper piping continued in Wisconsin until a ban on the use of lead solder and fluxes became effective in1984. Homes constructed after that date should have "lead-free" water supply plumbing systems. Also, any repairs of existing plumbing systems must be made with "lead-free" materials, such as tin/antimony (95/5) solder.

Studies indicate that the levels of dissolved metals in drinking water will decrease as a building ages. This is because, as time passes, a mineral or oxidation coating forms on the inside of the pipes (if the water is not too corrosive). This coating can partially insulate the water from the lead materials, significantly reducing levels of dissolved lead.

The longer water stands in a pipe the more lead can be dissolved. Because lead will continuously dissolve into the water, the resulting lead concentrations will increase directly with time. This is why water which is drawn first thing in the morning, or after any extended period of nonuse, will contain the highest levels of lead.

Federal and state standards have established an action level of 15 parts per billion (ppb) for lead in drinking water. The standard is adjusted to account for average lead exposures from other environmental sources as well. Nevertheless, lead has no beneficial health effects, and it is advisable to reduce the lead in your tap water as much as possible. This is particularly true for pregnant women or young children who may drink the water.

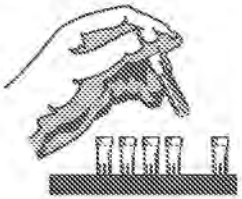


How does lead affect my health?

Lead absorbed by the lungs and the digestive tract from all sources enters the bloodstream, where it distributes to all tissues of the body. Excessive levels of lead can damage the brain, kidneys, nervous system, red blood cells and reproductive system. The degree of harm is directly related to the level of lead in the blood (from all sources). Known effects of exposure to lead range from subtle changes in body chemistry and nervous system functions at low levels of exposure, to severe toxic effects or even death at very high levels associated with acute poisoning. Some harmful effects are reversible if exposure is reduced, while other harmful effects can be permanent.

Young children, infants and fetuses appear to be particularly vulnerable to harmful effects of lead. A dose of lead that would have little effect on an adult can have a big effect on a small child. Also, growing children will more rapidly absorb any lead they consume. A child's mental and physical development can be irreversibly stunted by over-exposure to lead. In infants, whose diet consists of liquids made with water – such as baby formula – lead in drinking water makes up an even greater proportion of total lead exposure (40 to 60%).

How can I find out if my water is safe to drink?



There are certain obvious advantages to having your water tested for lead, including knowing exactly how high your lead levels rise after periods of nonuse. Even if you live in an older home with no lead piping and are in a hard water area, a lead test can confirm that there is little or no lead in your "first-draw" sample. If testing shows lead in your first drawn water, a lead test before and after flushing can confirm if your flushing procedure is working.

If you decide to have your water tested, it is recommended that you use a state certified laboratory which can detect lead in drinking water at 5 parts per billion or less. There are a number of laboratories statewide that can provide drinking water sampling materials and instruction. A list of certified labs is available from your drinking water & groundwater specialist at your DNR regional office or online at: dnr.wi.gov/org/es/science/lc/LABS/LabLists.htm or check your local yellow pages. Persons served by a public water system should contact the system owner to determine whether there has already been testing of homes with plumbing materials and an installation date similar to yours.

Private Wells

In addition to plumbing corrosion concerns, there are several other potential sources of lead in private wells. If your well draws water from a sand and/or gravel formation, you should know that some well screens contain lead, and many have been installed with a "lead packing collar." If such a device is contributing lead to your water, flushing will probably take longer. It is recommended that you have your water tested for lead.

If you own a "driven-point" well, and if you have ever "shot" the well to clear the screen, you have another potential source of lead in your water. Some individuals have actually poured lead shot into a well to keep out sand. Lead wool has also been placed in some wells. (None of these practices has ever been recommended.) In any of these cases, it is recommended that you have your water tested for lead.

If you live in a former lead-zinc mining region of extreme southwest Wisconsin or if you live near existing or former cherry orchards in Door County, you may have lead in your groundwater. It is recommended that you have your water tested for lead.

If you have lead in your groundwater, flushing will not be effective. Point-of-use treatment devices, such as reverse osmosis and distillation units can be effective in removing lead. However, they can be expensive, their effectiveness varies, and they must be properly maintained. All makes and models of treatment devices must be approved by the Wisconsin Department of Commerce. Department of Natural Resources approval may be required, under certain conditions, for the installation of a point of use treatment device. Contact the Bureau of Drinking Water and Groundwater at (608) 266-0821 or one of the DNR offices listed at the end of this brochure for additional information.

If a treatment device is installed, set up an effective and practical maintenance and monitoring program to be sure the system is maintained as recommended by the manufacturer. This is the best way to be certain that it is doing the job intended.

Bring in water from a known safe supply.

A new house

If your house was constructed after September 26, 1984, state law requires that the soldered joints be "lead-free." To check on this, try to scratch the outside of the solder at a pipe joint with a key or screwdriver. If the solder is dull in appearance, scratches easily, and is shiny underneath, it may be illegally-installed 50/50 lead/tin solder. Tin/antimony (95/5) solder, the typical replacement for lead solder, remains bright in appearance, and there is often a slight gap or indentation in the solder where the pipe and fitting meet. Lead solder usually bridges this gap completely.

If you suspect that lead solder was used in the construction of your plumbing system, have a "first-draw" sample of your water tested for lead. If lead is found at levels over 10 ppb, contact your local plumbing inspector or the Wisconsin Department of Commerce, Safety and Buildings Division at (608) 266-3151 or visit their Web site at commerce.state.wi.us., for further advice. (Lead often occurs in other metallic alloys such as brass and bronze and small amounts can occur in copper pipe itself.)

How can I reduce my exposure to lead in drinking water?

If your house was constructed before October, 1984, the easiest and most effective method of reducing lead in drinking water is not to drink water that has been in contact with your house plumbing for more than 6 hours, such as overnight or during your work day. Before using water for drinking or cooking, flush the cold water faucet by allowing the water to run until the water has become as cold as it will get (usually 2-3 minutes).

You must do this for each drinking water faucet – taking a shower will not flush your kitchen tap. Shower, toilet, or cold water laundry use will, however, partially flush the plumbing, and will often reduce the time needed to flush drinking water faucets. Buildings constructed prior to the 1940s may have service lines made of lead. Letting the water run for an extra 15 seconds after it cools should also flush this service line.

Studies by the DNR have shown that such flushing can reduce lead levels from hundreds of parts per billion to less than 3 parts per billion (the current detection limit at the State Laboratory of Hygiene). Water flushed from the taps – usually one to two gallons – can be collected and used for nonconsumptive purposes such as washing; it needn't be wasted. (NOTE: The flushing procedures outlined above will usually be inadequate in large buildings such as apartment complexes.)

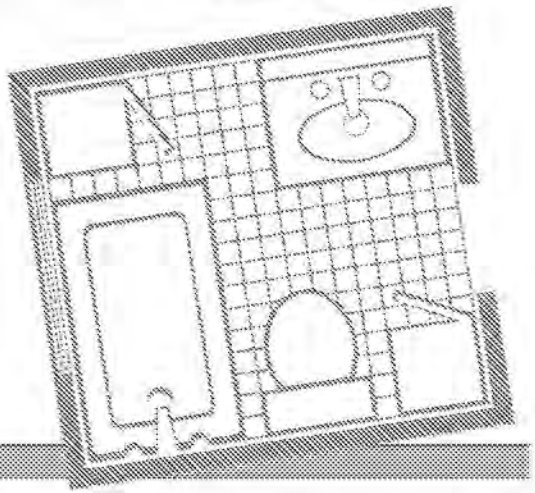
Another recommendation for reducing lead exposure is to never cook with or drink water from the hot-water tap. Hot water dissolves lead more quickly than cold water. So, do not use water taken from the hot tap for cooking or drinking and especially not for making baby formula.

Must every plumbing system be flushed in the morning? Not in all cases. Compliance samples collected show that, in areas with high water hardness, little or no detectable lead was found in homes which met all of the following conditions:

- Very hard, alkaline water (generally total hardness greater than 300 parts per million, reported "as calcium carbonate"),
- Water supply plumbing system more than five years old
- No lead piping
- No lead service line connecting to street water main

The individuals in these homes do not need to flush their house plumbing if water is used daily and many others with a similar situation will probably find few problems. You can contact your water utility or supplier for information on the level of water hardness in your area, as well as other information available on first-draw lead levels in the area.

A word of caution: with the limited data available, it is not possible to guarantee that all homes with the above characteristics will have little or no detectable "first-draw" lead levels. If you do not have your water tested, flushing is a simple precaution.



WHAT IS LEAD?

- Lead is a toxic metal that is harmful if inhaled or swallowed.

WHAT HEALTH EFFECTS CAN LEAD CAUSE?

- At high levels, lead can cause serious illness affecting many parts of the body.
- More often, low levels cause learning disabilities without any obvious illness.

WHO IS AT RISK?

- Children ages 6 and under are at greatest risk.
- Pregnant women and nursing mothers should also avoid exposure.

MORE INFORMATION

Information on lead in water:

EPA Safe Drinking Water Hotline
800-426-4791

Lead in Drinking Water Website
www.epa.gov/safewater/lead

To get your water tested:

Calhoun County
Environmental Health Division
269-969-6341

Information on lead in general:

National Lead Information Center
800-424-LEAD

Calhoun County Public Health Department
190 E. Michigan Avenue
Battle Creek, Michigan 49014
(269) 969-6370 (Tel)
(269) 966-1489 (Fax)
www.calhouncountymi.gov/publichealth

CALHOUN COUNTY PUBLIC HEALTH DEPARTMENT

IS THERE LEAD IN MY DRINKING WATER?

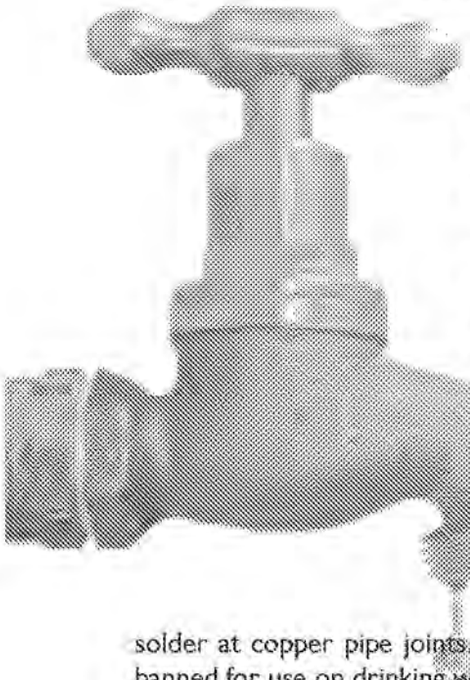
Tips for Protecting Your Family's Health

How Does Lead Get Into Water?

Lead enters tap water through contact with your plumbing.

Some plumbing parts contain lead. Water can absorb lead as it flows through them.

Today, plumbing parts made for drinking water contain very little or no lead. However, the plumbing installed in your home probably has more lead in it than plumbing being installed today. Here are some examples of plumbing materials that contain lead:



- Interior lead pipes, which were often installed in new homes until around 1930.
- For city water users, an underground lead pipe connecting your home to the water main. This is most likely for homes built before 1950.
- Lead solder at copper pipe joints. Lead solder was banned for use on drinking water pipes in 1987.
- Brass or bronze parts, including chrome-plated faucets. Brass tends to contain about 5% lead, but the percentage used in faucets has dropped, starting in the late 1990s.
- Laundry room faucets and outdoor faucets, which can be higher in lead, since they are not intended for drinking use.

How Do I Know if There is Lead in My Water?

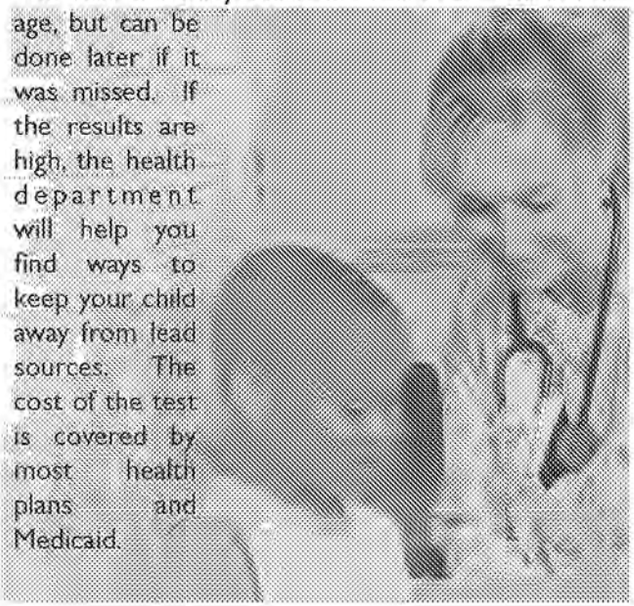
Testing the water at the faucet is the only way to know for sure. Testing the faucets you use for drinking water is a good idea for both well owners and city water users. City water departments test their water for lead, but these tests can't rule out problems caused by your home's plumbing.

You can visit the Environmental Health office to pick up a test kit. We are located at 190 E. Michigan Ave., Battle Creek. The test costs $24. Or, you can purchase a mail-in test kit from a home improvement store.

If a test shows a high level of lead (above 15 ug/L or 0.015 mg/L), call the Safe Drinking Water Hotline at 1-800-426-4791 to learn more about reducing the level.

Should My Child Be Tested?

A simple blood test can check for lead in your child's body. Thousands of children in Calhoun County get tested every year. You can ask your health care provider if testing is recommended for your child. The test is usually done at 12 and 24 months of age, but can be done later if it was missed. If the results are high, the health department will help you find ways to keep your child away from lead sources. The cost of the test is covered by most health plans and Medicaid.



Quick Tips to Reduce Lead in Your Drinking Water

- Don't drink water that stood in your plumbing for more than 6 hours. First run the water until the temperature stops changing.
- Don't run hot water for drinking or cooking. For infant formula, heat cold tap water with a stove or microwave.
- Once a month, remove the aerator from your faucet, and clean the inside.
- If you plan to buy a home water filter, check the box to see if it's certified to remove lead.
- To help block the effects of lead, serve your family meals that are low in fat and high in calcium and iron, including dairy products and green vegetables.
- Boiling your water will NOT get rid of lead.

DON'T FORGET ABOUT LEAD PAINT

The most dangerous source of lead is lead paint. Old lead paint releases chips or dust that children can get into their mouths. Most homes built before 1978 have some lead paint. A lead professional can check your house or apartment for lead paint. If you qualify for assistance, the state government can help pay for this, and for fixing any problems that are found. Call MI Healthy Homes at 1-866-691-LEAD to find a certified professional or to find out if you qualify for assistance.

From: Marc Edwards <edwardsm@vt.edu>
Sent: Wednesday, October 14, 2015 1:08 PM
To: 'Henry, James';'Howard Croft';'Reynolds, Lawrence'
Cc: 'Lane, Mike';'Lytle, Darren';'Andy Leavitt';'Amy Hovey';'Brent Wright';'Dayne Walling';'donna. cole';Dykema, Linda D. (DHHS);Krisztian, George (DEQ);'Gerald (Jed) Natzke';'Jamie Gaskin';'Jason Lorenz';'jmikewright';'JoAnne Herman';'John O'Brien';'Kirk Smith';larry.koehler@mcc.edu;'Laura Sullivan';'Michael Glasgow';'Wright, Michael';Prysby, Mike (DEQ);'Natasha Henderson';'Norb Birchmeier';'Pete Levine';'Robert Bincsik';rosejo@msu.edu;'Russell Hudson';'Samir Matta';'Schock, Michael';'Sean Kammer';Busch, Stephen (DEQ);'Warren Green';Wurfel, Brad (DEQ);'Anthony Chubb';'Kevin Keane';'Valacak, Mark'
Subject: RE: 3rd Quarter Water Report

I agree that with one or two rare exceptions, it is ok to do all of the activities below. We did measure an average of 2000 ppb lead in one Flint home, over a flushing period of 25 minutes, in which case we redid the exposure calculations and showed that it could be significant.
That was a very exceptional case based on our sampling. I hope that this helps. So I agree with Dr. Arias.

Marc

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Wednesday, October 14, 2015 12:55 PM
To: Howard Croft; Reynolds, Lawrence
Cc: Lane, Mike; Lytle, Darren; Andy Leavitt; Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Wright, Michael; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane; Valacak, Mark
Subject: RE: 3rd Quarter Water Report

Hello everyone,

Similar to many of your organizations the Genesee County Health Department has been receiving many specific questions regarding risks from lead. We have partnered with MDEQ's Toxicology Division to try to get some answers. Our research has provided only limited information. Attached are EPA, CDC and a few other documents that have been extremely helpful, but they do not address many of the specific questions. Also, copied below is a CDC response to some of the questions.

Please feel free to comment and add to the list below. If anyone has official, scientific or generally accepted guidance, please share it. I'll compile a comprehensive FAQ document and share it back with the group.

Public FAQ's

- Is it ok to wash fruits and vegetables?
- Is it ok to wash dishes?
- Is it ok to wash hands and then handle or eat food?

- Is it ok to wash clothes? (skin irritations)
- What are risks to pets (any particular pet that may be more susceptible) i.e. canary?

Hamilton Health Center Questions w/ CDC response below:

1. Can Flint River water be used to wipe down surfaces, counter tops?
2. Is it ok to utilize the water for cleaning of instruments?
3. Is it ok to use the water in autoclaving?

Dr. Arias wrote: We know of no formal guidance on this issue. However, lead in water is measured in parts per billion. Ambient contamination of surfaces and metals in general is much higher. Lead is also not well absorbed through skin. Our SMEs would not expect any problems with this practice unless the water is ingested. I'm copying Mary Jean Brown here who would be available if you have additional questions or need some other follow up.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Tuesday, October 13, 2015 5:59 PM
To: Reynolds, Lawrence
Cc: Lane, Mike; Lytle, Darren; Andy Leavitt; Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; Henry, James; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan;

Michael Glasgow; Wright, Michael; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane; Valacak, Mark
Subject: Re: 3rd Quarter Water Report

All,

The comments continue to be helpful and I am making adjustments as we go. I spent two hours at the Health Department today at their board meeting and we have greatly enhanced the communication between the City and the GCHD. I will be attending their future board meetings and will keep Mark and Jim not just appraised but involved in directional decisions as we continue to craft short and long term plans.

On Tue, Oct 13, 2015 at 10:39 AM, Reynolds, Lawrence <LawrenceR@mottchc.org> wrote:

Thank you Mr. Lane. These points will help medical providers stay on message with information our families can act on .

From: Lane, Mike [mailto:mjlane@umflint.edu]
Sent: Tuesday, October 13, 2015 9:53 AM
To: 'Lytle, Darren'; Howard Croft; Andy Leavitt
Cc: Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Reynolds, Lawrence; Reynolds, Lawrence; Michael Glasgow; Wright, Michael; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

Subject: RE: 3rd Quarter Water Report

Howard,

I agree with Darren that it may be a good idea to let the community know and prepare them that while switching back to Detroit water in the near future they will likely see discolored water, particulates, etc. during the transition.

Also, providing specific details on how to sample water in their homes would be helpful… the first draw, how long to flush before taking the second sample, how long water should sit in pipes before the first draw, etc.

It would further help to rebuild trust with the community to share the City's plan/timeline of more aggressive water quality sampling, specifically as it relates to lead exposure in homes and schools. Is there a timeline that can be shared which the City is working with to identify homes with lead service lines, and how can the City and State work together to assist those homeowners with mitigation. Perhaps indicating that the issue of lead is and will remain a high priority for the City until all households, schools, etc. have reliable/safe water quality regardless of whether the source of lead is from city transmission lines or a property owner's service line and home fixtures would also be helpful.

Mike

** ** ** ** ** ** ** **

Michael Lane

Director, Environment, Health and Safety

The University of Michigan-Flint

810-766-6763

PPI cell

mjlane@umflint.edu

From: Lytle, Darren [mailto:Lytle.Darren@epa.gov]
Sent: Tuesday, October 13, 2015 7:40 AM
To: Howard Croft; Andy Leavitt
Cc: Marc Edwards; Amy Hovey; Brent Wright; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Wright, Michael; Lane, Mike; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane
Subject: RE: 3rd Quarter Water Report

Howard,

I am in agreement with past comments and suggestions. Is this the time to let the public know your future plans? Are you expecting to be back to Detroit water next quarter? If so, that does not necessarily come without issues. It is a change and the potential for a brief upset (e.g., "red" water, particles, etc) exists. Would it be worth letting the public know in advance? Under "current drinking water issues", do you want to let residents know how and where to take samples here? A sampling plan (beyond LCR compliance sampling) is very important to understand the relative lead source (brass , solder and service lines) contributions, assess the current situation and the effectiveness of the return to Detroit water to reduce lead. You could state that on is being developed.

Darren

Darren A. Lytle, Ph.D., P.E.

Branch Chief (Acting)

U.S. Environmental Protection Agency

26 West Martin Luther King Dr.

Cincinnati, Ohio 45268

Phone: (513) 569-7432

Fax: (513) 487-2543

email: lytle.darren@epa.gov

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Sunday, October 11, 2015 7:29 AM
To: Andy Leavitt
Cc: Marc Edwards; Amy Hovey; Brent Wright; Lytle, Darren; Dayne Walling; donna. cole; dykemal; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Wright, Michael; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Schock, Michael; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane
Subject: Re: 3rd Quarter Water Report

All,

The comments were very helpful and I have made several revisions to the report that was sent yesterday, please review the amendments and forward any additional recommendations. I would like to solicit comments from anyone in the medical community that is willing to be quoted.

On Sat, Oct 10, 2015 at 12:03 PM, Andy Leavitt <aleavitt@senatedems.org> wrote:

> I would echo Marc's sentiment on the bold language agreeing with his points but I would also add that trust needs to be rebuilt and the public simply will not believe anything in the document if you start by telling them it still meets standards. They do not differentiate between regs and rules but they know the water does not meet the standard of the physician community.
>
> I would also recommend opening with timeline of going back to Detroit and what steps people can take to mitigate lead issues. Preferably with an excerpt from a physician.
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>
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>
> > Hi Howard,
> >
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> >
> > I also think that given results of our team sampling 277 homes, the high levels of lead MDEQ detected in the Flint schools (a 90%'ile over 15 ppb..which is horrible because they are not tier 1 plumbing sites), and the problems in the official LCR sampling conducted in late 2014-2015, that the following statement (in bold) is not really helpful in getting the message out about the current health risks. The bold statement seems more like wishful thinking or a legal position, and detracts from the goal of telling the public about the known problems.
> >
> > *After 16 months of treating water from the Flint River, the City became aware that the while* ***still meeting all Safe Drinking Water Standards****, the level of corrosiveness could result in more lead leaching from service lines and household plumbing.*
> >
> > That is my input. I am available at 540 231-7236 or 540 320-8740, if anyone should have questions about this.

Best Regards,

Marc Edwards

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Saturday, October 10, 2015 8:33 AM
To: Amy Hovey; Andy Leavitt; Brent Wright; Darren Lytle; Dayne Walling; donna. cole; dykemal; edwardsm; George Krisztian (DEQ); Gerald (Jed) Natzke; Howard Croft; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Michael Wright; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; schock.michael@epa.gov; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

Subject: 3rd Quarter Water Report

Team,

Included in this email is a copy of the first quarter water quality report that has been developed by the Utilities Division. Please take a look and offer any comments that you may have regarding content. There will be an additional one page insert containing three months test data inserted prior to distribution.

The purpose of the quarterly mailer is to increase communication, provide more transparency, and put more information into the hands of the public about what's occurring within the water system and with the infrastructure.

I will be putting together a separate weekly report for this Committee.

Thank you,

--

Howard Croft

Public Works Director

City of Flint

1101 S. Saginaw Street

Flint, MI 48502

PH# 810.766.7135 Ext.2043

hcroft@cityofflint.com

--

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PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Howard Croft <hcroft@cityofflint.com>
Sent: Thursday, October 15, 2015 8:21 AM
To: Laura Sullivan
Cc: Gerald (Jed) Natzke;Andy Leavitt;Marc Edwards;Amy Hovey;Brent Wright;Lytle, Darren;Flint Mayor;donna.cole;Dykema, Linda D. (DHHS);Krisztian, George (DEQ);Henry, James;James Gaskin;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Lawrence Reynolds;Lawrence Reynolds;Michael Glasgow;Wright, Michael;Lane, Mike;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;schock.michael@epa.gov;Sean Kammer;Busch, Stephen (DEQ);Warren Green;Wurfel, Brad (DEQ);Anthony Chubb;Kevin Keane
Subject: Re: 3rd Quarter Water Report

Laura,

Yes that is correct, I will have the lab convey the additional data regarding the 90th percentile. We are also testing at a rate of almost 20 people a day and we are GIS mapping all of the data as it comes in.
For this group only, I am providing a link to our test data. You can click on each location to see the lab results. This is 2015 data only and we will be updating it continually.

http://flint.maps.arcgis.com/home/webmap/viewer.html?webmap=786d8418d42341f4ab6bc894ec24bbfc

The following is our current mapping of service lines, as you zoom in, you can click on each location and get the information, we are working with U of M Flint to complete this.

http://flint.maps.arcgis.com/home/webmap/viewer.html?webmap=51d7a0319bac452bafd827ecfaef2016

We are using the information here to try and test some of the clusters of lead service line areas.
Please let me know if you cannot access this information.

On Tue, Oct 13, 2015 at 7:00 PM, Laura Sullivan <dr.laura2@gmail.com> wrote:
Howard,

Am I reading this correctly? Does this say that only 16 of 189 water test samples collected between January and September had lead levels exceeding 15 ppb?

What was the 90th percentile value?

Could you provide the committee with the sample collection date, lead level, and address for these 189 residences? If not that, then the zip codes and collection dates for each?

Laura Sullivan

On Monday, October 12, 2015, Howard Croft <hcroft@cityofflint.com> wrote:
All,

In addition to the text, here is the single page of data that will accompany the mailer.
We can add any specific information that is requested.

We will be tracking all of the Flint River testing data prior to the switch and it will be available to this group.
We will work with Genesee County to obtain any water data that they have as well.

On Sun, Oct 11, 2015 at 5:57 PM, <gdn2@aol.com> wrote:
Hi Howard,
The thoughts that both Andy and Marc shared sound wise. I'm curious though as to whether the TAC could be privy to the actual results of the Flint City water testing prior to the switch and this years values? Also, it would seem prudent to obtain the present Detroit Water System testing if available as well?
Thank you,
Gerald Natzke DO

-----Original Message-----
From: Andy Leavitt <aleavitt@senatedems.org>
To: Marc Edwards <edwardsm@vt.edu>; Howard Croft <hcroft@cityofflint.com>; Amy Hovey <Amy.Hovey@mail.house.gov>; Brent Wright <bwright@cityofflint.com>; Darren Lytle <lytle.darren@epa.gov>; Dayne Walling <dwalling@cityofflint.com>; donna. cole <donna.cole@genesys.org>; dykemal <dykemal@mich.gov>; George Krisztian (DEQ) <krisztiang@michigan.gov>; Gerald (Jed) Natzke <gdn2@aol.com>; James Henry <jhenry@gchd.us>; Jamie Gaskin <jgaskin@unitedwaygenesee.org>; Jason Lorenz <jlorenz@cityofflint.com>; jmikewright <jmikewright@yahoo.com>; JoAnne Herman <jherman@genesys.org>; John O'Brien <jfobrien@gcdcwws.com>; Kirk Smith <ksmith@flint.org>; larry.koehler <larry.koehler@mcc.edu>; Laura Sullivan <dr.laura2@gmail.com>; Lawrence Reynolds <LawrenceR@mottchc.org>; Lawrence Reynolds <reynolds@mottchc.org>; Michael Glasgow <mglasgow@cityofflint.com>; Michael Wright <Wright.Michael@epa.gov>; Mike Lane <mjlane@umflint.edu>; Mike Prysby (DEQ) <prysbym@michigan.gov>; Natasha Henderson <nhenderson@cityofflint.com>; Norb Birchmeier <nbirchm1@hurleymc.com>; Pete Levine <plevine@gcms.org>; Robert Bincsik <rbincsik@cityofflint.com>; rosejo <rosejo@msu.edu>; Russell Hudson <Russell.Hudson@mclaren.org>; Samir Matta <SFMatta@lan-inc.com>; schock.michael <schock.michael@epa.gov>; Sean Kammer <skammer@cityofflint.com>; Stephen Busch (DEQ) <BUSCHS@michigan.gov>; Warren Green <jwgreen@lan-inc.com>; Wurfel, Brad (DEQ) (DEQ) <WurfelB@michigan.gov>; Anthony Chubb <achubb@cityofflint.com>; Kevin Keane <KEVIN.KEANE@cmsenergy.com>
Sent: Sat, Oct 10, 2015 12:09 pm
Subject: Re: 3rd Quarter Water Report

I would echo Marc's sentiment on the bold language agreeing with his points but I would also add that trust needs to be rebuilt and the public simply will not believe anything in the document if you start by telling them it still meets standards. They do not differentiate between regs and rules but they know the water does not meet the standard of the physician community.

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message out about the current health risks. The bold statement seems more like wishful thinking or a legal position, and detracts from the goal of telling the public about the known problems.

*After 16 months of treating water from the Flint River, the City became aware that the while **still meeting all Safe Drinking Water Standards**, the level of corrosiveness could result in more lead leaching from service lines and household plumbing.*

That is my input. I am available at 540 231-7236 or 540 320-8740, if anyone should have questions about this.

Best Regards,

Marc Edwards

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Saturday, October 10, 2015 8:33 AM
To: Amy Hovey; Andy Leavitt; Brent Wright; Darren Lytle; Dayne Walling; donna. cole; dykemal; edwardsm; George Krisztian (DEQ); Gerald (Jed) Natzke; Howard Croft; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Michael Wright; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; schock.michael@epa.gov; Sean Kammer; Stephen Busch (DEQ); Warren Green; Wurfel, Brad (DEQ); Anthony Chubb; Kevin Keane

Subject: 3rd Quarter Water Report
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Thank you,

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Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

--
Laura L. Sullivan, Ph. D
3101 Hawthorne Drive

Flint, Michigan 48503
dr.laura2@gmail.com

Human(kind). Be both

--

Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Marc Edwards <edwardsm@vt.edu>
Sent: Tuesday, November 10, 2015 5:15 PM
To: 'Howard Croft';'Andy Leavitt'
Cc: 'Wright, Michael';'Amy Hovey';'Anthony Chubb';'Brent Wright';'Lytle, Darren';'Dayne Walling';'Deborah Higgins';'donna. cole';Dykema, Linda D. (DHHS);Wells, Eden (DHHS);Krisztian, George (DEQ);'Gerald (Jed) Natzke';'James Henry';'Jamie Gaskin';'Jason Lorenz';'jmikewright';'JoAnne Herman';'John O'Brien';'Kevin J. Keane';'Kirk Smith';larry.koehler@mcc.edu;'Laura Sullivan';'Lawrence Reynolds';'Lawrence Reynolds';'Michael Glasgow';'Schock, Michael';'Mike Lane';Prysby, Mike (DEQ);MVALACAK@gchd.us;'Natasha Henderson';'Norb Birchmeier';'Pete Levine';'Robert Bincsik';rosejo@msu.edu;'Russell Hudson';'Samir Matta';'Sean Kammer';'Shawn Patrick McElmurry';Busch, Stephen (DEQ);swalser@senatedems.org;Thompson, Sheryl D. (DHHS);'Warren Green'
Subject: RE: Technical Advisory Team Information

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Best Regards,

Marc

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Tuesday, November 10, 2015 4:56 PM
To: Andy Leavitt
Cc: Wright, Michael; Amy Hovey; Anthony Chubb; Brent Wright; Lytle, Darren; Dayne Walling; Deborah Higgins; donna. cole; dykemal; Eden Wells (DHHS); edwardsm; George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kevin J. Keane; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Schock, Michael; Mike Lane; Mike Prysby (DEQ); MVALACAK@gchd.us; Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Sean Kammer; Shawn Patrick McElmurry; Stephen Busch (DEQ); swalser@senatedems.org; thompsons2@michigan.gov; Warren Green
Subject: Re: Technical Advisory Team Information

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http://water.epa.gov/drink/guide/upload/book_waterontap_full.pdf

Lastly, I couldn't hear who made the comment, but I agree that infants are likely the most vulnerable of concern. So, I was wondering if the clinicians/health practitioners in the room might consider partnering or spearheading an outreach effort to target expectant mothers with the Filters that are being provided. Not sure if this is best done via prenatal clinics, delivery hospitals, OB-GYN departments, or lactation management specialists, etc. The public health practitioners might also be able to use this emergency as another reason to advocate breastfeeding (vs infant formula).

Thanks,
Mike

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Friday, November 06, 2015 3:48 PM
To: Amy Hovey <Amy.Hovey@mail.house.gov>; Andy Leavitt <aleavitt@senatedems.org>; Anthony Chubb <achubb@cityofflint.com>; Brent Wright <bwright@cityofflint.com>; Lytle, Darren <Lytle.Darren@epa.gov>; Dayne Walling <dwalling@cityofflint.com>; Deborah Higgins <DeborahC@mottchc.org>; donna. cole <donna.cole@genesys.org>; dykemal <dykemal@mich.gov>; Eden Wells (DHHS) <wellse3@michigan.gov>; edwardsm <edwardsm@vt.edu>; George Krisztian (DEQ) <krisztiang@michigan.gov>; Gerald (Jed) Natzke <gdn2@aol.com>; Howard Croft <hcroft@cityofflint.com>; James Henry <jhenry@gchd.us>; Jamie Gaskin <jgaskin@unitedwaygenesee.org>; Jason Lorenz <jlorenz@cityofflint.com>; jmikewright <jmikewright@yahoo.com>; JoAnne Herman <jherman@genesys.org>; John O'Brien <jfobrien@gcdcwws.com>; Kevin J. Keane <KEVIN.KEANE@cmsenergy.com>; Kirk Smith <ksmith@flint.org>; larry.koehler@mcc.edu; Laura Sullivan <dr.laura2@gmail.com>; Lawrence Reynolds <LawrenceR@mottchc.org>; Lawrence Reynolds <reynolds@mottchc.org>; Michael Glasgow <mglasgow@cityofflint.com>; Schock, Michael <Schock.Michael@epa.gov>; Wright, Michael <Wright.Michael@epa.gov>; Mike Lane <mjlane@umflint.edu>; Mike Prysby (DEQ) <prysbym@michigan.gov>; MVALACAK@gchd.us; Natasha Henderson <nhenderson@cityofflint.com>; Norb Birchmeier <nbirchm1@hurleymc.com>; Pete Levine

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Subject: Technical Advisory Team Information

All,

Enclosed please find the weekly update along with the agenda for next weeks Technical Advisory Committee meeting. The time and location remain at City Hall on the 3rd floor at 2:00 pm. There is a conference call in number available and we have modified the speaker system to accommodate all those who call in. If there are any questions, please do not hesitate to contact me.

Dial-in Number: PPI

Access Code: PPI

PIN: PPI

Thank you,

--

Howard Croft

Public Works Director

City of Flint

1101 S. Saginaw Street

Flint, MI 48502

PH# 810.766.7135 Ext.2043

hcroft@cityofflint.com

--

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hcroft@cityofflint.com

From: Marc Edwards <edwardsm@vt.edu>
Sent: Wednesday, November 11, 2015 12:15 PM
To: 'Shawn Patrick McElmurry';'Howard Croft'
Cc: 'Wright, Michael';'Amy Hovey';'Anthony Chubb';'Brent Wright';'Lytle, Darren';'Dayne Walling';'Higgins, Deborah';'donna. cole';Dykema, Linda D. (DHHS);Wells, Eden (DHHS);Krisztian, George (DEQ);'Gerald (Jed) Natzke';'James Henry';'Jamie Gaskin';'Jason Lorenz';'jmikewright';'JoAnne Herman';'John O'Brien';'Kevin J. Keane';'Kirk Smith';larry.koehler@mcc.edu;'Laura Sullivan';'Michael Glasgow';'Schock, Michael';'Mike Lane';Prysby, Mike (DEQ);MVALACAK@gchd.us;'Natasha Henderson';'Norb Birchmeier';'Pete Levine';'Robert Bincsik';rosejo@msu.edu;'Russell Hudson';'Samir Matta';'Sean Kammer';Busch, Stephen (DEQ);swalser@senatedems.org;Thompson, Sheryl D. (DHHS);'Warren Green';'Andy Leavitt';'Reynolds, Lawrence'
Subject: RE: Technical Advisory Team Information

Just using the standard EPA instructions, and giving the residents the wide mouth bottle…that would do it. That is our sampling protocol.
Marc

From: Shawn Patrick McElmurry [mailto:s.mcelmurry@wayne.edu]
Sent: Wednesday, November 11, 2015 10:19 AM
To: Howard Croft
Cc: Marc Edwards; Wright, Michael; Amy Hovey; Anthony Chubb; Brent Wright; Lytle, Darren; Dayne Walling; Higgins, Deborah; donna. cole; dykemal; Eden Wells (DHHS); George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kevin J. Keane; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Schock, Michael; Mike Lane; Mike Prysby (DEQ); MVALACAK@gchd.us; Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Sean Kammer; Stephen Busch (DEQ); swalser@senatedems.org; thompsons2@michigan.gov; Warren Green; Andy Leavitt; Reynolds, Lawrence
Subject: Re: Technical Advisory Team Information

I really like Lawrence's suggestion and believe this is an area where the Tech. Advisory Team (TAT) can provide assistance. I would like to suggest the this advisory panel develop a Standard Operating Procedure for sampling intended to fulfill the Lead & Copper Rule. I know there are excellent example protocols out there that we could build from but this is one way Flint can show leadership on this issue.

I think we can all agree that the methodology should include collecting first-draw samples without flushing in wide-mouth bottles, etc. Perhaps Marc Edwards, Darren Lytle or Michael Schock could provide a first draft? If preferred, I am happy to draft.

Sincerely,
Shawn McElmurry

Shawn P. McElmurry, Ph.D., P.E.
Associate Professor
Wayne State University
Dept. of Civil and Environmental Engineering
2158 Engineering Building
5050 Anthony Wayne Dr.
Detroit, Michigan 48202
Phone: 313-577-3876

Fax: 313-577-3881
Skype: s.mcelmurry
www.eng.wayne.edu/mcelmurry

From: Reynolds, Lawrence <LawrenceR@mottchc.org>
Sent: Wednesday, November 11, 2015 7:12 AM
To: Howard Croft; Andy Leavitt
Cc: Marc Edwards; Wright, Michael; Amy Hovey; Anthony Chubb; Brent Wright; Lytle, Darren; Dayne Walling; Higgins, Deborah; donna. cole; dykemal; Eden Wells (DHHS); George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kevin J. Keane; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Schock, Michael; Mike Lane; Mike Prysby (DEQ); MVALACAK@gchd.us; Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Sean Kammer; Shawn Patrick McElmurry; Stephen Busch (DEQ); swalser@senatedems.org; thompsons2@michigan.gov; Warren Green
Subject: RE: Technical Advisory Team Information

Can this change be sent out in the testing procedure document so we can see it in context ? Thank you .

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Cc: Marc Edwards; Wright, Michael; Amy Hovey; Anthony Chubb; Brent Wright; Lytle, Darren; Dayne Walling; Higgins, Deborah; donna. cole; dykemal; Eden Wells (DHHS); George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kevin J. Keane; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Reynolds, Lawrence; Reynolds, Lawrence; Michael Glasgow; Schock, Michael; Mike Lane; Mike Prysby (DEQ); MVALACAK@gchd.us; Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Sean Kammer; Shawn Patrick McElmurry; Stephen Busch (DEQ); swalser@senatedems.org; thompsons2@michigan.gov; Warren Green
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Dial-in Number: (PPI
Access Code: PPI

PIN: PPI

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Public Works Director
City of Flint
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Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

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Sent: Thursday, November 12, 2015 10:17 AM
To: 'John O'Brien';'Pete Levine';'Howard Croft'
Cc: 'Andy Leavitt';'Wright, Michael';'Amy Hovey';'Anthony Chubb';'Brent Wright';'Lytle, Darren';'Dayne Walling';'Deborah Higgins';'donna. cole';Dykema, Linda D. (DHHS);Wells, Eden (DHHS);Krisztian, George (DEQ);'Gerald (Jed) Natzke';'James Henry';'Jamie Gaskin';'Jason Lorenz';'jmikewright';'JoAnne Herman';'Kevin J. Keane';'Kirk Smith';larry.koehler@mcc.edu;'Laura Sullivan';'Lawrence Reynolds';'Lawrence Reynolds';'Michael Glasgow';'Schock, Michael';'Mike Lane';Prysby, Mike (DEQ);MVALACAK@gchd.us;'Natasha Henderson';'Norb Birchmeier';'Robert Bincsik';rosejo@msu.edu;'Russell Hudson';'Samir Matta';'Sean Kammer';'Shawn Patrick McElmurry';Busch, Stephen (DEQ);swalser@senatedems.org;Thompson, Sheryl D. (DHHS);'Warren Green'
Subject: RE: Technical Advisory Team Information

It is my understanding that this is a water system technical advisory team. Is that correct?

And the larger group has been formed, because the state of Michigan has been breaking Federal law since April 2014, triggering a massive lead in water problem in Flint that they are covering up to the present day.
The cover-up includes the repeated claim (**not once retracted**) that Flint has always met the provisions of the lead and copper rule, their use of methods of testing for lead that do not find lead in water problems, and throwing out samples with high lead to skew results.

As far as I know, no federal laws were broken relative to lead paint and lead from demolitions, and Flint's existing programs were having success in address those issues until the switch. So as an outsider, I too, am completely perplexed at the amount of time spent on those issues.

I am also perplexed at all the discussion on how to re-build trust with the community, when some of the state agencies involved are still not worthy of the public's trust, as evidenced by word and deed.

Marc

From: John O'Brien [mailto:jfobrien@gcdcwws.com]
Sent: Thursday, November 12, 2015 8:45 AM
To: 'Pete Levine'; Howard Croft
Cc: Andy Leavitt; Marc Edwards; Wright, Michael; Amy Hovey; Anthony Chubb; Brent Wright; Lytle, Darren; Dayne Walling; Deborah Higgins; donna. cole; dykemal; Eden Wells (DHHS); George Krisztian (DEQ); Gerald (Jed) Natzke; James Henry; Jamie Gaskin; Jason Lorenz; jmikewright; JoAnne Herman; Kevin J. Keane; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Lawrence Reynolds; Lawrence Reynolds; Michael Glasgow; Schock, Michael; Mike Lane; Mike Prysby (DEQ); MVALACAK@gchd.us; Natasha Henderson; Norb Birchmeier; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Sean Kammer; Shawn Patrick McElmurry; Stephen Busch (DEQ); swalser@senatedems.org; thompsons2@michigan.gov; Warren Green
Subject: RE: Technical Advisory Team Information

We are not trying to deflect the issue. Is the goal to reduce blood lead levels in the population or to ride the Flint water mistake to a virtual end?

From: Pete Levine [mailto:plevine@gcms.org]
Sent: Wednesday, November 11, 2015 9:49 AM
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Cc: Andy Leavitt <aleavitt@senatedems.org>; Marc Edwards <edwardsm@vt.edu>; Wright, Michael <Wright.Michael@epa.gov>; Amy Hovey <Amy.Hovey@mail.house.gov>; Anthony Chubb <achubb@cityofflint.com>; Brent Wright <bwright@cityofflint.com>; Lytle, Darren <Lytle.Darren@epa.gov>; Dayne Walling <dwalling@cityofflint.com>; Deborah Higgins <DeborahC@mottchc.org>; donna. cole <donna.cole@genesys.org>; dykemal <dykemal@mich.gov>; Eden Wells (DHHS) <wellse3@michigan.gov>; George Krisztian (DEQ) <krisztiang@michigan.gov>; Gerald (Jed) Natzke <gdn2@aol.com>; James Henry <jhenry@gchd.us>; Jamie Gaskin <jgaskin@unitedwaygenesee.org>; Jason Lorenz <jlorenz@cityofflint.com>; jmikewright <jmikewright@yahoo.com>; JoAnne Herman <jherman@genesys.org>; John O'Brien <jfobrien@gcdcwws.com>; Kevin J. Keane <KEVIN.KEANE@cmsenergy.com>; Kirk Smith <ksmith@flint.org>; larry.koehler@mcc.edu; Laura Sullivan <dr.laura2@gmail.com>; Lawrence Reynolds <LawrenceR@mottchc.org>; Lawrence Reynolds <reynolds@mottchc.org>; Michael Glasgow <mglasgow@cityofflint.com>; Schock, Michael <Schock.Michael@epa.gov>; Mike Lane <mjlane@umflint.edu>; Mike Prysby (DEQ) <prysbym@michigan.gov>; MVALACAK@gchd.us; Natasha Henderson <nhenderson@cityofflint.com>; Norb Birchmeier <nbirchm1@hurleymc.com>; Robert Bincsik <rbincsik@cityofflint.com>; rosejo@msu.edu; Russell Hudson <Russell.Hudson@mclaren.org>; Samir Matta <SFMatta@lan-inc.com>; Sean Kammer <skammer@cityofflint.com>; Shawn Patrick McElmurry <s.mcelmurry@wayne.edu>; Stephen Busch (DEQ) <BUSCHS@michigan.gov>; swalser@senatedems.org; thompsons2@michigan.gov; Warren Green <jwgreen@lan-inc.com>
Subject: Re: Technical Advisory Team Information

I also think it is important for folks to stop trying to deflect this crisis into a general lead abatement discussion.

This email has been sent from a virus-free computer protected by Avast.
www.avast.com

Peter A. Levine, MPH
Executive Director
Genesee County Medical Society
4438 Oak Bridge Dr. Suite B
Flint, Mi. 48532
Phone:810-7339925
Fax:810-2303737
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Subject: Re: Technical Advisory Team Information

Andy,

We changed the instructions late last week that called for flushing, all bottles are now going out with the new protocol attached. We are concerned that some people are still not removing filters from the tap so we are trying to focus on that aspect of communication as well..

On Tue, Nov 10, 2015 at 1:59 PM, Andy Leavitt <aleavitt@senatedems.org> wrote:

Hi Howard,

Can you confirm when Flint will move away from the testing mode that includes flushing?

Thanks,

Andy

On Mon, Nov 9, 2015 at 6:20 PM Wright, Michael <Wright.Michael@epa.gov> wrote:

> Howard:
>
> Thanks for arranging the meeting today. I didn't catch all of what Natasha (and others) said on the line but I was intrigued when I heard her mention a fact sheet or some information on Lead that was taken from a city in MA. Can you/she forward that URL for our review and consideration?
>
> During the last call, I also noted my concern regarding boil advisories during a lead emergency and wanted to provide a link that documented what I said about Lead (and nitrates for that matter) being concentrated upon heating.
> http://water.epa.gov/drink/guide/upload/book_waterontap_full.pdf
>
> Lastly, I couldn't hear who made the comment, but I agree that infants are likely the most vulnerable of concern. So, I was wondering if the clinicians/health practitioners in the room might consider partnering or spearheading an outreach effort to target expectant mothers with the Filters that are being provided. Not sure if this is best done via prenatal clinics, delivery hospitals, OB-GYN departments, or lactation management specialists, etc. The public health practitioners might also be able to use this emergency as another reason to advocate breastfeeding (vs infant formula).

Thanks,
Mike

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Friday, November 06, 2015 3:48 PM
To: Amy Hovey <Amy.Hovey@mail.house.gov>; Andy Leavitt <aleavitt@senatedems.org>; Anthony Chubb <achubb@cityofflint.com>; Brent Wright <bwright@cityofflint.com>; Lytle, Darren <Lytle.Darren@epa.gov>; Dayne Walling <dwalling@cityofflint.com>; Deborah Higgins <DeborahC@mottchc.org>; donna. cole <donna.cole@genesys.org>; dykemal <dykemal@mich.gov>; Eden Wells (DHHS) <wellse3@michigan.gov>; edwardsm <edwardsm@vt.edu>; George Krisztian (DEQ) <krisztiang@michigan.gov>; Gerald (Jed) Natzke <gdn2@aol.com>; Howard Croft <hcroft@cityofflint.com>; James Henry <jhenry@gchd.us>; Jamie Gaskin <jgaskin@unitedwaygenesee.org>; Jason Lorenz <jlorenz@cityofflint.com>; jmikewright <jmikewright@yahoo.com>; JoAnne Herman <jherman@genesys.org>; John O'Brien <jfobrien@gcdcwws.com>; Kevin J. Keane <KEVIN.KEANE@cmsenergy.com>; Kirk Smith <ksmith@flint.org>; larry.koehler@mcc.edu; Laura Sullivan <dr.laura2@gmail.com>; Lawrence Reynolds <LawrenceR@mottchc.org>; Lawrence Reynolds <reynolds@mottchc.org>; Michael Glasgow <mglasgow@cityofflint.com>; Schock, Michael <Schock.Michael@epa.gov>; Wright, Michael <Wright.Michael@epa.gov>; Mike Lane <mjlane@umflint.edu>; Mike Prysby (DEQ) <prysbym@michigan.gov>; MVALACAK@gchd.us; Natasha Henderson <nhenderson@cityofflint.com>; Norb Birchmeier <nbirchm1@hurleymc.com>; Pete Levine <plevine@gcms.org>; Robert Bincsik <rbincsik@cityofflint.com>; rosejo@msu.edu; Russell Hudson <Russell.Hudson@mclaren.org>; Samir Matta <SFMatta@lan-inc.com>; Sean Kammer <skammer@cityofflint.com>; Shawn Patrick McElmurry <s.mcelmurry@wayne.edu>; Stephen Busch (DEQ) <BUSCHS@michigan.gov>; swalser@senatedems.org; thompsons2@michigan.gov; Warren Green <jwgreen@lan-inc.com>
Subject: Technical Advisory Team Information

All,

Enclosed please find the weekly update along with the agenda for next weeks Technical Advisory Committee meeting. The time and location remain at City Hall on the 3rd floor at 2:00 pm. There is a conference call in number available and we have modified the speaker system to accommodate all those who call in. If there are any questions, please do not hesitate to contact me.

Dial-in Number: PPI

Access Code: PPI

PIN: PPI

Thank you,

--

Howard Croft

Public Works Director

City of Flint

1101 S. Saginaw Street

Flint, MI 48502

PH# 810.766.7135 Ext 2043

hcroft@cityofflint.com

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Howard Croft

Public Works Director

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Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Busch, Stephen (DEQ)
Sent: Friday, February 27, 2015 1:48 PM
To: Crooks, Jennifer;Deltoral, Miguel
Cc: Rosenthal, Adam (DEQ);Poy, Thomas;Porter, Andrea;Prysby, Mike (DEQ);Benzie, Richard (DEQ);Shekter Smith, Liane (DEQ)
Subject: RE: HIGH LEAD: FLINT Water testing Results

Miguel and Jennifer,

Thank you for this information, we will take it under consideration.

The City of Flint:

- Has a 90th percentile lead level of 6.0 ppb based on 100 samples collected in its most recent monitoring period of 7/1/2014 – 12/31/2014, with 2 samples (23 & 37 ppb) over the AL.
- Has a 90th percentile copper level of 110 ppb based on 100 samples collected in its most recent monitoring period of 7/1/2014 – 12/31/2014, with no samples over the Cu AL.
- Has an Optimized Corrosion Control Program
- Conducts quarterly Water Quality Parameter monitoring at 25 sites and has not had any unusual results.
- Has never had a 90th percentile lead AL exceedance
- Continues to meet all applicable plant tap standards and treatment technique requirements at its WTP
- Has developed and implemented an Operational Evaluation of its treatment and distribution systems, and continues to adjust and update this OE based on updated quarterly results

My understanding from Ben Grumbles and the LCR Short Term Revisions is that "EPA regulations require water systems to develop a targeted sampling pool, focused on those sites with the greatest risk of lead leaching. All compliance samples used to determine the 90th percentile must come from that sampling pool." [40 CFR 141.80(c)(1)], 56 Fed Reg. 26518 (June, 7, 1991), [40CFR 141.90(a)(1)(v), and 40 CFR 141.90(h)(2)]. Our office continues to work with our community water systems to follow these and all other requirements of the current lead and copper regulations.

212 Browning, the site in question, is not part of the City's established sample site pool. The residence consists of PVC plumbing materials, and has an iron pre-filter at the service connection.

Regarding TTHM, the most recent quarter monitoring from February 2015 was issued today by the lab.
While 2 of the 8 DBP compliance sites continue to have an LRAA that exceeds the standard, quarterly results at all 8 DBP compliance sites were below less than half the standard level of 80 ppb, the highest being 28.5 ppb. Only one site now has an OEL over 80 ppb, at 85 ppb.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Friday, February 27, 2015 11:05 AM
To: Deltoral, Miguel; Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Poy, Thomas; Porter, Andrea
Subject: Re: HIGH LEAD: FLINT Water testing Results

Hi, Steve and Mike. I talked with Miguel, and he said if you all would be interested in getting input from our expert, Mike Schock at EPA Cincinnatti Research, on the Flint distribution system issues and dealing with lead and DBP's together, you should contact Mike directly--here is his information.

schock.michael@epa.gov
(513) 569-7412

Jennifer

From: Deltoral, Miguel
Sent: Friday, February 27, 2015 4:58 AM
To: Crooks, Jennifer; Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Poy, Thomas; Schock, Michael; Porter, Andrea
Subject: Re: HIGH LEAD: FLINT Water testing Results

Jen/all - I think things got garbled in translation...

What I was saying is that where you find Pb values that high, it is usually due to particulate lead. Not always, but generally. Particulate lead is released sporadically from lead service lines, leaded solder and leaded brass in a number of ways and folks tend to discount these values as anomalies, but particulate lead release is a normal part of the corrosion process and it is universal (common) in all systems. It's just that it is not captured as often by the infrequent LCR sampling. If systems are pre-flushing the tap the night before collec on thisting LCR compliance samples (MDEQ still provides these instructions to public water systems) this clears particulate lead out of the plumbing and biases the results low by eliminating the highest lead values. If systems are pre-flushing and still finding particulate lead, the amount of particulate lead in the system can be higher than what is being detected using these 'pre-flushed' first-draw samples. My point on that was that people are exposed to the particulate lead on a daily basis, but the particulate lead is being flushed away before collecting compliance samples which provides false assurance to residents about the true lead levels in the water.

Some quick notes on particulate lead release:

- Fe/Mn can transport lead from the lead service lines into the home. The lead sorbs onto the Fe/Mn particles. In GW systems, Fe/Mn can come from the source water and more Fe from the water mains. In SW systems, the Fe typically is released from the water mains.
- Lead released from lead service lines can also 'seed' galvanized iron pipes inside the homes. Again, the lead sorbs onto the iron on the pipes and be released sporadically. Generally, the higher the flow, the more Fe and Fe+Pb particulate you will likely get.
- If there is a partial lead service line (lead connected to copper) you can get additional lead release due to galvanic corrosion.
- Leaded brasses and solder can also release particulate lead under certain circumstances.
- The particulate can contain very high concentrations of lead (hundreds to thousands of ppb Pb) which is a much higher concentration than lead paint, so even small particles can result in high lead values.
- If the lead service line was disturbed (water main repair/replacement, meter installation repair/replacement, service line leak repairs, etc.) you can have VERY high lead levels in the scale and sediment that is dislodged from the inside of lead service lines. Here in Chicago, during a partial lead service line replacement, we collected the scale and sediment that came into the home and we found 300,000+ ug/L lead in the scale; 125,000 ug/L Pb in the sediment. Very dangerous.
- Higher levels of PO4 (3-4 mg/L Ortho) seem to reduce the amount of particulate Pb that is released in the absence of physical disturbances to the lead lines. Doesn't stop it entirely, but should generally

reduce the occurrence. Caveat – Other water quality issues can change the chemical complexes that form on the pipe, so cleaner sources with more consistent WQ form more predictable scale complexes.

If I remember correctly, Detroit is feeding PO4 for the LCR, but since Flint is no longer part of that interconnection, I was wondering what their OCCT was. They are required to have OCCT in place which is why I was asking what they were using.

Mike Schock is our resident expert and may be able to help out with the simultaneous compliance (Pb & DBPs) so I would suggest that folks give him a call.

Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Crooks, Jennifer
Sent: Thursday, February 26, 2015 04:15 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Deltoral, Miguel; Poy, Thomas
Subject: HIGH LEAD: FLINT Water testing Results

Thank you, Mike. These results are dated 2/18/15, so they're probably different results than the results Adam had, but they still have to be included in with compliance calculation of the 90th percentile. What dates are the earlier compliance samples?

Yes, the stagnation of the water would increase the lead levels, and I'm glad you're following up with the City to get the lead levels reduced for Mrs. Walters' home—which will hopefully be effective for her neighbors because they are also most likely being exposed to these high lead levels. Miguel reminded me this morning, there are no safe levels of lead in drinking water.

I talked with Miguel Del Toral about his knowledge on research on lead. He said that high levels of iron, usually bring high levels of lead. The large amount of black sediment at Mrs. Walters' home, is most likely particulate lead, Miguel said, where the lead actually bonds to the iron sediment. While the particulates of lead/iron are small, they're very highly concentrated with lead—up to 95% lead.

Miguel was wondering if Flint is feeding Phosphates. Flint must have Optimal Corrosion Control Treatment—is it Phosphates? Or is it pH/Alkalinity Adjustment? The reason he asks, is because systems using the pH/Alkalinity adjustment have problems with lead levels in the 100's or higher—and they have problems with random lead particulate matter in the distribution system. Miguel said that we all know that flushing regularly helps reduce the lead concentrations, but not immediately. The City can't just flush in advance of taking the compliance samples, they have to flush the lines on a regular schedule.
The problem with high lead issues, is that the water has so many different variables, that it's hard to pinpoint what is causing what problem where. From a public health perspective, can we assume that the high lead levels in Mrs. Walters' neighborhood are isolated to just her area? Or are they more widespread?

Please feel free to contact Miguel directly—312-886-5253; Deltoral.miguel@epa.gov.

Jennifer

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, February 26, 2015 10:25 AM
To: Crooks, Jennifer
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: HIGH LEAD: FLINT Water testing Results

Jennifer,

I recall Adam showing me a high lead/copper sample result (perhaps it was this one)....as part of the city's routine lead-copper monitoring. If so, it was a stagnated sample as part of the sampling protocol. Adam mentioned that all other samples were below the AL...and the city will not exceed the lead AL. I will confirm this. The city; however, needs to take further action to help address Ms. Walter's concern. The type of plumbing needs to be identified and sample tap location within the premise plumbing. They should offer to re-sample for PB after flushing the tap to demonstrate that flushing the tap will reduce the lead concentration. The city also needs to provide other lead-reduction strategies to Mrs. Walters.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Thursday, February 26, 2015 10:53 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Poy, Thomas; Deltoral, Miguel
Subject: HIGH LEAD: FLINT Water testing Results

Hi, Steve and Mike. Thanks for talking with me yesterday, Steve, about the most recent TTHM results. We'll look forward to receiving them whenever you get them back from the lab.

However, the main purpose of my email is to alert you to the high lead levels reported to a citizen yesterday by Flint Water Dept. I have been discussing the water situation with LeeAnn Walters since January, and she has been talking with Mike Glasgow at the plant about the black sediment in her water. (HUGE KUDOs to MIKE!!) He did test it to find that the iron levels were greater than his test would go; GT 3.3. But, because the iron levels were so high, he suggested testing for lead and copper. WOW!!!! Did he find the LEAD! **104 ppb.** She has 2 children under the age of 3... Big worries here.

So, Steve, this goes back to what you and I were talking about yesterday. That the different chemistry water is leaching out contaminants from the insides of the biofilms inside the pipes. I think Lead is a good indication that other contaminants are also present in the tap water, that obviously were not present in the compliance samples taken at the plant. VOC/SOC and inorganics/metals would be good samples to start with to take at the tap. And since Ms. Walters' drinking water is showing the high lead levels, her tap water would be a good place to start, I think.

We also talked about Dr. Joan Rose from Michigan State being on the Flint Tech Advisory Committee—you also mentioned that someone from the Dept of Community Health was on the Committee. I'm thinking that Dr. Rose would want to dive further into this, since there's actual evidence that the water is leaching contaminants from the biofilms; or

Dept of Community Health would want to get involved and look at this from an epidemiological perspective. (She and her family are also exhibiting the rashes when exposed to the water, and her daughter's hair is falling out in clumps.)

Maybe MSU could authorize the payment of the analyses for these samples? Or Dept of Community Health?

The citizen's name is:
LeeAnn Walters
212 Browning Ave
Flint, MI 48507
616-212-6233
Lwalters313@gmail.com

Jennifer

From: Lea Moste [mailto:lwalters313@gmail.com]
Sent: Thursday, February 26, 2015 9:08 AM
To: Crooks, Jennifer
Subject: Fwd: Re: Water testing Results

---------- Forwarded message ----------
From: "Michael Glasgow" <mglasgow@cityofflint.com>
Date: Feb 26, 2015 7:55 AM
Subject: Re: Water testing Results
To: "Lea Moste" <lwalters313@gmail.com>
Cc:
Lee,

Here are your Lead & Copper Results. This number is very high, 104 ppb of lead. In the last few months over 100 samples have been tested and only 2 were over the 15 ppb regulatory limit, and the highest level I have seen is 37 ppb. I will pass this info to Mr. Croft so he is aware. I will send the sample I collected from your kitchen faucet today for a complete metals test (12 different metals), to see what the level is without letting the water stagnate over night. I'm hoping that value will be much, but we will have to see. Sorry for this news, but I wanted to let you know right away.

Mike

On Tue, Feb 24, 2015 at 1:50 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:

> Lee,
>
> I will bring a copy of last years annual report when I stop by tomorrow. The annual report from 2014 must be delivered to residents by July 1st of this year. I imagine we may have it complete by June.
>
> Mike
>
> On Fri, Feb 20, 2015 at 1:00 AM, Lea Moste <lwalters313@gmail.com> wrote:
>
> > Mike,
> > Thank you for the water reports and we already planned to see you on the 25th at 10:00am. I was wondering if you know who I need to talk to in the water plant to obtain the Annual Drinking Water Report from last year. According to the EPA website there is link to access but when you click on it, it cannot be accessed.

Was also curious if there is an expected time frame for this years report due to the switch. If you can be of any assistance I would appreciate it.

Thank You
LeeAnne Walters

On Thu, Feb 19, 2015 at 12:47 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:

> Lee & Dennis,
>
> Here is a list of test results from water sampled at your home over the last 2 weeks. I have sent in your lead and copper sample, and also a sample from the toilet tank for manganese. I should hopefully have results from this testing early next week. I'll plan on stopping over on Wednesday (the 25th) around 10 am again to give you these results & sample again.
>
> Mike

From: Busch, Stephen (DEQ)
Sent: Wednesday, March 18, 2015 11:53 AM
To: Howes, Sarah (DEQ);Shekter Smith, Liane (DEQ);Prysby, Mike (DEQ)
Cc: Tommasulo, Karen (DEQ)
Subject: RE: Flint Drinking Water Letter?

Sarah,

I just got a 3/16 letter from the DEQ lab to the City of Flint for certification of the laboratory at the City water treatment plant. Maybe this is what they were wondering about?

The DEQ certified the Flint WTP lab for Microbiology analysis.

Let me know if you want a copy.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Howes, Sarah (DEQ)
Sent: Tuesday, March 17, 2015 12:38 PM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Tommasulo, Karen (DEQ)
Subject: Flint Drinking Water Letter?

Hi all—

I just got a call from Rep. Neeley's office and it's their understanding that DEQ will be issuing a letter on Flint Drinking Water tomorrow. Is this true? If so, could you please PDF me a copy and I'll distribute to the legislative offices that have asked for updates when appropriate.
Thanks,
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Busch, Stephen (DEQ)
Sent: Monday, April 27, 2015 8:27 AM
To: Cook, Pat (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: RE: Flint Corrosion Control?

He continues to base his concern on a single location which has/had a lead service line and "pre-flushing" concerns which are not part of the current regulations.
Flint is now below the criteria for a large system. Technically they don't have to do any of this.
Flint has also only been through one round of lead copper sample not the two rounds needed to make the determination he lists below.
If he continues to persist we may need Liane or Director Wyant to make a call to EPA to help address his over-reaches.
Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Cook, Pat (DEQ)
Sent: Monday, April 27, 2015 7:59 AM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: FW: Flint Corrosion Control?
Hi Steve and Mike - I knew this was going to happen. Miguel is questioning that Flint is in compliance with optimal corrosion control. Please read the below email and let me know what you think. While it's not a big hurry at this time since Miguel is out till next week, we eventually will have to respond to him.
pat

From: Deltoral, Miguel [mailto:deltoral.miguel@epa.gov]
Sent: Saturday, April 25, 2015 10:11 AM
To: Cook, Pat (DEQ)
Cc: Porter, Andrea; Crooks, Jennifer; Poy, Thomas
Subject: Re: Flint Corrosion Control?
Hi Pat,
I'll be heading out to MI for RTCR tomorrow and won't see email until next Tuesday, but I wanted to follow up on this because Flint has essentially not been using any corrosion control treatment since April 30, 2014 and they have LSLs. Given the very high lead levels found at one home and the pre-flushing happening at Flint, I'm worried that the whole town may have much higher lead levels than the compliance results indicated, since they are using pre-flushing ahead of their compliance sampling.
If the source water lead is non-detect (zero), then according to 141.89(a)(3) they should use zero for that source water value:
"All lead and copper levels measured between the PQL and MDL must be either reported as measured or they can be reported as one-half the PQL specified for lead and copper in paragraph (a)(1)(ii) of this section. All levels below the lead and copper MDLs must be reported as zero."
As far as the treatment determination, there are only two scenarios for a large system to be deemed to have optimized corrosion control without treatment and Flint does not appear to meet either:

The first is at 141.81(b)(3)

Any water system is deemed to have optimized corrosion control if it submits results of tap water monitoring conducted in accordance with § 141.86 and source water monitoring conducted in accordance with § 141.88 that demonstrates for two consecutive 6-month monitoring periods that the difference between the 90th percentile tap water lead level computed under § 141.80(c)(3) and the highest source water lead concentration is less than the Practical Quantitation Level for lead specified in § 141.89(a)(1)(ii).

If Flint's highest source water lead was zero, and their 90th percentile was 0.006, then Flint does not meet this criteria, because the difference must be LESS THAN the PQL (i.e., 0.004 or less). 0.006 - 0 = 0.006.

The second is at 141.81(b)(3)(i):

Those systems whose highest source water lead level is below the Method Detection Limit may also be deemed to have optimized corrosion control under this paragraph if the 90th percentile tap water lead level is less than or equal to the Practical Quantitation Level for lead for two consecutive 6-month monitoring periods.

Although Flint's source water lead was non-detect (zero), the 90th percentile lead level is 0.006 which is above the PQL of 0.005, so Flint would not meet this criteria either.
Am I missing something?

Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Cook, Pat (DEQ) <COOKP@michigan.gov>
Sent: Friday, April 24, 2015 12:45 PM
To: Deltoral, Miguel
Subject: RE: Flint Corrosion Control?

Total Lead collected from the plant tap on 5/22/14 was zero.
pat

From: Deltoral, Miguel [mailto:deltoral.miguel@epa.gov]
Sent: Friday, April 24, 2015 11:59 AM
To: Cook, Pat (DEQ)
Cc: Poy, Thomas; Porter, Andrea
Subject: Re: Flint Corrosion Control?

What was the source water lead level?

Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Cook, Pat (DEQ) <COOKP@michigan.gov>
Sent: Friday, April 24, 2015 10:43 AM
To: Deltoral, Miguel
Cc: Poy, Thomas; Porter, Andrea
Subject: RE: Flint Corrosion Control?

Hi Miguel - Flint is currently not practicing corrosion control treatment at the WTP. When they started treating water at their WTP last spring, we placed them on full chart (100 sites) Pb/Cu monitoring for two consecutive 6 month periods. WQ monitoring is also being conducted. The first round of samples after switch-over from DWSD (July 1, 2014 – Dec 31, 2014) had 90th percentiles of 6 ppb for Lead and 110 ppb for Copper. The

second round of samples (Jan 1, 2015 – June 30, 2015) is underway with approximately 20 of the 100 sample site results in. The highest lead result out of the 20 received thus far is 13 ppb.
Based on the matrix of recommended corrosion control study components for Large PWS's for both Lead and Copper, there are no additional requirements for the City of Flint based on the levels of lead and copper in the current source water and the results of the lead and copper distribution monitoring. The only provision of the Lead & Copper Rule which classifies the existing treatment of large PWSs as optimized for corrosion control is when the difference between the 90% Pb-TAP and Pb-POE is less than the lead practical quantitative level (PQL) for each six-month period of the initial monitoring program. By definition, the PQL for lead is 0.005 mg/L; and the lead value for the source water used in this determination is the highest source water lead concentration. If this condition is met, then no study or testing is required. We believe this condition has been met for Flint. However, we will re-evaluate this after the 2nd round of 6 month sampling is completed.
If you have any further questions, please contact the Lansing District Supervisor, Steve Busch at (517) 643-2314 or at buschs@michigan.gov.
Have a good (and hopefully warm) weekend!
Patrick Cook, P.E.
Community Drinking Water Unit
Office of Drinking Water & Municipal Assistance
Michigan Department of Environmental Quality
Phone: (517) 284-6514
cookp@michigan.gov

From: Deltoral, Miguel [mailto:deltoral.miguel@epa.gov]
Sent: Thursday, April 23, 2015 12:33 PM
To: Cook, Pat (DEQ)
Cc: Poy, Thomas; Porter, Andrea
Subject: Flint Corrosion Control?

Hi Pat,
What's Flint doing now (post Detroit) for corrosion control treatment?

Miguel A. Del Toral
Regulations Manager
Ground Water and Drinking Water Branch
77 West Jackson Blvd (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Busch, Stephen (DEQ)
Sent: Monday, August 31, 2015 11:55 AM
To: Shekter Smith, Liane (DEQ);Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: RE: Flint

Mike spoke with some staff from Flint earlier today. They are still having internal discussions regarding corrosion control treatment.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Shekter Smith, Liane (DEQ)
Sent: Friday, August 28, 2015 3:33 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: FW: Flint

Any word?

From: Poy, Thomas [mailto:poy.thomas@epa.gov]
Sent: Friday, August 28, 2015 3:29 PM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ)
Subject: Flint

Liane/Richard: Has Flint replied yet on how they plan to comply with the corrosion control requirements of the 8/17 letter? Susan Hedman will be at a Brownfields meeting next week along with the Flint mayor and the subject of lead will likely come up.

Tom

Tom Poy
Chief, Ground Water and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

From: Busch, Stephen (DEQ)
Sent: Tuesday, September 01, 2015 4:12 PM
To: Prysby, Mike (DEQ)
Subject: Re: Flint Lead

Please ask brad to respond

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

Sent from my iPhone

On Sep 1, 2015, at 3:44 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

> Steve,
> Ron Fonger left me a voicemail concerning questions he has concerning the lead issue in Flint. Specifically, he is aware of the increased discussion of lead in Flint's drinking water and the home tests recently performed at residents request in corroboration with V Tech and concerned groups. Ron discussed this issue w. Mr. Kroft and has the impression that the DEQ has had discussions with the city about the lead issue; however, Mr. Kroft declined to discuss the issue any further. Mr. Fonger wishes to discuss with the DEQ as to what discussions the DEQ has had with the city concerning the lead issue. Our only discussion (written) that I am aware of...is our 90% PB/CU letter sent to the city and the need for the city to install optimal corrosion control. Should I return his call or pass this on to Brad?
> Michael Prysby, P.E.
> District Engineer
> Office of Drinking Water and Municipal Assistance
> 517 290-8817

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 02, 2015 11:39 AM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ);Shekter Smith, Liane (DEQ)
Subject: FW: lead in flint water

Okay, friends. Time to compose all we've been discussing. I'm working up something for the Flint Journal.

Mike, please continue to not engage this one until we've formally responded. Then we can use you and Steve to bail cleanup on any questions Fonger may have.

Steve, have you got a few minutes for me to bounce some stuff off you today?
b

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, September 02, 2015 11:34 AM
To: Wurfel, Brad (DEQ)
Cc: Kristin Longley; Bryn Mickle
Subject: lead in flint water

Brad:
I left a message with Mike Prysby on Tuesday, Sept. 1, but wanted to reach out to you also because of stories we are working on about the extent to which lead is becoming an issue in Flint drinking water.
Today, Sept. 2, researchers at Virginia Tech posted the results on an experiment with Flint water online. The report concludes that Flint River water leaches much more lead from plumbing than does Detroit.
"On average, Detroit water is 12 times (or 12X) less corrosive than the Flint River water currently in use ... This is creating a public health threat in some Flint homes that have lead pipe or lead solder," the report says.
An earlier post by the same researchers says that initial water tests show "a serious lead in water problem" in Flint, partly because Flint River water is so corrosive to pipes.
Given the state's role in oversight of the city's drinking water system through DEQ and its overall oversight by state emergency managers during the past several years, I wanted to make sure I'm reaching out to the right person to respond to this information.
Could you let me know who that is?
I expect to post the first story about the experiment today and expect the issue will be getting more attention as the VT study of 300 water test kits from Flint is completed.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile PPI
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Poy, Thomas <poy.thomas@epa.gov>
Sent: Thursday, September 03, 2015 1:02 PM
To: Benzie, Richard (DEQ);Shekter Smith, Liane (DEQ);Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Hyde, Tinka;Henry, Timothy;Bair, Rita;Damato, Nicholas;Crooks, Jennifer
Subject: RE: Flint Meeting

Thanks for the email.

I hope that Flint will utilize the expertise of MDEQ field staff and ORD distribution system staff to help them identify water quality and pipe conditions that need to be considered in the effective implementation of phosphate treatment.

Tom Poy
Chief, Ground Water and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

From: Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
Sent: Thursday, September 03, 2015 9:21 AM
To: Poy, Thomas
Cc: shekterl@michigan.gov
Subject: FW: Flint Meeting

FYI

From: Prysby, Mike (DEQ)
Sent: Thursday, September 03, 2015 9:06 AM
To: Benzie, Richard (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: Flint Meeting

Richard,

I spoke this morning with Mike Glasgow (Utility Administrator) and Brent Wight (WTP Supt) to see what came out of their meeting with LAN and the city. The meeting's main focus was over the lawsuit and financial issues; however, corrosion control treatment was also discussed. City administration told Mike and Brent that there will be no funding restrictions to install corrosion control. The capital cost to install treatment (P04 feed system) is not expected to be high since the WTP has existing feed lines and equip in place; however, new properly sized pumps will be needed. Mike expects LAN to have a proposal for us to review and approve for issuance of an Act 399 construction permit within the next one to two months.

Michael Prysby, P.E.

District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Benzie, Richard (DEQ)
Sent: Wednesday, September 02, 2015 5:13 PM
To: Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: FW: Flint Meeting

Do we know how this meeting concluded?

From: Poy, Thomas [mailto:poy.thomas@epa.gov]
Sent: Wednesday, September 02, 2015 4:23 PM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ)
Subject: Flint Meeting

Liane/Richard:
How did Flint's meeting with their consultant go? Did they decide to implement treatment?

Tom

Tom Poy
Chief, Ground Water and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

From: Busch, Stephen (DEQ)
Sent: Thursday, November 19, 2015 6:16 PM
To: lytle.darren@epa.gov;Schock, Michael (Schock.Michael@epa.gov)
Cc: Sygo, Jim (DEQ);Robert Kaplan (kaplan.robert@epa.gov);Prysby, Mike (DEQ);Krisztian, George (DEQ);Benzie, Richard (DEQ);burke.thomas@epa.gov
Subject: Corrosion Control Treatment Example Study
Attachments: Flint CCT Operation Letter 10-30-15.pdf; image2015-11-03-155158.pdf

Darren and Mike,

The City of Flint and their engineering consultant would like EPA to provide a previously approved example of an optimal corrosion control treatment evaluation completed for a water treatment plant when full scale testing of the new source water was not available.

This is in an effort to assist the City of Flint regarding the required corrosion control treatment evaluation of the City's future change in source water to Lake Huron supplied by the Karegnondi Water Authority at the City of Flint Water Treatment Plant, as outlined in the Department's October 30, 2015 letter to the City, and in accordance with the November 3, 2015, EPA Memorandum *Lead and Copper Rule Requirements for Optimal Corrosion Control Treatment for Large Drinking Water Systems*, both attached.

While the later part of the EPA memo discusses systems that plan to disconnect from a supplier that had installed corrosion control treatment to determine the OCCT for the new source (and in the case of the City of Flint, new treatment), the guidance document that is referenced in this memo appears to focus only on existing systems where full-scale treatment evaluation is possible, with no apparent guidance for new systems or systems that disconnect from their supplier prior to their source and treatment change.

Your assistance regarding this matter is greatly appreciated.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

October 30, 2015

VIA E-MAIL and U.S. MAIL

Mr. Mike Glasgow
Utilities Administrator
City of Flint
4500 North Dort Highway
Flint, Michigan 48505

Dear Mr. Glasgow:

SUBJECT: Water Supply – City of Flint (City) – Corrosion Control Treatment Operation

The purpose of this letter is to outline additional requirements and recommendations regarding the additional corrosion control treatment measures being taken by the City water system.

The City has been purchasing drinking water from the Detroit Water and Sewerage Department (DWSD)/Great Lakes Water Authority (GLWA) since Friday, October 16, 2015. DWSD/GLWA provides corrosion control treatment to its water and DWSD/GLWA has been deemed by the Michigan Department of Environmental Quality (MDEQ) to have fully optimized corrosion control treatment. This optimization requires DWSD/GLWA to provide orthophosphate addition, maintain a minimum dose of 0.9 milligrams per liter (mg/L) as PO_4, and maintain a DWSD/GLWA plant tap residual of 0.8 mg/L as PO_4. As part of its optimization, DWSD/GLWA is also required to maintain a minimum pH of 7.0 at the DWSD/GLWA plant tap.

Corrosion Control Treatment and Operation

To further enhance pipe passivation in the City water distribution system, customer service lines, and customer plumbing, **the City shall dose additional orthophosphate to increase distribution system phosphate residual to a minimum of 3.1 mg/L as PO_4 (1.0 mg/L as P).** The City has obtained a Michigan Safe Drinking Water Act, 1976 PA 399, as amended

This information shall be included in the City's monthly operation report and shall be reported to the MDEQ as required under Administrative Rule 1502 (R 325.11502) of the administrative rules promulgated pursuant to Act 399.

Enhanced Water Quality Parameter Monitoring

The City's revised monitoring schedule dated October 22, 2015, requires quarterly Water Quality Parameter Monitoring at 25 sites throughout the City's water distribution system for temperature (Celcius), Conductivity (mS), pH, Total Alkalinity (mg/L as $CaCO_3$), Calcium (mg/L as Ca^{2+}), and orthophosphate (mg/L PO_4). Ten of these 25 sites are also used by the City to conduct required total coliform bacteria and chlorine residual monitoring (location numbers 1, 2, 3, 4, 5, 6, 7, 8, CS, and WS). **At these ten locations, the City shall also conduct weekly monitoring for the following parameters at the same time that total coliform bacteria and**

Customer Household Exposure Assessment

The Michigan Department of Health and Human Services (MDHHS) is continuing to conduct blood lead level testing for children in the City. Families with children found to have elevated blood lead levels will be asked to have an elevated blood lead level investigation conducted at their residence that will include a lead exposure assessment, including the contribution of lead from water service lines and premise plumbing. This diagnostic testing is different than the first draw sampling being conducted by the City and should help further substantiate the effectiveness of corrosion control treatment. Any water analysis samples meeting the criteria for inclusion in the 90th percentile calculation for compliance purposes for lead and copper must be completed by a certified laboratory.

Flint Water Treatment Plant Evaluation of Karegnondi Water Authority (KWA) Raw Water

The City is planning to change source water in the next year to raw water from Lake Huron purchased from the KWA. The City is required to evaluate the Flint Water Treatment Plant (WTP) processes related to optimization of corrosion control treatment using source water purchased from the KWA to determine if any adjustments are necessary. It is recognized that full scale testing at the Flint WTP may not be feasible. A report of this evaluation shall be provided to our office for review and approval prior to initiating service of this treated water to its customers.

If you have any questions regarding this correspondence, please contact me at the number below or at prysbym@michigan.gov.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Field Operations Section
Office of Drinking Water and
Municipal Assistance
517-290-8817

cc: Mr. Brent Wright, City of Flint
Mr. Howard Croft, City of Flint
Ms. Natasha Henderson, City of Flint
Mr. Darren Lytle, U.S. EPA
Mr. Samir F. Matta, P.E., Lockwood, Andrews & Newnam, Inc.
Mr. Warren Green, Lockwood, Andrews & Newnam, Inc.
Mr. James Henry, Genesee County Health Department
Dr. Linda Dykema, MDHHS
Mr. Jim Sygo, Chief Deputy Director, MDEQ
Mr. Stephen Busch, MDEQ
Mr. Adam Rosenthal, MDEQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

NOV 03 2015

MEMORANDUM

SUBJECT: Lead and Copper Rule Requirements for Optimal Corrosion Control Treatment for Large Drinking Water Systems

FROM: Peter C. Grevatt, Director
Office of Ground Water and Drinking Water

TO: EPA Regional Water Division Directors, Regions I-X

This memorandum addresses certain concerns raised about the application of the 1991 Lead and Copper Rule, specifically the requirements pertaining to maintenance of optimal corrosion control treatment, in situations in which a large water system ceases to purchase treated water and switches to a new drinking water source. These concerns have been raised most recently in regard to the drinking water system in Flint, Michigan, where the water system was disconnected from the Detroit Water and Sewerage Department, which provided corrosion control treatment for Lake Huron source waters, and instead began distributing water from the Flint River. This type of situation rarely arises and the language of the LCR does not specifically discuss such circumstances. After reviewing the rule with our Office of General Counsel, it appears that there are differing possible interpretations of the LCR with respect to how the rule's optimal corrosion control treatment procedures apply to this situation, which may have led to some uncertainty with respect to the Flint water system. This memorandum clarifies how the LCR applies to this situation and eliminates the uncertainty for water systems and primacy agencies that may face these circumstances in the future.

It is important for large systems and primacy agencies[1] to take the steps necessary to ensure that appropriate corrosion control treatment is maintained at all times, thus ensuring that public health is protected. This memorandum focuses on those steps and clarifies, on a prospective basis, how EPA interprets the LCR corrosion control requirements and how primacy agencies should apply these requirements to large public water systems before, during and after making a significant change in source water, including switching from purchased water to a new source.

Under the LCR, all large systems (those serving more than 50,000 persons), whether purchasing water or not, must have completed a series of steps to either optimize the corrosion control treatment or be deemed to have optimal corrosion control treatment (OCCT) by 1998. 40 CFR 141.81. Key steps for

[1] The term "primacy agency" refers to the State, tribe or U.S. Environmental Protection Agency regional office having jurisdiction over, and primary enforcement responsibility for, a given public water system.

optimizing corrosion control include monitoring, corrosion control studies, installation of treatment, follow-up sampling and specification by the primacy agency of water quality parameters (WQPs) for monitoring corrosion control. The LCR requires any large system that has met the OCCT requirements through the installation of corrosion control treatment to continue operating and maintaining the treatment and to continue meeting the WQPs established by the primacy agency. 40 CFR 141.81(b) and 141.82(g). Systems deemed to have OCCT without the installation of corrosion control treatment are not subject to this requirement. However, they are required to notify the primacy agency in writing of any upcoming changes in treatment or source and request that the primacy agency modify its determination of the OCCT and WQPs applicable to the system. The primacy agency must then review and approve the change and designate OCCT and WQPs prior to its implementation by the system. 141.81(b)(3). Similarly, systems subject to reduced monitoring or monitoring waivers must notify the primacy agency of any upcoming changes in treatment or source and the primacy agency must subsequently review and approve it. EPA recommends that systems that are not subject to a notification requirement also notify the primacy agency prior to the addition of a new source or treatment and request the primacy agency to modify its determination of the optimal corrosion control and WQPs applicable to the system.

Due to the unique characteristics of each PWS (e.g., source water, existing treatment processes, distribution system materials) it is critical that public water systems, in conjunction with their primacy agencies and, if necessary, outside technical consultants, evaluate and address potential impacts resulting from treatment and/or source water changes. It is also critical for public water systems to conduct ongoing monitoring to ensure compliance with OCCT prior to, during and after a source or treatment change. The rearrangement of a system's existing configuration may trigger the need for OCCT adjustments and establishment of appropriate WQPs. Primacy agencies should work with systems that plan to disconnect from a supplier that had installed corrosion control treatment to determine the OCCT for the new source and establish WQPS for that treatment instead of using the OCCT and WQPs established for the previous source. This will allow a system that ceases to purchase treated water to stay in compliance with any applicable requirements pertaining to OCCT and ensure protection of public health during and after the change in source. EPA has developed a guidance manual[2] specifically focusing on evaluation of corrosion control treatment options and optimization of full-scale treatment to assist water systems and primacy agencies with these efforts. EPA is currently preparing an updated version of the manual, which we anticipate will be released in February 2016.

The key to identifying and mitigating potential problems is to ensure effective collaboration between the public water system and the primacy agency. Corrosion control treatment can come in many forms. For this reason, it is important to conduct a system-wide assessment prior to any source water and/or treatment modifications and to identify existing or anticipated water quality, treatment or operational issues that may interfere with or limit the effectiveness of corrosion control treatment optimization or re-optimization.

If you have additional questions or concerns, please contact me or have your staff contact Maria Lopez Carbo, Chief of the Protection Branch, in the Office of Ground Water and Drinking Water, at lopez-carbo.maria@epa.gov.

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[2] U.S. Environmental Protection Agency. *Lead and Copper Rule Guidance Manual, Volume II: Corrosion Control Treatment.* Office of Water. EPA 811-B-92-002. 1992. Available at: http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=91019DM4.txt.

Subject:	Flint WTP visit
Location:	Flint WTP
Start:	Mon 3/25/2013 1:30 PM
End:	Mon 3/25/2013 3:30 PM
Recurrence:	(none)
Organizer:	Prysby, Mike (DEQ)

Subject:	Flint WTP Test run visit
Location:	WTP
Start:	Wed 7/10/2013 11:00 AM
End:	Wed 7/10/2013 12:30 PM
Recurrence:	(none)
Organizer:	Prysby, Mike (DEQ)

Subject:	Rep. Neeley-Flint Drinking Water
Location:	798 HOB/Mt downstairs at guard's desk
Start:	Tue 1/6/2015 4:00 PM
End:	Tue 1/6/2015 5:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Howes, Sarah (DEQ)
Required Attendees:	Prysby, Mike (DEQ); Benzie, Richard (DEQ); Datema, Maggie (DEQ); Shekter Smith, Liane (DEQ)

Attached is the letter from the City of Flint that Rep. Neeley would like to discuss. He would like an overview of the issue and situation and update on the water issues/how they are working to be solved.

Let's meet at the main entrance by the guard's desk at 3:45 and we can walk over together.

Thank you for being flexible and available on such short notice. It is much appreciated.
Sarah

Flint Water Quality Letter.pdf...

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system was recently found to be in violation of a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, and November 20 of 2014). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the Maximum Contaminant Level (MCL). The standard for TTHMs is 80 ug/L. The location reporting the highest TTHM level was 99 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. In that case, you may be at increased risk and should seek advice about drinking water from your health care provider.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem in 2015.

For more information, please contact Mr. Brent Wright or Mike Glasgow at 810-787-6537 or the Water Plant at 4500 North Dort Highway, Flint, MI 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: F1 S3 WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules. Reminder to water supplier: This notice/ certification must be sent to the DEQ.

Michael Glasgow	ASSISTANT SUPERVISOR	1/2/15
Signature	Title	Date Distributed

Subject:	Flint Plan review
Location:	CH-1S-FRANK-BALCER
Start:	Fri 4/3/2015 8:00 AM
End:	Fri 4/3/2015 10:00 AM
Recurrence:	(none)
Meeting Status:	Meeting organizer
Organizer:	Prysby, Mike (DEQ)
Resources:	CH-1S-FRANK-BALCER

Subject:	Flint WTP - Glen Thomas
Start:	Wed 4/29/2015 8:00 AM
End:	Wed 4/29/2015 9:30 AM
Recurrence:	(none)
Organizer:	Prysby, Mike (DEQ)

Subject:	McLaren Water System
Location:	McLaren Hospital, Flint
Start:	Wed 4/29/2015 1:00 PM
End:	Wed 4/29/2015 2:30 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Busch, Stephen (DEQ)
Required Attendees:	Prysby, Mike (DEQ)

Subject:	Hurley Hospital Water System
Location:	Hurley Hospital, Flint
Start:	Wed 4/29/2015 3:00 PM
End:	Wed 4/29/2015 4:30 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Busch, Stephen (DEQ)
Required Attendees:	Prysby, Mike (DEQ)

Subject:	CGCD & Flint plan review
Location:	CH-1S-FRANK-BALCER
Start:	Mon 6/15/2015 1:00 PM
End:	Mon 6/15/2015 4:00 PM
Recurrence:	(none)
Meeting Status:	Meeting organizer
Organizer:	Prysby, Mike (DEQ)
Resources:	CH-1S-FRANK-BALCER

Subject:	Flint GAC review
Location:	CH-1S-FRANK-BALCER
Start:	Mon 7/13/2015 9:30 AM
End:	Mon 7/13/2015 12:00 PM
Recurrence:	(none)
Meeting Status:	Meeting organizer
Organizer:	Prysby, Mike (DEQ)
Resources:	CH-1S-FRANK-BALCER

Subject:	GCDC-WWS Water Treatment Plant Preconstruction Meeting
Location:	GCDC-WWS Offices--4610 Beecher Road, Flint, Mi
Start:	Wed 9/30/2015 8:00 AM
End:	Wed 9/30/2015 9:00 AM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	Tharp, Ed

You are invited to attend the preconstruction meeting for the GCDC-WWS Water Treatment Plant. It will be held at 9:00 a.m. on Wednesday September 30, 2015. The meeting will be held at the GCDC-WWS offices at 4160 Beecher Road, Flint, MI 48532 in the modular unit. Please contact Ed Tharp at 810-732-6712 if there are questions.

Subject:	Saturday Sampling Discussion
Location:	CH-6S-JAMES-THOMSON
Start:	Fri 10/30/2015 3:30 PM
End:	Fri 10/30/2015 4:30 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Devereaux, Tracy Jo (DEQ)
Required Attendees:	Krisztian, George (DEQ); Graham, Lois (DEQ); Prysby, Mike (DEQ); Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ)
Optional Attendees:	Edgerton, Shelly (LARA); Sygo, Jim (DEQ); Shaler, Karen (DEQ); Neuman, Andy (LARA); Madziar, Joseph (LARA)

Moved to 3:30 per Steve Busch ***Moved to Thomson Conference Room***

Meeting to discuss Saturday sampling.

Joe is available by cell if we need to speak to him during the meeting. Joe/Andy will be in Flint doing the assessments all day Friday.

Thanks,

Tracy Jo

Tracy Jo Devereaux
Office of Drinking Water and Municipal Assistance
Michigan Department of Environmental Quality
Constitution Hall, 4th Floor, South Tower, Pillar P8
525 W. Allegan Street
Lansing, Michigan 48933
☎517-284-6544
devereauxt@michigan.gov

Subject:	Great Lakes Conf. Room Reserved - RE: Flint Task Force Comments on MDEQ Residential Sampling Instructions
Start:	Tue 11/24/2015 10:00 AM
End:	Tue 11/24/2015 11:00 AM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Shekter Smith, Liane (DEQ)
Required Attendees:	Shekter Smith, Liane (DEQ)
Optional Attendees:	Busch, Stephen (DEQ); Prysby, Mike (DEQ)

From: Shaler, Karen (DEQ)
Sent: Monday, November 23, 2015 3:46 PM
To: Shekter Smith, Liane (DEQ); Sygo, Jim (DEQ)
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: Great Lakes Conf. Room Reserved - RE: Flint Task Force Comments on MDEQ Residential Sampling Instructions

In case more than Jim participates in this 10:00-11:00 am conference call tomorrow, I reserved Great Lakes Conference Room for you.

From: Shekter Smith, Liane (DEQ)
Sent: Monday, November 23, 2015 2:22 PM
To: Sygo, Jim (DEQ)
Cc: Shaler, Karen (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: RE: Flint Task Force Comments on MDEQ Residential Sampling Instructions

Jim – I don't have a call on my calendar for tomorrow. Just took a look at your calendar, and it looks like you are the only DEQ rep scheduled to participate. Who do you want available? Are there other topics besides sampling?

From: Sygo, Jim (DEQ)
Sent: Monday, November 23, 2015 1:06 PM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: Fwd: Flint Task Force Comments on MDEQ Residential Sampling Instructions

EPA comments for tomorrow's phone call.

Sent from my iPhone

Begin forwarded message:

From: "Kaplan, Robert" <kaplan.robert@epa.gov>
Date: November 23, 2015 at 12:40:59 PM EST
To: "Sygo, Jim (DEQ)" <SygoJ@michigan.gov>
Subject: Flint Task Force Comments on MDEQ Residential Sampling Instructions

Jim,

Thanks for the opportunity to comment on the MDEQ Flint Residential Sampling Instructions. Attached please find the Task Force comments.

- Bob

From: Benzie, Richard (DEQ)
Sent: Wednesday, July 16, 2014 5:40 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ);Poy, Thomas;Crooks, Jennifer
Subject: FW: Flint Mobile Home Park Caller

Mike,

From what I can tell, the Ambassador East Mobile Home Park is not now on our inventory and was not on our inventory as far back as 2009, so they probably have always been a Flint customer.

I'm not sure what we can do in this situation. I don't think the city should restore service until the past due bills are paid and they get some documentation from the current "owner" that it is okay to restore service. And I don't think the city should turn water back on based solely on an occupant's request, even if they pay the past due bill. The occupant/tenant may not have the control necessary to authorize restoring service.

If this park has been without water for a year, why has DLARA or the Genesee County Health Department not taken any action, such as suspending their license or declaring unsanitary living conditions and making people leave? I know it's not politically popular to do so, but neither is allowing substandard living conditions to jeopardize public health.

Please contact Flint to see what they have to say about this situation and try to determine what the city believes is the smoothest path to resolution and then let me know their side of this story. Thanks.

Richard Benzie, P.E., Acting Chief
Field Operations Section
Office of Drinking Water and Municipal Assistance, MDEQ
517-284-6512

From: Poy, Thomas [mailto:poy.thomas@epa.gov]
Sent: Wednesday, July 16, 2014 4:12 PM
To: Benzie, Richard (DEQ)
Cc: Crooks, Jennifer
Subject: Flint Mobile Home Park Caller

Richard: I got a call from Bob Johnson, PPI He said that a year ago Flint shut-off the water to the Ambassador East Mobile Home Park (1718 Webster Road) because they did not pay their water bill. Mr. Johnson said that the owner of the MHP has abandoned the park. He is trying to figure out how they can get their water turned back on. He said that he has talked to local officials but isn't getting anywhere. I don't know if the MHP is a PWS or just a customer of Flint. Can you please have someone look into this?

Thanks.

Tom

Tom Poy
Chief, Ground Water and Drinking Water Branch

USEPA - Region 5
(312) 886-5991

From: Cherry, John (DNR)
Sent: Tuesday, August 19, 2014 4:53 PM
To: Prysby, Mike (DEQ)
Subject: Flint Water

Hi Mike,

I don't believe we've met before, I work over at DNR. But I live in the City of Flint and I just wanted to know, what is going on with the water, I hear a lot of conflicting things, its testing positive for fecal coliform, then that the test was wrong, now that the there is another test for total coliform that was positive. A lot of my neighbors are asking me if its safe to drink the water (because for the average person the DNR and DEQ are the same thing and we are expected to know the answer). We don't live in the advisory area, but, people from all areas are still worried. Any help that you can give me to explain what's going on and what is causing the situation would be helpful.

Thanks,

John D. Cherry
DNR Performance Management
Office: 517-284-5801
Cell: PPI

From: Busch, Stephen (DEQ)
Sent: Tuesday, October 07, 2014 8:11 AM
To: Rosenthal, Adam (DEQ);Prysby, Mike (DEQ)
Subject: RE: Flint MCL VN

I think we need to remove all of the August stuff and just focus this VN on the September MCL. The August violation was the acute E.coli which is stated in the letter but totaling the August monitoring and including it looks like we are hitting them with the same violation. My understanding was that the August acute MCL was public noticed and the violation previously resolved so there is no need to readdress August.

Let's revise the letter and just keep it to the samples that were collected in September and the September TC MCL.

If there is something I'm missing here, let me know.

For CC's include those Mike indicated and the ones from the OEL letter as we discussed. I will be back this afternoon so we should still be able to get it out today. Thanks.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Rosenthal, Adam (DEQ)
Sent: Monday, October 06, 2014 3:23 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: Flint MCL VN

Attached is the VN for edit/review. Wasn't sure who needed to be CC'd, so let me know.

Adam

From: Busch, Stephen (DEQ)
Sent: Tuesday, October 14, 2014 1:54 PM
To: rbincsik@cityofflint.com
Cc: Brent Wright (bwright@cityofflint.com);Prysby, Mike (DEQ)
Subject: Flint Water Complaint

Importance: High

Rob,

We have been forwarded the following complaint information from EPA. Could you please let us know whether you have received their complaint and provide a summary of any action or communication with the complaintant? Thanks.

Citizen lives at 324 West Jackson Avenue, Flint, 48505

She states, "Water quality is bad since switching to Flint River. My water stinks like sewage at times. I have developed a cough and rash, brown sediment in sink basins and kitchen sink stays backed up. I have written City Hall Water Dept and Council President for help, but no response."

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Tuesday, October 14, 2014 1:56 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: RE: Controlled Correspondence RE: Flint drinking water

Importance: High

Sorry, we did discuss the probably source of the brown sediment in the water (my memory should be better):

"... the cause of brown water (iron deposits and sediments from the very old cast iron pipes that make up the distribution system)..."

But I have a few more questions below.

Jennifer

From: Crooks, Jennifer
Sent: Tuesday, October 14, 2014 12:38 PM
To: 'Prysby, Mike (DEQ)'; Busch, Stephen (DEQ)
Subject: Controlled Correspondence RE: Flint drinking water
Importance: High

Hi, Mike. Yep, another complaint about our favorite water supply ☺

Citizen lives at 324 West Jackson Avenue, Flint, 48505

She states, "Water quality is bad since switching to Flint River. My water stinks like sewage at times. I have developed a cough and rash, brown sediment in sink basins and kitchen sink stays backed up. I have written City Hall Water Dept and Council President for help, but no response. "

I think the pos bacti/boil water advisory was in Sept, so can I say that bactis in the past few weeks have met State/Fed'l health standards? How's the TTHMs right now? Any other health standards close to being exceeded?

What do you attribute the sewer smell? Has her area been flushed recently? Probably needs flushing?

I will include the phone numbers of the Water Service Center and the Water Treatment plant that you gave me last time we spoke about Flint.

Can I include your phone number as a contact as well?

Thank you!

Jennifer

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Tuesday, October 14, 2014 2:05 PM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Subject: RE: Controlled Correspondence RE: Flint drinking water

Hey, thank you, Steve. Yes, I did include some wording about the improper use of hydrants by local contractors, and the possible need to flush her lines. Let me know if the City will be flushing her lines, so I can include in this letter.
I will forward my draft response/letter to both of you on Thursday, to make sure it is acceptable to you both.
Thanks!
Jennifer

From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Tuesday, October 14, 2014 1:00 PM
To: Crooks, Jennifer; Prysby, Mike (DEQ)
Subject: RE: Controlled Correspondence RE: Flint drinking water

Jennifer,

I have forwarded the address and complaint information to the City to confirm if they received any complaint and what follow up may have occurred.

I am not aware of any additional TC positive samples since the BWA at the beginning of September. In addition this address does not appear to be included in the BWA area from August or September.

I await any info from the City on flushing. You may want to ask whether there has been any building work (blight removal) in the area, as contractors have been problematic with hydrant use.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Tuesday, October 14, 2014 1:38 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: Controlled Correspondence RE: Flint drinking water
Importance: High

Hi, Mike. Yep, another complaint about our favorite water supply ☺

Citizen lives at 324 West Jackson Avenue, Flint, 48505

She states, "Water quality is bad since switching to Flint River. My water stinks like sewage at times. I have developed a cough and rash, brown sediment in sink basins and kitchen sink stays backed up. I have written City Hall Water Dept and Council President for help, but no response. "

I think the pos bacti/boil water advisory was in Sept, so can I say that bactis in the past few weeks have met State/Fed'l health standards? How's the TTHMs right now? Any other health standards close to being exceeded?

What do you attribute the sewer smell, and the brown sediment to? Has her area been flushed recently?

I will include the phone numbers of the Water Service Center and the Water Treatment plant that you gave me last time we spoke about Flint.

Can I include your phone number as a contact as well?

Thank you!

Jennifer

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Tuesday, October 14, 2014 3:16 PM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Subject: RE: Controlled Correspondence RE: Flint drinking water

Question—I was just talking with Tom Poy about this woman's complaint. He was wondering—has Flint changed their flushing routine? If the illegal use of the hydrants by contractors is what is stirring up the debris in the pipes/iron, how come this is now being complained about? Was this a problem when Flint was using Detroit water?
Jennifer

From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Tuesday, October 14, 2014 1:00 PM
To: Crooks, Jennifer; Prysby, Mike (DEQ)
Subject: RE: Controlled Correspondence RE: Flint drinking water

Jennifer,

I have forwarded the address and complaint information to the City to confirm if they received any complaint and what follow up may have occurred.

I am not aware of any additional TC positive samples since the BWA at the beginning of September. In addition this address does not appear to be included in the BWA area from August or September.

I await any info from the City on flushing. You may want to ask whether there has been any building work (blight removal) in the area, as contractors have been problematic with hydrant use.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Tuesday, October 14, 2014 1:38 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: Controlled Correspondence RE: Flint drinking water
Importance: High

Hi, Mike. Yep, another complaint about our favorite water supply ☺

Citizen lives at 324 West Jackson Avenue, Flint, 48505

She states, "Water quality is bad since switching to Flint River. My water stinks like sewage at times. I have developed a cough and rash, brown sediment in sink basins and kitchen sink stays backed up. I have written City Hall Water Dept and Council President for help, but no response. "

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What do you attribute the sewer smell, and the brown sediment to? Has her area been flushed recently?

I will include the phone numbers of the Water Service Center and the Water Treatment plant that you gave me last time we spoke about Flint.

Can I include your phone number as a contact as well?

Thank you!

Jennifer

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Thursday, October 23, 2014 4:04 PM
To: janburgess52@comcast.net
Cc: Poy, Thomas;Howard, Donna;Prysby, Mike (DEQ);Busch, Stephen (DEQ);Porter, Andrea
Subject: Flint, Michigan Citizen complaint - Drinking water quality and Chloride levels

Dear Ms. Burgess: You stated below that GM is not using the treated Flint water anymore because of higher chloride levels, which is correct. If you read thru the article link that you sent me or the links below, the Michigan Dept of Environmental Quality (MDEQ) clarified that the higher chloride levels are most likely coming from the City's treatment of the Flint River water with Ferric Chloride, which acts as a coagulant to help remove suspended and dissolved solids and contaminants. A chloride is a salt compound resulting from the combination of the gas chlorine and a metal. As EPA explains (see: http://water.epa.gov/drink/contaminants/secondarystandards.cfm), chlorides cause corrosion.

The Secondary Maximum Contaminant Levels (SMCL) listed in the Federal regulations at 40 CFR 143.3, are levels of contaminants that represent reasonable goals for drinking water quality, and are not enforceable by the State or the Federal governments. The SMCL for chloride is 250 milligrams per liter (mg/L). The MDEQ reports that the chloride levels in the Flint drinking water are approx. 50-60 mg/L which are acceptable levels, based on the SMCL of 250 mg/L. However, it appears General Motors requires a source of water with chloride levels below 20 mg/L.

Chlorine reacts with water to create different species of compounds that serve as disinfectants and acts to oxidize viruses/bacteria, so chlorine is not the same as chloride.

http://www.mlive.com/news/flint/index.ssf/2014/10/gms_decision_to_stop_using_fli.html

http://www.mlive.com/news/flint/index.ssf/2014/10/general_motors_wont_use_flint.html

Secondly, your email refers to the poor quality of the Flint drinking water. The source of drinking water for the City of Flint was changed from Detroit (which comes from Lake Huron) to the Flint River at the end of April this year. The Flint River raw water is a different quality than the Lake Huron raw water; and requires additional treatment to ensure an acceptable quality drinking water. The MDEQ has been working closely with the Operator-in-Charge at the Flint Water Treatment plant to ensure a palatable drinking water is provided to the citizens of Flint. Please note that the use of Flint River water as a source for your drinking water is an interim source; the City of Flint plans to connect to the Karegnondi Water Authority pipeline which will draw water from Lake Huron, in 2016.

The MDEQ is aware of the multiple complaints from citizens and is working closely with the Flint Water Department to ensure the distribution system and the water treatment processes work more efficiently and more effectively. For further information, you can contact Mike Prysby at:

Mike Prysby, District Engineer
Michigan Department of Environmental Quality
Office of Drinking Water and Municipal Assistance, Lansing District Office
P.O. Box 30242
Lansing, Michigan 48909-7742
(517) 290-8817

prysbynm@michigan.gov

The most likely cause of the brown water (iron deposits and sediments from the very old cast iron pipes that make up the distribution system in Flint), is incorrect use of fire hydrants by demolition contractors in the area during this time. The fire hydrants are turned on for the contractors to use, and since the water is under pressure, the fast flow of the water scours the insides of the pipes, causing sediment and rust to become free floating. The City conducts this type of cleaning of the pipes in a regulated/controlled process, and requires at least ten minutes for all the sediment to be flushed out of the water main. However, the contractors do not always let the water flush for ten minutes, thus sediment remains in the water main. The City's flushing of the water mains should alleviate the sediment and brown water issues. You can contact the Flint Water Service Center to request that your lines be fully flushed.

Telephone numbers for you to call if you have further concerns:
Flint Water Service Center deals with problems in the distribution system: 810-766-7202
Water Treatment Plant deals with the actual treatment of the water prior to its pumping into the distribution system: 810-787-6537

If you have additional questions, please contact me at (312) 886-0244 or crooks.jennifer@epa.gov.

Jennifer Kurtz Crooks
Michigan Program Manager
Ground Water and Drinking Water Branch
United States Environmental Protection Agency, Region 5
77 West Jackson Blvd, WG-15J
Chicago, Illinois 60604
312.886.0244
crooks.jennifer@epa.gov

From: howard.donna@epa.gov [mailto:howard.donna@epa.gov]
Sent: Wednesday, October 15, 2014 11:46 AM
To: Poy, Thomas
Subject: FWD: (SDWA - FY15-122649-3715-CV) Referred to Region - Michigan

10/15/2014

SUBJECT: FWD: (SDWA - FY15-122649-3715-CV) Referred to Region - Michigan
FROM: howard.donna@epa.gov
TO: poy.thomas@epa.gov
CC:

-----Original Message-----

10/14/2014 9:07 AM

HQ LEAD NUMBER: FY15-122649-3715-CV

SUBJECT: Referred to Region - Michigan

FROM: janburgess52@comcast.net

TO:

Name: Jan Burgess

Address: 720 Commonwealth Ave

City: Flint

State: Michigan

Zip: 48503

Phone: 810-235-6530

Alleged Violator's Name: City of Flint

Alleged Violator's Address: 1101 S. Saginaw St.

Alleged Violator's City: Flint

Alleged Violator's State: Michigan

Alleged Violator's Zip: 48502

Tip or Complaint: Earlier this year, the City of Flint, MI changed its water supply from the City of Detroit [Lake Huron] to the Flint River. This river has a very long history of pollution. Since this change, our drinking water has tripled in cost and the quality varies daily. Some days it smells like an over-chlorinated swimming pool; other days, like pond scum. It often is brown in color and frequently has visible particles floating in it. We've been under several boil water advisories due to e-coli contamination. Just this morning our local paper reports that General Motors Engine plant has shut off Flint River water to the plant due to the over-chlorination and the fears that the water will cause corrosion. http://www.mlive.com/news/flint/index.ssf/2014/10/general_motors_wont_use_flint.html#incpid=nsltr_strvheadline. People in Flint have had to resort to buying bottled water or having purification systems installed in their homes. Some residents have even had private wells dug. The water is not safe to drink, cook or wash dishes with, or even give to pets. We worry every time we shower. The City of Flint is still very economically depressed and most citizens cannot afford to do anything other than use the river water. Many of them have NO water at all due to the extremely high water bills. There is reasonable suspicion that reports have been falsified. Some residents have had water tested privately and the results are not even close to those reported by the City. Calls to the City and State have resulted in no action whatsoever.

Violation Still Occurring? Yes

State DEP/DEQ/DEM Notified? No

Sent: Thursday, November 13, 2014 9:32 AM
To: Busch, Stephen (DEQ);Benzie, Richard (DEQ)
Cc: Shekter Smith, Liane (DEQ)
Subject: RE: Flint

I was about to draft up the summary of my call to Tom Poy.

- On-going (several months) of do-not drink, bathe, or cook with Flint water. The complainant may have misunderstood the TCR violation notice (30-day notice) that the city was required to post for the Aug and Sept violations. These were addition to the immediate BWAshat will issued in mid Aug and early Sept to protect public health during the actual TC contamination in the affected area.
- Watermains being fixed only during media coverage. We could not confirm this. What we do know, based on frequent discussions with the Water Service Center (Dist OIC), is that broken mains are repaired as soon as possible.
- Death of animals drinking the water and/or buried in the city water. We could not confirm this.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Thursday, November 13, 2014 9:16 AM
To: Benzie, Richard (DEQ)
Cc: Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Flint

FYI.

Mike called Tom Poy yesterday and spoke to him regarding the complaint detailed below.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance MDEQ
517-643-2314

From: Poy, Thomas [mailto:poy.thomas@epa.gov]
Sent: Wednesday, November 12, 2014 2:38 PM
To: Benzie, Richard (DEQ); Crooks, Jennifer
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Flint

Liane/Richard: FYI..Someone called the EPA Office of Inspector General's hotline with a complaint about Flint's drinking water. The OIG forwarded a log of the call with the name of the complaintant redacted.

Complaint Details
Summary: Complaintant calling regarding drinking water in Flint, Michigan.

Details: Complaintant states the water in Flint, Michigan is not fit to drink. For several months they have been told by city officials not to drink, bathe or cook with the water. Complaintant states a water scientist advised him that dogs have died and have been buried in the city water. Complaintant states that some of the water mains have been broken for 2 – 3 months and only got fixed when the t.v. crews came and filmed it. Complaintant states the Emergency Manager, Garnelle Early, and the city Mayor, Dane Walling stated the city was paying too much to get their water from Detroit and that they need get it from Parragondy Water Pipe Line. Complaintant states the Mayor is President of the Parragondy Water Pipe Line. Complaintant states the Mayor's children go to a public school and that their school has been advised not to drink the water and for the students to bring their own drinking water and the other public schools have not been told this. Also that water is trucked into city hall.

I know that you and your staff have been working with the Flint utility on their water quality and distribution system issues. Have you heard about one school being advised not to drink the water while the others have not? Or city hall getting alternate water?

Tom

Tom Poy
Chief, Ground Water and Drinking Water Branch USEPA - Region 5
(312) 886-5991

From: Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
Sent: Thursday, November 06, 2014 9:10 AM
To: Poy, Thomas; Crooks, Jennifer
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ); shekterl@michigan.gov
Subject: Flint

Tom and Jennifer,

I received a phone call from an unidentified individual who wanted to talk to someone responsible for clean drinking water in the city of Flint. I told him that Michigan has adopted the Safe Drinking Water Act and has primary enforcement responsibility for this program. I provided him with the names of the district supervisor and district engineer that oversee this system, but he didn't want their telephone numbers because he wasn't going to waste his time with them.

He really wanted to talk to someone in Washington. I told him the EPA Administrator was Gina McCarthy, but I did not have her number or any of the others at headquarters because we work with the Region 5 EPA office. He asked for contact information, so I provided him with Tom's telephone number. I'm letting you know so you will hopefully be prepared to deal with the fact that he doesn't want to discuss this matter with the state.

I just talked to him again, as he called the OEA saying the number I gave him (312-886-5991) was incorrect, but he may have had it wrong initially. I offered to give him Jennifer Crooks phone number, and he was adamant that he did not want to talk to her. I suspect he has called about this issue previously.

Good luck.

Richard

From: Rennaker, Joanne (DEQ)
Sent: Friday, December 12, 2014 9:42 AM
To: Prysby, Mike (DEQ)
Subject: Flint Letter
Attachments: Flint DBP MCL 4Q14 d3.doc

Importance: High

Good Morning Mike,

I have attached a copy of the Flint letter. It has been finalized, but Steve would like you to take one last look at it, then e-mail me back with any changes or to let me know that it is okay.

Thanks,

Jo Anne Rennaker
Secretary
Department of Environmental Quality - Lansing District Office
Office of Drinking Water & Municipal Assistance
Office of Waste Management & Radiological Protection
517-284-6643

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

December 12, 2014

Mr. Brent Wright, Operation Supervisor
City Of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, MI 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Violation Notice – Maximum Contaminant Level for Total Trihalomethanes
Operational Evaluation – Total Trihalomethanes
4th Quarter 2014 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the City of Flint is in violation of the Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels* (MCL) *for disinfection byproducts*, of the 1979 Administrative Code.

In accordance with R.325.10610, *MCLs for disinfection byproducts*, of the 1979 Administrative Code, the MCL for disinfection byproduct total trihalomethanes (TTHM) is 0.080 milligrams per liter (mg/L) as a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the City of Flint's highest TTHM locational running annual average (LRAA), based on the last three quarters, ending November 30, 2014, is 0.099 mg/l which exceeds the standard, and that two of the eight sample site locations exceed the standard of 0.080 mg/L.

Further, in accordance with R325.10719l, *Disinfection byproducts: operational evaluation levels*, of the 1979 Administrative Code, when an operational evaluation level (OEL) at a monitoring location for TTHM exceeds 0.080 mg/L, a supply shall conduct an operational evaluation and submit a written report of the evaluation to the department not later than 90 days after being notified of the analytical result that causes the supply to exceed the operational evaluation level. As listed in the table below, our records show that TTHM operational evaluation levels for the City of Flint exceed 0.080 mg/L at four of the City's eight sample site locations.

TTHM Results (mg/L)					
	5/21/14	8/21/14	11/20/14	LRAA	OEL
DBP1 McDonalds 3719 Davison	**0.162**	**0.145**	0.059	**0.092**	**0.106**
DBP2 Liquor Palace 3302 S. Dort Highway	**0.112**	**0.127**	0.033	0.068	0.076
DBP3 North Flint Auto 6204 N. Saginaw St.	**0.097**	**0.118**	0.041	0.064	0.074
DBP4 University Market 2501 Flushing Road	**0.106**	**0.196**	**0.094**	**0.099**	**0.122**
DBP5 Taco Bell 3606 Corunna Road	0.079	**0.181**	0.034	0.074	**0.082**
DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.088**	**0.144**	0.054	0.072	**0.085**
DBP7 Salem Housing 3216 MLK Boulevard	**0.082**	**0.112**	0.050	0.061	0.074
DBP8 BP Gas Station 822 S. Dort Highway	0.075	**0.112**	0.036	0.056	0.065

Our investigation consisted of a review of ODWMA files for laboratory reports received for compliance monitoring. Our investigation is considered complete. This violation began on December 1, 2014, and will continue until TTHM LRAA is below the MCL at all sample sites.

We acknowledge and appreciate the city's cooperation with our recommendation to preemptively conduct an Operational Evaluation following the City's second quarterly round of monitoring in August. That Operational Evaluation report has identified possible causes and corrective measures for the elevated TTHM levels which we encourage the City continue implementing. These modifications have likely contributed in part to the reduction in TTHM levels reported in the most recent quarter, and suggest the City may be able to achieve compliance with the TTHM standard.

Our office is continuing to review the Operational Evaluation report that was submitted on December 1, 2014, and will provide the City and their consultant comments as needed to help address this MCL violation.

Water systems that exceed the OEL must complete and submit an Operational Evaluation in accordance with Administrative Rule 719l (R325.10719l) within 90 days of being notified of the violation. **An updated Operational Evaluation report, which incorporates the most recent sample results, must now be completed and received by our office by no later than March 1, 2015**.

If you have any other factual information you would like us to consider regarding the violation identified in this Violation Notice (VN), please provide them in a written response by January 12, 2015.

Administrative rule R 325.10403 of Act 399 requires that suppliers provide public notice (PN) as soon as practical, but no later than thirty (30) days after the supplier learns of this type of violation, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not normally reached by mail. Enclosed is a sample PN which contains the minimum required language. The City is encouraged to include

additional information regarding its response to this violation. **Please notify your consumers by January 10, 2015, and send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the public notice**. This violation must also be included in your 2014 Consumer Confidence Report (CCR), due by July 1, 2015. The PN must be repeated every quarter until you no longer exceed the TTHM standard. Failure to issue a PN for this violation will result in a fine of at least $1,000 per event, with a maximum of $5,000 per violation.

We anticipate and appreciate your continued cooperation in resolving this matter. If you have any questions regarding this VN, please contact us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water & Municipal Assistance
517-290-8817

Adam Rosenthal, EQA
Lansing District Office
Office of Drinking Water & Municipal Assistance
517-284-6644

mfp/ar/jlr
Enclosure

cc: Mr. Darnell Early, Emergency Manager, City of Flint
Mr. Daughtry Johnson, City of Flint
Mr. Howard Croft, City of Flint
Mr. Robert Bincsik, City of Flint
Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Genesee County Health Department
Ms. Liane Shekter Smith, P.E., DEQ
Mr. Richard Benzie, P.E., DEQ
Mr. Stephen Busch, P.E., DEQ

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, and November 20 of 2014). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the Maximum Contaminant Level (MCL). The standard for TTHMs is 80 µg/L. The location reporting the highest TTHM level was 99 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem by 2015.

For more information, please contact Mr. Brent Wright at 517-787-6537 or the Flint Water Plant at 4500 North Dort Highway, Flint, MI 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Busch, Stephen (DEQ)
Sent: Friday, December 12, 2014 10:07 AM
To: Prysby, Mike (DEQ);Rennaker, Joanne (DEQ)
Subject: RE: Flint Letter

Importance: High

Mike take a look at lunch and give me a call.

Richard, Adam, and I think it is good to go. Once I hear back from you I will sign for you and get it out the door yet today, along with electronic copies to the executive office.

Thanks.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Friday, December 12, 2014 10:03 AM
To: Rennaker, Joanne (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: Re: Flint Letter

I am out in the field today...may get an opportunity to look at it ....otherwise I can take a last look first thing Monday

Sent from my iPhone

On Dec 12, 2014, at 9:41 AM, "Rennaker, Joanne (DEQ)" <RENNAKERJ@michigan.gov> wrote:

> Good Morning Mike,
>
> I have attached a copy of the Flint letter. It has been finalized, but Steve would like you to take one last look at it, then e-mail me back with any changes or to let me know that it is okay.
>
> Thanks,
>
> Jo Anne Rennaker
> Secretary
> Department of Environmental Quality - Lansing District Office
> Office of Drinking Water & Municipal Assistance
> Office of Waste Management & Radiological Protection
> 517-284-6643
>
> <Flint DBP MCL 4Q14 d3.doc>

From: Busch, Stephen (DEQ)
Sent: Tuesday, January 06, 2015 10:54 AM
To: Prysby, Mike (DEQ)
Subject: RE: flint caller

Ok thanks. When you get a chance try to put together a list of who has called and who you have talked to. Then email it to Adam, Richard, Liane, and me, so if we get repeat callers we can try to get on the same page.

Thanks Mike. Hang in there and keep up your efforts they really do make a difference.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 06, 2015 10:50 AM
To: Busch, Stephen (DEQ)
Subject: flint caller

Yes....the PPI – Bradley tried to contact me twice at 10:15am ....so I will return his call

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Subject:	Rep. Neeley-Flint Drinking Water
Location:	798 HOB/Mt downstairs at guard's desk
Start:	Tue 1/6/2015 4:00 PM
End:	Tue 1/6/2015 5:00 PM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	Howes, Sarah (DEQ)
Required Attendees:	Prysby, Mike (DEQ); Benzie, Richard (DEQ); Datema, Maggie (DEQ); Shekter Smith, Liane (DEQ)

Attached is the letter from the City of Flint that Rep. Neeley would like to discuss. He would like an overview of the issue and situation and update on the water issues/how they are working to be solved.

Let's meet at the main entrance by the guard's desk at 3:45 and we can walk over together.

Thank you for being flexible and available on such short notice. It is much appreciated.
Sarah

Flint Water Quality Letter.pdf...

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system was recently found to be in violation of a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, and November 20 of 2014). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the Maximum Contaminant Level (MCL). The standard for TTHMs is 80 ug/L. The location reporting the highest TTHM level was 99 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. In that case, you may be at increased risk and should seek advice about drinking water from your health care provider.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem in 2015.

For more information, please contact Mr. Brent Wright or Mike Glasgow at 810-787-6537 or the Water Plant at 4500 North Dort Highway, Flint, MI 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: F1 S3 WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules. Reminder to water supplier: This notice/ certification must be sent to the DEQ.

Michael Glasgow ASSISTANT SUPERVISOR 1/2/15

Signature Title Date Distributed

From: Brent Wright <bwright@cityofflint.com>
Sent: Wednesday, January 07, 2015 2:40 PM
To: Prysby, Mike (DEQ)
Subject: Water Rate Schedule
Attachments: Scan003.PDF

Mike attached is the water rates you requested, call if you need more information.

Thank you

--

Brent Wright
Water Plant Supervisor
City of Flint
4500 N. Dort Hwy.
Flint, MI. 48505
Ph: 810.787.6537 ext. 3510
Fx: 810.787.3710

SCHEDULE OF WATER RATES & CHARGES
EFFECTIVE FOR BILLS DUE AFTER JULY 1, 2014

WATER CONSUMPTION RATES

Metered Water

	Rates Effective FY2014		Rates For Bills Due in FY15	
Rates per 100 cubic feet (ccf)	Inside City Rate	Outside City Rate	Inside City Rate	Outside City Rate
Through 35 ccf	7.512	11.259	7.920	11.880
Next 1,965 ccf	7.310	10.765	7.620	11.420
Over 2,000 ccf	5.792	8.677	6.090	9.140

WATER MONTHLY SERVICE CHARGES

Remote Meter Monthly Charge

	Rates Effective FY2014		Rates For Bills Due in FY15	
Meter Size	Inside City Charge	Outside City Charge	Inside City Charge	Outside City Charge
5/8"	21.776	32.483	22.900	34.170
3/4"	41.861	62.706	44.030	65.950
1"	55.283	82.792	58.150	87.080
1-1/2"	55.283	82.792	58.150	87.080
2"	55.283	82.792	58.150	87.080

Commercial & Industrial Monthly Charge

	Rates Effective FY2014		Rates For Bills Due in FY15	
Meter Size	Inside City Charge	Outside City Charge	Inside City Charge	Outside City Charge
5/8"	53.385	80.134	55.790	83.740
3/4"	61.263	91.715	64.020	95.840
1"	75.103	112.673	78.480	117.740
1-1/2"	107.756	161.785	112.600	169.060
2"	150.622	226.086	157.400	236.260
3"	297.448	448.469	310.830	468.650
4"	523.495	785.366	547.050	820.710
6"	1,029.429	1,543.867	1,075.750	1,613.340
8"	1,492.875	2,239.473	1,560.050	2,340.240
10"	2,060.754	3,107.476	2,153.480	3,247.300
12"	2,493.124	3,739.505	2,605.310	3,907.770
16"	3,102.636	4,653.867	3,242.250	4,863.280
20"	3,351.483	5,463.817	3,501.980	5,709.670

SCHEDULE OF SEWER RATES & CHARGES
EFFECTIVE FOR BILLS DUE AFTER July 1, 2014

SEWAGE FLOW RATES

Residential Sewage Flow Rates

	Rates Effective FY2014		Rates For Bills Due FY15	
	Inside City Rate	Outside City Rate	Inside City Rate	Outside City Rate
Rate per 100 cubic feet (ccf) (Based upon metered water)	4.800	5.285	5.170	5.680

Commercial & Industrial Waste Rates

	Rates Effective FY2014		Rates For Bills FY15	
	Inside City Rate	Outside City Rate	Inside City Rate	Outside City Rate
Volume (per 100 cubic feet)	1.795	2.036	1.930	2.189
Suspended Solids (per pound)	0.550	0.548	0.591	0.589
Biological/Chemical Oxygen Demand (per pound)	1.169	1.312	1.257	1.410
Phosphorus (per pound)	1.657	1.683	1.781	1.809
Industrial Charge (per 100 cubic feet)	0.030	0.030	0.032	0.032

Wholesale Rates

Beecher Metro District Rate	1.335

SEWER MONTHLY SERVICE CHARGE

Residential - Remote Read Meter Charge

	Rates Effective FY2014		Rates For Bills FY15	
Meter Size	Inside City Charge	Outside City Charge	Inside City Charge	Outside City Charge
5/8"	32.002	41.010	34.480	44.190
3/4"	46.922	56.005	50.560	60.350
1"	65.340	76.986	70.410	82.960
1-1/2"	65.340	76.986	70.410	82.960
2"	65.340	76.986	70.410	82.960

Commercial & Industrial Charge

	Rates Effective FY2014		Rates For Bills FY15	
Meter Size	Inside City Charge	Outside City Charge	Inside City Charge	Outside City Charge
5/8"	51.919	58.120	55.900	62.570
3/4"	64.434	73.620	69.370	79.260
1"	84.708	98.050	91.200	105.560
1-1/2"	137.843	164.800	148.400	177.430
2"	196.163	232.430	211.190	250.240
3"	438.083	522.870	471.620	562.930
4"	721.842	886.010	777.140	953.890
6"	1,459.948	1,770.130	1,571.800	1,905.740
8"	2,148.213	2,646.520	2,312.790	2,849.270
10"	2,918.392	3,522.540	3,141.970	3,792.410
12"	3,426.233	4,132.570	3,688.720	4,449.170
16"	4,523.945	5,497.910	4,870.530	5,919.110
20"	5,326.865	6,532.020	5,734.960	7,032.440

From: Benzie, Richard (DEQ)
Sent: Thursday, January 08, 2015 9:49 AM
To: Prysby, Mike (DEQ)
Subject: RE: flint

Thanks.

From: Prysby, Mike (DEQ)
Sent: Thursday, January 08, 2015 9:48 AM
To: Benzie, Richard (DEQ)
Subject: RE: flint

Adam is in....left him a note .....I am waiting to see if Adam has contacted her....if not....I will call her asap.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Benzie, Richard (DEQ)
Sent: Thursday, January 08, 2015 9:47 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: flint

Did someone call Sandra Wilkes(?) back?

From: Prysby, Mike (DEQ)
Sent: Thursday, January 08, 2015 9:27 AM
To: Busch, Stephen (DEQ); Benzie, Richard (DEQ)
Subject: FW: flint

More reports from Flint concerning the TTHM violation.....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Bennett, Charles (DEQ)
Sent: Thursday, January 08, 2015 9:14 AM
To: Prysby, Mike (DEQ)
Cc: Rosenthal, Adam (DEQ)
Subject: flint

I don't see you named, but this looks like the story you mentioned...

http://www.mlive.com/news/flint/index.ssf/2015/01/flint_report_says_going_back_t.html#incart_river

From: Wolf, Jennifer (DEQ)
Sent: Friday, January 09, 2015 1:21 PM
To: Prysby, Mike (DEQ)
Subject: RE: Facility Notification: Flint State Office Building

Thank you!

SGT. JEN WOLF
MI DEPT. OF ENVIRONMENTAL QUALITY
MI DEPT. OF NATURAL RESOURCES
LAW ENFORCEMENT DIVISION
EMERGENCY MANAGEMENT
DESK: 517-284-6231
CELL: PPI

From: Prysby, Mike (DEQ)
Sent: Friday, January 09, 2015 1:21 PM
To: Wolf, Jennifer (DEQ)
Subject: RE: Facility Notification: Flint State Office Building

Jennifer,

I will respond to Jeanette

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Wolf, Jennifer (DEQ)
Sent: Friday, January 09, 2015 10:42 AM
To: Prysby, Mike (DEQ)
Cc: VanOtteren, Bruce (DNR); Doll, Jeanette (DTMB)
Subject: FW: Facility Notification: Flint State Office Building

Hi Mike!

Are you handling this one? If so are you able to address Jeanette's below?

SGT. JEN WOLF
MI DEPT. OF ENVIRONMENTAL QUALITY
MI DEPT. OF NATURAL RESOURCES
LAW ENFORCEMENT DIVISION
EMERGENCY MANAGEMENT
DESK: 517-284-6231

CELL: PPI

From: Doll, Jeanette (DTMB)
Sent: Friday, January 09, 2015 7:33 AM
To: VanOtteren, Bruce (DNR); Wolf, Jennifer (DEQ)
Subject: FW: Facility Notification: Flint State Office Building

Good morning!

My phone call was referencing the advisory our Real Estate Division received from the City of Flint. Just wanted to know if we would know sooner than March 1 on the TTHM levels.

Jeanette

From: DTMB Facilities [mailto:dtmb@govsubscriptions.michigan.gov]
Sent: Wednesday, January 07, 2015 11:49 AM
To: Doll, Jeanette (DTMB)
Subject: Facility Notification: Flint State Office Building

Flint Water Advisory

Date/Time:

Effective Wednesday, January 7, 2015

Details:

The City of Flint recently sent out the attached notice regarding violations to the drinking water standards. While the City of Flint states that corrective actions are not necessary, DTMB is in the process of providing a water cooler on each occupied floor, positioned near the water fountain, so you can choose which water to drink. The coolers will arrive today and will be provided as long as the public water does not meet treatment requirements.

- Flint Water pdf

Contact:

DTMB Customer Service Center, DTMB-Customerservice@michigan.gov or (517) 373-6227

	Since we spend about 40 hours a week at our workplaces, isn't the office the best place to try out some new energy-saving tricks? The Energy Information Administration estimates that if commercial and industrial buildings improved their energy efficiency by 10 percent, our economy could see yearly savings of nearly $20 billion.

This email was sent to dolil@michigan.gov using GovDelivery, on behalf of DTMB - Lewis Cass Building - 320 South Walnut Street Lansing, MI 48933 (517) 373-1604

From: Crooks, Jennifer [crooks.jennifer@epa.gov]
Sent: Monday, January 12, 2015 12:50 PM
To: supersteely77@gmail.com
Cc: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Subject: Flint drinking water-citizen

Dear Mr. Martin: The names of the engineers at the Michigan Dept of Environmental Quality (MDEQ) that regulate the Flint drinking water supply are:

Steve Busch, Supervising District Engineer
517-643-2314
buschs@michigan.gov

Mike Prysby, District Engineer
517-290-8817
prysbym@michigan.gov

The Water Service Center in Flint deals with problems in the distribution system: 810-766-7202
The Water Treatment Plant in Flint deals with the actual treatment of the water prior to its pumping into the distribution system: 810-787-6537

The cloudiness in the water can be from other components of the drinking water, not necessarily from regulated contaminants. But, the laboratory analyses can give an indication what is causing the cloudiness in the water.

Jennifer Kurtz Crooks
DWSRF Set-aside Coordinator, Region 5
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604
crooks.jennifer@epa.gov
312-886-0244

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Monday, January 12, 2015 1:06 PM
To: lwalters313@gmail.com
Cc: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Subject: Flint drinking water-citizen 2

Dear Ms. Walters: The names of the engineers at the Michigan Dept of Environmental Quality (MDEQ) that regulate the Flint drinking water supply are:

Steve Busch, Supervising District Engineer
517-643-2314
buschs@michigan.gov

Mike Prysby, District Engineer
517-290-8817
prysbym@michigan.gov

The Water Service Center in Flint deals with problems in the distribution system: 810-766-7202
The Water Treatment Plant in Flint deals with the actual treatment of the water prior to its pumping into the distribution system: 810-787-6537

The cloudiness in the water can be from other components of the drinking water, not necessarily from regulated contaminants. But, the laboratory analyses can give an indication what is causing the cloudiness in the water.

Jennifer Kurtz Crooks
DWSRF Set-aside Coordinator, Region 5
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604
crooks.jennifer@epa.gov
312-886-0244

From: Howes, Sarah (DEQ)
Sent: Thursday, January 15, 2015 1:47 PM
To: Rennaker, Joanne (DEQ)
Cc: Busch, Stephen (DEQ);Prysby, Mike (DEQ);Shekter Smith, Liane (DEQ)
Subject: RE: Formal correspondence sent to City of Flint in 2014

Thank you, Joanne, for your quick return on this.

I sent this over yesterday.
It's much appreciated.
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C 517.282.9204

From: Rennaker, Joanne (DEQ)
Sent: Wednesday, January 14, 2015 10:35 AM
To: Howes, Sarah (DEQ)
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Subject: Formal correspondence sent to City of Flint in 2014

Dear Ms. Howes,

Per your request to Steve Busch, I have attached scanned copies of the formal correspondence (correspondence sent on letterhead) sent to the City of Flint in 2014.

Please let us know if you require anything else.

Jo Anne Rennaker
Secretary
Department of Environmental Quality - Lansing District Office
Office of Drinking Water & Municipal Assistance
Office of Waste Management & Radiological Protection
517-284-6643

From: Busch, Stephen (DEQ)
Sent: Friday, January 16, 2015 12:19 PM
To: Prysby, Mike (DEQ)
Subject: RE: tally of Flint calls

Ok. I will call her now.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Friday, January 16, 2015 12:18 PM
To: Busch, Stephen (DEQ)
Subject: Re: tally of Flint calls

Did not get a chance yesterday to call her back

Sent from my iPhone

On Jan 16, 2015, at 12:15 PM, "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov> wrote:

> Mike,
>
> The tally sheet indicated you contacted Ms. Blasdeel but were cut off and going to call her back on Thursday. Did you ever get back with her? She has called and left a message.
>
> Stephen Busch, P.E.
> Lansing and Jackson District Supervisor
> Office of Drinking Water and Municipal Assistance
> MDEQ
> 517-643-2314
>
> ---
>
> **From:** Prysby, Mike (DEQ)
> **Sent:** Wednesday, January 14, 2015 3:58 PM
> **To:** Busch, Stephen (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Rosenthal, Adam (DEQ); Rennaker, Joanne (DEQ)
> **Subject:** tally of Flint calls
>
> See updated list....
>
> Michael Prysby, P.E.
> District Engineer
> Office of Drinking Water and Municipal Assistance
> 517 290-8817

From: Yocum, William (DEQ)
Sent: Sunday, January 18, 2015 9:16 AM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: Flint h2o

Extensive coverage on ABC ch 12 this AM of meeting at Baptist church ?yesterday. Lots of emotional concerns, cause and effect claims. Jug of cider colored liquid waved in front of camera.
Bottled water sales rising .

Sent from my iPhone

From: Howard Croft <hcroft@cityofflint.com>
Sent: Tuesday, January 20, 2015 3:13 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ);Green, Warren;John O'Brien;djansen@gcdcwws.com;rosejo@msu.edu
Cc: Elizabeth Murphy;Gerald Ambrose;Flint Mayor
Subject: Water Forum
Attachments: City of Flint_Public Forum (1).pdf

Here is the current agenda that I have assembled for our Wednesday night forum. I am looking for everyone to speak for about 10 minutes at the opening and then we will move to written questions.
I have attempted to highlight each persons area of expertise as it relates to initial comments and I will moderate through the questions. We do not plan to have an open microphone.

Starting time is 7:00 in the Dome, I will be available in City Hall for those that arrive early.

Thank you all for participating,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7346 Ext.2043
hcroft@cityofflint.com

City of Flint

Public Forum

Wednesday January 21, 2015
7:00 pm City Hall Dome
AGENDA

Opening COF – DPW Director - Howard Croft

- Forum Ground Rules
- Overview of Format (each guest to speak for ~10 minutes, written questions afterword)
- Introduction of Guests

1st Speaker DEQ – Local Representative - Mike Prysby, Steve Busch

- Water safety
- Explanation of violations (impact of being over MCL)
- Another violation coming in March due to the calculation method (what that means)
- Role of DEQ
- Other places in Michigan with violations?

2nd Speaker LAN – Lead Engineer - Warren Green

- Discuss Engineering role
- Discuss evaluation of Treatment Plant and Distribution system (as reflected in report)
- They are working with KWA and coordinate with DEQ regularly

3rd Speaker Health Expert – MSU Microbiologist – Dr. Joan Rose Ph.D.

- Risk Assessment (what do the numbers mean?)
- What to do if someone suspects they are at risk
- What about the elderly and those with a weak immune system
- What will the next violation mean (water is still safe)

4th Speaker GCDC – Jeff Wright

- What to expect from KWA raw water as source
- Update on KWA timeline

Final COF – DPW Director – Howard Croft

- Summary (Next Steps – Action Plans)
  - Hiring a consultant
  - Increasing communication
  - Strategic goals in Utility Dept. (importance of community supported CIP as it relates to infrastructure)
  - Funding (state funding through the DWRF, Federal opportunities)

- Questions (Expected to have an hour of panel response time)
- Conclusion - Thank the panel, (Additional follow up at next Public Works Committee meeting)

From: Howard Croft <hcroft@cityofflint.com>
Sent: Tuesday, January 20, 2015 5:08 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ);Elizabeth Murphy;Gerald Ambrose;Flint Mayor;Shekter Smith, Liane (DEQ)
Subject: Re: Water Forum

Steve,

Thanks for the input, I have made the changes and will address the rates as well.

On Tue, Jan 20, 2015 at 3:33 PM, Busch, Stephen (DEQ) <BUSCHS@michigan.gov> wrote:

Howard,

Please revise the DEQ bullet points to as follows:

- Role of the DEQ
- Explanation of TTHM violation

Delete all others. Thanks.

Based on the calls we have been getting from your water customers, our Office strongly recommends someone from the City discuss the City's water rate structure and what the City's water rates are being used to support.

Stephen Busch, P.E.

Lansing and Jackson District Supervisor

Office of Drinking Water and Municipal Assistance

MDEQ

517-643-2314

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Tuesday, January 20, 2015 3:13 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Green, Warren; John O'Brien; djansen@gcdcwws.com; rosejo@msu.edu
Cc: Elizabeth Murphy; Gerald Ambrose; Flint Mayor
Subject: Water Forum

Here is the current agenda that I have assembled for our Wednesday night forum. I am looking for everyone to speak for about 10 minutes at the opening and then we will move to written questions.

I have attempted to highlight each persons area of expertise as it relates to initial comments and I will moderate through the questions. We do not plan to have an open microphone.

Starting time is 7:00 in the Dome, I will be available in City Hall for those that arrive early.

Thank you all for participating,

--

Howard Croft

Public Works Director

City of Flint

1101 S. Saginaw Street

Flint, MI 48502

PH# 810.766.7346 Ext.2043

hcroft@cityofflint.com

--

Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7346 Ext.2043
hcroft@cityofflint.com

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 21, 2015 10:52 AM
To: Prysby, Mike (DEQ)
Subject: Draft Presentation
Attachments: FlintPublicMeeting-DEQ.pptx

See attached draft.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

001652

Community Water Supply

Information Regarding
Total Trihalomethane (TTHM)
Disinfection Byproducts

DEQ - Community Water Supply

- Regulatory Authority over Public Water Systems
- Michigan Safe Drinking Water Act
- 1400 Community Supplies in MI (like Flint)
- Lansing Jackson Districts – 300 in 13 counties
- Oversight through:
  - Inspection
  - Monitoring
  - Construction Permitting
  - Planning
- Partnership and Compliance Assistance

What are TTHM's

Trihalomethanes occur when natural organic matter in the water react with chlorine disinfectants. (Byproduct of disinfection process)

4 Chemical Compounds made up of these elements:

- Carbon
- Hydrogen
- Bromine
- Chlorine

TTHM Standard

- Based on chronic exposure to low doses
- 80 parts per billion (0.080 ppm)
- Locational Running Annual Average (LRAA)
- Quarterly monitoring at each location
- Location and timing based on highest risk
- Running = over last 4 quarters, not calendar yr
- Total sum of 4 quarters not to exceed 320 ppb

Flint TTHM Results

TTHM Results (mg/L)					
	5/21/14	8/21/14	11/20/14	LRAA	OEL
DBP1 McDonalds 3719 Davison	**0.162**	**0.145**	0.059	**0.092**	**0.106**
DBP2 Liquor Palace 3302 S. Dort Highway	**0.112**	**0.127**	0.033	0.068	0.076
DBP3 North Flint Auto 6204 N. Saginaw St.	**0.097**	**0.118**	0.041	0.064	0.074
DBP4 University Market 2501 Flushing Road	**0.106**	**0.196**	**0.094**	**0.099**	**0.122**
DBP5 Taco Bell 3606 Corunna Road	0.079	**0.181**	0.034	0.074	**0.082**
DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.088**	**0.144**	0.054	0.072	**0.085**
DBP7 Salem Housing 3216 MLK Boulevard	**0.082**	**0.112**	0.050	0.061	0.074
DBP8 BP Gas Station 822 S. Dort Highway	0.075	**0.112**	0.036	0.056	0.065

Potential Health Effects Related to TTHM

- Federal Language
- Some people who drink water containing TTHM in excess of the MCL over many years could experience liver, kidney, or central nervous system problems and increased risk of cancer.

Health Effect Basis

- Toxicology Studies - Uncertainty in using results of high-dose studies in animals to estimate risk to humans from chronic exposure to low doses in drinking water
- Epidemiology – Findings are contradictory. No conclusion of causal link between exposure and health effects.
- EPA determined evidence supports a potential hazard concern and establishment of standard.
- Considered best course of action at this time to reduce potential risks.

TTHM Violation Requirements

- Water supply must take steps to reduce the amount of TTHM so that they are below the standard.
- Water supply must notify customers of the violation within 30 days of after learning of the violation.

Operational Evaluation

- System treatment practices
- System distribution practices
- Storage tank operations
- Excess storage capacity
- Distribution system flushing
- Source water quality
- Treatment changes
- TTHM contributions
- Steps to minimize future standard violations

Public Notification

- Designed to provide

001661

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 21, 2015 10:59 AM
To: Prysby, Mike (DEQ)
Subject: FW: Water Forum

FYI.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Wednesday, January 21, 2015 10:58 AM
To: Busch, Stephen (DEQ)
Subject: Re: Water Forum

Steven,

Yes, there is a projector available, we have it set up with a laptop and you will only need a thumb drive with your information.

On Wed, Jan 21, 2015 at 8:50 AM, Busch, Stephen (DEQ) <BUSCHS@michigan.gov> wrote:

Howard,

Are you planning to have a projector available for visual aides during the meeting? Please confirm.

Stephen Busch, P.E.

Lansing and Jackson District Supervisor

Office of Drinking Water and Municipal Assistance

MDEQ

517-643-2314

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Tuesday, January 20, 2015 5:08 PM

To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ); Elizabeth Murphy; Gerald Ambrose; Flint Mayor; Shekter Smith, Liane (DEQ)
Subject: Re: Water Forum

Steve,

Thanks for the input, I have made the changes and will address the rates as well.

On Tue, Jan 20, 2015 at 3:33 PM, Busch, Stephen (DEQ) <BUSCHS@michigan.gov> wrote:

Howard,

Please revise the DEQ bullet points to as follows:

- Role of the DEQ
- Explanation of TTHM violation

Delete all others. Thanks.

Based on the calls we have been getting from your water customers, our Office strongly recommends someone from the City discuss the City's water rate structure and what the City's water rates are being used to support.

Stephen Busch, P.E.

Lansing and Jackson District Supervisor

Office of Drinking Water and Municipal Assistance

MDEQ

517-643-2314

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Tuesday, January 20, 2015 3:13 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Green, Warren; John O'Brien; diansen@gcdcwws.com; rosejo@msu.edu

Cc: Elizabeth Murphy; Gerald Ambrose; Flint Mayor
Subject: Water Forum

Here is the current agenda that I have assembled for our Wednesday night forum. I am looking for everyone to speak for about 10 minutes at the opening and then we will move to written questions.

I have attempted to highlight each persons area of expertise as it relates to initial comments and I will moderate through the questions. We do not plan to have an open microphone.

Starting time is 7:00 in the Dome, I will be available in City Hall for those that arrive early.

Thank you all for participating,

--

Howard Croft

Public Works Director

City of Flint

1101 S. Saginaw Street

Flint, MI 48502

PH# 810.766.7346 Ext.2043

hcroft@cityofflint.com

--

Howard Croft

Public Works Director

City of Flint

1101 S. Saginaw Street

Flint, MI 48502

PH# 810.766.7346 Ext.2043

hcroft@cityofflint.com

--

Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7346 Ext.2043
hcroft@cityofflint.com

From: Shekter Smith, Liane (DEQ)
Sent: Wednesday, January 21, 2015 1:18 PM
To: Prysby, Mike (DEQ);Donaldson, Kristina (DEQ);Benzie, Richard (DEQ);Busch, Stephen (DEQ)
Subject: FW: Document for Review
Attachments: DWSD and Flint Water Issue, 1.12.15.pdf

FYI

Liane J. Shekter Smith, P.E., Chief
Office of Drinking Water and Municipal Assistance
Michigan Department of Environmental Quality
517-284-6543

From: Thelen, Mary Beth (DEQ)
Sent: Wednesday, January 21, 2015 11:52 AM
To: Creal, William (DEQ); Shekter Smith, Liane (DEQ); Anderson, Madhu (DEQ); Sygo, Jim (DEQ); Datema, Maggie (DEQ); Epkey, Amy (DEQ)
Cc: Shaler, Karen (DEQ); Willard, Veronica (DEQ); Smith, Laura (DEQ); Feuerstein, Heather (DEQ); Wilcox, Candra (DEQ)
Subject: FW: Document for Review

Director asked that I share this with you.

Mary Beth

Mary Beth Thelen
Management Assistant to Director Dan Wyant
Department of Environmental Quality
Constitution Hall, 6th Floor South
Phone: 517-284-6712 or 284-6700 (new numbers)
Fax: 517-241-7401
Thelenm2@michigan.gov

From: Adamczyk, Lynne (GOV)
Sent: Friday, January 16, 2015 10:27 AM
To: Thelen, Mary Beth (DEQ); Pleyte, Beth (Treasury); VanSickle, Michele (GOV); Clement, Elizabeth (GOV); Rospond, Laurie (GOV); Hall, Jean (GOV); Brader, Valerie (GOV)
Subject: Document for Review

FYI

Lynne Adamczyk
Executive Assistant
Office of Governor Rick Snyder
517-373-3400 (o)
517-241-9412 (d)
adamczykl@michigan.gov

Wyant/Sauton
FYI RB/DM/EC/DP
JW/VB

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
OFFICE OF THE DIRECTOR

735 RANDOLPH STREET
DETROIT, MICHIGAN 48226-2830
WWW.DETROITMI.GOV

January 12, 2015

Mr. Darnell Earley, Emergency Manager
Mr. Dayne Walling, Mayor
City of Flint
1101 S. Saginaw Street
Flint, Michigan 48502

Dear Messrs. Earley and Walling:

Regarding: Re-establishing Detroit Water and Sewerage Department Water Service

I was recently referred to a report in MLive in which there was reference to the City of Flint (City) potentially re-visiting its decision to utilize Flint River water as a water source prior to the completion of the KWA pipeline. Within that report, there appeared to be some incorrect assumptions about the cost of water service from the Detroit Water and Sewerage Department (DWSD). I write to you today to express the willingness of DWSD to resume delivery of drinking water to the City and its residents. We have monitored the water quality issues that have troubled the City since May, 2014, and understand that many of the difficulties stem from the limited access to source water. Please know that DWSD is ready, willing and able to resume service to the City if you so desire.

If the City is interested in a long term arrangement with DWSD, with this goal in mind, we offer that the City can immediately reconnect to the DWSD system at no additional charge to the City and at the same "expired contract" rate that the City was paying in April, 2014, modified to reflect the 4% increase experienced by all other wholesale customers in July, 2014. The resulting rate structure is a fixed monthly rate of $846,700 and a commodity rate of $14.92/Mcf. In order to facilitate contract negotiations, DWSD is willing to extend this rate to the City (and to Genesee County as the City's partner and former customer) until June 30, 2015.

We at DWSD take very seriously the matter of drinking water quality, and we are as concerned as you must be by the continued quality issues faced by the City. We are confident that DWSD can provide you with a solution for reliable, safe, high quality water on an expeditious timeline. Please contact me directly at (313) 224-4701 if you wish to discuss this offer further.

Sincerely yours,

Sue F. McCormick
Director

cc: Governor Rick Snyder – (via U.S. Mail)
Flint City Council, (via U.S. Mail and Electronic Mail)
Eric Mays; Jacqueline Poplar (c/o Jennie Johnson); Kerry Nelson (c/o Jennie Johnson); Joshua Freeman; Wantwaz Davis; Herbert Winfrey (c/o Jennie Johnson); Monica Galloway, Vicki VanBuren; Scott Kincaid (c/o Jennie Johnson)
Jeff Wright, GCDC – (via Electronic Mail)
Mayor Mike Duggan (via Electronic Mail)
James Fausone, BOWC (via Electronic Mail)
Robert Daddow, GLWA (via Electronic Mail)

From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 21, 2015 4:37 PM
To: Fonger, Ronald
Cc: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: RE: a question about flint

The water is still pre-treated. I think you mean when the water was coming from DWSD, and the city was just in the water transmission business instead of the water treatment business.
I believe the answer is no, they didn't have many violations, but I'd encourage you to put the question to Mike Prysby, who will be at the meeting. Understand that dozens and dozens of 'boil water' advisories are issued by municipalities around the state every year for various reasons – anything from an abnormal coliform count to broken water mains that expose water to outside influence ... and the advisory is not by itself a warning that folks drinking the water will become ill. It's representative of a comprehensive, conservative protection standard with ample public notification measures to ensure that water customers can make informed decisions.
All of that said, the two guys most likely to know the answer to your specific question will be in the room tonight. And I've copied them here to make them aware you've got questions.
b

From: Fonger, Ronald [mailto:RFONGER1@mlive.com]
Sent: Wednesday, January 21, 2015 4:08 PM
To: Wurfel, Brad (DEQ)
Subject: a question about flint

Brad:
One thing I'd like to know is whether Flint has ever been in violation of the Safe Drinking Water Act previously – at least as far back as your records go.
I'm guessing we didn't have too many when the water was pre-treated.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile PPI
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Busch, Stephen (DEQ)
Sent: Thursday, January 22, 2015 12:05 PM
To: Looney, Carolyn (DEQ);Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: RE: Voicemail from Ms. Ann Newell, 810-262-9459

I called and left a voicemail for her to call me back.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Looney, Carolyn (DEQ)
Sent: Thursday, January 22, 2015 11:14 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: Voicemail from Ms. Ann Newell, 810-262-9459

I received a voicemail yesterday at 1:17 pm from Ms. Ann Newell, 810-262-9459. She is the Infection Control Manager at Hurley Medical Center in Flint. She would like a call back to let you know about the issues and concerns they are dealing with at the hospital regarding the bad water in Flint. Please give her a call. Thanks!!

Carolyn Looney
Secretary for the Environmental Health Section
Office of Drinking Water and Municipal Assistance
Michigan Department of Environmental Quality
Phone: 517-284-6535
Fax: 517-241-1328
Email: looneyc@mi.gov

From: Shekter Smith, Liane (DEQ)
Sent: Thursday, January 22, 2015 3:30 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: Flint water

Thanks!

Liane J. Shekter Smith, P.E., Chief
Office of Drinking Water and Municipal Assistance
Michigan Department of Environmental Quality
517-284-6543

From: Prysby, Mike (DEQ)
Sent: Thursday, January 22, 2015 2:12 PM
To: Shekter Smith, Liane (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: Re: Flint water

Liane,
Back in the office and getting ready to make the call, depending on how much information she requests, it may take some time to compile it...

Sent from my iPhone

On Jan 22, 2015, at 2:03 PM, "Shekter Smith, Liane (DEQ)" <SHEKTERL@michigan.gov> wrote:

> Mike's voicemail indicates he's in the field today. I left a message for him and one for Steve. Hopefully, one of them will be able to touch base with her.

> **From:** Wurfel, Brad (DEQ)
> **Sent:** Thursday, January 22, 2015 1:59 PM
> **To:** Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
> **Subject:** Fwd: Flint water
>
> Help?
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** "Erb, Robin" <rerb@freepress.com>
> > **Date:** January 22, 2015 at 1:34:44 PM EST

To: "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
Subject: RE: Flint water

Hmmmm. Not yet.

Desk: 313-222-2708
Cell: PPI

From: Wurfel, Brad (DEQ) [mailto:WurfelB@michigan.gov]
Sent: Thursday, January 22, 2015 1:30 PM
To: Erb, Robin
Subject: Re: Flint water

You get a call?

Sent from my iPhone

On Jan 22, 2015, at 10:40 AM, "Erb, Robin" <rerb@freepress.com> wrote:

> Thanks for the time just now; it was nice to speak to you again.
>
> I'd love to connect with Mike as soon as he has a few minutes. I'm also hoping to nail down a timeline for the boil advisories, the dates of the samples that were problematic, when DEQ notified Flint of the exceedance problems, and the dates of meetings that DEQ has had with residents.
>
> My direct line is 313-222-2708. My cell is PPI
>
> Again, many thanks.
>
> (And really, I don't think you're crazy to hang out on a slab of ice waiting for fish. Nope, not at all. Weirdo.)
>
> Robin Erb
>
> Detroit Free Press Medical Writer
> 160 W. Fort Street
> Detroit, MI 48226
> Metro desk: 313-222-6601
> Direct line: 313-222-2708
>
> Follow me on Twitter **@Freephealth**

From: Erb, Robin <rerb@freepress.com>
Sent: Thursday, January 22, 2015 4:01 PM
To: Prysby, Mike (DEQ)
Subject: RE: Flint TTHM Results

Thanks much. I really appreciate your help today.

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, January 22, 2015 3:04 PM
To: Erb, Robin
Subject: Flint TTHM Results

Robin,

Attached is the summary of Flint's TTHM sample results beginning with the May 2014 quarter.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Friday, January 23, 2015 12:00 PM
To: Fisher, Brant (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: RE: From the FREEP

The City has met the TCR requirements in Oct., Nov., Dec., and at least so far in Jan. That doesn't mean that every sample is TC ND. We can say that there has been only the one EC positive sample back in August with no more since that time.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Fisher, Brant (DEQ)
Sent: Friday, January 23, 2015 11:56 AM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: From the FREEP

Does the following statement mean there are in fact other disease-carrying pathogens in the water?

"State tests suggest the water is clear of coliform bacteria, which can suggest the presence of other disease-carrying pathogens."

What a horribly worded sentence. No wonder there is so much outrage.

Brant O. Fisher, Environmental Engineer Specialist
Community Drinking Water Unit
Office of Drinking Water and Municipal Assistance
Michigan Department of Environmental Quality
Phone: 517-284-6515

Subject:	Meet w/ Sen. Ananich re: Flint Water Issues
Location:	S-105 Capitol Building
Start:	Wed 1/28/2015 9:00 AM
End:	Wed 1/28/2015 9:30 AM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	Feuerstein, Heather (DEQ)
Required Attendees:	Howes, Sarah (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ); Datema, Maggie (DEQ)

Subject:	Meet w/ Sen. Ananich re: Flint Water Issues
Location:	S-105 Capitol Building
Start:	Wed 1/28/2015 9:00 AM
End:	Wed 1/28/2015 9:30 AM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	Feuerstein, Heather (DEQ)
Required Attendees:	Howes, Sarah (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ); Datema, Maggie (DEQ)

Maggie FYI

From: Bennett, Charles (DEQ)
Sent: Wednesday, January 28, 2015 9:40 AM
To: Rosenthal, Adam (DEQ);Prysby, Mike (DEQ)
Subject: flint

Here's more if you haven't seen already...
http://www.mlive.com/news/flint/index.ssf/2015/01/erin_brockovich_says_shes_prep.html#incart_river

From: Anderson, Paula (DCH)
Sent: Wednesday, January 28, 2015 1:28 PM
To: Busch, Stephen (DEQ)
Cc: Robinson, Mikelle (DCH);Moran, Susan (DCH);Miller, Mark (DCH);Prysby, Mike (DEQ);Shekter Smith, Liane (DEQ)
Subject: RE: Need for information on the municipal water situation in Flint.....Urgent

Thank you. Nick Lyon plans to come to Sue Moran's office (Sue is the Senior Deputy for Public Health) sometime between 2-2:15 pm. We will plan to call you at the number you provided.

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 28, 2015 1:20 PM
To: Miller, Mark (DCH); Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Cc: Anderson, Paula (DCH); Robinson, Mikelle (DCH)
Subject: RE: Need for information on the municipal water situation in Flint.....Urgent

Please call me at the number listed below at 2:00. I will be on my way to the meeting with Richard Benzie, Field Operations Section Chief.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Miller, Mark (DCH)
Sent: Wednesday, January 28, 2015 12:41 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ)
Cc: Anderson, Paula (DCH); Robinson, Mikelle (DCH)
Subject: Need for information on the municipal water situation in Flint.....Urgent
Importance: High

Mike,

As discussed my Director of Community Health, Nick Lyon, asked for a quick briefing on the Municipal Water situation in Flint, at 2 PM today (Wednesday January 28th). I realize this is really short notice, but I'd like us all to be on the same page, especially if Nick get questions about it. At this point, I only have what I've heard in the media.

Can you give me a phone number of somebody that would be available at 2 PM today to answer Nick's questions? Please send it to Paula Anderson (cc:ed on this email).

Appreciate your assistance.

Mark Miller

Director, Local Health Services

Michigan Dept. of Community Health
201 Townsend, 6th Floor
Lansing MI 48913
(517) 335-8032
millerm1@michigan.gov

From: Benzie, Richard (DEQ)
Sent: Tuesday, February 03, 2015 10:36 AM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Subject: FW: Gillie's Coney Island offers up free well water for Flint residents | MLive.com

Too bad they don't have to sample for arsenic.

From: Ladouceur, Anita (DEQ)
Sent: Tuesday, February 03, 2015 6:12 AM
To: DeBruyn, Dana (DEQ); Benzie, Richard (DEQ)
Cc: Monosmith, Carrie (DEQ); Dettweiler, Dan (DEQ)
Subject: RE: Gillie's Coney Island offers up free well water for Flint residents | MLive.com

They are the model type II supply. Collect their annual samples and pay their annual fee. I KNEW there was a reason why I hadn't heard of them! ☺

From: DeBruyn, Dana (DEQ)
Sent: Friday, January 30, 2015 10:24 AM
To: Benzie, Richard (DEQ); Ladouceur, Anita (DEQ)
Cc: Monosmith, Carrie (DEQ); Dettweiler, Dan (DEQ)
Subject: RE: Gillie's Coney Island offers up free well water for Flint residents | MLive.com

No, since it is a Transient. Once I get their WSSN we will look into this and into the fee payment history.

From: Benzie, Richard (DEQ)
Sent: Friday, January 30, 2015 10:23 AM
To: DeBruyn, Dana (DEQ); Ladouceur, Anita (DEQ)
Cc: Monosmith, Carrie (DEQ); Dettweiler, Dan (DEQ)
Subject: RE: Gillie's Coney Island offers up free well water for Flint residents | MLive.com

Would this well have been monitored for arsenic? Should it be since I assume it is in the Genesee/Lapeer area?

Thanks for letting me know.

From: DeBruyn, Dana (DEQ)
Sent: Friday, January 30, 2015 8:46 AM
To: Ladouceur, Anita (DEQ)
Cc: Monosmith, Carrie (DEQ); Dettweiler, Dan (DEQ); Benzie, Richard (DEQ)
Subject: FW: Gillie's Coney Island offers up free well water for Flint residents | MLive.com

Anita,
Can you check watertrack on the sampling history of these good folks on Monday?
Dana

From: Dana Debruyn [mailto:dlwils@yahoo.com]
Sent: Thursday, January 29, 2015 8:17 PM
To: DeBruyn, Dana (DEQ)
Subject: Gillie's Coney Island offers up free well water for Flint residents | MLive.com

http://www.mlive.com/news/flint/index.ssf/2015/01/gillies_coney_island_offers_up.html#incart_river_default

Sent from my Verizon Wireless 4G LTE DROID

From: Barger, Kristin (DEQ)
Sent: Wednesday, February 04, 2015 8:02 AM
To: Prysby, Mike (DEQ)
Subject: Flint Drinking Water

Good Morning,

Mike

We received a Voicemail from Scott Bonk (517-768-2816) he said that he would like to talk to someone about possible solutions to the drinking water problem.

Thank you.

Kristin Barger
Office of Environmental Assistance
Dept. of Environmental Quality
PO Box 30457
Lansing, MI 48909
800-662-9278 or 517-284-6853

From: Swendsen, Kurt (DEQ)
Sent: Thursday, February 05, 2015 8:43 AM
To: Prysby, Mike (DEQ)
Subject: RE: Interview Aids

Since I was the project manager for the previous Flint loans, I've been keeping an eye on the news reports myself. I asked Rowe if they plan on submitting a project plan this May but haven't heard answer from them. Do you know whether Flint is trying to put together a project plan? If so, with it being such a political project, it would be good for me and you to get a copy of the draft project plan, which would ideally be available this month.

From: Prysby, Mike (DEQ)
Sent: Thursday, February 05, 2015 8:20 AM
To: Swendsen, Kurt (DEQ)
Subject: RE: Interview Aids

Kurt,

Good luck on the interview, sorry I didn't get back with you...wasn't ignoring ....just been totally swamped with the Flint situation.....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Swendsen, Kurt (DEQ)
Sent: Thursday, February 05, 2015 8:04 AM
To: Prysby, Mike (DEQ)
Cc: Skinker, Bethel (DEQ)
Subject: Interview Aids

Hi Mike,
I wanted to let you know that Bethel pointed me to the OTU short courses booklets, which I'm now diving into. They will be a great help and will more than fill up my time between now and next week, so I'm all set for reading materials and you can therefore disregard my email from last week.

Kurt Swendsen
DEQ - Revolving Loan Section
(517) 284-5418

From: Jeff Markstrom <JMarkstrom@rowepsc.com>
Sent: Thursday, February 05, 2015 12:44 PM
To: Prysby, Mike (DEQ)
Subject: Re: Flint 24" Water Main Phase 1

Ok. I'll contact Duffy and discuss

On Feb 5, 2015, at 12:42 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

> Jeff,
>
> Meeting went well....the city appeared interested in re-visiting the sizing issue on the west transmission loop. With the hydraulic model essentially complete, it shouldn't take too long to verify proper main size.
>
> Michael Prysby, P.E.
> District Engineer
> Office of Drinking Water and Municipal Assistance
> 517 290-8817
>
> ---
>
> **From:** Jeff Markstrom [mailto:JMarkstrom@rowepsc.com]
> **Sent:** Thursday, February 05, 2015 12:39 PM
> **To:** Prysby, Mike (DEQ)
> **Subject:** Re: Flint 24" Water Main Phase 1
>
> Sorry. I meant to send it to Duffy at Flint but accidentally hit reply and send instead of forward.
>
> How did the meeting go with the city yesterday
>
> On Feb 5, 2015, at 12:36 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:
>
> > Jeff,
> >
> > You sent me a reply yesterday; however, there was no text or attachments in the reply....perhaps it was a un-intended blank message....
> >
> > Michael Prysby, P.E.

District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Jeff Markstrom [mailto:JMarkstrom@rowepsc.com]
Sent: Wednesday, February 04, 2015 9:22 AM
To: Prysby, Mike (DEQ)
Subject: FW: Flint 24" Water Main Phase 1

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Friday, January 30, 2015 11:34 AM
To: Jeff Markstrom
Cc: Busch, Stephen (DEQ)
Subject: Re: Flint 24" Water Main Phase 1

Not in today ... And we can discuss further next week...proper sizing is important especially given the TTHM issue and stagnation contributing... I recall in our earlier discussion that the system model would be revisited to confirm whether this transmission main is properly sized or if a smaller sized main would be better suited given the decline in the city's customer base. I did not see any discussion of this in the submittal.

Sent from my iPhone

On Jan 30, 2015, at 9:10 AM, "Jeff Markstrom" <JMarkstrom@rowepsc.com> wrote:

> Mike,
>
> Good morning, hope all is well. I was following up with you to see if you had a chance to review the Phase 1 for the 24" WM project we submitted to you a few weeks back. The City just put this project out for bids this week and I wanted to make sure that we will have a permit soon.
>
> Second thing is that the City is having us pull together a second project Phase 2 for the 24" WM project that we should be sending your way in the next couple weeks for review. The city wants to have a second project on the street in about a month so the construction is staggered a little this summer. Both projects are budgeted to get constructed this summer/fall.
>
> I look forward to your response.
>
> Jeff B. Markstrom, P.E., Senior Project Manager
> ROWE Professional Services Company
>
> <image001.jpg>
>
> 540 South Saginaw Street, Suite 200, P.O. Box 3746, Flint, MI 48502
> tel: 810.341.7500 x232 / fax: 810.341.7573 / cell: 810.869.5398
> JMarkstrom@rowepsc.com / www.rowepsc.com

From: Berndt, Jason (DEQ)
Sent: Friday, February 06, 2015 11:35 AM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ);Busch, Stephen (DEQ)
Subject: RE: Source Wster assessment Flint River
Attachments: FlintFinal0204.doc

See the attachment.

From: Prysby, Mike (DEQ)
Sent: Friday, February 06, 2015 11:04 AM
To: Berndt, Jason (DEQ)
Subject: Source Wster assessment Flint River

Jason,

Has a source water assessment been performed for the Flint River watershed...spec. for the Flint WTP intake? If so, the city of Flint would like to obtain a copy of source water assessment report.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Source Water Assessment Report for the City of Flint Water Supply Flint River Emergency Intake February 2004

City of Flint Water Treatment Plant, Flint, Michigan

Prepared for:

City of Flint Water Supply; WSSN 2310

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Michigan Source Water Assessment Report 54

Executive Summary

The purpose of the Source Water Assessment is to analyze the sensitivity and determine susceptibility of a community's source of drinking water to potential sources of contamination.

Sensitivity is determined from the natural setting of the source water (raw water to the water treatment plant), and indicates natural protection afforded the source water. Using procedures established in the Great Lakes Protocol, Michigan Source Water Assessment Program, the ***emergency*** *intake for the Flint Water Treatment Plant has a very high degree of sensitivity to potential contaminants. When the effects of agricultural and urban runoff in the Flint River watershed are considered, the Flint intake is categorized as very highly sensitive.*

Susceptibility identifies factors within the community's source water area that may pose a risk to the water supply. The susceptibility determination provides information with respect to listed facilities and land areas within the source water area that should be given greater priority and oversight in implementing a source water protection program. The source water area for the Flint ***emergency*** *intake includes 96 potential contaminant sources, 16 listed potential contaminant sources within the susceptible area, plus urban and agricultural runoff from the Flint River watershed into the Flint River. The potential contaminant sources, in combination with the very highly sensitive intake, indicate that the Flint* ***emergency*** *intake source water is very highly susceptible to potential contamination.*

The Flint ***emergency*** *intake source water is categorized as very highly susceptible, given land uses and potential contaminant sources within the source water area. However, it is noted that when operating, the City of Flint Water Treatment Plant has effectively treated this source water to meet drinking water standards. The City of Flint has instituted pollution prevention programs, but should be cognizant of additional potential threats to its source of drinking water that are identified in this report. This report explains the background and basis for these determinations.*

Using this Assessment

Clean, safe drinking water is fundamental to the viability of any community. Protecting the drinking water source is a wise and relatively inexpensive investment in your community's future. The overall intent of this assessment is to provide background information for your community to use in developing a local source water protection program. The assessment benefits your community by providing the following:

- ***A basis for focusing limited resources within the community to protect the drinking water source(s).***

  The assessment provides your community with information regarding activities within the **source water area (SWA)** that directly affect your water supply. It is within this SWA that a spill or improper use of **potential contaminants** may cause these contaminants to migrate toward the water **intake**. By examining where the source waters are most susceptible to contaminants, and where potential contaminants are located, the assessment clearly illustrates the potential risks that should be addressed.

- ***A basis for informed decision-making regarding land use within the community.***

  The assessment provides your community with a significant amount of information regarding where your drinking water comes from (the source) and what the risks are to the quality of that source. Knowing where the resource is allows your community planning authorities to make informed decisions regarding proposed land uses within the SWA that are compatible with both your drinking water resource and the vision of growth embraced by your community.

- ***A basis for dealing with future regulations.***

  The assessment has been designed to functionally meet proposed requirements for surface-water supplies. Information needed to address regulatory needs and requirements has been collected and made available to your community through this report.

This source water assessment also provides the basis for a locally developed, voluntary source water protection program. Communities interested in voluntarily developing source water protection programs should contact the Michigan Department of Environmental Quality (MDEQ) or visit the Department web page at http://www.deq.state.mi.us.

Introduction

In 1996, Congress amended the **Safe Drinking Water Act** and provided resources for state agencies to conduct source water assessments by identifying SWAs, analyzing the **sensitivity** of the source to natural conditions, conducting contaminant source inventories, and determining the **susceptibility** of the source to potential contamination. Delineations, sensitivity analyses, contaminant inventories, and susceptibility determinations comprise a "source water assessment." Assessments will be completed for every public water supply source in Michigan. To support this effort, the MDEQ Water Division established a partnership with the U.S. Geological Survey (USGS) to develop a method for conducting source water assessments for surface water supplies (Sweat and others, 2000; Sweat and others, 2001).

The requirements for public water supplies in Michigan to meet United States Environmental Protection Agency (USEPA) **maximum contaminant levels** (MCLs) provide some degree of assurance of safe drinking water; however, all systems are vulnerable to potential contamination. One of the best ways to ensure safe drinking water is to develop a local program designed to protect the source of drinking water against potential contamination. Not only does this add a margin of safety, but it also raises the awareness of consumers and/or the community of the risks of drinking water contamination. It is expected that source water assessment results will provide a basis for developing a source water protection program.

Background

Flint is located in Genesee County, about 55 miles northwest of Detroit, Michigan (fig. 1). The city of Flint water supply serves a population of 125,000. In 1967, the city connected to the Detroit Water and Sewage Department (DWSD) water supply and the Flint Water Treatment Plant (WTP) was placed on stand-by operation. The city is required by the MDEQ to maintain this treatment facility for reliabilty since the city obtains treated water through a single pipeline from the DWSD Lake Huron WTP which is subject to interruption of service. The present intake at the Flint WTP was constructed in 1948 and consists of a concrete box structure on the edge of the Flint River. The intake structure has a bottom elevation of 700.00 and connects through a 72-inch concrete pipe to the low service pump station. Low service pumps lift the river water through the WTP processes of conventional treatment and lime-soda softening .

Flint WTP Emergency, Flint River Intake Structure (Viewed from downstream)

Treatment at the plant includes the addition ferric chloride as a coagulant, lime and soda ash for softening, chlorine for disinfection, and fluoride addition for dental health.

Water treatment plants are periodically inspected to identify construction, maintenance, operational or source defects that could make them vulnerable to contamination, particularly from contaminants that are microbial in nature, such as fecal coliforms. Water suppliers are provided a sanitary survey report that notes deficiencies in the system, and the State may direct the system to make necessary corrections. The sanitary survey is an important part of a safe drinking water program.

Climate

The Flint water supply is located in the central Lower Peninsula hydrologic province (Rheaume, 1991), in the Flint River watershed (USGS, 1974, 1982). The region experiences temperate summers with moderate winters. The Flint Bishop International Airport Weather Bureau station reports that the average annual precipitation for the climatic years 1887-2001 was 30.28 inches and the average from the past 5 years is 31.42 inches (NOAA, 2001), with about 13 percent of that as snowfall between November and March. Annual average runoff for the Flint SWA, extrapolated from Miller and Twenter (1986, fig. 1) is 9 to 10 inches.

Source Water Area Geology and Hydrology

The study area for evaluating the extent of the Flint emergency intake SWA includes the upper reaches of the Flint River watershed (fig. 1). Flint is located roughly in the middle of the Flint River watershed. The SWA consists of lacustrine clays and silts; end moraines of coarse- and medium-textured till; fine-, medium-, and coarse-textured glacial tills ; and postglacial alluvium. The SWA is underlain by Bayport Limestone, Marshall Sandstone and mixed shales, sandstones, and limetsones of the Saginaw and Michigan Formations (Martin, 1955; Milstein, 1987). Soils underlying the Flint SWA are primarily associations of the Blount, Boyer, Brookston, Capac, Ceresco, Celina, Chelsea, Cohoctah, Conover, Del Ray, Kibbie, Lapeer, Lenawee, McBride, Metea, Miami, Montcalm, Sloan, Spinks series (U.S. Department of Agriculture, 1961; BASINS, 1998; MIRIS, 2000). They include loams, loamy sands, fine sandy loams, silty clay and muck.

Flint River – Source Water for City of Flint WTP

Soil permeability is based on the calculated time of travel, in inches per hour (in/hr), for water to move vertically through a saturated soil zone. Soil thickness and permeability values are available in soil survey reports published by the National Cooperative Soil Survey and U.S. Department of Agriculture (1982, 1992, 1993, also 2 county reprints in press). Permeability ranges from less than 0.06 in/hr, rated as very slow, to more than 20 in/hr, rated as very rapid.

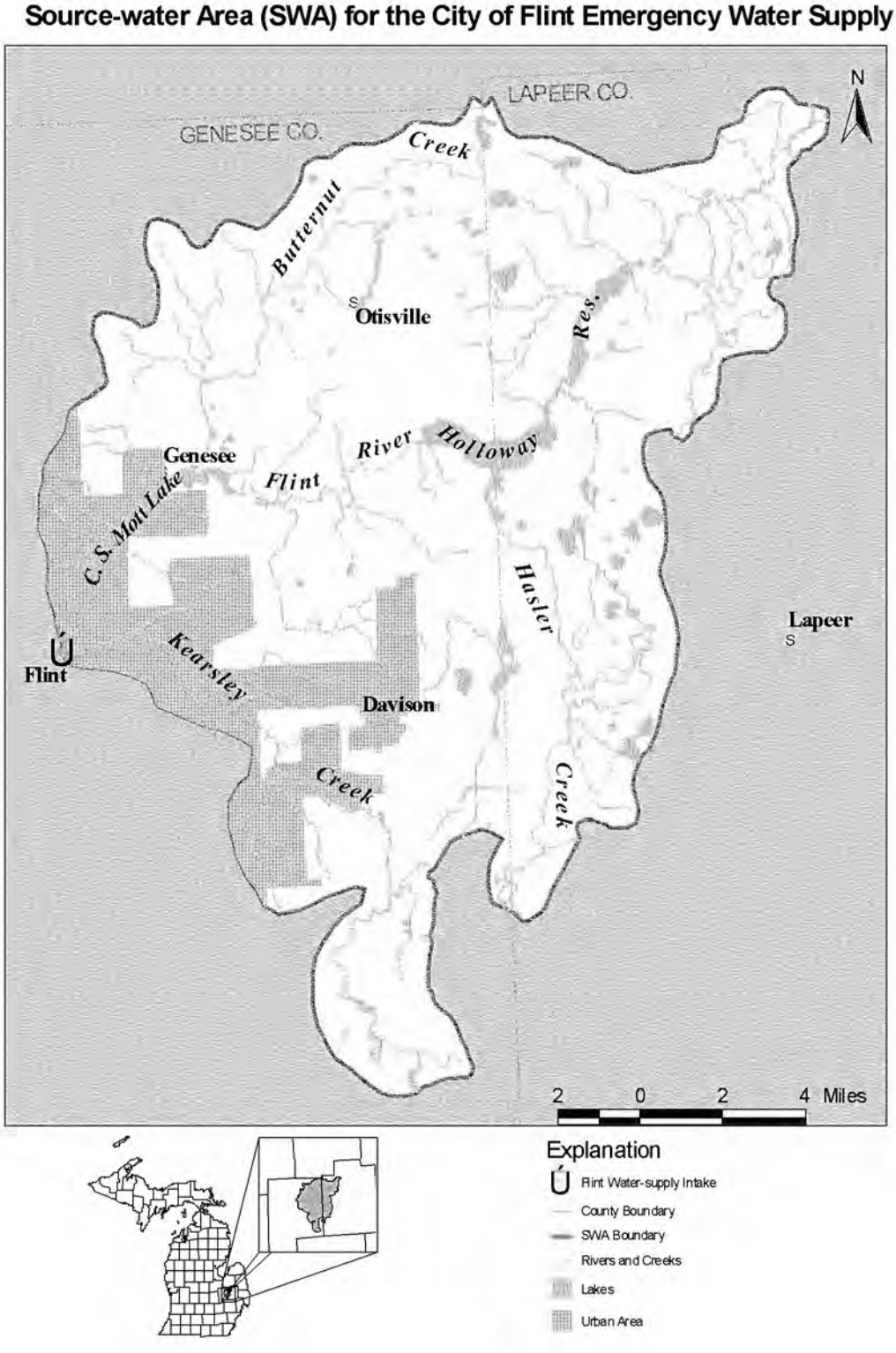

Figure 1. Source-water area (SWA) for the evaluation of the Flint emergency intake, Flint, MI.

Mott Lake and Dam on Flint River upstream of Flint WTP

Very slowly permeable soils significantly reduce the movement of water through the soil zone and, as a result, allow greater time for natural degradation of contaminants. However, such soils also provide for rapid overland transport of contaminants directly to receiving waters, which in turn may affect the water supply intake. Erosion and transport of soils by surface waters can cause an increase in turbidity. In contrast, very rapidly permeable soils allow for rapid infiltration and passage through the soil zone from the surface. Such soils potentially allow rapid transport of contaminants with minimal contact-time available for contaminant breakdown.

Mean, area-weighted, depth-integrated permeabilities for the Flint SWA range from 0.6 to as much as 7.8 in/hr. The mean permeability is 3.1in/hr (Schneider and Erickson, undated, series of 5 maps; BASINS, 1998; MIRIS, 2000). Soil permeability ranges from moderately slow in the northeastern portion of the SWA to moderate over the eastern portion of the SWA to moderately rapid throughout the central and western portions of the SWA, and rapid around the Flint River (fig. 2; U.S. Department of Agriculture, 1961; BASINS, 1998; MIRIS, 2000). Areas adjacent to the Flint River are underlain by highly sensitive drift lithologies, whereas the remainder of the SWA is underlain by least sensitive drift lithology (Lusch and others, 1992).

Kearsley Lake and Dam on Kearsley Creek Upstream of Discharge to Flint River and Flint WTP Emergency Intake

The Flint SWA contains an area of about 237 square miles (mi2). There are is one operable gage within the Flint SWA and a Flint River gage which operates approximately 9 miles downstream from the Flint Emergency Intake. Between 1932 and 2002 discharge has been recorded at this station by the USGS (Blumer and others, 2002). Annual mean discharge at the Flint River at Flint gauging station was 339 cubic feet per second (cfs) between 1932 and 2001, and ranged from 153 to 1258 cfs. Velocity measured at this stream gage was used to estimate the distance in which contaminants could travel within 24 hours, or the 24-hour time-of-travel (TOT) for this area on the Flint River. The distance calculated for the 24-hour TOT was approximately 27 miles.

Soil Permeability for the Flint Source-water Area, Flint, MI

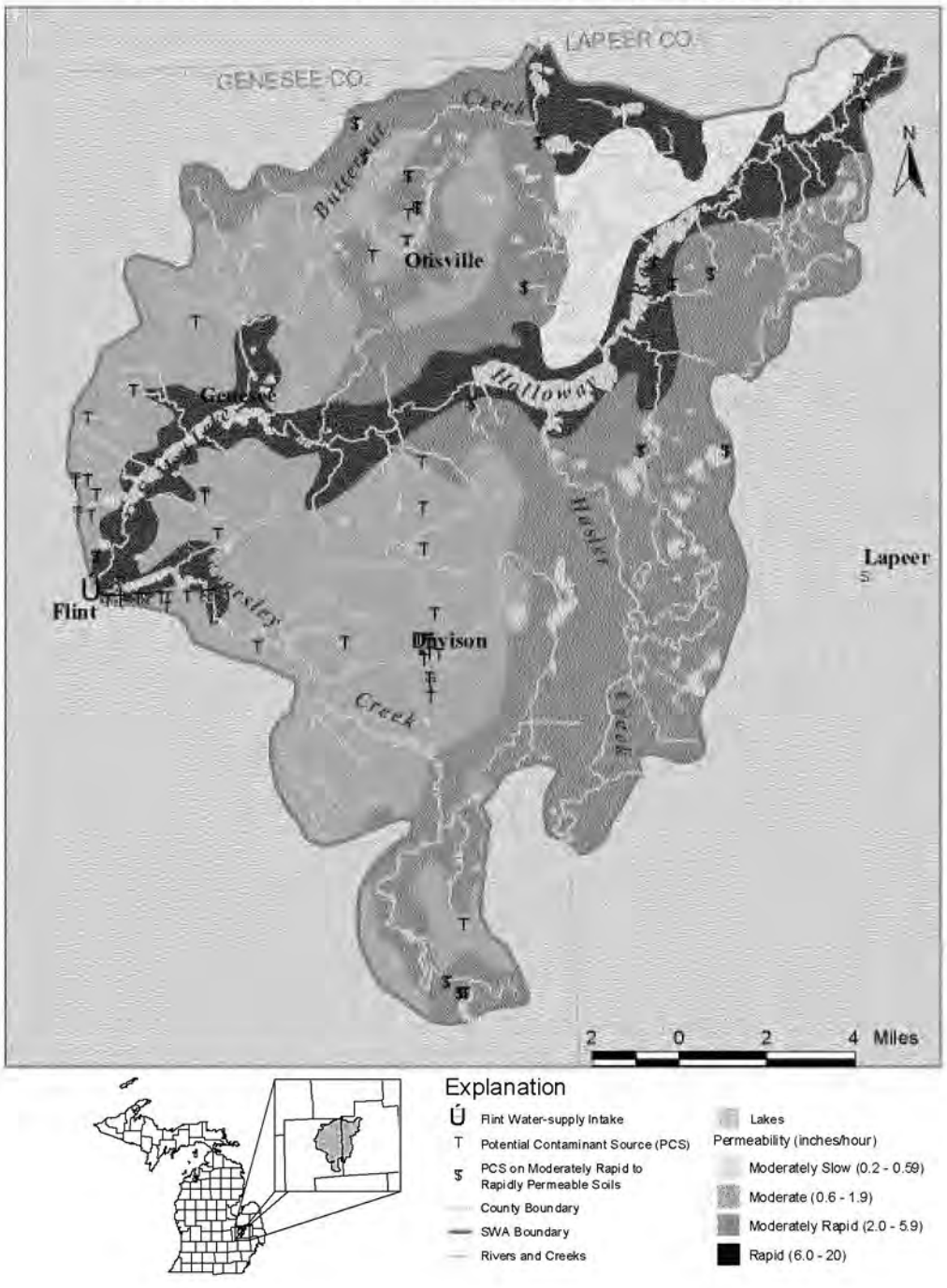

Figure 2. Soil permeability for the Flint emergency water-supply intake SWA. Flint, MI.

History of Raw Water Quality at the Source

Public water supplies are required to routinely monitor raw water quality for selected parameters to optimize treatment, and to monitor treated water quality for a list of contaminants that is determined by MDEQ and the Safe Drinking Water Act. A detection of any contaminant may indicate that a pathway exists for contaminants to reach the intake. It is important to realize that the results from a given sample only provide information regarding the water quality at the time the sample was collected. Water quality can change with time for a number of reasons. The fact that a water sample does not contain contaminants is no guarantee that contamination will not occur in the future. Conversely, the detection of a contaminant in the past does not indicate that it will occur in the future.

The Flint WTP records for the last 3 years of routine operation, 1965-1967 show that water use fluctuated between 34.4 and 46.5 million gallons per day (MGD), with an average daily use of 38.5 MGD. Raw water quality reported for these three years ranged from 5 to 183 nephelometric turbidity units (NTU) for turbidity, 203 to 375 mg/l total hardness as CaCO3, 116 to 235 mg/l alkalinity as CaCO3, 16 to 46 mg/l chlorides and 8.2 to 8.5 units for pH. Precipitation events were noted to increase turbidity and lower hardness. An analysis of flow duration for the Flint River and source water chemistry would probably indicate that there may be an indirect correlation between turbidity, suspended sediments, and coliforms and high flows associated with spring snowmelt and precipitation runoff events.

In recent years, the Flint WTP has undergone operational and process improvements for water treatment. Raw water quality during these testing periods when the WTP was operating but discharging to waste are noted in the table below.

Date of Tests	Turbidity	Total Organic Carbon	pH	Alkalinity	Hardness
	(NTU)	(mg/l)	(pH units)	(mg/l)	(mg/l)
12/5-7/2000	4.2	8.75	7.8	249	324
1/16-18/2001	2.4	8.5	7.7	275	363
3/20-21-2001	5.4	N/A	7.9	196	266
4/16-18/2001	7.6	8.6	8.2	213	284

Source Water Assessment Methodology

Technical guidelines for completing source water assessments are contained in the Michigan Source Water Assessment Program, Assessment Protocol for Great Lakes Sources (Protocol) (MDEQ, 1999, Appendix L) available at http://www.deq.state.mi.us/dwr. In general, an assessment is a process for evaluating a drinking water supply and the potential for its treated water to exceed an MCL due to raw water contamination. A source water assessment considers the SWA, potential sources of contamination within the SWA, conditions of the water supply intake, and susceptibility to contaminants in order to identify potential risks to drinking water quality. Although the Protocol provides the minimum requirements and instructions on how to conduct an assessment, each water supply is unique with respect to how the process is carried out, due to local conditions and information. Sweat and others (2000, 2001) have developed and documented the methodology used in the preparation of this assessment.

Delineating Source Water Areas

Delineation of the SWA is accomplished by using geographic information system (GIS) software to map the watershed(s) that have the potential to affect source water at the intake. Using information from the water supply, a critical assessment zone (CAZ) is defined for the intake (MDEQ, 1999, Appendix L). A buffer is then created along any shoreline intersected by the CAZ, and from the edge of the CAZ to the mouth of any river(s) that might influence the intake. Finally, the buffer is extended along the shoreline of any river(s) that might influence the intake, from the mouth of the river to its headwaters. The area defined by the CAZ, river and shoreline buffers is termed the susceptible area. The susceptible area within the SWA defines locations where a water supply should focus its management strategies and resources to benefit the drinking water resources.

Using the Great Lakes Protocol and the Flint water supply information:

- The CAZ for the Flint intake is assigned as 3,000 ft since the intake is located in an inland river (fig. 3).
- The susceptible area along the shoreline is determined to be: A distance of 300 ft inland along the banks of the Flint River and its tributaries (fig. 4).

Contaminant Source Inventory

Past, current, and potential future sources of contaminants were inventoried to identify several categories of potential sources of contaminants including microorganisms (bacteria, oocysts, and viruses), inorganic

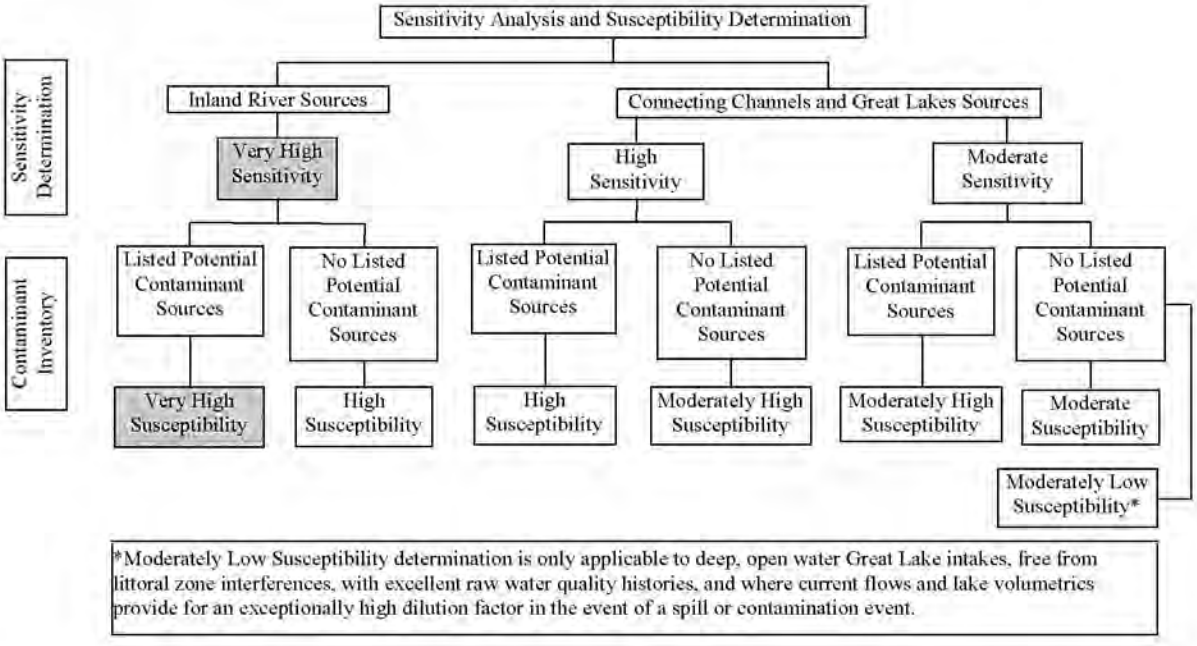

Figure 53. Surface-water sSource sSensitivity aAnalyses and sSusceptibility dDetermination for the ~~Ann Arbor~~Flint emergency water-treatment-plant source-water areas.

compounds (nitrates and metals), organic compounds (solvents, petroleum compounds, pesticides), and disinfection by-product precursors (trihalomethanes, haloacetic acids).

It is important to remember that sites and areas identified by this process are only potential contaminant sources used and managed properly. In addition, assumptions were made about particular types of land uses and risks associated with those land uses. Assumptions are discussed further in the results portion of this report.

The process for completing the inventory included several steps, which are summarized as follows:

1. Reviewed readily available land use maps and historical/current aerial photographs.
2. Plotted relevant information from applicable state and federal regulatory databases including the following lists:
   - MDEQ leaking underground storage tank (LUST) sites;
   - MDEQ registered underground storage tank (UST) sites;
   - MDEQ Environmental Cleanup Site Information System (ECSI) sites;

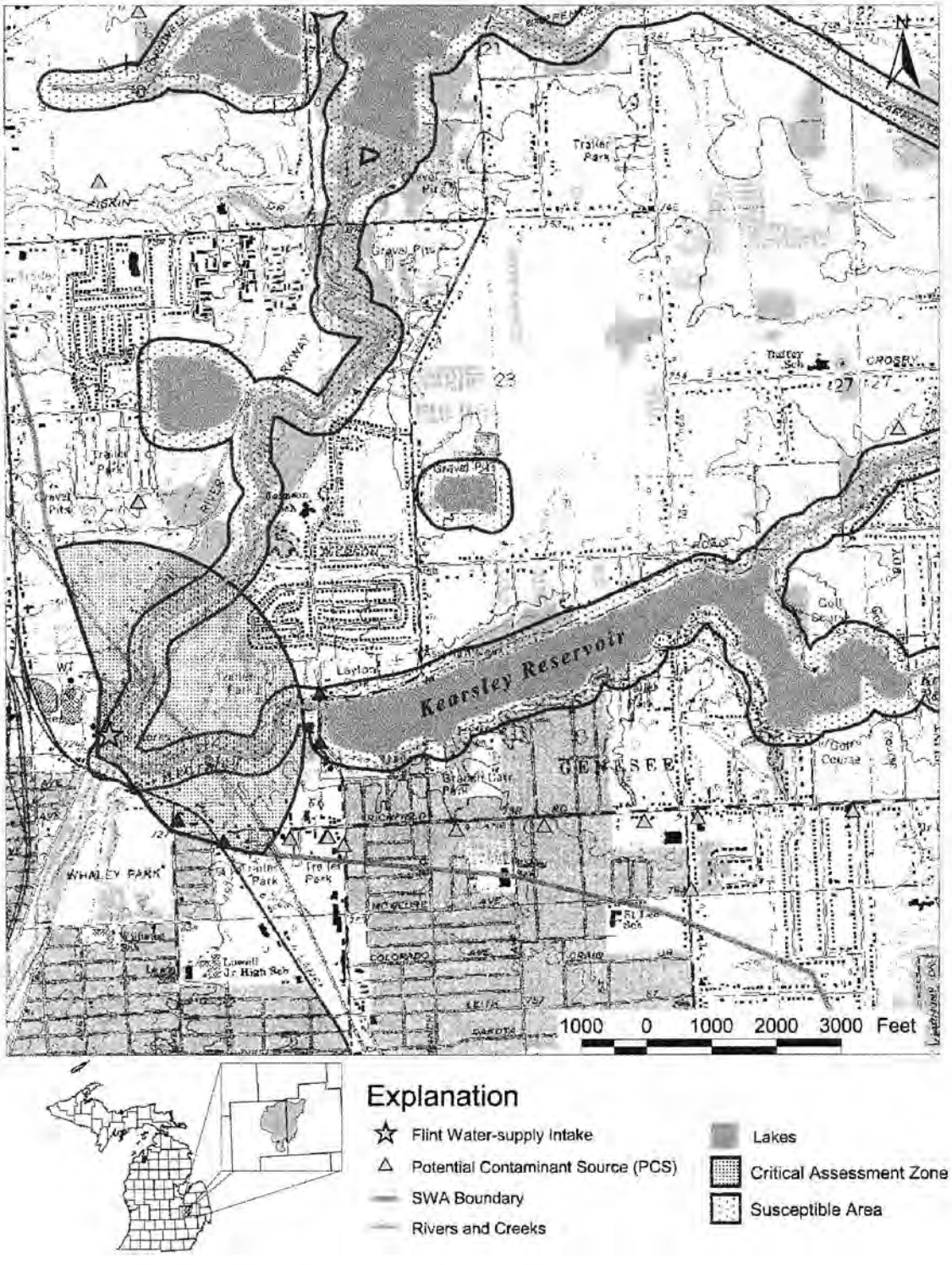

Figure 4. Critical Assessment Zone (CAZ) for the Flint emergency water-supply intake, Flint, MI.

- ·MDEQ Source Information System (for water discharge permit sites including National Pollutant Discharge Elimination System (NPDES) permits, Water Pollution Control Facility (WPCF) permits, storm water discharge permits, and on-site sewage (septic) system permits);
- ·MDEQ Underground Injection Control (UIC) database;
- ·MDEQ Active Solid Waste Disposal Permits list;
- ·Michigan Department of Transportation (MDOT) - Hazardous Materials database;
- ·State Fire Marshall registry of above-ground fuel storage tank sites;
- ·State Fire Marshall Hazardous Material Handlers and Hazardous Material Incidents (HAZMAT) sites;
- ·U.S. EPA BASINS software, version 2.1,
- ·U.S. EPA Envirofacts database;
- ·U.S. EPA Resource Conservation Recovery Act (RCRA) generators or notifiers list;
- ·U.S. EPA RCRA Treatment, Storage, and Disposal Facility (TSDF) Permits list;
- ·U.S. EPA National Priorities List (NPL);
- ·U.S. EPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLA) List;
- ·U.S. EPA RCRA Corrective Action Activity List (CORRACTS);
- ·U.S. Department of Transportation (DOT) Hazardous Materials Information Reporting System (HMIRS);
- ·U.S. EPA Toxic Chemical Release Inventory System (TRIS); and
- ·U.S. EPA Oil Pollution Act of 1990 Spill Response Atlas

3. Met with public water supply and community officials on June 11, 2003 to identify potential sources not listed elsewhere in databases or on maps and completed a preliminary inventory form to be used in completing the SWA base map. Subsequent contacts by email and telephone on numerous occasions to request additional data, clarify data, and discuss results.
4. Land use and/or ownership (for example, residential/municipal; commercial/industrial; agricultural/forest; and other land uses) was mapped and evaluated in relation to PCS, soil characteristics, and proximity to the intake(s).
5. Conducted an informal field inventory to locate additional PCS.
6. Completed final inventory form of PCS and plotted locations of PCS on the base map.

The purpose of the inventory is three fold: first, to provide information on the location of PCS, especially those within the susceptible area; second, to provide an effective means of educating the public about PCS; and third, to provide a reliable basis for developing a management plan to reduce potential contaminant risks to the Flint water supply.

The inventory process attempts to identify potential point-source contaminants within the SWA. It does not include an attempt to identify specific potential contamination problems at specific sites, such as facilities that do not safely store potentially hazardous materials. However, assumptions were made about particular types of land use. For example, it is assumed that rural residences associated with farming operations have specific potential contamination sources such as fuel storage, chemical storage and mixing areas, and machinery repair shops. It should also be noted that although the inventory depicts existing agricultural uses (crops grown), these are likely to undergo continual change due to normal crop rotation practices. What is irrigated farmland now may be non-irrigated farmland next year, or vice versa.

The results of the inventory were analyzed in terms of current, past, and future land uses and their relationship to the susceptible area and the supply intake. In general, land uses and PCS that are closest to the supply intake pose the greatest threat to a safe drinking water supply. Inventory results are summarized in table 1, and are shown on figure 5.

Many PCS are readily identifiable because they have a single discharge point, and often a permit is required for these discharges. However, other PCS have diffused, poorly defined discharge locations. These are known as non-point discharges because they occur over large areas and may not be quantifiable by readily accepted methods. These non-point source discharges are difficult to identify and control, and consequently to quantify, yet they are a major source of water pollution (Carpenter and others, 1998). Non-point sources also include atmospheric deposition over water and land, and include urban, rural, and

Table 1. Potential contaminant sources in the source water area

Type of Potential Contaminant Source (PCS)	Number of PCS	Number of PCS in Susceptible Area
Hazardous or solid waste site permits	71	11
Industrial facility discharge site permits	9	3
National priority list sites	1	0
Permit compliance system	12	2
Toxic release inventory permits	3	0
TOTALS	96	16

agricultural runoff from areas such as lawns, golf courses, farm fields, pastures, parking lots, and roadways. Runoff from these areas can contain many types of pollutants including sediments, metals, organic and inorganic chemicals, viral and bacterial pathogens, pharmaceuticals, and animal wastes. Transportation also represents a non-point source of contamination. Trucking and railroads transport potential contaminants through the SWA. An accident causing a spill could lead to potential contaminants entering a storm sewer, or in the case of boaters or rail transportation, directly to the Flint River. Petroleum pipeline crossing the upper reaches of the Flint River also pose contaminant threats.

Non-point sources of concern to the Flint water supply are primarily from storm sewers and from industrial, commercial, and residential sources in the SWA and communities upstream of the intake. A railroad bridge immediately upstream in the CAZ of the intake carries occasional train traffic described as hazardous. The West Boulevard storm sewer which discharges in the CAZ provides drainage to the Flint River from an industrialized area.

Railroad Trestle over Flint River Immediately Upstream of Flint WTP

The Michigan Department of Agriculture is working to identify dairies and concentrated animal feedlots (greater than 1000 animal units) in the Flint River watershed upstream of the intake.

The U.S. Environmental Protection Agency (USEPA) has identified one impaired water body in the Flint SWA on its Clean Water Act 303(d) list. The parameter of concern within the Holloway Reservoir is fish consumption advisories for PCBs. An additional impaired water body exists upstream of the SWA but not within the SWA itself. This water body is the collective of unnamed drains in Metamora, and the parameters of concern are untreated sewage discharge and pathogens (MDEQ, 2002).

In general, PCS within the susceptible area pose greater risks than those outside the susceptible area. The presence of PCS within the SWA indicates potential sources of chemicals that could, if improperly managed or released, impact the water quality at the intake. Small quantities of these chemicals, in some

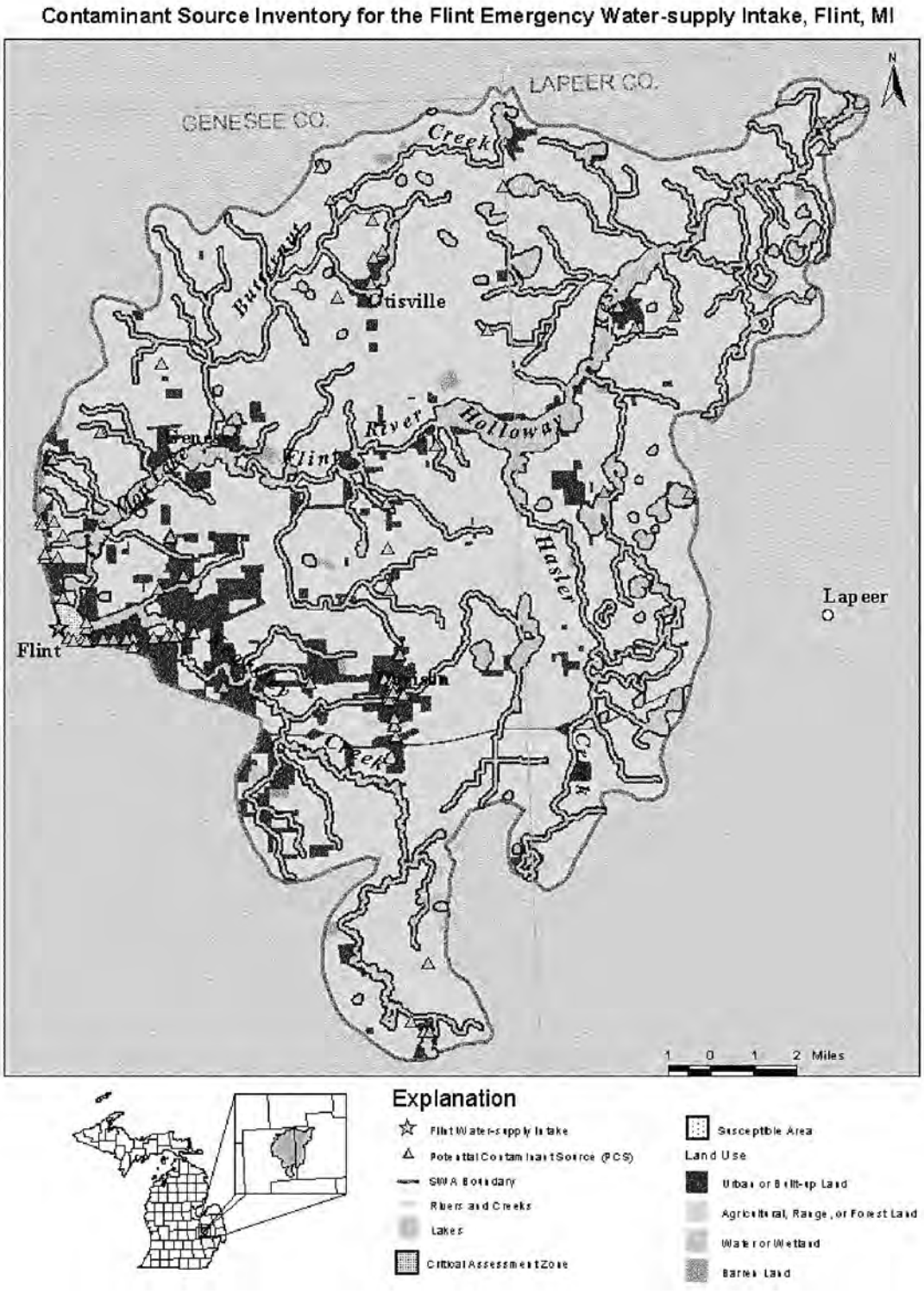

Figure 5. Potential Contaminant Sources in City of Flint Source Water Area, Flint, Michigan

cases less than a liter, can significantly affect the supply. Also of concern is the location and distribution of these sources with respect to highly permeable soils. The susceptible area consists of primarily agricultural and forested land with some urban areas. Overlaying the PCS locations and the moderately rapid to rapidly permeable soil map for the Flint SWA indicates that 21 of the located PCS are located on or very near to

areas with moderately rapid to rapidly-permeable soils. All PCS within the SWA should be addressed; the susceptibility determination, however, provides the water supply with the tools to focus resources where the greatest risk occurs. The results of the PCS inventory performed for Flint water supply is shown on figure 5 and is summarized as a function of PCS locations relative to the susceptible area. The inventory results indicate that there are 7 PCS, holding 8 permits for discharge, within the susceptible area (table 2).

Table 2. Contaminant source inventory.

Site Name	Identification Number	Reason for Permit	Reason for Listing as Potential Contaminant Source
DAVISON OIL AND GAS BURTON STA 7	MI0000540310	On-Site Storage	Hazardous and Solid Waste Site
H AND M SVC	MID985612225		
KINNIES PARTY STORE	MID985597657		
ZACK CO	MID002975225		
EVERGREEN CLEANERS	MID981539711		
DORT HWY INC	MID985579945		
SUPER GO MARKETERS INC	MID985583053		
PIONEER CABINETRY INC	MID985605849		
DAVISON CITY OF	MID985625136		
MID MICHIGAN AUTO PARTS INC	MID985654789		
CLARK STORE 1849	MI0001853613		
FORD-NORTHVILLE PLT	MI0024643	Process, Treatment, and Waste Waters	Industrial Facilities Discharge Site
FOREST WASTE PRODUCTS	YCRCLA276		
OTISVILLE WWTP [a]	MI0028720		
ORCHARD COVE WWTP	MI0054755	Waste Water, Dust, and Process Water	Permit Compliance System
OTISVILLE WWTP [a]	MI0028720		

Note: Subscript denotes multiple permits

Sensitivity Analysis

Sensitivity is the natural ability of a SWA to provide protection against the contamination of the water supply intake, and includes physical attributes of lakes, rivers, and soils. The sensitivity analysis requires consideration of several different variables related to the natural environment, for example:

- ·Water quality history of the source.
- ·Distribution of moderately to highly-permeable soils.
- ·Amount of available water from precipitation or runoff.
- ·Potential for runoff to affect the intake.
- ·Nature of the intake, including: depth, distance from shore, age, and materials used.
- ·Surface water flow patterns in vicinity of intake.

To perform this analysis, USGS, MDEQ, and the operator of the Flint WTP collected, researched, and analyzed information from the WTP, monthly operator reports, sanitary surveys, soil maps, published reports, and historical plant operation and raw water quality data. The Michigan SWAP has three categories of sensitivity for surface water sources ranging from moderately sensitive to very highly sensitive. Analysis of this information, using guidelines provided in Brogren (1999) and Sweat and others (2000, in press), indicates that the Flint intake is at the high end of this range or very highly sensitive (fig. 3). This means that the natural environment offers little protection against contamination of the water supply intake.

Susceptibility Determination

Susceptibility is the relative potential for contamination to reach the public water supply intake used for drinking water purposes. Whereas the sensitivity of a water supply is the natural ability of the area to protect the intake against contamination, the susceptibility determination also takes into account other factors that will affect whether a contaminant reaches the intake. Whether or not a particular drinking water source becomes contaminated depends on three factors:

(1) The distribution of PCS;
(2) The source water area; and
(3) The natural protection, or sensitivity, of the source.

In conducting a susceptibility determination, the part of the SWA that yields water to the water supply-system intake is identified by establishment of the susceptible area within the source water area. PCS within the susceptible area are then located. Based on the distribution of PCS within the susceptible area, the type of PCS, and the nature of the chemicals they use or store. PCS are analyzed for the risk they may represent to the water supply intake. Along with the presence and distribution of PCS, the sensitivity analysis is then used to determine the susceptibility of the water supply (fig. 3). This leads to a determination of whether the drinking water source is moderately susceptible, highly susceptible, or very highly susceptible to contamination (Brogren, 1999; Sweat and others, in press). It is important to understand that a system can have low sensitivity relative to some conditions (for example, intake construction and location), and high susceptibility because of other conditions (for example, the type of PCS). In Michigan, surface water sources of drinking water range from moderately-low to very-high susceptibility.

When a public water supply is determined to have a moderate, high, or very high susceptibility because of a particular condition or set of conditions, there is a significant risk of contamination of the drinking water source because of that condition or set of conditions. Although the susceptibility determination does not predict when or if contamination will actually occur, it does recognize conditions that are highly favorable for contamination of the supply. In the event of a contaminant release to soils or surface water within the susceptible area, it is very likely that contamination at the intake would occur without completion of remedial actions.

If a public water supply's drinking water source is determined to be highly susceptible, it is recommended that the system identify the condition(s) that lead to the high susceptibility. Immediate steps should be taken to protect the source, and action should be considered to remedy the condition (for example, repairing or replacing faulty intake construction, working directly with facility operators to implement sound management practices, etc.).

All water supplies, regardless of their susceptibility, should consider identified factors that could lead to higher susceptibility in the future, and should prepare a strategy to protect the water supply source. Raising public awareness through signs and other education programs, encouraging proper intake construction and the use of best management practices in existing facilities are good ways of ensuring that a surface water source maintains its moderate susceptibility rating.

Summary and Recommendations

The actual susceptibility of the drinking water source of a water supply depends on a number of contributing factors, some of which are only slightly related. Sensitivity is determined from the natural setting of the source and identifies the natural protection afforded to the source water. Susceptibility is determined by identifying those factors within the community's SWA that may pose a risk to the source water. The susceptibility determination provides information with respect to facilities within the SWA or land areas within the SWA that should be given greater priority and oversight in the implementation of a drinking water protection program.

Sensitivity Analysis: Based on criteria adopted in the Great Lakes Protocol of the Michigan Source Water Assessment Program, the emergency intake for the Flint Water Treatment Plant has a very high degree of sensitivity to potential contaminants.

Susceptibility Determination: The SWA for the Flint intake includes 8 listed potential contaminant sources within the susceptible area, numerous storm drains discharging upstream of the intake, a railroad crossing plus urban, agricultural, and industrial runoff from the Flint River watershed. Combining these potential contaminant sources with the very highly sensitive intake yields a very highly susceptible determination for Flint source water (fig. 5).

Effective Treatment:

The results of this assessment and the recommendations based on these results are summarized as follows:

- ***Intake*** - The Flint Water WTP intake was installed in 1948 and draws water from the Flint River from a shoreline structure making the intake very highly sensitive.
- ***Soils*** - Using a mean, area-weighted, depth-integrated permeability estimation, the soil and subsoil permeability in the SWA range from 0.6 in/hr to as much as 7.7 in/hr. The mean permeability is 3.1 in/hr (Schneider and Erickson, undated, series of 5 maps; BASINS, 1998; MIRIS, 2000). About two thirds of the soils in the Flint SWA are moderately rapid or rapidly permeable. Sixteen (16) PCS are located on these soils. These factors combine to make the SWA, and thus the intake, very highly sensitive. The community should take steps to evaluate current and future land use in areas of highly permeable soils, particularly those occurring within the susceptible area. Those PCS that have been identified either on or in close proximity to these soils should be informed of the sensitive nature of the area and encouraged to adopt best management practices designed to minimize the risk of a ground release. Residential areas that have been developed on these soils should be targeted for educational programs identifying steps that residents can take to protect the water supply.
- ***Historical Contaminant Detections*** – Since the Flint WTP has not utilized the Flint River since 1967 as a source of public drinking water, extensive raw water quality data is not available. However, as is typical for river water, the periodic presence of coliform bacteria is indicative of a relationship between runoff and soil conditions, causing the presence of bacteria at detectable levels in river source water. Background turbidity has recently been reported in the range of 2.4 to 7.6 NTU. These factors indicate that the SWA, and thus the intake, is very highly susceptible.
- ***Sanitary Survey*** – Defects reported as requiring repair either have been corrected or are scheduled for repair. The Flint WTP is undergoing extensive upgrades to improve treatment and reliability. It is important that the water supply continue to follow good management practices.
- ***Potential Contaminant Sources*** - A review of the PCS inventory and the rapidly and very rapidly permeable soil distribution indicates that the Flint SWA has 21 PCS located on moderately rapid to rapidly permeable soils. Within the susceptible area, there are 7 PCS with 8 discharge permits. In addition, there are numerous storm drains within the vicinity of the intake. A railroad crossing immediately upstream of the intake also poses a potential contaminant threat. It is recommended that the community focus initially on PCS that are within the susceptible area as they pose the greatest potential threat to the water supply. These facilities should be made aware of free technical assistance that is available through MDEQ's pollution prevention programs. Through chemical inventory, waste reduction, and by increasing awareness of best management practices, the risk these facilities pose to source waters can be reduced. The PCS inventory indicates that the source is very highly susceptible.
- ***Source Water Assessment*** - The Flint source water assessment is based on these site-specific parameters:
  1. Definition of a Critical Assessment Zone around both intake for a very highly sensitive source;
  2. Definition of a SWA for the Flint River, and shoreline near the intake;
  3. Flow duration and discharge in the Flint River upstream of the intake, and the effects of upstream contaminant discharges on the source water quality; and
  4. Listed and nonlisted potential contaminant sources.
- ***Source Water Protection*** - The City has initiated source water protection activities with an Industrial Pretreatment Program incorporating management plans, chemical containment, and spill response, spill response training, plus storm sewer and street cleaning programs.

The Flint WTP and/or the community should assemble a team to assist in the development and implementation of a source water protection program that uses this assessment to further protect the Flint source water area.

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GLOSSARY

Critical Assessment Zone (CAZ) - the area from the intake structure to the shoreline and inland, including a triangular water surface and a land area encompassed by an arc from the endpoint of the shoreline distance on either side of the on shore intake pipe location

Geographic Information System (GIS) - a system to capture, store, update, manipulate, analyze, and display all forms of geographically referenced information

Impaired water bodies - As defined by USEPA and listed on the 303 (d) list of the federal Clean Water Act.

Intake - the point at which source (raw) water is drawn into a pipe to be delivered to a water treatment plant

Lignins - an amorphous, cellulose-like, organic substance that acts as a binder for the cellulose fibers in wood and adds strength and stiffness to cell walls

Maximum Contaminant Level (MCL) - the maximum permissible level of a contaminant in water that is delivered to any user of a public water system

Potential Contaminant Sources (PCS) - listed and non-listed agricultural sites, businesses, and industries that have the potential to cause contaminants to be introduced into source water

Sensitivity - a measure of the physical attributes of the source area and how readily they protect the intake from contaminants

Source - the water body from which a water supplier gets its water

Source Water Area (SWA) - the land and water area upstream of an intake that has the potential to directly influence the quality of the water at the intake

Source Water Assessment Program (SWAP)- in Michigan, the process defined by the state Department of Environmental Quality to complete assessments of all the state's public water supplies

Susceptibility - the Susceptibility identifies factors that may pose a risk within the community's SWA

Susceptible Area - the area defined by the critical assessment zone and a buffer on either side of any drainages that contribute water to an intake

Synthetic Organic Contaminants (SOC) - Manmade organic chemical compounds such as pesticides, etc.

Tannins - naturally occurring phenolic compounds that precipitate proteins, alkaloids, and glucosides from solution that has a yellowish appearance

Volatile Organic Contaminants (VOC) - Unnatural, volatile organic chemical compounds such as gasoline components, solvents, degreasers, etc

From: Berndt, Jason (DEQ)
Sent: Friday, February 06, 2015 11:44 AM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: RE: Source Wster assessment Flint River

You may want to consider the idea of providing an edited copy of the report that removes the intake location and specs. I have done this before when there is a request for a community's assessment. Are there any concerns there?

From: Busch, Stephen (DEQ)
Sent: Friday, February 06, 2015 11:39 AM
To: Berndt, Jason (DEQ); Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: RE: Source Wster assessment Flint River

Mike,

You may want to inquire why they don't have a copy of this record as it is a requirement. In addition, per the required CCR language they are supposed to make it available to their customers upon request.

We should also have a copy of this somewhere in the basic data files.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Berndt, Jason (DEQ)
Sent: Friday, February 06, 2015 11:35 AM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: RE: Source Wster assessment Flint River

See the attachment.

From: Prysby, Mike (DEQ)
Sent: Friday, February 06, 2015 11:04 AM
To: Berndt, Jason (DEQ)
Subject: Source Wster assessment Flint River

Jason,

Has a source water assessment been performed for the Flint River watershed...spec. for the Flint WTP intake? If so, the city of Flint would like to obtain a copy of source water assessment report.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Ostlund, Peter (DEQ)
Sent: Friday, February 06, 2015 11:52 AM
To: Dee, Rhiannon;Benzie, Richard (DEQ)
Cc: Busch, Stephen (DEQ);Prysby, Mike (DEQ);Crooks, Jennifer;Poy, Thomas;Vantil, Barbara
Subject: RE: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

I think we're done with this. We just usually follow up with what we've found or know about the complaint. I think Richard summarized the issues with the Flint Water system, which has received a lot of press lately.

-Pete

Peter Ostlund
Field Operations Section Chief
Water Resources Division
Michigan Dept. of Environmental Quality
P.O. Box 30458
Lansing, Michigan 48909-7958
517-898-5128 (iPhone)
ostlundp@michigan.gov

From: Dee, Rhiannon [mailto:dee.Rhiannon@epa.gov]
Sent: Friday, February 06, 2015 11:50 AM
To: Benzie, Richard (DEQ)
Cc: Ostlund, Peter (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ); Crooks, Jennifer; Poy, Thomas; Vantil, Barbara
Subject: RE: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

Richard,

While I understand this complaint conflates various issues, my intention of forwarding it on to Pete and Barry was to relay the potential NPDES impacts of the complainants allegations.

Best,

Rhiannon Dee
Program Analyst
U.S. Environmental Protection Agency
Water Division, WC-15J
(312) 886-4882
dee.rhiannon@epa.gov

From: Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
Sent: Friday, February 06, 2015 9:38 AM
To: Dee, Rhiannon
Cc: ostlundp@michigan.gov; Busch, Stephen (DEQ); Prysby, Mike (DEQ); Crooks, Jennifer; Poy, Thomas
Subject: RE: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

I'm not sure what this complainant is alleging. Do you want Michigan to respond to the allegation that a "company or individual dumped millions of gallons of raw sewage into the city of Flint drinking water" or the

allegation that "they(?) have dumped a potential cancer causing chemical into the city's drinking water" or the allegation that the city of Flint is flushing hydrants and charging customers double? The Office of Drinking Water and Municipal Assistance cannot address the issue surrounding the dumping of raw sewage and we don't interfere with water rates, but maybe an explanation of the issues that have confronted the city of Flint and their public water supply will help you understand the overall problem.

Last spring, the city of Flint decided to begin relying upon the Flint River as their source of drinking water using a treatment plant that was designed to do so. Last summer, they experienced difficulties with stagnation in some areas of the distribution system due to significantly reduced demands as a result of the loss of a significant percentage of their residential and industrial demands that accelerated over the last decade. During the summer of 2014, they also had a couple of monitoring periods where they detected total coliform at monitoring sites in these stagnant areas, and one time they detected E.coli present. The ensuing boil water advisories and public notification heightened customer concern about the quality of drinking water as a result of the switch from Detroit to the Flint River. Detroit supplied Flint with drinking water from Lake Huron, a much higher quality source than the Flint River. However, monitoring of the Flint water treatment plant tap has never indicated unacceptable water entering the distribution system. In response to these coliform detections and in an effort to prevent a recurrence, the city also increased flushing water mains in low flow areas and they have attempted to ensure the presence of a chlorine residual throughout the distribution system (is this the "potential cancer causing chemical" the complainant mentions?).

Compounding the problem of customer confidence was the initial monitoring for disinfection byproducts conducted by Flint under the Stage 2 DBR after their switch to the Flint River. The initial monitoring reported significantly elevated levels of total trihalomethane (TTHM) compounds throughout the city's distribution system. Our district office advised the city that they needed to immediately implement operational techniques at the treatment plant and in the distribution system to reduce the formation of these compounds. The steps the city of Flint has taken have been successful and have reduced TTHM concentrations to the point where the latest results are below the drinking water standard. However, the standard is calculated on a running annual average and it is likely to be another 3 to 6 months before the annual average at each monitoring station will (hopefully) meet the standard. Until then, the city has to continue to provide quarterly public notification, which will continue to concern residents despite the latest TTHM results.

The switch to the Flint River, the microbiological problems and the elevated TTHM concentrations experienced last year in Flint have caused a high level of customer dissatisfaction and distrust. The city is working diligently to restore that confidence, but it will not be accomplished easily or overnight. You should also know that the switch to the Flint River is an interim measure intended to last only until a 72-inch pipeline from Lake Huron to the Flint water treatment plant is completed. It is currently under construction and expected to be in operation in mid-2016. At that point, the city's drinking water should again be very similar in quality to what they were receiving from Detroit.

Although the subject(s) of this complaint are not clear to me, I suspect it is a result of the media coverage of the recent problems with the city's water supply. However, the information from your initial contact indicates a Grand Blanc, Michigan address, which is not in the city of Flint service area. As I mentioned, our Lansing district office has been dealing with city representatives on this issue. If you have further questions, feel free to contact either Michael Prysby or Steve Busch. They are receiving this message so you have their contact information. You may also wish to communicate with your Region 5 counterparts in the Office of Drinking Water & Ground Water, Jennifer Crooks or Tom Poy, who have received similar complaints and with whom we have communicated regularly on these issues.

Please let us know if someone from EPA will respond to the complainant, or if you expect Michigan DEQ to do so.

Richard Benzie, P.E., Chief
Field Operations Section
Office of Drinking Water and Municipal Assistance, MDEQ
517-284-6512

From: Ostlund, Peter (DEQ)
Sent: Friday, February 06, 2015 6:55 AM
To: Dee, Rhiannon
Cc: Selden, Barry (DEQ); Benzie, Richard (DEQ); Bartley, Cheryl (DEQ)
Subject: RE: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

Rhiannon, this is a drinking water complaint, not an NPDES compliant. Flint does have SSOs, and reports those. That's not the cause of this complaint.

There are public concerns with Flint's drinking water system, which switch from the city of Detroit supply to their own supply. Detroit's source water is much better, so the public may be noticing some changes.

I've copied Richard Benzie, how is the Field Operations Chief in our division that handles drinking water. If you need more follow up, he can provide it.

Thanks, Pete

Peter Ostlund
Field Operations Section Chief
Water Resources Division
Michigan Dept. of Environmental Quality
P.O. Box 30458
Lansing, Michigan 48909-7958
517-898-5128 (iPhone)
ostlundp@michigan.gov

From: Dee, Rhiannon [mailto:dee.Rhiannon@epa.gov]
Sent: Thursday, February 05, 2015 5:11 PM
To: Ostlund, Peter (DEQ); Selden, Barry (DEQ)
Subject: FW: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

Hi there,

Hope all is well. We received this complaint a while back. Complainant is alleging discharges into Flint River.

Let me know if you have any questions or if I should forward this on to someone else.

Best,

Rhiannon Dee
Program Analyst
U.S. Environmental Protection Agency
Water Division, WC-15J
(312) 886-4882
dee.rhiannon@epa.gov

From: howard.donna@epa.gov [mailto:howard.donna@epa.gov]
Sent: Monday, January 12, 2015 11:21 AM
To: Dee, Rhiannon

Cc: Beese, Jennifer
Subject: FWD: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan

01/12/2015

SUBJECT: FWD: (CWA - FY15-124819-3709-CV) Referred to Region - Michigan
FROM: howard.donna@epa.gov
TO: Dee.Rhiannon@epa.gov
CC: Beese.Jennifer@epa.gov

-----Original Message-----

1/11/2015 10:55 AM

HQ LEAD NUMBER: FY15-124819-3709-CV

SUBJECT: Referred to Region - Michigan

FROM: sargent

TO:

Name: marcia

Address: po box 277

City: grand blanc

State: Michigan

Zip: 48480

Phone: 8103368486

Alleged Violator's Name: city of flint michigan

Alleged Violator's Address: water department

Alleged Violator's City: flint

Alleged Violator's State: Michigan

Alleged Violator's Zip: 48503

Tip or Complaint: an individual or company dumped several million gallons of raw sewage into the city of flint Michigan drinking water and now they have dumped a potential cancer causing chemical into the water to cover up their negligent act. people are getting sick and skin rashes are becoming apparent, especially in the young and elderly. we will keep going until something is done to correct this "mistake"

Specific Directions: Flint river. runs right through the city of flint. they have been opening the hydrants and letting water

pour out of them to "purge" the system, then charging consumers double for their mistake.

Violation Still Occurring? Yes

State DEP/DEQ/DEM Notified? Yes

From: Berndt, Jason (DEQ)
Sent: Friday, February 06, 2015 11:56 AM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: RE: Source Wster assessment Flint River
Attachments: EditedStIgnaceFinal1003.doc

Here is an example where I edited the St. Ignace assessment.

From: Busch, Stephen (DEQ)
Sent: Friday, February 06, 2015 11:39 AM
To: Berndt, Jason (DEQ); Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: RE: Source Wster assessment Flint River

Mike,

You may want to inquire why they don't have a copy of this record as it is a requirement. In addition, per the required CCR language they are supposed to make it available to their customers upon request.

We should also have a copy of this somewhere in the basic data files.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Berndt, Jason (DEQ)
Sent: Friday, February 06, 2015 11:35 AM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: RE: Source Wster assessment Flint River

See the attachment.

From: Prysby, Mike (DEQ)
Sent: Friday, February 06, 2015 11:04 AM
To: Berndt, Jason (DEQ)
Subject: Source Wster assessment Flint River

Jason,

Has a source water assessment been performed for the Flint River watershed...spec. for the Flint WTP intake? If so, the city of Flint would like to obtain a copy of source water assessment report.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Source Water Assessment Report for the City of Saint Ignace Water Supply October 2003

City of Saint Ignace Water Treatment Plant
Saint Ignace, Michigan

Prepared for:

City of Saint Ignace Water Supply: WSSN 6290

Prepared by:

U.S. Geological Survey, Water Resources Division, Michigan District
Michigan Department of Environmental Quality, Water Division

Michigan Source Water Assessment Report 64

Executive Summary

The purpose of the Source Water Assessment is to analyze the sensitivity and determine susceptibility of a community's source of drinking water to potential sources of contamination.

Sensitivity is determined from the natural setting of the source water (raw water to the water treatment plant), and indicates natural protection afforded the source water. Using procedures established in the Great Lakes Protocol, Michigan Source Water Assessment Program; considering the effects of winds on Lake Huron; and considering the effects of flow and mixing between lakes Michigan and Huron, the Saint Ignace Water Treatment Plant intake has a high degree of sensitivity to potential contaminants.

Susceptibility identifies factors within the community's source water area that may pose a risk to the water supply. The susceptibility determination provides information with respect to listed facilities and land areas within the source water area that should be given greater priority and oversight in implementing a source water protection program. The source water area for the Saint Ignace intake includes seven potential contaminant sources, all within the susceptible area. Additionally, there are potential combined-sewer and storm-sewer outfalls in Saint Ignace; urban and agricultural runoff from rivers tributary to Lake Huron in the SWA; potential industrial and chemical runoff; the Mackinac Bridge over the Straits of Mackinac; and, shipping on the Great Lakes. These potential contaminant sources, commercial activities, and transportation on the Great Lakes, in combination with the highly sensitive intake, indicate that the Saint Ignace source water is highly susceptible to potential contamination.

The Saint Ignace source water is categorized as highly susceptible, given land uses and potential contaminant sources within the source water area. However, historically, the Saint Ignace Water Treatment Plant has effectively treated this source water to meet drinking water standards. Saint Ignace has instituted pollution prevention programs, but should be also cognizant of additional potential threats to its source of drinking water identified in this report. This report explains the background and basis for these determinations.

Using this Assessment

Final source-water assessments of connecting-channel intakes will be completed using a two-dimensional hydrodynamic model that is currently under development. Draft source-water assessments of connecting-channels intakes are made using methods defined in the Great Lakes Protocol. These methods have been modified for application to connecting-channels intakes, and as such, include contaminant-source inventories of watersheds immediately upstream and adjacent to the intake. Inputs from these watersheds may or may not affect source-water at the intake. Delineated contributing areas and potential contaminant sources, as currently illustrated and tabulated in draft connecting-channels source-water assessments, may change as final connecting-channels source-water assessments are completed.

Clean, safe drinking water is fundamental to the viability of any community. Protecting the drinking water **source** is a wise and relatively inexpensive investment in your community's future. The overall intent of this assessment is to provide background information for your community to use in developing a local source-water protection program. The assessment benefits your community by providing the following:

- ***A basis for focusing limited resources within the community to protect the drinking water source(s).*** The assessment provides your community with information regarding activities within the **source water area** (**SWA**) that directly affect your water supply. It is within this SWA that a spill or improper use of **potential contaminants** may cause these contaminants to migrate toward the water **intake**. By examining where the source waters are most susceptible to contaminants, and where potential contaminants are located, the assessment clearly illustrates the potential risks that should be addressed.
- ***A basis for informed decision-making regarding land use within the community.***

The assessment provides your community with a significant amount of information regarding where your drinking water comes from (the source) and what the risks are to the quality of that source. Knowing where the resource is allows your community planning authorities to make informed decisions regarding proposed land uses within the SWA that are compatible with both your drinking water resource and the vision of growth embraced by your community.

- ***A basis for dealing with future regulations.***
  The assessment has been designed to functionally meet proposed requirements for surface-water supplies. Information needed to address regulatory needs and requirements has been collected and made available to your community through this report.

This Source Water Assessment also provides the basis for a locally developed, voluntary source-water protection program. Communities interested in voluntarily developing source-water protection programs should contact the Department of Environmental Quality or visit its web page at http://www.michigan.gov/deq.

Introduction

In 1996, Congress amended the **Safe Drinking Water Act** and provided resources for state agencies to conduct source water assessments by identifying SWAs, analyzing the **sensitivity** of the source to natural conditions, conducting contaminant source inventories, and determining the **susceptibility** of the source to potential contamination. Delineations, sensitivity analyses, contaminant inventories, and susceptibility determinations comprise a "source water assessment." Assessments will be completed for every public water supply source in Michigan. To support this effort, the Michigan Department of Environmental Quality (MDEQ) Water Division established a partnership with the U.S. Geological Survey (USGS) to develop a method for conducting source water assessments for surface water supplies (Sweat and others, 2000; 2002; *in press*).

The requirements for public water supplies in Michigan to meet United States Environmental Protection Agency (USEPA) **maximum contaminant levels (MCLs)** provide some degree of assurance of safe drinking water; however, all systems are vulnerable to potential contamination. One of the best ways to ensure safe drinking water is to develop a local program designed to protect the source of drinking water against potential contamination. Not only does this add a margin of safety, but it also raises the awareness of consumers and/or the community of the risks of drinking water contamination. It is expected that source-water assessment results will provide a basis for developing a source-water protection program.

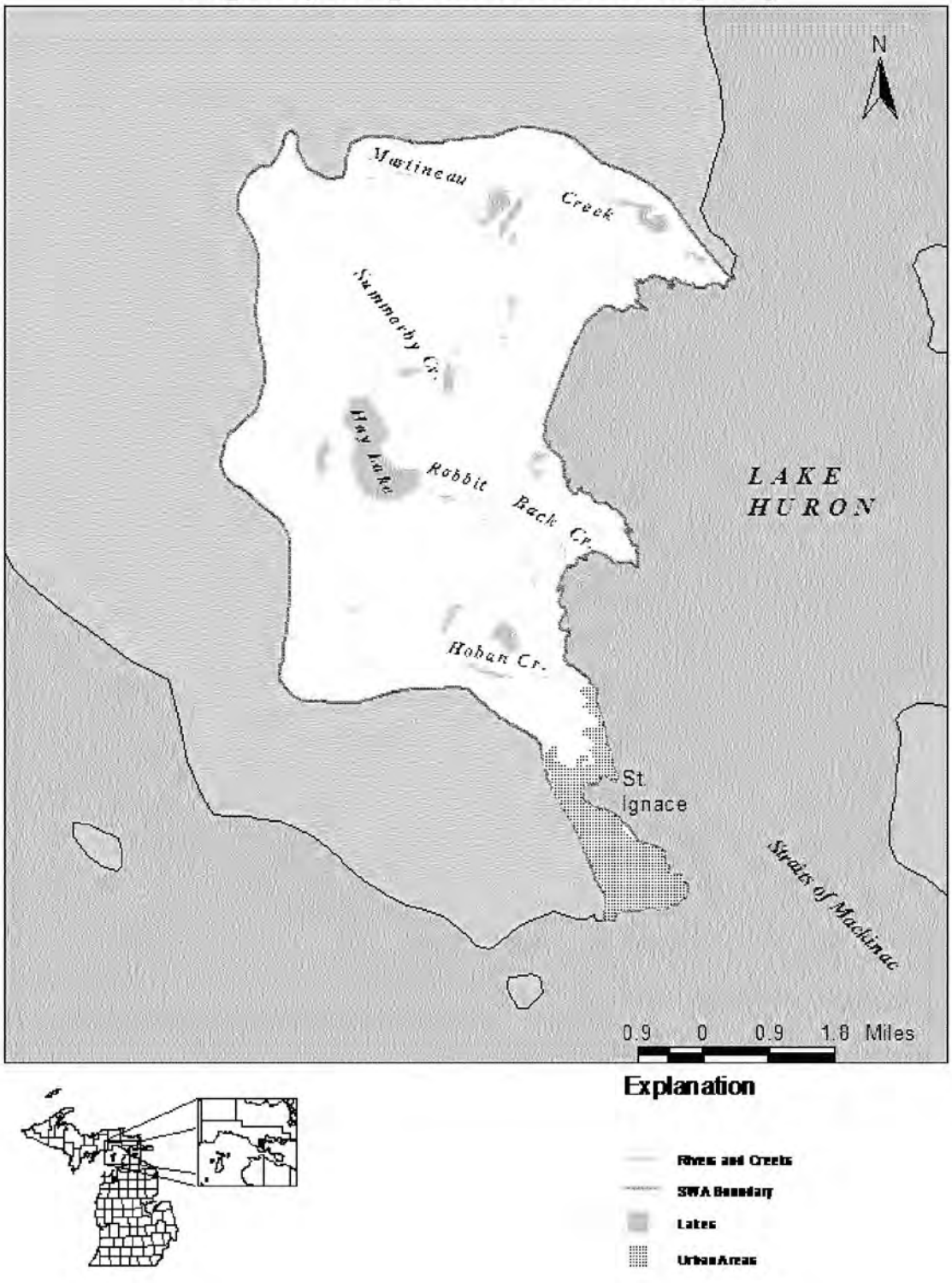
Background

Saint Ignace is located in Mackinac County, on the west shore of Lake Huron (fig. 1). The city water supply was constructed in 1930s and operated by Edison Sault Electric. The city took the water system over in 1979 and constructed the water treatment plant (WTP) in 1994-95. The WTP intake extends feet off shore into Lake Huron. The square rock filled, timber crib extends feet off the bottom in feet of water and connects to the low service pump station through a 24-inch diameter cast iron main.

The WTP plant is rated at 2.0 million gallons per day (MGD) and uses alum for coagulation, chlorine for disinfection, fluoride to prevent tooth decay and soda ash for corrosion control.

Saint Ignace WTP Low Service Pump Station

St. Ignace, Michigan Source-water Area (SWA)



Water supplies are periodically inspected to identify construction, maintenance, operational or source defects that could make them vulnerable to contamination, particularly from contaminants that are microbial in nature, such as fecal coliforms. Water suppliers are provided a sanitary survey report that notes any deficiencies in the system, and the state may direct the system to make necessary corrections. The sanitary survey is an important part of a safe drinking water program. A sanitary survey of the Saint Ignace water supply is being drafted

Climate

The Saint Ignace water supply is located in the Northern Lower and southeastern Upper Peninsula hydrologic province (Rheaume, 1991), in the Lake Huron watershed (USGS, 1974, 1982). The region experiences temperate summers with extreme winters. The Saint Ignace Weather Bureau station reports that the average annual precipitation for the climatic years 1971-1998 was 34.29 inches (NOAA, 1999), with about sixty percent of this amount as snowfall between October and April. Annual average runoff for the region, extrapolated from Miller and Twenter (1986, fig. 1) is between 16 and 18 inches.

Source Water Area Geology and Hydrogeology

The study area for evaluating the Saint Ignace WTP SWA is the Lake Huron watershed (fig. 1). Adjacent areas consist of thin to discontinuous glacial till over bedrock, lacustrine sand and gravel, and peat and muck; and are underlain by Mackinac Breccia and Point aux Chenes Shale (Martin, 1955; Milstein, 1987). Soils found in the source water area include associations of the Carbondale, Croswell, Eastport, Mackinac, and Pickford and are comprised of loam, sand, silty clay loam, and muck (U.S. Environmental Protection Agency, 1998).

Soil permeability is based on the calculated time of travel, in inches per hour (in/hr), for water to move downward through a saturated soil zone. Soil thickness and permeability values are available by county in soil survey reports published by the National Cooperative Soil Survey and U.S. Department of Agriculture (1961). Permeability rates range from less than 0.06 in/hr, rated as very slow to more than 20 in/hr, rated as very rapid.

Very rapid permeable soils, defined as soils with a water travel time greater than 20 in/hr, allow for rapid infiltration and passage through the soil zone from the surface. Such soils potentially allow rapid transfer of contaminants, with minimal time available for contaminant breakdown. In contrast, very slow permeable soils, defined as soils with a calculated water travel time of less than 0.06 in/hr, significantly reduce the movement of water through the soil zone and, as a result, allow for a greater amount of time for the natural degradation of contaminants. However, such soils also provide for rapid overland transport of contaminants directly to receiving waters, which in turn may affect the water supply intake. In addition to providing a mechanism for contaminants to move into receiving waters, the soils themselves are susceptible to erosion and can degrade the quality of the water by becoming suspended in the water.

Figure 2 shows the distribution of the soil permeabilities within the source water area (SWA) and their relationship with the **potential contaminant sources (PCS)** found within the study area. Mean, area weighted, depth integrated permeabilities range from 4.5 to 13 in/hr. The mean permeability is 7.4 in/hr (BASINS, 1998). Soils range from moderately rapidly permeable in the west and south parts of the SWA to rapidly permeable in the east-central part of the SWA (Lusch and others, 1992; U.S. Environmental Protection Agency, 1998).

The Saint Ignace SWA contains an area of about 38.5 square miles (mi^2) and obtains its source water from the waters of Lake Huron. The Saint Ignace intake is at the western extent of Lake Huron, and is primarily influenced by conditions on Lake Huron. The Carp and Pine Rivers discharge to Lake Huron north of the city and were also noted as influencing the WTP intake during certain weather events.

History of Raw Water Quality at the Source

Public water supplies are required to routinely monitor raw water quality for selected parameters to optimize treatment, and to monitor treated water quality for a list of contaminants that is determined by MDEQ and the Safe Drinking Water Act. A detection of any contaminant may indicate that a pathway exists for this and other contaminants to reach the intake. It is important to realize that the results from a given sample only provide information regarding the water quality at the time the sample was collected. Water quality can change with time for a number of reasons. The fact that a water sample does not contain contaminants is no guarantee that contamination will not occur in the future. Conversely, the detection of a contaminant in the past does not indicate that it will occur in the future.

Figure 1. Source-water area (SWA) for the evaluation of the Saint Ignace water supply, Saint Ignace,

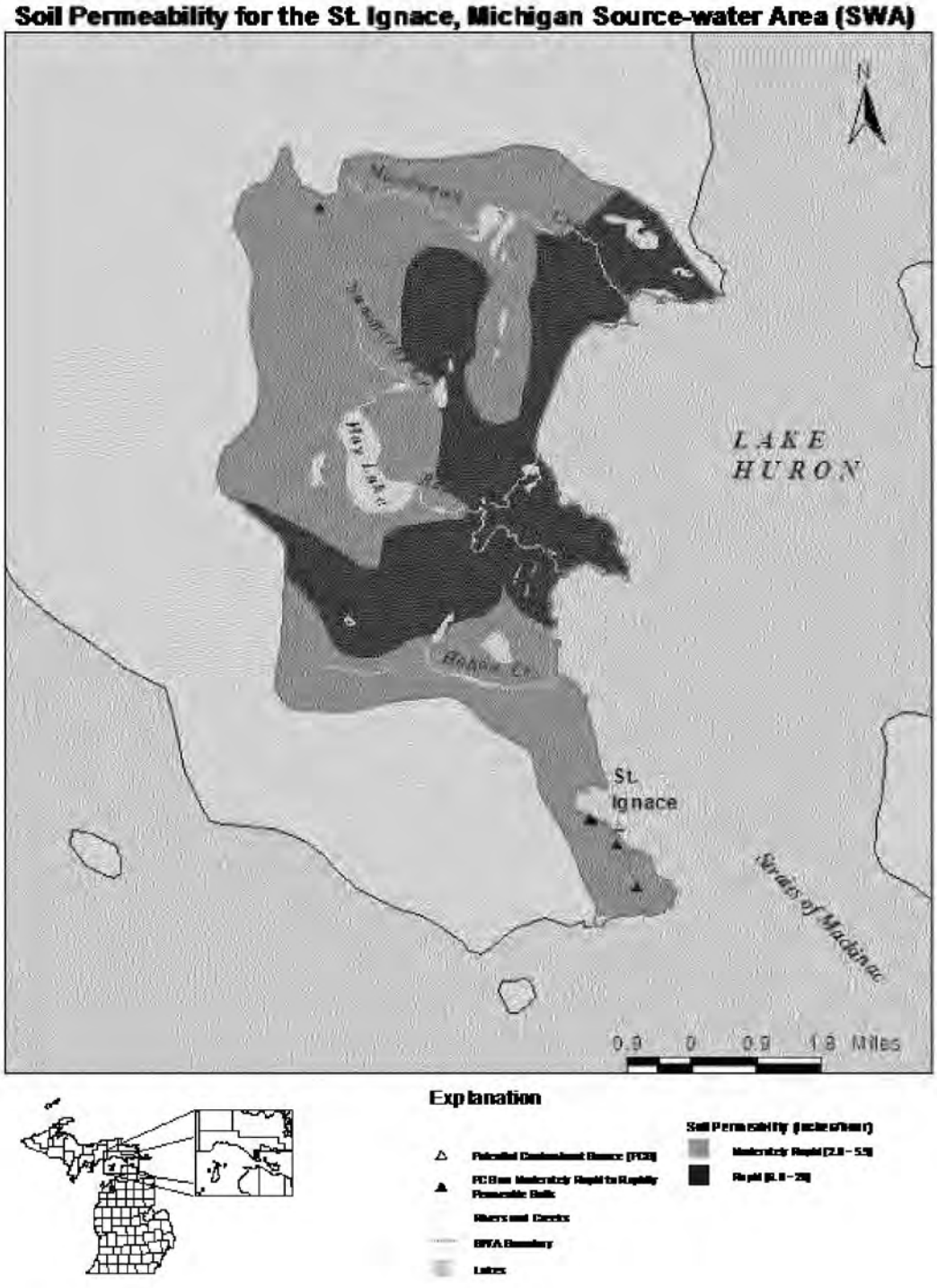


Figure 2. Soil permeability with identified potential point-source contaminant sources within the Saint Ignace source-water area, Saint Ignace, Michigan.

For the period of December 1995 through February 2002, the Saint Ignace WTP treated an average of 0.82 MGD. Maximum daily demands were 1.89 MGD while the minimum amount treated was 0.25 MGD. During this period, raw water turbidity averaged 0.9 nephelometric turbidity units (NTU) ranging from 0.20 to 17.10 NTU. Raw water pH ranged from 7.67 to 8.99 units while hardness averaged 106.5 mg/l as CaCO3 ranging from 80 to 144 mg/l as CaCO3. Alkalinity averaged 85 mg/l as CaCO3 ranging from a low of 64 to a high of 180 mg/l as CaCO3. Raw water total coliform typically is not detected in the winter and averages 5 to 8 counts/100 ml the remainder of the year.

A review of annual consumer confidence reports for 1999, 2000 and 2001 shows that the Saint Ignace WTP has met the requirements for treated water quality as outlined in by the EPA's National Primary Drinking Water Regulations.

Source Water Assessment Methodology

Technical guidelines for completing source water assessments are contained in the Michigan **Source Water Assessment Program**, Assessment Protocol for Great Lakes Sources (Protocol) (MDEQ, 1999, Appendix L) available at http://www.michigan.gov/deq. In general, an assessment is a process for evaluating a drinking water supply and the potential for its treated water to exceed an MCL due to raw water contamination. A source water assessment considers the SWA, potential sources of contamination within the SWA, conditions of the water supply intake, and susceptibility to contaminants in order to identify potential risks to drinking water quality. Although the Protocol provides the minimum requirements and instructions on how to conduct an assessment, each water supply is unique with respect to how the process is carried out, due to local conditions and information. Sweat and others (2000, 2001) have developed and documented the methodology used in the preparation of this assessment.

Delineating Source Water Areas

Delineation of the SWA is accomplished by using **geographic information system (GIS)** software to map the watershed(s) that have the potential to affect source water at the intake. Using information from the water supply, a **critical assessment zone** (CAZ) is defined for the intake (MDEQ, 1999, Appendix L). A buffer is then created along any shoreline intersected by the CAZ, and from the edge of the CAZ to the mouth of any river(s) that might influence the intake. Finally, the buffer is extended along the shoreline of any river(s) that might influence the intake, from the mouth of the river to its headwaters. The area defined by these buffer zones is termed the **susceptible area.** The CAZ and susceptible area within the source water area define locations where a water supply should focus its management strategies and resources to benefit the drinking water resources (fig. 3).

Using the Great Lakes Protocol and the Saint Ignace water supply information:

- The sensitivity value for the Saint Ignace intake is calculated as:

  (the length of the intake in ft.) x (the depth of the intake in ft.) = (unitless)
  This results in rating the intake as highly sensitive (fig. 4), with a CAZ of 3,000 ft (MDEQ, 1999, Appendix L).

- The susceptible area inland from the lake shore is determined to be:

  3,000 (the radius of the CAZ in ft.) –(the length of the near shore intake in ft.) = 2,480 ft.

Contaminant Source Inventory

Past, current, and potential future sources of contaminants were inventoried to identify several categories of potential sources of contaminants including microorganisms (bacteria, oocysts, and viruses), inorganic compounds (nitrates and metals), organic compounds (solvents, petroleum compounds, pesticides), and disinfection by-product precursors (trihalomethanes, haloacetic acids).

It is important to remember that sites and areas identified by this process are only potential contaminant sources (PCS) to the drinking water. Environmental contamination is not likely to occur when potential contaminants are used and managed properly. In addition, assumptions were made about particular types of land uses and risks associated with those land uses. Assumptions are discussed further in the results portion of this report.

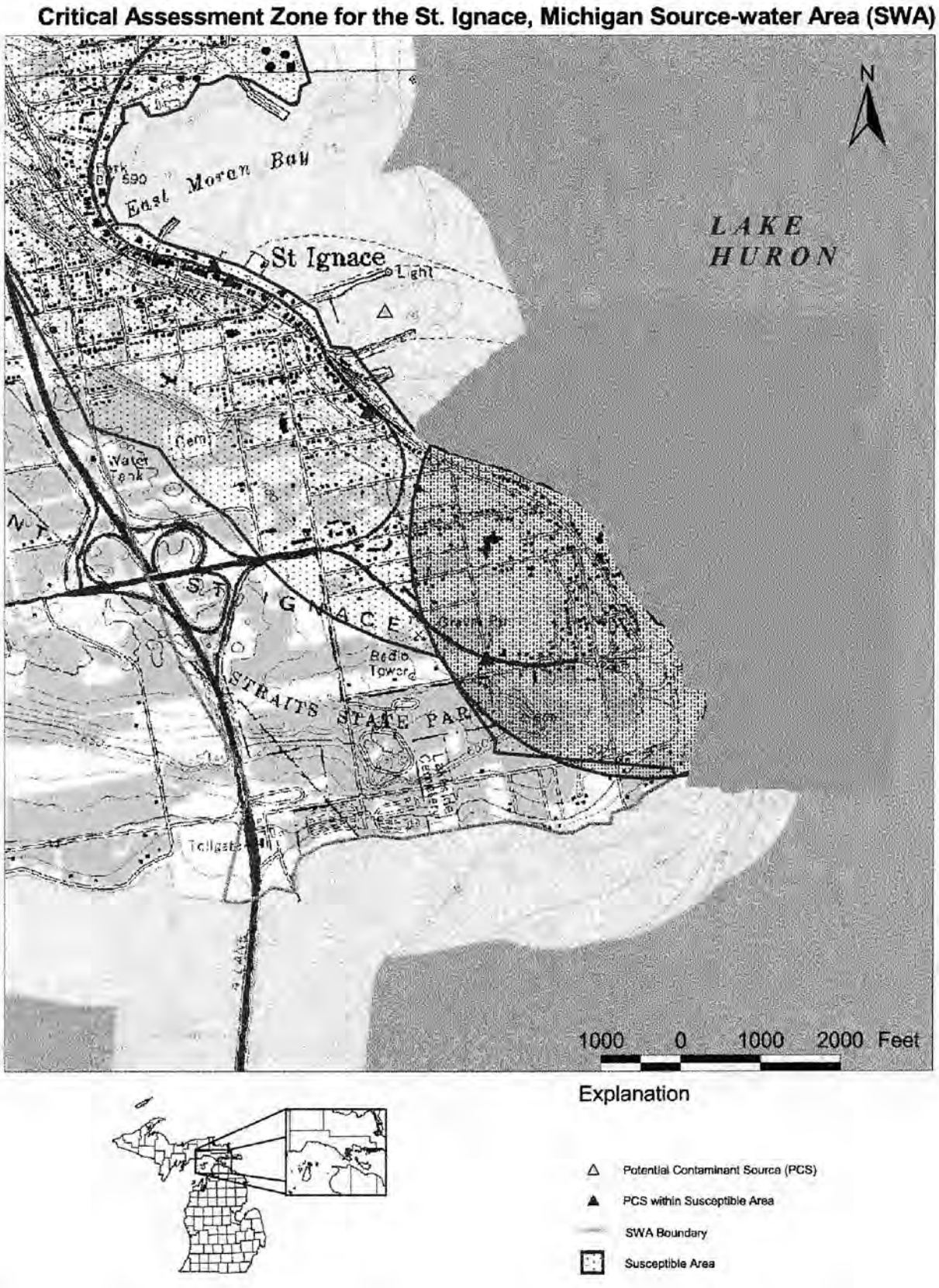


Figure 3. Critical assessment zone (CAZ) for the Saint Ignace SWA, Saint Ignace, Michigan.

The process for completing the inventory included several steps, which are summarized as follows:

1. Reviewed readily available land use maps and historical/current aerial photographs.
2. Plotted relevant information from applicable state, federal, and international regulatory databases including the following lists:
   - MDEQ leaking underground storage tank (LUST) sites;
   - MDEQ registered underground storage tank (UST) sites;
   - MDEQ Environmental Cleanup Site Information System (ECSI) sites;
   - MDEQ Source Information System (for water discharge permit sites including National Pollutant Discharge Elimination System (NPDES) permits, Water Pollution Control Facility (WPCF) permits, storm water discharge permits, and on-site sewage (septic) system permits);
   - MDEQ Underground Injection Control (UIC) database;
   - MDEQ Active Solid Waste Disposal Permits list;
   - Michigan Department of Transportation (MDOT) - Hazardous Materials database;
   - State Fire Marshall registry of above-ground fuel storage tank sites;
   - State Fire Marshall Hazardous Material Handlers and Hazardous Material Incidents (HAZMAT) sites;
   - U.S. EPA BASINS software, version 2.1.
   - U.S. EPA Envirofacts database;
   - U.S. EPA Resource Conservation Recovery Act (RCRA) generators or notifiers list;
   - U.S. EPA RCRA Treatment, Storage, and Disposal Facility (TSDF) Permits list;
   - U.S. EPA National Priorities List (NPL);
   - U.S. EPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLA) List;
   - U.S. EPA RCRA Corrective Action Activity List (CORRACTS);
   - U.S. Department of Transportation (DOT) Hazardous Materials Information Reporting System (HMIRS);
   - U.S. EPA Toxic Chemical Release Inventory System (TRIS);
   - U.S. EPA Oil Pollution Act of 1990 Spill Response Atlas;
   - EC National Pollutant Release Inventory (NPRI).
3. Met with public water supply and community officials on August 21, 2002 to identify potential sources not listed elsewhere in databases or on maps and completed a preliminary inventory form to be used in completing the SWA base map.
4. Land use and/or ownership (residential/municipal; commercial/industrial; agricultural/ forest; and other land uses) was mapped and evaluated in relation to PCS, soil characteristics, and proximity to the intake.
5. Conducted an informal field inventory to locate additional PCS.
6. Completed final inventory form of PCS and plotted locations of PCS on the base map.

The purpose of the inventory is threefold: first, to provide information on the location of PCS, especially those within susceptible areas; second, provide an effective means of educating the public about PCS; and third, provide a reliable basis for developing a management plan to reduce potential contaminant risks to the Saint Ignace water supply.

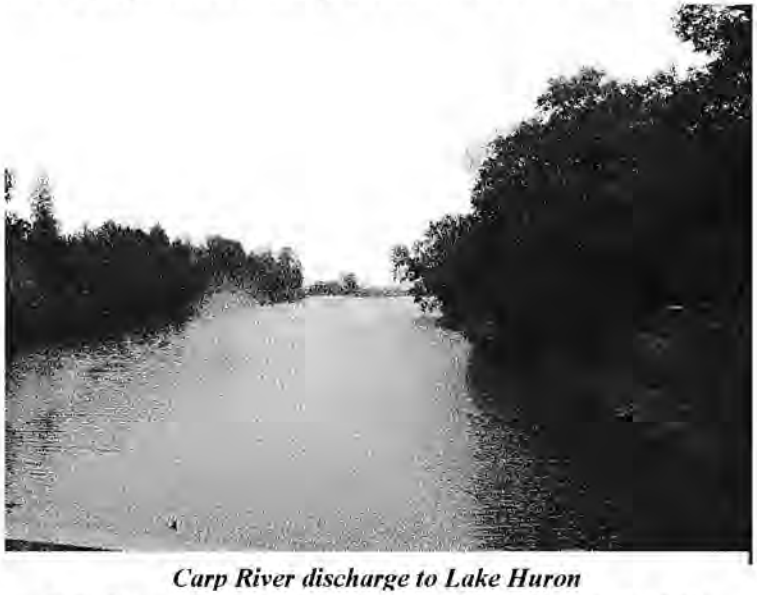
The inventory process attempts to identify potential point-source contaminants within the source-water area. It does not include an attempt to identify specific potential

U.S. Coast Guard Facilities near Saint Ignace Intake

contamination problems at specific sites, such as facilities that do not safely store potentially hazardous materials. However, assumptions were made about particular types of land use. For example, it is assumed that rural residences associated with farming operations have specific potential contamination sources such as fuel storage, chemical storage and mixing areas, and machinery repair shops. It should also be noted that although the inventory depicts existing agricultural uses (crops grown), these are likely to undergo continual change due to normal crop rotation practices. What is irrigated farmland now may be non-irrigated farmland next year, or vice versa.

The results of the inventory were analyzed in terms of current, past, and future land uses and their relationship to the CAZ, the susceptible area, and the supply intake. In general, land uses and PCS that are closest to the supply intake pose the greatest threat to a safe drinking water supply. Inventory results are summarized below, in tables 1 and 2, and are shown on figure 4.

Many PCS are readily identifiable because they have a single discharge point, and often a permit is required for these discharges. However, other PCS have diffuse, poorly defined discharge locations. These are known as non-point discharges because they occur over large areas and may not be quantifiable by readily accepted methods. These nonpoint source discharges are difficult to identify and control, and consequently to quantify, yet they are a major source of water pollution (Carpenter and others, 1998). Non-point sources also include atmospheric deposition over water and land, and include urban, rural, and agricultural runoff from areas such as lawns, golf courses, farm fields, pastures, parking lots, and roadways. Runoff from these areas can contain many types of pollutants including sediments, metals, organic and inorganic chemicals, viral and bacterial pathogens, pharmaceuticals, and animal wastes. Transportation also represents a non-point source of contamination. Trucking, rail roads, shipping and pipelines transport potential contaminants through the SWA. An accident causing a spill could lead to potential contaminants entering a storm sewer, or in the case of shipping, directly discharge to Lake Huron, possibly over or near the water intake. Non-point sources of concern to the Saint Ignace water supply are primarily from agriculture, from urban areas, from storm sewers in the Saint Ignace SWA, from industrial and chemical sources, and from residential and commercial sources in Saint Ignace and surrounding communities.



Carp River discharge to Lake Huron

Table 1. Potential contaminant sources within the SWA

Type of Potential Contaminant Source Permit*	Number of Potential Contaminant Sources	PCS within Susceptible Area and CAZ	PCS with discharge to Lake Huron or Michigan
Hazardous or Solid Waste Site	2	2	0
Industrial Facilities Discharge Site	3	1	0
National Priority List Site	0	0	0
Permit Compliance System	2	1	2
Toxic Release Inventory	0	0	0
National Pollutant Release Inventory	0	0	0

Storm sewer outfalls on Hombach, Spring and Reagon Streets are also of concern to the Saint Ignace water supply. The storm sewers channel runoff from precipitation, snowmelt, and any surface spills from the bridges directly into Lake Huron, and are therefore a potential contaminant source (PCS) to the Saint Ignace intake. The U.S. Environmental Protection Agency (USEPA) has identified Lake Huron as an impaired water body on its Clean

Water Act 303(d) list. These contaminants of concern include: fish-consumption advisories for PCB, chlordane, and dioxin (MDEQ, 2002).

Table 2. Potential-contaminant-source inventory results

Site Name	Identification Number	Reason for Permit	Reason for Listing as Potential Contaminant Source
ST IGNACE CLEANERS	MID981092059	Runoff or airborne particulates	Hazardous or solid waste site
MICH BELL TEL CO	MID982632887		
ST IGNACE WWTP[a]	MI0020699	Process, treatment, and waste water	Industrial facilities discharge site
ST IGNACE WWTP[a]	MID985632397	Waste water, dust, and process water	Permit Compliance System

[a]Some PCS may hold more than one permit type.

In general, PCS within the susceptible area pose greater risks than those outside the susceptible area. The presence of PCS within the SWA indicates potential sources of chemicals that could, if improperly managed or released, affect the water quality at the intake. A small quantity of these chemicals, in some cases a gallon or less, can significantly affect the supply. Also of concern is the location and distribution of these sources with respect to highly permeable soils. The susceptible area consists primarily of forested land, specifically forested wetland (USEPA, 1998). Overlaying the PCS locations and the moderately rapid to rapidly-permeable soil map for the Saint Ignace water supply indicates that six of the PCS are located on or very near to areas with moderately rapid to rapidly-permeable soils. All PCS within the SWA should be addressed; the susceptibility determination, however, provides the water supply with the tools to focus resources where the greatest risk occurs. The results of the PCS inventory performed for Saint Ignace water supply is shown on figure 4 and is summarized as a function of PCS location relative to the susceptible area. The inventory results indicate that there are 3 PCS, holding 4 permits, within the susceptible area (table 2).

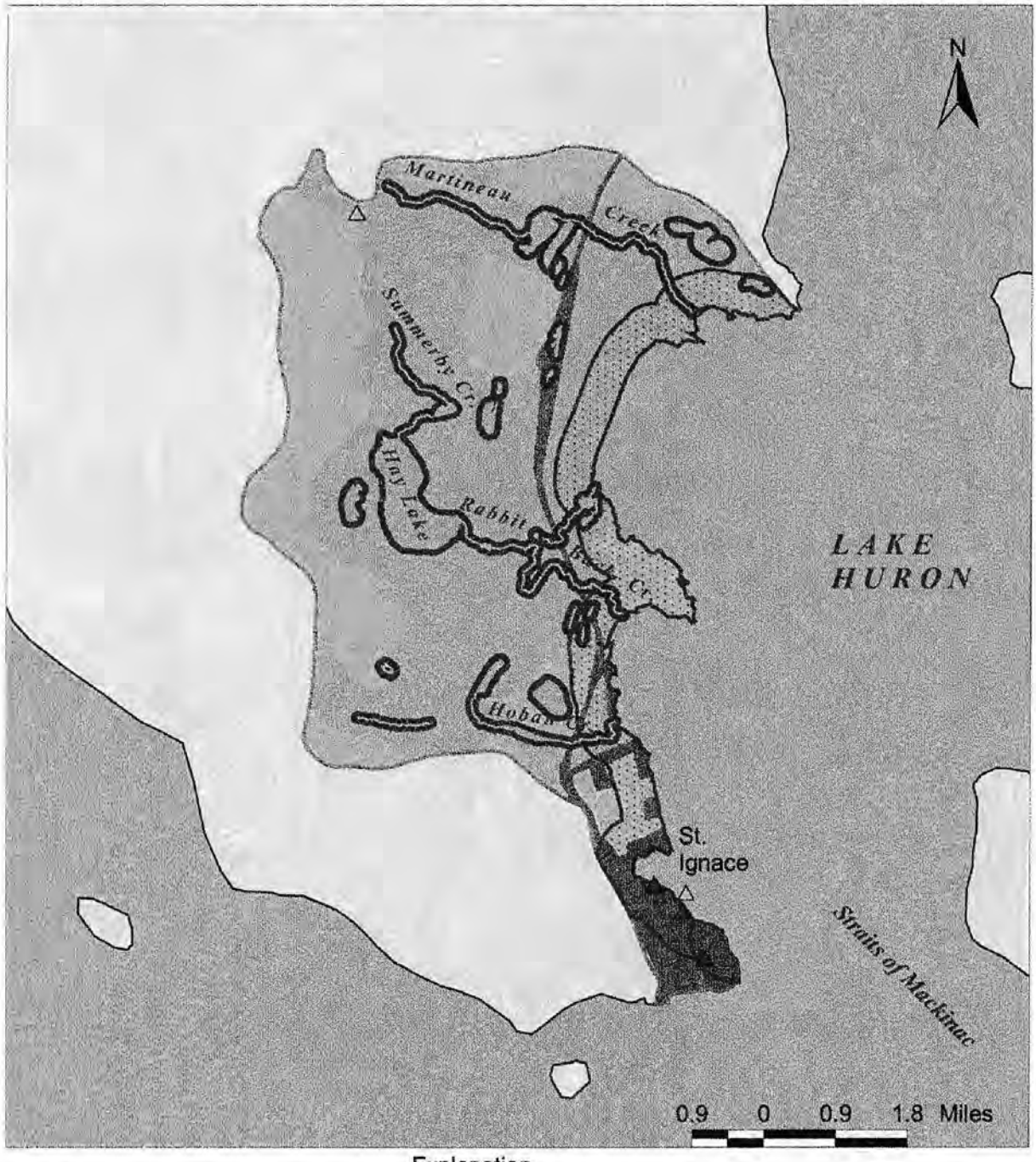
Sensitivity Analysis

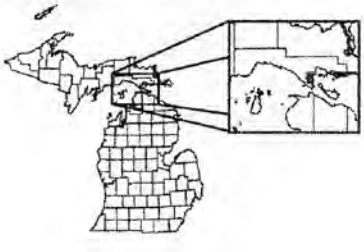
Sensitivity is the natural ability of a SWA to provide protection against the contamination of the water supply intake, and includes physical attributes of lakes, rivers, and soils. The sensitivity analysis requires consideration of several different variables related to the natural environment, for example:

- Water quality history of the source.
- Distribution of moderate- to highly-impervious soils.
- Amount of available water from precipitation or runoff.
- Potential for runoff to affect the intake.
- Nature of the intake, including: depth, distance from shore, age, and materials used.

Surface water flow patterns in vicinity of intake. To perform this analysis, USGS and MDEQ collected, researched, and analyzed information from the WTP operator, monthly operator reports, sanitary surveys, soil maps, published reports, and historical plant operation and raw water quality data. The Michigan SWAP has three categories of sensitivity for surface water sources ranging from moderately sensitive to very highly sensitive. Analysis of this information using guidelines provided in Sweat and others (2000, 2002, *in press*) indicates that the Saint Ignace intake is highly sensitive (fig 5). This means that the natural environment offers little protection against contamination of the water supply intake.

Potential Contaminant Source Inventory for the St. Ignace, Michigan Source-water Area (SWA)





Explanation

- Potential Contaminant Source (PCS)
- PCS within Susceptible Area
- SWA Boundary
- Rivers and Creeks
- Lakes
- Susceptible Area
- Susceptible Shoreline Area

Land Use

- Urban or Built-up Land
- Agricultural, Range, or Forest Land
- Water or Wetland
- Barren Land

Susceptibility Determination

Susceptibility is the relative potential for contamination to reach the public water supply intake used for drinking water purposes. Whereas the sensitivity of a water supply is the natural ability of the area to protect the intake against contamination, the susceptibility determination also takes into account other factors that will affect whether a contaminant reaches the intake. Whether or not a particular drinking water source becomes contaminated depends on three factors:

(1) The distribution of PCS;
(2) The source water area; and
(3) The natural protection, or sensitivity, of the source

In conducting a susceptibility determination, the part of the watershed that yields water to the water supply-system intake is identified by establishment of the susceptible areas within the source water area. PCS within the susceptible areas are then located. Based on the distribution of PCS within the susceptible areas, and on the type of PCS and the nature of the chemicals they use or store, PCS are analyzed for the risk they may represent to the water supply intake. Along with the presence and distribution of PCS, the sensitivity analysis is then used to determine the susceptibility of the water supply. This leads to a determination of whether the drinking water source is moderately susceptible, highly susceptible, or very highly susceptible to contamination (Sweat and others, 2001). It is important to understand that a system can have low sensitivity relative to some conditions (for example, intake construction and location), and high susceptibility because of other conditions (for example, the type of PCS). In Michigan, all surface water sources of drinking water range from moderate to very high susceptibility.

When a public water supply is determined to have a moderate, high, or very high susceptibility because of a particular condition or set of conditions, there is a significant risk of contamination of the drinking water source because of that condition or set of conditions. Although the susceptibility determination cannot predict when or if contamination will actually occur, it does recognize conditions that are highly favorable for supply contamination of the supply. In the event of a contaminant release to soils or surface water within the susceptible area, it is very likely that contamination at the intake would occur without completion of remedial actions.

If a public water supply's drinking water source is determined to be highly susceptible, it is recommended that the system identify the condition(s) that lead to the high susceptibility. Immediate steps should be taken to protect the source, and action should be considered to remedy the condition (for example, repairing or replacing faulty intake construction, working directly with facility operators to implement sound management practices, etc.).

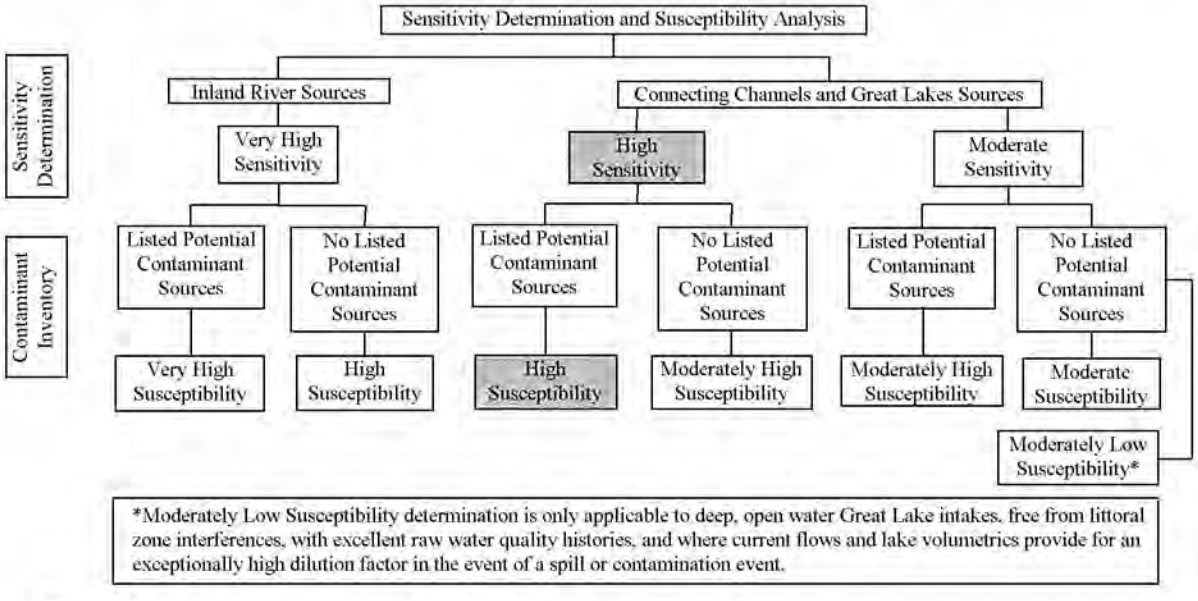


Figure 5. Surface-source sensitivity analyses and susceptibility determinations

All water supplies, regardless of their susceptibility, should consider identified factors that could lead to higher susceptibility in the future, and should prepare a strategy to protect the water supply source. Raising public awareness through signs and other education programs, encouraging proper intake construction and the use of best

management practices in existing facilities are good ways of ensuring that a surface water source maintains its moderate susceptibility rating.

Summary and Recommendations

The actual susceptibility of the drinking water source of a water supply depends on a number of contributing factors, some of which are only slightly related. Sensitivity is determined from the natural setting of the source and identifies the natural protection afforded to the source water. Susceptibility is determined by identifying those factors within the community's SWA that may pose a risk to the source water. The susceptibility determination provides information with respect to facilities within the SWA or land areas within the SWA that should be given greater priority and oversight in the implementation of a Drinking Water Protection Program

Sensitivity Analysis: Based on criteria adopted in the Great Lakes Protocol of the Michigan Source Water Assessment Program, the near-shore intake for the Saint Ignace Water Treatment Plant has a high degree of sensitivity to potential contaminants. When considering lake currents and mixing patterns in Lake Huron, the Saint Ignace intake is categorized as highly sensitive.

Susceptibility Determination: The SWA for the Saint Ignace intake includes three listed potential contaminant sources, with four permits, within the susceptible area, several storm-sewer discharges within the susceptible area, plus urban and industrial runoff from the watershed. Combining these potential contaminant sources with the highly sensitive intake yields a highly susceptible determination for Saint Ignace source water (fig. 5).
Effective Treatment: While it has been determined the Saint Ignace source water is highly susceptible to potential contamination, it is also noted the Saint Ignace WTP has, historically, effectively treated this source water to meet drinking water standards. This assessment provides the city with a basis to institute a source-water protection program as another tool to assure the continued safety of its water supply.

The results of this assessment and the recommendations based on these results are summarized as follows:

- ***Intake*** - The Saint Ignace Water Supply intake was constructed in the 1930s, and draws water from an intake located in Lake Huron, ft from shore in about of water, making it a highly sensitive intake.
- ***Soils*** - The soil and subsoil material in the watershed have a weighted permeability of 4.5 inches per hour. Both moderately rapid and rapidly permeable soils occur within the Saint Ignace SWA, and 6 PCS are located on these soils. These factors combine to make the SWA, and thus the intake, highly sensitive. The community should take steps to evaluate current and future land use in areas of highly permeable soils, particularly those occurring within the susceptible areas. Those PCS that have been identified either on or in close proximity to these soils should be informed of the sensitive nature of the area and encouraged to adopt best management practices designed to minimize the risk of a ground release. Residential areas that have been developed on these soils should be targeted for educational programs identifying steps that residents can take to protect the water supply.
- ***Historical Contaminant Detections*** - Inorganic contaminants are typically at lake background levels. Nitrate concentrations are routinely below the detection limit. There have been no detections of synthetic or volatile organic contaminants in the systems raw water. Coliform bacteria have not been detected.
- ***Sanitary Survey*** – A sanitary survey of the water supply is being drafted. It is important that the water supply continue to follow good management practices.
- ***Potential Contaminant Sources*** - A review of the PCS inventory and the moderately rapid and rapidly permeable soil distribution indicates that the Saint Ignace SWA has six PCS located on moderately rapid and rapidly permeable soil. Within the susceptible area, there are three PCS with four discharge permits. It is recommended that the community focus initially on PCS that are within the susceptible area as they pose the greatest potential threat to the water supply. These facilities should be made aware of free technical assistance that is available through MDEQ's pollution prevention programs. Through chemical inventory, waste reduction, and increasing awareness of best management practices, the risk these facilities pose to source waters can be reduced. The PCS inventory indicates that the source is highly susceptible.

- ***Source Water Assessment*** - The Saint Ignace source water assessment is based on these site-specific parameters:
  1. Definition of a Critical Assessment Zone around the intakes for a highly sensitive source;
  2. Definition of a SWA for Lake Huron watershed up current of Saint Ignace, and along the shoreline of Lake Huron near the intake;

3. Currents and mixing patterns in the lakes Michigan and Huron and their effects on source water quality; and
4. Listed and nonlisted potential contaminant sources.

- ***Source Water Protection*** – The City has initiated source water protection activities with an Industrial Pretreatment Program incorporating management plans, chemical containment, and spill response, spill response training, and an aggressive street cleaning program. The Saint Ignace Water Supply and/or the community should assemble a team to assist in the development and implementation of a source-water protection program that uses this assessment to further protect the Saint Ignace source water.

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GLOSSARY

Confined Disposal Facility (CDF) – a facility designed to retain dredged solids while allowing carrier water to be released from the containment area.

Critical Assessment Zone (CAZ) – the area from the intake structure to the shoreline and inland, including a triangular water surface and a land area encompassed by an arc from the endpoint of the shoreline distance on either side of the on shore intake pipe location

Geographic Information System (GIS) – a system to capture, store, update, manipulate, analyze, and display all forms of geographically referenced information

Intake – the point at which source (raw) water is drawn into a pipe to be delivered to a water treatment plant

Lignins – an amorphous, cellulose-like, organic substance that acts as a binder for the cellulose fibers in wood and adds strength and stiffness to cell walls

Maximum Contaminant Level (MCL) – the maximum permissible level of a contaminant in water that is delivered to any user of a public water system

Potential Contaminant Sources (PCS) – listed and non-listed agricultural sites, businesses, and industries that have the potential to cause contaminants to be introduced into source water

Sensitivity – a measure of the physical attributes of the source area and how readily they protect the intake from contaminants

Source – the water body from which a water supplier gets its water

Source Water Area (SWA) – the land and water area upstream of an intake that has the potential to directly influence the quality of the water at the intake

Source Water Assessment Program (SWAP)– in Michigan, the process defined by the state Department of Environmental Quality to complete assessments of all the state's public water supplies

Susceptibility – the Susceptibility identifies factors that may pose a risk within the community's source water area

Susceptible Area – the area defined by the critical assessment zone and a buffer on either side of any drainage that contribute water to an intake

Synthetic Organic Contaminants (SOC) – Manmade organic chemical compounds such as pesticides, etc.

Tannins – naturally occurring phenolic compounds that precipitate proteins, alkaloids, and glucosides from solution that has a yellowish appearance

Turbidity – the measurement of the clarity of water

Volatile Organic Contaminants (VOC) – Unnatural, volatile organic chemical compounds such as gasoline components, solvents, degreasers, etc.

From: Elizabeth Murphy <emurphy@cityofflint.com>
Sent: Friday, February 06, 2015 2:55 PM
To: Prysby, Mike (DEQ)
Subject: Re: Flint River Source Water Assessment

Thank you, Mike. I will share this with the Water Treatment Plant Staff and Director Croft.
LIZ

On Fri, Feb 6, 2015 at 1:48 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Elizabeth,

Attached is a copy of the Flint River Source Water Assessment report for your information. Water treatment plant staff should have a copy of this report, if not, please provide them with a copy.

Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

--
Liz Murphy
Assistant to the Emergency Manager
City of Flint
810 237 2025

From: DEQ-PEAS
Sent: Sunday, February 08, 2015 9:43 AM
To: busch@michigan.gov;Prysby, Mike (DEQ)
Subject: Flint news

Activist Erin Brockovich is sending a water expert to a March for clean water in Flint.....ABC CH12 Sunday AM

Sent from the PEAS On Call cell phone.

From: Rennaker, Joanne (DEQ)
Sent: Tuesday, February 10, 2015 3:47 PM
To: Prysby, Mike (DEQ)
Subject: Letter
Attachments: WTP 30% comments cover ltr.doc

I wasn't sure if I had sent this one back to you.

Jo Anne Rennaker
Secretary
Department of Environmental Quality - Lansing District Office
Office of Drinking Water & Municipal Assistance
Office of Waste Management & Radiological Protection
517-284-6643

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

February 6, 2015

Mr. John O'Brien, Director
Genesee County Drain Commissioner
G-4610 Beecher Road
Flint, Michigan 48532

WSSN: 2615

Dear Mr. O'Brien:

SUBJECT: Genesee County Water Treatment Plant (WTP) – 30% Design
Department of Environmental Quality Comments

This letter is to acknowledge receipt of three sets of plans (30% design) for the proposed Genesee County WTP. Our review comments are enclosed. The enclosure also includes comments pertaining to the sizing of the finished water reservoir and Genesee County's response to our December 22, 2014, comments concerning the duration of the proposed pilot study.

As always, we are available to meet to discuss our comments in more detail. If you have any questions, feel free to contact me at (517) 290-8817; prysbym@michigan.gov; or Department of Environmental Quality, Office of Drinking Water and Municipal Assistance, Lansing District Office, 525 West Allegan Street, 1st Floor South, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Field Operations Section
Office of Drinking Water and
Municipal Assistance

mfp/jlr
Enclosure

cc: Mr. Dave Jansen, Genesee County
Mr. Mike Winegard, P.E., AECOM

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Wednesday, February 11, 2015 3:50 PM
To: Benzie, Richard (DEQ);Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ)
Subject: RE: Controlled Correspondence from citizen in Flint

Thank you, Richard, for your comments below. I changed to "District Supervisor". Regarding your second comment, I came to the same conclusion a bit ago, and tried to clarify this with a citizen caller---that the water leaving the plant was fine; it was the time in the distribution system that was causing problems. But, they didn't care---the bottom line was their water "was bad". So, I don't think I'll include that comment; but I did forward to Tom Poy for his weigh in.
Jen

From: Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
Sent: Wednesday, February 11, 2015 1:03 PM
To: Crooks, Jennifer; Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: shekterl@michigan.gov
Subject: RE: Controlled Correspondence from citizen in Flint

Jen,

I'm sure Steve will reply, but I know he has been conducting interviews today.

Most of the letter looks fine. However, the title of Supervising District Engineer has not been used since we merged with the Surface Water Quality Division in 2002. Steve is currently the ***District Supervisor*** for the Lansing (and Jackson) District. You use his title several times in your final draft.

Also, it may be appropriate or beneficial to point out that at no time has the drinking water leaving the water treatment plant since the switch to the Flint River exceeded a drinking water standard. The problems the city has encountered appear to be related to distribution system issues, such as an aging pipe network, reduced customer usage, and as a result, increased stagnation of drinking water within the distribution system.

That's my two cents.

Richard

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Wednesday, February 11, 2015 11:49 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: Controlled Correspondence from citizen in Flint
Importance: High

Hi, Steve. As we discussed, I've drafted our response and included information you gave us on Monday. Tom Poy has reviewed, so this is our final draft. If you could get back to me this afternoon with any changes, I'd appreciate it. These things are like ticking time bombs around here.

Thank you!

Jennifer

From: London, Bob (DEQ)
Sent: Tuesday, February 17, 2015 1:39 PM
To: Prysby, Mike (DEQ)
Subject: RE: questions from Ron Fonger

Mike,

Populations served:

Beaver Road Association serves 786
Beaver Township serves 1109
Portsmouth Township serves 525
Buena Vista Township serves 8676

The above are the only systems to exceed the MCL since 1/1/2010. In 2009, under Stage 1, Bay City exceeded the TTHM MCL, with a duration of 3 calendar quarters. Since this occurred under Stage 1, compliance was based on a system-wide RAA (of four locations) rather than LRAAs. The highest system-wide RAA during this time was 99.6 ppb.

I will leave it to you to decide what, if any, of the above information should be passed along. I'm sure you have a better idea of what, specifically, he is looking for.

Bob London

From: Prysby, Mike (DEQ)
Sent: Tuesday, February 17, 2015 11:32 AM
To: London, Bob (DEQ); Philip, Kris (DEQ)
Subject: FW: questions

Here are the additional ?s from Ron Fonger concerning the systems that exceeded the TTHM MCL.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Fonger, Ronald [mailto:RFONGER1@mlive.com]
Sent: Tuesday, February 17, 2015 10:58 AM
To: Prysby, Mike (DEQ)
Subject: questions

Mike:
Here's what I need to clarify:
What period of time is covered by the TTHM exceedances in your email (are theses the only violations since Jan. 1, 2010) ?
How many customers are served by each of the five water systems that had TTHM exceedances?

What's the best way to describe "Highest LRAA" that's listed for each of the water systems?
When did TTHM become a part of required monitoring? Since that time, have there been changes in allowable levels, and if so, when?
Thanks again for your help,

Ron Fonger
MLive Media Group
Reporter

mobile [PPI]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: London, Bob (DEQ)
Sent: Tuesday, February 17, 2015 2:15 PM
To: Prysby, Mike (DEQ)
Subject: RE: questions from Ron Fonger

Mike,

Because the 2009 exceedance occurred under Stage 1, when I refer to "Bay City", I mean the entire service area (City plus customer communities). We had Bay City sampling both inside and outside the City in order to represent the system as a whole. Two sites represented maximum residence time, and two represented "at least average residence time", which was the criteria for Stage 1. The system as a whole was out of compliance during the 2nd, 3rd, and 4th calendar quarters of 2009, and it returned to compliance during the 1st quarter of 2010. After that, the system as a whole remained in compliance for the rest of the time that Stage 1 was in effect.

Since Stage 2 started, only the listed customer communities exceeded the MCL. The City of Bay City itself has always been in compliance with Stage 2.

Bob London

From: Prysby, Mike (DEQ)
Sent: Tuesday, February 17, 2015 2:03 PM
To: London, Bob (DEQ)
Subject: RE: questions from Ron Fonger

Bob,

I am assuming Bay City re-achieved compliance under Stage I and has maintained compliance under Stage 2....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: London, Bob (DEQ)
Sent: Tuesday, February 17, 2015 1:39 PM
To: Prysby, Mike (DEQ)
Subject: RE: questions from Ron Fonger

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I will leave it to you to decide what, if any, of the above information should be passed along. I'm sure you have a better idea of what, specifically, he is looking for.

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From: Prysby, Mike (DEQ)
Sent: Tuesday, February 17, 2015 11:32 AM
To: London, Bob (DEQ); Philip, Kris (DEQ)
Subject: FW: questions

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Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Fonger, Ronald [mailto:RFONGER1@mlive.com]
Sent: Tuesday, February 17, 2015 10:58 AM
To: Prysby, Mike (DEQ)
Subject: questions

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When did TTHM become a part of required monitoring? Since that time, have there been changes in allowable levels, and if so, when?
Thanks again for your help,

Ron Fonger
MLive Media Group
Reporter

mobile PPI
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Brent Wright <bwright@cityofflint.com>
Sent: Friday, February 20, 2015 9:11 AM
To: Prysby, Mike (DEQ)
Subject: Re: call

Mike

Marvin Gnagy from Veolia wanted to talk with you about some of the suggestions they were making for treatment here at the plant. He wanted to know what could be implemented right away and what might need permit approval from the MDEQ. They were here running test all week but left yesterday. I have listed his contact number and email below. I would appreciate it if you could get in contact with him so he can finalize his report and send his recommendations to the city administration.

Marvin Gnagy
419-450-2931
marvin.gnagy@veolia.com

Thank you

On Fri, Feb 20, 2015 at 8:40 AM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Brent,

Are we having a conference call today? I am available, give me a time for the call and I will make my-self available.

Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

--

Brent Wright
Water Plant Supervisor
City of Flint
4500 N. Dort Hwy.
Flint, MI. 48505
Ph: 810.787.6537 ext. 3510
Fx: 810.787.3710

From: Berndt, Jason (DEQ)
Sent: Wednesday, February 25, 2015 8:24 AM
To: Prysby, Mike (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

Sorry, I was out of the office and it looks like the SWA's are no longer needed? They are available at: S:\Drinking Water and Environmental Health\Source Water Protection\SWAP\Surface Water Intake Assessments

Jason Berndt
Environmental Quality Analyst
Office of Drinking Water and Municipal Assistance
Gaylord Field Office
~~517-284-6513~~
989-705-3420

From: Prysby, Mike (DEQ)
Sent: Monday, February 23, 2015 8:15 AM
To: Berndt, Jason (DEQ)
Subject: FW: Steve Carmody interview. Can you do Friday?

Jason,

LDO staff may need to reference source water assessments to complete this assignment. Can you send me a copy of the assessment for each of these supplies mentioned below? Thanks. I may add to the list as needed.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Wurfel, Brad (DEQ)
Sent: Friday, February 20, 2015 11:05 AM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: FW: Steve Carmody interview. Can you do Friday?

Hey, all. Michigan Radio's Steve Carmody is looking to do a piece with us next Tuesday on Flint's water.
The angle is looking at the Flint River as a source. I've been parsing this out with Mike Alexander in WRD – looking at the waters, what they flow through upstream of the intake, what that means for the quality of the source.
Carmody also wants to look at it comparatively. As in, what other municipalities around the state are using rivers? I'm aware of Manistique, Blissfield, Alma (?), and … ??? What is the quality of those sources, comparatively?

I know, tough story to do. I need some counsel from Drinking water people, collaborating with WRD counterparts, to get us prepped. And I think we'll need one of you three to be part of this interview on Tuesday.
Let me know when the drawing of straws is over. Thanks! ☺
b

From: Alexander, Michael (DEQ)
Sent: Friday, February 20, 2015 10:56 AM
To: Wurfel, Brad (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

We are all set for Tuesday afternoon at 3 PM. Let me know if that time doesn't work and where should we have it? I can get a conference room if you want me to.

Michael Alexander, WRD
Department of Environmental Quality
Phone 517-449-7971
alexanderm2@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Friday, February 20, 2015 10:10 AM
To: Alexander, Michael (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

Hmmmm. Not what he imparted when I talked to him, but I get what you're saying. Drinking water intake, or drinking water source? Blissfield, Manistique and (I think) Alma use surface water as sources. Is that what he's looking for? Comparative water quality discussion?

From: Alexander, Michael (DEQ)
Sent: Friday, February 20, 2015 9:54 AM
To: Wurfel, Brad (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

Just got off the phone with Steve Carmody. He wants to know how the Flint River water quality is as it relates to a drinking water intake, which is not necessarily the type of water quality assessment we conduct in WRD. We can certainly be part of the discussion if the topic of typical types of inputs to the Flint compared to other Michigan watersheds, but we wouldn't be able to make any statements as to how it compares to other drinking water intakes around MI. I would think someone from Office of Drinking Water and Radiological Protection would be better to answer that question. Thoughts?

Michael Alexander, WRD
Department of Environmental Quality
Phone 517-449-7971
alexanderm2@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Friday, February 20, 2015 8:55 AM

To: Alexander, Michael (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

You in today? Call my cell or tell me where you're sitting and I'll come see you.
b

From: Alexander, Michael (DEQ)
Sent: Friday, February 20, 2015 8:17 AM
To: Wurfel, Brad (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

Hi Brad,

Sometime later this afternoon would be best. It will give us a little more time to prep. I was home with a sick child and the rest of WRD was in training yesterday, Can you please verify for me that he wants to talk about water quality for Flint River, not drinking water treatment? Are there any particular items other than Flint's treatment system you want us to stay away from?

Michael Alexander, WRD
Department of Environmental Quality
Phone 517-449-7971
alexanderm2@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Thursday, February 19, 2015 2:55 PM
To: Alexander, Michael (DEQ)
Subject: Steve Carmody interview. Can you do Friday?

Hey, Mike. Steve wants to do the interview in person. He can be here Friday, optimally any time between 10 a.m. and 4 p.m.
Can this work for you (and whomever you want to join the conversation)?
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
517-230-8006 cell

From: Busch, Stephen (DEQ)
Sent: Wednesday, February 25, 2015 12:32 PM
To: Crooks, Jennifer;Prysby, Mike (DEQ)
Subject: RE: results from recent Flint TTHM samples?

Jennifer,

As we discussed on the phone, samples are at the lab now, but no results yet. I will pass them along as soon as we have them.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Wednesday, February 25, 2015 12:19 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: results from recent Flint TTHM samples?
Importance: High

Mike/Steve--Yes, I have another controlled correspondence from the White House. I thought I'd update my last letter, in case you have these results—I'm hoping that all 8 locations are below 80 this time?

Jennifer

From: Hansen, Jeff <jrhansen@lan-inc.com>
Sent: Friday, February 27, 2015 8:40 AM
To: Prysby, Mike (DEQ)
Subject: Flint Lab Results

Hi Mike,

Do you know if the DEQ lab has gotten Flint THM / HAA5 results yet? Flint has not seen anything yet but they said you normally see the results before they do.

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 **C** PPI
www.lan-inc.com • JRHansen@lan-inc.com

From: Howard Croft <hcroft@cityofflint.com>
Sent: Friday, February 27, 2015 10:26 AM
To: Brent Wright;Daugherty Johnson;Dayne Walling;donna. cole;gdn2@aol.com;Howard Croft;James Henry;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;mgavuli1 @hurleymc.com;Michael Glasgow;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Pete Levine;rob.nicholas@veolia.com;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green;jmikewright
Subject: First Technical Team Meeting
Attachments: TAC Invitation Letter.pdf

Technical Team Members,

This is a reminder of our first meeting date next Wednesday March 4th at Flint City Hall at 2:00 - 4:00 pm. Please bring any questions or goals that you would like to see developed out of the group as we will create the final overarching agenda in the committee.

On a side note, our February TTHM test results were returned from the state lab this morning and all eight test sites are substantially below the MCL.

I look forward to seeing everyone on Wednesday.

Regards,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Shaler, Karen (DEQ)
Sent: Friday, February 27, 2015 1:16 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: Letter from Northern Concrete Pipe, Inc.
Attachments: Northern Concrete Pipe, Inc., Letter.pdf

Hi Steve,

Attached is a PDF of the letter we discussed. Since it was sent to Lansing District Office's P.O. Box and is about furnishing "water and/or sewer & related underground construction materials" to Eagle Excavation in Flint, I'm wondering if this has to do with the Flint water system. Please confirm.

If it's not intended for ODWMA, then I'll keep checking around. Thanks!

From: Bloemker, Jon (DEQ)
Sent: Wednesday, March 04, 2015 10:21 AM
To: Shekter Smith, Liane (DEQ);Benzie, Richard (DEQ);Busch, Stephen (DEQ)
Cc: Devereaux, Tracy Jo (DEQ);Prysby, Mike (DEQ)
Subject: RE: Karegnondi Water Supply-Farmers

Just one work of warning, the Saginaw-Midland Municipal Water Supply Corporation had numerous private connections to their raw water transmission line from the late 40's to the early 80's. Eventually all the individuals were forced off the line and were required to connect to a CWS providing finished water or install their own well. Knowing the thought process of too many farmers, I would not put it past a few of them to use the KWA water service for 'potable' purposes. If adequate precautions are not taken, the ODWMA will face the same headaches as the MDPH had with the home/farm owners and EPA.

From: Shekter Smith, Liane (DEQ)
Sent: Wednesday, March 04, 2015 8:49 AM
To: Benzie, Richard (DEQ); Bloemker, Jon (DEQ); Busch, Stephen (DEQ)
Cc: Devereaux, Tracy Jo (DEQ)
Subject: FW: Karegnondi Water Supply-Farmers

Your thoughts on whether and/or who should attend for ODWMA?

Liane J. Shekter Smith, P.E., Chief
Office of Drinking Water and Municipal Assistance
Michigan Department of Environmental Quality
517-284-6543

From: Howes, Sarah (DEQ)
Sent: Tuesday, March 03, 2015 12:23 PM
To: Shekter Smith, Liane (DEQ); Creal, William (DEQ)
Cc: Feuerstein, Heather (DEQ)
Subject: Karegnondi Water Supply-Farmers

Liane and Bill,

I received a call from Jason Wadaga of Kindsvatter and Associates---they represent Genessee County Drain Commissioners. They are getting a lot of questions from farmers on how to tap into the new water system since they are getting disconnected from Detroit's.

He's requesting a meeting with DEQ/MDARD (Mike DiBernardo will be there for MDARD) to talk about the process and any environmental regulations that they should be aware of if/when they tap in.

Can you guys let me know who from your staff (not sure if WRD and ODWMA both need to be included) would be most appropriate to handle this? I'll ask Jason to reach out to them directly.
Thanks,
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Rennaker, Joanne (DEQ)
Sent: Friday, March 06, 2015 1:43 PM
To: Prysby, Mike (DEQ)
Subject: For your records
Attachments: Flint DBP MCL 1Q15.doc

Jo Anne Rennaker
Secretary
Department of Environmental Quality - Lansing District Office
Office of Drinking Water & Municipal Assistance
Office of Waste Management & Radiological Protection
517-284-6643

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

DAN WYANT
DIRECTOR

March 5, 2015

Mr. Brent Wright, Operations Supervisor
City Of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Violation Notice (VN) – Maximum Contaminant Level for Total Trihalomethanes (TTHM)
Operational Evaluation – Total Trihalomethanes
1st Quarter 2015 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the city of Flint (City) is in violation of the Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels for disinfection byproducts (MCLs)*, of the 1979 Administrative Code.

In accordance with R 325.10610, *MCLs*, of the 1979 Administrative Code, the MCL for disinfection byproduct TTHM is 0.080 milligrams per liter (mg/L) as a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the City's highest TTHM locational running annual average (LRAA), based on the last four quarters, ending February 28, 2015, is 0.105 mg/L which exceeds the standard, and that two of the eight sample site locations exceed the standard of 0.080 mg/L.

Further, in accordance with R 325.10719l, *Disinfection byproducts: operational evaluation levels*, of the 1979 Administrative Code, when an operational evaluation level (OEL) at a monitoring location for TTHM exceeds 0.080 mg/L, a supply shall conduct an operational evaluation and submit a written report of the evaluation to the DEQ not later than 90 days after being notified of the analytical result that causes the supply to exceed the operational evaluation level. As listed in the table below, our records show that the TTHM OELs for the City exceed 0.080 mg/L at one of the City's eight sample site locations.

TTHM Results (mg/L)						
	5/21/14	8/21/14	11/20/14	2/17/15	LRAA	OEL
DBP1 McDonalds 3719 Davison	**0.162**	**0.145**	0.059	0.0162	**0.096**	0.059
DBP2 Liquor Palace 3302 S. Dort Highway	**0.112**	**0.127**	0.033	0.0168	0.072	0.049
DBP3 North Flint Auto 6204 N. Saginaw St.	**0.097**	**0.118**	0.041	0.0149	0.068	0.047
DBP4 University Market 2501 Flushing Road	**0.106**	**0.196**	**0.094**	0.0245	**0.105**	**0.085**
DBP5 Taco Bell 3606 Corunna Road	0.079	**0.181**	0.034	0.0151	0.078	0.063
DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.088**	**0.144**	0.054	0.0192	0.076	0.059
DBP7 Salem Housing 3216 MLK Boulevard	**0.082**	**0.112**	0.050	0.0285	0.068	0.055
DBP8 BP Gas Station 822 S. Dort Highway	0.075	**0.112**	0.036	0.0199	0.061	0.047

Our investigation consisted of a review of ODWMA files for laboratory reports received for compliance monitoring. Our investigation is considered complete. This violation began on March 1, 2015, and will continue until TTHM LRAA is below the MCL at all sample sites.

We are encouraged by the results from the most recent round of compliance samples collected on February 17, 2015, which now show individual TTHM levels at less than half of the 0.080 mg/L standard at all locations throughout the City's system. Operational Evaluation Reports from December 2014, and February 2015, have identified possible causes and corrective measures for the previous elevated TTHM levels which we encourage the City to continue implementing. These modifications have likely contributed in part to the reduction in TTHM levels reported in the most recent quarter, and suggest the City may be able to achieve compliance with the TTHM standard at all sites by continuing these efforts.

Our office is currently reviewing the Operational Evaluation Report dated February 27, 2015, and will provide the City and their consultant with comments, as needed, to help address this MCL violation.

Water systems that exceed the OEL must complete and submit an Operational Evaluation in accordance with Administrative Rule 719l (R 325.10719l) within 90 days of being notified of the violation. **An updated Operational Evaluation report, which incorporates the most recent sample results, must now be completed and received by our office by no later than Friday, May 29, 2015**.

If you have any other factual information you would like us to consider regarding the violation identified in this VN, please provide them in a written response by March 19, 2015.

Administrative rule R 325.10403 of Act 399 requires that suppliers provide public notice (PN) as soon as practical, but no later than thirty (30) days after the supplier learns of this type of violation, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not normally reached by mail. Enclosed is a sample PN which contains the minimum required language. The City is encouraged to include additional information regarding its response efforts to this violation. **Please notify your consumers by April 1, 2015, and send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the public notice**. This violation must also be included in your 2015 Consumer Confidence Report, due by July 1, 2016. The PN must be repeated every quarter until you no longer exceed the TTHM standard. Failure to issue a PN for this violation will result in a fine of at least $1,000 per event, with a maximum of $5,000 per violation.

We anticipate and appreciate your continued cooperation in resolving this matter. If you have any questions regarding this VN, please contact us at the numbers below; at prysbym@michigan.gov; or rosenthala@michigan.gov; or at DEQ, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and Municipal Assistance
517-290-8817

Adam Rosenthal, Environmental Quality Analyst
Lansing District Office
Office of Drinking Water and Municipal Assistance
517-284-6644

Enclosure

cc: Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Mr. Jerry Ambrose, Emergency Manager, City of Flint
Mr. Robert Bincsik, City of Flint
Mr. Howard Croft, City of Flint
Mr. Daughtry Johnson, City of Flint
Genesee County Health Department
Ms. Liane Shekter Smith, DEQ
Mr. Richard Benzie, DEQ
Mr. Stephen Busch, DEQ

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, November 20 of 2014, and February 17, 2015). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the MCL. The standard for TTHMs is 80 micro grams per liter (µg/L). The location reporting the highest TTHM level was 105 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem in 2015. Our most recent individual sample results were all less than half the 80 µg/L standard, however since compliance is calculated using a locational running annual average (LRAA) of the most recent four quarters, we are still out of compliance with the MCL at two of eight locations.

For more information, please contact Mr. Brent Wright at 517-787-6537, or the Flint Water Plant at 4500 North Dort Highway, Flint, Michigan 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice/certification must be sent to the Department of Environmental Quality.

From: Howard Croft <hcroft@cityofflint.com>
Sent: Monday, March 16, 2015 4:28 PM
To: Brent Wright;Daugherty Johnson;Dayne Walling;donna. cole;gdn2@aol.com;Howard Croft;James Henry;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;rob.nicholas@veolia.com;Robert Nicholas;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green
Subject: TTHM Draft Letter
Attachments: ycn-infection-safedrinkingwaterguidelines-sept2004 (1).pdf; vulnerable to drinking water.pdf; TTHM fact sheet (1).pdf; KrasnerWright-DBPBoil-WatRes2005 (1).pdf; Guidance for People with Severely Weakened Immune Systems.pdf; Egorov-ExpDBPsRussia-Proofs (1).pdf; CA study on THMs and pregnancy (1).pdf; Bottled Water NRDC.pdf; Draft - Flint Letter to Healthcare Providers.docx

Team,

We have received our notice from the DEQ and our next step is to have this group preview the letter that we intend to send to the public along with it. I have forwarded everyone a draft of the letter for any comments and I am also sending again all of the literature that was forwarded from Mr. Wright of the EPA and DR. Rose of MSU.

We expect to have an additional FAQ ready and out to this group on Tuesday and we anticipate the violation notice going out in the near future.

The **citizens advisory group** will meet again on this Thursday, we are currently looking to have another **Technical Advisory Committee** with this group in early April.

Thank you,
--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

DRAFT Letter to Flint Healthcare Providers

The safety and quality of Flint's water has been in the news for months. We have worked hard to address these issues and have succeeded in bringing Flint's water within the state's safety guidelines on all measures, including TTHM (total trihalomethanes). Excess TTHM triggered the initial letter to our customers earlier this year.

Even though Flint water now meets the standards and is testing significantly below the state's allowable contamination levels, we are required to send out another letter to residents because the *annual* quarterly testing average is not yet below the state's allowable average.

Flint tests for TTHM – a byproduct of the water chlorination process – at eight different sites in the city. When we began using the Flint River as a source in April of 2014, our first round of quarterly testing for TTHM was conducted in May. At that time, only two testing sites were below the allowable maximum; in August, every site was above the allowable maximum.

The City, with the help of LAN engineering, developed an Operation Evaluation Report (OER) which contained an action plan to address the issue. That plan was implemented with steps including upgrading the ozone treatment process at the Water Treatment Plant (WTP), increasing water main/hydrant flushing to decrease stagnation, small scale testing of treatment to identify areas of improvement, applying overall improvements to the WTP through operational changes and to the distribution system through water circulation modeling.

Because the public notice is based on an annual average of quarterly results a notice was not required until November, at which time all but one testing site was below the allowable levels and our most recent testing in February showed that every testing site was well below state allowable levels. (See the attached graph outlining our progress.)

We have taken many steps to continue to improve the safety and quality of Flint's water, including bringing in international urban water system consultants, Veolia North America, and establishing two advisory committees: a Citizens Advisory Committee, along with a Technical Advisory Committee made up of representatives from the University of Michigan, Michigan State University, Kettering University, Mott Community College, Genesys, McLaren, and Hurley Hospitals along with local health officials including the Genesee Medical Society the Genesee County Public Health Department, the Michigan Department of Environmental Quality and the U.S. Environmental Protection Agency.

We have also established a hotline 810-787-6537 and a place for continuing updates on the city's website cityofflint.com and have encouraged residents who are concerned about their water to report it to us immediately so that we can make arrangements for on-site testing. Although we have been offering this for more than a month, to date only a few residents have requested on-site testing. All residents wishing to have their water tested can call the hotline number or send an email to flintwater@cityofflint.com.

Despite our progress, we are required by law to once again advise residents about what *was* an excess of TTHM in Flint's water system at the eight testing sights last year. The letter – a draft of which is enclosed for your information – includes legally required language recommending that residents who have (severely compromised immune systems, have an infant, or are elderly) should contact their physician. This is standard language from the U.S. EPA which is included in every water quality or water related report the City publishes, regardless of whether there are specific health or quality concerns, and is used by other municipalities nationwide. We failed to alert you in advance of our original letter

we were required to send out earlier this year – and we don't want to make that mistake again. We have enclosed a fact sheet and a list of Frequently Asked Questions in an effort to help you respond to any inquiries you may get from patients.

We recognize that Flint's water system may still be challenged with *quality* issues such as discoloration or odor but we assure you the *safety* of the water meets all state standards. You should also know that the City also publishes its monthly tests for a wide variety of water treatment components, including chloride levels, on its website at cityofflint.com/?page_id=5643.

We urge you to contact the City of Flint Water Treatment Plant with any specific questions or concerns you may have on this issue. We will do our absolute best to get you the answers you need.

Sincerely,

DRAFT

From: Mike Wright <jmikewright@yahoo.com>
Sent: Tuesday, March 17, 2015 8:53 PM
To: Prysby, Mike (DEQ);Howard Croft;Brent Wright;Daugherty Johnson;Dayne Walling;donna. cole;gdn2@aol.com;James Henry;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Mike Lane;Natasha Henderson;Norb Birchmeier;Pete Levine;rob.nicholas@veolia.com;Robert Nicholas;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green;wright.michael@epa.gov
Cc: Busch, Stephen (DEQ)
Subject: Re: TTHM Draft Letter
Attachments: Draft - Flint Letter to Healthcare Providers_Prysby_Wright.docx

Howard et al:
Please find my additions (including some Comments) attached using tracked changes based on Mike's version. I like his additions as well especially the LRAA language, although I did have a question on the softening text. Although I think this Letter is close to ready to be sent, please note that I do NOT recommend, due to inaccuracies, that you send the version of the TTHM Fact Sheet that you also attached. I can send you a revised version of that tomorrow. I have some concerns over some of the other files as well (e.g. the ycn one) and can provide another paper that examines the effects of both boiling/filtration on DBP concentrations that could be sent.
Please call me this week as well.
Mike Wright
PS: Please add my work email to the current Email list (wright.michael@epa.gov)

On Tuesday, March 17, 2015 1:26 PM, "Prysby, Mike (DEQ)" <PRYSBYM@michigan.gov> wrote:

Howard,

I made a few changes to the draft letter…in red (see attached)….mainly to make a more clear distinction between the locational running annual average and the stand-alone quarter (February 2015) results and how it affects the number of sites in compliance. If you have any questions, feel free to call me.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Monday, March 16, 2015 4:28 PM
To: Brent Wright; Daugherty Johnson; Dayne Walling; donna. cole; gdn2@aol.com; Howard Croft; James Henry; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Mike Lane; Prysby, Mike (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; rob.nicholas@veolia.com; Robert Nicholas; rosejo@msu.edu; Russell Hudson; Samir Matta; Warren Green
Subject: TTHM Draft Letter

Team,

We have received our notice from the DEQ and our next step is to have this group preview the letter that we intend to send to the public along with it. I have forwarded everyone a draft of the letter for

any comments and I am also sending again all of the literature that was forwarded from Mr. Wright of the EPA and DR. Rose of MSU.

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Public Works Director
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The City, with the help of LAN engineering, developed an Operation Evaluation Report (OER) which contained an action plan to address the issue. That plan was implemented with steps including upgrading the ozone treatment process at the Water Treatment Plant (WTP), **complete softening,** increasing water main/hydrant flushing to decrease stagnation, small scale testing of treatment to identify areas of improvement, applying overall improvements to the WTP through operational changes and to the distribution system through water circulation modeling

Comment [mw1]: What's complete mean here?
Might be misconstrued that it was a one time action.
Can that parenthetically be put below when describing operational changes?

Because the public notice is based on a **locational running** annual average of quarterly results a notice was not required until November, at which time all but one testing **location** was below the allowable levels. **Our most recent testing in February 2015 showed all locations well below state allowable levels; however, the locational running annual average (based on the four most recent quarters – May 2014 – Feb. 2015) results in all but two locations being below the allowable level.** (See the attached graph outlining our progress.)

We have taken many steps to continue to improve the safety and quality of Flint's water, including bringing in international urban water system consultants, Veolia North America, and establishing two advisory committees: a Citizens Advisory Committee, along with a Technical Advisory Committee made up of representatives from the University of Michigan, Michigan State University, Kettering University, Mott Community College, Genesys, McLaren, and Hurley Hospitals along with local health officials including the Genesee Medical Society the Genesee County Public Health Department, the Michigan Department of Environmental Quality and the U.S. Environmental Protection Agency.

We have also established a hotline 810-787-6537 and a place for continuing updates on the city's website cityofflint.com and have encouraged residents who are concerned about their water to report it to us immediately so that we can make arrangements for on-site testing. Although we have been offering this for more than a month, to date only a few residents have requested on-site testing. All residents wishing to have their water tested can call the hotline number or send an email to flintwater@cityofflint.com.

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We recognize that Flint's water system may still be challenged with *quality* issues such as discoloration or odor, but we assure you the ~~*safety* of the~~ water meets all state standards. You should also know that the City also publishes its monthly tests for a wide variety of water treatment components, including chloride levels, on its website at cityofflint.com/?page_id=5643.

We urge you to contact the City of Flint Water Treatment Plant with any specific questions or concerns you may have on this issue. We will do our absolute best to get you the answers that you need.

Sincerely,

Comment [mw2]: I'd recommend that you NOT send that version of the TTHM Fact Sheet due to inaccuracies. I can provide a revised version of that tomorrow.

Comment [mw3]: While I recognize the desire to emphasis Safe... Safety does not make sense here.

DRAFT

From: Benzie, Richard (DEQ)
Sent: Wednesday, March 18, 2015 10:40 AM
To: Fisher, Brant (DEQ);Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ)
Subject: Fw: Meeting with Jeff Wright
Attachments: Karegnondi Water Supply-Farmers; Karegnondi Water Supply-Mtg with Farmers

FYI. No meeting scheduled yet. Brant's knowledge on the water withdrawal permit ultimately issued to Genesee County/Karegnondi Water Authority and it's limitations means he should accompany me when this meeting is scheduled. I assume someone from Lansing district would like to be present as well. I'll keep you informed as I learn more.

Sent using OWA for iPhone

From: Goodheart, James (DEQ)
Sent: Wednesday, March 18, 2015 9:30:49 AM
To: DiBernardo, Michael (MDA)
Cc: Klemans, Diana (DEQ); Benzie, Richard (DEQ); Howes, Sarah (DEQ)
Subject: FW: Meeting with Jeff Wright

Mike, as you will see in these attachments, DEQ (both WRD and Drinking Water) staff are engaged in this issue and planning to attend this meeting. The DEQ contacts are shown in the second attachment. Would you want to let them know of your availability to coordinate between DEQ and DARD? I would like to sit in on the meeting if they would also send me the meeting notice. Thanks JimG

From: Howes, Sarah (DEQ)
Sent: Wednesday, March 18, 2015 9:25 AM
To: Goodheart, James (DEQ)
Cc: Fish, Kim (DEQ)
Subject: RE: Meeting with Jeff Wright

Hi Jim—

Bill and Liane designated Dina and Richard to head this up from our staff (and whomever else they'd like to include from their staff). I asked Jason to work directly with them to get something scheduled as this isn't a legislative request. Jason just went through me as he didn't know who else to contact within the department. I've attached the emails that I sent to Bill and Liane, and then to Jason with the contact info.

Please let Dina and Richard know if you'd like to be included as they will be the ones working with Jason to set it up.
Thanks,
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Goodheart, James (DEQ)
Sent: Tuesday, March 17, 2015 4:18 PM
To: Howes, Sarah (DEQ)
Subject: FW: Meeting with Jeff Wright

Sarah, can you shed some light on this issue with the meeting being set up?

From: Fish, Kim (DEQ)
Sent: Tuesday, March 17, 2015 2:33 PM
To: Goodheart, James (DEQ)
Cc: Argiroff, Phil (DEQ)
Subject: RE: Meeting with Jeff Wright

Jim, attached are the emails I've seen on this issue. I'm not sure who is setting up a meeting, I assume Sarah is working on it.

Kimberly Fish
Assistant Division Chief, Water Resources Division
Michigan Dept. of Environmental Quality
517-599-9040

From: Goodheart, James (DEQ)
Sent: Monday, March 16, 2015 9:20 AM
To: Fish, Kim (DEQ)
Cc: Argiroff, Phil (DEQ)
Subject: FW: Meeting with Jeff Wright

Kim, I assume WRD has also been in contact with the Gen. Co Drain Comm regarding this request. Please note the reply here with times available to meet here in Lansing to discuss this issue of agriculture tapping the KWA pipeline. Is this something we can coordinate between us and MDARD? Thanks, JimG

From: DiBernardo, Michael (MDA)
Sent: Monday, March 16, 2015 7:51 AM
To: Jason
Cc: Goodheart, James (DEQ)
Subject: RE: Meeting with Jeff Wright

Hi Jason
I have time available for us to meet here in Lansing on:
Wednesday March 25 in the afternoon.
Wednesday April 1 in the afternoon.
Thursday April 2 in the morning.
Thanks

Mike DiBernardo
Economic Development Specialist
Michigan Department of Agriculture & Rural Development
Cell: PPI

dibernardom@michigan.gov
www.michigan.gov/mdard

From: Jason [mailto:Jason@Kindsvatterassociates.com]
Sent: Tuesday, March 03, 2015 9:05 AM
To: DiBernardo, Michael (MDA)
Subject: Meeting with Jeff Wright

Mike,

As a follow-up to my phone call, the Genesse County Drain Commissioner, Jeff Wright, is looking to set up a joint meeting with the DEQ and MDARD to discuss regulations relating to farmers taping into the KWA pipeline for raw water. He is starting to get questions and he wants to make sure he is sharing accurate information with those farmers.

When you get the opportunity, could you let me know some dates and times that might work for you? I have also reached out to the DEQ and am awaiting a call back.

Thanks!

Jason Wadaga
V.P. of Government Affairs
Kindsvatter, Dalling & Associates
1000 West St. Joseph Suite 200
Lansing, MI 48915
517-485-7711 Office
517-485-9408 Fax

PPI

From: Howes, Sarah (DEQ)
Sent: Tuesday, March 03, 2015 12:23 PM
To: Shekter Smith, Liane (DEQ);Creal, William (DEQ)
Cc: Feuerstein, Heather (DEQ)
Subject: Karegnondi Water Supply-Farmers

Liane and Bill,

I received a call from Jason Wadaga of Kindsvatter and Associates---they represent Genessee County Drain Commissioners. They are getting a lot of questions from farmers on how to tap into the new water system since they are getting disconnected from Detroit's.

He's requesting a meeting with DEQ/MDARD (Mike DiBernardo will be there for MDARD) to talk about the process and any environmental regulations that they should be aware of if/when they tap in.

Can you guys let me know who from your staff (not sure if WRD and ODWMA both need to be included) would be most appropriate to handle this? I'll ask Jason to reach out to them directly.
Thanks,
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Howes, Sarah (DEQ)
Sent: Friday, March 06, 2015 9:24 AM
To: jason@kindsvatterassociates.com
Cc: Klemans, Diana (DEQ);Benzie, Richard (DEQ);Creal, William (DEQ);Shekter Smith, Liane (DEQ);Datema, Maggie (DEQ);Feuerstein, Heather (DEQ)
Subject: Karegnondi Water Supply-Mtg with Farmers

Hi Jason,

In regards to our conversation earlier this week, listed below are the contacts you asked for from DEQ. Please feel free to work with them directly to get something scheduled. They may wish to include additional staff as well.

Dina Klemans, Chief
Surface Water Assessment Section
Water Resources Division
517-284-5510
klemansd@michigan.gov

Richard Benzie, P.E., Chief
Field Operations Section
Office of Drinking Water and Municipal Assistance
517-284-6512
BENZIER@michigan.gov

Thanks and have a nice weekend.
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Busch, Stephen (DEQ)
Sent: Wednesday, March 18, 2015 11:54 AM
To: Howes, Sarah (DEQ);Shekter Smith, Liane (DEQ);Prysby, Mike (DEQ)
Cc: Tommasulo, Karen (DEQ)
Subject: RE: Flint Drinking Water Letter?

Importance: High

Never mind this was a private lab in Flint, not the Flint WTP.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Howes, Sarah (DEQ)
Sent: Tuesday, March 17, 2015 12:38 PM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Tommasulo, Karen (DEQ)
Subject: Flint Drinking Water Letter?

Hi all--

I just got a call from Rep. Neeley's office and it's their understanding that DEQ will be issuing a letter on Flint Drinking Water tomorrow. Is this true? If so, could you please PDF me a copy and I'll distribute to the legislative offices that have asked for updates when appropriate.
Thanks,
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Cole, Donna <Donna.Cole@genesys.org>
Sent: Wednesday, March 18, 2015 3:01 PM
To: Howard Croft;Brent Wright;Daugherty Johnson;Dayne Walling;gdn2@aol.com;James Henry;jmikewright;Herman, JoAnne;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Pete Levine;rob.nicholas@veolia.com;Robert Nicholas;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green
Subject: RE: TTHM Draft Letter
Attachments: Draft - accept changes- Flint Letter to Healthcare Providers_031815.docx

Greetings!

To review proposed changes within the attached word document: go to the review tab, go to show final markup pull down, select final.
Consolidated thoughts to individual paragraphs that were spread throughout the original letter.

Kindly review, revise or reject—as appropriate.

Best Regards,
Donna Cole,
Property Manager, Farbman Group
Agent for GRMC
810 606 5611
Donna.Cole@Genesys.org

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Monday, March 16, 2015 4:28 PM
To: Brent Wright; Daugherty Johnson; Dayne Walling; Cole, Donna; gdn2@aol.com; Howard Croft; James Henry; jmikewright; Herman, JoAnne; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Mike Lane; Mike Prysby (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; rob.nicholas@veolia.com; Robert Nicholas; rosejo@msu.edu; Russell Hudson; Samir Matta; Warren Green
Subject: TTHM Draft Letter

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Thank you,
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Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

CONFIDENTIALITY NOTICE:

This email message and any accompanying data or files is confidential and may contain privileged information intended only for the named recipient(s). If you are not the intended recipient(s), you are hereby notified that the dissemination, distribution, and or copying of this message is strictly prohibited. If you receive this message in error, or are not the named recipient(s), please notify the sender at the email address above, delete this email from your computer, and destroy any copies in any form immediately. Receipt by anyone other than the named recipient(s) is not a waiver of any attorney-client, work product, or other applicable privilege.

This message was secured by ZixCorp(R).

DRAFT Letter to Flint Healthcare Providers

Dear Resident:

The safety and quality of Flint's water has been in the news for months. We have worked hard to address these issues and have succeeded in bringing Flint's water within the state's safety guidelines on all measures, including TTHM (total trihalomethanes). TTHM is a byproduct of the water chlorination process. Excess TTHM levels triggered the initial letter to our customers earlier this year.

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~~Flint tests for TTHM – a byproduct of the water chlorination process – at eight different sites in the city. When we began using the Flint River as a source in April of 2014, round of quarterly testing for TTHM was conducted in May. At that time, only two testing sites were below the allowable maximum; in August, every site was above the allowable maximum.~~

The City, with the help of LAN engineering, developed an Operation Evaluation Report (OER) which contained an action plan to address the issue. That plan was implemented with steps including: upgrading the ozone treatment process at the Water Treatment Plant (WTP), **complete softening,** increasing water main/hydrant flushing to decrease stagnation, small scale testing of treatment to identify areas of improvement, applying overall operational improvements to the WTP ~~through operational changes~~ and implementing water circulation modeling to the distribution system. ~~through water circulation modeling~~

The City of Flint tests water at eight different sites within the city. We began using the Flint River as a source in April, 2014. Our first round of quarterly testing for TTHM was conducted in May, 2014. By August, 2014, every site tested was above the allowable maximum. Even though Flint water now meets the drinking water standards and current TTHM levels are significantly below the state's allowable contamination levels, we are required to send out another letter to residents because the *annual* quarterly testing average is not yet below the state's allowable average. ~~Because the public notice is based on a **locational running** annual average of quarterly results a notice was not required until November, at which time all but one testing **location** was below the allowable levels.~~ The public notice is based on a **locational running annual average** of quarterly results, therefore the notice was not required until November, 2014. At that time, all but one of the testing locations was **below** the allowable levels. ~~**Our**~~ **The most recent testing conducted in February 2015 showed all locations well below state allowable levels; however, the locational running annual average (~~based on the four most recent quarters –~~ May 2014 – Feb. 2015) results in all but two locations being below the allowable level.** (See the attached graph outlining our progress.)

~~We have taken many steps to continue to improve the safety and quality of Flint's water, including bringing in international urban water system consultants, Veolia North America, and establishing two advisory committees: a Citizens Advisory Committee, along with a Technical Advisory Committee made up of representatives from the University of Michigan, Michigan State University, Kettering University, Mott Community College, Genesys, McLaren, and Hurley Hospitals along with local health officials including the Genesee Medical Society the Genesee County Public Health Department, the Michigan Department of Environmental Quality and the U.S. Environmental Protection Agency.~~

Comment [mw1]: What's complete mean here?
Might be misconstrued that it was a one time action.
Can that parenthetically be put below when describing operational changes?

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~~made up of representatives from the University of Michigan, Michigan State University, Kettering University, Mott Community College, Genesys, McLaren, and Hurley Hospitals along with local health officials including the Genesee Medical Society the Genesee County Public Health Department, the Michigan Department of Environmental Quality and the U.S. Environmental Protection Agency.~~

~~We have also established a hotline 810-787-6537 and a place for continuing updates on the city's website cityofflint.com and have encouraged residents who are concerned about their water to report it to us immediately so that we can make arrangements for on-site testing. Although we have been offering this for more than a month, to date only a few residents have requested on-site testing. All residents wishing to have their water tested can call the hotline number or send an email to flintwater@cityofflint.com.~~

Despite our progress, we are required by law to once again advise residents about what ***was*** an excess of TTHM in Flint's water system at the eight testing sights last year. The letter – a draft of which is enclosed for your information – includes legally required language recommending that residents who have (severely compromised immune systems, have an infant, or are elderly) should contact their physician. This is standard language from the U.S. EPA which is included in every water quality or water related report the City publishes, regardless of whether there are specific health or quality concerns, and is used by other municipalities nationwide. We failed to alert you in advance of our original letter we were required to send out earlier this year ~~– and~~ we don't want to make that mistake again. We have enclosed a fact sheet and a list of Frequently Asked Questions in an effort to help you respond to any inquiries you may get from patients.

We have taken many steps to continue to improve the safety and quality of Flint's water, including: Hiring Veolia North America, an international urban water system consultant firm, and establishing two advisory committees: a Citizens Advisory Committee, and a Technical Advisory Committee, which is made up of representatives from the University of Michigan, Michigan State University, Kettering University, Mott Community College, Genesys, McLaren, and Hurley Hospitals along with local health officials including the Genesee Medical Society the Genesee County Public Health Department, the Michigan Department of Environmental Quality and the U.S. Environmental Protection Agency. In addition, we have also established a hotline (810-787-6537) and a place for continuing updates on the city's website (www. cityofflint.com). The City of Flint encourages residents who have concerns about their water to report it immediately by either calling the hotline or emailing flintwater@cityofflint.com. Upon citizen's notice we will make arrangements for on-site testing.

We recognize that Flint's water system may still be challenged with *quality* issues such as discoloration or odor, but we assure you the ~~*safety* of the~~ water meets all state standards. You should also know that the City also publishes its monthly tests for a wide variety of water treatment components, including chloride levels, on its website at cityofflint.com/?page_id=5643.

We urge you to contact the City of Flint Water Treatment Plant (@) with any specific questions or concerns you may have on this issue. We will do our absolute best to get you the answers that you need.

Sincerely,

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Comment [mw2]: I'd recommend that you NOT send that version of the TTHM Fact Sheet due to inaccuracies. I can provide a revised version of that tomorrow.

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Comment [mw3]: While I recognize the desire to emphasis Safe... Safety does not make sense here.

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Comment [CD4]: Include contact information if different from the hotline and website.

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From: Busch, Stephen (DEQ)
Sent: Monday, March 30, 2015 8:35 AM
To: Prysby, Mike (DEQ)
Subject: FW: NYTimes.com: A Water Dilemma in Michigan: Cloudy or Costly?

FYI. Article on Flint.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Monosmith, Carrie (DEQ)
Sent: Monday, March 30, 2015 7:58 AM
To: Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: FW: NYTimes.com: A Water Dilemma in Michigan: Cloudy or Costly?

Saw this over the weekend, fyi-Carrie

From: emailthis@ms3.lga2.nytimes.com [mailto:emailthis@ms3.lga2.nytimes.com]
Sent: Saturday, March 28, 2015 11:39 AM
To: Monosmith, Carrie (DEQ)
Subject: NYTimes.com: A Water Dilemma in Michigan: Cloudy or Costly?

Sent by monosmithc@gmail.com

A Water Dilemma in Michigan: Cloudy or Costly?

BY MITCH SMITH

The troubled city of Flint says its supply is safe despite the development of odors and discoloration since a switch from Lake Huron to the Flint River.

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From: Ostrander, Debbie (DEQ)
Sent: Thursday, April 02, 2015 1:00 PM
To: Benzie, Richard (DEQ);Busch, Stephen (DEQ);Cook, Pat (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: RE: small system operator training

I think that calls for a full guffaw! ☺

From: Benzie, Richard (DEQ)
Sent: Thursday, April 02, 2015 12:54 PM
To: Busch, Stephen (DEQ); Cook, Pat (DEQ)
Cc: Prysby, Mike (DEQ); Ostrander, Debbie (DEQ)
Subject: RE: small system operator training

Do you want me to cut it down for all of you? Stop snickering.

From: Busch, Stephen (DEQ)
Sent: Thursday, April 02, 2015 11:03 AM
To: Cook, Pat (DEQ)
Cc: Benzie, Richard (DEQ); Prysby, Mike (DEQ); Ostrander, Debbie (DEQ)
Subject: RE: small system operator training

Good luck. It's like a giant onion. There's just more and more layers to the situation with every layer you peel back so 2-4 slides will be a challenge!

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Cook, Pat (DEQ)
Sent: Thursday, April 02, 2015 10:50 AM
To: Busch, Stephen (DEQ)
Cc: Benzie, Richard (DEQ); Prysby, Mike (DEQ); Ostrander, Debbie (DEQ)
Subject: RE: small system operator training

Thank you Steve. For the Spring Regional DEQ Update presentation I'll probably end up taking your slides and condensing them to 2 - 4 slides to provide a very brief overview of the Flint situation without making them look too bad (which is kind of hard to do).

pat

From: Busch, Stephen (DEQ)
Sent: Thursday, April 02, 2015 10:30 AM
To: Ostrander, Debbie (DEQ); Cook, Pat (DEQ)
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Subject: RE: small system operator training

Debbie and Pat,

You have both asked for some slides regarding Flint for upcoming training and updates.

Attached is what I have put together. There is some additional dialog in the speaker notes. I will be out tomorrow (Friday) and next Tuesday so I wanted to get them to you now and give you an opportunity to ask any questions or added information from your outside the issue perspectives. Pat I think if you need to cut some material out, probably the breakdown of BWA's slides 3 and 4 would make the place to start.

Let Mike and I know if you have any questions and we can provide additional info as needed.

EPA region 5 has been dealing with a number of complaint letters submitted to the White House which we have been helping with and there are probably too many news articles to count at this point so I have opted not to include all of that here, but I do touch on the communication challenges with customers and the media in trying to separate the issues and relay the actual potential for threat to public health. Water rate charges have also been a challenge for the City and may come up but that should really be left to the City to explain where their rate generated revenues are being expended.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Ostrander, Debbie (DEQ)
Sent: Tuesday, March 17, 2015 8:39 AM
To: Busch, Stephen (DEQ)
Cc: Joseph, Mark (DEQ)
Subject: small system operator training

Hi Steve. I have put together a session for the small system training about several of the drinking water issues that have been in the news this year. We touched on it briefly a few weeks ago, and I don't know if you and Mark have discussed it any further. I would appreciate it if you could provide me with either PowerPoint slides about the Flint situation, or a synopsis of the issues that I can put into slides. The other topics I've covered are the Toledo algal bloom, the Charleston, West Virginia MCHM river contamination, and the Louisiana Naegleria fowleri contamination. These 3 were discussed at the Cincinnati training I was at last fall, so I used my notes to put those together.

I will need to have the slides done by April 10 so the booklets will be done on time, so if you could have either slides to me by then, or the data to me the week before (so I have time to put it into slides), I'd appreciate it. If this is not doable, please let me know and I will work something else out.

Thanks much,

Debbie

Debbie Smith Ostrander
Office of Drinking Water and Municipal Assistance
Kalamazoo District Office
P:269-491-4536
F:269-567-3555

From: Cook, Pat (DEQ)
Sent: Friday, April 03, 2015 11:36 AM
To: Prysby, Mike (DEQ)
Subject: RE: KWA

Thanks. No need to contact them. I'm all set.

pat

From: Prysby, Mike (DEQ)
Sent: Friday, April 03, 2015 11:05 AM
To: Cook, Pat (DEQ)
Subject: RE: KWA

Based on our most recent discussions with Flint and Genesee County...they are saying mid to late 2016....so Summer – Fall timeframe. I can contact GCDC to see if they have a more refined timeframe.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Cook, Pat (DEQ)
Sent: Friday, April 03, 2015 10:19 AM
To: Prysby, Mike (DEQ)
Subject: KWA

Hey Mike – when is the KWA raw water pipeline supposed to be ready for Flint to tap into?

pat

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Monday, April 06, 2015 7:24 AM
To: Rosenthal, Adam (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: City of Flint - March Bromate Results
Attachments: March 2015 Bromate Results.pdf

Adam,

Here are the results of our March bromate sampling.

Mike Glasgow
City of Flint Water Plant

NSF International
789 N. Dixboro Rd. Ann Arbor, MI 48105, USA
1-800.NSF.MARK | +1-734.769.8010 | www.nsf.org

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TEST REPORT

Send To: C0211289
Mr. Michael Glasgow
City of Flint, Municipality
1101 South Saginaw Street
Flint, MI 48502

Facility: C0211290
City of Flint Water Plant
4500 North Dort Highway
Flint MI 48505
United States

Result	**COMPLETE**	Report Date	02-APR-2015

Customer Name	City of Flint, Municipality
Tested To	USFDA CFR Title 21 Part 165.110
Description	Municipal Water
Test Type	Test Only
Job Number	J-00157090
Project Number	10005233 (CL03)
Project Manager	Anna Ciechanowski

Thank you for having your product tested by NSF International.

Please contact your Project Manager if you have any questions or concerns pertaining to this report.

Report Authorization Kerri L. LeVanseler **Date** 02-APR-2015

Kerri Levanseler - Director, Chemistry Laboratory

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General Information

Standard: USFDA CFR Title 21 Part 165.110
Date and Time Sampled: 3/27/2015 08:00 EDT
Product Description: Municipal Water
Test Description: Bromate - March

Sample Id: **S-0001141163**
Description: Municipal Water - 3/27/2015 08:00 EDT
Sampled Date: 03/27/2015
Received Date: 03/31/2015

Testing Parameter	Reporting Limit	Result	FDA SOQ	Units	P / F
Disinfection Residuals/Disinfection By-Products					
Bromate	5	ND	10	ug/L	Pass

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<<Additional Information>>

Sample Id: S-0001141163

Test Parameter	Date Analyzed	Time Analyzed	Date Prepared/ Processed
Disinfection Residuals/Disinfection By-Products			
Bromate (Ref: EPA 300.1)	31-MAR-2015		

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Testing Laboratories:

	Flag	Id	Address
All work performed at: (Unless otherwise specified)	→	NSF_AA	NSF International 789 N. Dixboro Road Ann Arbor MI 48105

References to Testing Procedures:

NSF Reference	Parameter / Test Description
C3015	Bromate (Ref: EPA 300.1)

Certifications:

Arizona (# AZ0655)	California (# 03214 CA)	Connecticut (# PH-0625)
Florida (# E-87752 FL)	Hawaii	Indiana
Maryland (# 201)	Michigan (# 0048)	North Carolina (# 26701)
New Jersey (# MI770)	Nevada (# MI000302010A)	New York (# 11206)
Pennslyvania (# 68-00312)	South Carolina (# 81005)	Virginia (# 00045)
Vermont (# VT 11206)		

Test descriptions preceded by an asterisk "*" indicate that testing has been performed per NSF International requirements but is not within its scope of accreditation.

The reported result for Odor, Phenolics, Potassium, Specific Conductance and Total Residual Chlorine cannot be used for compliance purposes within the State of Arizona.

Notes:

1) Bottled water sold in the United States shall not contain Fluoride in excess of the levels published by the USFDA in 21 CFR Part 165.110. These levels are based on the annual average of maximum daily air temperatures at the location where the bottled water is sold at retail. Please refer to the most current edition of the regulation to determine the Fluoride maximum level that pertains to your product.
2) A blank on the FDA SOQ column indicates that no maximum level has been established by the FDA for that contaminant.
3) An ND result means that the contaminant was not detected at or above the reporting limit.

For a list of NSF International Method Detection Limits refer to
http://www.nsf.org/media/enews/documents/minimum_detection_level_spreadsheet.pdf.

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From: Rennaker, Joanne (DEQ)
Sent: Monday, April 06, 2015 9:03 AM
To: Prysby, Mike (DEQ)
Subject: RE: Letter 4 final
Attachments: LT2 letter 2nd round Sch 2 plants.docx

For your records...

Jo Anne Rennaker
Secretary
Department of Environmental Quality - Lansing District Office
Office of Drinking Water & Municipal Assistance
Office of Waste Management & Radiological Protection
517-284-6643

From: Prysby, Mike (DEQ)
Sent: Friday, April 03, 2015 1:39 PM
To: Rennaker, Joanne (DEQ)
Subject: Letter 4 final

Joanne,

Attached is a letter 4 final to the city of Flint. Thanks!

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

April 3, 2015

Mr. Brent Wright
City of Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

Dear: Mr. Wright

SUBJECT: Long Term 2 Enhanced Surface Water Treatment Rule (LT2 Rule)
2nd Round of Source Water Monitoring Requirements

The LT2 Rule was promulgated by the United States Environmental Protection Agency on January 5, 2006. The Department of Environmental Quality (DEQ) adopted this rule into the Administrative Rules in December, 2009. All public water systems that are supplied by a surface water source, and systems supplied by a ground water source under the direct influence of surface water (GWUDI), are subject to this rule.

According to the LT2 Rule, systems are required to conduct an initial and a second round of source water monitoring for each plant that treats a surface water or GWUDI source. Please keep in mind that grandfathering data will not be accepted for the second round of monitoring. This monitoring includes at least one source water *Cryptosporidium*, *E. coli*, and turbidity sample per month for a period of 24 months for systems serving populations greater than 10,000 people. Systems will be assigned to a "treatment bin" based on the results of source water monitoring. The treatment bin specifies the level of *Cryptosporidium* removal and/or inactivation that the system must achieve.

Our records indicate that your system is required to comply with the source water monitoring requirements on Schedule 2 as stated below in Table 1. Therefore, your system is required to submit to the DEQ, a source water monitoring plan for each plant by July 1, 2015, and start the 2nd round of monitoring in October, 2015.

Table 1 – LT2 Milestone Dates for 2nd Round of Source Water Sampling

System Population	Schedule	Must submit Source Water Sampling Plan by...	Must begin second round of source water monitoring...
At least 100,000	1	January 1, 2015	April 1, 2015
50,000 – 99,999	2	July 1, 2015	October 1, 2015
10,000 – 49,999	3	July 1, 2016	October 1, 2016

<10,000	4	July 1, 2017	October 1, 2017

Enclosed with this letter is a Source Water Sampling Plan template that you can complete and submit to this office to comply with the July 1, 2015, deadline. The template includes instructions and a worksheet that will assist the DEQ in determining if your plan meets the requirements of the LT2 Rule.

If you have any questions about this subject, feel free to contact me at 517-290-8817; prysbym@michigan.gov; or Department of Environmental Quality, Office of Drinking Water and Municipal Assistance, Lansing District Office, 525 West Allegan Street, 1st Floor South, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Field Operations Section
Office of Drinking Water and
Municipal Assistance

Enclosures

cc: Mr. Howard Kroft, City of Flint

From: Bennett, Charles (DEQ)
Sent: Monday, April 06, 2015 4:16 PM
To: Rosenthal, Adam (DEQ);Prysby, Mike (DEQ)
Subject: flint

Here's another helpful opinion...
http://www.mlive.com/news/flint/index.ssf/2015/04/flint_councilman_claims_govern.html#incart_river

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Monday, April 06, 2015 5:37 PM
To: Prysby, Mike (DEQ)
Subject: Flint Oct 2014 Bromate Results
Attachments: October 2014 Bromate Results.pdf

Mike,

Here are the October 2014 Bromate results. I will put the Ozone dosage on the MOR immediately. We do have data from each month of operation. I will get to work on compiling that and updating the prior MOR's as soon as I finish verifying all the data from March MOR.

Mike Glasgow
City of Flint Water Plant

NSF International
789 N. Dixboro Rd. Ann Arbor, MI 48105, USA
1-800.NSF.MARK | +1-734.769.8010 | www.nsf.org

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TEST REPORT

Send To: C0211289
Mr. Michael Glasgow
City of Flint, Municipality
1101 South Saginaw Street
Flint, MI 48502

Facility: C0211290
City of Flint Water Plant
4500 North Dort Highway
Flint MI 48505
United States

Result	**COMPLETE**	Report Date	06-NOV-2014

Customer Name	City of Flint, Municipality
Tested To	USFDA CFR Title 21 Part 165.110
Description	Municipal Water
Test Type	Test only
Job Number	J-00148749
Project Number	9841598 (CL02)
Project Manager	Anna Ciechanowski

Thank you for having your product tested by NSF International.

Please contact your Project Manager if you have any questions or concerns pertaining to this report.

Report Authorization Kerri L. LeVanseler **Date** 06-NOV-2014

Kerri Levanseler - Director, Chemistry Laboratory

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General Information

Standard: USFDA CFR Title 21 Part 165.110
Date and Time Sampled: 10/31/2014 08:34 EDT
Product Description: Municipal Water
Test Description: Bromate - October

Sample Id: **S-0001096447**
Description: Municipal Water - 10/31/2014 08:34 EDT
Sampled Date: 10/31/2014
Received Date: 11/05/2014

Testing Parameter	Reporting Limit	Result	FDA SOQ	Units	P / F
Disinfection Residuals/Disinfection By-Products					
Bromate	5	10	10	ug/L	Pass

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<<Additional Information>>

Sample Id: S-0001096447

Test Parameter	Date Analyzed	Time Analyzed	Date Prepared/ Processed
Disinfection Residuals/Disinfection By-Products			
Bromate (Ref: EPA 300.1)	5-NOV-2014		

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Testing Laboratories:

	Flag	Id	Address
All work performed at: (Unless otherwise specified)	→	NSF_AA	NSF International 789 N. Dixboro Road Ann Arbor MI 48105

References to Testing Procedures:

NSF Reference	Parameter / Test Description
C3015	Bromate (Ref: EPA 300.1)

Certifications:

Arizona (# AZ0655)	California (# 03214 CA)	Connecticut (# PH-0625)
Florida (# E-87752 FL)	Hawaii	Indiana
Maryland (# 201)	Michigan (# 0048)	North Carolina (# 26701)
New Jersey (# MI770)	Nevada (# MI000302010A)	New York (# 11206)
Pennslyvania (# 68-00312)	South Carolina (# 81005)	Virginia (# 00045)
Vermont (# VT 11206)		

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Notes:

1) Bottled water sold in the United States shall not contain Fluoride in excess of the levels published by the USFDA in 21 CFR Part 165.110. These levels are based on the annual average of maximum daily air temperatures at the location where the bottled water is sold at retail. Please refer to the most current edition of the regulation to determine the Fluoride maximum level that pertains to your product.
2) A blank on the FDA SOQ column indicates that no maximum level has been established by the FDA for that contaminant.
3) An ND result means that the contaminant was not detected at or above the detection limit for the instrument.

For a list of NSF International Method Detection Limits refer to
http://www.nsf.org/media/enews/documents/minimum_detection_level_spreadsheet.pdf.

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From: Henry, James [jhenry@gchd.us]
Sent: Tuesday, April 07, 2015 12:06 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: Legionella Conference Call w/ MDCH

Hello Mr. Busch,

If possible would you or a representative from your office please attend the conference call that is being hosted by MDCH regarding the Legionella cases in Genesee County. Your knowledge and experiences may help us better understand the Flint municipal water system and municipal water in general, relative to Legionella. I understand that this is short notice, the meeting is today at 2:30pm and the call line is below.

PPI
Access code: PPI

Thank you
Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us.

From: Hasan, Shurooq
Sent: Tuesday, April 7, 2015 10:25 AM
To: Henry, James
Subject: FW: Conference call line

From: Johnson, Shannon (DCH) [mailto:JohnsonS61@michigan.gov]
Sent: Monday, April 06, 2015 8:40 AM
To: Hasan, Shurooq
Subject: Conference call line

Hi Shurooq,

The conference call line for tomorrow's call from 2:30-3:30pm is:

PPI
Access code: PPI

Thanks,
Shannon

Shannon Andrews Johnson, MPH
Infectious Disease Epidemiologist
Michigan Dept. of Community Health
201 Townsend St., CVB 5th Floor
Lansing, MI 48913
Phone: 517-335-8165
Fax: 517-335-8263

From: Busch, Stephen (DEQ)
Sent: Tuesday, April 07, 2015 12:10 PM
To: Henry, James
Cc: Prysby, Mike (DEQ);Benzie, Richard (DEQ);Shekter Smith, Liane (DEQ)
Subject: RE: Legionella Conference Call w/ MDCH

I am out of the office on Sick Leave today.

Mike Prysby will try to call in.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Tuesday, April 07, 2015 12:06 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: Legionella Conference Call w/ MDCH

Hello Mr. Busch,

If possible would you or a representative from your office please attend the conference call that is being hosted by MDCH regarding the Legionella cases in Genesee County. Your knowledge and experiences may help us better understand the Flint municipal water system and municipal water in general, relative to Legionella. I understand that this is short notice, the meeting is today at 2:30pm and the call line is below.

PPI
Access code: PPI

Thank you
Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Hasan, Shurooq
Sent: Tuesday, April 7, 2015 10:25 AM
To: Henry, James
Subject: FW: Conference call line

From: Johnson, Shannon (DCH) [mailto:JohnsonS61@michigan.gov]
Sent: Monday, April 06, 2015 8:40 AM
To: Hasan, Shurooq
Subject: Conference call line

Hi Shurooq,

The conference call line for tomorrow's call from 2:30-3:30pm is:

1-877-873-8017
Access code: 7931338

Thanks,
Shannon

Shannon Andrews Johnson, MPH
Infectious Disease Epidemiologist
Michigan Dept. of Community Health
201 Townsend St., CVB 5th Floor
Lansing, MI 48913
Phone: 517-335-8165
Fax: 517-335-8263

From: Henry, James <jhenry@gchd.us>
Sent: Tuesday, April 07, 2015 1:33 PM
To: Prysby, Mike (DEQ)
Subject: Re: Legionella Conference Call w/ MDCH

Thank you

Sent from my phone.

------ Original message------
From: Prysby , Mike (DEQ)
Date: Tue, Apr 7, 2015 12:46 PM
To: Busch, Stephen (DEQ);Henry, James;
Cc: Benzie, Richard (DEQ);Shekter Smith, Liane (DEQ);
Subject:RE: Legionella Conference Call w/ MDCH

I am available

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Tuesday, April 07, 2015 12:10 PM
To: Henry, James
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Legionella Conference Call w/ MDCH

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Mike Prysby will try to call in.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Tuesday, April 07, 2015 12:06 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: Legionella Conference Call w/ MDCH

Hello Mr. Busch,

If possible would you or a representative from your office please attend the conference call that is being hosted by MDCH regarding the Legionella cases in Genesee County. Your knowledge and experiences may help us better understand the Flint municipal water system and municipal water in general, relative to Legionella. I understand that this is short notice, the meeting is today at 2:30pm and the call line is below.

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Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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Access code: PPI

Thanks,
Shannon

Shannon Andrews Johnson, MPH
Infectious Disease Epidemiologist
Michigan Dept. of Community Health
201 Townsend St., CVB 5th Floor
Lansing, MI 48913
Phone: 517-335-8165
Fax: 517-335-8263

From: Busch, Stephen (DEQ)
Sent: Wednesday, April 08, 2015 10:48 AM
To: Crooks, Jennifer;Prysby, Mike (DEQ)
Subject: RE: Flint to switch to chloramines?

Jennifer,

I was out yesterday and didn't have a chance to respond. There was some brief consideration early on about converting to a chloramination system. However, given the biofilm, TC, EC, and other aesthetic issues that had occurred in August and September of 2014, there was concern that use of chloramines in that distribution environment could easily lead to the presence and proliferation of nitrifying bacteria, causing more public health risk than it would be helping.

Given the reduction in DBP levels the City has been able to accomplish in the last 6-9 months there hasn't been a need to revisit the use of chloramines, but it's not completely off the table as an option if high DBP levels were to come back and remain prevalent.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Tuesday, April 07, 2015 11:32 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: Flint to switch to chloramines?

I heard that it was discussed at a public meeting, so it's probably just an idea floating around. Thank you for checking into this, Mike.
Jen

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Tuesday, April 07, 2015 10:01 AM
To: Crooks, Jennifer; Busch, Stephen (DEQ)
Subject: RE: Flint to switch to chloramines?

Jennifer,
I do not recall chloramines being considered as a treatment alternative to reduce TTHMs; however, I will confirm this.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Tuesday, April 07, 2015 9:24 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: Flint to switch to chloramines?

Hi, Mike and Steve. We've heard that Flint may be contemplating a switch to chloramines in the near future. We're concerned about possible effects related to what happened in DC. Is Flint planning on switching to chloramines; and if so, when?

Jen

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Thursday, April 09, 2015 7:52 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: Flint River Monitoring

Oh, that's good. Thank you! I put the letter in Tom P.'s box, but I'll revise it now before he gets in.
You both are terrific to work with; did I tell you that?
Jennifer

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, April 09, 2015 6:46 AM
To: Crooks, Jennifer
Cc: Busch, Stephen (DEQ)
Subject: RE: Flint River Monitoring

Jennifer,

This reads well...You may want to add to the two last sentences...."To clarify, the TTHMs found in the city's drinking water are a by-product of the chlorination process which starts at the water treatment plant as chlorine reacts with naturally occurring organic compounds from the Flint River". "Refrigerants and solvents are not the contributing precursors of TTHM formation from the Flint River".

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Wednesday, April 08, 2015 4:30 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: RE: Flint River Monitoring

How does this sound?

"Your letter indicated that you received a letter of alert regarding refrigerant and cleaning solvents found in the Flint River. The letter of alert is most likely the public notice dated January 2, 2015 that was sent to you by the City regarding the drinking water TTHM violation, as required by Federal and SDWAs. Wikipedia states that industrial uses of TTHMs are refrigerants and solvents, and that TTHMs as water pollutants are a by-product of the chlorination process. To clarify, the TTHMs found in the City's drinking water are a by-product of the chlorination process which begins in the City's water treatment plant. The TTHMs are not originating from the Flint River."

Jen

From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Wednesday, April 08, 2015 2:33 PM
To: Crooks, Jennifer
Cc: Prysby, Mike (DEQ)
Subject: RE: Flint River Monitoring

Jennifer,

Here is what we think your complainant may be referring to:

The solvent/refrigerant reference appears to come from Wikipedia
http://en.wikipedia.org/wiki/Trihalomethane

The Flint Public Notice was mailed out to residents on January 2, 2015.
http://www.mlive.com/news/flint/index.ssf/2015/01/flint_water_has_high_disinfect.html

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Wednesday, April 08, 2015 3:02 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: RE: Flint River Monitoring

Thank you, Steve, for such a prompt answer—I definitely appreciate it. So, I thought I would respond below—is this accurate in your opinion?

"Your letter indicated that you received a letter of alert regarding refrigerant and cleaning solvents found in the Flint River. Three different programs in the Water Resources Division were contacted, and none were aware of any reports of dumping of these chemicals, nor of any monitoring being done on the Flint River for these chemicals."

Jennifer

From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Wednesday, April 08, 2015 1:06 PM
To: Crooks, Jennifer
Cc: Prysby, Mike (DEQ)
Subject: Flint River Monitoring

Jennifer,

Per our phone conversation this morning, I have contacted MDEQ Water Resources Division Staff. This included: Stephanie Kammer, Acting Lansing District Supervisor

Chuck Bennett, NPDES and Wastewater Engineering
William Keiper, Aquatic Biologist, Surface Water Assessment Section
Susan Doty, Storm Water NPDES and Non-point Source

All responded and none of them are aware of such monitoring (solvents or refrigerants) being done on the Flint River.

Please let me know if you end up with a copy of this "Letter of Alert" from your complainant. I'm sure we would all be interested in the source of such information.

Thanks.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Busch, Stephen (DEQ)
Sent: Thursday, April 09, 2015 9:09 AM
To: Prysby, Mike (DEQ)
Subject: Flint - Michigan Radio

FYI. Not sure if you would have heard this. It was on yesterday afternoon and this morning.

http://michiganradio.org/post/flint-pastors-want-city-turn-tap-flint-river

While they didn't go into detail to provide further explanation, it sounds a little weird to hear them say Flint can't afford to connect to DWSD, but then counter with the City is spending millions to improve its treatment.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Babcock, Amy (DEQ)
Sent: Monday, April 13, 2015 1:34 PM
To: Cook, Pat (DEQ)
Cc: Prysby, Mike (DEQ);Busch, Stephen (DEQ);Bohr, Joseph (DEQ)
Subject: RE: City of Flint Intake Location

Thank you, everyone!

From: Cook, Pat (DEQ)
Sent: Monday, April 13, 2015 1:24 PM
To: Babcock, Amy (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: FW: City of Flint Intake Location

Hi Amy -- see below for the lat /long for the Flint intake.

The Flint plant is located at 4500 N Dort Hwy, Flint, MI. The intake is just east-southeast of the plant in the Flint River. Bing or Google maps will give you a better view if you need some visuals.

Patrick Cook, P.E.
Community Drinking Water Unit
Office of Drinking Water & Municipal Assistance
Michigan Department of Environmental Quality
Phone: (517) 284-6514
cookp@michigan.gov

From: Prysby, Mike (DEQ)
Sent: Monday, April 13, 2015 1:00 PM
To: Cook, Pat (DEQ)
Subject: RE: City of Flint Intake Location

The correct Lat-long is: 43.054838 and -83.668681

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Cook, Pat (DEQ)
Sent: Monday, April 13, 2015 12:12 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Shekter, Jean (DEQ)
Subject: FW: City of Flint Intake Location

Hi Mike & Steve - can one of you guys please forward the location of the Flint WTP intake to Amy Babcock? The info I have on it is below, but I don't know if that is accurate or not.

	Source	LAT	LON
Flint (emergency)	Flint River	43.054200	-83.808300

Patrick Cook, P.E.
Community Drinking Water Unit
Office of Drinking Water & Municipal Assistance
Michigan Department of Environmental Quality
Phone: (517) 284-6514
cookp@michigan.gov

From: Babcock, Amy (DEQ)
Sent: Monday, April 13, 2015 11:12 AM
To: Cook, Pat (DEQ); Shekter, Jean (DEQ)
Subject: City of Flint Intake Location

Hello Pat and Jean,

Are you able to give me some information about the exact location of the intake for the City of Flint? We have some surface water monitoring data from the Flint River (collected from Montrose and M-13) and want to know if there's any chance the drinking water needs to be looked at, too.

Thanks!!
Amy

Amy L. Babcock, MPH
Toxicologist
Water Resources Division
Michigan Department of Environmental Quality
P. O. Box 30458
Lansing, Michigan 48909-7958
Telephone: 517.284.5524
Fax: 517.241.9003
e-mail: babcocka@michigan.gov
Web: http://www.michigan.gov/deq

From: Dorcy, Kristofer (DEQ)
Sent: Tuesday, April 14, 2015 3:45 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: EPA Call

Glad to hear.

Thanks for the update.

Kristofer Dorcy, REHS
Environmental Quality Analyst
Noncommunity & Private Drinking Water Supplies Unit
Office of Drinking Water & Municipal Assistance
Michigan Department of Environmental Quality
Office #1-517-284-6527 -Fax #1-517-241-1328

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From: Prysby, Mike (DEQ)
Sent: Tuesday, April 14, 2015 3:44 PM
To: Dorcy, Kristofer (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: EPA Call

Kristofer,

I was on the phone with him when you called. Got it covered...essentially he is offering on behalf of EPA's ORD to helping out with any of the technical/analytical investigation pertaining to the Flint water supply.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Dorcy, Kristofer (DEQ)
Sent: Tuesday, April 14, 2015 3:31 PM
To: Prysby, Mike (DEQ)
Subject: EPA Call

Mike,

Left you a phone message a moment ago. I had a call from Arron Lightel from EPA out of Cincinnati. He had some questions on Flints drinking water supply and some recent activities. It appears that you maybe the person that can help him out.

His number is 1-513-569-7432

Thanks

Kristofer Dorcy, REHS
Environmental Quality Analyst
Noncommunity & Private Drinking Water Supplies Unit
Office of Drinking Water & Municipal Assistance
Michigan Department of Environmental Quality
Office #1-517-284-6527 -Fax #1-517-241-1328

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Sent: Wednesday, April 15, 2015 11:18 AM
To: Busch, Stephen (DEQ);Shekter Smith, Liane (DEQ);Benzie, Richard (DEQ)
Subject: FW: Questionnaire / FOIA
Attachments: Final Genesee supplemental questionnaire 2-23-15.docx; FOIA Request Jan 27, 2015 Flint Water.doc; FOIA Request Flint Water April 2 2015.doc

Importance: High

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Wednesday, April 15, 2015 10:45 AM
To: Prysby, Mike (DEQ)
Subject: FW: Questionnaire / FOIA
Importance: High

Mike, I apologize for the delay regarding the attached FOIA's and questionnaire.

The information that you shared during the conference call last week was very helpful. I have not received a response yet from the April 2, FOIA.

Thank you

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
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MDSS ID _____

Legionellosis Questionnaire
Genesee County, 2014-2015

Interviewer Identification

Date of Interview: _____ Interviewer's Name: _____
Health Dept.: _____ Phone Number: _____ E-mail: _____

What was the patient's outcome? ☐ *RECOVERED* ☐ *STILL ILL* ☐ *DIED* ☐ *UNK*

Patient Contact Information

Name: _____ Age: _____ Sex: ☐ M ☐ F
Street address: _____ City: _____
State: _____ Zip: _____ County: _____
Daytime Phone: _____ Evening Phone: _____

Surrogate Contact Information <*List surrogate contact information if patient is too unwell or has died*>

Name: _____
Daytime Phone: _____ Evening Phone: _____
Relationship to Patient: _____

Hello, my name is _____ and I'm calling from _____ (health department). We are investigating a cluster of respiratory illnesses in Genesee County. At this point, the source of these illnesses is still under investigation. We are hoping this interview will provide further information and answers about the illnesses. I'd like to ask you a few questions about your home and your exposures during the 2 weeks before you got sick. You do not have to answer any of the questions, but any assistance you can provide is appreciated. Do you have about 30 minutes to talk? If not now, when would be a good time for me to call back? _____

<If the case is from more than 1 month prior, the following text may be used: >
It might be helpful for you to collect documents such as a calendar, receipts, credit card or bank statements to jog your memory about your activities and where you were in the 2 weeks prior to getting sick. The only information we would ask you to share from these are dates and locations. Would you like me to call you back after you have time to collect these materials? When would be a convenient day and time for me to call you back? _____

I have that your first symptom started on *<insert onset date>* _____. Is this correct?

☐ Yes ☐ No ☐ Not sure

If no, what was the first date you started feeling sick? ____/____/_____

List dates of exposure period: from ____/____/____ *to* ____/____/____ *<The exposure period includes the 2 weeks before the date of illness onset>*

MDSS ID _____

Illness Information

1.) During your illness, did you have any of the following symptoms?

	Check one:		
	YES	NO	UNK
Diagnosis of pneumonia			
Fever If yes, highest temp:_____			
Chills			
Cough			
Nausea			
Vomiting			
Diarrhea			
Aches or muscle pains			
Chest pain			
Shortness of breath			
Sore throat			
Headaches			
Other symptoms (*specify*):			

Exposure Information

2.) How long have you lived at your current residence? _____

<If they have moved since the listed exposure period, indicate that you are asking about the house they lived in prior to becoming sick>

a.) If you moved after the exposure period/illness, what was your previous residence address? _____

3.) Where did you get your tap (drinking and other household use) water from between ___/___/___ and ___/___/___ ? *<Exposure period from above>*

- ☐ 1. City of Flint Water
- ☐ 2. City of Flint Township Water
- ☐ 3. Other municipal water system
- ☐ 4. Private well
- ☐ 5. Unknown
- ☐ 6. Other _____

4.) During the last year, has the water pressure at your residence changed? ☐ Yes ☐ No ☐ Not Sure

a.) If yes, did the water pressure: ☐ Increase ☐ Decrease

b). If yes, when did the water pressure change occur? _____

MDSS ID _____

5.) During the last year, has the water quality (appearance, taste, smell) at your residence changed?
☐Yes ☐No ☐Not Sure
a.) If yes, please describe the change in the water quality:_____
_____
b). If yes, when did the water quality change occur? _____

6.) Prior to your illness, did you make any recent plumbing changes or repairs at your residence?
☐Yes ☐No ☐Not sure
a.) If yes, please describe the changes/repairs and give the dates the work was done.
_____
_____

7.) Prior to your illness, were there any water main breaks or other water line issues that affected the water at your residence, including boil water advisories? ☐Yes ☐No ☐Not sure
a.) If yes, please describe the water main/line issues or boil water advisories and give the dates they occurred.
_____
_____

I'd like to ask you some questions about what you did during the 2 weeks **before** you got sick.
The time period I'm asking about is between ___/___/___ and ___/___/___.*<Exposure period>*
During this 2 week period, did you:

8.) Work or volunteer, either full or part time? ☐Yes ☐No ☐Not sure
a.) If yes, complete the following table:

Job description	Company	Location	Any exposure to misty water?

9.) Spend any time in a hospital, doctor's office, clinic, or dentist office as a patient, visitor, employee, or volunteer? ☐Yes ☐No ☐Not sure
a.) If yes, check all that apply:

Exposure	Date(s)	Reason for Visit	Name & City of Hospital/ Office/ Clinic	Name of Doctor
Inpatient ☐	Admission_____ Discharge_____			
Outpatient ☐				
Visitor ☐				
Employee ☐				
Volunteer ☐				

10.) Visit, reside, or work in a long term care facility, nursing home, assisted living facility, or senior living facility? ☐Yes ☐No ☐Not sure

MDSS ID _____

a.) If yes, complete the following table:

Exposure	Date(s)	Name & City of Facility
Resident ☐		
Visitor ☐		
Employee ☐		

11.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you spend any nights away from home (excluding healthcare settings)? ☐Yes ☐No ☐Not sure

a.) If yes, complete the following table: *<prompts: hotel, campground, cabin, cruise, second home, with family, etc.>*

Accommodation Type/Name	Address Street, City, State	Floor/Room No.	Dates of Stay	
			Arrival	Departure

12.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you visit any of the following community venues?

	Check one:					
Venue	YES	NO	UNK	Date(s)	Name of Venue	Address
Hotel (*without* staying overnight – e.g. dinner, wedding)						
Auditorium						
Barbershop or Hair salon						
Car wash						
Casino						
Church or Place of worship						
Gym or Work out facility						
Grocery store						
Home improvement store						
Spa or Nail salon						
Mall or Department store						
Movie theater						
Other (*specify*)						

13.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you have exposure to any of the following water sources, either ***at home*** or while ***away from home***?

MDSS ID _____

	Check one:				
Exposures ***at home***	YES	NO	UNK	Dates (s)	Description: Name (or Type)/Location
Shower					
Use a detachable shower head or hose					
Hot tub, whirlpool spa, Jacuzzi tub					
Sat NEAR a working hot tub or whirlpool spa but did not get in					
Steam room or wet sauna					
Humidifier (whole house or portable)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Respiratory therapy machine (e.g. nebulizer, CPAP, BiPAP, etc.)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Other (*specify*)					

Exposures ***away from home***	YES	NO	UNK	Dates (s)	Description: Name (or Type)/Location
Shower at gym, work, other location					
Use a detachable shower head or hose					
Hot tub, whirlpool spa, Jacuzzi tub					
Sat NEAR a working hot tub or whirlpool spa but did not get in					
Humidifier (whole house or portable)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Pool/splash pad/waterpark					
Recreational or cooling misters					
Steam room or wet sauna					
Decorative fountain					
Outdoor watering hose or sprinkler					
Beach, lake, pond, river, creek, etc.					
Other (*specify*)					

Medical History

Now I'm going to ask a few questions about your medical history and health behaviors.

14.) Have you ever been told by a healthcare provider that you had any of the following conditions:

MDSS ID _____

Condition	Check one: YES	NO	UNK	Comments
Chronic kidney disease				
Weakened immune system (due to cancer, chemotherapy , radiation therapy, immunosuppressive meds, HIV, organ transplant, etc.)				
Diabetes				
Chronic lung disease (COPD, emphysema)				
Asthma or chronic bronchitis				
Heart disease or congestive heart failure				
Liver disease				
Other conditions (*specify*)				

15.) Health behaviors:

	Check one: YES	NO	Quantity per day (packs or drinks)	Duration (years)
Are you currently a smoker?				
Are you a former smoker?				
Do you drink alcohol?				

16.) Do you know anyone else with similar symptoms? ☐ Yes ☐ No ☐ Not sure

a.) If yes, complete the following table:

Name	Phone	State of Residence	Details of Shared Exposure

Additional Comments _____

_____

_____

_____

_____

Thank you so much for taking the time to answer these questions. Do you have any questions that I can help answer? If you have any questions or remember any further details later, please contact the _____ (health department) at phone: _____.

From: Wurfel, Brad (DEQ)
Sent: Thursday, April 16, 2015 3:30 PM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ)
Subject: Reporter question on Flint water

Guys, got a call from Lindsey Smith at Michigan Radio. She's reading the report by the consultants in Flint, came upon a section that caught her eye. Pardon my shorthand, but in essence the section says the drinking water plant was originally constructed to serve as an emergency backup and supply water for a period of weeks while Detroit was down … and as such it "lacked redundancies that would be required for a primary water treatment plant."

My understanding was that they retrofitted the plant to our specs in 2013 and it currently meets requirements to be a primary water treatment plant. Not so?

b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
PPI cell

Subject: MDEQ-McLaren Water System Meeting
Location: Administration Board Room--6 North

Start: Wed 4/29/2015 12:00 PM
End: Wed 4/29/2015 1:00 PM
Show Time As: Tentative

Recurrence: (none)

Organizer: Russell Hudson

Item Type: Appointment
Start Date: Wednesday, 29 Apr 2015, 01:00:00pm (Eastern Daylight Time)
Duration: 1 Hour
Place: Administration Board Room--6 North

Sue Forrest from McLaren Infection Control was contacted last week by the Stephen Busch, PE a District Supervisor from MDEQ—Office of Drinking Water and Municipal Assistance.

He is requesting to meet with us on Wednesday, April 29 at 1:00 PM. We will meet in the Administration Board Room on 6-North.

He and Mike Prysby from MDEQ would like to meet with McLaren staff to discuss the water distribution operations at McLaren Flint and to review and discuss any water system risk assessment, control program, risk management plan, and operation/monitoring records for the hospital water utility.

Information for the State of Michigan representatives:
McLaren Flint Hospital
401 S. Ballenger Highway (corner of Beecher & Ballenger)
Flint, MI 48532
(810) 342-2552
(park in the visitor lot on the West side of Ballenger Highway, walk across the street to the Main Entrance. Either I will meet with you in the Main Lobby or if I am not there ask the Front Desk Receptionist to call me)

Any questions, please do not hesitate to contact me.
Thanks,

Rusty Hudson Assoc. AIA
Director of Engineering Services
McLaren Flint
(810) 342-2552 phone
(810) 342-4941 fax
russell.hudson@mclaren.org

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email and destroy all copies of the original message and attachments. Please note that this email and attachments may be copyright protected.

From: Johnson, Shannon (DCH)
Sent: Friday, April 24, 2015 2:35 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: RE: City of Flint water testing results

Thank you, appreciate your help.

Shannon Andrews Johnson, MPH
Infectious Disease Epidemiologist
Michigan Dept. of Health and Human Services
201 Townsend St., CVB 5th Floor
Lansing, MI 48913
Phone: 517-335-8165
Fax: 517-335-8263

From: Busch, Stephen (DEQ)
Sent: Friday, April 24, 2015 2:33 PM
To: Johnson, Shannon (DCH)
Cc: Prysby, Mike (DEQ)
Subject: RE: City of Flint water testing results

Shannon,

Attached is what I have through March.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Johnson, Shannon (DCH)
Sent: Thursday, April 23, 2015 4:15 PM
To: Busch, Stephen (DEQ)
Subject: City of Flint water testing results

Hi Steve,

You had mentioned in our meeting the other week that you would be able to share the water testing spreadsheet. Would it be possible for us to get a copy of that so we can share it with the Genesee Health Department? I know this was part of the information they were looking for.

Thanks for your help.

Best,
Shannon Andrews Johnson, MPH
Infectious Disease Epidemiologist
Michigan Dept. of Health and Human Services
201 Townsend St., CVB 5th Floor
Lansing, MI 48913
Phone: 517-335-8165
Fax: 517-335-8263

From: Mike Mayer <mikemayer@hurleymc.com>
Sent: Thursday, April 30, 2015 1:26 PM
To: buschs@michaigan.gov;Prysby, Mike (DEQ)
Cc: Ann Newell;Norbert Birchmeier
Subject: Water test equipment
Attachments: KIMG0591.jpg; KIMG0592.JPG; KIMG0593.jpg; KIMG0595.jpg; KIMG0596.jpg

Hi Michael and Stephen,

Please see the attached for our boiler water testing instruments and let me know what you think of us using these for our potable water testing.

Thank you,

Mike Mayer
Senior Facilities Supervisor
One Hurley Plaza
Flint, MI 48503

Office Phone: (810) 262-6178
Fax: (810 262-6233

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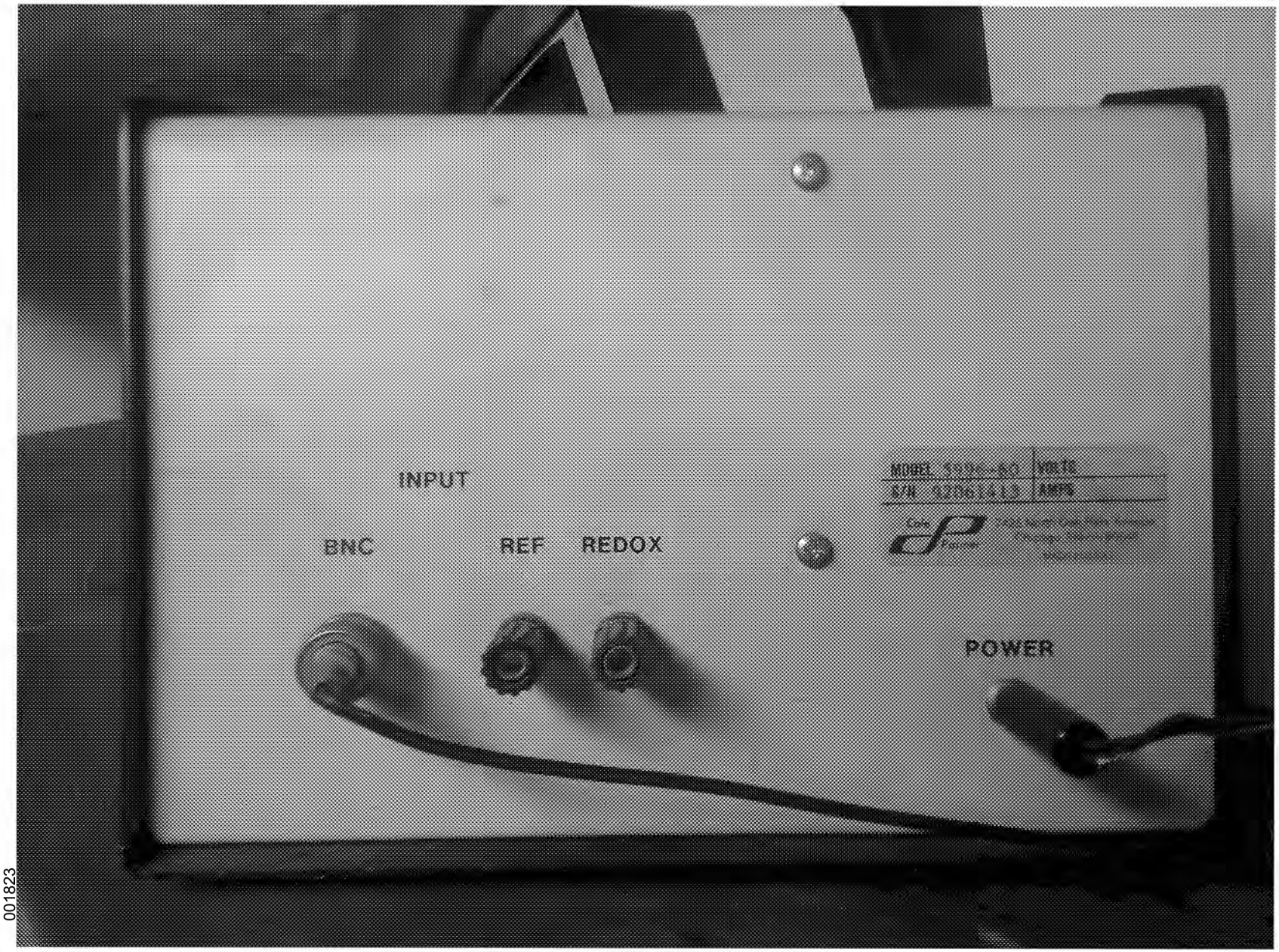
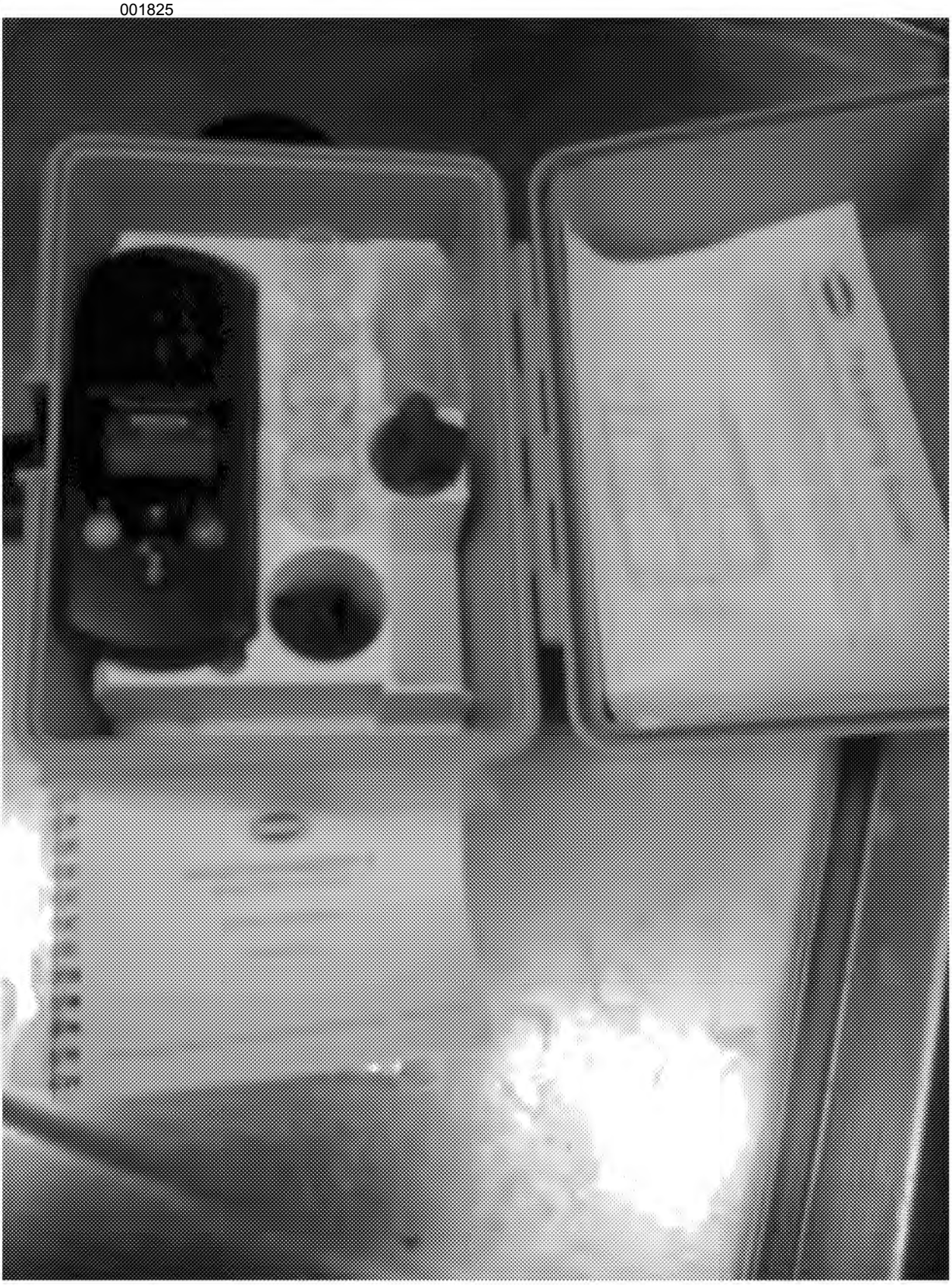


0018823

001824

001825



001826

Chlorine
Chlorine – HR
Bromine
Chlorine Dioxide
pH/Chlorine
Monochloramine
Chromium
Copper
Manganese – HR
Nickel/Cobalt
Fluoride
Phosphate
Iron/TPTZ
Ozone
Sulfate
Silica
Manganese – LR
Nitrate
D.O.
Iron-Ferrous
Single Wavelength
Free Ammonia/Nessler

HACH
CHLORINE
Cl_2
TEST KIT
Pocket Colorimeter™ II
Cat. No. 58700-00

001827

From: Mike Mayer <mikemayer@hurleymc.com>
Sent: Thursday, April 30, 2015 1:54 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: FW: Water test equipment
Attachments: KIMG0591.jpg; KIMG0592.JPG; KIMG0593.jpg; KIMG0595.jpg; KIMG0596.jpg

Sorry Stephen, I typed your email address in wrong on the first try...

Thanks again,
Mike

From: Mike Mayer
Sent: Thursday, April 30, 2015 1:26 PM
To: 'buschs@michaigan.gov'; 'prysbym@michigan.gov'
Cc: Ann Newell; Norbert Birchmeier (nbirchm1@hurleymc.com)
Subject: Water test equipment

Hi Michael and Stephen,

Please see the attached for our boiler water testing instruments and let me know what you think of us using these for our potable water testing.

Thank you,

Mike Mayer
Senior Facilities Supervisor
One Hurley Plaza
Flint, MI 48503

Office Phone: (810) 262-6178
Fax: (810 262-6233

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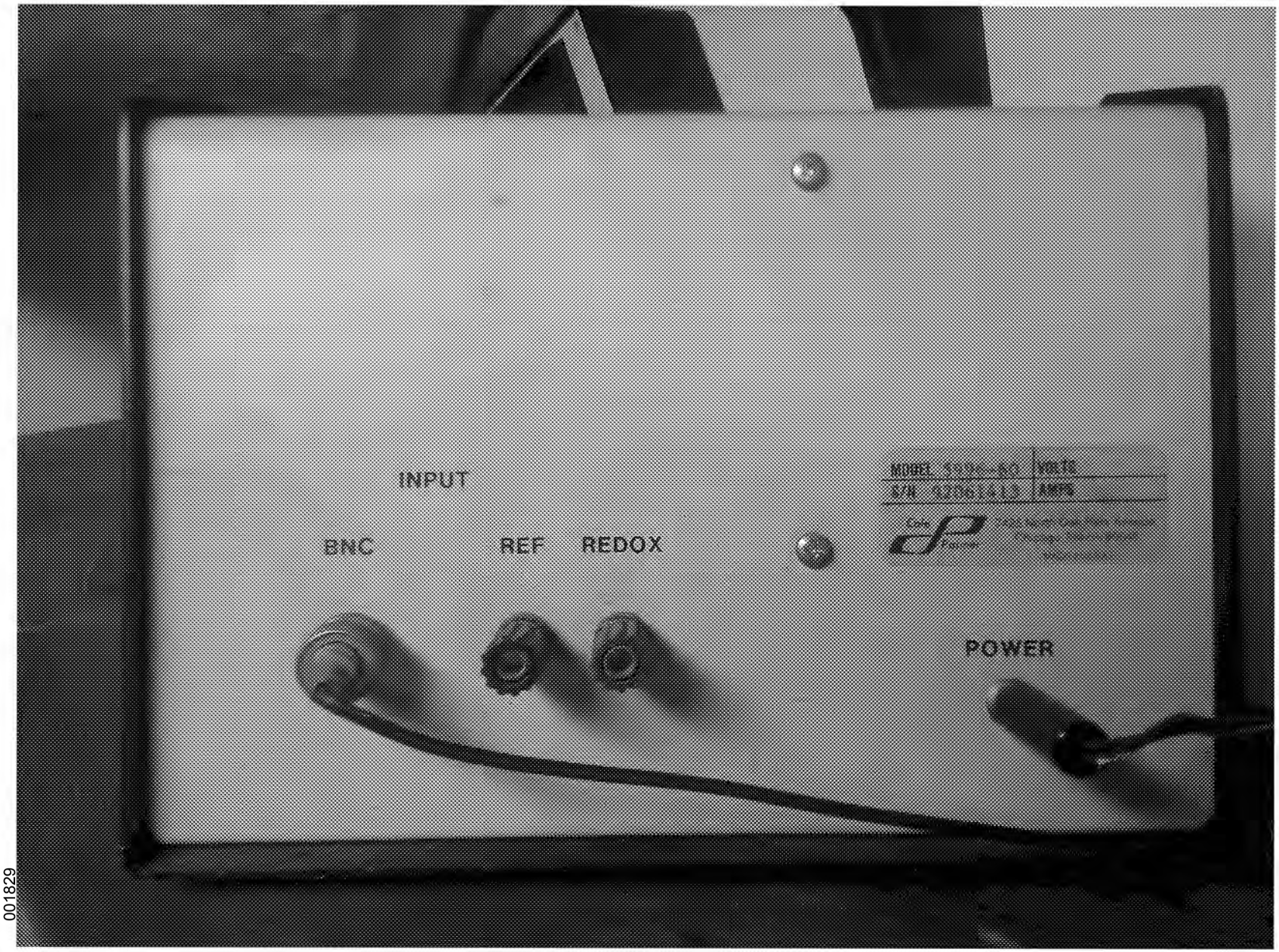
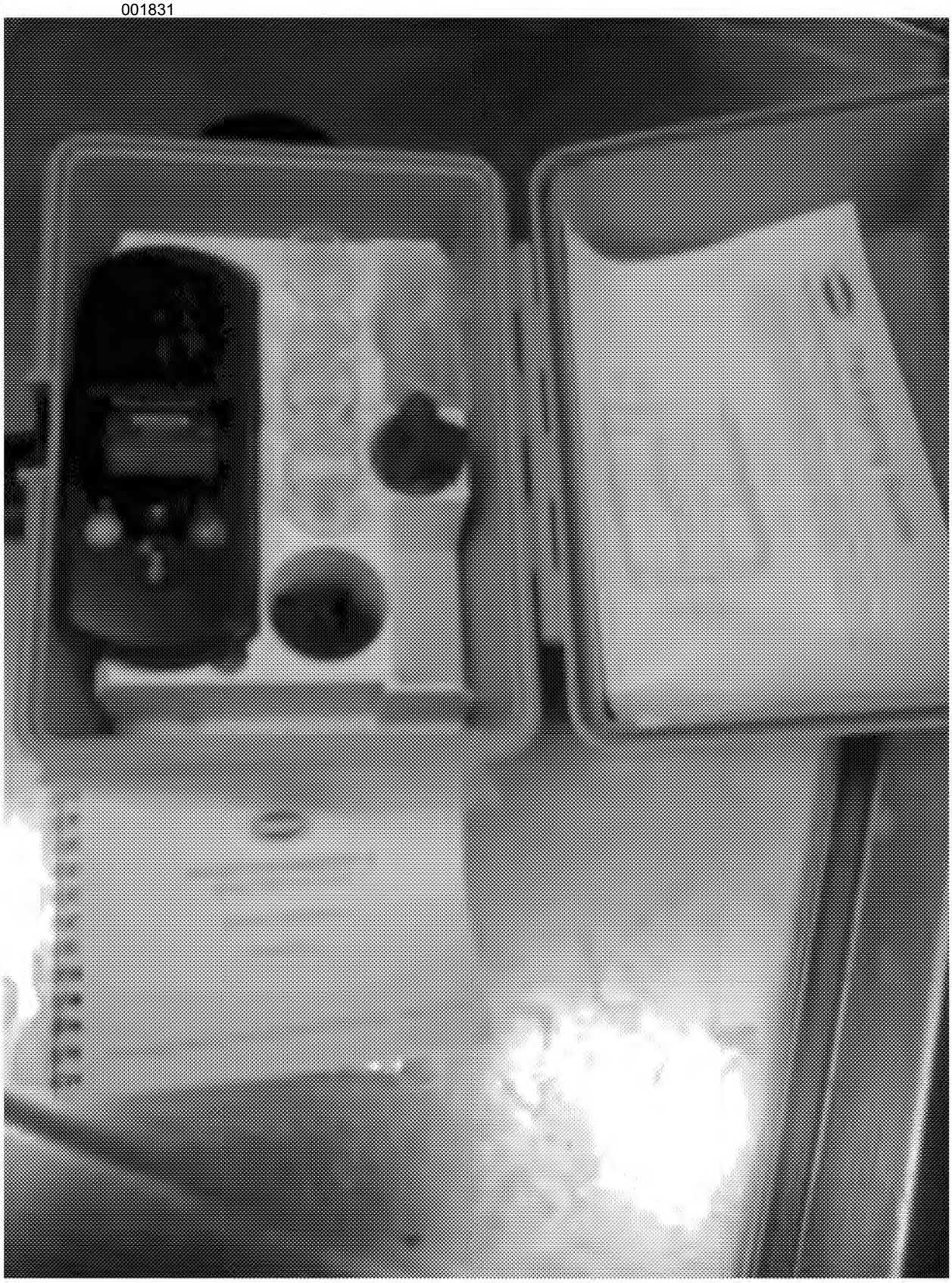


0018229

001830

001831



Chlorine
Chlorine – HR
Bromine
Chlorine Dioxide
pH/Chlorine
Monochloramine
Chromium
Copper
Manganese – HR
Nickel/Cobalt
Fluoride
Phosphate
Iron/TPTZ
Ozone
Sulfate
Silica
Manganese – LR
Nitrate
D.D.
Iron-Ferrous
Single Wavelength
Free Ammonia/Nitrogen

HACH
CHLORINE
Cl2
TEST KIT
Pocket Colorimeter™ II
Cat. No. 58700-00

001833

From: Spielberg, John (DEQ)
Sent: Friday, May 01, 2015 9:24 AM
To: Prysby, Mike (DEQ)
Subject: RE: Public Water Supply availability in vicinity of former Container Specialties Inc

Michael: Google Maps does pick it up, but you are right. The location is in Flint Township next to the city of Flint boundary, between Flushing and the Flint river. Thanks for the contact info.

From: Prysby, Mike (DEQ)
Sent: Friday, May 01, 2015 7:52 AM
To: Spielberg, John (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: Public Water Supply availability in vicinity of former Container Specialties Inc

John,

Yahoo Maps did not find a 3261 Flushing Rd in Flint or Flint Twp; however, 3260 Flushing Road is shown. The location borders the city of Flint and Flint Township. Water supply options to investigate are:

1. City of Flint - Water Service Center - Mr. Robert Binscik (810) 766-7202
2. Flint Township - Township Office (810) 732-1350 Flint Twp is a retail customer of the Genesee County Drain Commissioner (GCDC); thus establishment of service could start at their office. The

GCDC contact is John O'Brien – (810) 732-7870

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Spielberg, John (DEQ)
Sent: Thursday, April 30, 2015 3:43 PM
To: Prysby, Mike (DEQ)
Subject: Public Water Supply availability in vicinity of former Container Specialties Inc

Hi, Mike. Do you have a summary of water supplies available to residents in the neighborhood south of 3261 Flushing Rd, Flint, between Flushing and the Flint river? There is groundwater contamination in this area and some houses appear to still use residential water wells. One resident I talked to who lives on Hatherly Ave said they are connected to city water. But, the nearby house at 1457 Mitson Blvd still has a well. RRD Superfund section will be conducting an investigation of contamination in this area.

Thanks Mike

From: Busch, Stephen (DEQ)
Sent: Friday, May 08, 2015 11:41 AM
To: Prysby, Mike (DEQ)
Subject: RE: CCCP letter to Flint
Attachments: Visit Ltr - April 2015-revised.doc

See attached revisions.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Thursday, May 07, 2015 3:02 PM
To: Busch, Stephen (DEQ)
Subject: CCCP letter to Flint

Steve,

Attached is a draft letter for your review to the city of Flint regarding their CCCP.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

May 7, 2015

Mr. Howard Kroft, Director of Public Works
City Of Flint
1101 South Saginaw Street
Flint, MI 48502

WSSN: 02310

Dear Mr. Kroft:

SUBJECT: Flint Cross Connection Control Program

This letter confirms my site visit on April 29, 2015 with Mr. Glen Thomas, Utilities/Cross Connection Division Inspector for the City of Flint. Mr. Stephen Busch from our office was also present. The purpose of the visit, in part, was to discuss the city's Cross Connection Control Program (CCCP).

The City of Flint has made significant progress in recent years regarding the implementation of the City's approved CCCP. This effort has included identification of accounts, inspection and re-inspection of accounts at the approved frequencies, and ensuring the testing of backflow prevention assemblies in accordance with approved frequencies. However, the City's most recent report of annual CCCP activities for 2014 indicates a significant decrease in these activities below minimum requirements, and this deficiency must be address.

Our office fully recognizes the recent staffing loss of the City's previous plumbing inspector and the importance of these plumbing inspection services in providing public health protection, but these activities should not be borne at the cost of the City's CCCP and the protections it provides. Given the bacterial detections that occurred in the City's water distribution system in August and September 2014, along with customer complaints regarding aesthetic water quality, the need for protection through cross connection control are very evident.

We also realize that implementing a CCCP of for a community water system of this magnitude requires a significant commitment of time and personnel. We encourage the city to review CCCP staffing needs and authorize the workforce necessary to comply with the City's approved CCCP requirements.

Should you require further information, please contact me at the telephone number below; via e-mail at prysbym@michigan.gov; or Department of Environmental Quality, P.O. Box 30242, Lansing, Michigan 48909.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Office of Drinking Water and
Municipal Assistance

Lansing District Office
(517) 290-8817

mfp/jlr
cc Mr. Glen Thomas
Mr. Stephen Busch, P.E.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Hansen, Jeff <jrhansen@lan-inc.com>
Sent: Thursday, May 14, 2015 9:19 AM
To: Prysby, Mike (DEQ)
Subject: Flint

Hi Mike,

I have a couple questions that I think you can easily answer:

1. Flint needs 0.5 log inactivation by disinfection after treatment, right?
2. For the replacement of anthracite with GAC, is there a minimum EBCT you will want to see?

Thanks,

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 **C** [redacted]
www.lan-inc.com • JRHansen@lan-inc.com

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From: Howard Croft <hcroft@cityofflint.com>
Sent: Tuesday, May 19, 2015 9:40 AM
To: Brent Wright;donna. cole;Elizabeth Murphy;gdn2@aol.com;Gerald Ambrose;Howard Croft;James Henry;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Michael Wright;Mike Lane;Prysby, Mike (DEQ);Norb Birchmeier;Pete Levine;Robert Bincsik;Robert Nicholas;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green
Cc: Dayne Walling;Natasha Henderson
Subject: Technical Advisory Team Meeting _ May
Attachments: 2015-05-20 TAC Agenda.pdf

All,

I am sending everyone the TAC team agenda for Wednesday's meeting, there is room left for general conversation regarding next steps and future agenda's. We look forward to seeing everyone that can make it to City Hall tomorrow.

Thank you,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

Flint Water
Technical Advisory Committee
May 20, 2015
Flint City Hall

Agenda

2:00 pm	**Welcome** **Purpose of the Technical Advisory Committee: Provide a respectful means of sharing factual information and having dialogue around the City of Flint water.**
2:05 pm	**Introductions**
2:10pm	**Current water status information – M. Glasgow, Operator In Charge (F-1)**
2:20 pm	**Improvements Information – H. Croft, Director Department of Public Works** New filter media installation Leak detection New pipe installation Water meter installation New water page on City website
2:40 pm	**Discussion on next TTHM testing expectations**
2:50pm	**Discussion on current health concerns, including lead and copper testing**
3:30pm	**Next Steps** Next meeting, one month or two months?
3:35 pm	**Adjourn**

Sources of Information:

City Website: CityofFlint.com See Residents: WATER or
Departments: Public Works: Utilities - many links to reports, Q&A and other useful information.

If you, or another Flint resident, would like to have their water tested: call 810-766-7135 ext 2606

From: Hansen, Jeff <jrhansen@lan-inc.com>
Sent: Tuesday, May 19, 2015 4:44 PM
To: Prysby, Mike (DEQ)
Subject: RE: Flint OEL - MDEQ Comments

Hi Mike,

I had not seen those comments but will address as you suggested in the report due May 29th. Thanks and this is the correct email.

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 **C** PPI
www.lan-inc.com • JRHansen@lan-inc.com

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Tuesday, May 19, 2015 3:42 PM
To: Hansen, Jeff
Subject: FW: Flint OEL - MDEQ Comments

Jeff,

I am trying this address....your old one was undeliverable.....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Tuesday, May 19, 2015 3:36 PM
To: Jeff Hansen
Subject: Flint OEL - MDEQ Comments

Jeff,

In looking at some of the Flint TTHM material for tomorrow's TAC meeting.....I noted our March 1, 2015 comments pertaining to the most recent Operation Evaluation Report prepared for Flint. I didn't see an electronic "sent date" to you on this document. It may be that I hand delivered our comments to LAN during our first TAC meeting on March 4th. If not, attached are our comments and I apologize in the delay. These comments can be addressed in the next report due on May 29, 2015.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

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From: Hansen, Jeff <jrhansen@lan-inc.com>
Sent: Wednesday, May 20, 2015 11:20 AM
To: Prysby, Mike (DEQ)
Cc: Matta, Samir;Green, Warren;Brent Wright (bwright@cityofflint.com);mglasgow@cityofflint.com
Subject: Flint Filter Media Change to GAC
Attachments: GAC-basis-of-design.pdf

Hi Mike,

Attached is our preliminary basis of design. We are currently working through details with GAC suppliers to determine the best specific media for Flint, but the Filtrasorb 300 and 400 series from Calgon or equivalent appear to be the best suited. Please note that both meet AWWA B604, but are questionable by Ten States Standards (TSS) as TSS are non-specific for GAC capping. According to Calgon, their Filtrasorb product has been approved by DEQ at numerous plants including Ann Arbor, Grosse Pointe Farms, Manistique, and Alpena.

Also note we intend to add a chlorine feed point following filtration while maintaining the intermediate feed point, with valving, so chlorine can be added at either point. The intermediate feed point prior to filtration can then be used as a means of disinfecting the filters in the future, if necessary.

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A MEAD & HUNT COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 **C** PPI
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CITY OF FLINT WTP
Filter Media Replacement
Basis of Design

					Notes
Max. Expected Flow Rate =	30.0	mgd =	20,833 gpm =	2,785 cft/min	
Max. Day May 2014 - April 2015 =	25.4	mgd =	17,639 gpm =	2,358 cft/min	
Avg. Day May 2014 - April 2015 =	18.3	mgd =	12,708 gpm =	1,699 cft/min	
Design Flow Rate =	24.0	mgd =	16,667 gpm =	2,228 cft/min	
Min. Expected Flow Rate =	8.0	mgd =	5,556 gpm =	743 cft/min	
Area / Filter =	700	sft			
Number of Filters =	12				

mgd	30.0	24.0	8.0
Loading (gpm/sft) =	2.48	1.98	0.66

Top of Underdrain elev =	723.58				
Washwater Trough Weir elev =	730.67				
Operating Water Level =	734.00				
Top of Filter Basin / Floor elev =	736.00				
Filter BW Dimensional D =	7.08				
Existing Sand D =	12.00	inches =	1.00 ft		
Existing Anthracite D =	18.00	inches =	1.50 ft		
Proposed Sand D =	12.00	inches =	1.00 ft		
Proposed GAC D =	18.00	inches =	1.50 ft		See following pages for details
Proposed Water Depth =			7.92 ft		
Max Cold BW Flow rate / filter =	9800	gpm =	14.0 gpm/sft		To match current BW flow rate
Max Warm BW Flow rate / filter =	14000	gpm =	20.0 gpm/sft		Use when water temp > 65 degrees
Max Sand Expanded D =	14.2	inches =	1.18 ft =	18%	Occurs at cold temps
Max GAC Expanded D =	34.20	inches =	2.85 ft =	90%	
Total BW Expanded D =	48.40	inches =	4.03 ft		
Proposed BW Freeboard =			3.05 ft		
Proposed # of Filters to Replace	12				
GAC Volume =	12,600	cft			
GAC apparent density =	33.7	lbs/cft			
GAC Total Weight =	424,620	lbs =	212.3 tons		

mgd	30.0	24.0	8.0
EBCT (min) =	4.5	5.7	17.0

Propose to relocate intermediate chlorine feed to inlet side of weir chamber following filtration
Intermediate CL2 feed point to remain in place as means to disinfect filters in the future, if needed

mgd	30.0	24.0	8.0	
Contact time (min) =	55.0	68.8	206.3	
CT =	99.0	123.8	371.4	Calculations attached separately

Required CT at 1.8 mg/l chlorine, less than 0.5 degrees C, and pH of 8.0 = 56 OK

Lockwood, Andrews & Newnam, Inc.
A LAN & DAVY COMPANY

CITY OF FLINT- DEPARTMENT OF PUBLIC UTILITIES

GAC Filter Evaluation
Filter Media Analysis 2015 1st Stage

Date: 05/20/15
By: JRH
Data Entry:

WATER INPUT DATA	
Backwash Rate (gpm/sf)	14.0
Water Temperature (F°)	32
Viscosity (centipoise)	1.79355
Dynamic Viscosity (# -sec/sf)	3.746E-05
Water Density (#/cf)	62.42
Mass Density (# -sec/ft^4)	1.940

COMMENTS

SITE LOCATION	10 States		10 States Interpreted		Filtrasorb 400		Filtrasorb 300		Alt	
Media Type	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC
Bed Depth (in)	12	18	12	18	12	18	12	18	12	18
Uniformity Coefficient	2.30	1.65	2.30	1.40	2.30	1.90	2.30	2.10	2.30	1.50
Effective Size (mm)	0.400	0.550	0.40	0.800	0.40	0.650	0.40	0.800	0.40	0.650
d60% Size (mm)	0.920	0.908	0.920	1.120	0.920	1.235	0.920	1.680	0.920	0.975
d90% Size (mm)	1.607	1.269	1.607	1.403	1.607	1.899	1.607	2.762	1.607	1.279
Porosity	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50
Specific Gravity	2.554	1.45	2.554	1.45	2.554	1.45	2.554	1.45	2.554	1.45
Media Density (#/cf)	159.4	90.5	159.4	90.5	159.4	90.5	159.4	90.5	159.4	90.5
Min. Fluidization Rate (gpm/sf)	7.03	2.14	7.03	3.13	7.03	3.74	7.03	6.55	7.03	2.43
Reynolds Number	2.447	0.734	2.447	1.329	2.447	1.750	2.447	4.168	2.447	0.899
Correction Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Min. Fluidization Rate (gpm/sf)	7.03	2.14	7.03	3.13	7.03	3.74	7.03	6.55	7.03	2.43
Unhindered Settling Vel. (ft/sec)	20.68	6.20	20.68	11.23	20.68	14.79	20.68	35.22	20.68	7.59
Expansion Coefficient (n)	3.287	3.708	3.287	3.494	3.287	3.399	3.287	3.117	3.287	3.633
Bed Porosity Coefficient (k)	142.82	27.92	142.82	35.31	142.82	39.49	142.82	56.85	142.82	30.22
Porosity (expanded)	0.493	0.830	0.493	0.767	0.493	0.737	0.493	0.638	0.493	0.809
Bed Depth Expanded (in)	14.2	53.0	14.2	38.7	14.2	34.2	14.2	24.9	14.2	47.2
% Expanded Bed	18.4	194.4	18.4	115.0	18.4	90.1	18.4	38.1	18.4	162.0
d90gac/d10s Ratio	3.173		3.508		4.746		6.905		3.198	
Discussion/Notes										

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

CITY OF FLINT- DEPARTMENT OF PUBLIC UTILITIES

GAC Filter Evaluation
Filter Media Analysis 2015 1st Stage

Date: 05/20/15
By: JRH
Data Entry:

WATER INPUT DATA	
Backwash Rate (gpm/sf)	20.0
Water Temperature (F°)	80
Viscosity (centipoise)	0.86134
Dynamic Viscosity (# -sec/sf)	1.799E-05
Water Density (#/cf)	62.22
Mass Density (# -sec/ft^4)	1.927

COMMENTS

SITE LOCATION	10 States		10 States Interpreted		Filtrasorb 400		Filtrasorb 300		Alt	
Media Type	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC
Bed Depth (in)	12	18	12	18	12	18	12	18	12	18
Uniformity Coefficient	2.30	1.65	2.30	1.40	2.30	1.90	2.30	2.10	2.30	1.50
Effective Size (mm)	0.400	0.550	0.400	0.800	0.400	0.650	0.400	0.800	0.400	0.650
d60% Size (mm)	0.920	0.908	0.920	1.120	0.920	1.235	0.920	1.680	0.920	0.975
d90% Size (mm)	1.607	1.269	1.607	1.403	1.607	1.899	1.607	2.762	1.607	1.279
Porosity	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50
Specific Gravity	2.554	1.45	2.554	1.45	2.554	1.45	2.554	1.45	2.554	1.45
Media Density (#/cf)	159.4	90.5	159.4	90.5	159.4	90.5	159.4	90.5	159.4	90.5
Min. Fluidization Rate (gpm/sf)	13.38	4.09	13.38	6.00	13.38	7.16	13.38	12.54	13.38	4.66
Reynolds Number	9.640	2.905	9.640	5.259	9.640	6.928	9.640	16.499	9.640	3.557
Correction Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.828	1.000	1.000
Min. Fluidization Rate (gpm/sf)	13.38	4.09	13.38	6.00	13.38	7.16	13.38	10.39	13.38	4.66
Unhindered Settling Vel. (ft/sec)	81.46	24.55	81.46	44.44	81.46	58.54	81.46	139.42	81.46	30.06
Expansion Coefficient (n)	2.866	3.231	2.866	3.045	2.866	2.962	2.866	2.716	2.866	3.166
Bed Porosity Coefficient (k)	184.94	38.40	184.94	49.50	184.94	55.84	184.94	68.25	184.94	41.83
Porosity (expanded)	0.460	0.817	0.460	0.743	0.460	0.707	0.460	0.636	0.460	0.792
Bed Depth Expanded (in)	13.3	49.2	13.3	35.0	13.3	30.7	13.3	24.8	13.3	43.3
% Expanded Bed	11.2	173.5	11.2	94.3	11.2	70.7	11.2	37.5	11.2	140.5
d90gac/d10s Ratio	3.173		3.508		4.746		6.905		3.198	
Discussion/Notes										

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

CITY OF FLINT WTP

CT CALCS

TIME FROM FILTERS EFFLUENT TO 1ST TAP

Label	Location	Diameter m	Diameter ft	L ft	W ft	D ft	Bottom elev	Vol cft	Flow mgd	Flow cfs	Baffle Factor	Time hr	Velocity fps	Flow mgd	Flow cfs	Time hr	Flow Rate mgd	Flow Rate cft/s	Time min
A	Weir chamber, pre-baffle			26.75	13.08	15.5	709.00	5423	30.0	46.4	1.0	1.95	0.23	24.0	37.1	2.43	8.0	12.4	7.30
B	Weir chamber, post-baffle			26.75	8.5	10.0	709.00	2274	30.0	46.4	1.0	0.82	0.55	24.0	37.1	1.02	8.0	12.4	3.06
	Effluent pipe																		
C	wc - bldg face	48	4.00	16.00				201	30.0	46.4	1.0	0.07	3.69	24.0	37.1	0.09	8.0	12.4	0.27
D	bldg face - junct well	48	4.00	401.00				5039	30.0	46.4	1.0	1.81	3.69	24.0	37.1	2.26	8.0	12.4	6.79
	Res. 3																		
E	Junct well			12.00	18.00	15.0	704.00	3240	30.0	46.4	1.0	1.16	0.17	24.0	37.1	1.45	8.0	12.4	4.36
F	Clear well			140.00	177	10.0	709.00	247,800	30.0	46.4	0.5	44.49	0.05	24.0	37.1	55.61	8.0	12.4	166.83
G	Transfer chamber			7.00	55.25	15.0	704.00	5,801	30.0	46.4	1.0	2.08	0.06	24.0	37.1	2.60	8.0	12.4	7.81
H	Suction well			9.00	25.75	15.0	704.00	3,476	30.0	46.4	1.0	1.25	0.12	24.0	37.1	1.56	8.0	12.4	4.68
	Pump																		
I	Suction pipe	36	3.00	12.00				85	30.0	46.4	1.0	0.03	6.57	24.0	37.1	0.04	8.0	12.4	0.11
J	Discharge pipe	30	2.50	20.00				98	30.0	46.4	1.0	0.04	9.46	24.0	37.1	0.04	8.0	12.4	0.13
K	Dis. pipe (to bldg face)	42	3.50	34.00				327	30.0	46.4	1.0	0.12	4.82	24.0	37.1	0.15	8.0	12.4	0.44
	Finish main 1																		
L1	bldg face - 1st tee	42	3.50	208.00				2001	30.0	46.4	1.0	0.72	4.82	24.0	37.1	0.90	8.0	12.4	2.69
M1	tee - WTP tap	42	3.50	223.00				2146	30.0	46.4	1.0	0.77	4.82	24.0	37.1	0.96	8.0	12.4	2.89
N1	WTP tap - bldg face	12	1.00	19.00				15	30.0	46.4	1.0	0.005	59.10	24.0	37.1	0.01	8.0	12.4	0.02
	Subtotal											1.49				1.87			5.60
	Finish main 2																		
L2	bldg face - 1st tee	42	3.50	73.00				702	30.0	46.4	1.0	0.25	4.82	24.0	37.1	0.32	8.0	12.4	0.95
M2	tee - 1st split	42	3.50	277.00				2665	30.0	46.4	1.0	0.96	4.82	24.0	37.1	1.20	8.0	12.4	3.59
	Subtotal											1.21				1.51			4.53
							Total CT time		@ 36 mgd =			55.0		@ 24 mgd =		68.8	@ 12 mgd =		206.3

	2014								2015							
Month	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr		Min	Avg	Max
Cl2	5.0	4.7	3.9	3.3	3.1	2.5	2.0	1.8	1.8	2.1	2.4	2.0		1.8	2.9	5.0
pH	7.37	7.48	7.62	7.78	7.82	7.71	7.87	8.07	7.74	7.84	7.89	7.83		7.4	7.8	8.1
Flow (mgd)	30.0	24.0	24													
CT =	30.0	122.8	251.4													

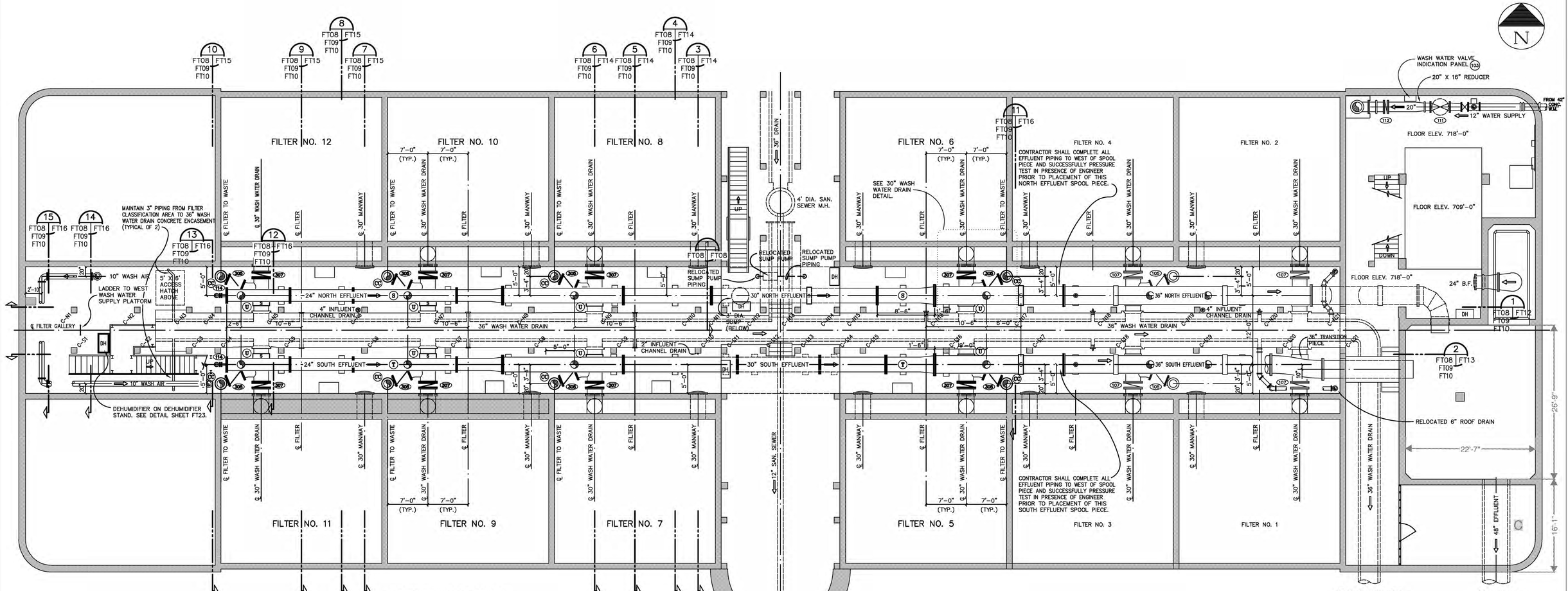
Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

Table C-1. CT Values for Inactivation of *Giardia* Cysts by Free Chlorine at 0.5°C or Lower

CHLORINE CONCENTRATION	pH<=6 Log Inactivation						pH=6.5 Log Inactivation						pH=7.0 Log Inactivation						pH=7.5 Log Inactivation					
(mg/L)	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0
<=0.4	23	46	69	91	114	137	27	54	82	109	136	163	33	65	98	130	163	195	40	79	119	158	198	237
0.6	24	47	71	94	118	141	28	56	84	112	140	169	33	67	100	133	167	200	40	80	120	159	199	239
0.8	24	48	73	97	121	145	29	57	86	115	143	172	34	68	103	137	171	205	41	82	123	164	205	246
1	25	49	74	99	123	148	29	59	88	117	147	176	35	70	105	140	175	210	42	84	127	169	211	253
1.2	25	51	76	101	127	152	30	60	90	120	150	180	36	72	108	143	179	215	43	86	130	173	216	259
1.4	26	52	78	103	129	155	31	61	92	123	153	184	37	74	111	147	184	221	44	89	133	177	222	266
1.6	26	52	79	105	131	157	32	63	95	126	155	189	38	75	113	151	188	226	46	91	137	182	228	273
1.8	27	54	81	108	135	162	32	64	97	129	161	193	39	77	116	154	193	231	47	93	140	186	233	279
2	28	55	83	110	138	165	33	66	99	131	164	197	39	79	118	157	197	236	48	95	143	191	238	286
2.2	28	56	85	113	141	169	34	67	101	134	169	201	40	81	121	161	202	242	50	99	149	198	248	297
2.4	29	57	86	115	143	172	34	68	103	137	171	205	41	82	124	165	206	247	50	99	149	199	248	298
2.6	29	58	88	117	146	175	35	70	105	139	174	209	42	84	126	168	210	252	51	101	152	203	253	304
2.8	30	59	89	119	148	178	36	71	107	142	178	213	43	86	129	171	214	257	52	103	155	207	258	310
3	30	60	91	121	151	181	36	72	109	145	181	217	44	87	131	174	218	261	53	105	158	211	263	316
CHLORINE CONCENTRATION	pH=8.0 Log Inactivation						pH=8.5 Log Inactivation						pH=9.0 Log Inactivation											
(mg/L)	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0						
<=0.4	46	92	139	185	231	277	55	110	165	219	274	329	65	130	195	260	325	390						
0.6	48	95	143	191	238	286	57	114	171	228	285	342	68	136	204	271	339	407						
0.8	49	98	148	197	246	295	59	113	177	236	295	354	70	141	211	281	352	422						
1	51	101	152	203	253	304	61	122	183	243	304	365	73	146	219	291	364	437						
1.2	52	104	157	209	261	313	63	125	188	251	313	376	75	150	226	301	376	451						
1.4	54	107	161	214	268	321	65	129	194	258	323	387	77	155	232	309	387	464						
1.6	55	110	165	219	274	329	66	132	199	265	331	397	80	159	239	318	398	477						
1.8	56	113	169	225	282	338	68	136	204	271	339	407	82	163	245	326	408	489						
2	55	115	173	231	288	346	70	139	209	278	348	417	83	167	250	333	417	500						
2.2	59	118	177	235	294	353	71	142	213	284	355	426	85	170	256	341	426	511						
2.4	60	120	181	241	301	361	73	145	218	290	363	435	87	174	261	348	435	522						
2.6	61	123	184	245	307	368	74	148	222	296	370	444	89	178	267	355	444	533						
2.8	63	125	188	250	313	375	75	151	226	301	377	452	91	181	272	362	453	543						
3	64	127	191	255	318	382	77	153	230	307	383	460	92	184	276	369	460	552						

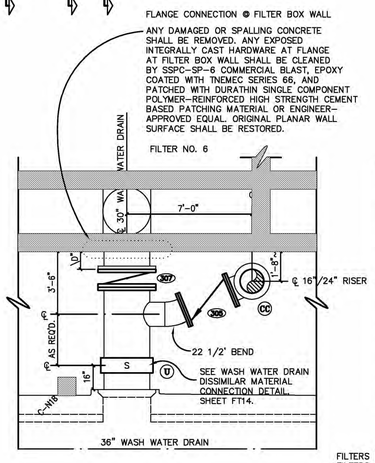
Source: AWWA, 1991.

001851



FILTER GALLERY PIPING LEGEND

ID	DESCRIPTION	EXISTING	NEW
P	WASH WATER SUPPLY – GALLERY SERVING FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
Q	REWASH FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	NO
R	EFFLUENT FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
S	NORTH EFFLUENT	YES	YES
T	SOUTH EFFLUENT	YES	YES
U	WASH WATER DRAIN FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
V	INFLUENT FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
W	SURFACE WASH FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	NO
X	PLANT WATER AND SURFACE WASH	YES	NO
AA	WASH AIR SUPPLY – GALLERY	YES	NO
BB	WASH AIR SUPPLY FILTERS NO. 5 – NO. 12, INCLUSIVE	NO	YES
CC	FILTER TO WASTE SERVING FILTERS NO. 5 – NO. 12, INCLUSIVE	NO	YES
DD	PROCESS WATER	NO	YES
EE	WASH WATER SUPPLY – WEST	NO	YES



30" WASH WATER DRAIN DETAIL

SCALE : 1/4" = 1'-0"

EXISTING CAST IRON WASH WATER DRAIN DISTANCE FROM FILTER BOX WALL TO FLANGE/ FLANGE FACE	
FILTER NO.	DISTANCE "D"
5	8.5"~
6	10"~
7	8.5"~
8	8.5"~
9	9.5"~
10	8"~
11	9.75"~
12	9.5"~

FILTERS NO. 7, 9, & 11 SIMILAR.
FILTERS NO. 5, 8, 10, & 12 OPPOSITE HAND.

FILTER PLAN – EL. 720'-0"

SCALE : 1/8" = 1'-0"

GENERAL NOTE

ALL DRAWINGS ARE A REPRESENTATION OF ACTUAL CONDITIONS BASED ON 1952 CONSTRUCTION PLAN DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, SIZES, AND LOCATIONS OF ALL RELEVANT ITEMS.

GENERAL NOTE NO. 1

THIS NOTE APPLIES TO DRAWINGS FT01 THROUGH FT28

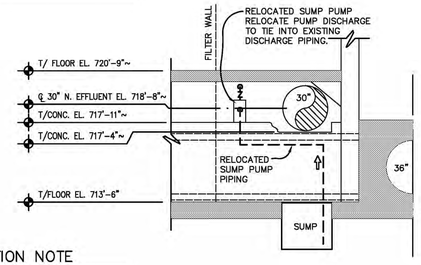
THE WORK ARE FOR ALL CONCRETE SURFACES THAT ARE REPAIRED, INFILLED OR PATCHED SHALL BE SMOOTH AND FLUSH WITH SURROUNDING CONCRETE SURFACES. IF NECESSARY THE CONTRACTOR SHALL GRIND THE NEW SURFACES TO BE FLUSH WITH THE ADJOINING SURFACES.

GENERAL CONSTRUCTION NOTE

NO MOUNTING OR FASTENING OF ANY TEMPORARY OR PERMANENT EQUIPMENT, SUPPORTS, OR DEVICES TO THE CONCRETE OF THE FILTER BOXES OR INFLUENT CHANNEL IS PERMITTED.

PIPE END CONFIGURATION LEGEND

FLANGE
GROOVED END COUPLING
SLEEVE TYPE COUPLING

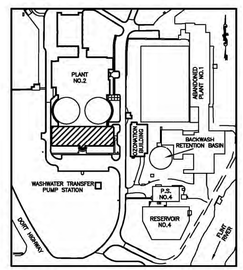


SECTION 1

SCALE : 1/4" = 1'-0" FT08 | FT08

NOTES :

1. FILTER INTERNALS NOT SHOWN FOR CLARITY.
2. SUPPORT MECHANISMS FOR VALVES, ACTUATORS, & PIPING NOT SHOWN FOR CLARITY. REFER TO 1/4 SCALE SECTIONS FOR SUPPORT LOCATIONS.
3. HANDRAIL NOT SHOWN FOR CLARITY. SEE NEW FILTER GALLERY SECTION FOR NEW HANDRAIL AT FLOOR ELEV. 718'~ AT TOP OF 36" WASH WATER DRAIN CONCRETE ENCASEMENT.



KEY PLAN

NTS

THE DLZ TEAM
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
1425 KEYSTONE AVE., LANSING, MI 48911
TELE. (517) 393-4080 • FAX (517) 272-7390

FLINT MICHIGAN

CITY OF FLINT
DEPARTMENT OF PUBLIC WORKS & UTILITIES

WATER TREATMENT PLANT REHABILITATION
PHASE I, SEGMENT 4

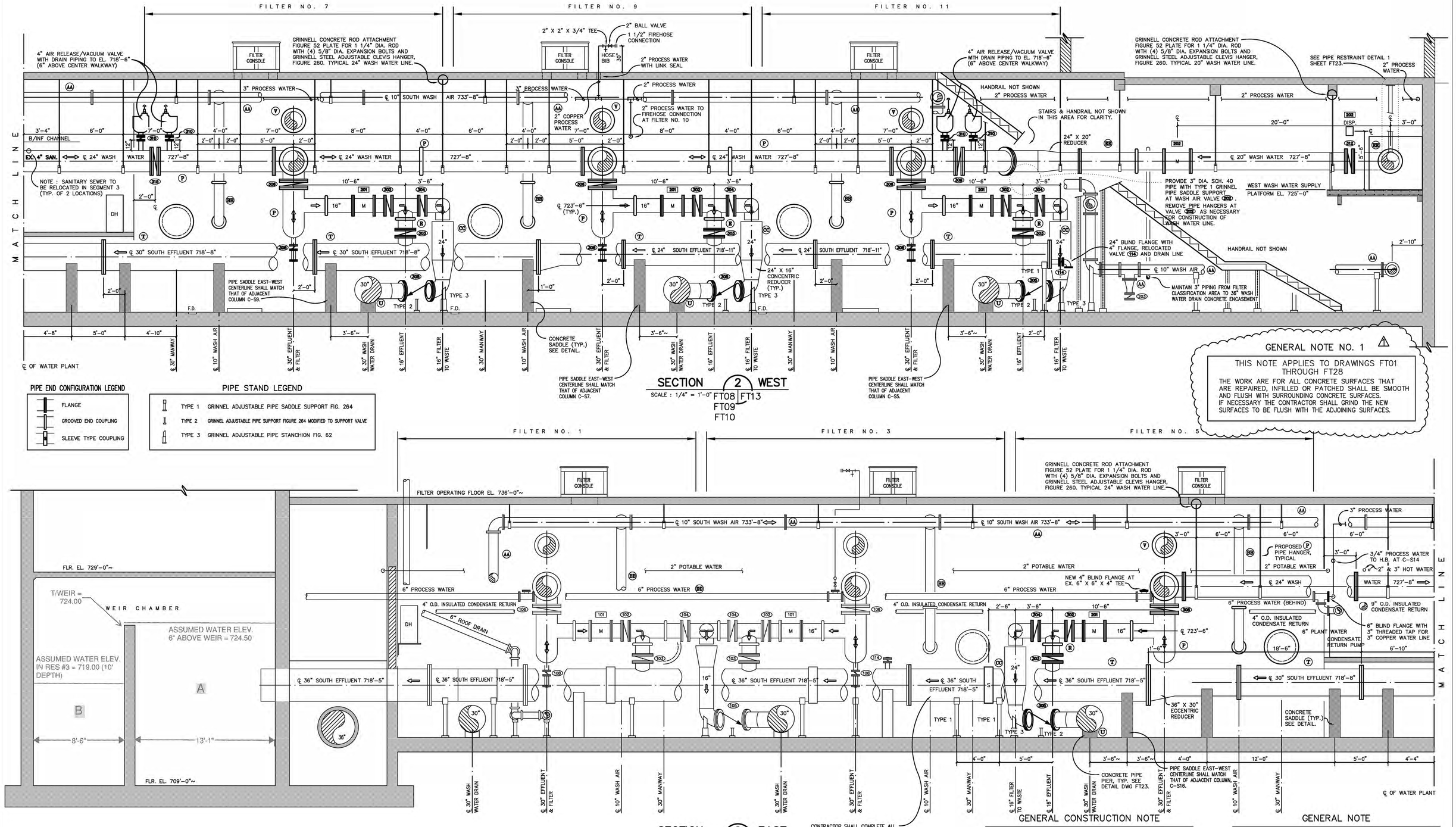
FILTER REHABILITATION
NEW FILTER PLAN – EL. 720'-0"

DRAWN	J.B.P.
CHK'D.	C.A.P.
APPRV'D	C.A.P.
DATE	JUNE 2002
PROJECT NUMBER	7019-04

NO.	REVISION	BY	DATE
1	ADDENDUM NO. 1 REVISION	JO	10/03
	AS-BUILT	DJV	8/05

SHEET
OF
DRAWING NUMBER
FT08

001852



SECTION 2 WEST
SCALE : 1/4" = 1'-0"
FT08 | FT13
FT09
FT10

GENERAL NOTE NO. 1

THIS NOTE APPLIES TO DRAWINGS FT01 THROUGH FT28

THE WORK ARE FOR ALL CONCRETE SURFACES THAT ARE REPAIRED, INFILLED OR PATCHED SHALL BE SMOOTH AND FLUSH WITH SURROUNDING CONCRETE SURFACES. IF NECESSARY THE CONTRACTOR SHALL GRIND THE NEW SURFACES TO BE FLUSH WITH THE ADJOINING SURFACES.

PIPE END CONFIGURATION LEGEND

- FLANGE
- GROOVED END COUPLING
- SLEEVE TYPE COUPLING

PIPE STAND LEGEND

- TYPE 1 GRINNEL ADJUSTABLE PIPE SADDLE SUPPORT FIG. 264
- TYPE 2 GRINNEL ADJUSTABLE PIPE SUPPORT FIGURE 264 MODIFIED TO SUPPORT VALVE
- TYPE 3 GRINNEL ADJUSTABLE PIPE STANCHION FIG. 62

SECTION 2 EAST
SCALE : 1/4" = 1'-0"
FT08 | FT13
FT09
FT10

CONTRACTOR SHALL COMPLETE ALL EFFLUENT PIPING TO WEST OF SPOOL PIECE AND SUCCESSFULLY PRESSURE TEST IN PRESENCE OF ENGINEER PRIOR TO PLACEMENT OF THIS SOUTH EFFLUENT SPOOL PIECE.

GENERAL CONSTRUCTION NOTE

NO MOUNTING OR FASTENING OF ANY TEMPORARY OR PERMANENT EQUIPMENT, SUPPORTS, OR DEVICES TO THE CONCRETE OF THE FILTER BOXES OR INFLUENT CHANNEL IS PERMITTED.

GENERAL NOTE

ALL DRAWINGS ARE A REPRESENTATION OF ACTUAL CONDITIONS BASED ON 1952 CONSTRUCTION PLAN DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, SIZES, AND LOCATIONS OF ALL RELEVANT ITEMS.

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FLINT MICHIGAN

CITY OF FLINT
DEPARTMENT OF PUBLIC WORKS & UTILITIES

WATER TREATMENT PLANT REHABILITATION PHASE I, SEGMENT 4

FILTER REHABILITATION NEW FILTER GALLERY SECTIONS

DRAWN	J.B.P.
CHK'D.	C.A.P.
APPRV'D	C.A.P.
DATE	JUNE 2002
PROJECT NUMBER	7019-04

NO.	REVISION	BY	DATE
1	ADDENDUM NO. 1 REVISION	JO	10/03
2	AS-BUILT	DJV	8/05

SHEET
OF
DRAWING NUMBER
FT13

001853

OZONE BLDG

PLANT NO. 1
(ABANDONED)

CHLORINE
CONTACT

LOADING RAMP

GATE

GATE

N1

M1

M2

D

L1

L2

E

F

MH #50
RIM = 727.21

MH #51
RIM = 726.18

MH #88
RIM = 725.08

WVMH #04
RIM = 726.35

HV7
720.31

42" WATER

48" WATER

54" RAW WATER

48" WATER

6" SS

36" STORM

8" DECANT

14" F.M.

42" RAW WATER

42" H.S. DISCHARGE HEADER

6"-50

8"-50

72" INTAKE CONDUIT

6" SLUDGE FORCE MAIN

SS-4

36" WATER

6"WATER

48" WATER

48" RAW WATER LOW SERVICE

48" RAW WATER LOW SERVICE

36" OVERFLOW DRAIN

6" SLUDGE FORCE MAIN

36" WATER

24" WATER

36" SEWER

6"SS

24" TO PARK

36" WATER

36" SEWER

6" SLUDGE FORCE MAIN

6" SLUDGE FORCE MAIN

6" WATER (ABD.)

(6" DEEP)

24" OD CI WATER

24" OD CI WATER

24" W

24" W

24" W

24" DISTRIBUTION LINE

21"

24" SD

24" SD

24" SAN SEWER

GROUND OBSCURED

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

GENERAL PLAN

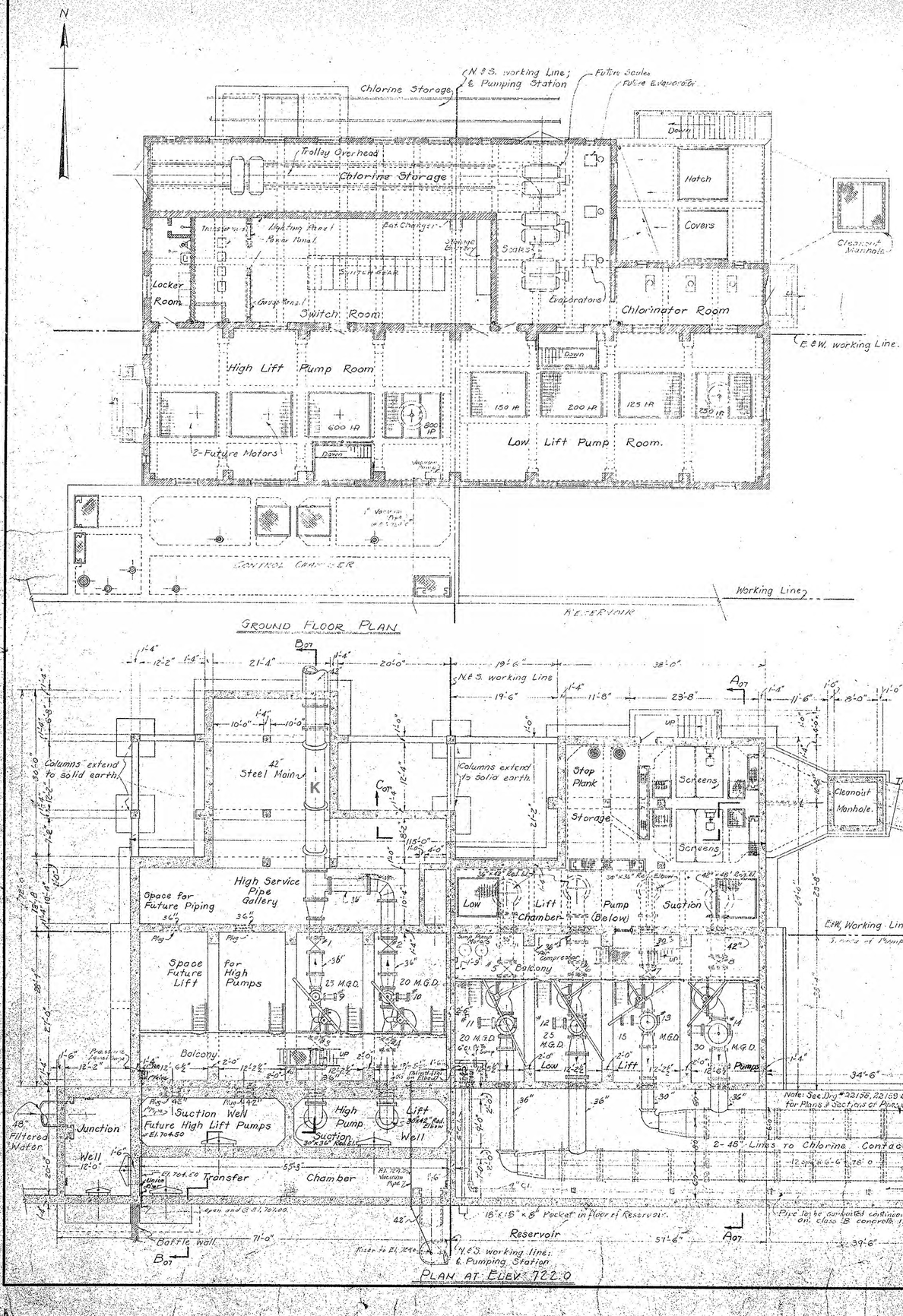
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

SCALE: 1"=20'-0"

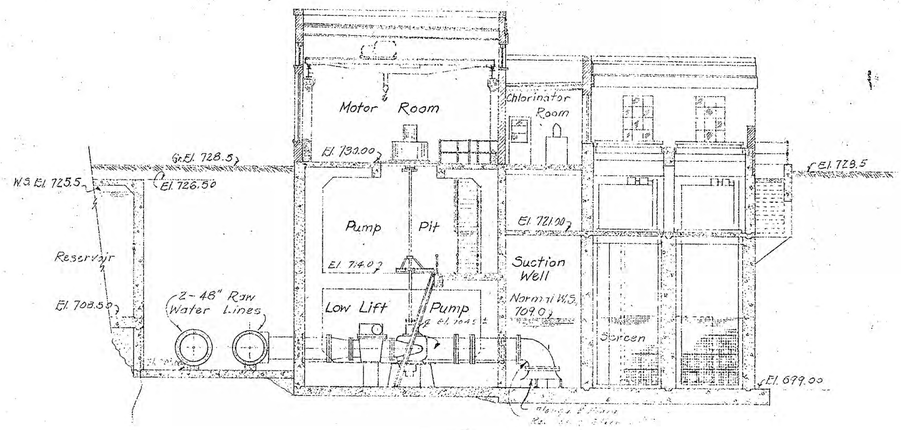
JUNE 1948

22101-2

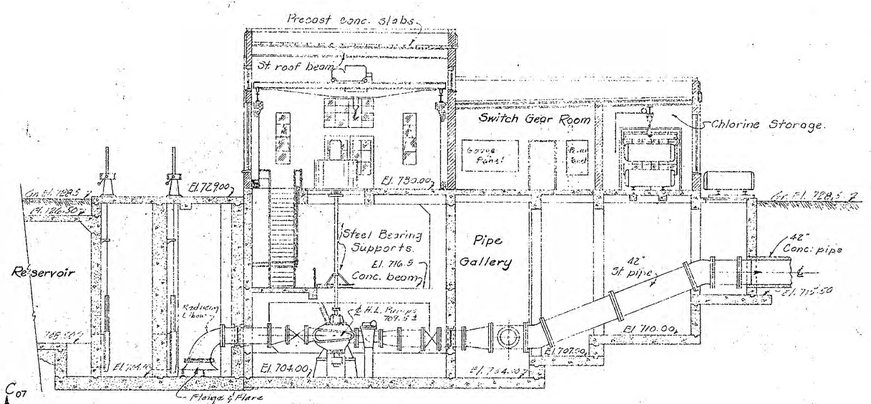
001855



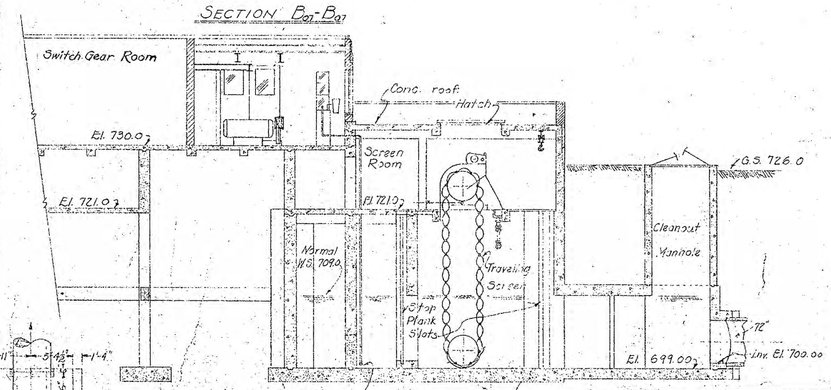
GROUND FLOOR PLAN



SECTION A_{07}-A_{07}



SECTION B_{07}-B_{07}



SECTION C_{07}-C_{07}

PLAN AT ELEV. 722.0

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

PUMPING STATION NO. 3
GENERAL PLAN

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

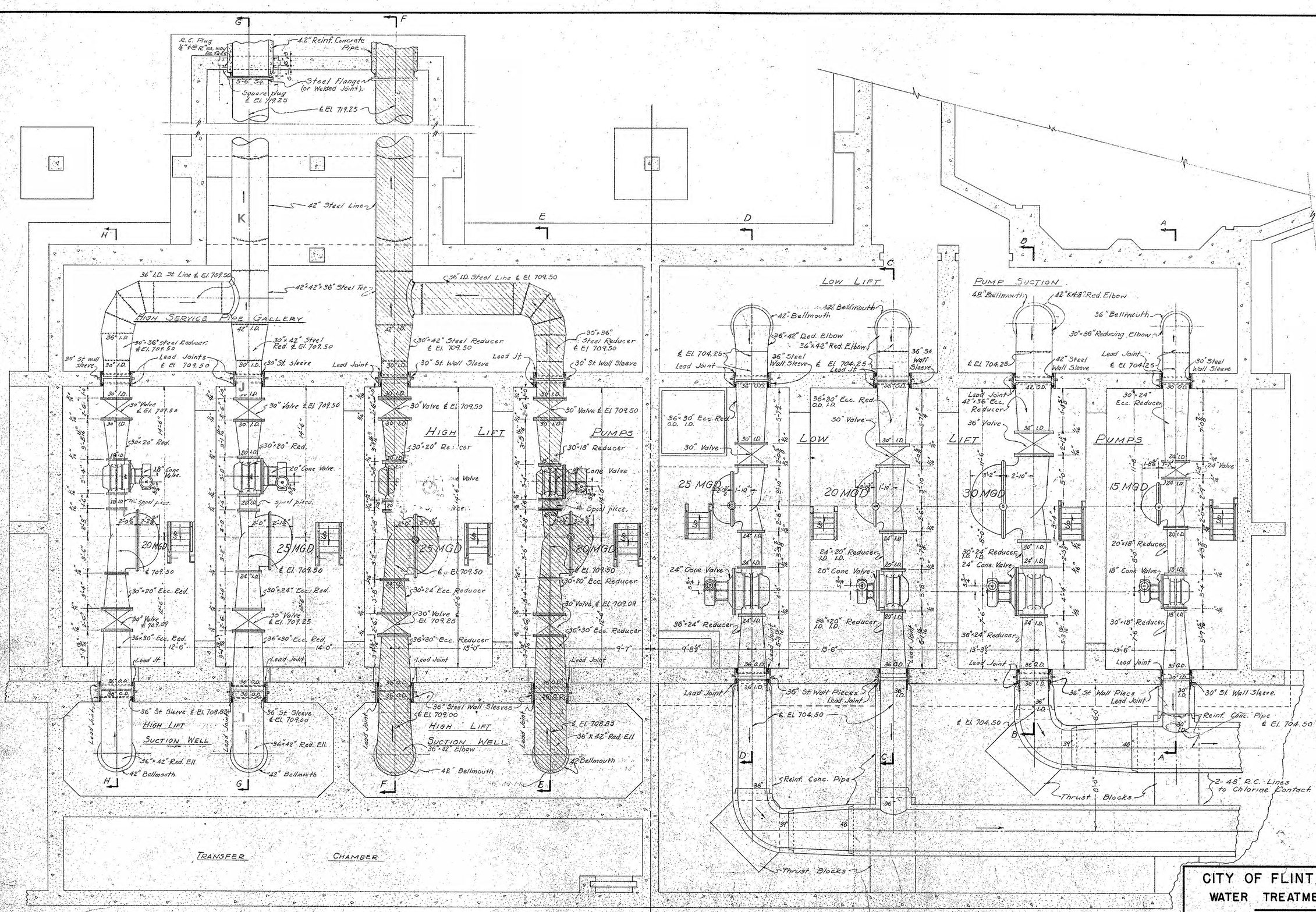
REV. 2	8-12-48	REVISED TO CONFORM ADDENDUM #2 AS ISSUED
REV. 1	6-8-48	ORIGINAL ISSUE

DRAWN BY: M.R.D. CHECKED BY:

SCALE: 1"= 10'-0" JUNE 1948

22107-2

001856



℄ Pumping Station
(North-South working line)

PARTIAL SECTIONAL PLAN @ El. 711 ℄
(SHOWING HIGH & LOW LIFT PIPING)
Scale: ¼"=1'-0"

NOTE:
Layout of pipe in Pump Station is for Steel pipe.
▨ Denotes Future High Lift Pumps & Pipes

REV.	5	MAR'49	Dimension Changes	S.E.M.
REV.	4	FEB'49	Relocate High Lift Pumps	M.A.D.
REV.	3	JAN'49	Relocate LLift Valves	M.A.D.
REV.	2	DEC'48	Complete Details	M.A.D.
REV.	1	Oct '48	Original Issue	
DRAWN BY:		M.A.D.	CHECKED BY:	

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

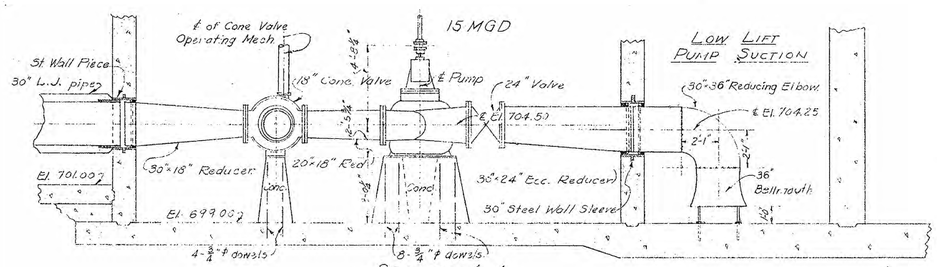
PUMPING STATION NO. 3
PLAN OF PUMP PIPING

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

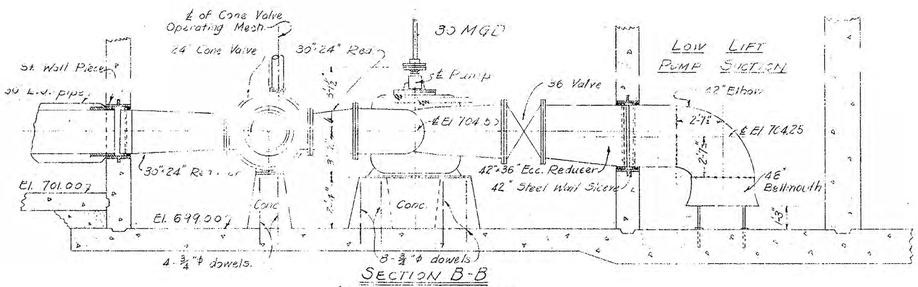
SCALE: AS SHOWN — NOV. 1948

S 22107-A4

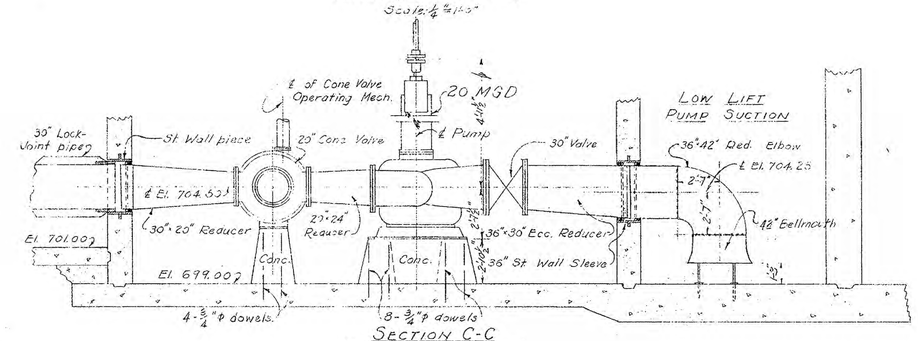
001857



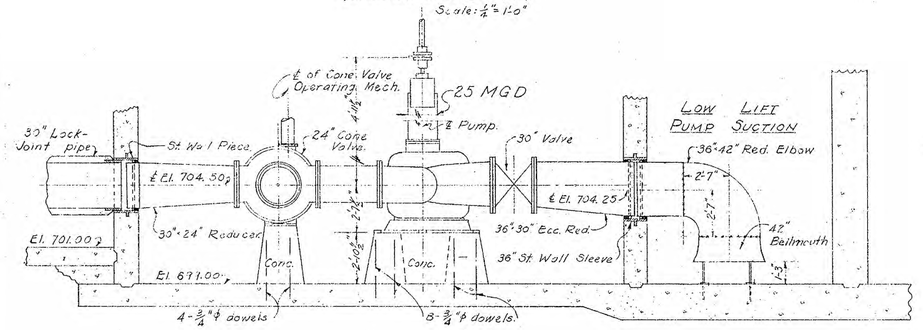
SECTION A-A
(SHOWING 15 MGD PUMP)
Scale: ¼"=1'-0"



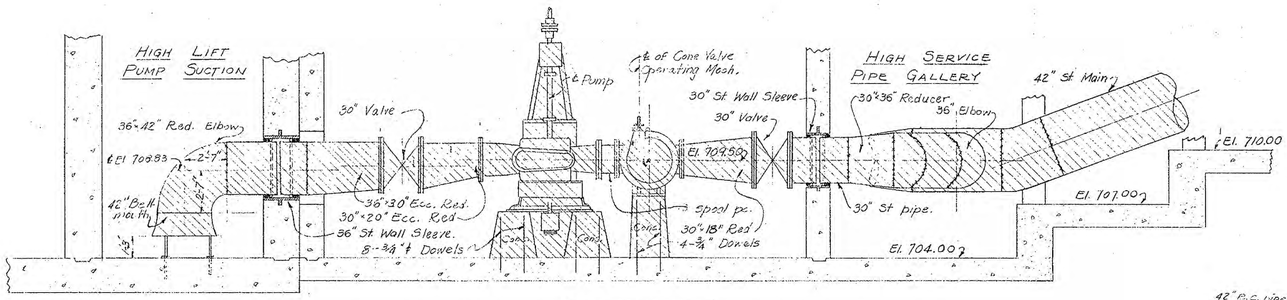
SECTION B-B
(SHOWING 30 MGD PUMP)
Scale: ¼"=1'-0"



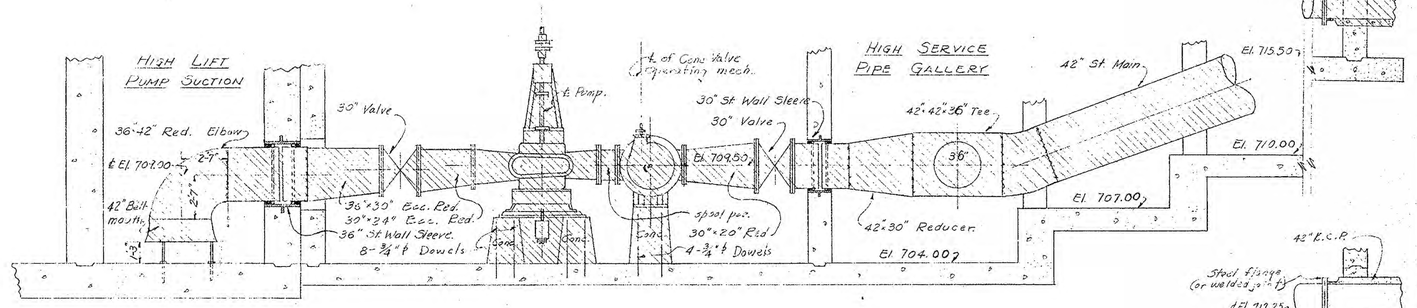
SECTION C-C
(SHOWING 20 MGD PUMP)
Scale: ¼"=1'-0"



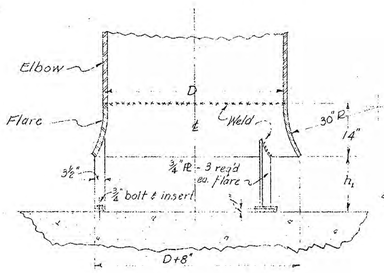
SECTION D-D
(SHOWING 25 MGD PUMP)
Scale: ¼"=1'-0"



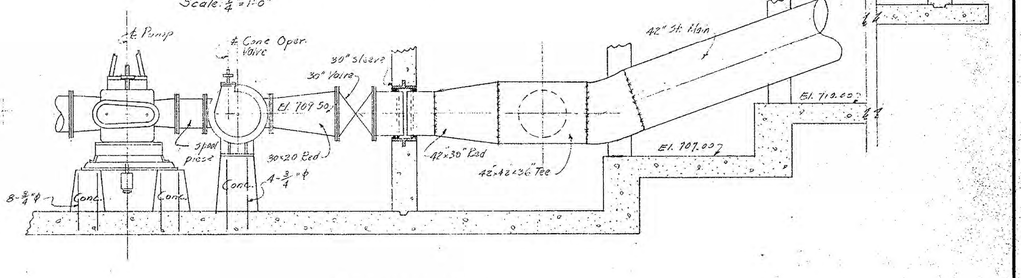
SECTION E-E
(SHOWING 20 MGD PUMP)
Scale: ¼"=1'-0"



SECTION F-F
(SHOWING 25 MGD PUMP)
Scale: ¼"=1'-0"

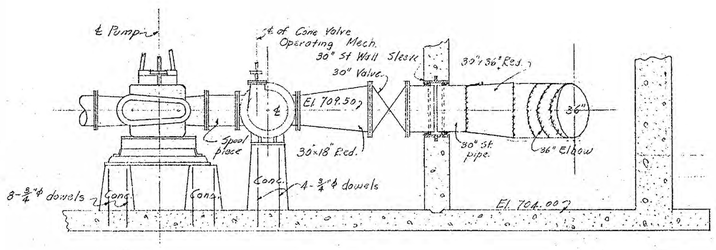


BELLMOUTH & SUPPORT DETAILS
No Scale



SECTION G-G
(SHOWING 25 MGD PUMP DISCHARGE)
Scale: ¼"=1'-0"

HIGH SERVICE	D	D+8"	h_1
25 M.G.D. Pump	42"	50"	1'-3"
20 M.G.D. Pump	42"	50"	1'-3"
LOW SERVICE	D	D+8"	h_1
15 M.G.D. Pump	36"	44"	1'-0"
20 M.G.D. Pump	42"	50"	1'-3"
25 M.G.D. Pump	42"	50"	1'-3"
30 M.G.D. Pump	48"	56"	1'-3"



SECTION H-H
(SHOWING 20 MGD Pump DISCHARGE)
Scale: ¼"=1'-0"

NOTE:
1. ▨ Denotes Future HIGH LIFT Pumps & PIPES.
2. Suction piping for HIGH LIFT Pumps is as shown in SECTS E-E & F-F.

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

PUMPING STATION NO. 3
SECTIONS OF PUMP PIPING

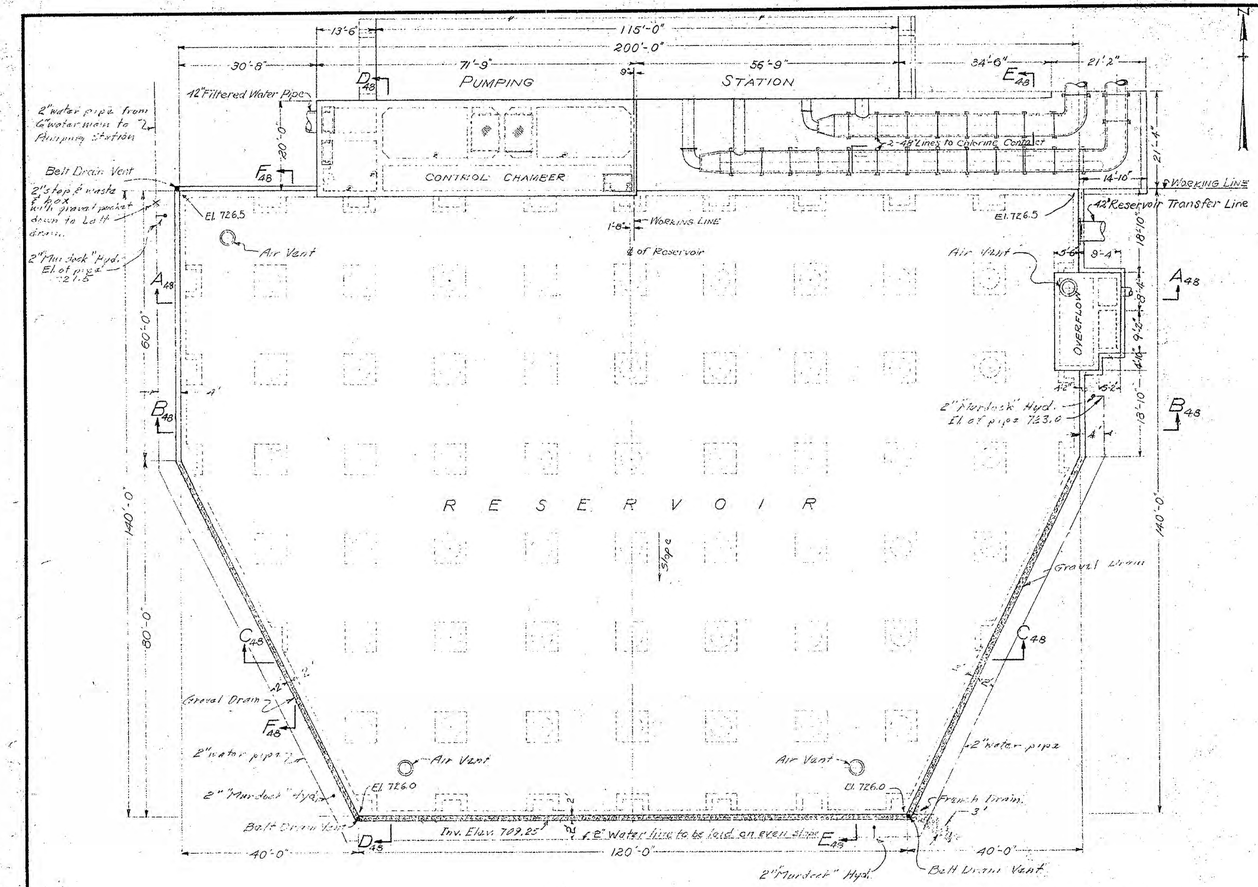
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

SCALE: AS SHOWN NOV. 1948

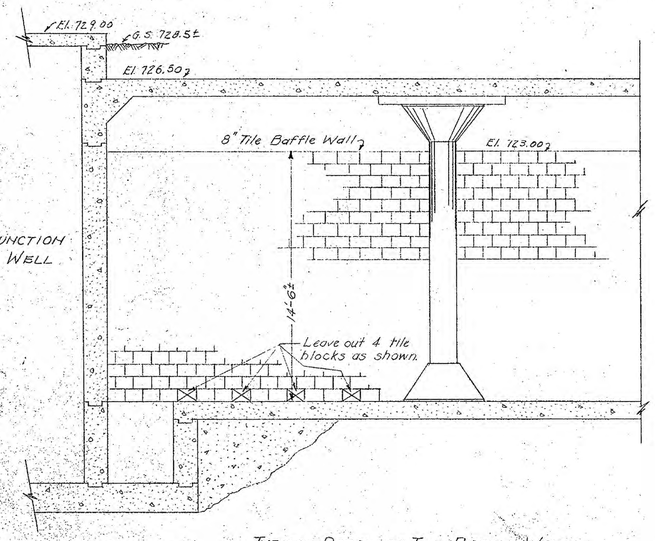
REV.	5	MAR. '49	Spool Piece Notations S.B.M.
REV.	4	FEB. '49	Relocate H Lift Pumps M.A.M.
REV.	3	JAN. '49	Relocate L Lift Valves M.A.M.
REV	2	DEC. '48	Complete Details M.A.M.
REV	1	Oct '48	Original Issue
DRAWN BY:		M.A.M.	CHECKED BY:

S 22107-B4

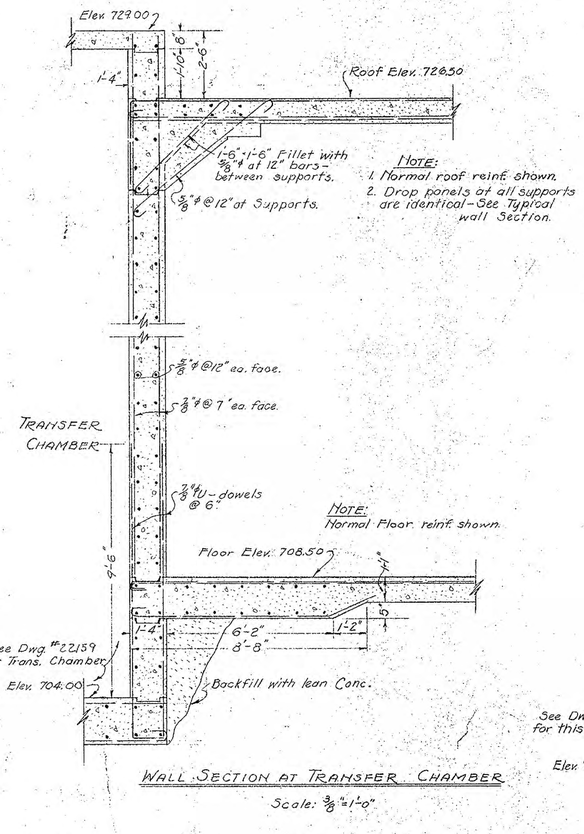
001858


PUMPING STATION
CONTROL CHAMBER
RESERVOIR
12" Filtered Water Pipe
2" water pipe from Chattermain to Pumping Station
Bell Drain Vent
2" stop & waste valve with gravel pocket down to bell drain
2" "Flurdeck" Hyd. El. of pipe 721.8
El. 726.5
Air Vent
Working Line
℄ of Reservoir
42" Reservoir Transfer Line
El. 726.5
Air Vent
OVERFLOW
2" "Flurdeck" Hyd. El. of pipe 723.0
Gravel Drain
2" water pipe
Air Vent
Air Vent
El. 726.0
El. 726.0
2" "Flurdeck" Hyd.
French Drain
Bell Drain Vent
Inv. Elev. 709.25
℄ 8" Water line to be laid on even slope
2" "Flurdeck" Hyd.
Bell Drain Vent
115'-0"
200'-0"
30'-8"
71'-9"
55'-9"
34'-6"
21'2"
13'-6"
140'-0"
60'-0"
40'-0"
120'-0"
40'-0"
14'-10"
19'-10"
18'-0"
8'-4"
9'-4"
5'-2"
4'
5'-0"
5'-0"
5'-0"

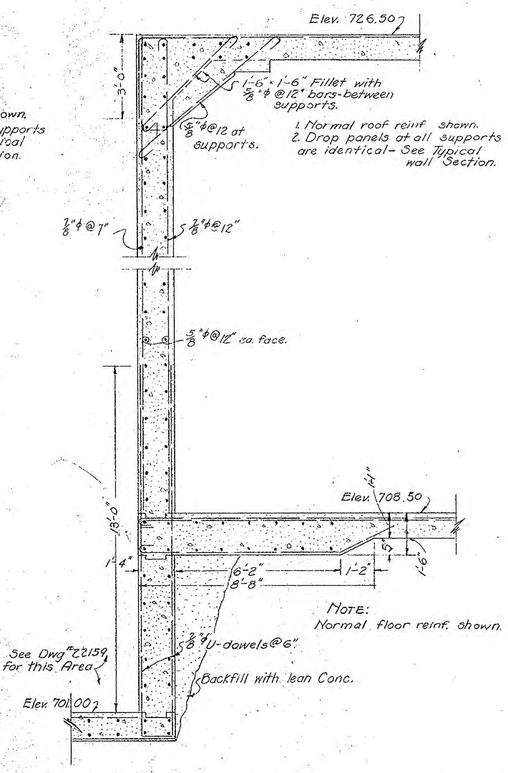
001859



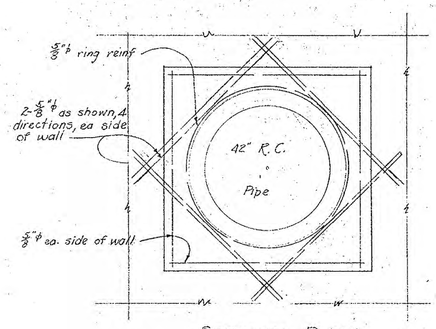
TYPICAL DETAIL OF TILE BAFFLE WALL
Scale: ½"=1'-0"



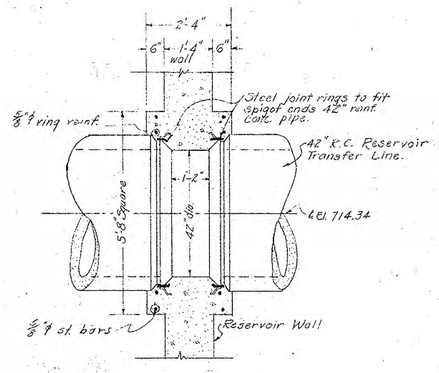
WALL SECTION AT TRANSFER CHAMBER
Scale: ⅜"=1'-0"



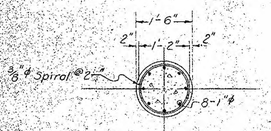
WALL SECTION EAST OF TRANSFER CHAMBER
Scale: ⅜"=1'-0"



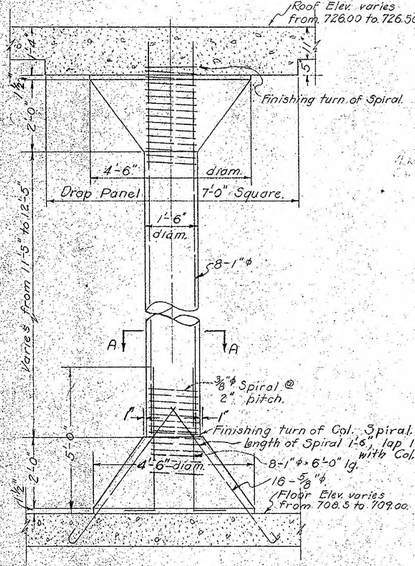
SECTIONAL PLAN
42" TRANSFER LINE AT RESERVOIR WALL
Scale: ½"=1'-0"



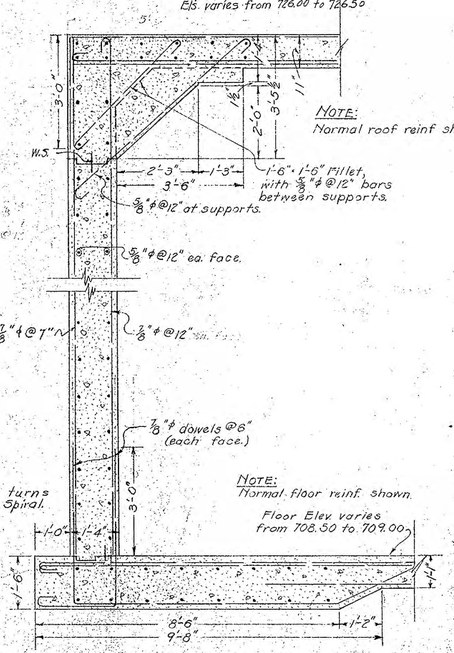
SECTIONAL ELEVATION
DETAIL 42" R.C. TRANSFER LINE AT RESERVOIR WALL
Scale: ½"=1'-0"



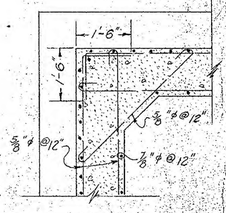
SECTIONAL PLAN A-A



ELEVATION OF TYPICAL COLUMN
Scale: ½"=1'-0"

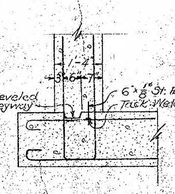


TYPICAL WALL SECTION
(Where wall varies, See other Sections)
Scale: ½"=1'-0"



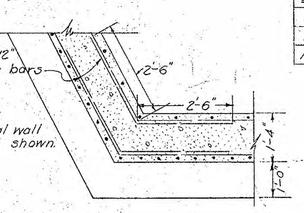
TYPICAL NORTH CORNER DETAILS
Scale: ½"=1'-0"

TYPICAL VERTICAL JOINT
Scale: ½"=1'-0"

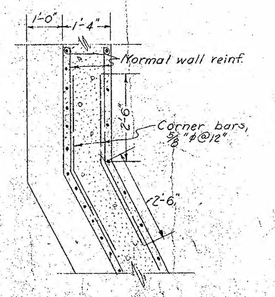


HORIZONTAL WATER STOP
Scale: ½"=1'-0"

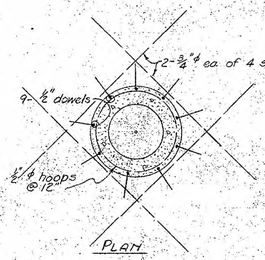
CONCRETE COVER FOR REINFORCING STEEL	
3"	For bottom face of all footings & base slabs
2"	For all slabs and vertical walls.
1½"	For all faces of exposed dry slabs & beams



TYPICAL FOR CORNERS 1 & 6
Scale: ½"=1'-0"

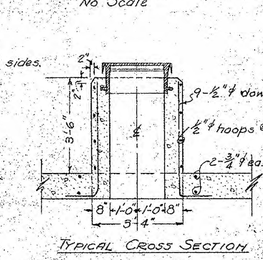


TYPICAL FOR CORNERS 2 & 5
Scale: ½"=1'-0"



ROOF FILL DETAIL
No Scale

PLAN



TYPICAL CROSS SECTION

NOTE:
For location of Air Vents see Dwg #22148

AIR VENT DETAIL
Scale: ¾"=1'-0"

Note: See concrete cover for reinforcing steel this sheet.

REV.		ORIGINAL ISSUE
DRAWN BY: M.A.D.		CHECKED BY:

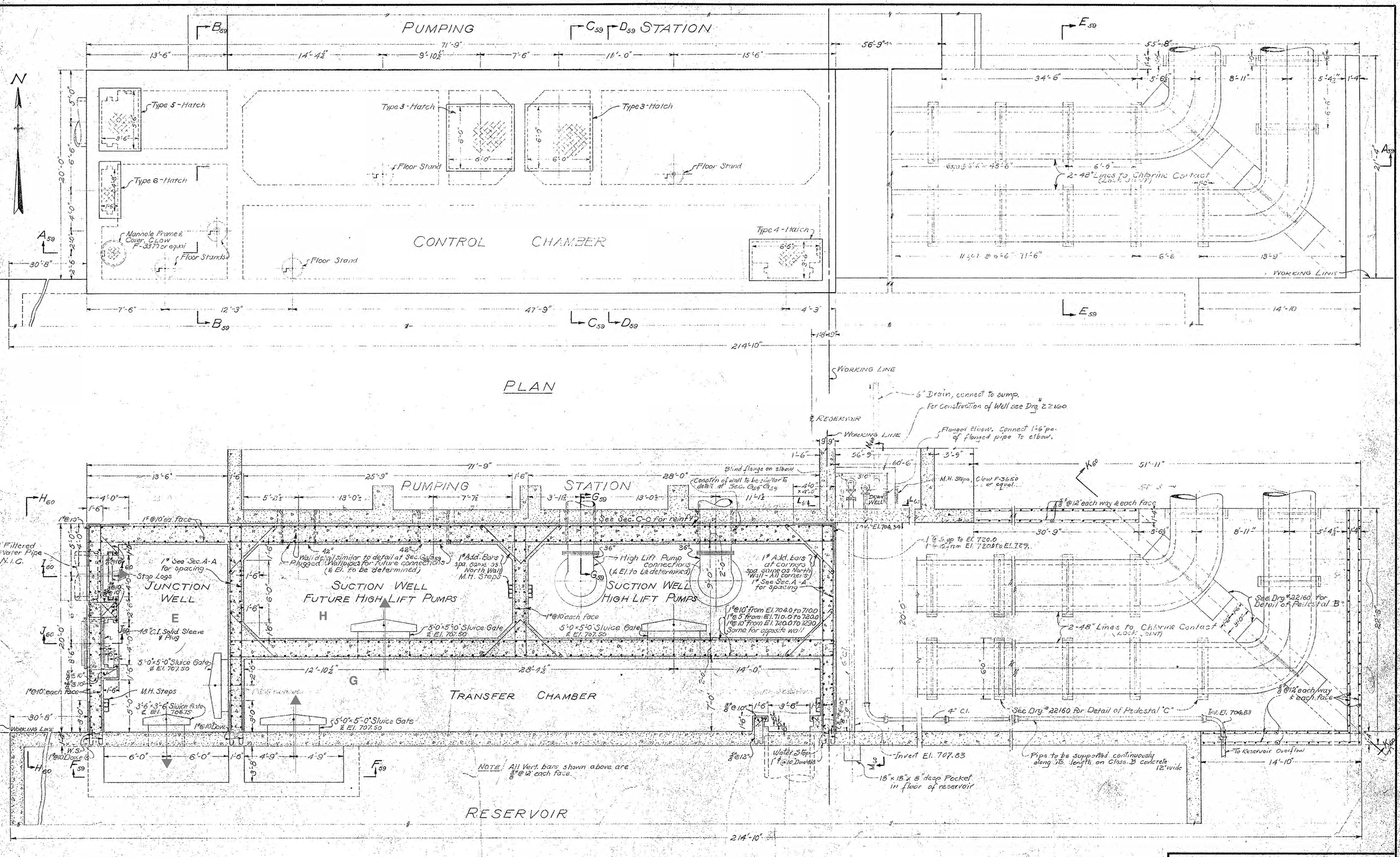
CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT
RESERVOIR NO.3
DETAILS
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN
SCALE: AS NOTED JULY 1948

22157 - 1

001860

PUMPING STATION

PLAN



SECTIONAL PLAN AT EL. 718.00

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

RESERVOIR NO. 3
CONTROL CHAMBER PLANS

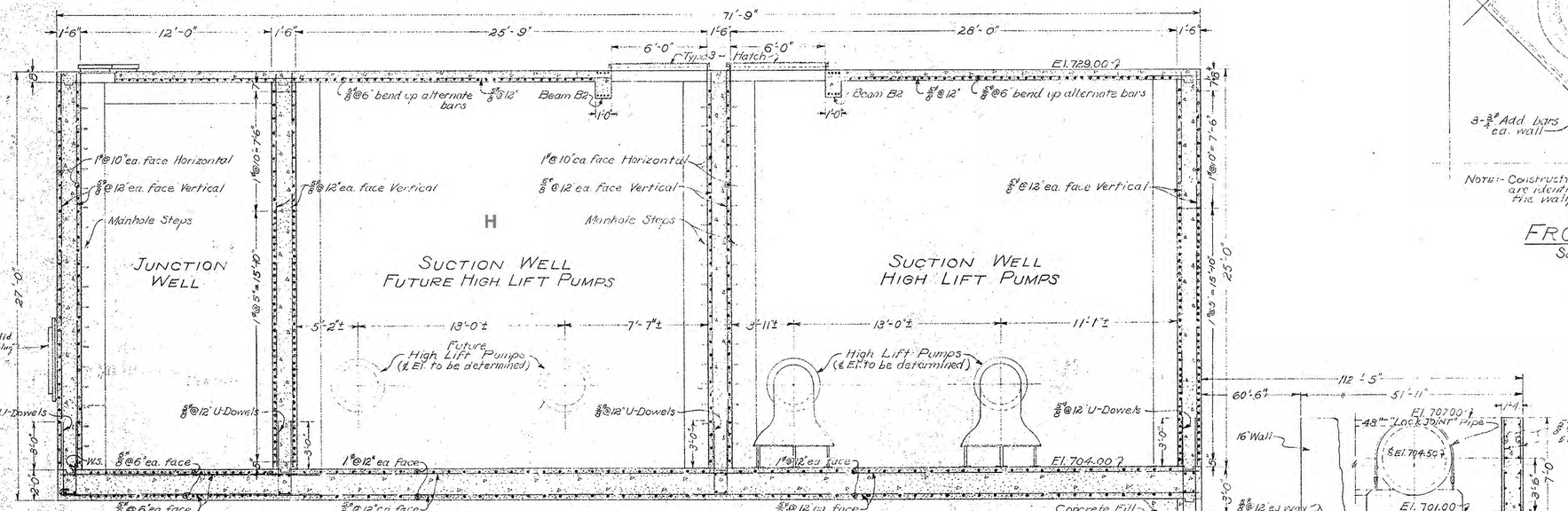
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

REV. 2	8-16-48	Drain Well & Pipe Added	
REV. 1		ORIGINAL ISSUE	
DRAWN BY: K.T.		CHECKED BY:	

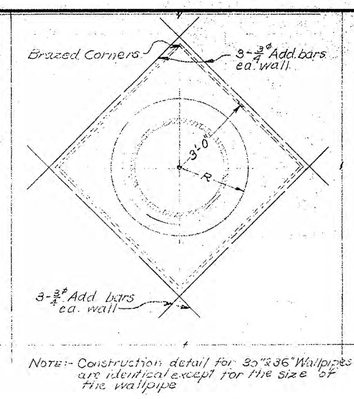
SCALE: ¼"=1'-0" JULY 1948

22158-2

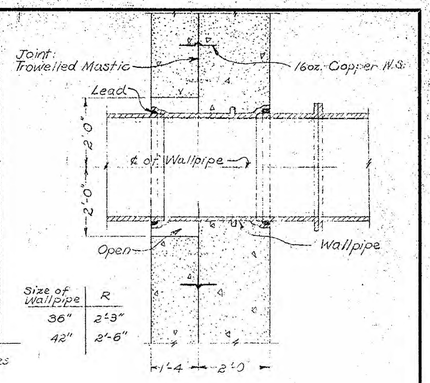
001861



SECTION A_{59}-A_{59}

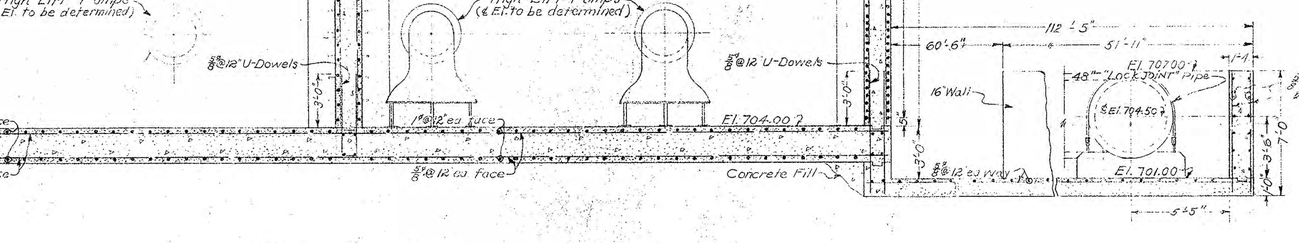


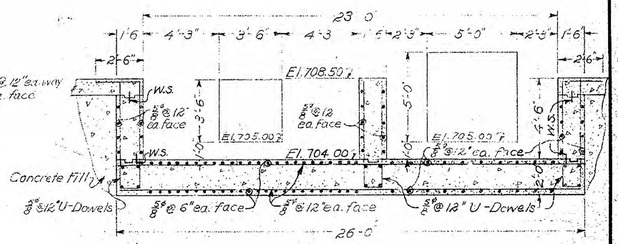
FRONT VIEW
Scale: 1/2"=1'-0"



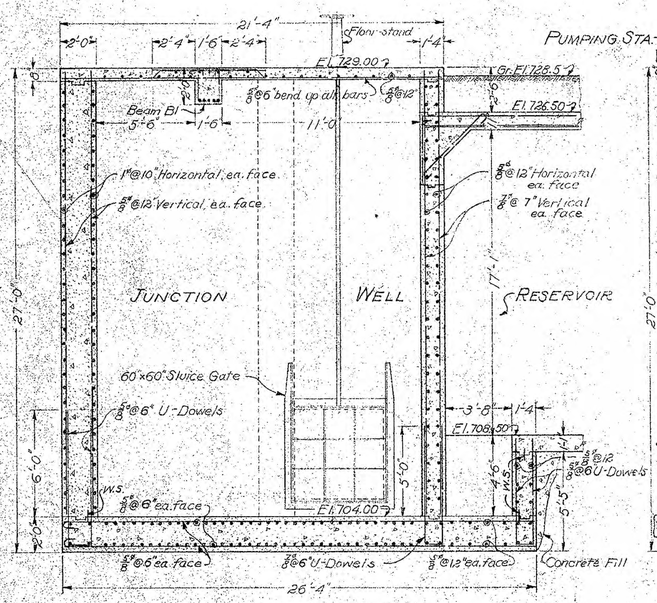
Size of Wallpipe	R
36"	2'-3"
42"	2'-6"

SECTION G_{59}-G_{59}
Scale: 1/2"=1'-0"

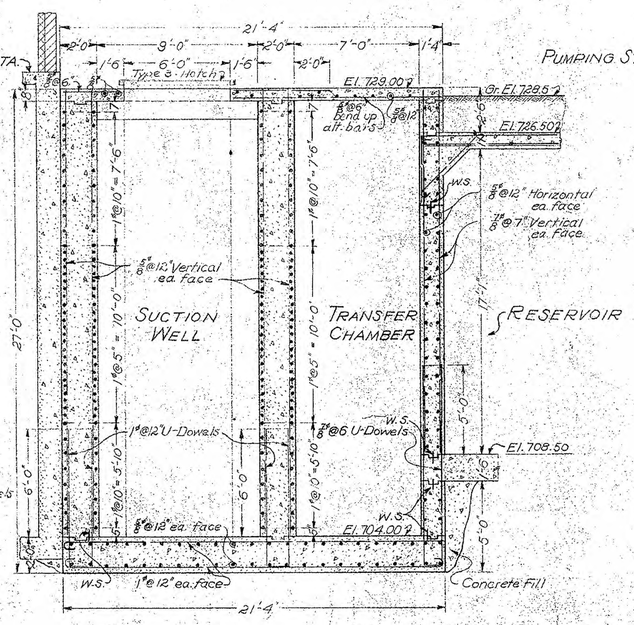




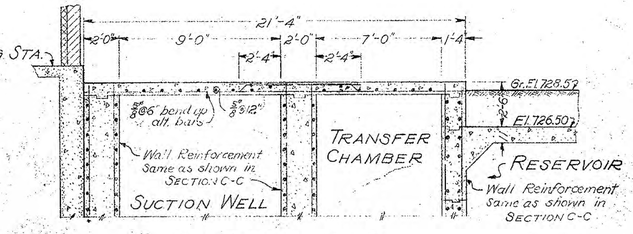
SECTION F_{59}-F_{59}



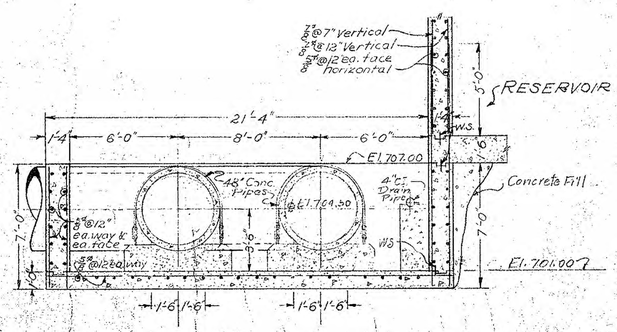
SECTION B_{59}-B_{59}



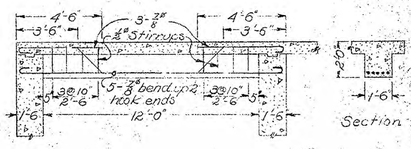
SECTION C_{59}-C_{59}



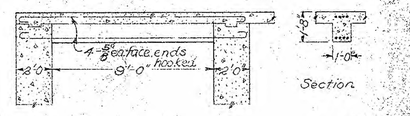
SECTION D_{59}-D_{59}



SECTION E_{59}-E_{59}



DETAIL OF BEAM B1



DETAIL OF BEAM B2

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT
RESERVOIR NO.3
CONTROL CHAMBER SECTIONS

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

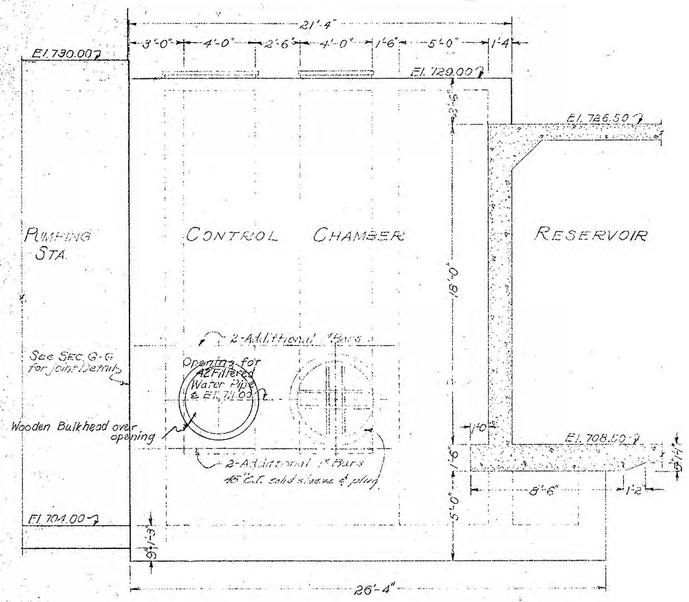
REV. 2	6-6-49	4" Drain Pipe in Sec. E-E added
REV. 1		ORIGINAL ISSUE
DRAWN BY: K.T.		CHECKED BY:

SCALE: 1/4"=1'-0" UNLESS NOTED — JULY, 1948

22159 -2

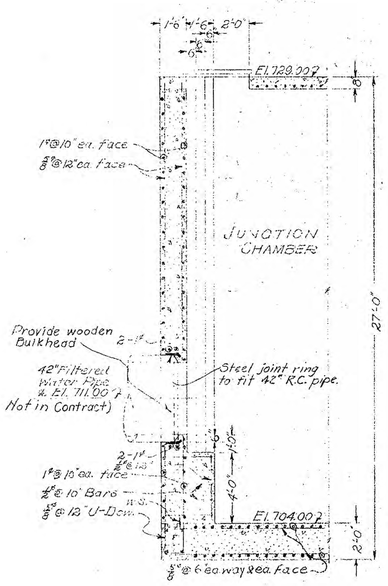
FLINT-W.T.P.-TRANSFER CHAMBER SECTIONS

001862



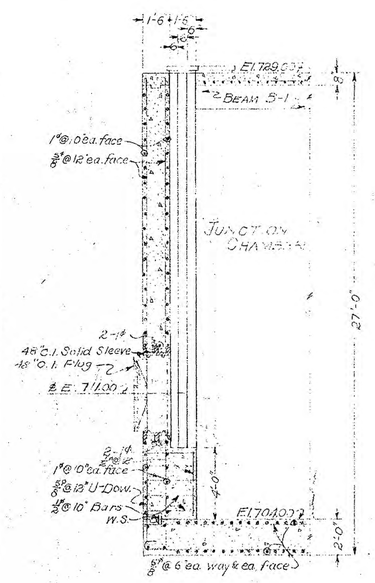
SECTION H_{60}-H_{60}

Scale: $\frac{1}{4}$"=1'-0"



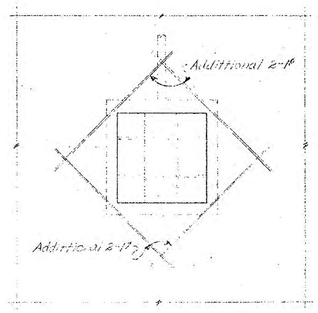
SECTION I_{60}-I_{60}

Scale: $\frac{1}{4}$"-1'-0"

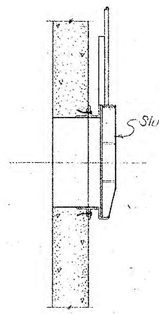


SECTION J_{60}-J_{60}

Scale: $\frac{1}{4}$"=1'-0"

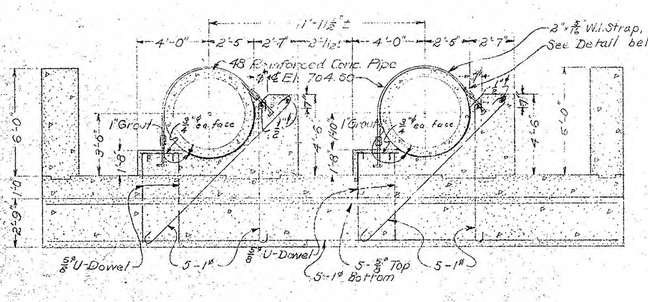


FRONT VIEW



SECTION

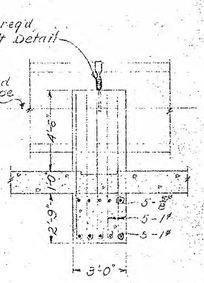
TYPICAL SLUICE GATE INSTALLATION



PEDESTAL "B"

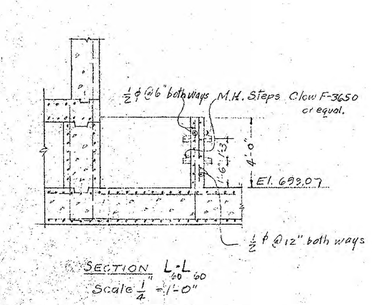
SECTION K_{60}-K_{60}

Scale: $\frac{1}{4}$"=1'-0"



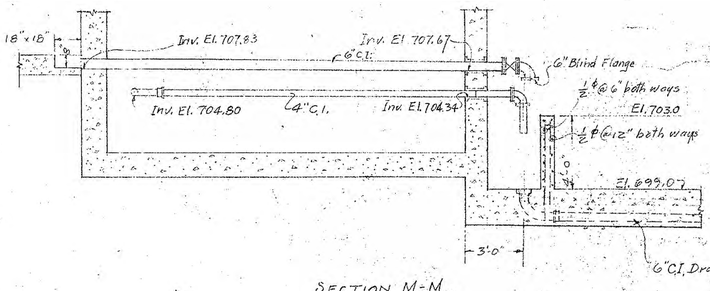
SECTIONAL VIEW

Scale: $\frac{1}{2}$"=1'-0"



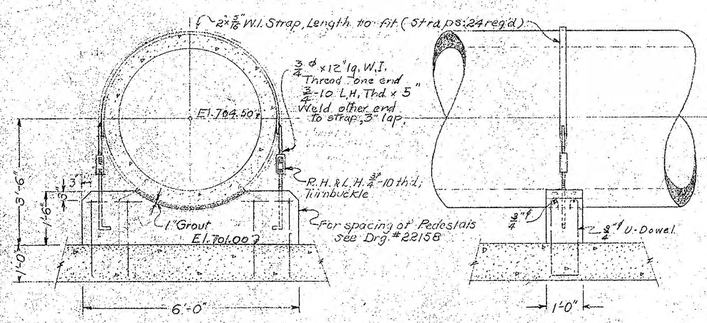
SECTION L_{60}-L_{60}

Scale: $\frac{1}{4}$"=1'-0"



SECTION M_{60}-M_{60}

Scale $\frac{1}{4}$"=1'-0"



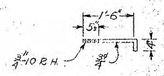
FRONT VIEW

SIDE VIEW

(24 Required)

DETAIL OF PEDESTAL "C"

Scale: $\frac{1}{2}$"=1'-0"



(48 Required)

ANCHOR BOLT DETAIL

Scale: $\frac{1}{2}$"-1'-0"

Rev.	2	8-16-48	Sec L-L to Sec M_{60}-M_{60} added.
Rev.	1		ORIGINAL ISSUE

DRAWN By: K.T. CHECKED By:

CITY OF FLINT, MICHIGAN

WATER TREATMENT PLANT

RESERVOIR NO. 3

CONTROL CHAMBER DETAILS

AYRES, LEWIS, NORRIS & MAY

CONSULTING ENGINEERS

ANN ARBOR, MICHIGAN

SCALE: $\frac{1}{4}$" = 1'-0" UNLESS NOTED JULY 1948

22160 - 2

From: Busch, Stephen (DEQ)
Sent: Friday, May 22, 2015 10:10 AM
To: Prysby, Mike (DEQ)
Subject: Accepted: Flint WTP - GAC addition

From: Garrison, Laurel (CDC/OID/NCIRD) <lee5@cdc.gov>
Sent: Friday, June 05, 2015 5:05 PM
To: 'Henry, James';Collins, Jim (DCH)
Cc: Cupal, Suzanne;Hasan, Shurooq;Childs, Bonnie;Valacak, Mark;Yoder, Jonathan S. (CDC/OID/NCEZID);Langley, Gayle E. (CDC/OID/NCIRD);Fialkowski, Veronica (DCH);Weinberg, Meghan (DCH);Tyndall Snow, Leigh (DCH);Johnson, Shannon (DCH);Fiedler, Jay (DCH);Bohm, Susan (DCH);GJOHNSON@gchd.us;Wright, Michael;Prysby, Mike (DEQ);Connolly, Stephanie
Subject: RE: Legionellosis Outbreak Investigation

Thanks, Jim. I'm concerned about the hospital. I can get our folks together for a call to discuss next week if you'd like. Do you have the details of what they've been doing to address the colonization there?

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Friday, June 05, 2015 4:37 PM
To: Collins, Jim (CDC michigan.gov); Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Meghan Weinberg (CDC michigan.gov); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (CDC michigan.gov); Bohm, Susan (CDC michigan.gov); GJOHNSON@gchd.us; Wright, Michael; PRYSBYM@michigan.gov; Connolly, Stephanie
Subject: Legionellosis Outbreak Investigation

Hello Team,

The executive summary regarding the Legionella outbreak is appreciated, but I don't know if there is consensus that it is over. We have been collaborating with our local, state and federal partners regarding the next steps and efforts to improve methods to obtain adequate clinical and environmental isolates.

Genesee County has had three confirmed Legionella cases, since the beginning of May 2015. The most recent cases on 6/1/15 and 6/2/15 have provided sputum samples to McLaren Hospital for analysis. We have discussed concerns regarding the hospitals' lack of success isolating the bacteria and MDCH and CDC have expressed interest to assist with the process.

Below is a brief summary of the recent cases.

Patient #1 PHI years old. She was admitted to McLaren Hospital on PHI and discharged on PHI. She returned to McLaren on PHI and was diagnosed with Legionella. McLaren attempted, but was unable to collect an adequate respiratory specimen. PHI PHI does not receive Flint water at her residence.

Patient #2 PHI years old. He was admitted to McLaren Hospital on PHI and discharged on PHI. He returned to McLaren on PHI and diagnosed with Legionella. PHI does not receive Flint water at his residence.

Patient #3 PHI years old. She was admitted to Hurley Hospital on PHI and discharged on PHI. Hurley Hospital receives Flint water. PHI went to McLaren on PHI and was diagnosed with Legionella. She resides PHI PHI She receives Flint water at her residence. Her son, PHI indicated that she has been ill since

returning home from Hurley Hospital on PHI . He also mentioned that there has been low water pressure events at their residence.

GCHD is prepared to collect environmental samples, as previously discussed, but without the clinical isolate the environmental samples may not have much value.

If there are recommendations, questions or concerns, please reply to the group, as we all have different roles with the investigation.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/

From: Collins, Jim (DCH) [mailto:CollinsJ12@michigan.gov]
Sent: Thursday, June 4, 2015 3:17 PM
To: Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Henry, James; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Weinberg, Meghan (DCH); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (DCH); Bohm, Susan (DCH)
Subject: Flint, Michigan - Legionellosis Outbreak Investigation Summary

Good Afternoon,

As we enter summer (finally) here in Michigan, I wanted to share a summary of the analysis of the data around this past year's increase in legionella cases identified in proximity to the city of Flint. As you'll recall, while there were no clinical specimens available for testing from the 45 cases included in the investigation, there was a significant outreach to gather more patient information from cases. I've attached an executive summary of the investigation and analysis to this post.

Please feel free to contact us is you have any questions,
Jim

Jim Collins MPH, RS
Director, CD Division
MDHHS
Desk: 517-335-8586
Cell: PPI

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From: Rosenthal, Adam (DEQ)
Sent: Monday, June 08, 2015 9:32 AM
To: Prysby, Mike (DEQ)
Subject: RE: more customer lead samples over the AL?

We have 28 samples, 4 are over the AL for lead, (42, 22, 20 & 17 ppb), 2 in red are marked other though. If they count, the 90th would be 17.6 rounding to 18 ppb. If they don't, then the 90th would be 11.2 or 11 ppb. They are required 100 samples for this 2nd 6 month round. Hopefully the rest are below.

Adam

From: Prysby, Mike (DEQ)
Sent: Friday, June 05, 2015 7:16 AM
To: Rosenthal, Adam (DEQ)
Subject: FW: more customer lead samples over the AL?

Adam,

Do a quick check as to where Flint is at on their PB/Cu monitoring (Jan 1 – June 30th round) and whether we have all (or most) of the sample results in to determine where their AL is at..... If this issue heats up again...it would be helpful to know that the city continues to meet the PB/CU ALs.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Deltoral, Miguel [mailto:deltoral.miguel@epa.gov]
Sent: Friday, June 05, 2015 7:09 AM
To: Crooks, Jennifer; Busch, Stephen (DEQ); Prysby, Mike (DEQ); Cook, Pat (DEQ)
Cc: Poy, Thomas
Subject: Re: more customer lead samples over the AL?

Slight correction...most old pipe from the home ***to the shut-off*** is galvanized, and the majority of lead they have seen is from the shut-off to the main. Apologies for not getting this report written up, but I keep getting sidetracked with NDWAC LCR and RTCR primacy packages. I will try to get that written up and out to you in the next week.

If I get copies of the latest results I will forward them, but my understanding is that the DEQ lab runs the samples, so they should be available within DEQ as well.

Miguel A. Del Toral

Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Crooks, Jennifer
Sent: Thursday, June 4, 2015 03:05 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); cookp@michigan.gov
Cc: Deltoral, Miguel; Poy, Thomas
Subject: more customer lead samples over the AL?

I talked with Miguel this week; he learned that there have been 2 more customer-requested lead samples that have come back over the AL: 22ppb and 40 ppb. These were customer-requested samples taken by Mike Glasgow and analyzed at the Flint lab. When I receive the lab reports, I'll email them to you—or Mike Glasgow should have copies of all the customer-requested lead sample results he's taken. Greg Waldorf, the contractor that replaced Ms. Walters' service line on Wed May 6, said that many of the customer services are galvanized from the customer to the water main, but they also have a lead line that connects the shut-off valve with the water main—which would make the lead piping City-owned.

Jennifer

From: Swendsen, Kurt (DEQ)
Sent: Thursday, July 09, 2015 2:58 PM
To: Prysby, Mike (DEQ)
Subject: FW: Waster march

More fun in Flint. I didn't read the article, but if it's a summer protest, then I hope they remember to keep hydrated and drink plenty of water.

From: Fitzner, Wendy (DEQ)
Sent: Thursday, July 09, 2015 11:36 AM
To: Green, Kelly (DEQ); Butler, Sonya (DEQ); Clendenon, Cynthia (DEQ)
Cc: Swendsen, Kurt (DEQ); Shekter Smith, Liane (DEQ)
Subject: Waster march

Not sure if you all heard about this water march from Detroit to Flint. There's a short article on Mlive plus I see that a San Francisco and Seattle paper (and other national periodicals) have picked it up.
http://www.mlive.com/news/flint/index.ssf/2015/07/water_justice_journey_on_its_w.html

> PONTIAC, Mich. (AP) — Critics of water shutoffs in Detroit and water quality problems in Flint are holding a 70-mile protest march between the two southeastern Michigan cities.

Here's the group that might be sponsoring it...
http://www.peopleswaterboard.org/

Wendy Fitzner, Chief
East Project Management Unit
Revolving Loan Section
Office of Drinking Water and Municipal Assistance
517-284-5406

From: Bennett, Charles (DEQ)
Sent: Wednesday, August 26, 2015 1:08 PM
To: Prysby, Mike (DEQ);Rosenthal, Adam (DEQ)
Subject: flint

In case you haven't seen this...
http://www.mlive.com/news/flint/index.ssf/2015/08/crews_work_to_contain_large_wa.html#incart_river

From: Hansen, Jeff <jrhansen@lan-inc.com>
Sent: Thursday, August 27, 2015 8:19 AM
To: Prysby, Mike (DEQ)
Subject: Flint THM

Hi Mike,

Have you seen any results from the DEQ lab for Flint TTHM yet?

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 **C** PPI
www.lan-inc.com • JRHansen@lan-inc.com

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Sent: Monday, August 31, 2015 8:53 AM
To: Hansen, Jeff
Subject: RE: Flint THM

Jeff,

We received the TTHM results last Friday...7 of the 8 sites were below 80 ppb. Site #7 – 3216 MLK was above – 90 ppb; however, the LRAA and the OEL are now below 80 ppb and the city will re-achieve compliance with TTHM

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Hansen, Jeff [mailto:jrhansen@lan-inc.com]
Sent: Monday, August 31, 2015 8:44 AM
To: Prysby, Mike (DEQ)
Subject: RE: Flint THM

Hi Mike,

Still nothing?

Jeffrey R. Hansen
Senior Project Manager

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, August 27, 2015 9:27 AM
To: Hansen, Jeff
Cc: Rosenthal, Adam (DEQ)
Subject: Re: Flint THM

Not yet....I will check with Adam Rosenthal, our EQA, when I return from to office this afternoon.

Sent from my iPhone

On Aug 27, 2015, at 8:19 AM, Hansen, Jeff <jrhansen@lan-inc.com> wrote:
Hi Mike,

Have you seen any results from the DEQ lab for Flint TTHM yet?

Jeffrey R. Hansen
Senior Project Manager

<image001.gif>
1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 C PPI
www.lan-inc.com • JRHansen@lan-inc.com

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From: Prysby, Mike (DEQ)
Sent: Monday, August 31, 2015 10:45 AM
To: Rosenthal, Adam (DEQ)
Subject: FW: Urgent: Independent Flint Water Study

fyi

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Wurfel, Brad (DEQ)
Sent: Monday, August 31, 2015 10:25 AM
To: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Prysby, Mike (DEQ)
Cc: Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Murray, David (GOV); Wurfel, Sara (GOV); Jessica Brown; Brown, Eric (GOV)
Subject: Fwd: Urgent: Independent Flint Water Study

Liane / Steve, can you look into this situation as a priority?

Everyone else -- just got this from the ACLU. Call me if you have questions / counsel.

Thanks.
b

Sent from my iPhone

Begin forwarded message:

> **From:** Curt Guyette <cguyette@aclumich.org>
> **Date:** August 31, 2015 at 10:18:34 AM EDT
> **To:** "wurfelb@michigan.gov" <wurfelb@michigan.gov>
> **Subject: Urgent: Independent Flint Water Study**
>
> Mr. Wurfel,
>
> Prof. Marc Edwards of Virginia Tech university has been leading a research project to conduct an independent study of lead in Flint's water. Working with a group of city residents, they have been collecting water samples from homes throughout the city. The study is still under way, but the results so far have been so disturbing that VT has begun posting results on the web in order to alert residents about how serious the problem may be.
>
> This is what VT is reporting:

Over the weekend we analyzed another 72 lead samples collected by Flint residents and mailed to VT. For the 120 samples analyzed to date, ***forty two percent were over 5 ppb****, which suggests a serious lead in water problem according to our experience and criteria. Twenty-three (20% of those collected) also exceeded 15 ppb lead, suggesting a serious lead in water problem.* ***That is, the Flint Citizen Science study to date, is finding results worse than the EPA standard which is applied to sampling "worst case" homes.*** *The highest lead sampled in first draw so far was 158 ppb, and the highest sample after 45 second flushing is 1051 ppb. Six of 120 homes sampled (5%), had over 15 ppb lead even after 2 minutes of continuous flushing.* ***The 90%'ile lead level in the Flint Water Study is currently 30 ppb, which is double the EPA standard applied to "worst case" homes, and in a range where water consumption has caused lead poisoning in children and adverse pregnancy outcomes.*** *Needless to say, these data are very worrisome.*

Here is the website containing the information.

I am writing about this for a story that will be posted tomorrow. If the city chooses to respond, I need to hear back from you by the end of the day today, Aug. 31.

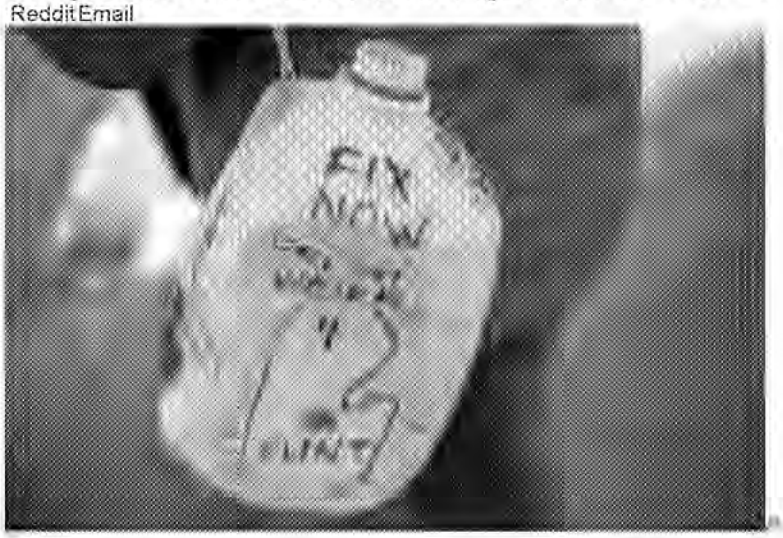
Sincerely,

Curt Guyette

From: Swendsen, Kurt (DEQ)
Sent: Monday, August 31, 2015 1:27 PM
To: Prysby, Mike (DEQ)
Subject: Flint Petition

In case someone else hasn't sent this to you already, this MLive article is about a petition and a rally today:

on August 31, 2015 at 10:02 AM, updated August 31, 2015 at 11:09 AM
Reddit Email



An empty one-gallon water jug is used as a sign of protest of Flint's water quality on in this 2015 Flint Journal file photo. A rally today, Aug. 31, is planned at City Hall. Flint Journal file photo *Flint Journal file photo*

FLINT, MI -- Three groups advocating the city end its use of the Flint River for drinking water are rallying today, Aug. 31, at City Hall and say they're delivering **26,000 petition signatures** to show the depth of their support.

Organizer Melissa Mays said Food & Water Watch, Water You Fighting For and the Coalition for Clean Water plan to hand deliver the petitions, which were collected online, to Mayor Dayne Walling and City Administrator Natasha Henderson at 10 a.m.

The petitions say in part, that "the Flint River clearly is not a safe, reliable source for the city's drinking water. It was as easy as pushing a button to disconnect from (the Detroit Water and Sewerage Department); it's time to push the button again, reconnecting Flint to DWSD and providing Flint residents with the clean, safe water they deserve.

"Please reconnect Flint to the Detroit Water and Sewerage Department immediately and make water safe and clean for all."

Flint has been in violation of the Safe Drinking Water Act since January because of high levels of total trihalomethanes (TTHM), a problem that arose after the city changed its drinking water source from Lake Huron to the Flint River.

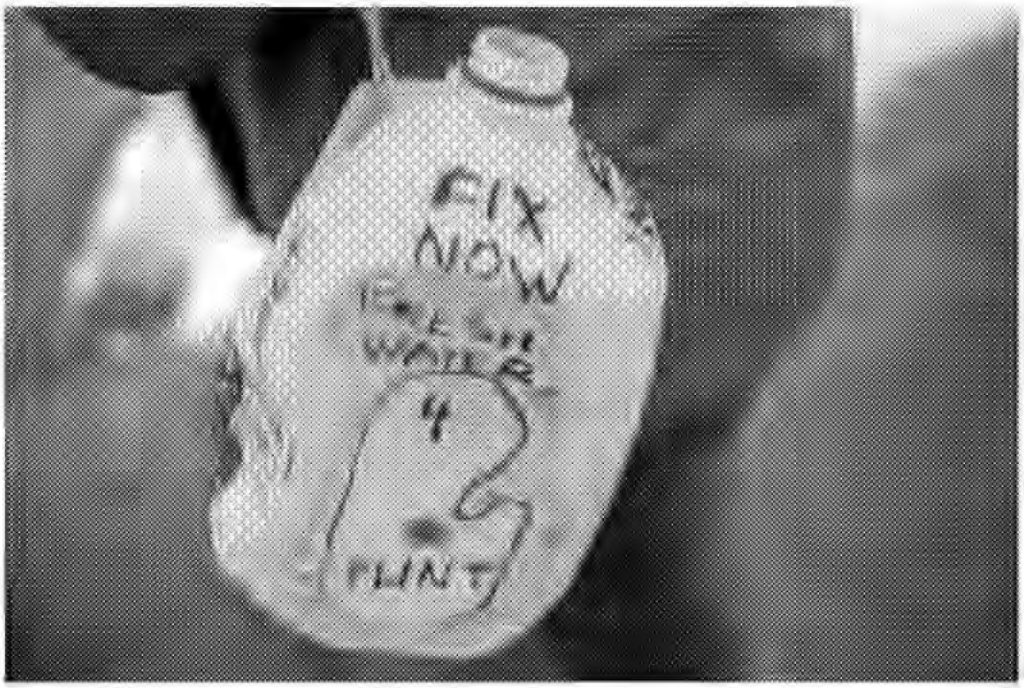
Levels of TTHM, a byproduct of chlorinating river water, have dropped to allowable amounts in more recent tests, and the city has installed a new a $1.5 million granulated active-charcoal filter in an effort to purify river water.

City officials have said Flint water is safe, but have mailed residents, warning of potential health problems related to long-term exposure to high levels of TTHM.

The use of the Flint River for drinking water is expected to end next year when the new Karegnondi Water Authority pipeline is expected to be put into service.

The project is a joint venture involving the city and Genesee County.

Kurt Swendsen
Community Water Supply
DEQ – Lansing District Office
(517) 525-1487


FIX
NOW
FLINT

From: Prysby, Mike (DEQ)
Sent: Tuesday, September 01, 2015 4:13 PM
To: Busch, Stephen (DEQ)
Subject: RE: Flint Lead

Will do.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Tuesday, September 01, 2015 4:12 PM
To: Prysby, Mike (DEQ)
Subject: Re: Flint Lead

Please ask brad to respond

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

Sent from my iPhone

On Sep 1, 2015, at 3:44 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

> Steve,
>
> Ron Fonger left me a voicemail concerning questions he has concerning the lead issue in Flint. Specifically, he is aware of the increased discussion of lead in Flint's drinking water and the home tests recently performed at residents request in corroboration with V Tech and concerned groups. Ron discussed this issue w. Mr. Kroft and has the impression that the DEQ has had discussions with the city about the lead issue; however, Mr. Kroft declined to discuss the issue any further. Mr. Fonger wishes to discuss with the DEQ as to what discussions the DEQ has had with the city concerning the lead issue. Our only discussion (written) that I am aware of...is our 90% PB/CU letter sent to the city and the need for the city to install optimal corrosion control. Should I return his call or pass this on to Brad?
>
> Michael Prysby, P.E.

District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Benzie, Richard (DEQ)
Sent: Wednesday, September 02, 2015 2:53 PM
To: Busch, Stephen (DEQ);Shekter Smith, Liane (DEQ);Prysby, Mike (DEQ)
Subject: RE: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!
Attachments: Editorial response to Virginia Tech testing Flint homes for lead.doc

Here's my final version. It is much easier to read if you open it and then go to the Review tab and then next to Track Changes, select "Final" from the pick list in the drop down box. I assume Liane will transmit it to Brad. If not, let me know.

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 02, 2015 12:12 PM
To: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Prysby, Mike (DEQ)
Subject: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!

We are aware that Virginia Tech researchers are now testing water at various Flint homes for lead levels in their plumbing.

First, we want to be very clear that the lead issue in Flint, to the extent there is one, is not from the source water or the plant or even the transmission lines. The river has no detectable levels of lead in it, and treated water from the plant has not detectable levels of lead in it. The issue is how, whether, and to what extent the water is interacting with lead plumbing in people's homes.

It does not appear their research lab is certified, and we can't speak to the whatever sampling methods are being employed to achieve these results. The results reported so far fail to track with any of the lead sampling done by the DEQ for the past 25 years (since 1991), or the blood lead levels testing regularly conducted by the state department of community health. That said, we do appreciate that Virginia Tech's team is working on this issue because it brings the public spotlight on an important fact: if you have lead water pipes in your home, or a lead service connection to the city system, it is very likely you are ingesting some level of lead. That's just a fact, and in the City of Flint that fact affects 15,000 or more residences.

The state's monitoring program, which uses certified laboratories and a standardized, federal testing protocol, looks specifically at the homes in communities most likely to experience lead problems. Our results, obtained from two separate rounds of testing over the past year, concluded that the mean average of lead in Flint drinking water, meets state and federal safe drinking water standards.

That said, the state is pushing Flint to 'optimize' its water, which means addressing additives that can minimize the extent to which the water interacts with lead plumbing in homes. While statute allows several years for an operator actually undertake this process – Detroit took five years to complete its water optimization work – we are encouraging Flint water system operators to take these steps immediately and we are encouraged by the conversation so far.

Any resident who has concerns about lead in their drinking water should have their water tested and get professional consultation on how to address it. The leading cause of lead poisoning is known to be lead paint and, in some areas, environmental legacy hot spots where lead is present in soils.

However, I will say it again: when homes are fitted with lead plumbing pipes, homeowners should assume there is some varied level of interaction between water and pipes that means exposure.

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, September 02, 2015 11:34 AM
To: Wurfel, Brad (DEQ)
Cc: Kristin Longley; Bryn Mickle
Subject: lead in flint water

Brad:
I left a message with Mike Prysby on Tuesday, Sept. 1, but wanted to reach out to you also because of stories we are working on about the extent to which lead is becoming an issue in Flint drinking water.
Today, Sept. 2, researchers at Virginia Tech posted the results on an experiment with Flint water online.

The report concludes that Flint River water leaches much more lead from plumbing than does Detroit.

"On average, Detroit water is 12 times (or 12X) less corrosive than the Flint River water currently in use ... This is creating a public health threat in some Flint homes that have lead pipe or lead solder," the report says.

An earlier post by the same researchers says that initial water tests show "a serious lead in water problem" in Flint, partly because Flint River water is so corrosive to pipes.

Given the state's role in oversight of the city's drinking water system through DEQ and its overall oversight by state emergency managers during the past several years, I wanted to make sure I'm reaching out to the right person to respond to this information.

Could you let me know who that is?

I expect to post the first story about the experiment today and expect the issue will be getting more attention as the VT study of 300 water test kits from Flint is completed.
Thanks,

Ron Fonger
MLive Media Group
Reporter

PPI
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

We are aware that Virginia Tech researchers are now testing water at various Flint homes for lead levels ~~in their plumbing~~. We appreciate that Virginia Tech's team is working on this issue because it brings the public spotlight on an important fact: if you have lead water pipes or plumbing fixtures containing lead in your home, or a lead service connection to the city system, it is very likely you are ingesting some level of lead. That's just a fact, and in the City of Flint, that fact affects 15,000 or more residences.

However~~First~~, we want to be very clear that the lead levels being detected~~issue~~ in Flint~~, to the extent there is one, is not from the source~~drinking water are not coming from~~or~~ the treatment plant or ~~even~~ the city's transmission lines. ~~The river has no detectable levels of lead in it, and t~~Treated water leaving~~from~~ the plant has not detectable levels of lead in it. The issue is how, whether, and to what extent the drinking water is interacting with lead plumbing in people's homes.

It does not appear ~~their~~ the Virginia Tech research lab is certified, and we can't speak to the ~~whatever~~ sampling methods ~~are~~ being employed to achieve these results. The results reported so far fail to track with any of the lead sampling conducted by the city.~~done by the DEQ for the past 25 years (since 1991), or~~ In addition, the Virginia Tech results are not reflected by the blood lead levels testing regularly conducted by the state department of community health that have not shown any change since Flint switched sources. ~~That said, we do appreciate that Virginia Tech's team is working on this issue because it brings the public spotlight on an important fact: if you have lead water pipes in your home, or a lead service connection to the city system, it is very likely you are ingesting some level of lead. That's just a fact, and in the City of Flint that fact affects 15,000 or more residences.~~

The state's compliance monitoring ~~program, which~~program requires the city to uses certified laboratories and a standardized, federal testing ~~protocol,~~protocol that looks specifically at the homes in communities most likely to experience lead problems. The latest~~Our~~ results from Flint, obtained from two separate rounds of testing over the past year, indicated~~concluded~~ that ~~the mean average of lead in~~ Flint drinking water, meets state and federal safe drinking water standards for lead.

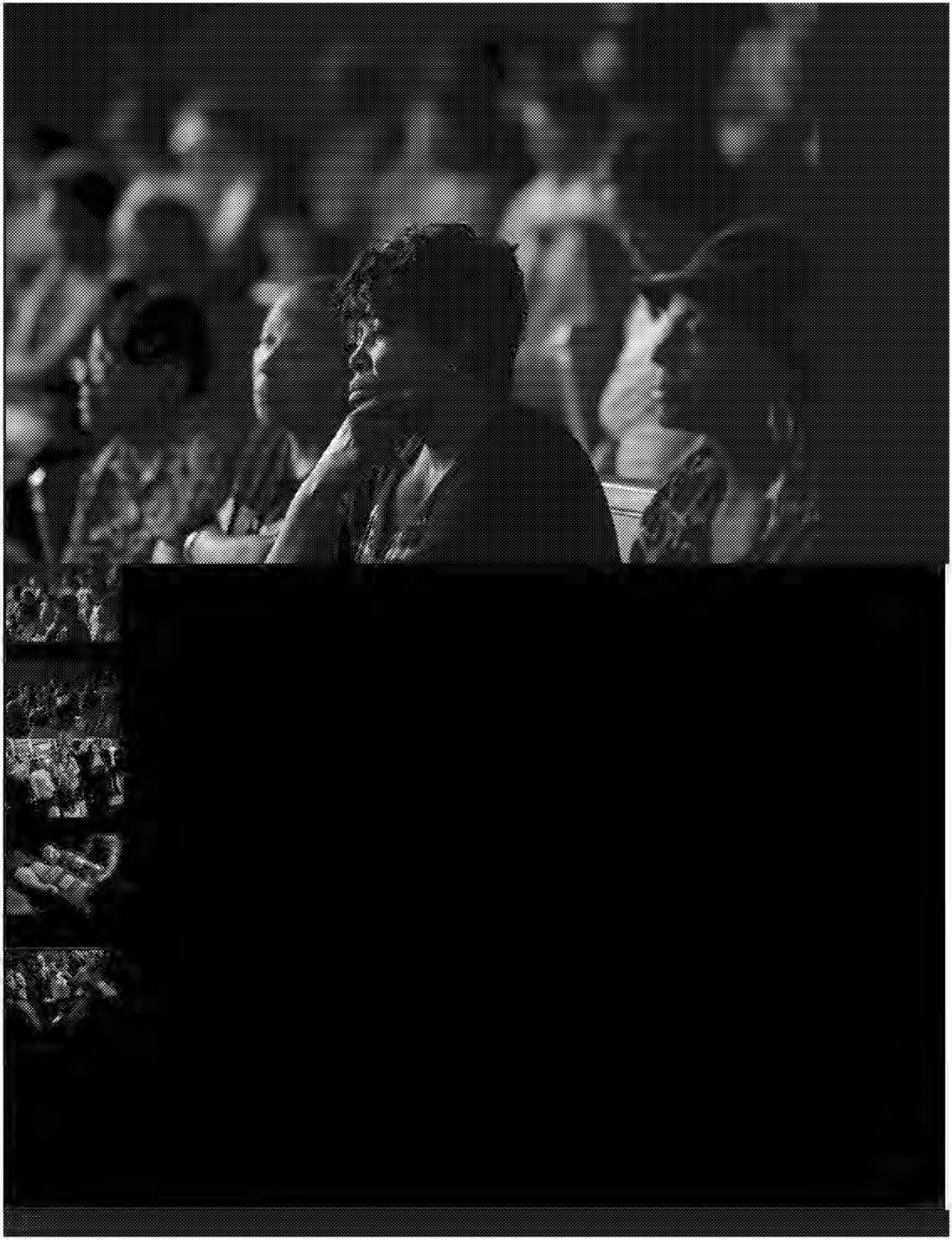
That said, the state has requested~~is pushing~~ Flint to 'optimize' its water treatment to further limit exposure~~, which means addressing additives that can minimize the extent to which the water interacts with~~ to lead from plumbing in homes. While statute allows several years for a drinking water system ~~n operator actually~~to actually undertake this process – Detroit took five years to complete its water optimization work – we are encouraging Flint water system operators to take these steps immediately and we are encouraged by the conversation so far.

Any resident who has concerns about lead in their drinking water should have their water tested at a certified laboratory and get professional consultation on how to address it. The leading cause of lead poisoning is known to be lead paint and, in some areas, environmental legacy hot spots where lead is present in soils. However, I will say it again: when homes are fitted with lead plumbing or plumbing fixtures containing lead~~pipes~~, homeowners should assume there is some varied level of interaction between water and pipes that results in lead~~means~~ exposure.

From: Swendsen, Kurt (DEQ)
Sent: Thursday, September 24, 2015 7:37 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: Flint VA Tech Speech Photo

It's a new article, but what I was interested in was the lead photo of the Va Tech talk because I was curious how well it would be attended. No one would ever comment on the Flint DWRF environmental assessments, so I thought even for this it would only be the 20 - 50 or so activists attending.

Flint to issue lead in water warning after push from doctors, health officials



Flint resident Ruth Blassingame listens during a town hall meeting as Virginia Tech researchers present evidence after water testing in Flint showed high levels of lead on Tuesday, Sept. 15, 2015, at Saints of God Church in Flint, Mich. Danny Miller | MLive.com
Danny Miller | dmille17@mlive.com

Print Email

By Ron Fonger | rfonger1@mlive.com The Flint Journal
on September 24, 2015 at 5:50 AM, updated September 24, 2015 at 8:51 AM

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Reddit
Email

FLINT WATER

Flint Journal file photo

FLINT, MI -- The city of Flint is expected to advise its water customers on ways to minimize exposure to lead in its tap water -- particularly for children -- after a group that includes doctors and health officials strongly suggested the step.

Flint Mayor Dayne Walling confirmed the move on Wednesday, Sept. 23, after The Flint Journal-MLive learned the Greater Flint Health Coalition approved a resolution two days prior urgently asking the city to issue the advisory.

Representatives of the coalition met privately with Walling and other city officials to express their concerns about the safety of Flint water, and issued a statement saying "not enough was being done to alert the public to potential risks of consuming Flint city water that could lead to elevated levels of lead."

Walling's statement said the city "will be issuing an advisory" on the matter "in cooperation with health partners promoting ways to minimize the exposure to lead such as flushing pipes when the water has been sitting." He did not specify when the advisory would be issued.

Walling, who earlier this month asked Gov. Rick Snyder for $30 million for Flint's infrastructure, including $10 million to replace lead service lines to homes, said in an email that he "will continue to pursue funding for a comprehensive healthy homes initiative that addresses lead in paint and pipes."

"We have to get the lead out of our community to eliminate the threat of childhood lead poisoning," the statement says. "I am extremely concerned to hear from doctors about any elevated blood lead levels in Flint's children."

The Journal could not immediately reach Walling for more information on the concerns expressed to him by doctors about lead.

Kirk D. Smith, president and chief executive officer of the Greater Flint Health Coalition, and state Senate Minority Leader Jim Ananich, the chairman of the group's board of directors, issued a statement to The Journal about the coalition's recommendation on issuing precautions.

"As a coalition of concerned physicians, health care professionals and county leaders, we are compelled to inform the public when there is a possible threat to their health so they can take appropriate precautions and actions to protect themselves and their families," the joint statement says.

"At our last meeting and in recent days we have heard from numerous physicians who shared strong concerns that not enough was being done to alert the public to potential risks of consuming Flint city water that could lead to elevated levels of lead."

A resolution approved by the nonprofit coalition's board of directors, which includes representatives of Flint area hospitals, universities, physicians and unions, comes after researchers from Virginia Tech University reported their testing here shows a far-reaching problem with lead in water.

Ten percent of Flint homes tested by Virginia Tech had 25 parts per billion of lead or more, far more than the allowable level -- 15 ppb -- set in federal guidelines, according to the university researchers.

City and state officials have said their testing shows Flint's water supply meets all health and safety regulations, never rising above 11 ppb in more than 10 percent of homes during the last 16 months, but data from the state Department of Environment Quality shows **lead levels have spiked** since the city began using the Flint River as its water source in April 2014.

At the urging of state and federal officials, the city announced three weeks ago that it would speed up the development of plans aimed at making Flint water less corrosive.

Professor Marc Edwards of Virginia Tech has said treated river water is currently far more corrosive than water the city had used for decades -- Lake Huron water that was treated and piped here by the city of Detroit.

Edwards has criticized the city and the state for not having developed a plan for reducing the corrosiveness of Flint's water because an estimated 15,000 homes in the city have lead or lead solder in service lines and plumbing, making the homes much more susceptible to lead leaching into water.

City Councilman Scott Kincaid, also a member of the GFHC, said he supported the organization's request for further action -- particularly after physicians raised concerns about how high lead levels could affect infants and young children.

"I'm supporting the resolution. I think we need to advise people that there is a potential concern," Kincaid said. "Lead isn't good for anybody, but the effect on infants" is especially disturbing.

Although the city has yet to issue its lead advisory, Walling's mention of allowing water to flush through pipes is the same advice given by Virginia Tech earlier this month.

Researchers at the university have also recommended that infants not be fed formula made with unfiltered Flint tap water and that residents who are not flushing water for five minutes before using it for drinking or cooking should use a filter certified to remove lead.

The Journal could not reach Dr. Lawrence Reynolds, president and CEO of Mott Children's Health Center, for comment Wednesday. Other coalition members said Reynolds led the push for additional, quick action by the city.

Lead is a toxic metal that was used for many years in products found in and around homes, according to the U.S. Environmental Protection Agency. Even at low levels, lead may cause health effects such as behavioral problems and learning disabilities.

Current regulations for lead in water began in 1992 and require a limited amount of testing to measure the degree to which lead leaches into tap water after flowing through lead service lines and lead solder in home plumbing.

Flint has struggled with its water quality since switching to the Flint River as its primary water source in April 2014. Previously, the city had purchased water through the city of Detroit, which got its water from Lake Huron.

Flint was required to step up its testing of water in homes after it shifted to the Flint River, which is intended to be a temporary move as the city and Genesee County are partners in building a new water pipeline to Lake Huron through a partnership called the Karegnondi Water Authority.

The city has been using -- and Walling and state emergency managers have supported continuing to use -- the Flint River as a stopgap water source until the KWA pipeline is expected to be completed in 2016.

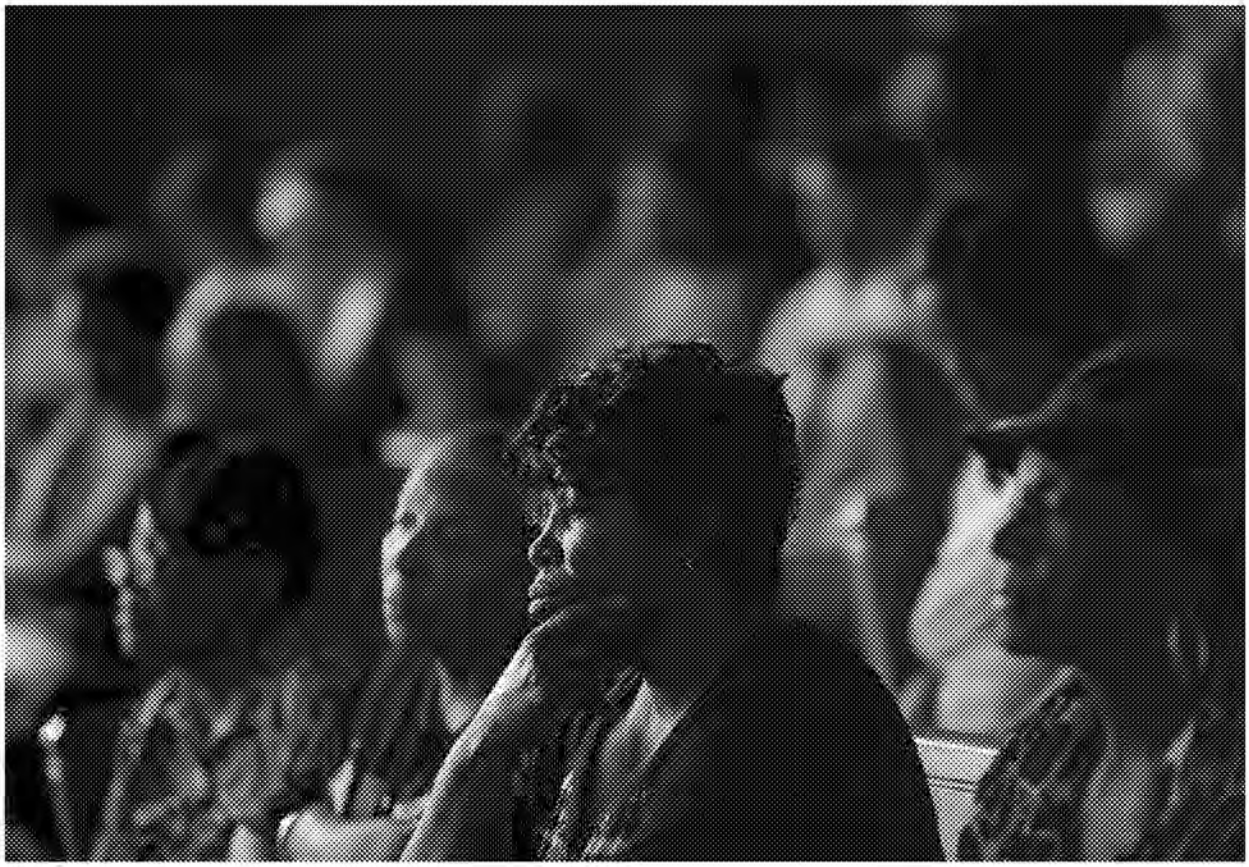
In state testing of city water samples, Flint has stayed below the federal threshold for lead, with less than 10 percent of tap water samples exceeding 15 ppb.

Water systems can be required to take steps like making water less corrosive or replacing lead service lines if sampling shows such elevated lead levels.

But after the Virginia Tech testing showed lead was much more prevalent than Flint's testing showed, Edwards and U.S. Rep. Dan Kildee each raised doubts about the water testing by the city and DEQ.

Kildee said in a news release Sept. 21 that "the city, DEQ and (U.S. Environmental Protection Agency) have not adequately answered my questions on their testing methods to ensure the safety of Flint's water."

Kurt Swendsen
Community Water Supply
DEQ – Lansing District Office
(517) 525-1487



Sent: Thursday, September 24, 2015 4:06 PM
To: Busch, Stephen (DEQ);Benzie, Richard (DEQ)
Subject: Flint draft lead advisory
Attachments: DRAFT_Lead Advisory.docx

Steve, Richard,

Although I've been in the field most of the day...I thought it was prudent to review Flint's Public Health Advisory (draft) regarding lead in drinking water, at the city's request. Attached is the draft advisory with my tracked revisions. Feel free to comment or make any further revisions as needed.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Public Health Advisory Regarding Lead in Drinking Water

The City of Flint is issuing a Public Health Advisory for residents to be aware of lead levels in drinking water. While the City ~~is in full compliance with the Federal Safe Drinking Water Act~~ has not exceeded the lead Action Level (15 parts per billion), this advisory is being issued as part of a public information campaign to ensure that everyone takes note that no level of lead is considered safe.

Lead ~~contamination~~ can leach into water from a home's lead water service lines, lead solder, and leaded plumbing materials including fixtures, faucets, and fittings. Older service lines with pipes and fixtures installed before 1986 can sometimes be more susceptible to lead issues due to materials used in the home such as lead based paint and lead pipes. This message is meant as a precaution to residents and does not mean that all homes in the City will experience the same issue.

In an effort to minimalize any potential risk, the City of Flint Public Works Department advises the public to take the following precautions:

- Flush water for at least five minutes prior to use.
- Only use cold water for cooking and drinking.
- Have your water tested (see information below).

For more specific questions about lead related issues please visit the Genesee County Health Department website at www.gchd.us . The City of Flint is working proactively along with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. Activities include instituting corrosion control treatment at the Water Treatment Plant to reduce corrosion of lead form lead service lines and leaded plumbing materials into the drinking water. We expect to have corrosion control treatment in place by January 2016.

The City's Utilities Division continues to offer free water testing by calling the Water Treatment Plant at 810-787-6537 and pressing #1 after prompted or by emailing flintwater@cityofflint.com.

From: Microsoft Outlook
To: Fields, Maggie (DEQ)
Sent: Friday, September 25, 2015 8:30 AM
Subject: Undeliverable: Consumer Notice (draft) - city of Flint

Your message to IMCEAEX-_o=MIGOV_ou=First+20Administrative+20Group_cn=Recipients_cn=FIELDSM@namprd09.prod.outlook.com couldn't be delivered.

Your mail program is using out-of-date address information for IMCEAEX-_o=MIGOV_ou=First+20Administrative+20Group_cn=Recipients_cn=FIELDSM

PRYSBYM Office 365 IMCEAEX-_o=MIGOV_ou=. . .
Action Required Recipient

Out-of-date TO address

How to Fix It
To stop your mail program from using out-of-date address information, clear the recipient nickname cache in Outlook or Outlook Web App by doing the following:
Click New mail (or New Email).
In the To box, start typing the recipient's name or email address until the recipient appears in the drop-down list.
Use the Down Arrow and Up Arrow keys to select the recipient, then press the Delete key.
Resend your message - delete and retype the recipient's name or email address before sending it.

If the problem continues, forward this message to your email admin.

Was this helpful? Send feedback.

More Info for Email Admins
The recipient email address is a LegacyExchangeDN address, which isn't used by the Office 365 service. You might see this error if you've migrated from on-premises to the cloud, or if your organization has a hybrid configuration and you synchronize your on-premises directory with Office 365. If clearing the recipient nickname cache from the user's Outlook or Outlook Web App program doesn't solve the problem, try to clear the related LegacyExchangeDN address from your on-premises Active Directory by using the LegacyExchangeDN Utility. Then re-synch the directory.

For more information, see Error code 5.1.11 in Exchange Online and Office 365.

Original Message Details
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Subject:Consumer Notice (draft) - city of Flint

Error Details
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CC: "Benzie, Richard (DEQ)" <BENZIER@michigan.gov>, "Busch, Stephen (DEQ)"
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InXQpL4F9NxuA4gpp7CmG+8XuIDApo7mhOeasH16bL15JhP0RiHr3Ng3t3+XnVfuojt3j4lkgDCD1WHvzSh/BfH3gUKKbc/56t
OOpqbGqAO6VpfN6Djt+YKiIDuv3U5f/m/sLtNwUUyNisrlA==;5:UAwr+NmPSAG27I5wQUz4+KtWZrWlLeq4bdl5IsaIFnGykJz
GQ6YqGBWxMu4ym3eatpAPNLT7QMfT2rulZgff5g2mmcQ+3oJGeNTHPsxJkKWZZG0vwLgLEsP69e6UvhzUdvWOJQYXTksc
oy6bEU3Kzg==;24:+rHKCoeCGa/jFBkVh3OH2YeJ48tCwgncyNNKRpWzF+PX7CDyP0MZvlb3PacYmP8XEDfnvK4O3sQ4ry3cR
lXJUwT/QlWp1lMq+ixOtpXDlFo=;20:erZAVjZPgMhYVh7KEnmJojoYxFXtiker6+sDHaFOqEwahea0bwY7Bkt1POBhFCYc/tPrG
ioX5lNa8te2LfK9xw==
SpamDiagnosticOutput: 1:0
X-MS-Exchange-CrossTenant-OriginalArrivalTime: 25 Sep 2015 12:29:46.9837
 (UTC)
X-MS-Exchange-CrossTenant-FromEntityHeader: Hosted
X-MS-Exchange-CrossTenant-Id: d5fb7087-3777-42ad-966a-892ef47225d1
X-MS-Exchange-Transport-CrossTenantHeadersStamped: DM2PR09MB0382

From: Prysby, Mike (DEQ)
Sent: Friday, September 25, 2015 8:30 AM
To: Wurfel, Brad (DEQ);Fields, Maggie (DEQ)
Cc: Benzie, Richard (DEQ);Busch, Stephen (DEQ)
Subject: Consumer Notice (draft) - city of Flint
Attachments: DRAFT_Lead Advisory.docx

Brad,

Mr. Howard Kroft from the city of Flint has prepared a draft Public Health Advisory regarding lead in drinking water that he intends to publish today. Mr. Kroft requested us to review the draft advisory and make any revisions as needed. Attached is a copy of the draft advisory along with our tracked changes. If there are any further edits you see fit, let me know. Also, I will be out of the office today after 11am. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Consumer Awareness Notice ~~Public Health Advisory~~ Regarding Lead in Drinking Water

The City of Flint is issuing a Public Health Advisory for residents to be aware of lead levels in drinking water. While the City ~~is in full compliance with the Federal Safe Drinking Water Act~~ has not exceeded the lead Action Level (15 parts per billion), this advisory is being issued as part of a public information campaign to ensure that everyone takes note that no level of lead is considered safe.

Lead ~~contamination~~ can leach into water from a home's lead water service lines, lead solder, and leaded plumbing materials including fixtures, faucets, and fittings. Older service lines with pipes and fixtures installed before 1986 can sometimes be more susceptible to lead issues due to materials used in the home such as lead based paint and lead pipes. This message is meant as a precaution to residents and does not mean that all homes in the City will experience the same issue.

In an effort to minimalize any potential risk, the City of Flint Public Works Department advises the public to take the following precautions:

- Flush water for at least five minutes prior to use.
- Only use cold water for cooking and drinking.
- Have your water tested (see information below).

For more specific questions about lead related issues please visit the Genesee County Health Department website at www.gchd.us . The City of Flint is working proactively along with the County Health Department, the Michigan Department of Environmental Quality, and the U.S. Environmental Protection Agency to improve the water system throughout the City. Activities include the city's plan to install corrosion control treatment at the Water Treatment Plant by January 2016.

The City's Utilities Division continues to offer free water testing by calling the Water Treatment Plant at 810-787-6537 and pressing #1 after prompted or by emailing flintwater@cityofflint.com.

From: Grochowski, Bryan (DEQ)
Sent: Monday, September 28, 2015 9:32 AM
To: Prysby, Mike (DEQ)
Subject: Hurley Medical - Lead - Stop Drinking the Water

Hi Mike,

I'm having computer problems... You may have to google it to find the announcement. I thought that it was a terribly irresponsible announcement, failing to mention that the lead is coming from their own pipes.

Bryan M. Grochowski
Environmental Quality Analyst
Office of Waste Management & Radiological Protection
Department of Environmental Quality
grochowskib@michigan.gov
Ph. 517-614-7448 or Fx. 517-241-3571

From: plevine@gcms.org
Sent: Wednesday, September 30, 2015 2:10 PM
To: Howard Croft
Cc: Brent Wright;Dayne Walling;donna. cole;edwardsm;Gerald (Jed) Natzke;James Henry;Jason Lorenz;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Michael Wright;Mike Lane;Prysby, Mike (DEQ);Natasha Henderson;Norb Birchmeier;Robert Bincsik;rosejo@msu.edu;Russell Hudson;Samir Matta;schock.michael@epa.gov;Sean Kammer;Warren Green;Busch, Stephen (DEQ);lytle.darren@epa.gov;Amy Hovey;Andy Leavitt;James Gaskin
Subject: Re: Technical Advisory Meeting

I will be there

Sent from my iPhone

On Sep 30, 2015, at 1:00 PM, Howard Croft <hcroft@cityofflint.com> wrote:

> Team,
>
> I am writing to again confirm our meeting which is scheduled for next Wednesday October 7th at 2:00 pm. We have decided to hold the meeting at City Hall but due to rapidly evolving events I will wait until early next week to put out an agenda. In general, we expect to update the most recent water status in order to get everyone on the same page, and then have a targeted agenda that points at both a short term and long term goals.
>
> In staying consistent with our other meetings we anticipate a full sharing of information along with open discussion and a clear direction going forward. Darren Lytle of the EPA has committed to being at the meeting and Marc Edwards of Virginia Tech has agreed to call in.
>
> Please email me if there are any questions.
>
> Thank you,
>
> On Wed, Sep 23, 2015 at 3:52 PM, Howard Croft <hcroft@cityofflint.com> wrote:
>
> Technical Advisory Team,
>
> I am writing to inform everyone that we have scheduled the next Technical Advisory Committee meeting to be Wednesday October 7th, 2015 from 2:00 – 4:30 pm. We are extending invitations to Marc Edwards of Virginia Tech along with two lead experts from the EPA (Darren Lytle & Michael Schock) to become a part of the technical team and we are hopeful that they will all be present at the upcoming meeting.

At the meeting we will discuss an overview of the City water system, compliance with the Safe Drinking Water Act, lead concerns, corrosion control, water testing, public education, capital improvement plans, the KWA pipeline, and next steps.

I will forward a specific location and agenda in the near future but we are firmly committing to the time and date. As with previous meetings we look forward to this group having positive dialogue that will benefit the community.

Thank you,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Hoyt, Cheryl (DEQ)
Sent: Thursday, October 01, 2015 4:16 PM
To: Prysby, Mike (DEQ)
Subject: FW: PEAS-13537: Caller upset about how DEQ is handling City of Flint Drinking water, Genesee County
Attachments: PEAS - 13537_ upset resident re_ Flint Drinking Water - Genesee Co. - (AH - PEAS) - no.pdf

From: Henney, Autumn (DEQ)
Sent: Thursday, October 01, 2015 4:04 PM
To: DEQ-PEAS-Lansing
Subject: PEAS-13537: Caller upset about how DEQ is handling City of Flint Drinking water, Genesee County

Please confirm receipt and advise who is lead agency. Caller expects a call right back.

Autumn B. Henney
Lansing District Office
Remediation and Redevelopment Division
Phone: 517-284-5125
HenneyA@michigan.gov

001902

Michigan DEQ PEAS Incident Report

PEAS Call Date & Time:	10/1/2015 15:54		Shift:	Office Hrs.
PEAS Incident Number:	13537	Incident Occurred (D/T):	10/1/2015	15:58	Release Controlled:	Secured Rel.
Related Incident Number(s):		DEQ District:	Lansing		Dispatch:	AH - PEAS

Description of Incident (incl. cleanup efforts, whether call-back is requested...): upset resident re: Flint Drinking Water

Caller is very upset about how the DEQ is handling the lead in the City of Flint's drinking water problem. He expects a call right back. Please note he is VERY upset.

PEAS Caller:	Jeff Bean	Party Involved (PI) - Contact:	
PEAS Caller Employer:		Party Involved - Company:	City of Flint
PEAS Caller *Street Address:*	8218 Hendrie	Party Involved Str. Address:	
PEAS Caller City or Twp.:	Huntington Woods	Party Involved City or Twp.:	Flint
PEAS Caller State:	Michigan	Party Involved State:	Michigan
PEAS Caller *Phone:*	PPI	Party Involved Phone:	
PEAS Caller *Alt. Phone:*		Party Involved Alt. Phone:	
PEAS Caller Type:	Private Party	**Party Involved Type**:	
Incident Street Address:		Name of Pollutant:	lead
Incident Cross Streets:		Released to Water (gallons):	
Incident City or Township:		Released to Ground (gallons):	
Incident County:	Genesee	Released to Air (pounds):	
Water Body Impacted:		Cleanup Contractor:	

Referrals **PWS?:** Pub. Water Sup. **Lead Div.:** Lead Div. 2: DEQ Primary:

Referral Contact(s)	Division / Affiliation	E-Mail Date / Time Sent	E-Mail Date / Time Rec'd	Phone Call or Page Date / Time	Referral Complete	Filed By	Assigned To	Notes
Lansing	District D.L.	10/1/2015 16:00						

Operator	Date / Time Start	Date / Time End	Hours
AH	10/1/2015 03:50		0.0

Non-FOIA-able Sensitive Information (complainant personal information, etc.):

PEAS Administration Section (non-working phone numbers, hardware/software issues...):

This form shall not be released via FOIA - all information in the form except private callers' personal information (italics) is available through the PEAS Administrator via FOIA

Sent: Monday, October 05, 2015 12:32 PM
Subject: FW: Technical Advisory Meeting

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Wednesday, September 30, 2015 1:01 PM
To: Brent Wright; Dayne Walling; donna. cole; edwardsm; Gerald (Jed) Natzke; Howard Croft; James Henry; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Michael Wright; Mike Lane; Prysby, Mike (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; schock.michael@epa.gov; Sean Kammer; Warren Green; Busch, Stephen (DEQ); lytle.darren@epa.gov; Amy Hovey; Andy Leavitt; James Gaskin
Subject: Re: Technical Advisory Meeting

Team,

I am writing to again confirm our meeting which is scheduled for next Wednesday October 7th at 2:00 pm. We have decided to hold the meeting at City Hall but due to rapidly evolving events I will wait until early next week to put out an agenda. In general, we expect to update the most recent water status in order to get everyone on the same page, and then have a targeted agenda that points at both a short term and long term goals.

In staying consistent with our other meetings we anticipate a full sharing of information along with open discussion and a clear direction going forward. Darren Lytle of the EPA has committed to being at the meeting and Marc Edwards of Virginia Tech has agreed to call in.

Please email me if there are any questions.

Thank you,

On Wed, Sep 23, 2015 at 3:52 PM, Howard Croft <hcroft@cityofflint.com> wrote:
Technical Advisory Team,

I am writing to inform everyone that we have scheduled the next Technical Advisory Committee meeting to be Wednesday October 7th, 2015 from 2:00 – 4:30 pm. We are extending invitations to Marc Edwards of Virginia Tech along with two lead experts from the EPA (Darren Lytle & Michael Schock) to become a part of the technical team and we are hopeful that they will all be present at the upcoming meeting.

At the meeting we will discuss an overview of the City water system, compliance with the Safe Drinking Water Act, lead concerns, corrosion control, water testing, public education, capital improvement plans, the KWA pipeline, and next steps.

I will forward a specific location and agenda in the near future but we are firmly committing to the time and date. As with previous meetings we look forward to this group having positive dialogue that will benefit the community.

Thank you,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Schock, Michael <Schock.Michael@epa.gov>
Sent: Friday, October 16, 2015 1:35 PM
To: Prysby, Mike (DEQ)
Subject: Automatic reply: Flint WTP PH2 SEG4 - Corrosion Control

I am out of the office until 10/19.

From: Kolhoff, Thomas (DEQ)
Sent: Friday, October 23, 2015 6:32 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: FW: Ticket #23002-490657 Response Sent

Hi Mike,
I'm not sure how or why this was sent to me.....FYI. You may have already received a copy. Thanks.

Tom

Thomas Kolhoff
DEQ, WRD, Lansing District
P.O. Box 30242
Lansing, Michigan 48909
517-284-6666
kolhofft@michigan.gov

From: Sheila Bailey-Waddell [mailto:sheila.bw@hotmail.com]
Sent: Friday, October 23, 2015 12:56 AM
To: Kolhoff, Thomas (DEQ) <KOLHOFFT@michigan.gov>
Subject: FW: Ticket #23002-490657 Response Sent

From: sheila.bw@hotmail.com
To: prysbym@michigan.gov
Subject: FW: Ticket #23002-490657 Response Sent
Date: Wed, 21 Oct 2015 20:41:09 -0400

Mike,

It has come to my attention and that of the public that federal laws were not adhered to in water quality testing. I am reasonably certain that complaints have been submitted to your office. It is my contention that they were intentionally ignored in the style of the communications, below. I shouldn't have to test my own water.

Thank you,
Sheila

Sent from my MetroPCS Android device

------ Original message------
From: Prysby, Mike (DEQ)
Date: Fri, Oct 2, 2015 10:04 AM
To: sheila.bw@hotmail.com;
Cc: Busch, Stephen (DEQ);Benzie, Richard (DEQ);
Subject:RE: Ticket #23002-490657 Response Sent
Sheila,

I am responding to your e-mail to address your concerns with lead Flint's drinking water. The drinking water treated at the Water Treatment Plant (WTP) and distributed to Flint residents meets all applicable drinking water standards and has not detected the presence of lead in any plant tap samples (water that leaves the WTP). Although the drinking water standards are being met, and compliance with the Action Level for lead is being achieved (90% of selected sites sampled throughout the city are at or below the 15 parts per billion Action Level for lead in accordance to EPA's monitoring requirements), there is no safe level for lead in drinking water. Compliance with the lead Action Level; however, does not mean that under certain conditions that some residents may have water within their domestic plumbing system that has leached lead from either a lead service line or lead solder.

The only way to know if you are being exposed to a higher concentration of lead at your residency is to have a sample collected from your residency and analyzed for lead at a certified laboratory. It is our understanding that the city of Flint is working with their customers on lead sampling requests without charge. You will need contact the city to arrange for the sampling.

If lead is present in the water at your home or if there is uncertainty, our advice is to minimize stagnation of the water prior to consumption by running your faucet for several minutes to clear out the stagnated water from your plumbing and service line.

Below is a link that provide additional information regarding lead in drinking water.

http://water.epa.gov/drink/contaminants/basicinformation/lead.cfm

If you have any further concerns regarding lead in your drinking water or on any other water related matter, please don't hesitate to contact me.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Sheila Bailey-Waddell [mailto:sheila.bw@hotmail.com]
Sent: Wednesday, September 30, 2015 8:43 PM

To: Hill, Charles (DEQ); Selden, Barry (DEQ); Smith, Laura (DEQ); Prysby, Mike (DEQ)
Subject: RE: Ticket #23002-490657 Response Sent

Hello,

Have you not heard that the water quality in Michigan is detrimental to its residents? It is filled with lead; killing our children and the elderly who are most vulnerable. What is the EPA doing about this? Even the hospitals are forced to order distilled water for patients (in/out). I want expeditious answers.

Thank you,
Sheila

From: sheila.bw@hotmail.com
To: hillc@michigan.gov; seldenb@michigan.gov; smithl16@michigan.gov
Subject: FW: Ticket #23002-490657 Response Sent
Date: Thu, 7 May 2015 17:16:50 -0400

From: sheila.bw@hotmail.com
To: safewater_support@supportportal.com; bartholi@msu.edu; info@cityofflint.com; senator@stabenow.senate.gov; bennettc4@michigan.gov
Subject: RE: Ticket #23002-490657 Response Sent
Date: Thu, 7 May 2015 16:41:38 -0400
Hello,

It is unfortunate that you don't track local drinking water information. So in essence your tracking efforts are limited to the auspices of NRCS Water Division only for the conservation of farming and other natural (non-human) resources. What if, by chance, the local water source is not being accurate in their reporting of safe drinking water and source supply?

Thank you,
Sheila

http://mi.water.usgs.gov/pubs/MISC/RTSMI-0121/pdf/WTO222b.pdf

---

From: safewater_support@supportportal.com
To: sheila.bw@hotmail.com
Date: Thu, 20 Feb 2014 08:25:04 -0500
Subject: Ticket #23002-490657 Response Sent
The Safe Drinking Water Hotline has responded to your question(s).
Hello,
Thank you for contacting the Safe Drinking Water Hotline. You had some concerns regarding your local water quality. Please review the information included below:
The Safe Drinking Water Hotline does not track local drinking water information. The best source of specific

information about your drinking water is your water supplier. Water suppliers that serve the same people year-round are required to send their customers an annual water quality report called a Consumer Confidence Report (CCR). The CCR describes any contaminants that have been detected in your drinking water, how these detection levels compare to health-based national drinking water standards, and the source of your drinking water. To obtain a copy of your CCR, you may search online at http://cfpub.epa.gov/safewater/ccr/index.cfm. If your water system's report is not online, you should contact your local water provider to obtain a copy of this report. To find the telephone number for your local water provider, please check your water utility bill, your local phone book, or search online at http://cfpub.epa.gov/safewater/ccr/index.cfm.
If your city has a population in excess of 100,000, they are obligated to publish the reports online. Many local governments have sites where reports can be posted, even if a system itself does not have a site. EPA will make links from its Web site (http://water.epa.gov/drink/index.cfm) to all the reports of which it is aware (Preparing Your Drinking Water Consumer Confidence Report: Revised Guidance for Community Water Suppliers), EPA816-R-05-002).
If your city has not made the 2012 report available, please contact your state water program. They are the regulatory and enforcement agency for all public water systems in your state. The state water program should help you find the data. You can find contact information to your state by following the link below: http://water.epa.gov/drink/local/index.cfm.http://cfpub.epa.gov/safewater/ccr/index.cfm.
EPA's Safe Drinking Water Hotline answers questions about the regulations and programs developed in response to the Safe Drinking Water Act. The Safe Drinking Water Hotline provides information, including access to publications, on EPA's drinking water standards, source water protection, and underground injection wells. The Hotline also provides referrals to state public water supply supervision programs, state underground injection control programs, and state laboratory certification programs.
If you have additional questions, you may contact the Safe Drinking Water Hotline at the following number: (800) 426-4791 -- Toll Free
For more information, please visit EPA's Office of Ground Water and Drinking Water Internet web site: http://water.epa.gov/drink/index.cfm.
Thank you for your interest in safe drinking water.

Ticket Information:

Ticket #	23002-490657
Date Created	2/19/2014 02:18 PM EST
Subject	Water Quality Assessment
Question	I live in Flint Michigan. What I have learned is Michigan appears to have 2012 and 2014 reports but neither are being reported by EPA. On this side of reporting for this data, we have no information as to the status of the 2012 or 2014 data. There are automotive plants in my area and the water quality is suspected to be less than satisfactory for residents.

To update or check the status of this Ticket:
Go to: http://safewater.supportportal.com/link/portal/23002/23015/Ticket/490657
Log in, and you will be automatically taken to the Ticket page.

Sent: Tuesday, December 08, 2015 1:05 PM
To: Shekter Smith, Liane (DEQ);Sygo, Jim (DEQ);Benzie, Richard (DEQ);Busch, Stephen (DEQ);Philip, Kris (DEQ)
Subject: RE: link to flint cap improvement

The bottom of Page 50 makes a reference.....Master Plan reference: Potable Water; Pg. 187

I don't recall us having a Master Plan (greater than 187 pages) but I will verify. I may be helpful to obtain a copy of the Master Plan from the city.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Shekter Smith, Liane (DEQ)
Sent: Tuesday, December 08, 2015 11:18 AM
To: Sygo, Jim (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ); Philip, Kris (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: FW: link to flint cap improvement

FYI

From: Butler, Sonya (DEQ)
Sent: Tuesday, December 08, 2015 10:49 AM
To: Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ); Krisztian, George (DEQ)
Subject: link to flint cap improvement

http://www.imagineflint.com/Portals/tempflint/Flint%20CIP-Adopted%2001-26-2015.pdf

page 47 is infrastructure

From: Busch, Stephen (DEQ)
Sent: Friday, January 09, 2015 2:38 PM
To: Howes, Sarah (DEQ);Benzie, Richard (DEQ)
Cc: Prysby, Mike (DEQ);Shekter Smith, Liane (DEQ);Datema, Maggie (DEQ);DEQ-Legislative-Contact
Subject: RE: Flint Legislator Questions

Great! Thanks so much for your help on this.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Howes, Sarah (DEQ)
Sent: Friday, January 09, 2015 2:36 PM
To: Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ); Datema, Maggie (DEQ); DEQ-Legislative-Contact
Subject: RE: Flint Legislator Questions

Yes, Sen. Ananich and Rep. Phelps both received the advanced notice of the VN. I called Rep. Phelps and Rep. Neeley to let them know that DEQ was unable to attend or participate in the meeting earlier this week due to the short notice, but are happy to in the future.

I also left a message for Sen. Ananich saying that we can come over and brief him on the status and answer any questions. I haven't heard back yet.

Thanks you all for your work on this.
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Benzie, Richard (DEQ)
Sent: Friday, January 09, 2015 10:34 AM
To: Busch, Stephen (DEQ); Howes, Sarah (DEQ)
Cc: Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Flint Legislator Questions

Steve and Sarah,

I assume he received the advance notice of the violation with the other legislators. We could send him the summary that Mike had prepared and left with Representatives Neeley and Phelps on Tuesday, and offer to meet with him if he still has questions. But I think it would be appropriate for that information to be delivered

from Sarah or Maggie unless they advise the district to provide it to Senator Ananich's office directly and just copy them.

Richard

Richard Benzie, P.E., Chief
Field Operations Section
Office of Drinking Water and Municipal Assistance, MDEQ
517-284-6512

From: Busch, Stephen (DEQ)
Sent: Friday, January 09, 2015 8:24 AM
To: Howes, Sarah (DEQ)
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: Flint Legislator Questions

Sarah,

I know Mike, Richard, and you met with Neeley and Phelps earlier this week, but we may want to check in with Senator Ananich's office, to see if they have any questions as well. See the article below.

http://www.mlive.com/news/flint/index.ssf/2015/01/legislators_from_flint_want_st.html#incart_river

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 14, 2015 9:36 AM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ);Shekter Smith, Liane (DEQ)
Subject: Flint Emergency Financial Manager

As you may have heard, Darnell Early is transitioning from the Emergency Financial Manager for Flint to the EFM for Detroit Public Schools. It appears that Flint will be transitioning out of EFM status later this year, but Jerry Ambrose has been announced as the new EFM in Flint until that time.

http://www.mlive.com/news/flint/index.ssf/2015/01/jerry_ambrose_tapped_as_next_e.html

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Lynnette Meinz <L_MEINZ@gcdcwws.com>
Sent: Wednesday, January 14, 2015 11:19 AM
To: Berman, Jonathan (DEQ)
Cc: Matt Raysin;Tim Davidek;Prysby, Mike (DEQ);Jing Lin
Subject: RE: Genesee Co. DWRF # 7341-01 (Dalton Subdivision): Scope of Work - 4th Quarter FY 2015

Jonathon,

The Statements in our 2/27/14 e-mail still hold true below. No changes in scope are proposed. Please let me know if you have any other questions or need any additional information.

Lynnette

LYNNETTE MEINZ, P.E.
Engineer III
Genesee County Drain Commissioner's Office
Division of Water & Waste Services
G-4610 Beecher Road
Flint, MI 48532
810.732.7870 PHONE
810.732.9773 FAX

From: Berman, Jonathan (DEQ) [mailto:BERMANJ@michigan.gov]
Sent: Wednesday, January 14, 2015 10:52 AM
To: Lynnette Meinz
Cc: Matt Raysin; Tim Davidek; Prysby, Mike (DEQ)
Subject: RE: Genesee Co. DWRF # 7341-01 (Dalton Subdivision): Scope of Work - 4th Quarter FY 2015

Hi Lynnette,

Per the signed milestone schedule, today (1/14/2015) is the 4th quarter financing target deadline in which to disclose to our office any change(s) outside the MDEQ approved scope of work (if applicable) to the Genesee County DWRF # 7341-01 Phase 2 of 2 Water Main Replacement (Dalton Subdivision) from the 2010 Project Plan and the Environmental Assessment published in November 2010.

So, has there been any change(s) or do the statements in your 2/27/2014 email below still hold?

Let me know if you have any questions. Thanks.

Jonathan M. Berman
Senior Project Manager, EQA
Michigan Department of Environmental Quality
Office of Drinking Water and Municipal Assistance
Revolving Loan Section

Bermanj@michigan.gov
Phone #: 517-284-5400 (note new number)
Fax #: 517-373-4797 (note new number)

Constitution Hall – 4th Floor South (note new floor location)
525 W. Allegan
Lansing, MI 48933 (for deliveries)

P.O. Box 30241
Lansing, MI 48909-7741 (mailing)

DWRF website: www.michigan.gov/drinkingwaterrevolvingfund
SRF/SWQIF website: www.michigan.gov/cleanwaterrevolvingfund

From: Lynnette Meinz [mailto:L_MEINZ@gcdcwws.com]
Sent: Thursday, February 27, 2014 2:10 PM
To: Berman, Jonathan (DEQ)
Cc: Matt Raysin; Tim Davidek; Prysby, Mike (DEQ)
Subject: RE: Genesee Co. DWRF # 7341-01 (Dalton Subdivision): FY 2015?

Jonathon:

To confirm, the scope of the Dalton Subdivision does NOT include or extend to the Water Meter Replacement Project. The Water Meter Project will be processed as a separate Project.

Furthermore, the Dalton Subdivision scope as included in the 2010 EA, has not changed including the project components, location, size, capacity, construction footprint, and impacts. The current scope is exactly how it was portrayed and proposed in the 2010 Project Plan and Environmental Assessment.

If you have any other questions or comments, please contact us.

Thank you.

Lynnette

LYNNETTE MEINZ, P.E.
Engineer III
Genesee County Drain Commissioner's Office
Division of Water & Waste Services
G-4610 Beecher Road
Flint, MI 48532
810.732.7870 PHONE
810.732.9773 FAX

From: Berman, Jonathan (DEQ) [mailto:BERMANJ@michigan.gov]
Sent: Thursday, February 27, 2014 1:55 PM
To: Lynnette Meinz
Cc: Matt Raysin; Tim Davidek; Prysby, Mike (DEQ)
Subject: RE: Genesee Co. DWRF # 7341-01 (Dalton Subdivision): FY 2015?

Hi Lynnette,

For clarification, please confirm your 2/24 email below refers only to the Dalton Subdivision 8-inch Distribution Water Main Replacement project and does not extend to the Meter Replacement project.

Please confirm that when you write that "*The scope of work for the Dalton Subdivision 8-inch Distribution Water Main Replacement as outlined in the 2010 EA has not changed. The current scope and cost estimate are still valid.*" what you mean by scope of work "would include project components, location, size, capacity, construction footprint, and impacts" as in my 2/20 email (see attachment).

In terms of a draft plans and specifications submittal date, early/mid June 2014 is an estimate for a generic 1st Quarter DWRF FY 2015 milestone schedule. The district engineer, Mike Prysby, would have to agree to the target deadlines before MDEQ could sign off on a milestone schedule.

Thanks,

Jonathan M. Berman
Senior Project Manager, EQA
Michigan Department of Environmental Quality
Office of Drinking Water and Municipal Assistance
Revolving Loan Section

BermanJ@michigan.gov
Phone #: 517-284-5400 (note new number)
Fax #: 517-373-4797 (note new number)

Constitution Hall – 4th Floor South (note new floor location as of August 12th)
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Lansing, MI 48933 (for deliveries)

P.O. Box 30241
Lansing, MI 48909-7741 (mailing)

DWRF website: www.michigan.gov/drinkingwaterrevolvingfund
SRF/SWQIF website: www.michigan.gov/cleanwaterrevolvingfund

From: Lynnette Meinz [mailto:L_MEINZ@gcdcwws.com]
Sent: Monday, February 24, 2014 4:45 PM
To: Berman, Jonathan (DEQ)
Cc: Matt Raysin
Subject: RE: Genesee Co. DWRF # 7341-01 (Dalton Subdivision): FY 2015?

Jonathon:

Thank you for your response to DWRF #7341-01 on Thursday, February 20, 2014. To document our phone conversation today, February 24, we offer the following in response to your e-mail:

1. The scope of work for the Dalton Subdivision 8-inch Distribution Water Main Replacement as outlined in the 2010 EA has not changed. The current scope and cost estimate are still valid.
2. The legal entity to issue the bonds is still "County of Genesee".
3. The watermain is owned by Mt. Morris Township. They will utilize the example resolution that you just e-mailed today. By May 1, 2014, we will send you a copy of the passed resolution, once it is

passed. We anticipate sending you a copy of the signed resolution the week of March 10, 2014 (their next available Board Meeting).

4. It is our understanding, if the Project Plan and Environmental Assessment (EA) are not modified, the Dalton Subdivision project would be slated for First Quarter 2015 (which would require Plans and Specs be submitted mid-June 2014).
5. Although a public notice and public hearing are not required, because the Project Plan/EA is not over 5 years old, you recommend a public notice be performed again to inform the residents. We will let you know if we elect to public notice again. Previously, we did not have any public comments come forth out of the public notice or the public hearing regarding the Dalton Subdivision.
6. We may also elect to submit the DWRF – Green Project Reserve Qualification Template for Water Main Replacement and understand it is required to be submitted by the May 1, 2014 deadline also.

If any of the above information requires clarification, please let us know. Thank you for your continued assistance with this project.

Lynnette

LYNNETTE MEINZ, P.E.
Engineer III
Genesee County Drain Commissioner's Office
Division of Water & Waste Services
G-4610 Beecher Road
Flint, MI 48532
810.732.7870 PHONE
810.732.9773 FAX

From: Kevin VanSickle <kvansickle@gcdcwws.com>
Sent: Thursday, January 15, 2015 4:40 PM
To: Prysby, Mike (DEQ)
Subject: Pilot Study
Attachments: DEQ comments answers, Contrafast Pilot Proposal.doc

Mike,

I have answered the questions from the comments sent about the pilot study. I am still working with WesTech for the final proposal.

Today there was a phone conversation with Mike Winegard and he asked if there were any further comments about the PDR. You had sent some initial comments about the PDR and had stated that more would be coming. So can you give be an update if there are more comments about the PDR?

Thank you,

Kevin VanSickle
Water Plant Superintendent
Genesee County Drain Comminssioner
Division of Water & Waste Services
G-4610 Beecher Rd.
Flint, MI 48532

Direct: 810-600-4150
Mobile: PPI

GCDC WTP
Pre-treatment Contrafast
Proposed Pilot Plant Study
MDEQ Comments
12/22/2014

1. The duration of the pilot test is only 24 days which is significantly less than the 3-month minimum requested in our 10/31/2014 comments letter. We will re-iterate that the pilot study must be conducted for a minimum of three months. This will also provide each of the eight operating scenarios more than one week of pilot testing.
   The main reason for the pilot study is to determine which coagulation chemicals are best. A one month study should be able to determine this. The coagulation chemicals will be tested for ALUM and Ferric Sulfate, so two weeks will test each of the coagulations. Also Polymer will also be tested.

2. The Process Flow Diagram shows differences in the flow direction and the sludge re-cycle entry point as opposed to the full-scale clarifier shown in WesTech's Contrafast brochure. The proposed pilot plant shows flow from the rapid mix being directed into the reactor's draft tube from top to bottom which is opposite to the flow configuration shown in the full scale design. The proposed pilot also places a second sludge re-cycle inlet at the rapid-mix while the full scale design places one sludge recycle inlet at the bottom of the draft tube.
   WesTech answer:
   I have reviewed the design with my group, and we have determined we can reconfigure the flow arrangement in the pilot by making some minor changes to the piping arrangement. It has the appropriate flanges to allow this. We will make the flow directions match the full scale design.

   The pilot plant needs to be designed in the same manner as the proposed full-scale plant. Although the pilot plant may be designed to re-cycle sludge at the rapid-mix location, this cannot utilized if it is not intended to be used for full-scale treatment. Also, the flow direction through the reactor's draft tube needs to be similar to the direction used in full-scale treatment.
   See the answer above. There is a valve that closes the sludge to the rapid mix location so the sludge will only go to the reactor.

3. The full-scale design shows a short baffle wall (high velocity upflow port) to help prevent settling in the reactor as it transfers the water to the settling chamber. The pilot design (as shown in the Process Flow Diagram) does not appear to have this baffle wall.
   WesTech answer:

The process flow diagram shown in the proposal is a little bit over-simplified. This baffle wall is present in the actual pilot unit

4. The **CRITICAL DESIGN INFORMATION (1st page), TECHNICAL INFORMATION (5th page), and the Treatment Options Table (13th page)** does not appear to convey the same information.

   - The Critical Design Information sheet depicts a Basin Volume of 3,540 gal which implies no flash mix; however, the Technical Information sheet depicts 3,740 gallons being needed in order to include flash mix. Since flash mix will be part of the full-scale treatment, it needs to be included in the pilot design.
     The flash mix tank will be used

   - The Critical Design Information sheet states a hydraulic loading of 6gpm/sf; however, the Treatment Options Table lists eight treatment scenarios at 4.0 gpm/sf and 8.0 gpm/sf. Please clarify.
     see below

   - The desired full-scale tube-settler loading rate (5.5 gpm/sf) needs to be proven in the pilot study; thus, the pilot plant tube settler loading rate needs to operated at the rate closest to the desired full-scale rate. The loading rate of 6.0 gpm/sf is more representative of full-scale treatment than the 8.0 gpm/sf loading rate proposed in the pilot study. An additional (lower) loading rate should also be considered.
     The flow will be at 55 gpm, to supply the 5.5 gpm/sf to the tube settler. And a lower rate will be done as well (30 gpm)

5. The Design Basis (4th page) states Contrafast-E – Eccentric Design (Full Scale Design < 4MGD). Genesee County's full-scale WTP proposes to use four pre-treatment units (7.5 MGD each). Is the proper design basis being selected?
   WesTech answer
   Sorry this is a typo that should actually be ≥ 4 MGD. The results from this pilot unit can be scaled to up at least 14 MGD capacity units

6. The pilot study is being conducted to justify exceedance of Ten-State Standard's tube settler hydraulic loading rate of 2 gpm/sf. The pilot test also needs to confirm the ability of the tube settlers (independent of the thickener/settling unit) to perform adequately at the higher loading rates. This can be verified by comparing the turbidity of the treatment flow at the tube settler influent compared against the tube settler effluent turbidity. A sample tap immediately before the tube settler influent will need to be installed in order to perform this monitoring.

Samples before the lube settlers will be collected and compared to the effluent

7. The final report needs to discuss configuration of the pilot treatment process, types of chemical feed, sampling locations, and correlation of each treatment scenario in conjunction with sample collection.
   Will be done

8. The pilot study needs to characterize the treatment residuals (sludge generation) to establish full-scale design (storage volume, disposal options) for handling the treatment residuals. Also, coagulant choice, amount and dosage will need to be determined for design of the chemical feed systems.
   Samples of the sludge will be collected and analyzed and estimated amount of sludge generation. Dosage of the coagulants are the main reason for using the pilot study.

9. Please describe the application of the turbidity spike. What is the intended maximum spike and the duration? We recommend basing this information on historical turbidity data from nearby treatment plants on the Great Lakes.
   We are looking into how to do this.

10. How will the two flow points (Raw/Coagulated) be monitored continuously with one Hach pH monitor?
    If only monitor is provided, grab samples will be collected and analyzed. Several locations will be used to collect grab samples to analyze other parameters

From: Pieper, Julia (DEQ)
Sent: Friday, February 27, 2015 10:21 AM
To: Prysby, Mike (DEQ)
Subject: Unidentified peaks in Flint Water
Attachments: FlintFeb2015.pdf; FlintNov2013.pdf; FlintNov2014.pdf

Mike,
I have attached 3 chromatograms to illustrate what the analyst is seeing. These are all from Flint DBP1. The 2013 chromatogram shows no extra unidentified peaks; Flint was obtaining water from Detroit at this time. In the November 2014 and February 2015 chromatograms, we see unidentified hydrocarbon peaks starting at about 11 minutes. It is a little difficult to compare the chromatograms because the scaling is different. It is not common to see these extra peaks in our TTHM samples, which is why the analyst brought it to my attention.

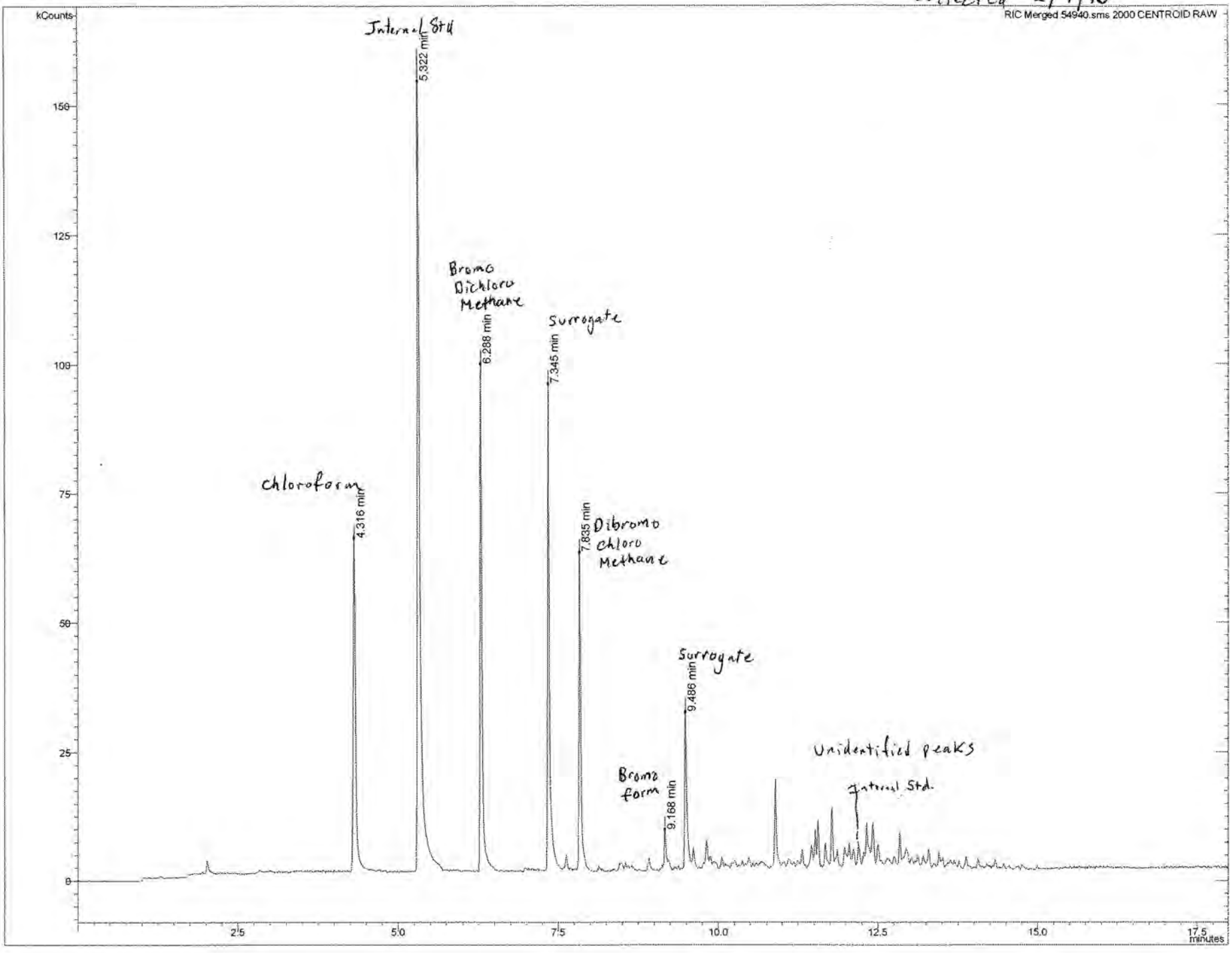
Julia Pieper
Drinking Water Coordinator
Organic Sub-Unit Manager
DEQ-RRD-Laboratory Services
pieperj2@michigan.gov
(517)-335-8076 phone
(517)-335-8562 fax

001923

Print Date: 23 Feb 2015 14:24:40

Flint DBP1
collected 2/7/15

MS Data Review Active Chromatogram Plot - 2/23/2015 2:24 PM

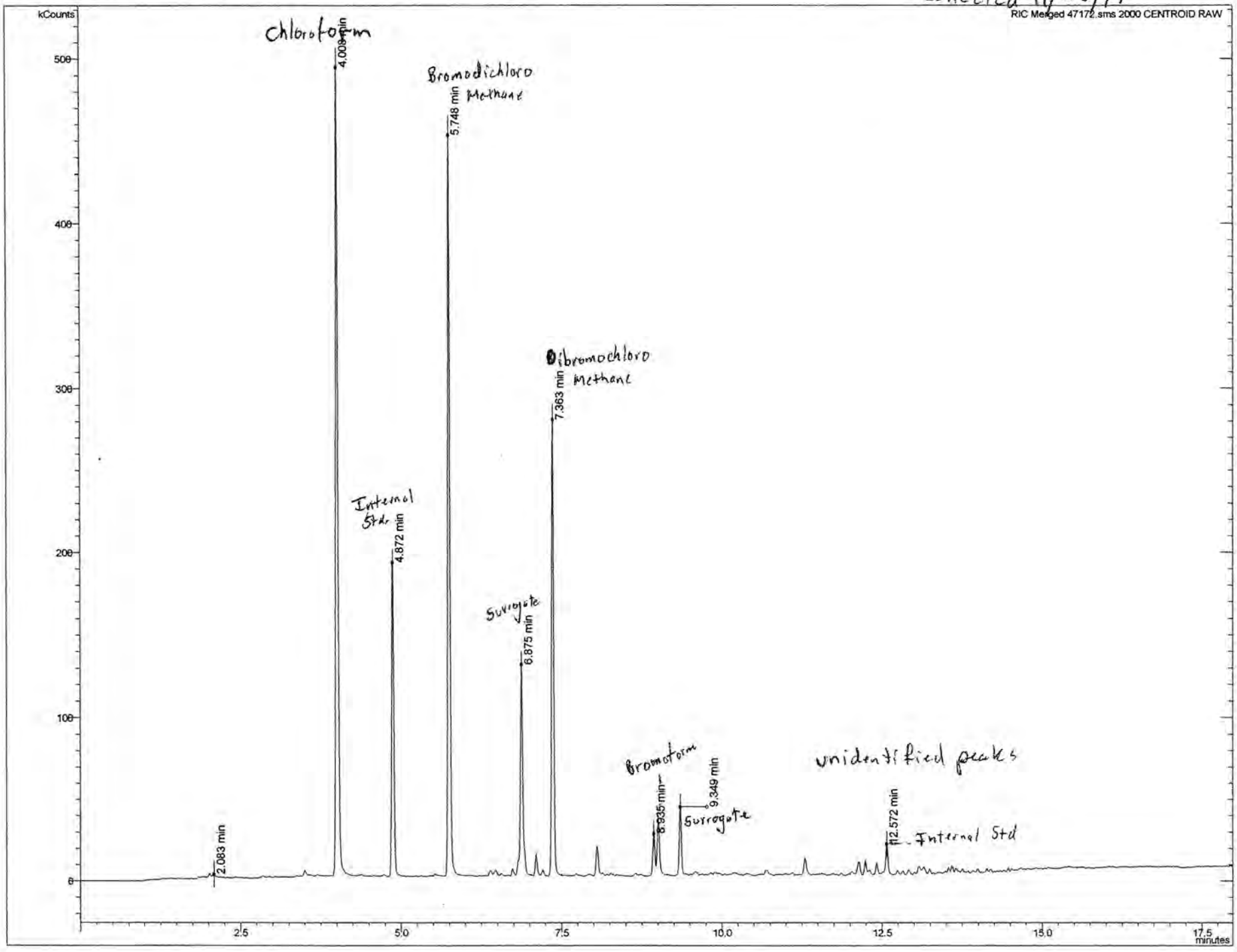


001924

Print Date: 23 Feb 2015 14:25:24

Flint DBP1
Collected 11/20/14

MS Data Review Active Chromatogram Plot - 2/23/2015 2:23 PM



From: Henry, James <jhenry@gchd.us>
Sent: Tuesday, March 10, 2015 6:40 PM
To: Howard Croft;Prysby, Mike (DEQ);Elizabeth Murphy;Natasha Henderson;Jerry Ambrose;Dayne Walling
Cc: Valacak, Mark;Cupal, Suzanne;Hasan, Shurooq;Childs, Bonnie;Hallwood, Dawn;Johnson, M.D., Gary
Subject: Information Request and Documentation
Attachments: FOIA Request Flint Water.doc

Hello everyone,

The Genesee County Health Department has made several written and verbal requests for specific information since October, 2014, including a Freedom of Information Act Request on January 27, 2015. The information still has not been received and the city's lack of cooperation continues to prevent my office from performing our responsibilities.

The Genesee County Health Department has the responsibility to conduct illness investigations and consider all potential sources, this is not optional. In 2014, Genesee County experienced a significant increase of confirmed Legionella illnesses relative to previous years. Legionella can be a deadly, waterborne disease that typically affects the respiratory system.

The increase of the illnesses closely corresponds with the timeframe of the switch to Flint River water. The majority of the cases reside or have an association with the city. Also, McLaren Hospital identified and mitigated Legionella in their water system. This is rather glaring information and it needs to be looked into now, prior to the warmer summer months when Legionella is at its peak and we are potentially faced with a crisis.

This situation has been explicitly explained to MDEQ and many of the city's officials. I want to make sure, in writing that there are no misunderstandings regarding this significant and urgent public health issue. The Trihalomethane issues "pale in comparison" to the potential public health risks of Legionella.

I am submitting the attached FOIA request again and requesting that the legal obligations of the request are met. If the information is not available, please let me know. In the past, I have requested to meet with the water plant staff and MDEQ regarding Legionella concerns. I did not receive a response from the water plant staff and MDEQ declined. I think it is in the best interest for all stakeholders that we meet and discuss the issues.

Respectfully,

Jim

Jim Henry
Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

January 27, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Water Plant Information Request

Dear FOIA Coordinator,

Under provisions of the Michigan Freedom of Information Act (MCLA 15.231 et seq; MSA 4.1801 (1) et seq) please provide copies of the following:

Provide specific water testing locations and laboratory results within the City of Flint public water system for Coliform, E-coli, Heterotrophic Bacteria and Trihalomethanes from January 1, 2010 to January 27, 2015. Provide any additional water testing that has been conducted for identifying potential public health risks. Include any available mapping of the water testing areas.

Provide a map delineating the boundaries of the City of Flint water distribution system. Include any changes to the boundaries, along with corresponding dates from January 1, 2014 to January 27, 2015.

Provide a map or list of locations, detailing dead ends, pooling, low pressure and any additional areas of concern within the City of Flint water distribution system. Include any modifications to the water distribution system addressing concerns, along with corresponding dates from January 1, 2014 to January 27, 2015.

If you determine that any of the requested information is exempt from disclosure, please detail what is being withheld and cite the exemption under FOIA. I anticipate the request being filled within five working days of receipt of this letter, as provided under FOIA. Please contact me at (810) 257-3618 if there are fees associated to comply with this request.

Sincerely,

Jim Henry
Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

From: Daugherty Johnson <djohnson@cityofflint.com>
Sent: Wednesday, March 11, 2015 11:11 AM
To: Prysby, Mike (DEQ)
Cc: Robert Bincsik;Jeff Markstrom;Dean Oparka;Brent Wright
Subject: Flint 24 in Transmission replacement
Attachments: LAN 24-inch Water Line detention analysis.pdf

Hello Mike. I have attached a letter from LAN summarizing the findings in regards to reducing the proposed transmission main from 24 inches down to 20 inches. We would like to discuss this at your earliest convenience to ensure this critical project moves forward timely. Please let us know some dates and times you are available to meet or phone conference.

DaughertyJohnson
Utilities Administrator
City of Flint

From: Busch, Stephen (DEQ)
Sent: Thursday, March 12, 2015 8:48 AM
To: Prysby, Mike (DEQ)
Subject: FW: Information Request and Documentation
Attachments: FOIA Request Flint Water.doc

Importance: High

FYI.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Shekter Smith, Liane (DEQ)
Sent: Thursday, March 12, 2015 8:41 AM
To: Wurfel, Brad (DEQ); Sygo, Jim (DEQ); Howes, Sarah (DEQ)
Cc: Shaler, Karen (DEQ); Benzie, Richard (DEQ); Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ)
Subject: FW: Information Request and Documentation
Importance: High

The district received this late Tuesday.

Steve Busch has indicated that the district has not received a meeting request from Jim Henry or the Genesee County Health Department as indicated in his email below.

The FOIA is specifically directed to the City of Flint not the DEQ.

While the change in source may have created water quality conditions that could provide additional organic nutrient source to support legionella growth, there is no evidence or confirmation of legionella coming directly from the Water Treatment Plant or in the community water supply distribution system at this time.

Seems like the next step is to communicate with DCH and possibly develop a joint strategy/response. Not sure who in Exec wants to take the lead on this. Steve Busch and Mike Prysby will continue to be lead for us on this. They have been in contact with DCH recently but only to learn that little progress has been made in identifying a source or sources for the illnesses.

Begin forwarded message:

From: "Henry, James" <jhenry@gchd.us>
Date: March 10, 2015 at 6:40:17 PM EDT
To: Howard Croft <hcroft@cityofflint.com>, "Mike Prysby (DEQ)"

<prysbym@michigan.gov>, Elizabeth Murphy <emurphy@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, Jerry Ambrose <gambrose49@gmail.com>, Dayne Walling <dwalling@cityofflint.com>
Cc: "Valacak, Mark" <MVALACAK@gchd.us>, "Cupal, Suzanne" <scupal@gchd.us>, "Hasan, Shurooq" <shasan@gchd.us>, "Childs, Bonnie" <BCHILDS@gchd.us>, "Hallwood, Dawn" <dhallwood@gchd.us>, "Johnson, M.D., Gary" <GJOHNSON@gchd.us>
Subject: Information Request and Documentation

Hello everyone,

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The Genesee County Health Department has the responsibility to conduct illness investigations and consider all potential sources, this is not optional. In 2014, Genesee County experienced a significant increase of confirmed Legionella illnesses relative to previous years. Legionella can be a deadly, waterborne disease that typically affects the respiratory system.

The increase of the illnesses closely corresponds with the timeframe of the switch to Flint River water. The majority of the cases reside or have an association with the city. Also, McLaren Hospital identified and mitigated Legionella in their water system. This is rather glaring information and it needs to be looked into now, prior to the warmer summer months when Legionella is at its peak and we are potentially faced with a crisis.

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I am submitting the attached FOIA request again and requesting that the legal obligations of the request are met. If the information is not available, please let me know. In the past, I have requested to meet with the water plant staff and MDEQ regarding Legionella concerns. I did not receive a response from the water plant staff and MDEQ declined. I think it is in the best interest for all stakeholders that we meet and discuss the issues.

Respectfully,

Jim

Jim Henry
Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

January 27, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Water Plant Information Request

Dear FOIA Coordinator,

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Sincerely,

Jim Henry

Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

From: Busch, Stephen (DEQ)
Sent: Thursday, March 19, 2015 3:05 PM
To: Benzie, Richard (DEQ);Prysby, Mike (DEQ);Shekter Smith, Liane (DEQ)
Subject: FW: Information Request and Documentation

Response from Jim Henry below.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Thursday, March 19, 2015 12:15 PM
To: Busch, Stephen (DEQ)
Cc: Valacak, Mark; Cupal, Suzanne
Subject: RE: Information Request and Documentation

Hello Mr. Busch,

Thanks for your response. I'm looking forward to working with your office moving forward. Based upon my experiences with this investigation, I think it is necessary for my communications to be candid and followed up in writing whenever possible. Our goal is to successfully conduct this investigation in efforts to better protect the public.

I agree there are ambiguities written in the FOIA request. GCHD does not have municipal water system expertise and we are continuously learning about the processes. The FOIA request is specific enough that we should have received a timely response from the City of Flint. Also, it is addressed to the City and I apologize if there were misunderstandings regarding the intended recipient.

There have not been any conclusions regarding the source of illnesses. Our team is gathering information and we suspect there may be several sources. It has been made clear that the Flint municipal water system is in compliance with the Safe Drinking Water Act. It seems reasonable that your office would be involved regardless if a potential health risk from municipal water is related to consumption, inhalation or dermal exposure. Perhaps the legislation should be revisited to better address risks.

As you mentioned, we had communications with your office in October 2014, regarding Legionella, but I also had three telephone conversations with Mr. Michael Prysby, from your office between January 21, 2015 and January 23, 2015. These conversations occurred around the same time that your office participated with the TTHM presentation in Flint. I "explicitly explained" the details of the Legionella concerns and the possible associations with the Flint municipal water system and I specifically requested to meet with your office for further discussions.

Mr. Prysby informed me that the concerns were discussed with you. I was informed there was no reason to meet because the municipal water system is in compliance with the Safe Drinking Water Act. Other than the timeframes written in your email, you are correct, I did not contact your office again until the email, dated March, 10, 2015.

GCHD has been working closely with MDCH and has consulted with CDC on several occasions regarding the epidemiological investigation. Also, we have been working with Legionella and municipal water experts, and recently with the USEPA. Based upon these discussions we have been informed that it is likely that a small amount of Legionella will survive the water treatment process at the plant and enter into the distribution system.

Our team is in the process of developing plans, which may include sampling locations within the distribution system and comparing environmental and clinical isolates. We recognize potential social, political and economic impacts regarding this investigation and need to be prepared for all outcomes. Hopefully, your office, the regulatory agency, will be available for assistance.

If a representative from your office is available to meet next week, please respond with some dates and times. I think it would be appropriate for the City to attend meetings and I will contact Mr. Croft, Flint DPW Director, after I receive a response from your office.

Thank you

Jim

Jim Henry
Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Friday, March 13, 2015 3:47 PM
To: Henry, James
Cc: Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Information Request and Documentation

Mr. Henry,

The January 27, 2015, FOIA request you provided was directed to the City of Flint, not the DEQ. The DEQ has no record of a FOIA request from your office for such information. It is our understanding that the City has responded to your FOIA request, has helped you adequately redefine your request within the City's scope of public record to address such ambiguities as "any additional areas of concern", and provided you with additional information beyond the scope of your request.

The DEQ fully recognizes the public health threat posed to individuals that contract Legionnaires' Disease with the understanding that the disease is not contracted by ingestion of potable water and therefore not regulated under the federal Safe Drinking Water Act. Your email below claims that you have explicitly explained the situation to our Department. However, since contacting our office early last October to indicate a rise in cases, we have not received any further information regarding your epidemiological investigation into this matter.

Further, conclusions that legionella is coming from the public water system without the presentation of any substantiating evidence from your epidemiologic investigation appears premature and prejudice toward that end.

It is highly unlikely that legionella would be present in treated water coming from the City of Flint water treatment plant given the treatment plant's use of ozone along with complete treatment and chlorine disinfect contact time to comply with federal surface water treatment rules for potable water. Detections of total coliform or heterotrophic bacteria in the City's public water distribution system indicate an environment where bacterial growth may be supported. However, there is no direct correlation that can be made to the presence of legionella. While total organic carbon levels in potable water may serve as a food source for bacteria growth in private plumbing system, water temperatures in the City's distribution system are below legionella growth range, and chlorine residual levels would also limit such growth.

Our office agrees that water main breaks, water leaks, and system repairs are possible vectors for legionella to enter the public water system. These should be investigated as part of your epidemiology. DEQ staff can be made available to assist GCHD and the City regarding such matters, but to date no request by GCHD for any such meeting has been received, let alone declined as alleged in your email.

If GCHD is seeking assistance to complete its epidemiological investigation regarding this matter, such resource requests should be directed to the Michigan Department of Community Health. Our Office agrees that a multi-agency partnership would be beneficial to move forward and develop a unified response. In that respect, if our Office can be of any further assistance you may contact me directly.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: "Henry, James" <jhenry@gchd.us>
Date: March 10, 2015 at 6:40:17 PM EDT
To: Howard Croft <hcroft@cityofflint.com>, "Mike Prysby (DEQ)" <prysbym@michigan.gov>, Elizabeth Murphy <emurphy@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, Jerry Ambrose <gambrose49@gmail.com>, Dayne Walling <dwalling@cityofflint.com>
Cc: "Valacak, Mark" <MVALACAK@gchd.us>, "Cupal, Suzanne" <scupal@gchd.us>, "Hasan, Shurooq" <shasan@gchd.us>, "Childs, Bonnie" <BCHILDS@gchd.us>, "Hallwood, Dawn" <dhallwood@gchd.us>, "Johnson, M.D., Gary" <GJOHNSON@gchd.us>
Subject: Information Request and Documentation

Hello everyone,

The Genesee County Health Department has made several written and verbal requests for specific information since October, 2014, including a Freedom of Information Act Request on January 27, 2015. The information still has not been received and the city's lack of cooperation continues to prevent my office from performing our responsibilities.

The Genesee County Health Department has the responsibility to conduct illness investigations and consider all potential sources, this is not optional. In 2014, Genesee County experienced a significant increase of confirmed Legionella illnesses relative to previous years. Legionella can be a deadly, waterborne disease that typically affects the respiratory system.

The increase of the illnesses closely corresponds with the timeframe of the switch to Flint River water. The majority of the cases reside or have an association with the city. Also, McLaren Hospital identified and mitigated Legionella in their water system. This is rather glaring information and it needs to

be looked into now, prior to the warmer summer months when Legionella is at its peak and we are potentially faced with a crisis.

This situation has been explicitly explained to MDEQ and many of the city's officials. I want to make sure, in writing that there are no misunderstandings regarding this significant and urgent public health issue. The Trihalomethane issues "pale in comparison" to the potential public health risks of Legionella.

I am submitting the attached FOIA request again and requesting that the legal obligations of the request are met. If the information is not available, please let me know. In the past, I have requested to meet with the water plant staff and MDEQ regarding Legionella concerns. I did not receive a response from the water plant staff and MDEQ declined. I think it is in the best interest for all stakeholders that we meet and discuss the issues.

Respectfully,

Jim

Jim Henry
Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Monday, March 30, 2015 3:00 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: FYI: Kildee Letter to EPA on SRF Loan Forgiveness
Attachments: 03-27-15 - SRF Loan Forgiveness for Flint - EPA (McCarthy).pdf

Here is the issue – Flint has an old SRF loan and they want principle forgiveness. We told them it was not allowed as PF is for initial financing....and for debt incurred on or after the enactment of the act pursuant to the approps text.

Please let me know if we should work with someone on this. thanks

Steve Marquardt
USEPA Region 5
77 West Jackson Blvd
Chicago, Illinois 60604
(312)353-3214

From: Deamer, Eileen
Sent: Monday, March 30, 2015 8:42 AM
To: Marquardt, Steve
Cc: Baltazar, Debbie; Fortin, Denise
Subject: FW: Kildee Letter to EPA on SRF Loan Forgiveness

I haven't completely gone through the letter, but giving you a heads up that we will be assigned this letter for response.
Eileen

From: Davis, CatherineM
Sent: Monday, March 30, 2015 8:30 AM
To: Eades, Cassaundra; Mims, Kathy
Cc: Deamer, Eileen
Subject: Fw: Kildee Letter to EPA on SRF Loan Forgiveness

Hi Sandy and Kathy,

Can you put this in CMS and assign it to R5? They've been working with Cong. Kildee's office on this issue.

Thanks,
Cathy Davis
Office of Congressional and Intergovernmental Relations
Office: 202-564-2703
Mobile: PPI
Email: davis.catherinem@epa.gov

Send mail to:
US Environmental Protection Agency
1200 Pennsylvania Ave, NW
MC: 1305A
Washington, DC 20460

From: Dickinson, Jordan <Jordan.Dickinson@mail.house.gov>
Sent: Friday, March 27, 2015 4:19 PM
To: Davis, CatherineM
Subject: Kildee Letter to EPA on SRF Loan Forgiveness

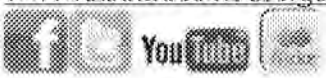
Hi Eileen,

I want you to see the letter that Congressman Kildee sent to Administrator McCarthy today. We sent a hard copy in the mail and you were cc'd. Could you make sure the Administrator and the corresponding staff see the letter?

Let me know if you have any questions.

Thanks,

Jordan Dickinson
Legislative Assistant
Congressman Dan Kildee (MI-05)
227 Cannon House Office Building
Washington, D.C. 20515
Phone: (202) 225-3611
www.dankildee.house.gov



Sign up for Congressman Dan Kildee's e-newsletter

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Tuesday, March 31, 2015 3:31 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Cc: Poy, Thomas;Bair, Rita;Damato, Nicholas;Murphy, Thomas;Shoven, Heather;Kuefler, Janet;Deltoral, Miguel
Subject: Call with EPA-Cincinnati, Office of Research and Development

Mike—below are the notes from the call we had last week regarding Legionella, as we discussed. You also mentioned that I should remind you to:

1. check with Mike Glasgow at Flint to ask about their flushing strategy; what types of flushing they are conducting; and
2. that you will send me the March MOR when you receive it in April. (Kris Donaldson from Warren office sent me the March 2014 MOR for Flint w/Detroit water.)

Both of these items above were discussed by Darren Lytle; that these documents will provide him basic data about the Flint water system.

Thank you!

Jennifer

Summary:
Last Thursday, March 26, we talked with Darren Lytle, Acting Chief of the Treatment Technology Evaluation Branch at EPA-Cincinnati, Office of Research and Development. Also in attendance was Simoni Triantafyllidou, a post-doctoral fellow working with Darren. Tom Poy, Nick Damato, Janet Kuefler, Miguel, and Jennifer were also in attendance.

Tom Poy summarized for Darren and Simoni what has occurred with the Flint drinking water since April 2014 when the change over from Detroit to Flint River water occurred, including the violations Flint has incurred since then. Miguel said that we don't know if Flint has a lead problem at this time. Due to findings by Genessee County Health Dept. that there has been an increase in the incidence of Legionella since April 2014, Genessee CHD has FOIA'd the City of Flint for operational data.

Darren talked about several treatments they have done for Legionella in 2 hospitals. The first treatment used copper/silver ions for disinfection. They did sampling at 10 locations, took water quality parameters and took microbiological samples. But they shut down the treatment due to staining of toilets on the cold water side. They did turn the treatment back on, only on the hot water side. The second treatment is a monochloramine system in the hot water feed, but the secondary effects are nitrification.

Darren said they have been doing studies for Homeland Security, collecting sediments at the bottom of storage tanks. He is finding high concentrations of Legionella in the bottom of the tanks.

Darren said anytime there is a treatment change, issues arise with the drinking water quality. Thus, what does this do to the transport of organisms like Legionella? Does is cause organisms to desorb and go into solution? The changes in water chemistry change these organisms electrostatically, and the biofilms with the distribution system pipes are disrupted and de-stabilize. Thus, different contaminants can be released. So maybe this isn't happening in people's homes; but it is happening in the distribution system pipes.

Darren thought that the incidence of Legionella must be fairly extensive for the CHD to notice and study.

We talked about the pathogen, Legionella. Simoni said that Legionella is everywhere; it is a group of opportunistic pathogens; meaning that it looks for high risk/immunocompromised hosts to infect. It may infect others but not show signs of disease because their immune system is working properly. Simoni was interested in knowing where are these cases of Legionella occurring? The background information/data is important in a study of the incidence of Legionella. Jen said she would gather data from past use of Detroit water (March 2014 monthly operation report-MOR), and recent MORs from use of Flint River water, and TTHM levels since April 2014. Tom Poy said that the Dept of Community Health is communicating with the Genessee CHD regarding their findings on Legionella.

Miguel said that extensive flushing is going on in Flint to address stagnant water that fosters bacti problems and TTHM development. But, stirring up the distribution system lines with flushing is stirring up the sediment in the pipes, and then causes a large chlorine demand, thus decreasing the chlorine residual which could promote the growth of bacteria, such as Legionella. Chlorine residual will come back gradually, though. Jen said she would check in with the State to find out the details of Flint's flushing program; is it unidirectional for example?

Darren asked, How can we help? He offered to conduct sampling and analyses for Legionella when it is needed. Tom Poy said the State is currently figuring out a communication-with-the-public plan. Mike Wright is the HQ-ORD DDBP expert and he is helping with the TTHM health effects issue. Tom Poy said that we are laying a foundation now with resources for when the State goes public with the issue of Legionella. Darren said that the labs are set-up now ready for Legionella sampling and analyses. Mark Rodgers is the Chief of the Microbial Contamination Branch at EPA-Cincinnati, ORD.

Darren is doing a RARE project in Region 3 on Legionella. EPA could work on the DNA to determine if the Legionella infecting people is from the distribution system. Type 1 Legionella causes disease, but other forms of Legionella do not cause disease. But Darren said, we must identify the source of the Legionella first.

Miguel said that we must look at the overall picture, i.e. is the system causing this increased incidence of Legionella disease? Darren said that first, we must find the source—is Legionella there? If Legionella is present, in the tanks/pipes, then disturbance of changing the water quality and flushing, could cause it to proliferate.

END

From: Busch, Stephen (DEQ)
Sent: Wednesday, April 08, 2015 2:29 PM
To: Prysby, Mike (DEQ)
Subject: FW: SMT Paragraphs for April 6 meeting

FYI.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Busch, Stephen (DEQ)
Sent: Monday, April 06, 2015 4:31 PM
To: Shekter Smith, Liane (DEQ)
Cc: Richard Benzie P.E. (BENZIER@michigan.gov)
Subject: RE: SMT Paragraphs for April 6 meeting

I think your note should cover it at this point.

Here is some other info FYI.

- No movement from DCH/GCHD on Legionella to my knowledge
- The EM transition is anticipated to begin this month.
- The WTP is having issues with plant tap Bromate levels. The RAA won't be calculated until end of June, but the average to this point is hovering just above the MCL of 10 ppb.
- Mike just issued a construction permit for a replacement of 8400 feet of 24 inch transmission main (a multi-million dollar project) that should help with some distribution issues.
- The City's consultant is also preparing a construction permit application to revamp WTP filters with GAC.
- The PN for TTHM MCL violation went out last week, so we may see more calls, next samples are in May.
- The resident with high lead levels was found to have a lead service line connected to an older parallel main. The service line has been completely replaced.
- The City has been given info to prepare an LT2 sampling plan, due 7/1 with monitoring to start 10/1.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Shekter Smith, Liane (DEQ)
Sent: Monday, April 06, 2015 3:59 PM
To: Benzie, Richard (DEQ); Busch, Stephen (DEQ); Butler, Sonya (DEQ); Crooks, Jennifer (crooks.jennifer@epa.gov); Green, Kelly (DEQ)
Cc: Devereaux, Tracy Jo (DEQ)
Subject: RE: SMT Paragraphs for April 6 meeting

There were a number of questions this morning during our SMT meeting about what is new in Flint. I'm proposing to include the following paragraph in the SMT summary. Please let me know if you have concerns or think we need to add additional information.

ODWMA shared that we are still working with and following the situation in the city of Flint. It was reported that the city council voted to return to water supplied by DWSD. However, the emergency manager and the mayor indicated that they will be continuing to use the Flint River. DEQ staff continues to provide oversight to ensure that water provided by the city of Flint meets drinking water standards. As a result of elevated trihalomethane (TTHM) levels last summer, the city continues to exceed the locational running annual average for TTHMs at one sampling site. However, all samples this quarter were low. It appears that operational changes implemented by the plant are managing previous water quality concerns. On another note, the city has requested U.S. EPA provide principal forgiveness for past low-interest SRF (State Revolving Fund) loans and DWRF (Drinking Water Revolving Fund) loans. We are awaiting an official response from EPA.

Liane

From: Thelen, Mary Beth (DEQ)
Sent: Monday, April 06, 2015 10:56 AM
To: DEQ-EXE-MGMT-TEAM; DEQ-District-Coordinators
Cc: DEQ-EXE-MGMT-TEAM-Secretaries
Subject: SMT Paragraphs for April 6 meeting
Importance: High

Please send your SMT paragraph(s) to Carrie Barr and me by Tuesday noon of this week. If you didn't have anything to report but would like to include something, please feel free to send it to us.

Thank you.

Mary Beth

Mary Beth Thelen
Management Assistant to Director Dan Wyant
Department of Environmental Quality
Constitution Hall, 6th Floor South
Phone: 517-284-6712 or 284-6700 (new numbers)
Fax: 517-241-7401
Thelenm2@michigan.gov

From: Henry, James <jhenry@gchd.us>
Sent: Wednesday, April 15, 2015 10:45 AM
To: Prysby, Mike (DEQ)
Subject: FW: Questionnaire / FOIA
Attachments: Final Genesee supplemental questionnaire 2-23-15.docx; FOIA Request Jan 27, 2015 Flint Water.doc; FOIA Request Flint Water April 2 2015.doc

Importance: High

Mike, I apologize for the delay regarding the attached FOIA's and questionnaire.

The information that you shared during the conference call last week was very helpful. I have not received a response yet from the April 2, FOIA.

Thank you

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/.

MDSS ID _____

Legionellosis Questionnaire
Genesee County, 2014-2015

Interviewer Identification

Date of Interview: _____ Interviewer's Name: _____
Health Dept.: _____ Phone Number: _____ E-mail: _____

What was the patient's outcome? ☐ *RECOVERED* ☐ *STILL ILL* ☐ *DIED* ☐ *UNK*

Patient Contact Information

Name: _____ Age: _____ Sex: ☐ M ☐ F
Street address: _____ City: _____
State: _____ Zip: _____ County: _____
Daytime Phone: _____ Evening Phone: _____

Surrogate Contact Information <*List surrogate contact information if patient is too unwell or has died*>

Name: _____
Daytime Phone: _____ Evening Phone: _____
Relationship to Patient: _____

Hello, my name is _____ and I'm calling from _____ (health department). We are investigating a cluster of respiratory illnesses in Genesee County. At this point, the source of these illnesses is still under investigation. We are hoping this interview will provide further information and answers about the illnesses. I'd like to ask you a few questions about your home and your exposures during the 2 weeks before you got sick. You do not have to answer any of the questions, but any assistance you can provide is appreciated. Do you have about 30 minutes to talk? If not now, when would be a good time for me to call back? _____

<If the case is from more than 1 month prior, the following text may be used: >
It might be helpful for you to collect documents such as a calendar, receipts, credit card or bank statements to jog your memory about your activities and where you were in the 2 weeks prior to getting sick. The only information we would ask you to share from these are dates and locations. Would you like me to call you back after you have time to collect these materials? When would be a convenient day and time for me to call you back? _____

I have that your first symptom started on *<insert onset date>* _____. Is this correct?

☐ Yes ☐ No ☐ Not sure

If no, what was the first date you started feeling sick? ____/____/_____

List dates of exposure period: from ____/____/____ *to* ____/____/____ *<The exposure period includes the 2 weeks before the date of illness onset>*

MDSS ID _____

Illness Information

1.) During your illness, did you have any of the following symptoms?

	Check one:		
	YES	NO	UNK
Diagnosis of pneumonia			
Fever If yes, highest temp:_____			
Chills			
Cough			
Nausea			
Vomiting			
Diarrhea			
Aches or muscle pains			
Chest pain			
Shortness of breath			
Sore throat			
Headaches			
Other symptoms (*specify*):			

Exposure Information

2.) How long have you lived at your current residence? _____

<If they have moved since the listed exposure period, indicate that you are asking about the house they lived in prior to becoming sick>

a.) If you moved after the exposure period/illness, what was your previous residence address? _____

3.) Where did you get your tap (drinking and other household use) water from between ___/___/___ and ___/___/___ ? *<Exposure period from above>*

- ☐ 1. City of Flint Water
- ☐ 2. City of Flint Township Water
- ☐ 3. Other municipal water system
- ☐ 4. Private well
- ☐ 5. Unknown
- ☐ 6. Other _____

4.) During the last year, has the water pressure at your residence changed? ☐ Yes ☐ No ☐ Not Sure

a.) If yes, did the water pressure: ☐ Increase ☐ Decrease

b). If yes, when did the water pressure change occur? _____

MDSS ID _____

5.) During the last year, has the water quality (appearance, taste, smell) at your residence changed?
☐Yes ☐No ☐Not Sure
a.) If yes, please describe the change in the water quality:_____
_____
b). If yes, when did the water quality change occur? _____

6.) Prior to your illness, did you make any recent plumbing changes or repairs at your residence?
☐Yes ☐No ☐Not sure
a.) If yes, please describe the changes/repairs and give the dates the work was done.
_____
_____

7.) Prior to your illness, were there any water main breaks or other water line issues that affected the water at your residence, including boil water advisories? ☐Yes ☐No ☐Not sure
a.) If yes, please describe the water main/line issues or boil water advisories and give the dates they occurred.
_____
_____

I'd like to ask you some questions about what you did during the 2 weeks **before** you got sick.
The time period I'm asking about is between ___/___/___ and ___/___/___.*<Exposure period>*
During this 2 week period, did you:

8.) Work or volunteer, either full or part time? ☐Yes ☐No ☐Not sure
a.) If yes, complete the following table:

Job description	Company	Location	Any exposure to misty water?

9.) Spend any time in a hospital, doctor's office, clinic, or dentist office as a patient, visitor, employee, or volunteer? ☐Yes ☐No ☐Not sure
a.) If yes, check all that apply:

Exposure	Date(s)	Reason for Visit	Name & City of Hospital/ Office/ Clinic	Name of Doctor
Inpatient ☐	Admission_____ Discharge_____			
Outpatient ☐				
Visitor ☐				
Employee ☐				
Volunteer ☐				

10.) Visit, reside, or work in a long term care facility, nursing home, assisted living facility, or senior living facility? ☐Yes ☐No ☐Not sure

MDSS ID _____

a.) If yes, complete the following table:

Exposure	Date(s)	Name & City of Facility
Resident ☐		
Visitor ☐		
Employee ☐		

11.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you spend any nights away from home (excluding healthcare settings)? ☐Yes ☐No ☐Not sure

a.) If yes, complete the following table: *<prompts: hotel, campground, cabin, cruise, second home, with family, etc.>*

Accommodation Type/Name	Address Street, City, State	Floor/Room No.	Dates of Stay	
			Arrival	Departure

12.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you visit any of the following community venues?

	Check one:					
Venue	YES	NO	UNK	Date(s)	Name of Venue	Address
Hotel (*without* staying overnight – e.g. dinner, wedding)						
Auditorium						
Barbershop or Hair salon						
Car wash						
Casino						
Church or Place of worship						
Gym or Work out facility						
Grocery store						
Home improvement store						
Spa or Nail salon						
Mall or Department store						
Movie theater						
Other (*specify*)						

13.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you have exposure to any of the following water sources, either ***at home*** or while ***away from home***?

MDSS ID _____

Exposures ***at home***	Check one: YES	NO	UNK	Dates (s)	Description: Name (or Type)/Location
Shower					
Use a detachable shower head or hose					
Hot tub, whirlpool spa, Jacuzzi tub					
Sat NEAR a working hot tub or whirlpool spa but did not get in					
Steam room or wet sauna					
Humidifier (whole house or portable)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Respiratory therapy machine (e.g. nebulizer, CPAP, BiPAP, etc.)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Other (*specify*)					

Exposures ***away from home***	YES	NO	UNK	Dates (s)	Description: Name (or Type)/Location
Shower at gym, work, other location					
Use a detachable shower head or hose					
Hot tub, whirlpool spa, Jacuzzi tub					
Sat NEAR a working hot tub or whirlpool spa but did not get in					
Humidifier (whole house or portable)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Pool/splash pad/waterpark					
Recreational or cooling misters					
Steam room or wet sauna					
Decorative fountain					
Outdoor watering hose or sprinkler					
Beach, lake, pond, river, creek, etc.					
Other (*specify*)					

Medical History

Now I'm going to ask a few questions about your medical history and health behaviors.

14.) Have you ever been told by a healthcare provider that you had any of the following conditions:

MDSS ID _____

Condition	Check one: YES	NO	UNK	Comments
Chronic kidney disease				
Weakened immune system (due to cancer, chemotherapy , radiation therapy, immunosuppressive meds, HIV, organ transplant, etc.)				
Diabetes				
Chronic lung disease (COPD, emphysema)				
Asthma or chronic bronchitis				
Heart disease or congestive heart failure				
Liver disease				
Other conditions (*specify*)				

15.) Health behaviors:

	Check one: YES	NO	Quantity per day (packs or drinks)	Duration (years)
Are you currently a smoker?				
Are you a former smoker?				
Do you drink alcohol?				

16.) Do you know anyone else with similar symptoms? ☐ Yes ☐ No ☐ Not sure

a.) If yes, complete the following table:

Name	Phone	State of Residence	Details of Shared Exposure

Additional Comments _____

_____

_____

_____

_____

Thank you so much for taking the time to answer these questions. Do you have any questions that I can help answer? If you have any questions or remember any further details later, please contact the _____ (health department) at phone: _____.

Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

January 27, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Water Plant Information Request

Dear FOIA Coordinator,

Under provisions of the Michigan Freedom of Information Act (MCLA 15.231 et seq; MSA 4.1801 (1) et seq) please provide copies of the following:

Provide specific water testing locations and laboratory results within the City of Flint public water system for Coliform, E-coli, Heterotrophic Bacteria and Trihalomethanes from January 1, 2010 to January 27, 2015. Provide any additional water testing that has been conducted for identifying potential public health risks. Include any available mapping of the water testing areas.

Provide a map delineating the boundaries of the City of Flint water distribution system. Include any changes to the boundaries, along with corresponding dates from January 1, 2014 to January 27, 2015.

Provide a map or list of locations, detailing dead ends, pooling, low pressure and any additional areas of concern within the City of Flint water distribution system. Include any modifications to the water distribution system addressing concerns, along with corresponding dates from January 1, 2014 to January 27, 2015.

If you determine that any of the requested information is exempt from disclosure, please detail what is being withheld and cite the exemption under FOIA. I anticipate the request being filled within five working days of receipt of this letter, as provided under FOIA. Please contact me at (810) 257-3618 if there are fees associated to comply with this request.

Sincerely,

Jim Henry
Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

April 2, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Municipal Water Information Request

Dear FOIA Coordinator,

Under provisions of the Michigan Freedom of Information Act (MCLA 15.231 et seq; MSA 4.1801 (1) et seq) please provide the following:

Please provide the dates and specific locations of the water main breaks for 2014. Please provide an electronic version with the address data file, if possible.

Please provide dates and specific locations of flushing activities within a mile radius around McLaren Hospital, Flint for 2014.

Please provide a copy of the Veolia presentation that was displayed at the Technical Advisory Committee on March 4, 2015. If possible please provide an electronic version.

Please provide the monitoring locations and results for heterotrophic bacteria for 2013 through 2014.

If you determine that any of the requested information is exempt from disclosure, please detail what is being withheld and cite the exemption under FOIA. I anticipate the request being filled within five working days of receipt of this letter, as provided under FOIA. Please contact me at (810) 257-3618 if there are fees associated to comply with this request.

Sincerely,

Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

cc: Crystal Olmstead, Flint City
Howard Croft, Flint City

From: Henry, James <jhenry@gchd.us>
Sent: Wednesday, April 22, 2015 2:03 PM
To: Howard Croft;ajones@cityofflint.com;Prysby, Mike (DEQ)
Subject: FW: FOIA Request
Attachments: FOIA Request Flint Water April 2 2015.doc

Good afternoon,

Howard,
Would you please look into the attached request? I sent it on April 2, 2015 and haven't heard back.

Mike/Howard,
Would it be possible to arrange a meeting sometime soon, maybe the next time Mike conducts a site visit in Flint?

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Henry, James
Sent: Thursday, April 2, 2015 4:57 PM
To: 'ajones@cityofflint.com'; 'Crystal Olmstead'; Howard Croft
Subject: FOIA Request

Good afternoon,

Please see the attached FOIA Request. Please let me know if there is confusion. I can clarify as needed.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
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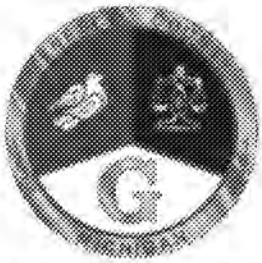
E-mail jhenry@gchd.us



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Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

April 2, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Municipal Water Information Request

Dear FOIA Coordinator,

Under provisions of the Michigan Freedom of Information Act (MCLA 15.231 et seq; MSA 4.1801 (1) et seq) please provide the following:

Please provide the dates and specific locations of the water main breaks for 2014. Please provide an electronic version with the address data file, if possible.

Please provide dates and specific locations of flushing activities within a mile radius around McLaren Hospital, Flint for 2014

Please provide a copy of the Veolia presentation that was displayed at the Technical Advisory Committee on March 4, 2015. If possible please provide an electronic version.

Please provide the monitoring locations and results for heterotrophic bacteria for 2013 through 2014.

If you determine that any of the requested information is exempt from disclosure, please detail what is being withheld and cite the exemption under FOIA. I anticipate the request being filled within five working days of receipt of this letter, as provided under FOIA. Please contact me at (810) 257-3618 if there are fees associated to comply with this request.

Sincerely,

Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

cc: Crystal Olmstead, Flint City
Howard Croft, Flint City

From: Busch, Stephen (DEQ)
Sent: Friday, April 24, 2015 2:33 PM
To: Johnson, Shannon (DCH)
Cc: Prysby, Mike (DEQ)
Subject: RE: City of Flint water testing results
Attachments: Flint-WaterQualityData-3-2015.pdf

Shannon,

Attached is what I have through March.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Johnson, Shannon (DCH)
Sent: Thursday, April 23, 2015 4:15 PM
To: Busch, Stephen (DEQ)
Subject: City of Flint water testing results

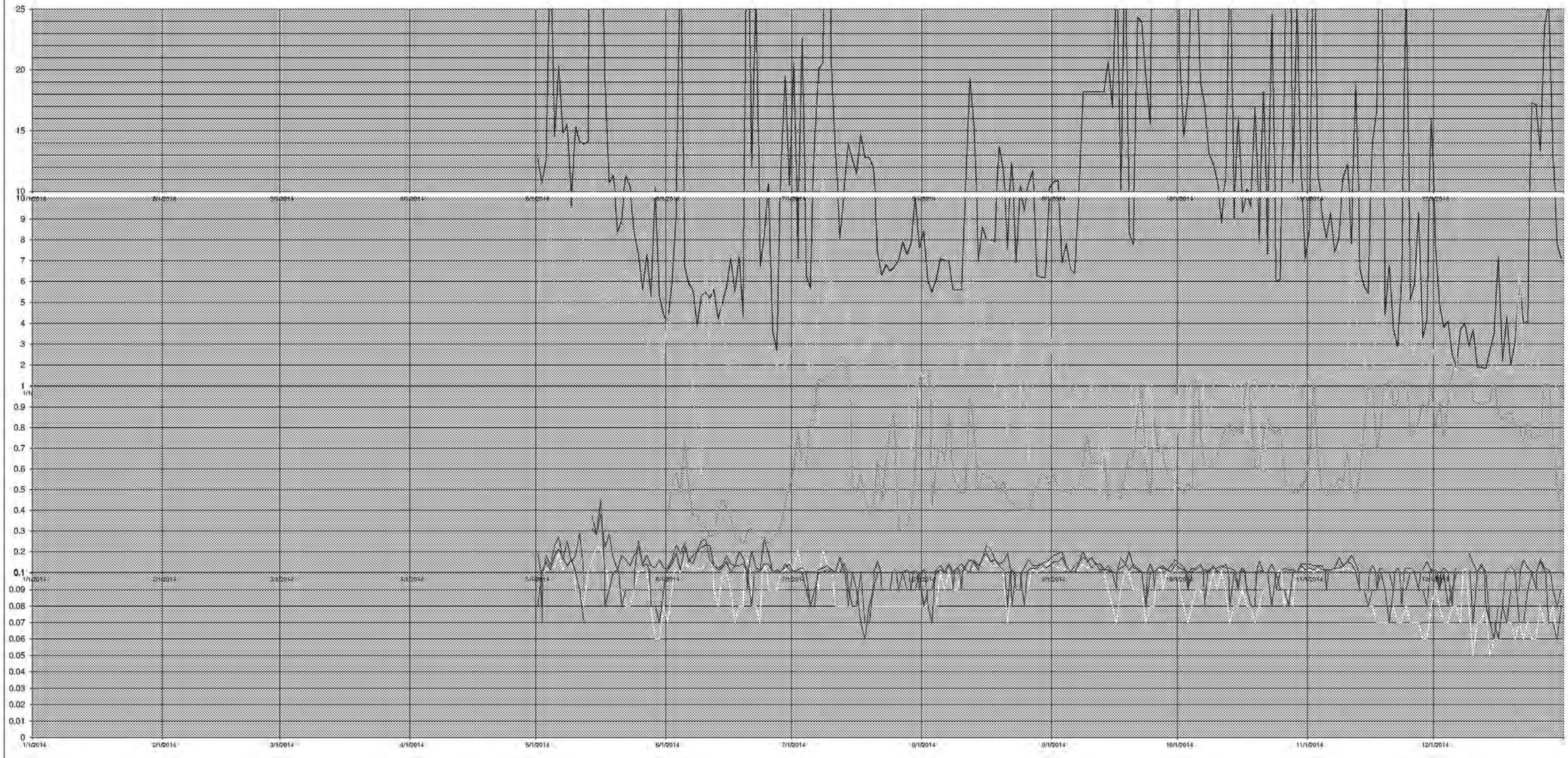
Hi Steve,

You had mentioned in our meeting the other week that you would be able to share the water testing spreadsheet. Would it be possible for us to get a copy of that so we can share it with the Genesee Health Department? I know this was part of the information they were looking for.

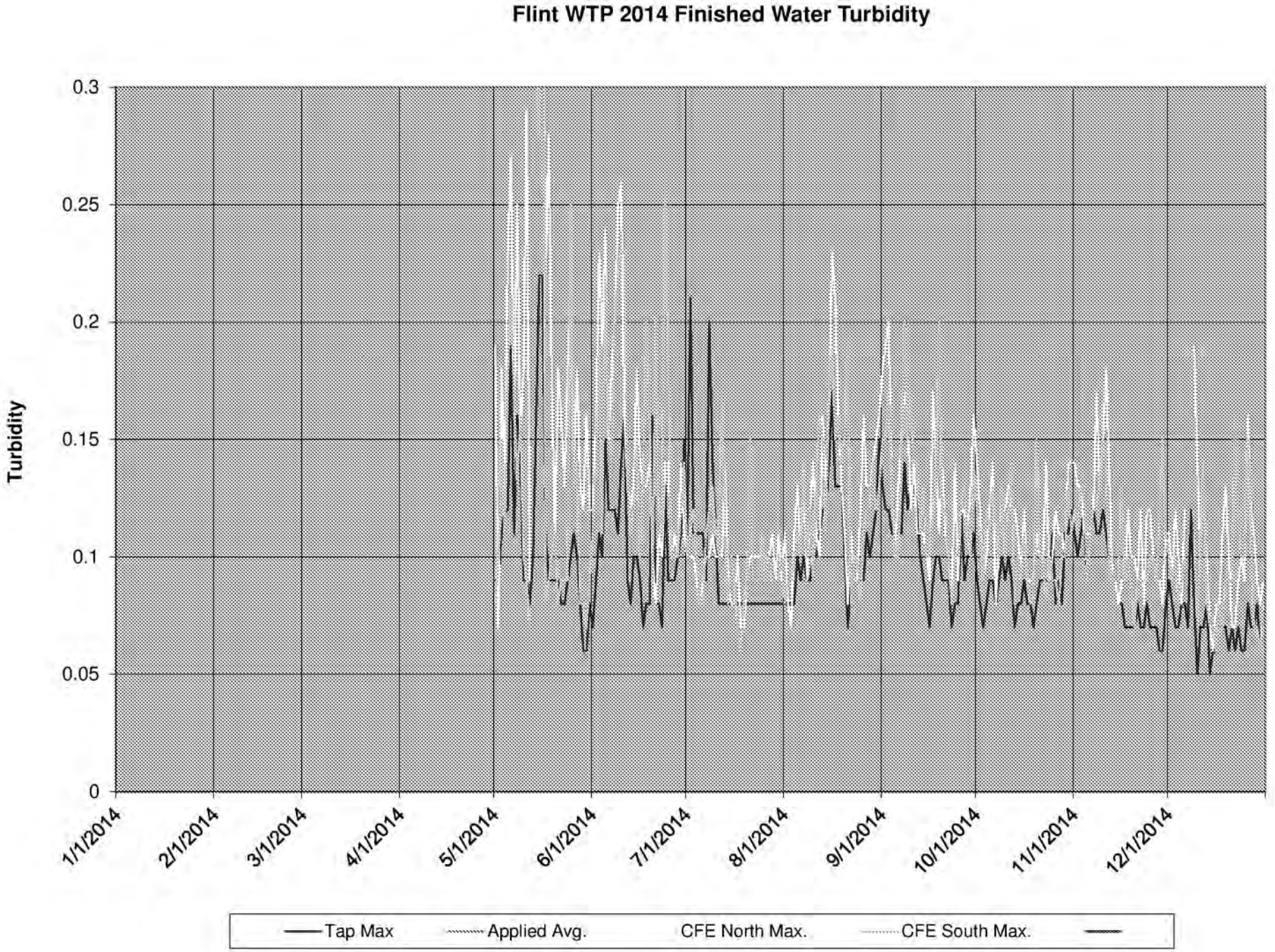
Thanks for your help.

Best,
Shannon Andrews Johnson, MPH
Infectious Disease Epidemiologist
Michigan Dept. of Health and Human Services
201 Townsend St., CVB 5th Floor
Lansing, MI 48913
Phone: 517-335-8165
Fax: 517-335-8263

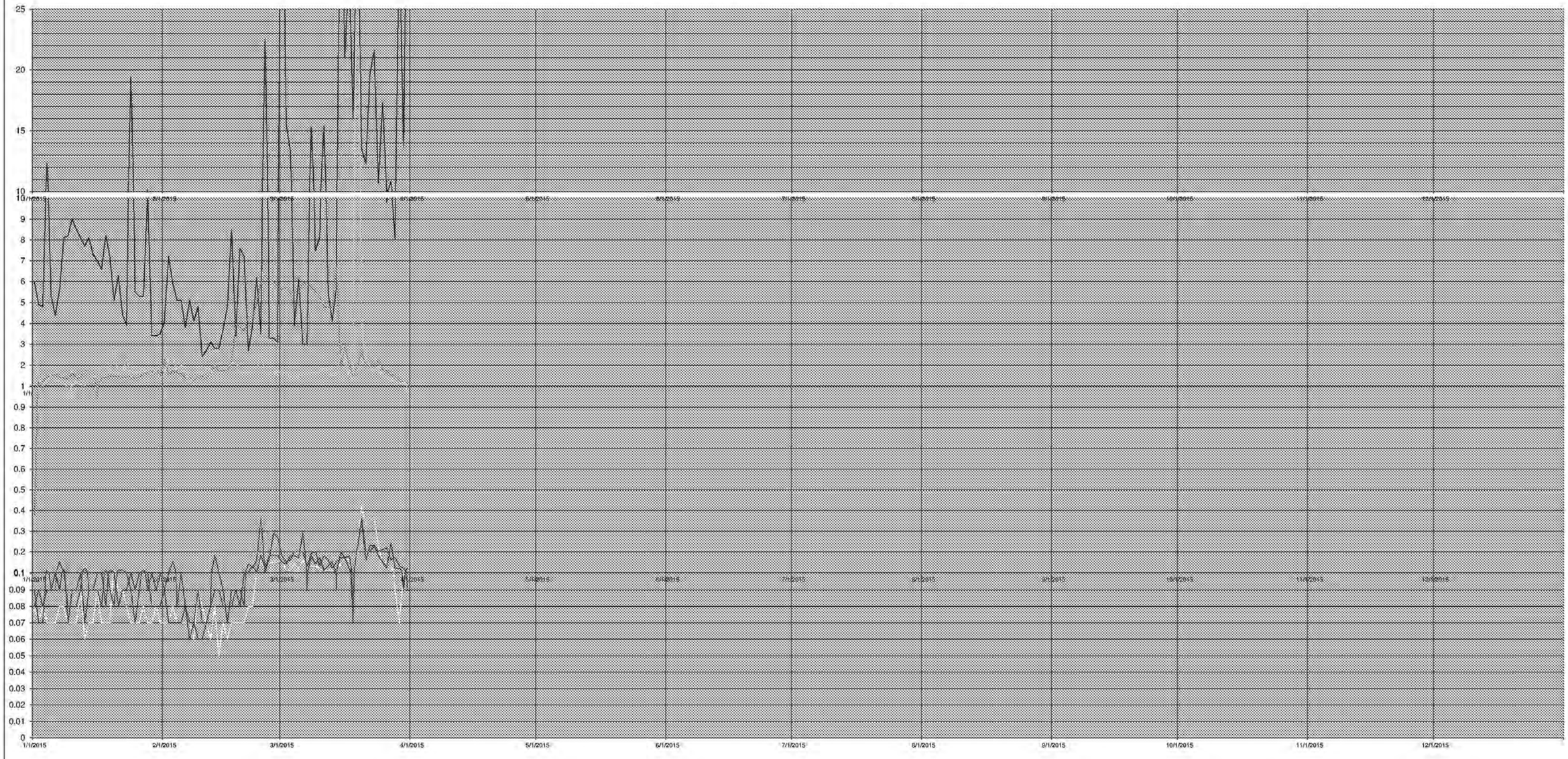
Flint WTP 2014 Turbidity Comparison



—Raw Max. —Settled Avg. Tap Max Applied Avg. —CFE North Max. —CFE South Max.

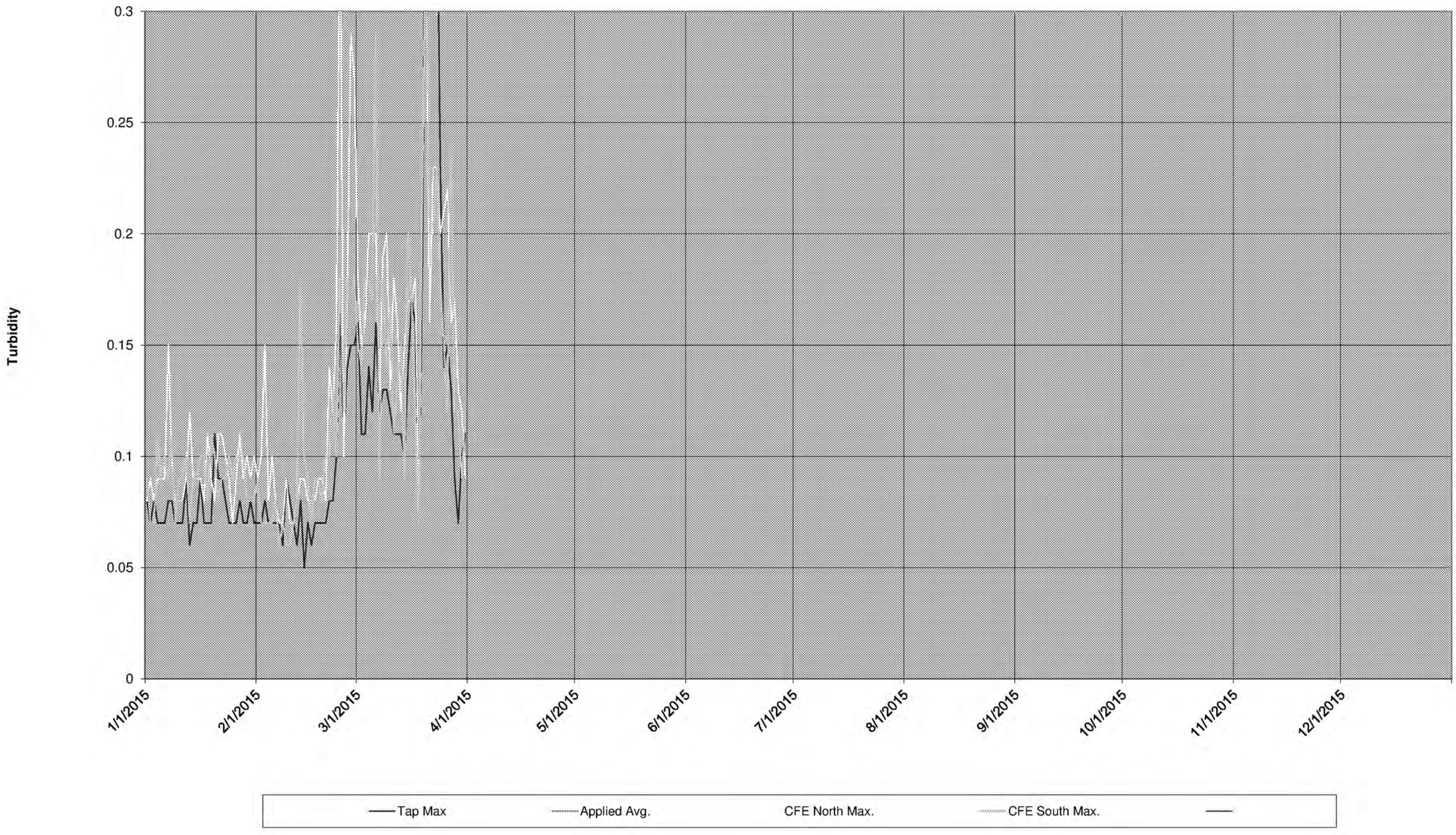

Flint WTP 2014 Finished Water Turbidity
Turbidity
0.3
0.25
0.2
0.15
0.1
0.05
0
1/1/2014
2/1/2014
3/1/2014
4/1/2014
5/1/2014
6/1/2014
7/1/2014
8/1/2014
9/1/2014
10/1/2014
11/1/2014
12/1/2014
Tap Max
Applied Avg.
CFE North Max.
CFE South Max.

Flint WTP 2015 Turbidity Comparison



—Raw Max. ---Settled Avg. Tap Max ····Applied Avg. —CFE North Max. —CFE South Max. ----

Flint WTP 2015 Finished Water Turbidity



2014 Flint WTP Water Quality Data

Raw Water

2014	Days	Hardness (ppm)			Turbidity (NTU)			Color			Alkalinity (ppm)			Total Coliform (CFU/100 mL)			TOC			Nitrate (ppm)			Fluoride (ppm)			TTHM (ppb)			HAA5 (ppb)			pH			HPC		
		Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.
January	31																																			
February	28																																			
March	31																																			
April	30																																			
May	31	254	286	232	12.3	71.7	3.5				207	216	184	2191	16328	126							0.15	0.16	0.14	NS	NS	NS	NS	NS	NS	8.27	8.44	8.05	9170	14760	16.1
June	30	268	280	252	4.55	39.4	1.9				223	232	216	3640	12262	62	9	9	9				0.16	0.18	0.14	NS	NS	NS	NS	NS	NS	8.1	8.34	7.88	4822	12460	960
July	31	249	273	227	8.41	49.5	4.9				205	226	182	9056	48329	1866	8.44	8.44	8.44				0.18	0.22	0.15	NS	NS	NS	NS	NS	NS	8.13	8.51	7.68	7255	14760	1180
August	31	235	248	221	6.23	19.3	4.7				194	200	185	5171	22398	1232	8.48	8.48	8.48				0.19	0.2	0.16	NS	NS	NS	NS	NS	NS	8.09	8.39	7.59	6831	14760	900
September	30	243	251	235	9.13	73.4	5.5				202	209	192	8097	31062	1918	7.36	7.36	7.36				0.19	0.24	0.16	NS	NS	NS	NS	NS	NS	8.13	8.41	7.78	4398	14760	1360
October	31	261	280	249	9.23	48.2	5.7				214	237	202	1979	15402	148	7.38	7.38	7.38				0.21	0.23	0.18	NS	NS	NS	NS	NS	NS	8.25	8.4	7.97	2914	14760	200
November	30	301	321	281	6.17	36.3	2.5				240	255	149	1502	19608	20	7.27	7.27	7.27				0.22	0.26	0.18	NS	NS	NS	NS	NS	NS	8.4	8.57	8.16	1467	5140	40
December	31	317	334	289	4.95	25.6	1.6				258	270	232				6.49	6.49	6.49				0.22	0.24	0.19	NS	NS	NS	NS	NS	NS	8.24	8.43	7.99	1670	14760	0
Annual		179	334	221	5.1	73.4	1.6	0.0	0	0	146	270	149	1039	1600	0	8.29	9	6.49	NS	NS	NS	0.13	0.26	0.14	NS	NS	NS	NS	NS	NS	5.50	8.57	7.59	4480.1	14760	0

Treated Water

2014	Hardness (ppm)			Turbidity (NTU)			Color			Alkalinity (ppm)			Total Coliform (CFU/100 mL)			TOC			Nitrate (ppm)			Fluoride (ppm)			TTHM (ppb)			HAA5 (ppb)			pH			HPC		
	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.
January																																				
February																																				
March																																				
April																																				
May	206	242	120	0.12	0.45	0.06				113	138	60	0	0	0							0.16	0.34	0.13	100.0	162	75	49.6	64	38	7.37	7.71	7.07	0	2	0
June	205	266	156	0.13	0.26	0.08				108	172	66	0	0	0	3.63	3.63	3.63	0.4	0.4	0.4	0.16	0.45	0.12							7.48	7.81	7	0	0	0
July	169	193	147	0.1	0.21	0.05				62	85	31	0	0	0	2.67	2.67	2.67				0.63	0.88	0.14							7.62	7.94	7.35	0	2	0
August	155	176	139	0.1	0.23	0.06				82	101	50	0	0	0	4.06	4.06	4.06				0.66	0.83	0.53	142.0	196	112	30.9	43	17	7.78	8.09	7.43	0	2	0
September	153	175	120	0.1	0.2	0.07				82	104	51	0	0	0	3.3	3.3	3.3				0.67	0.72	0.57							7.82	8.11	7.44	0	2	0
October	163	197	144	0.11	0.15	0.06				80	107	68	0	0	0	2.98	2.98	2.98	0	0	0	0.67	0.74	0.59							7.71	8.11	7.41	0	0	0
November	175	213	146	0.09	0.18	0.06				88	122	60	0	0	0	3.41	3.41	3.41				0.64	0.76	0.46	50.0	94	33	16.4	24	5	7.87	8.45	7.29	0	2	0
December	192	210	168	0.07	0.19	0.05				88	1115	60	0	0	0	2.59	2.59	2.59				0.66	0.77	0.58							8.07	8.49	7.41	1	4	0
Annual	119	266	120	0.07	0.45	0.05	0	0	0	59	1115	31	0	0	0	3.56	4.06	2.59		0.4	0	0.36	0.88	0.12	97.3	196	33	32.3	64	5	5.18	8.49	7	0.08	4	0

2015 Flint WTP Water Quality Data

Raw Water 2015	Days	Hardness (ppm) Avg.	Hardness (ppm) Max.	Hardness (ppm) Min.	Turbidity (NTU) Avg.	Turbidity (NTU) Max.	Turbidity (NTU) Min.	Color Avg.	Color Max.	Color Min.	Alkalinity (ppm) Avg.	Alkalinity (ppm) Max.	Alkalinity (ppm) Min.	Total Coliform (<1/100 mL) Avg.	Total Coliform (<1/100 mL) Max.	Total Coliform (<1/100 mL) Min.	TOC Avg.	TOC Max.	TOC Min.	Nitrate (ppm) Avg.	Nitrate (ppm) Max.	Nitrate (ppm) Min.	Fluoride (ppm) Avg.	Fluoride (ppm) Max.	Fluoride (ppm) Min.	TTHM (ppb) Avg.	TTHM (ppb) Max.	TTHM (ppb) Min.	HAA5 (ppb) Avg.	HAA5 (ppb) Max.	HAA5 (ppb) Min.	pH Avg.	pH Max.	pH Min.	HPC Avg.	HPC Max.	HPC Min.
January	31	324	344	311	5.17	19.4	2.7				258	272	245	820	2994	40	7.62	7.62	7.62				0.21	0.25	0.19	NS	NS	NS	NS	NS	NS	7.95	8.31	7.59	991	5980	60
February	28	352	366	339	3	22.5	2.1				280	295	228	141	365	41	5.95	5.95	5.95				0.23	0.24	0.21	NS	NS	NS	NS	NS	NS	7.95	8.11	7.75	114	183	62
March	31	290	366	211	8.7	47.2	2.4				233	297	171	8788	48392	98	7.22	7.22	7.22				0.2	0.26	0.14	NS	NS	NS	NS	NS	NS	7.98	8.27	7.55	3155	14760	43
April	30																									NS	NS	NS	NS	NS	NS						
May	31																									NS	NS	NS	NS	NS	NS						
June	30																									NS	NS	NS	NS	NS	NS						
July	31																									NS	NS	NS	NS	NS	NS						
August	31																									NS	NS	NS	NS	NS	NS						
September	30																									NS	NS	NS	NS	NS	NS						
October	31																									NS	NS	NS	NS	NS	NS						
November	30																									NS	NS	NS	NS	NS	NS						
December	31																									NS	NS	NS	NS	NS	NS						
Annual		79	366	211	1.4	47.2	2.1	0.0	0	0	63	297	171	1247	1600	0	1.72	7.62	5.95	NS	NS	NS	0.05	0.26	0.14	NS	NS	NS	NS	NS	NS	1.96	8.31	7.55	0.0	14760	43

Treated Water 2015	Days	Hardness (ppm) Avg.	Hardness (ppm) Max.	Hardness (ppm) Min.	Turbidity (NTU) Avg.	Turbidity (NTU) Max.	Turbidity (NTU) Min.	Color Avg.	Color Max.	Color Min.	Alkalinity (ppm) Avg.	Alkalinity (ppm) Max.	Alkalinity (ppm) Min.	Total Coliform (<1/100 mL) Avg.	Total Coliform (<1/100 mL) Max.	Total Coliform (<1/100 mL) Min.	TOC Avg.	TOC Max.	TOC Min.	Nitrate (ppm) Avg.	Nitrate (ppm) Max.	Nitrate (ppm) Min.	Fluoride (ppm) Avg.	Fluoride (ppm) Max.	Fluoride (ppm) Min.	Distribution TTHM (ppb) Avg.	Distribution TTHM (ppb) Max.	Distribution TTHM (ppb) Min.	Distribution HAA5 (ppb) Avg.	Distribution HAA5 (ppb) Max.	Distribution HAA5 (ppb) Min.	pH Avg.	pH Max.	pH Min.	HPC Avg.	HPC Max.	HPC Min.
January		189	218	165	0.07	0.15	0.06				73	98	44	0	0	0	3.21	3.21	3.21				0.47	0.7	0.19							7.74	8.24	7.31	2	38	0
February		197	244	168	0.08	0.36	0.05				76	127	47	0	0	0	2.07	2.07	2.07	1.3	1.3	1.3	0.57	0.64	0.48	20	29	15	8.1	9	2	7.84	8.69	7.54	0	0	0
March		208	243	151	0.13	0.42	0.07				104	135	58	0	0	0	2.97	2.97	2.97				0.57	0.66	0.48							7.89	9.9	7.3	0	0	0
April																																				
May																																				
June																																				
July																																				
August																																				
September																																				
October																																				
November																																				
December																																				
Annual		49	244	151	0.02	0.42	0.05	0	0	0	21	135	44	0	0	0	0.68	3.21	2.07	0	1.3	1.3	0.13	0.7	0.19	#DIV/0!	29	15	#DIV/0!	9	2	1.93	9.9	7.3	0.17	38	0

Chlorine Applied

	2014				2015				2016				2017				2018				2019				2020				2021				2022				2023				2024			
	Inter		Post		Inter		Post		Inter		Post		Inter		Post		Inter		Post		Pre		Inter		Pre		Inter		Pre		Inter		Pre		Inter		Pre		Inter		Pre		Inter	
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
Jan					1.8	2.1	3	3.5																																				
Feb					2.1	2.3	2.6	3.1																																				
March					2.4	2.9	3.1	4.9																																				
April																																										
May	5	6.9	0.4	1.4																																						
June	4.7	5.5	2.9	4																																						
July	3.9	5.3	3.8	5.2																																						
August	3.3	4.1	3.5	4.4																																						
Sept	3.1	3.9	3.9	4.8																																						
Oct	2.5	2.9	3.8	4.5																																						
Nov	2	2.5	3.4	4.2																																						
Dec	1.9	2.1	2.9	3.8																																						
AVG.	3.30		3.08		2.10		2.90		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#####		#DIV/0!		#####		#DIV/0!		#####		#DIV/0!		#####		#DIV/0!		#####		######		#####		#DIV/0!	
MAX.		6.9		5.2		2.9		4.9		0		0		0		0		0		0		0		0.00		0		0		0		0		0		0		0		0		0		0

OVERALL AVG.	Pre*	Inter	6/2005 - 2011 Avg.	Pre	Inter
	#DIV/0!	#DIV/0!		0	#DIV/0!

* When in use

MINIMUM RESIDUAL

	2014				2015				2016				2017				2018				2019				2020				2021				2022				2023				2024			
	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min	Applied	Filtered	Finished	Tap Min
Jan						0.4	2.3	1.5																																				
Feb						0.3	1.7	1.3																																				
March						0.3	1.7	1.3																																				
April																																											
May		1.2	1.4	1.2																																						
June		0.3	1.4	1.2																																						
July		0.2	1.3	1.3																																						
August		0.2	1.9	0.8																																						
Sept		0.2	1.9	1.2																																						
Oct		0.5	2.6	1.9																																						
Nov		0.2	2.4	1.8																																						
Dec		0.4	2.2	1.7																																						
MINIMUM	0.00	0.20	1.30	0.80	0.00	0.30	1.70	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CHEMICAL STORAGE (MIN. DAYS)

CHLORINE

	2014	2015	2003	2004	2005	2006	2007	2008	2009	2010	2011
Jan		18									
Feb		8									
March		19									
April											
May	20										
June	20										
July	16										
August	10										
Sept	15										
Oct	25										
Nov	15										
Dec	30										
MINIMUM	10	8	0	0	0	0	0	0	0	0	0

FERRIC CHLORIDE

	2014	2015	2003	2004	2005	2006	2007	2008	2009	2010	2011
Jan		10									
Feb		3									
March		9									
April											
May	14										
June	10										
July	23										
August	23										
Sept	27										
Oct	16										
Nov	22										
Dec	18										
MINIMUM	10	3	0	0	0	0	0	0	0	0	0

Flint 2015 Sanitary Survey Filter Data

Maximum Filtration Rate Experienced (gpm/ft^2)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Overall Monthly Avg.
January		3.6										3.60
February		3.3										3.30
March		3.3										3.30
April												#DIV/0!
May	3.8											3.80
June	3.5											3.50
July	3.8											3.80
August	3.3											3.30
September	3.4											3.40
October	3.3											3.30
November	3.2											3.20
December	3.2											3.20
Maximum	3.8	3.60	0	0	0	0	0	0	0	0	0	

OVERALL MAX.	**3.8**
	3.80
	0.00

Average Filtration Rate (gpm/ft^2)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Overall Monthly Avg.
January		2.1										2.10
February		2.4										2.40
March		2.3										2.30
April												#DIV/0!
May	2.6											2.60
June	2.5											2.50
July	2.3											2.30
August	2.2											2.20
September	2.1											2.10
October	1.9											1.90
November	2.1											2.10
December	2.4											2.40
Average	1.52	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

OVERALL AVG.	**0.19**
	0.42
	0.00

Average Filter Run (Hours)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Overall Monthly Avg.
January		76										76.00
February		86										86.00
March		96										96.00
April												#DIV/0!
May	101											101.00
June	74											74.00
July	65											65.00
August	78											78.00
September	97											97.00
October	84											84.00
November	76											76.00
December	74											74.00
Maximum	101	96	0	0	0	0	0	0	0	0	0	
Minimum	65	76	0	0	0	0	0	0	0	0	0	
Average	54.44	21.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

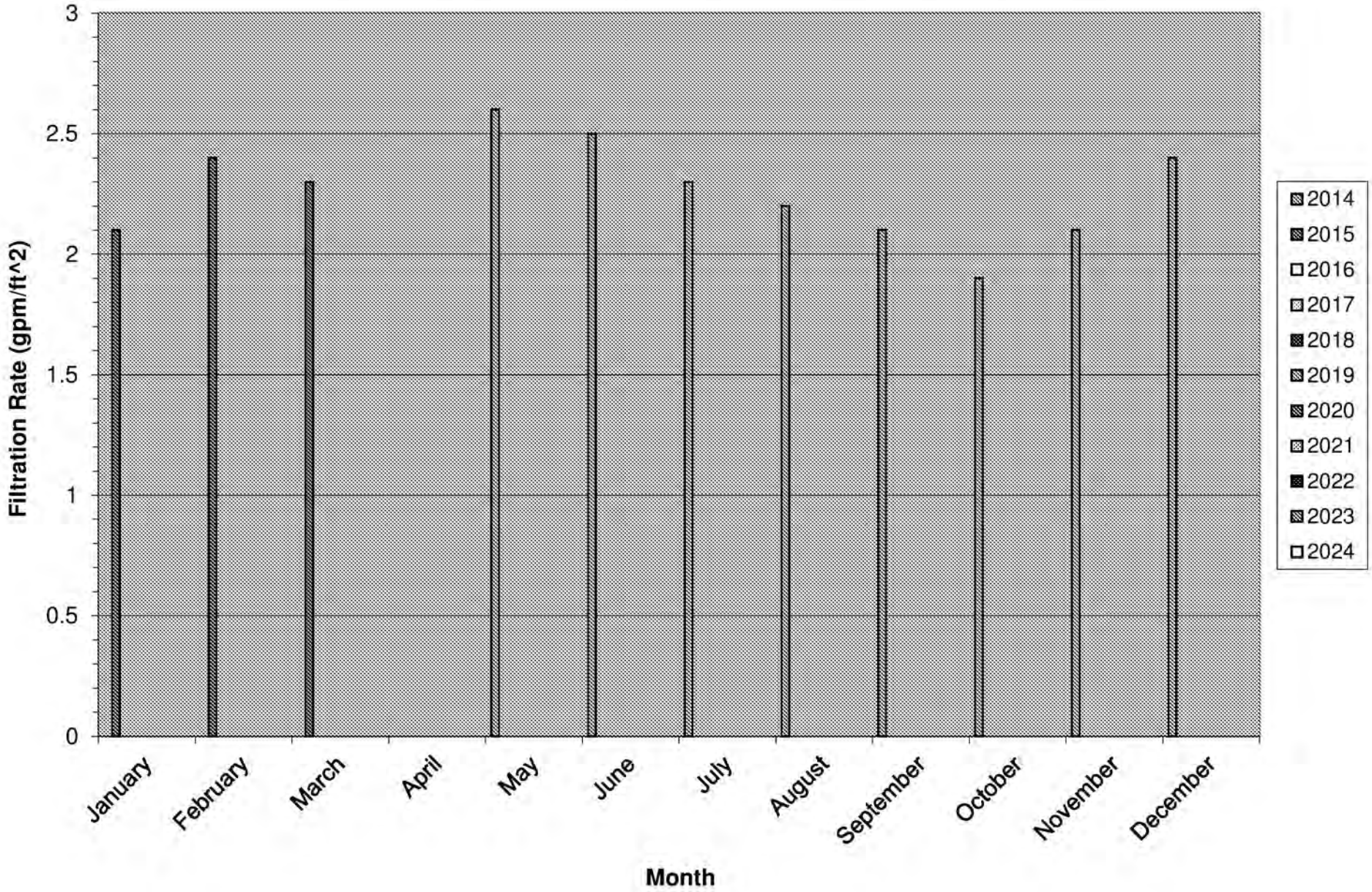
OVERALL AVG.	**6.88**	**0.00**	**15.13**
OVERALL MAX.	**101**	**0**	**101**
OVERALL MIN.	**0**	**0**	**0**

Average Percentage Wash Water Use

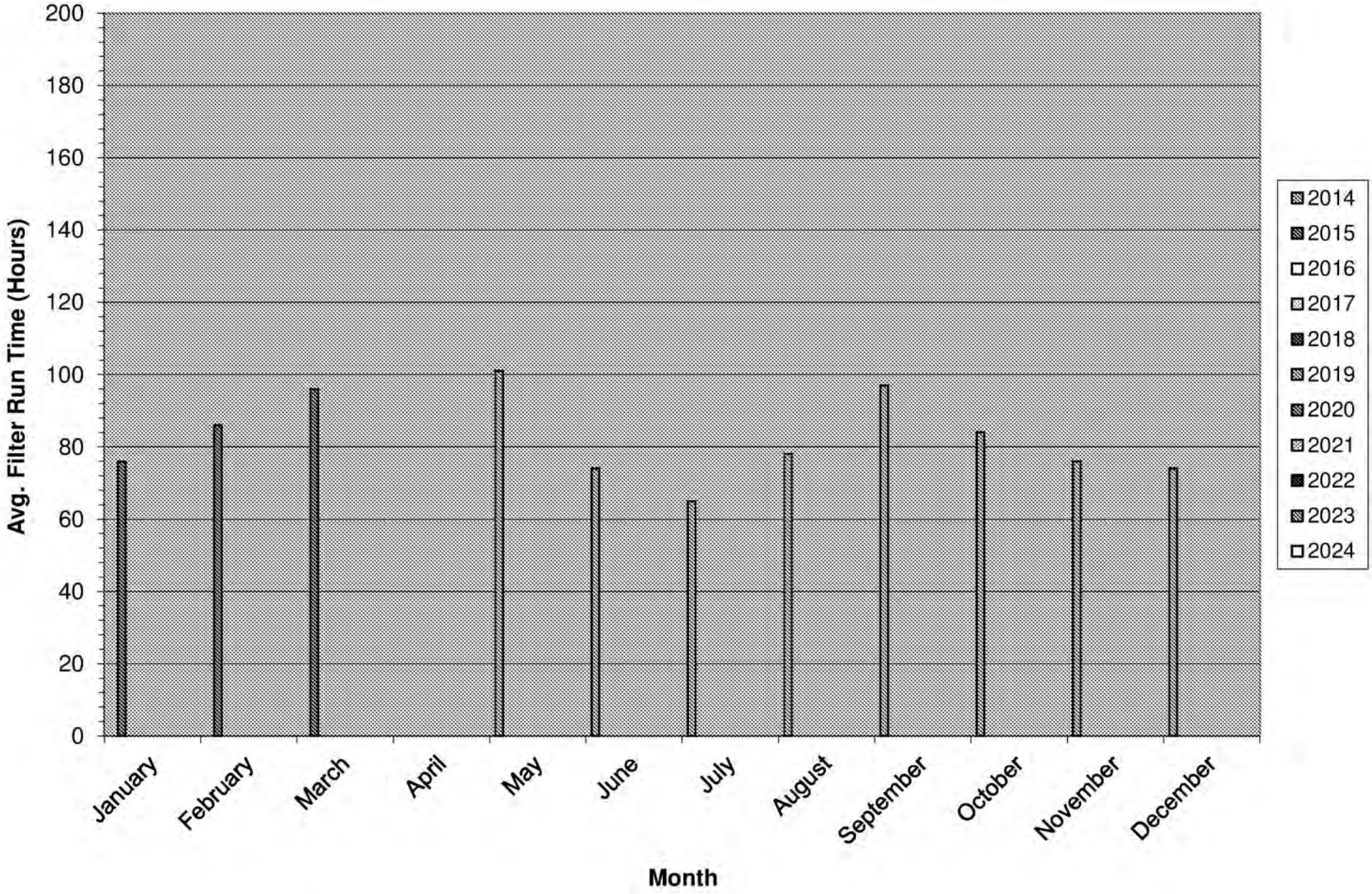
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Overall Monthly Avg.
January		3.20%										3.20%
February		2.40%										2.40%
March		1.30%										1.30%
April												#DIV/0!
May	2.00%											2.00%
June	3.60%											3.60%
July	2.50%											2.50%
August	2.80%											2.80%
September	1.90%											1.90%
October	2.70%											2.70%
November	3.20%											3.20%
December	2.90%											2.90%
Average	1.81%	0.57%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

OVERALL AVG.	**0.22%**
	0.48%
	0.00%

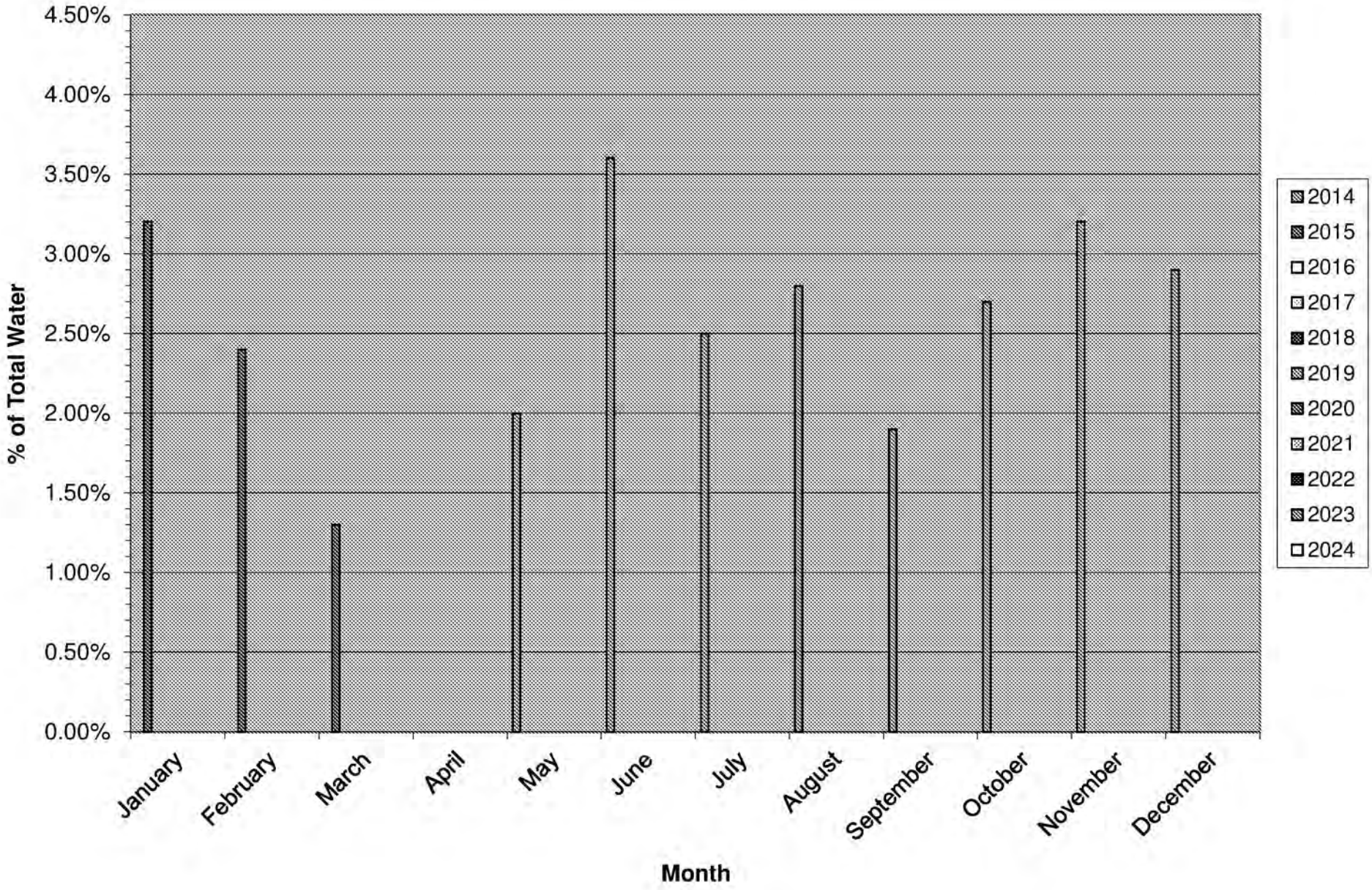
Average Filtration Rate Monthly Comparison



Average Filter Run Hours Monthly Comparison



Average Washwater Use Monthly Comparison



From: Henry, James <jhenry@gchd.us>
Sent: Monday, April 27, 2015 4:14 PM
To: Prysby, Mike (DEQ)
Subject: FW: FOIA Request
Attachments: FOIA Request Flint Water April 2 2015.doc

Hello Mike

Will you please assist with obtaining the information requested in the attached FOIA? Below is the correspondence to the City on April 2nd

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us.

From: Henry, James
Sent: Thursday, April 2, 2015 4:57 PM
To: 'ajones@cityofflint.com'; 'Crystal Olmstead'; Howard Croft
Subject: FOIA Request

Good afternoon,

Please see the attached FOIA Request. Please let me know if there is confusion. I can clarify as needed.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us

630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/.

Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

April 2, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Municipal Water Information Request

Dear FOIA Coordinator,

Under provisions of the Michigan Freedom of Information Act (MCLA 15.231 et seq; MSA 4.1801 (1) et seq) please provide the following:

Please provide the dates and specific locations of the water main breaks for 2014. Please provide an electronic version with the address data file, if possible.

Please provide dates and specific locations of flushing activities within a mile radius around McLaren Hospital, Flint for 2014

Please provide a copy of the Veolia presentation that was displayed at the Technical Advisory Committee on March 4, 2015. If possible please provide an electronic version.

Please provide the monitoring locations and results for heterotrophic bacteria for 2013 through 2014.

If you determine that any of the requested information is exempt from disclosure, please detail what is being withheld and cite the exemption under FOIA. I anticipate the request being filled within five working days of receipt of this letter, as provided under FOIA. Please contact me at (810) 257-3618 if there are fees associated to comply with this request.

Sincerely,

Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

cc: Crystal Olmstead, Flint City
Howard Croft, Flint City

From: Busch, Stephen (DEQ)
Sent: Friday, May 01, 2015 12:17 PM
To: Prysby, Mike (DEQ);gthomas@cityofflint.com
Subject: RE: Premise plumning
Attachments: Final Genesee supplemental questionnaire 2-23-15.docx

Glen,

The attached questionnaire that would be utilized by the Local Health Department and Department of Health and Human Services provides additional detail of what to be on the lookout for (See Questions 12 and 13). As we indicated almost every service connection could potentially have some element associated with what is listed in this questionnaire, but we are just looking for a rough list of those with more non-typical appurtenances such as spas, grocery stores with spray/mist system, garden/nurseries with mist irrigation, etc., and those that Mike provided. Thanks.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Friday, May 01, 2015 9:56 AM
To: gthomas@cityofflint.com
Cc: Busch, Stephen (DEQ)
Subject: Premise plumning

Glen,

Based upon our discussion during our April 29th, 2015 site visit, approximately 40-45 commercial/industrial customers were identified as a potential candidate for needing a premise plumbing Water Safety Plan (WSP). Attached is a list of mechanical components within building premise plumbing to assist you in confirming this and/or identifying additional customers that could serve as WSP candidates. Please send us your completed list at your earliest convenience. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

MDSS ID _____

Legionellosis Questionnaire
Genesee County, 2014-2015

Interviewer Identification

Date of Interview: _____ Interviewer's Name: _____
Health Dept.: _____ Phone Number: _____ E-mail: _____

What was the patient's outcome? ☐ *RECOVERED* ☐ *STILL ILL* ☐ *DIED* ☐ *UNK*

Patient Contact Information

Name: _____ Age: _____ Sex: ☐ M ☐ F
Street address: _____ City: _____
State: _____ Zip: _____ County: _____
Daytime Phone: _____ Evening Phone: _____

Surrogate Contact Information <*List surrogate contact information if patient is too unwell or has died*>

Name: _____
Daytime Phone: _____ Evening Phone: _____
Relationship to Patient: _____

Hello, my name is _____ and I'm calling from _____ (health department). We are investigating a cluster of respiratory illnesses in Genesee County. At this point, the source of these illnesses is still under investigation. We are hoping this interview will provide further information and answers about the illnesses. I'd like to ask you a few questions about your home and your exposures during the 2 weeks before you got sick. You do not have to answer any of the questions, but any assistance you can provide is appreciated. Do you have about 30 minutes to talk? If not now, when would be a good time for me to call back? _____

<If the case is from more than 1 month prior, the following text may be used: >
It might be helpful for you to collect documents such as a calendar, receipts, credit card or bank statements to jog your memory about your activities and where you were in the 2 weeks prior to getting sick. The only information we would ask you to share from these are dates and locations. Would you like me to call you back after you have time to collect these materials? When would be a convenient day and time for me to call you back? _____

I have that your first symptom started on *<insert onset date>* _____. Is this correct?

☐ Yes ☐ No ☐ Not sure

If no, what was the first date you started feeling sick? ____/____/_____

List dates of exposure period: from ____/____/____ *to* ____/____/____ *<The exposure period includes the 2 weeks before the date of illness onset>*

MDSS ID _____

Illness Information

1.) During your illness, did you have any of the following symptoms?

	Check one:		
	YES	NO	UNK
Diagnosis of pneumonia			
Fever If yes, highest temp:_____			
Chills			
Cough			
Nausea			
Vomiting			
Diarrhea			
Aches or muscle pains			
Chest pain			
Shortness of breath			
Sore throat			
Headaches			
Other symptoms (*specify*):			

Exposure Information

2.) How long have you lived at your current residence? _____

<If they have moved since the listed exposure period, indicate that you are asking about the house they lived in prior to becoming sick>

a.) If you moved after the exposure period/illness, what was your previous residence address? _____

3.) Where did you get your tap (drinking and other household use) water from between ___/___/___ and ___/___/___ ? *<Exposure period from above>*

- ☐ 1. City of Flint Water
- ☐ 2. City of Flint Township Water
- ☐ 3. Other municipal water system
- ☐ 4. Private well
- ☐ 5. Unknown
- ☐ 6. Other _____

4.) During the last year, has the water pressure at your residence changed? ☐ Yes ☐ No ☐ Not Sure

a.) If yes, did the water pressure: ☐ Increase ☐ Decrease

b). If yes, when did the water pressure change occur? _____

MDSS ID _____

5.) During the last year, has the water quality (appearance, taste, smell) at your residence changed?
☐Yes ☐No ☐Not Sure
a.) If yes, please describe the change in the water quality:_____
_____
b). If yes, when did the water quality change occur? _____

6.) Prior to your illness, did you make any recent plumbing changes or repairs at your residence?
☐Yes ☐No ☐Not sure
a.) If yes, please describe the changes/repairs and give the dates the work was done.
_____
_____

7.) Prior to your illness, were there any water main breaks or other water line issues that affected the water at your residence, including boil water advisories? ☐Yes ☐No ☐Not sure
a.) If yes, please describe the water main/line issues or boil water advisories and give the dates they occurred.
_____
_____

I'd like to ask you some questions about what you did during the 2 weeks **before** you got sick.
The time period I'm asking about is between ___/___/___ and ___/___/___.*<Exposure period>*
During this 2 week period, did you:

8.) Work or volunteer, either full or part time? ☐Yes ☐No ☐Not sure
a.) If yes, complete the following table:

Job description	Company	Location	Any exposure to misty water?

9.) Spend any time in a hospital, doctor's office, clinic, or dentist office as a patient, visitor, employee, or volunteer? ☐Yes ☐No ☐Not sure
a.) If yes, check all that apply:

Exposure	Date(s)	Reason for Visit	Name & City of Hospital/ Office/ Clinic	Name of Doctor
Inpatient ☐	Admission_____ Discharge_____			
Outpatient ☐				
Visitor ☐				
Employee ☐				
Volunteer ☐				

10.) Visit, reside, or work in a long term care facility, nursing home, assisted living facility, or senior living facility? ☐Yes ☐No ☐Not sure

MDSS ID _____

a.) If yes, complete the following table:

Exposure	Date(s)	Name & City of Facility
Resident ☐		
Visitor ☐		
Employee ☐		

11.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you spend any nights away from home (excluding healthcare settings)? ☐Yes ☐No ☐Not sure

a.) If yes, complete the following table: *<prompts: hotel, campground, cabin, cruise, second home, with family, etc.>*

Accommodation Type/Name	Address Street, City, State	Floor/Room No.	Dates of Stay	
			Arrival	Departure

12.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you visit any of the following community venues?

	Check one:					
Venue	YES	NO	UNK	Date(s)	Name of Venue	Address
Hotel (*without* staying overnight – e.g. dinner, wedding)						
Auditorium						
Barbershop or Hair salon						
Car wash						
Casino						
Church or Place of worship						
Gym or Work out facility						
Grocery store						
Home improvement store						
Spa or Nail salon						
Mall or Department store						
Movie theater						
Other (*specify*)						

13.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you have exposure to any of the following water sources, either ***at home*** or while ***away from home***?

MDSS ID _____

Exposures ***at home***	Check one: YES	NO	UNK	Dates (s)	Description: Name (or Type)/Location
Shower					
Use a detachable shower head or hose					
Hot tub, whirlpool spa, Jacuzzi tub					
Sat NEAR a working hot tub or whirlpool spa but did not get in					
Steam room or wet sauna					
Humidifier (whole house or portable)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Respiratory therapy machine (e.g. nebulizer, CPAP, BiPAP, etc.)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Other (*specify*)					

Exposures ***away from home***	YES	NO	UNK	Dates (s)	Description: Name (or Type)/Location
Shower at gym, work, other location					
Use a detachable shower head or hose					
Hot tub, whirlpool spa, Jacuzzi tub					
Sat NEAR a working hot tub or whirlpool spa but did not get in					
Humidifier (whole house or portable)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Pool/splash pad/waterpark					
Recreational or cooling misters					
Steam room or wet sauna					
Decorative fountain					
Outdoor watering hose or sprinkler					
Beach, lake, pond, river, creek, etc.					
Other (*specify*)					

Medical History

Now I'm going to ask a few questions about your medical history and health behaviors.

14.) Have you ever been told by a healthcare provider that you had any of the following conditions:

MDSS ID _____

Condition	Check one: YES	NO	UNK	Comments
Chronic kidney disease				
Weakened immune system (due to cancer, chemotherapy , radiation therapy, immunosuppressive meds, HIV, organ transplant, etc.)				
Diabetes				
Chronic lung disease (COPD, emphysema)				
Asthma or chronic bronchitis				
Heart disease or congestive heart failure				
Liver disease				
Other conditions (*specify*)				

15.) Health behaviors:

	Check one: YES	NO	Quantity per day (packs or drinks)	Duration (years)
Are you currently a smoker?				
Are you a former smoker?				
Do you drink alcohol?				

16.) Do you know anyone else with similar symptoms? ☐ Yes ☐ No ☐ Not sure

a.) If yes, complete the following table:

Name	Phone	State of Residence	Details of Shared Exposure

Additional Comments _____

_____

_____

_____

_____

Thank you so much for taking the time to answer these questions. Do you have any questions that I can help answer? If you have any questions or remember any further details later, please contact the _____ (health department) at phone: _____.

From: Robert Bincsik <rbincsik@cityofflint.com>
Sent: Tuesday, May 05, 2015 4:37 PM
To: Prysby, Mike (DEQ)
Subject: Re: Watermain breaks
Attachments: Main Breaks from Leak Report Info.xls; Main Breaks from Leak Report Info.xlsx

Mike please find attached the our most recent records from water main breaks.

On Fri, May 1, 2015 at 10:01 AM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Robert,

Based upon the discussion during our April 29th site visit, you have forwarded available information concerning the occurrence (location & date) of watermain breaks in the city of Flint during 2014. Please provide us with a copy of this information at your earliest convenience. Thanks.

Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

--
Thank you,

Robert Bincsik
Water Distribution and
Sewer Maintenance Supervisor
City of Flint
3310 E. Court Street
Flint, MI 48506
Ph: 810.766.7202 ext. 3413

Fx: 810.743.5758

	A	B	C	D	E	F	G	H
1	Row #	Date	Location of Leak	Date-2	Description of leak:	Description of Leak	Pipe Size, Inches	Pipe Material
2	1	7/14/2014	1037 E. Alma Ave.	7/14/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
3	2	3/28/2014	145 E. Alma Ave.	3/28/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
4	3	3/24/2014	902 E. Austin Ave.	3/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
5	4	3/4/2014	1518 Avenue B	3/4/2014	Description of leak: Clean break	Clean break	4" dia	Cast Iron
6	5	2/15/2014	2807 N. Averill Ave.	2/15/2014	Description of leak: hole in mechanical bell	hole in mechanical bell	4" dia	Cast Iron
7	6	2/12/2014	1857 S. Averill Ave.	2/12/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
8	7	1/22/2014	402 E. Atherton Rd.	1/22/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
9	8	1/10/2014	1946 S. Averill Ave.	1/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
10	9	1/7/2014	N. Averill Ave. & McClure Ave.	1/7/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
11	10	6/3/2013	737 E. Alma Ave.	6/3/2013	Description of leak: 1" dia hole	1" dia hole	6" dia.	Cast Iron
12	11	3/26/2013	2500 N. Averill Ave.	3/26/2013	Description of leak: 2" dia hole	2" dia hole	6" dia.	Cast Iron
13	12	1/31/2013	E. Atherton Rd. & Red Arrow Rd.	1/31/2013	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
14	13	1/6/2013	2715 N. Averill Ave.	1/6/2013	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
15	14	1/4/2013	1700 N. Averill Ave.	1/4/2013	Description of leak: Clean break	Clean break	12" dia.	Cast Iron
16	15	1/7/2013	2041 N. Averill Ave.	1/7/2013	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
17	16	1/15/2013	2923 Agree Ave.	1/15/2013	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
18	17	8/13/2014	900 Beach St.	8/13/2014	Description of leak: 2" lead corp	2" lead corp	6" dia.	Cast Iron
19	18	8/14/2014	E. Baltimore Blvd. & Horton Ave.	8/14/2014	Description of leak: fire hydrant	fire hydrant	n/a	n/a
20	19	5/29/2014	123 Bruce St.	5/29/2014	Description of leak: 3/4" lead corp	3/4" lead corp	n/a	n/a
21	20	4/22/2014	600 Bloor Ave.	4/22/2014	Description of leak: Clean break	Clean break	4" dia.	Cast Iron
22	21	4/30/2014	5100 W. Boulevard Dr.	4/30/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
23	22	4/29/2014	(bike path) W. Boulevard Dr.	4/29/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
24	23	4/17/2014	Bennett Ave. & Iowa Ave.	4/17/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
25	24	4/16/2014	116 Bruce St.	4/16/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
26	25	4/12/2014	3310 Beecher Rd.	4/12/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
27	26	4/9/2014	3101 Bryn Mawr Pl.	4/9/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
28	27	4/3/2014	1452 Broadway Blvd.	4/3/2014	Description of leak: 3" split	3" split	1.5" dia.	lead
29	28	4/1/2014	Burgess St. & Sonny St.	4/1/2014	Description of leak: valve face	valve face	6" dia.	Cast Iron
30	29	4/1/2014	3710 Burgess St.	4/1/2014	Description of leak: 3" dia hole	3" dia hole	6" dia.	Cast Iron
31	30	3/26/2014	2808 Brownell Blvd.	3/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
32	31	3/26/2014	2319 Brownell Blvd.	3/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
33	32	3/25/2014	2718 Begole St.	3/25/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
34	33	3/14/2014	E. Boulevard Dr. & Grandy St.	3/14/2014	Description of leak: valve failure	valve failure	6" dia.	Cast Iron
35	34	3/11/2014	Baldwin Blvd. & W. Marengo Ave.	3/11/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
36	35	3/6/2014	2502 Branch Rd.	3/6/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
37	36	3/3/2014	E. Bundy Ave. & Premier St.	3/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
38	37	3/14/2014	1309 Blanchard Ave.	3/14/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
39	38	3/13/2014	2108 Berkley St.	3/13/2014	Description of leak: 2" dia hole	2" dia hole	6" dia.	Cast Iron
40	39	3/13/2014	2326 Berkley St.	3/13/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
41	40	2/26/2014	430 W. Baltimore Blvd.	2/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
42	41	2/6/2014	1201 Burlington Dr.	2/6/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
43	42	2/6/2014	2509 Burns St.	2/6/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
44	43	2/4/2014	S. Ballenger Hwy. & Whitney Ave.	2/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
45	44	1/21/2014	Buick St. & E. Gillespie Ave.	1/21/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron

	I	J	K
1	Due to:	Cause of Leak	
2	Due to: Pressure fluctuation	Pressure fluctuation	
3	Due to: Wintertime conditions	Wintertime conditions	
4	Due to: Wintertime conditions	Wintertime conditions	
5	Due to: Wintertime conditions	Wintertime conditions	
6	Due to: Wintertime conditions	Wintertime conditions	
7	Due to: Wintertime conditions	Wintertime conditions	
8	Due to: Wintertime conditions	Wintertime conditions	
9	Due to: Wintertime conditions	Wintertime conditions	
10	Due to: Wintertime conditions	Wintertime conditions	
11	Due to: pipe failure	pipe failure	
12	Due to: pipe failure	pipe failure	
13	Due to: Wintertime conditions	Wintertime conditions	
14	Due to: Wintertime conditions	Wintertime conditions	
15	Due to: Wintertime conditions	Wintertime conditions	
16	Due to: Wintertime conditions	Wintertime conditions	
17	Due to: Wintertime conditions	Wintertime conditions	
18	Due to: pipe failure	pipe failure	
19	Due to: n/a	n/a	
20	Due to: pipe failure	pipe failure	
21	Due to: pipe failure	pipe failure	
22	Due to: n/a	n/a	
23	Due to: n/a	n/a	This one will not graph properly
24	Due to: Wintertime conditions	Wintertime conditions	
25	Due to: Wintertime conditions	Wintertime conditions	
26	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
27	Due to: Wintertime conditions	Wintertime conditions	
28	Due to: pipe failure	pipe failure	
29	Due to: Wintertime conditions	Wintertime conditions	
30	Due to: Wintertime conditions	Wintertime conditions	
31	Due to: Wintertime conditions	Wintertime conditions	
32	Due to: Wintertime conditions	Wintertime conditions	
33	Due to: Wintertime conditions	Wintertime conditions	
34	Due to: mechanical failure	mechanical failure	
35	Due to: Wintertime conditions	Wintertime conditions	
36	Due to: Wintertime conditions	Wintertime conditions	
37	Due to: Wintertime conditions	Wintertime conditions	
38	Due to: Wintertime conditions	Wintertime conditions	
39	Due to: Wintertime conditions	Wintertime conditions	
40	Due to: Wintertime conditions	Wintertime conditions	
41	Due to: Wintertime conditions	Wintertime conditions	
42	Due to: Wintertime conditions	Wintertime conditions	
43	Due to: Wintertime conditions	Wintertime conditions	
44	Due to: Wintertime conditions	Wintertime conditions	
45	Due to: Wintertime conditions	Wintertime conditions	

	A	B	C	D	E	F	G	H
46	45	1/14/2014	1406 Bent Dr.	1/14/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
47	46	1/30/2014	Bennett Ave. & Bennett Ct.	1/30/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
48	47	11/12/2013	3312 Buick St.	11/12/2013	Description of leak: 2" dia hole	2" dia hole	6" dia.	Cast Iron
49	48	9/13/2014	3902 Coggins Ave.	9/13/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
50	49	9/8/2014	1912 Corunna Rd.	9/8/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
51	50	7/29/2014	Cecil Dr. & Hathaway Dr.	7/29/2014	Description of leak: fire hydrant	fire hydrant	n/a	n/a
52	51	7/18/2014	900 E. Carpenter Rd.	7/18/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
53	52	4/23/2014	Chippewa St. & Mary St.	4/23/2014	Description of leak: 4" split	4" split	4" dia.	Cast Iron
54	53	5/3/2014	2702 E. Court St.	5/3/2014	Description of leak: old stub	old stub	12" dia.	Cast Iron
55	54	4/19/2014	W. Court St. & Beach St.	4/19/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
56	55	4/18/2014	Chippewa St. & Career Alliance parking lot	4/18/2014	Description of leak: 2" split	2" split	4" dia.	Cast Iron
57	56	4/14/2014	Chestnut St. & W. Austin Ave.	4/14/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
58	57	4/12/2014	3817 W. Court St.	4/12/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
59	58	4/9/2014	Carton St. & N. Saginaw St.	4/9/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
60	59	4/4/2014	1818 Carmanbrook Pkwy.	4/4/2014	Description of leak: mechanical joint	mechanical joint	8" dia.	Cast Iron
61	60	4/4/2014	Clifford St.	4/4/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
62	61	4/2/2014	1926 Corunna Rd.	4/2/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
63	62	3/26/2014	1509 Crestbrook Ln.	3/26/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
64	63	3/21/2014	2740 Clio Rd.	3/21/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
65	64	3/15/2014	3509 Comanche Ave.	3/15/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
66	65	3/11/2014	2732 Clio Rd.	3/11/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
67	66	3/4/2014	3106 W. Court St.	3/4/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
68	67	3/13/2014	Cook St. & Oklahoma Ave.	3/13/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
69	68	3/13/2014	1919 Clifford St.	3/13/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
70	69	2/26/2014	2113 Calumet St.	2/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
71	70	2/25/2014	2210 Canniff St.	2/25/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
72	71	2/24/2014	2948 Concord St.	2/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
73	72	2/24/2014	G-3299 Cheyenne Ave.	2/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
74	73	2/20/2014	3105 Cherokee Ave.	2/20/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
75	74	2/20/2014	E. Carpenter Rd. West of Alfred St.	2/20/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
76	75	2/14/2014	N. Chevrolet Ave. & Prospect St.	2/14/2014	Description of leak: Spiral break	Spiral break	6" dia.	Cast Iron
77	76	2/12/2014	401 Carton St.	2/12/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
78	77	2/10/2014	2106 Cartier St.	2/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
79	78	2/4/2014	1602 Concord St.	2/4/2014	Description of leak: valve face	valve face	6" dia.	Cast Iron
80	79	2/3/2014	2952 Clement St.	2/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
81	80	2/1/2014	1611 Colorado Ave.	2/1/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
82	81	1/30/2014	2917 Cheyenne Ave.	1/30/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
83	82	1/30/2014	Corunna Rd. & Darling St.	1/30/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
84	83	1/25/2014	1601 Crestbrook Ln.	1/25/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
85	84	1/8/2014	3505 Comanche Ave.	1/8/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
86	85	1/6/2014	2002 E. Court St.	1/6/2014	Description of leak: Clean break	Clean break	12" dia.	Cast Iron
87	86	9/9/2014	1776 S. Dort Hwy.	9/9/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
88	87	7/21/2014	2341 S. Dort Hwy.	7/21/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
89	88	7/17/2014	3609 DuPont St.	7/17/2014	Description of leak: hole in pipe	hole in pipe	24" dia.	Steel
90	89	4/11/2014	1210 DuPont St.	4/11/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
91	90	4/8/2014	DuPont St. & Bagley St.	4/8/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron

	I	J	K
46	Due to: Wintertime conditions	Wintertime conditions	
47	Due to: Wintertime conditions	Wintertime conditions	
48	Due to: Water hammer	Water hammer	
49	Due to: pipe failure	pipe failure	
50	Due to: pipe failure	pipe failure	
51	Due to: n/a	n/a	
52	Due to: pipe failure	pipe failure	
53	Due to: Wintertime conditions	Wintertime conditions	
54	Due to: pipe failure	pipe failure	
55	Due to: Wintertime conditions	Wintertime conditions	
56	Due to: n/a	n/a	
57	Due to: Wintertime conditions	Wintertime conditions	
58	Due to: Wintertime conditions	Wintertime conditions	
59	Due to: Wintertime conditions	Wintertime conditions	
60	Due to: Wintertime conditions	Wintertime conditions	
61	Due to: Wintertime conditions	Wintertime conditions	
62	Due to: Wintertime conditions	Wintertime conditions	
63	Due to: Wintertime conditions	Wintertime conditions	
64	Due to: Wintertime conditions	Wintertime conditions	
65	Due to: Wintertime conditions	Wintertime conditions	
66	Due to: Wintertime conditions	Wintertime conditions	
67	Due to: Wintertime conditions	Wintertime conditions	
68	Due to: Wintertime conditions	Wintertime conditions	
69	Due to: Wintertime conditions	Wintertime conditions	
70	Due to: Wintertime conditions	Wintertime conditions	
71	Due to: Wintertime conditions	Wintertime conditions	
72	Due to: Wintertime conditions	Wintertime conditions	
73	Due to: Wintertime conditions	Wintertime conditions	
74	Due to: Wintertime conditions	Wintertime conditions	
75	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
76	Due to: Wintertime conditions	Wintertime conditions	
77	Due to: Wintertime conditions	Wintertime conditions	
78	Due to: Wintertime conditions	Wintertime conditions	
79	Due to: Wintertime conditions	Wintertime conditions	
80	Due to: Wintertime conditions	Wintertime conditions	
81	Due to: Wintertime conditions	Wintertime conditions	
82	Due to: Wintertime conditions	Wintertime conditions	
83	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
84	Due to: Wintertime conditions	Wintertime conditions	
85	Due to: Wintertime conditions	Wintertime conditions	
86	Due to: Wintertime conditions	Wintertime conditions	
87	Due to: pipe failure	pipe failure	
88	Due to: pipe failure	pipe failure	
89	Due to: pipe failure	pipe failure	
90	Due to: Wintertime conditions	Wintertime conditions	
91	Due to: Wintertime conditions	Wintertime conditions	

	A	B	C	D	E	F	G	H
92	91	3/31/2014	2004 DuPont St.	3/31/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
93	92	3/21/2014	411 W. Dartmouth St.	3/21/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
94	93	3/18/2014	1421 Delaware Ave.	3/18/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
95	94	3/10/2014	E. Dewey St. & N. Saginaw St.	3/10/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
96	95	3/8/2014	1723 Dorothy Dr.	3/8/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
97	96	3/3/2014	3723 Dakota Ave.	3/3/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
98	97	2/28/2014	G-3370 S. Dort Hwy.	2/28/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
99	98	2/15/2014	4068 N. Dort Hwy.	2/15/2014	Description of leak: Lead joint	Lead joint	24" dia.	Cast Iron
100	99	2/12/2014	601 E. Dewey St.	2/12/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
101	100	2/11/2014	3608 Dakota Ave.	2/11/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
102	101	2/3/2014	3808 Dakota Ave.	2/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
103	102	1/24/2014	1330 DuPont St.	1/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
104	103	1/18/2014	DuPont St. & Copeman Blvd.	1/18/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
105	104	1/16/2014	2501 S. Dort Hwy.	1/16/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
106	105	1/10/2014	Dolphaine Ln. & Huggins St.	1/10/2014	Description of leak: hydrant lead	hydrant lead	6" dia.	Cast Iron
107	106	11/3/2014	Eldon Baker Dr. & Shawnee Ave.	11/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
108	107	4/10/2014	5413 Edwards St.	4/10/2014	Description of leak: Corp break	Corp break	6" dia.	Cast Iron
109	108	2/10/2014	5713 Edwards St.	2/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
110	109	1/9/2014	3517 Esther St.	1/9/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
111	110	8/29/2014	Flushing Rd. & DuPont St.	8/29/2014	Description of leak: 2" dia hole	2" dia hole	24" dia.	Steel
112	111	8/20/2014	919 Fremont St.	8/20/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
113	112	8/8/2014	Fenmore Dr. & Oxley Dr.	8/8/2014	Description of leak: mechanical joint	mechanical joint	6" dia.	Cast Iron
114	113	7/22/2014	N. Franklin Ave. & Illinois Ave.	7/22/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
115	114	4/10/2014	3805 Fenton Rd.	4/10/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
116	115	4/7/2014	E. Foss Ave. & Industrial Ave.	4/7/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
117	116	4/1/2014	Forest Hill Ave. & Sonny St.	4/1/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
118	117	3/15/2014	Fenton Rd. & Remington Ave.	3/15/2014	Description of leak: valve failure	valve failure	6" dia.	n/a
119	118	3/4/2014	3514 Foster St.	3/4/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
120	119	3/3/2014	145 E. Foss Ave.	3/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
121	120	3/3/2014	Fulton St. & E. Lyndon Ave.	3/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
122	121	2/26/2014	Fulton St. & E. Parkway Ave.	2/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
123	122	2/22/2014	1009 S. Franklin Ave.	2/22/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
124	123	2/24/2014	718 Frank St.	2/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
125	124	2/19/2014	W. Fifth Ave. & Garland St.	2/19/2014	Description of leak: Tapping saddle	Tapping saddle	12" dia.	Cast Iron
126	125	2/5/2014	S. Franklin Ave. & E. Second St.	2/5/2014	Description of leak: partial break	partial break	6" dia.	Cast Iron
127	126	1/27/2014	102 W. Flint Park Blvd.	1/27/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
128	127	6/5/2014	5322 Glenn Ave.	6/5/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
129	128	4/28/2014	Gainey Ave. & Cumings Ave.	4/28/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
130	129	3/25/2014	1407 Greenway Ave.	3/25/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
131	130	3/8/2014	5806 Griggs Dr.	3/8/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
132	131	3/6/2017	527 E. Genesee St.	3/6/2017	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
133	132	2/8/2014	5612 Griggs Dr.	2/8/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
134	133	3/3/2014	413 E. Genesee St.	3/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
135	134	1/29/2014	Gladwyn St. & DuPont St.	1/29/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
136	135	1/16/2014	410 Grace St.	1/16/2014	Description of leak: hole in mechanical bell	hole in mechanical bell	6" dia.	Cast Iron
137	136	1/15/2014	5710 Glenn Ave.	1/15/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
138	137	1/13/2014	Gibson St. & Gainey Ave.	1/13/2014	Description of leak: Split tee	Split tee	6" dia.	Cast Iron
139	138	1/8/2014	5610 Glenn Ave.	1/8/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron

	I	J	K
92	Due to: Wintertime conditions	Wintertime conditions	
93	Due to: Wintertime conditions	Wintertime conditions	
94	Due to: Wintertime conditions	Wintertime conditions	
95	Due to: Wintertime conditions	Wintertime conditions	
96	Due to: Wintertime conditions	Wintertime conditions	
97	Due to: Wintertime conditions	Wintertime conditions	
98	Due to: Wintertime conditions	Wintertime conditions	
99	Due to: pipe failure	pipe failure	
100	Due to: Wintertime conditions	Wintertime conditions	
101	Due to: Wintertime conditions	Wintertime conditions	
102	Due to: Wintertime conditions	Wintertime conditions	
103	Due to: Wintertime conditions	Wintertime conditions	
104	Due to: Wintertime conditions	Wintertime conditions	
105	Due to: Wintertime conditions	Wintertime conditions	
106	Due to: Wintertime conditions	Wintertime conditions	
107	Due to: pipe failure	pipe failure	
108	Due to: Wintertime conditions	Wintertime conditions	
109	Due to: Wintertime conditions	Wintertime conditions	
110	Due to: Wintertime conditions	Wintertime conditions	
111	Due to: pipe failure	pipe failure	
112	Due to: pipe failure	pipe failure	
113	Due to: pipe failure	pipe failure	
114	Due to: pipe failure	pipe failure	
115	Due to: Wintertime conditions	Wintertime conditions	
116	Due to: Wintertime conditions	Wintertime conditions	
117	Due to: Wintertime conditions	Wintertime conditions	
118	Due to: n/a	n/a	
119	Due to: Wintertime conditions	Wintertime conditions	
120	Due to: Wintertime conditions	Wintertime conditions	
121	Due to: Wintertime conditions	Wintertime conditions	
122	Due to: Wintertime conditions	Wintertime conditions	
123	Due to: Wintertime conditions	Wintertime conditions	
124	Due to: Wintertime conditions	Wintertime conditions	
125	Due to: Wintertime conditions	Wintertime conditions	
126	Due to: Wintertime conditions	Wintertime conditions	
127	Due to: Wintertime conditions	Wintertime conditions	
128	Due to: ground shift	ground shift	
129	Due to: ground shift	ground shift	
130	Due to: Wintertime conditions	Wintertime conditions	
131	Due to: Wintertime conditions	Wintertime conditions	
132	Due to: Wintertime conditions	Wintertime conditions	
133	Due to: Wintertime conditions	Wintertime conditions	
134	Due to: Wintertime conditions	Wintertime conditions	
135	Due to: Wintertime conditions	Wintertime conditions	
136	Due to: Wintertime conditions	Wintertime conditions	
137	Due to: Wintertime conditions	Wintertime conditions	
138	Due to: Wintertime conditions	Wintertime conditions	
139	Due to: Wintertime conditions	Wintertime conditions	

	A	B	C	D	E	F	G	H
140	139	11/3/2014	6230 Hathaway Dr.	11/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
141	140	8/9/2014	500 Harrison St.	8/9/2014	Description of leak: 3/4" corp	3/4" corp	6" dia.	Ductile Iron
142	141	7/18/2014	2400 Hills St.	7/18/2014	Description of leak: hole in pipe	hole in pipe	6" dia.	Cast Iron
143	142	7/12/2014	W. Twelfth St. & Fenton Rd.	7/12/2014	Description of leak: Corp break	Corp break	8" dia.	Cast Iron
144	143	4/16/2014	151 E. Hamilton Ave.	4/16/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
145	144	4/2/2014	Herrick St. & Stocker Ave.	4/2/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
146	145	4/1/2014	Harvard St. & E. Russell Ave.	4/1/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
147	146	3/24/2014	1034 E. Holbrook Ave.	3/24/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
148	147	3/25/2014	Horton Ave. & E. Pierson Rd.	3/25/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
149	148	3/25/2014	E. Hamilton Ave. & E. Boulevard Dr.	3/25/2014	Description of leak: Clean break	Clean break	12" dia.	Cast Iron
150	149	3/18/2014	Harrison St. & E. First St.	3/18/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
151	150	3/11/2014	147 E. Home Ave.	3/11/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
152	151	3/4/2014	1941 Hosler St.	3/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
153	152	2/24/2014	W. Home Ave. & Glenn Ave.	2/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
154	153	2/24/2014	W. Home Ave. & Baldwin Blvd.	2/24/2014	Description of leak: 4" hole	4" hole	6" dia.	Cast Iron
155	154	2/4/2014	302 W. Home Ave.	2/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
156	155	2/4/2014	313 E. Home Ave.	2/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
157	156	1/27/2014	Harrison St. & E. First St.	1/27/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
158	157	1/23/2014	Harrison St. & E. First St.	1/23/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
159	158	1/9/2014	2959 Henry St.	1/9/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
160	159	6/23/2014	2308 Iroquois Ave.	6/23/2014	Description of leak: 1" dia hole	1" dia hole	24" dia.	Steel
161	160	3/17/2014	Iroquois Ave. & W. Taylor St.	3/17/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
162	161	3/7/2014	Iroquois Ave. & W. Dayton St.	3/7/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
163	162	3/5/2014	Irene Ave. & Miller Rd.	3/5/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
164	163	3/1/2014	2213 Illinois Ave.	3/1/2014	Description of leak: Service line	Service line	6" dia.	Cast Iron
165	164	2/10/2014	3906 Joyner St.	2/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
166	165	2/4/2014	975 Johnson Ave.	2/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
167	166	11/6/2014	1617 Kensington Ave.	11/6/2014	Description of leak: Split pipe	Split pipe	6" dia.	Cast Iron
168	167	7/23/2014	Kellar Ave. & W. Dartmouth St.	7/23/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
169	168	3/10/2014	Kelso St. & Robert T. Longway Blvd.	3/10/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
170	169	3/14/2014	5410 Kermit St.	3/14/2014	Description of leak: Corp break	Corp break	6" dia.	Cast Iron
171	170	2/10/2014	3917 W. Kearsley St.	2/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
172	171	1/31/2014	1421 Kearsley Park Blvd.	1/31/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
173	172	9/21/2014	3701 Lorraine Ave.	9/21/2014	Description of leak: 3" dia hole	3" dia hole	6" dia.	Cast Iron
174	173	8/20/2014	2345 Lapeer Rd.	8/20/2014	Description of leak: Split pipe	Split pipe	8" dia.	Cast Iron
175	174	8/23/2014	1410 Leith St.	8/23/2014	Description of leak: Service line	Service line	6" dia.	Cast Iron
176	175	7/11/2014	1713 Leith St.	7/11/2014	Description of leak: Split pipe	Split pipe	6" dia.	Cast Iron
177	176	2/7/2014	1737 Leith St.	2/7/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
178	177	1/18/2014	Lippincott Blvd. & Chelan St.	1/18/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
179	178	4/25/2014	E. Lorado Ave. & Harvard St.	4/25/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
180	179	3/26/2014	1110 Lomita Ave.	3/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
181	180	3/26/2014	Lewis St. & Maryland Ave.	3/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
182	181	3/25/2014	906 Lomita Ave.	3/25/2014	Description of leak: mechanical joint	mechanical joint	6" dia.	Cast Iron
183	182							
184	183							
185	184							

	I	J	K
140	Due to: pipe failure	pipe failure	
141	Due to: n/a	n/a	
142	Due to: Water hammer	Water hammer	
143	Due to: mechanical damage	mechanical damage	
144	Due to: Wintertime conditions	Wintertime conditions	
145	Due to: Wintertime conditions	Wintertime conditions	
146	Due to: Wintertime conditions	Wintertime conditions	
147	Due to: Wintertime conditions	Wintertime conditions	
148	Due to: Wintertime conditions	Wintertime conditions	
149	Due to: Wintertime conditions	Wintertime conditions	
150	Due to: mechanical damage	mechanical damage	
151	Due to: Wintertime conditions	Wintertime conditions	
152	Due to: Wintertime conditions	Wintertime conditions	
153	Due to: Wintertime conditions	Wintertime conditions	
154	Due to: Wintertime conditions	Wintertime conditions	
155	Due to: Wintertime conditions	Wintertime conditions	
156	Due to: Wintertime conditions	Wintertime conditions	
157	Due to: mechanical damage	mechanical damage	
158	Due to: mechanical damage	mechanical damage	
159	Due to: Wintertime conditions	Wintertime conditions	
160	Due to: pipe failure	pipe failure	
161	Due to: Wintertime conditions	Wintertime conditions	
162	Due to: Wintertime conditions	Wintertime conditions	
163	Due to: Wintertime conditions	Wintertime conditions	
164	Due to: Wintertime conditions	Wintertime conditions	
165	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
166	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
167	Due to: Pressure fluctuation	Pressure fluctuation	
168	Due to: pipe failure	pipe failure	
169	Due to: Wintertime conditions	Wintertime conditions	
170	Due to: Wintertime conditions	Wintertime conditions	
171	Due to: Wintertime conditions	Wintertime conditions	
172	Due to: Wintertime conditions	Wintertime conditions	
173	Due to: pipe failure	pipe failure	
174	Due to: pipe failure	pipe failure	
175	Due to: pipe failure	pipe failure	
176	Due to: pipe failure	pipe failure	
177	Due to: Wintertime conditions	Wintertime conditions	
178	Due to: Wintertime conditions	Wintertime conditions	
179	Due to: Wintertime conditions	Wintertime conditions	
180	Due to: Wintertime conditions	Wintertime conditions	
181	Due to: Wintertime conditions	Wintertime conditions	
182	Due to: Wintertime conditions	Wintertime conditions	
183			
184			
185			

	A	B	C	D	E	F	G	H
186	185							
187	186							
188	187							
189	188							

Cell: F50
Comment: Alan Roberts:
8 inch hole in bell at bottom of pipe.

Cell: F64
Comment: Alan Roberts:
Clean break at bell

Cell: F89
Comment: Alan Roberts:
Unknown diameter hole

Cell: C141
Comment: Alan Roberts:
William S. White building on U of M campus.

	A	B	C	D	E	F	G	H
1	Row #	Date	Location of Leak	Date-2	Description of leak:	Leak Description	Pipe Size, Inches	Pipe Material
2	14	1/4/2013	1700 N. Averill Ave.	1/4/2013	Description of leak: Clean break	Clean break	12" dia.	Cast Iron
3	13	1/6/2013	2715 N. Averill Ave.	1/6/2013	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
4	15	1/7/2013	2041 N. Averill Ave.	1/7/2013	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
5	16	1/15/2013	2923 Agree Ave.	1/15/2013	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
6	12	1/31/2013	E. Atherton Rd. & Red Arrow Rd.	1/31/2013	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
7	11	3/26/2013	2500 N. Averill Ave.	3/26/2013	Description of leak: 2" dia hole	2" dia hole	6" dia.	Cast Iron
8	10	6/3/2013	737 E. Alma Ave.	6/3/2013	Description of leak: 1" dia hole	1" dia hole	6" dia.	Cast Iron
9	47	11/12/2013	3312 Buick St.	11/12/2013	Description of leak: 2" dia hole	2" dia hole	6" dia.	Cast Iron
10	85	1/6/2014	2002 E. Court St.	1/6/2014	Description of leak: Clean break	Clean break	12" dia.	Cast Iron
11	9	1/7/2014	N. Averill Ave. & McClure Ave.	1/7/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
12	84	1/8/2014	3505 Comanche Ave.	1/8/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
13	138	1/8/2014	5610 Glenn Ave.	1/8/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
14	158	1/9/2014	2959 Henry St.	1/9/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
15	109	1/9/2014	3517 Esther St.	1/9/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
16	256	1/9/2014	6400 Selby St.	1/9/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
17	8	1/10/2014	1946 S. Averill Ave.	1/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
18	105	1/10/2014	Dolphaine Ln. & Huggins St.	1/10/2014	Description of leak: hydrant lead	hydrant lead	6" dia.	Cast Iron
19	192	1/11/2014	2817 Lippincott Blvd.	1/11/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
20	191	1/13/2014	5402 Leslie Dr.	1/13/2014	Description of leak: Service line	Service line	6" dia.	Cast Iron
21	137	1/13/2014	Gibson St. & Gainey Ave.	1/13/2014	Description of leak: Split tee	Split tee	6" dia.	Cast Iron
22	45	1/14/2014	1406 Bent Dr.	1/14/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
23	136	1/15/2014	5710 Glenn Ave.	1/15/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
24	104	1/16/2014	2501 S. Dort Hwy.	1/16/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
25	135	1/16/2014	410 Grace St.	1/16/2014	Description of leak: hole in mechanical bell	hole in mechanical bell	6" dia.	Cast Iron
26	103	1/18/2014	DuPont St. & Copeman Blvd.	1/18/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
27	177	1/18/2014	Lippincott Blvd. & Chelan St.	1/18/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
28	190	1/18/2014	Lippincott Blvd. & Chelan St.	1/18/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
29	44	1/21/2014	Buick St. & E. Gillespie Ave.	1/21/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
30	219	1/22/2014	1905 McPhail St.	1/22/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
31	279	1/22/2014	3825 Woodrow Ave.	1/22/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
32	7	1/22/2014	402 E. Atherton Rd.	1/22/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
33	278	1/23/2014	3514 Winona St.	1/23/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
34	157	1/23/2014	Harrison St. & E. First St.	1/23/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
35	102	1/24/2014	1330 DuPont St.	1/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
36	277	1/24/2014	4214 Winona St.	1/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
37	83	1/25/2014	1601 Crestbrook Ln.	1/25/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
38	126	1/27/2014	102 W. Flint Park Blvd.	1/27/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
39	218	1/27/2014	2902 McClure Ave.	1/27/2014	Description of leak: Corp break	Corp break	8" dia.	Cast Iron
40	156	1/27/2014	Harrison St. & E. First St.	1/27/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
41	226	1/28/2014	410 E. Newall St.	1/28/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
42	134	1/29/2014	Gladwyn St. & Cadillac St.	1/29/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
43	275	1/29/2014	Woodbridge St. & Stevenson St.	1/29/2014	Description of leak: Split tee	Split tee	6" dia.	Cast Iron
44	81	1/30/2014	2917 Cheyenne Ave.	1/30/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
45	46	1/30/2014	Bennett Ave. & Bennett Ct.	1/30/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
46	82	1/30/2014	Corunna Rd. & Darling St.	1/30/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron

	I	J	K
1	Due to:	Cause of Leak	Note
2	Due to: Wintertime conditions	Wintertime conditions	
3	Due to: Wintertime conditions	Wintertime conditions	
4	Due to: Wintertime conditions	Wintertime conditions	
5	Due to: Wintertime conditions	Wintertime conditions	
6	Due to: Wintertime conditions	Wintertime conditions	
7	Due to: pipe failure	pipe failure	
8	Due to: pipe failure	pipe failure	
9	Due to: Water hammer	Water hammer	
10	Due to: Wintertime conditions	Wintertime conditions	
11	Due to: Wintertime conditions	Wintertime conditions	
12	Due to: Wintertime conditions	Wintertime conditions	
13	Due to: Wintertime conditions	Wintertime conditions	
14	Due to: Wintertime conditions	Wintertime conditions	
15	Due to: Wintertime conditions	Wintertime conditions	
16	Due to: Wintertime conditions	Wintertime conditions	
17	Due to: Wintertime conditions	Wintertime conditions	
18	Due to: Wintertime conditions	Wintertime conditions	
19	Due to: Wintertime conditions	Wintertime conditions	
20	Due to: Wintertime conditions	Wintertime conditions	
21	Due to: Wintertime conditions	Wintertime conditions	
22	Due to: Wintertime conditions	Wintertime conditions	
23	Due to: Wintertime conditions	Wintertime conditions	
24	Due to: Wintertime conditions	Wintertime conditions	
25	Due to: Wintertime conditions	Wintertime conditions	
26	Due to: Wintertime conditions	Wintertime conditions	
27	Due to: Wintertime conditions	Wintertime conditions	
28	Due to: Wintertime conditions	Wintertime conditions	
29	Due to: Wintertime conditions	Wintertime conditions	
30	Due to: Wintertime conditions	Wintertime conditions	
31	Due to: Wintertime conditions	Wintertime conditions	
32	Due to: Wintertime conditions	Wintertime conditions	
33	Due to: Wintertime conditions	Wintertime conditions	
34	Due to: mechanical damage	mechanical damage	
35	Due to: Wintertime conditions	Wintertime conditions	
36	Due to: Wintertime conditions	Wintertime conditions	
37	Due to: Wintertime conditions	Wintertime conditions	
38	Due to: Wintertime conditions	Wintertime conditions	
39	Due to: Wintertime conditions	Wintertime conditions	
40	Due to: mechanical damage	mechanical damage	
41	Due to: Wintertime conditions	Wintertime conditions	
42	Due to: Wintertime conditions	Wintertime conditions	
43	Due to: pipe failure	pipe failure	
44	Due to: Wintertime conditions	Wintertime conditions	
45	Due to: Wintertime conditions	Wintertime conditions	
46	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly

	A	B	C	D	E	F	G	H
47	171	1/31/2014	1421 Kearsley Park Blvd.	1/31/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
48	244	1/31/2014	Pitkin Ave. & N. Dexter St.	1/31/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
49	276	1/31/2014	White St. & Iroquois Ave.	1/31/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
50	80	2/1/2014	1611 Colorado Ave.	2/1/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
51	79	2/3/2014	2952 Clement St.	2/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
52	101	2/3/2014	3808 Dakota Ave.	2/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
53	78	2/4/2014	1602 Concord St.	2/4/2014	Description of leak: valve face	valve face	6" dia.	Cast Iron
54	216	2/4/2014	2722 Mackin Rd.	2/4/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
55	154	2/4/2014	302 W. Home Ave.	2/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
56	155	2/4/2014	313 E. Home Ave.	2/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
57	165	2/4/2014	975 Johnson Ave.	2/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
58	43	2/4/2014	S. Ballenger Hwy. & Whitney Ave.	2/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
59	217	2/5/2014	1705 Montclair Ave.	2/5/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
60	257	2/5/2014	1917 Utah Ave.	2/5/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
61	125	2/5/2014	S. Franklin Ave. & E. Second St.	2/5/2014	Description of leak: partial break	partial break	6" dia.	Cast Iron
62	41	2/6/2014	1201 Burlington Dr.	2/6/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
63	42	2/6/2014	2509 Burns St.	2/6/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
64	255	2/6/2014	Richfield Rd. & N. Franklin Ave.	2/6/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
65	176	2/7/2014	1737 Leith St.	2/7/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
66	243	2/8/2014	1701 Pennsylvania Ave.	2/8/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
67	132	2/8/2014	5612 Griggs Dr.	2/8/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
68	242	2/10/2014	1631 Pennsylvania Ave.	2/10/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
69	77	2/10/2014	2106 Cartier St.	2/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
70	164	2/10/2014	3906 Joyner St.	2/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
71	170	2/10/2014	3917 W. Kearsley St.	2/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
72	108	2/10/2014	5713 Edwards St.	2/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
73	215	2/11/2014	1317 Mann Ave.	2/11/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
74	240	2/11/2014	2518 Prospect St.	2/11/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
75	241	2/11/2014	314 W. Paterson St.	2/11/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
76	100	2/11/2014	3608 Dakota Ave.	2/11/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
77	239	2/12/2014	1721 Pennsylvania Ave.	2/12/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
78	6	2/12/2014	1857 S. Averill Ave.	2/12/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
79	76	2/12/2014	401 Carton St.	2/12/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
80	99	2/12/2014	601 E. Dewey St.	2/12/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
81	214	2/13/2014	2202 Maybury Ave.	2/13/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
82	273	2/13/2014	238 W. Witherbee St.	2/13/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
83	274	2/13/2014	4226 Wisner St.	2/13/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
84	189	2/14/2014	3202 Larchmont St.	2/14/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
85	75	2/14/2014	N. Chevrolet Ave. & Prospect St.	2/14/2014	Description of leak: Spiral break	Spiral break	6" dia.	Cast Iron
86	5	2/15/2014	2807 N. Averill Ave.	2/15/2014	Description of leak: hole in mechanical bell	hole in mechanical bell	4" dia.	Cast Iron
87	98	2/15/2014	4068 N. Dort Hwy.	2/15/2014	Description of leak: Lead joint	Lead joint	24" dia.	Cast Iron
88	272	2/17/2014	1920 Wolcott St.	2/17/2014	Description of leak: Pipe bell clean break	Pipe bell clean break	6" dia.	Cast Iron
89	238	2/17/2014	E. Pasadena Ave. & Esther St.	2/17/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
90	237	2/18/2014	Pitkin Ave. & Newcombe St.	2/18/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
91	124	2/19/2014	W. Fifth Ave. & Garland St.	2/19/2014	Description of leak: Tapping saddle	Tapping saddle	12" dia.	Cast Iron

	I	J	K
47	Due to: Wintertime conditions	Wintertime conditions	
48	Due to: Wintertime conditions	Wintertime conditions	
49	Due to: Wintertime conditions	Wintertime conditions	
50	Due to: Wintertime conditions	Wintertime conditions	
51	Due to: Wintertime conditions	Wintertime conditions	
52	Due to: Wintertime conditions	Wintertime conditions	
53	Due to: Wintertime conditions	Wintertime conditions	
54	Due to: Wintertime conditions	Wintertime conditions	
55	Due to: Wintertime conditions	Wintertime conditions	
56	Due to: Wintertime conditions	Wintertime conditions	
57	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
58	Due to: Wintertime conditions	Wintertime conditions	
59	Due to: Wintertime conditions	Wintertime conditions	
60	Due to: Wintertime conditions	Wintertime conditions	
61	Due to: Wintertime conditions	Wintertime conditions	
62	Due to: Wintertime conditions	Wintertime conditions	
63	Due to: Wintertime conditions	Wintertime conditions	
64	Due to: Wintertime conditions	Wintertime conditions	
65	Due to: Wintertime conditions	Wintertime conditions	
66	Due to: Wintertime conditions	Wintertime conditions	
67	Due to: Wintertime conditions	Wintertime conditions	
68	Due to: Wintertime conditions	Wintertime conditions	
69	Due to: Wintertime conditions	Wintertime conditions	
70	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
71	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
72	Due to: Wintertime conditions	Wintertime conditions	
73	Due to: Wintertime conditions	Wintertime conditions	
74	Due to: Wintertime conditions	Wintertime conditions	
75	Due to: Wintertime conditions	Wintertime conditions	
76	Due to: Wintertime conditions	Wintertime conditions	
77	Due to: Wintertime conditions	Wintertime conditions	
78	Due to: Wintertime conditions	Wintertime conditions	
79	Due to: Wintertime conditions	Wintertime conditions	
80	Due to: Wintertime conditions	Wintertime conditions	
81	Due to: Wintertime conditions	Wintertime conditions	
82	Due to: Wintertime conditions	Wintertime conditions	
83	Due to: Wintertime conditions	Wintertime conditions	
84	Due to: Wintertime conditions	Wintertime conditions	
85	Due to: Wintertime conditions	Wintertime conditions	
86	Due to: Wintertime conditions	Wintertime conditions	
87	Due to: pipe failure	pipe failure	
88	Due to: Wintertime conditions	Wintertime conditions	
89	Due to: Wintertime conditions	Wintertime conditions	
90	Due to: Wintertime conditions	Wintertime conditions	
91	Due to: Wintertime conditions	Wintertime conditions	

	A	B	C	D	E	F	G	H
92	73	2/20/2014	3105 Cherokee Ave.	2/20/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
93	213	2/20/2014	901 Markham St.	2/20/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
94	74	2/20/2014	E. Carpenter Rd. West of Alfred St.	2/20/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
95	271	2/21/2014	326 White St.	2/21/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
96	269	2/21/2014	711 Welch Blvd.	2/21/2014	Description of leak: 4" hole	4" hole	6" dia.	Cast Iron
97	122	2/22/2014	1009 S. Franklin Ave.	2/22/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
98	236	2/22/2014	Pettibone Ave. & Brunswick Ave.	2/22/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
99	71	2/24/2014	2948 Concord St.	2/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
100	123	2/24/2014	718 Frank St.	2/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
101	72	2/24/2014	G-3299 Cheyenne Ave.	2/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
102	153	2/24/2014	W. Home Ave. & Baldwin Blvd.	2/24/2014	Description of leak: 4" hole	4" hole	6" dia.	Cast Iron
103	152	2/24/2014	W. Home Ave. & Glenn Ave.	2/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
104	70	2/25/2014	2210 Canniff St.	2/25/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
105	188	2/25/2014	3202 Lawndale Ave.	2/25/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
106	69	2/26/2014	2113 Calumet St.	2/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
107	225	2/26/2014	2618 Norbert St.	2/26/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
108	187	2/26/2014	3113 Lippincott Blvd.	2/26/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
109	40	2/26/2014	430 W. Baltimore Blvd.	2/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
110	121	2/26/2014	Fulton St. & E. Parkway Ave.	2/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
111	186	2/27/2014	1357 Lapeer Rd.	2/27/2014	Description of leak: Service line	Service line	6" dia.	Cast Iron
112	212	2/27/2014	3315 Mallery St.	2/27/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
113	254	2/28/2014	2742 Raskob St.	2/28/2014	Description of leak: Service line	Service line	6" dia.	Cast Iron
114	97	2/28/2014	G-3370 S. Dort Hwy.	2/28/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
115	260	3/1/2014	1010 Victoria Ave.	3/1/2014	Description of leak: hole in mechanical bell	hole in mechanical bell	6" dia.	Cast Iron
116	163	3/1/2014	2213 Illinois Ave.	3/1/2014	Description of leak: Service line	Service line	6" dia.	Cast Iron
117	270	3/1/2014	3829 Woodrow Ave.	3/1/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
118	119	3/3/2014	145 E. Foss Ave.	3/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
119	96	3/3/2014	3723 Dakota Ave.	3/3/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
120	133	3/3/2014	413 E. Genesee St.	3/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
121	36	3/3/2014	E. Bundy Ave. & Premier St.	3/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
122	120	3/3/2014	Fulton St. & E. Lyndon Ave.	3/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
123	253	3/3/2014	Rosedale Ave. & Horton Ave.	3/3/2014	Description of leak: hole in mechanical bell	hole in mechanical bell	6" dia.	Cast Iron
124	4	3/4/2014	1518 Avenue B	3/4/2014	Description of leak: Clean break	Clean break	4" dia.	Cast Iron
125	151	3/4/2014	1941 Hosler St.	3/4/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
126	66	3/4/2014	3106 W. Court St.	3/4/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
127	235	3/4/2014	3116 Pencombe Pl.	3/4/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
128	118	3/4/2014	3514 Foster St.	3/4/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
129	211	3/5/2014	2320 Miller Rd.	3/5/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
130	268	3/5/2014	2522 Woodrow Ave.	3/5/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
131	210	3/5/2014	932 Markham St.	3/5/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
132	162	3/5/2014	Irene Ave. & Miller Rd.	3/5/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
133	208	3/6/2014	1016 Harmon St.	3/6/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
134	35	3/6/2014	2502 Branch Rd.	3/6/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
135	131	3/6/2014	527 E. Genesee St.	3/6/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
136	209	3/6/2014	Meida St. & Mannhall Ave.	3/6/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
137	161	3/7/2014	Iroquois Ave. & W. Dayton St.	3/7/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
138	95	3/8/2014	1723 Dorothy Dr.	3/8/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron

	I	J	K
92	Due to: Wintertime conditions	Wintertime conditions	
93	Due to: Wintertime conditions	Wintertime conditions	
94	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
95	Due to: Wintertime conditions	Wintertime conditions	
96	Due to: Wintertime conditions	Wintertime conditions	
97	Due to: Wintertime conditions	Wintertime conditions	
98	Due to: Wintertime conditions	Wintertime conditions	
99	Due to: Wintertime conditions	Wintertime conditions	
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111	Due to: Wintertime conditions	Wintertime conditions	
112	Due to: Wintertime conditions	Wintertime conditions	
113	Due to: Wintertime conditions	Wintertime conditions	
114	Due to: Wintertime conditions	Wintertime conditions	
115	Due to: Wintertime conditions	Wintertime conditions	
116	Due to: Wintertime conditions	Wintertime conditions	
117	Due to: Wintertime conditions	Wintertime conditions	
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119	Due to: Wintertime conditions	Wintertime conditions	
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121	Due to: Wintertime conditions	Wintertime conditions	
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124	Due to: Wintertime conditions	Wintertime conditions	
125	Due to: Wintertime conditions	Wintertime conditions	
126	Due to: Wintertime conditions	Wintertime conditions	
127	Due to: Wintertime conditions	Wintertime conditions	
128	Due to: Wintertime conditions	Wintertime conditions	
129	Due to: Wintertime conditions	Wintertime conditions	
130	Due to: Wintertime conditions	Wintertime conditions	
131	Due to: n/a	n/a	
132	Due to: Wintertime conditions	Wintertime conditions	
133	Due to: Wintertime conditions	Wintertime conditions	
134	Due to: Wintertime conditions	Wintertime conditions	
135	Due to: Wintertime conditions	Wintertime conditions	
136	Due to: Wintertime conditions	Wintertime conditions	
137	Due to: Wintertime conditions	Wintertime conditions	
138	Due to: Wintertime conditions	Wintertime conditions	

	A	B	C	D	E	F	G	H
139	267	3/8/2014	3415 Western Rd.	3/8/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
140	130	3/8/2014	5806 Griggs Dr.	3/8/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
141	94	3/10/2014	E. Dewey St. & N. Saginaw St.	3/10/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
142	168	3/10/2014	Kelso St. & Robert T. Longway Blvd.	3/10/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
143	150	3/11/2014	147 E. Home Ave.	3/11/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
144	65	3/11/2014	2732 Clio Rd.	3/11/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
145	266	3/11/2014	3610 Wisner St.	3/11/2014	Description of leak: Pipe bell clean break	Pipe bell clean break	6" dia.	Cast Iron
146	34	3/11/2014	Baldwin Blvd. & W. Marengo Ave.	3/11/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
147	265	3/12/2014	613 White St.	3/12/2014	Description of leak: Pipe bell clean break	Pipe bell clean break	6" dia.	Cast Iron
148	68	3/13/2014	1919 Clifford St.	3/13/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
149	38	3/13/2014	2108 Berkley St.	3/13/2014	Description of leak: 2" dia hole	2" dia hole	6" dia.	Cast Iron
150	39	3/13/2014	2326 Berkley St.	3/13/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
151	67	3/13/2014	Cook St. & Oklahoma Ave.	3/13/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
152	37	3/14/2014	1309 Blanchard Ave.	3/14/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
153	169	3/14/2014	5410 Kermit St.	3/14/2014	Description of leak: Corp break	Corp break	6" dia.	Cast Iron
154	33	3/14/2014	E. Boulevard Dr. & Grandy St.	3/14/2014	Description of leak: valve failure	valve failure	6" dia.	Cast Iron
155	64	3/15/2014	3509 Comanche Ave.	3/15/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
156	117	3/15/2014	Fenton Rd. & Remington Ave.	3/15/2014	Description of leak: valve failure	valve failure	6" dia.	n/a
157	252	3/15/2014	Remington Ave. & Fenton Rd.	3/15/2014	Description of leak: valve face	valve face	6" dia.	Cast Iron
158	185	3/17/2014	948 Leland St.	3/17/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
159	160	3/17/2014	Iroquois Ave. & W. Taylor St.	3/17/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
160	207	3/17/2014	Massachusetts Ave. & James P. Cole Blvd.	3/17/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
161	93	3/18/2014	1421 Delaware Ave.	3/18/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
162	206	3/18/2014	1922 Maryland Ave.	3/18/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
163	149	3/18/2014	Harrison St. & E. First St.	3/18/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
164	205	3/19/2014	3307 Mason St.	3/19/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
165	184	3/20/2014	1375 Lavender Ave.	3/20/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
166	234	3/20/2014	Prospect St. & Forest Hill Ave.	3/20/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
167	63	3/21/2014	2740 Clio Rd.	3/21/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
168	92	3/21/2014	411 W. Dartmouth St.	3/21/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
169	146	3/24/2014	1034 E. Holbrook Ave.	3/24/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
170	183	3/24/2014	2603 Lewis St.	3/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
171	264	3/24/2014	3714 Wisner St.	3/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
172	3	3/24/2014	902 E. Austin Ave.	3/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
173	182	3/24/2014	Lewis St. & Maryland Ave.	3/24/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
174	129	3/25/2014	1407 Greenway Ave.	3/25/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
175	32	3/25/2014	2718 Begole St.	3/25/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
176	181	3/25/2014	906 Lomita Ave.	3/25/2014	Description of leak: mechanical joint	mechanical joint	6" dia.	Cast Iron
177	148	3/25/2014	E. Hamilton Ave. & E. Boulevard Dr.	3/25/2014	Description of leak: Clean break	Clean break	12" dia.	Cast Iron
178	147	3/25/2014	Horton Ave. & E. Pierson Rd.	3/25/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
179	179	3/26/2014	1110 Lomita Ave.	3/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
180	62	3/26/2014	1509 Crestbrook Ln.	3/26/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
181	31	3/26/2014	2319 Brownell Blvd.	3/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
182	30	3/26/2014	2808 Brownell Blvd.	3/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
183	180	3/26/2014	Lewis St. & Maryland Ave.	3/26/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
184	2	3/28/2014	145 E. Alma Ave.	3/28/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
185	233	3/28/2014	306 W. Pasadena Ave.	3/28/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
186	223	3/29/2014	2718 Norbert St.	3/29/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron

	I	J	K
139	Due to: Wintertime conditions	Wintertime conditions	
140	Due to: Wintertime conditions	Wintertime conditions	
141	Due to: Wintertime conditions	Wintertime conditions	
142	Due to: Wintertime conditions	Wintertime conditions	
143	Due to: Wintertime conditions	Wintertime conditions	
144	Due to: Wintertime conditions	Wintertime conditions	
145	Due to: Wintertime conditions	Wintertime conditions	
146	Due to: Wintertime conditions	Wintertime conditions	
147	Due to: Wintertime conditions	Wintertime conditions	
148	Due to: Wintertime conditions	Wintertime conditions	
149	Due to: Wintertime conditions	Wintertime conditions	
150	Due to: Wintertime conditions	Wintertime conditions	
151	Due to: Wintertime conditions	Wintertime conditions	
152	Due to: Wintertime conditions	Wintertime conditions	
153	Due to: Wintertime conditions	Wintertime conditions	
154	Due to: mechanical failure	mechanical failure	
155	Due to: Wintertime conditions	Wintertime conditions	
156	Due to: n/a	n/a	
157	Due to: Wintertime conditions	Wintertime conditions	
158	Due to: Wintertime conditions	Wintertime conditions	
159	Due to: Wintertime conditions	Wintertime conditions	
160	Due to: Wintertime conditions	Wintertime conditions	
161	Due to: Wintertime conditions	Wintertime conditions	
162	Due to: Wintertime conditions	Wintertime conditions	
163	Due to: mechanical damage	mechanical damage	
164	Due to: Wintertime conditions	Wintertime conditions	
165	Due to: Wintertime conditions	Wintertime conditions	
166	Due to: Wintertime conditions	Wintertime conditions	
167	Due to: Wintertime conditions	Wintertime conditions	
168	Due to: Wintertime conditions	Wintertime conditions	
169	Due to: Wintertime conditions	Wintertime conditions	
170	Due to: Wintertime conditions	Wintertime conditions	
171	Due to: Wintertime conditions	Wintertime conditions	
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174	Due to: Wintertime conditions	Wintertime conditions	
175	Due to: Wintertime conditions	Wintertime conditions	
176	Due to: Wintertime conditions	Wintertime conditions	
177	Due to: Wintertime conditions	Wintertime conditions	
178	Due to: Wintertime conditions	Wintertime conditions	
179	Due to: Wintertime conditions	Wintertime conditions	
180	Due to: Wintertime conditions	Wintertime conditions	
181	Due to: Wintertime conditions	Wintertime conditions	
182	Due to: Wintertime conditions	Wintertime conditions	
183	Due to: Wintertime conditions	Wintertime conditions	
184	Due to: Wintertime conditions	Wintertime conditions	
185	Due to: Wintertime conditions	Wintertime conditions	
186	Due to: Wintertime conditions	Wintertime conditions	

	A	B	C	D	E	F	G	H
187	204	3/31/2014	111 E. Myrtle Ave.	3/31/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
188	91	3/31/2014	2004 DuPont St.	3/31/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
189	232	3/31/2014	Pontiac St. & Copeman Blvd.	3/31/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
190	29	4/1/2014	3710 Burgess St.	4/1/2014	Description of leak: 3" dia hole	3" dia hole	6" dia.	Cast Iron
191	28	4/1/2014	Burgess St. & Sonny St.	4/1/2014	Description of leak: valve face	valve face	6" dia.	Cast Iron
192	116	4/1/2014	Forest Hill Ave. & Sonny St.	4/1/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
193	145	4/1/2014	Harvard St. & E. Russell Ave.	4/1/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
194	61	4/2/2014	1926 Corunna Rd.	4/2/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
195	259	4/2/2014	912 Vosburg St.	4/2/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
196	144	4/2/2014	Herrick St. & Stocker Ave.	4/2/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
197	27	4/3/2014	1452 Broadway Blvd.	4/3/2014	Description of leak: 3" split	3" split	1.5" dia.	lead
198	224	4/3/2014	1600 Nebraska Ave.	4/3/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
199	251	4/3/2014	1616 Root St.	4/3/2014	Description of leak: Previous repair failure	Previous repair failure	4" dia.	Cast Iron
200	59	4/4/2014	1818 Carmanbrook Pkwy.	4/4/2014	Description of leak: mechanical joint	mechanical joint	8" dia.	Cast Iron
201	60	4/4/2014	Clifford St.	4/4/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
202	263	4/7/2014	2521 Woodrow Ave.	4/7/2014	Description of leak: Pipe bell clean break	Pipe bell clean break	6" dia.	Cast Iron
203	203	4/7/2014	3715 Marmion Ave.	4/7/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
204	115	4/7/2014	E. Foss Ave. & Industrial Ave.	4/7/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
205	90	4/8/2014	DuPont St. & Bagley St.	4/8/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
206	202	4/8/2014	Mason St. & W. Baker St.	4/8/2014	Description of leak: 3" split	3" split	6" dia.	Cast Iron
207	26	4/9/2014	3101 Bryn Mawr Pl.	4/9/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
208	58	4/9/2014	Carton St. & N. Saginaw St.	4/9/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
209	114	4/10/2014	3805 Fenton Rd.	4/10/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
210	107	4/10/2014	5413 Edwards St.	4/10/2014	Description of leak: Corp break	Corp break	6" dia.	Cast Iron
211	231	4/10/2014	944 Pettibone Ave.	4/10/2014	Description of leak: Previous repair failure	Previous repair failure	6" dia.	Cast Iron
212	89	4/11/2014	1210 DuPont St.	4/11/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
213	229	4/11/2014	Pitkin Ave. & Bingham St.	4/11/2014	Description of leak: Split tee	Split tee	6" dia.	Cast Iron
214	25	4/12/2014	3310 Beecher Rd.	4/12/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
215	230	4/12/2014	3420 Pitkin Ave.	4/12/2014	Description of leak: 3" dia hole	3" dia hole	6" dia.	Cast Iron
216	57	4/12/2014	3817 W. Court St.	4/12/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
217	201	4/14/2014	1811 M. L. King Ave.	4/14/2014	Description of leak: Clean break	Clean break	4" dia.	Cast Iron
218	56	4/14/2014	Chestnut St. & W. Austin Ave.	4/14/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
219	200	4/14/2014	Mackin Rd. & McIntosh Dr.	4/14/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
220	222	4/14/2014	Ninth Ave.	4/14/2014	Description of leak: 2" dia hole	2" dia hole	4" dia.	Cast Iron
221	24	4/16/2014	116 Bruce St.	4/16/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
222	143	4/16/2014	151 E. Hamilton Ave.	4/16/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
223	221	4/16/2014	2574 Nolen Dr.	4/16/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
224	250	4/16/2014	906 W. Ridgeway Ave.	4/16/2014	Description of leak: Service line	Service line	6" dia.	Cast Iron
225	199	4/17/2014	629 E. McClellan St.	4/17/2014	Description of leak: Previous repair failure	Previous repair failure	6" dia.	Cast Iron
226	23	4/17/2014	Bennett Ave. & Iowa Ave.	4/17/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
227	198	4/17/2014	M. L. King Ave. & W. Philadelphia Blvd.	4/17/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
228	55	4/18/2014	Chippewa St. & Career Alliance parking lot	4/18/2014	Description of leak: 2" split	2" split	4" dia.	Cast Iron
229	54	4/19/2014	W. Court St. & Beach St.	4/19/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
230	20	4/22/2014	600 Bloor Ave.	4/22/2014	Description of leak: Clean break	Clean break	4" dia.	Cast Iron
231	52	4/23/2014	Chippewa St. & Mary St.	4/23/2014	Description of leak: 4" split	4" split	4" dia.	Cast Iron
232	178	4/25/2014	E. Lorado Ave. & Harvard St.	4/25/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
233	128	4/28/2014	Gainey Ave. & Cumings Ave.	4/28/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron

	I	J	K
187	Due to: Wintertime conditions	Wintertime conditions	
188	Due to: Wintertime conditions	Wintertime conditions	
189	Due to: Wintertime conditions	Wintertime conditions	
190	Due to: Wintertime conditions	Wintertime conditions	
191	Due to: Wintertime conditions	Wintertime conditions	
192	Due to: Wintertime conditions	Wintertime conditions	
193	Due to: Wintertime conditions	Wintertime conditions	
194	Due to: Wintertime conditions	Wintertime conditions	
195	Due to: Wintertime conditions	Wintertime conditions	
196	Due to: Wintertime conditions	Wintertime conditions	
197	Due to: pipe failure	pipe failure	
198	Due to: Wintertime conditions	Wintertime conditions	
199	Due to: Wintertime conditions	Wintertime conditions	
200	Due to: Wintertime conditions	Wintertime conditions	
201	Due to: Wintertime conditions	Wintertime conditions	
202	Due to: Wintertime conditions	Wintertime conditions	
203	Due to: Wintertime conditions	Wintertime conditions	
204	Due to: Wintertime conditions	Wintertime conditions	
205	Due to: Wintertime conditions	Wintertime conditions	
206	Due to: n/a	n/a	
207	Due to: Wintertime conditions	Wintertime conditions	
208	Due to: Wintertime conditions	Wintertime conditions	
209	Due to: Wintertime conditions	Wintertime conditions	
210	Due to: Wintertime conditions	Wintertime conditions	
211	Due to: Wintertime conditions	Wintertime conditions	
212	Due to: Wintertime conditions	Wintertime conditions	
213	Due to: Wintertime conditions	Wintertime conditions	
214	Due to: Wintertime conditions	Wintertime conditions	This one will not graph properly
215	Due to: Wintertime conditions	Wintertime conditions	
216	Due to: Wintertime conditions	Wintertime conditions	
217	Due to: Wintertime conditions	Wintertime conditions	
218	Due to: Wintertime conditions	Wintertime conditions	
219	Due to: Wintertime conditions	Wintertime conditions	
220	Due to: Wintertime conditions	Wintertime conditions	
221	Due to: Wintertime conditions	Wintertime conditions	
222	Due to: Wintertime conditions	Wintertime conditions	
223	Due to: Wintertime conditions	Wintertime conditions	
224	Due to: Wintertime conditions	Wintertime conditions	
225	Due to: Wintertime conditions	Wintertime conditions	
226	Due to: Wintertime conditions	Wintertime conditions	
227	Due to: Wintertime conditions	Wintertime conditions	
228	Due to: n/a	n/a	
229	Due to: Wintertime conditions	Wintertime conditions	
230	Due to: pipe failure	pipe failure	
231	Due to: Wintertime conditions	Wintertime conditions	
232	Due to: Wintertime conditions	Wintertime conditions	
233	Due to: ground shift	ground shift	

	A	B	C	D	E	F	G	H
234	22	4/29/2014	(bike path) W. Boulevard Dr.	4/29/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
235	21	4/30/2014	5100 W. Boulevard Dr.	4/30/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
236	53	5/3/2014	2702 E. Court St.	5/3/2014	Description of leak: old stub	old stub	12" dia.	Cast Iron
237	258	5/24/2014	Van Slyke Rd. & W. Hemphill Rd.	5/24/2014	Description of leak: Tapping saddle	Tapping saddle	24	Ductile Iron
238	19	5/29/2014	123 Bruce St.	5/29/2014	Description of leak: 3/4" lead corp	3/4" lead corp	n/a	n/a
239	127	6/5/2014	5322 Glenn Ave.	6/5/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
240	249	6/10/2014	Robert T. Longway Blvd. & N. Vernon Ave.	6/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
241	159	6/23/2014	2308 Iroquois Ave.	6/23/2014	Description of leak: 1" dia hole	1" dia hole	24" dia.	Steel
242	220	7/7/2014	North St. & E. Gillespie Ave.	7/7/2014	Description of leak: Split at pipe bell	Split at pipe bell	24" dia.	Cast Iron
243	262	7/10/2014	Woodbridge St. & Stevenson St.	7/10/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
244	175	7/11/2014	1713 Leith St.	7/11/2014	Description of leak: Split pipe	Split pipe	6" dia.	Cast Iron
245	142	7/12/2014	W. Twelfth St. & Fenton Rd.	7/12/2014	Description of leak: Corp break	Corp break	8" dia.	Cast Iron
246	1	7/14/2014	1037 E. Alma Ave.	7/14/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
247	88	7/17/2014	3609 DuPont St.	7/17/2014	Description of leak: hole in pipe	hole in pipe	24" dia.	Steel
248	141	7/18/2014	2400 Hills St.	7/18/2014	Description of leak: hole in pipe	hole in pipe	6" dia.	Cast Iron
249	51	7/18/2014	900 E. Carpenter Rd.	7/18/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
250	87	7/21/2014	2341 S. Dort Hwy.	7/21/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
251	113	7/22/2014	N. Franklin Ave. & Illinois Ave.	7/22/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
252	228	7/22/2014	Pitkin Ave. & Bingham St.	7/22/2014	Description of leak: 2" dia hole	2" dia hole	6" dia.	Cast Iron
253	167	7/23/2014	Kellar Ave. & W. Dartmouth St.	7/23/2014	Description of leak: Clean break	Clean break	8" dia.	Cast Iron
254	50	7/29/2014	Cecil Dr. & Hathaway Dr.	7/29/2014	Description of leak: fire hydrant	fire hydrant	n/a	n/a
255	248	7/29/2014	Richfield Rd. & Term St.	7/29/2014	Description of leak: 2" split	2" split	8" dia.	Cast Iron
256	112	8/8/2014	Fenmore Dr. & Oxley Dr.	8/8/2014	Description of leak: mechanical joint	mechanical joint	6" dia.	Cast Iron
257	140	8/9/2014	500 Harrison St.	8/9/2014	Description of leak: 3/4" corp	3/4" corp	6" dia.	Ductile Iron
258	17	8/13/2014	900 Beach St.	8/13/2014	Description of leak: 2" lead corp	2" lead corp	6" dia.	Cast Iron
259	18	8/14/2014	E. Baltimore Blvd. & Horton Ave.	8/14/2014	Description of leak: fire hydrant	fire hydrant	n/a	n/a
260	227	8/18/2014	2810 Parkside Dr.	8/18/2014	Description of leak: Service line	Service line	2" dia.	Cast Iron
261	196	8/18/2014	513 Mary St.	8/18/2014	Description of leak: 10" split	10" split	6" dia.	Cast Iron
262	173	8/20/2014	2345 Lapeer Rd.	8/20/2014	Description of leak: Split pipe	Split pipe	8" dia.	Cast Iron
263	111	8/20/2014	919 Fremont St.	8/20/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
264	174	8/23/2014	1410 Leith St.	8/23/2014	Description of leak: Service line	Service line	6" dia.	Cast Iron
265	197	8/25/2014	600 E. McClellan St.	8/25/2014	Description of leak: 4" hole	4" hole	6" dia.	Cast Iron
266	110	8/29/2014	Flushing Rd. & DuPont St.	8/29/2014	Description of leak: 2" dia hole	2" dia hole	24" dia.	Steel
267	49	9/8/2014	1912 Corunna Rd.	9/8/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
268	86	9/9/2014	1776 S. Dort Hwy.	9/9/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron
269	48	9/13/2014	3902 Coggins Ave.	9/13/2014	Description of leak: Split at pipe bell	Split at pipe bell	6" dia.	Cast Iron
270	172	9/21/2014	3701 Lorraine Ave.	9/21/2014	Description of leak: 3" dia hole	3" dia hole	6" dia.	Cast Iron
271	261	9/21/2014	Winifred Dr. & Levern St.	9/21/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
272	195	9/26/2014	Marja St. & W. Mott Ave.	9/26/2014	Description of leak: 4" split	4" split	6" dia.	Cast Iron
273	194	10/10/2014	1636 Montana Ave.	10/10/2014	Description of leak: 3/4" lead corp	3/4" lead corp	6" dia.	Cast Iron
274	247	10/24/2014	2890 Robert T. Longway Blvd.	10/24/2014	Description of leak: mechanical joint	mechanical joint	16" dia.	Cast Iron
275	193	10/25/2014	1800 Missouri Ave.	10/25/2014	Description of leak: 2" dia hole	2" dia hole	6" dia.	Cast Iron
276	139	11/3/2014	6230 Hathaway Dr.	11/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
277	106	11/3/2014	Eldon Baker Dr. & Shawnee Ave.	11/3/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
278	166	11/6/2014	1617 Kensington Ave.	11/6/2014	Description of leak: Split pipe	Split pipe	6" dia.	Cast Iron
279	246	11/12/2014	1016 W. Ridgeway Ave.	11/12/2014	Description of leak: Clean break	Clean break	6" dia.	Cast Iron
280	245	11/17/2014	3220 Richfield Rd.	11/17/2014	Description of leak: Split at pipe bell	Split at pipe bell	8" dia.	Cast Iron

	I	J	K
234	Due to: n/a	n/a	This one will not graph properly
235	Due to: n/a	n/a	
236	Due to: pipe failure	pipe failure	
237	Due to: n/a	n/a	
238	Due to: pipe failure	pipe failure	
239	Due to: ground shift	ground shift	
240	Due to: pipe failure	pipe failure	
241	Due to: pipe failure	pipe failure	
242	Due to: Water hammer	Water hammer	
243	Due to: pipe failure	pipe failure	
244	Due to: pipe failure	pipe failure	
245	Due to: mechanical damage	mechanical damage	
246	Due to: Pressure fluctuation	Pressure fluctuation	
247	Due to: pipe failure	pipe failure	
248	Due to: Water hammer	Water hammer	
249	Due to: pipe failure	pipe failure	
250	Due to: pipe failure	pipe failure	
251	Due to: pipe failure	pipe failure	
252	Due to: pipe failure	pipe failure	
253	Due to: pipe failure	pipe failure	
254	Due to: n/a	n/a	
255	Due to: Pressure fluctuation	Pressure fluctuation	
256	Due to: pipe failure	pipe failure	
257	Due to: n/a	n/a	
258	Due to: pipe failure	pipe failure	
259	Due to: n/a	n/a	
260	Due to: pipe failure	pipe failure	
261	Due to: pipe failure	pipe failure	
262	Due to: pipe failure	pipe failure	
263	Due to: pipe failure	pipe failure	
264	Due to: pipe failure	pipe failure	
265	Due to: Water hammer	Water hammer	
266	Due to: pipe failure	pipe failure	
267	Due to: pipe failure	pipe failure	
268	Due to: pipe failure	pipe failure	
269	Due to: pipe failure	pipe failure	
270	Due to: pipe failure	pipe failure	
271	Due to: n/a	n/a	
272	Due to: Water hammer	Water hammer	
273	Due to: pipe failure	pipe failure	
274	Due to: mechanical failure	mechanical failure	
275	Due to: Pressure fluctuation	Pressure fluctuation	
276	Due to: pipe failure	pipe failure	
277	Due to: pipe failure	pipe failure	
278	Due to: Pressure fluctuation	Pressure fluctuation	
279	Due to: pipe failure	pipe failure	
280	Due to: Water hammer	Water hammer	

Cell: C16
Comment: Alan Roberts:
E. Ruth Ave. & Selby St. was the original description. However, these streets do not intersect anymore. So I put 6400 Selby St. to fool Google maps into working the right way.

Cell: C42
Comment: Alan Roberts:
This originally read "Gladwyn St. & DuPont St., but that intersection does not exist. A closer examination of the paperwork showed that it was more likely to be the intersection of Gladwyn St. & Cadillac St. This is near the intersection of DuPont St. & Cadillac St.

Cell: C130
Comment: Alan Roberts:
Sheet reads: 2521 Woodrow Ave., but I changed it to 2522 Woodrow Ave. to differentiate it from previous record.

Cell: C139
Comment: Alan Roberts:
Sheet reads: between Colorado Ave. & McClure Ave.

Cell: F167
Comment: Alan Roberts:
Clean break at bell

Cell: F247
Comment: Alan Roberts:
Unknown diameter hole

Cell: C257
Comment: Alan Roberts:
William S. White building on U of M campus.

Cell: F267
Comment: Alan Roberts:
8 inch hole in bell at bottom of pipe.

	A	B
1	Address	**Digstart**
2	111 E. Myrtle Ave., Flint, MI	3/31/2014
3	116 Bruce St., Flint, MI	4/16/2014
4	123 Bruce St., Flint, MI	5/28/2014
5	131 E. McClellan St., Flint, MI	4/24/2014
6	131 E. McClellan St., Flint, MI	4/24/2014
7	145 E. Alma Ave., Flint, MI	3/28/2014
8	145 E. Foss Ave., Flint, MI	3/3/2014
9	147 E. Home Ave., Flint, MI	3/11/2014
10	200 W. H. Schwartz Dr, Flint, MI	4/25/2014
11	200 W. H. Schwartz Dr, Flint, MI	4/25/2014
12	209 W. H. Schwartz Dr, Flint, MI	1/15/2014
13	209 W. H. Schwartz Dr, Flint, MI	3/1/2014
14	302 W Home Ave., Flint, MI	2/4/2014
15	306 W Pasadena Ave., Flint, MI	3/28/2014
16	310 W. Paterson St., Flint, MI	2/11/2014
17	313 E. Home Ave., Flint, MI	2/4/2014
18	326 White St., Flint, MI	2/21/2014
19	401 Carton St., Flint, MI	2/12/2014
20	409 E. Sherman Ave., Flint, MI	3/19/2014
21	410 E. Newall St., Flint, MI	1/28/2014
22	410 Grace St., Flint, MI	1/16/2014
23	411 W. Baltimore Blvd., Flint, MI	3/21/2014
24	413 E. Genesee St., Flint, MI	3/3/2014
25	414 Fremont St., Flint, MI	3/29/2014
26	422 W. Second St., Flint, MI	3/31/2014
27	422 W. Second St., Flint, MI	3/31/2014
28	430 W. Baltimore Blvd., Flint, MI	2/26/2014
29	517 Mary St., Flint, MI	8/18/2014
30	527 E. Genesee St., Flint, MI	3/6/2014
31	568 Welch Blvd., Flint, MI	11/5/2014
32	600 Bloor Ave., Flint, MI	4/22/2014
33	605 N. Saginaw St., Flint, MI	11/18/2014
34	605 St Clair St., Flint, MI	10/8/2014
35	613 White St., Flint, MI	3/12/2014
36	614 S. Grand Traverse St., Flint, MI	5/29/2014
37	629 E. McClellan St., Flint, MI	4/17/2014
38	630 E. Lorado Ave., Flint, MI	4/25/2014
39	630 E. Lorado Ave., Flint, MI	4/25/2014
40	711 Welch Blvd., Flint, MI	2/17/2014
41	718 Frank St., Flint, MI	2/23/2014
42	719 Dell Ave., Flint, MI	11/19/2014
43	728 Garland St., Flint, MI	2/19/2014
44	804 E. Ninth St., Flint, MI	2/27/2014
45	900 Beach St., Flint, MI	8/11/2014
46	901 Markham St., Flint, MI	2/20/2014
47	906 W Ridgeway Ave., Flint, MI	4/16/2014
48	917 E. Ninth St., Flint, MI	5/2/2014

	A	B
49	917 Johnson Ave., Flint, MI	3/20/2014
50	917 Johnson Ave., Flint, MI	3/20/2014
51	919 Fremont St., Flint, MI	8/20/2014
52	932 Markham St., Flint, MI	3/4/2014
53	944 Pettibone Ave., Flint, MI	4/10/2014
54	948 Leland St., Flint, MI	3/17/2014
55	965 E. Seventh St., Flint, MI	2/25/2014
56	1009 S Franklin Ave., Flint, MI	2/22/2014
57	1010 Victoria Ave., Flint, MI	3/1/2014
58	1016 W Ridgeway Ave., Flint, MI	11/12/2014
59	1017 Gladwyn St., Flint, MI	5/16/2014
60	1017 Gladwyn St., Flint, MI	5/14/2014
61	1037 E. Alma Ave., Flint, MI	6/17/2014
62	1106 Barrie Ave., Flint, MI	2/10/2014
63	1113 W. Paterson St., Flint, MI	4/17/2014
64	1152 Donaldson St., Flint, MI	1/31/2014
65	1210 Dupont St., Flint, MI	4/11/2014
66	1219 Somerset Ln., Flint, MI	2/17/2014
67	1219 Somerset Ln., Flint, MI	2/18/2014
68	1309 Blanchard Ave., Flint, MI	3/14/2014
69	1309 Blanchard Ave., Flint, MI	3/14/2014
70	1317 Mann Ave., Flint, MI	2/11/2014
71	1330 Dupont St., Flint, MI	1/24/2014
72	1375 Lavender Ave., Flint, MI	3/20/2014
73	1406 W Mott Ave., Flint, MI	3/6/2014
74	1407 Greenway Ave., Flint, MI	3/25/2014
75	1421 Delaware Ave., Flint, MI	3/18/2014
76	1421 Kearsley Park Blvd., Flint, MI	1/28/2014
77	1452 Broadway Blvd., Flint, MI	1/24/2014
78	1452 Broadway Blvd., Flint, MI	4/2/2014
79	1505 Jane Ave., Flint, MI	2/17/2014
80	1509 Crestbrook Ln., Flint, MI	3/25/2014
81	1511 E. Atherton Rd., Flint, MI	2/13/2014
82	1527 E. Kearsley St., Flint, MI	1/5/2014
83	1601 Crestbrook Ln., Flint, MI	1/24/2014
84	1602 Leith St., Flint, MI	7/17/2014
85	1611 Colorado Ave., Flint, MI	2/1/2014
86	1616 Root St., Flint, MI	3/10/2014
87	1616 Root St., Flint, MI	4/3/2014
88	1618 Kensington Ave., Flint, MI	11/6/2014
89	1620 Nebraska Ave., Flint, MI	2/5/2014
90	1625 Nebraska Ave., Flint, MI	3/3/2014
91	1625 Pennsylvania Ave., Flint, MI	3/3/2014
92	1631 Pennsylvania Ave., Flint, MI	2/10/2014
93	1636 Montana Ave., Flint, MI	10/10/2014
94	1701 Pennsylvania Ave., Flint, MI	2/7/2014
95	1703 Martin Luther King Ave., Flint, MI	4/15/2014
96	1705 Montclair Ave., Flint, MI	2/5/2014

	A	B
97	1713 Leith St., Flint, MI	6/10/2014
98	1776 S Dort Hwy., Flint, MI	9/9/2014
99	1811 Martin Luther King Ave., Flint, MI	4/14/2014
100	1813 Seneca St., Flint, MI	2/27/2014
101	1818 Carmanbrook Pkwy., Flint, MI	4/4/2014
102	1857 S Averill Ave., Flint, MI	2/12/2014
103	1901 E. Second St., Flint, MI	2/1/2014
104	1902 Wolcott St., Flint, MI	11/17/2014
105	1905 Mcphail St., Flint, MI	1/22/2014
106	1912 Corunna Rd., Flint, MI	9/8/2014
107	1919 Clifford St., Flint, MI	3/13/2014
108	1920 Wolcott Ave., Flint, MI	2/17/2014
109	1926 Corunna Rd., Flint, MI	4/2/2014
110	1926 Corunna Rd., Flint, MI	7/2/2014
111	1941 Hosler St., Flint, MI	3/3/2014
112	2018 Sloan St., Flint, MI	3/12/2014
113	2018 Stanford Ave., Flint, MI	3/19/2014
114	2101 Leith St., Flint, MI	1/30/2014
115	2107 Calumet St., Flint, MI	2/26/2014
116	2113 Calumet St., Flint, MI	2/26/2014
117	2118 Welch Blvd., Flint, MI	1/13/2014
118	2202 Maybury Ave., Flint, MI	2/13/2014
119	2210 Canniff St., Flint, MI	2/24/2014
120	2210 Santa Barbara Dr., Flint, MI	2/19/2014
121	2211 S Dort Hwy., Flint, MI	1/8/2014
122	2213 Illinois Ave., Flint, MI	3/1/2014
123	2320 Miller Rd., Flint, MI	3/5/2014
124	2341 S Dort Hwy., Flint, MI	7/21/2014
125	2402 Hills St., Flint, MI	7/18/2014
126	2501 S Dort Hwy., Flint, MI	1/16/2014
127	2502 Branch Rd., Flint, MI	3/4/2014
128	2502 Branch Rd., Flint, MI	3/4/2014
129	2509 Burns St., Flint, MI	2/6/2014
130	2518 Prospect St., Flint, MI	2/11/2014
131	2521 Woodrow Ave., Flint, MI	3/5/2014
132	2521 Woodrow Ave., Flint, MI	4/7/2014
133	2574 Nolen Dr., Flint, MI	4/16/2014
134	2603 Lewis St., Flint, MI	3/24/2014
135	2607 Avenue A, Flint, MI	3/11/2014
136	2618 Norbert St., Flint, MI	2/24/2014
137	2633 Hillcrest Ave., Flint, MI	3/27/2014
138	2718 Norbert St., Flint, MI	3/29/2014
139	2722 Mackin Rd., Flint, MI	2/4/2014
140	2740 Clio Rd., Flint, MI	3/20/2014
141	2808 Brownell Blvd., Flint, MI	3/21/2014
142	2810 Parkside Dr., Flint, MI	8/18/2014
143	2810 Parkside Dr., Flint, MI	8/18/2014
144	2890 Robert T Longway Blvd., Flint, MI	10/6/2014

	A	B
145	2910 Wyoming Ave., Flint, MI	4/29/2014
146	2935 Richfield Rd., Flint, MI	1/2/2014
147	2951 Henry St., Flint, MI	6/26/2014
148	2952 Clement St., Flint, MI	2/3/2014
149	2956 N. Stevenson St., Flint, MI	1/16/2014
150	2959 Henry St., Flint, MI	1/9/2014
151	3009 Cherokee Ave., Flint, MI	11/20/2014
152	3070 S Dort Hwy., Flint, MI	2/28/2014
153	3106 W. Court St., Flint, MI	3/4/2014
154	3113 Lippincott Blvd., Flint, MI	2/26/2014
155	3116 Pencombe Pl., Flint, MI	3/4/2014
156	3202 Larchmont St., Flint, MI	2/14/2014
157	3202 Lawndale Ave., Flint, MI	2/24/2014
158	3220 Richfield Rd., Flint, MI	11/17/2014
159	3299 Cheyenne Ave., Flint, MI	2/21/2014
160	3307 Mason St., Flint, MI	3/19/2014
161	3308 Dakota Ave., Flint, MI	2/3/2014
162	3310 Beecher Rd., Flint, MI	4/12/2014
163	3505 Comanche Ave., Flint, MI	3/15/2014
164	3514 Foster St., Flint, MI	3/4/2014
165	3514 Winona St., Flint, MI	1/23/2014
166	3517 Esther St., Flint, MI	1/9/2014
167	3608 Dakota Ave., Flint, MI	2/11/2014
168	3610 Wisner St., Flint, MI	3/7/2014
169	3701 N. Averill Ave., Flint, MI	1/5/2014
170	3715 Marmion Ave., Flint, MI	4/7/2014
171	3805 Fenton Rd., Flint, MI	4/10/2014
172	3829 Woodrow Ave., Flint, MI	3/1/2014
173	3837 Risedorph Ave., Flint, MI	1/31/2014
174	3838 Richfield Rd., Flint, MI	1/13/2014
175	3902 Coggins St., Flint, MI	9/13/2014
176	3917 W. Kearsley St., Flint, MI	2/7/2014
177	4140 Western Rd., Flint, MI	1/29/2014
178	4214 Winona St., Flint, MI	1/24/2014
179	4226 Wisner St., Flint, MI	2/13/2014
180	5322 Glenn Ave., Flint, MI	6/5/2014
181	5410 Kermit St., Flint, MI	3/13/2014
182	5413 Edwards Ave., Flint, MI	4/8/2014
183	5414 Winthrop Blvd., Flint, MI	2/27/2014
184	5612 Griggs Dr., Flint, MI	2/6/2014
185	5614 Glenn Ave., Flint, MI	1/3/2014
186	5713 Edwards Ave., Flint, MI	2/7/2014
187	5714 Baldwin Blvd., Flint, MI	2/7/2014
188	5806 Griggs Dr., Flint, MI	3/8/2014
189	5810 Baldwin Blvd., Flint, MI	1/7/2014
190	6230 Hathaway Dr., Flint, MI	11/3/2014
191	7010 Daryll Dr., Flint, MI	1/14/2014
192	Adams Ave. & E. Hamilton Ave., Flint, MI	3/17/2014

	A	B
193	Arlene Ave. & Mann Ave., Flint, MI	1/9/2014
194	Avenue B & E. Wood St., Flint, MI	3/4/2014
195	Baldwin Blvd. & W. Marengo Ave., Flint, MI	3/11/2014
196	Begole St. & N. Ballenger Hwy., Flint, MI	3/25/2014
197	Bennett Ave. & Lyman St., Flint, MI	1/30/2014
198	Bennett Ave. & Iowa Ave., Flint, MI	4/17/2014
199	Bent Dr. & Woodhall Dr., Flint, MI	1/14/2014
200	Berkley St. & Forest Hill Ave., Flint, MI	3/13/2014
201	Bingham St. & Pitkin Ave., Flint, MI	7/22/2014
202	Blanchard Ave. & Calumet St., Flint, MI	1/17/2014
203	Blanchard Ave. & Calumet St., Flint, MI	3/12/2014
204	Brentwood Dr. & Westcombe Ave., Flint, MI	9/19/2014
205	Bryn Mawr Pl. & W. McClellan St., Flint, MI	4/9/2014
206	Buckham Aly. & W. First St., Flint, MI	3/21/2014
207	Buckham Aly. & W. First St., Flint, MI	3/24/2014
208	Buick St. & E. Gillespie Ave., Flint, MI	1/21/2014
209	Burgess St. & Sonny Ave., Flint, MI	4/1/2014
210	Burlington Dr. & Brimfield Dr., Flint, MI	2/6/2014
211	Cherokee Ave. & Eldon Baker Dr., Flint, MI	2/20/2014
212	Chestnut St. & W. Austin Ave., Flint, MI	4/14/2014
213	Cheyenne Ave. & Mohawk Ave., Flint, MI	1/29/2014
214	Chippewa St. & Mary St., Flint, MI	4/22/2014
215	Clifford St. & E. Twelfth St., Flint, MI	4/4/2014
216	Clio Rd. & W. Dartmouth St., Flint, MI	3/11/2014
217	Clio Rd. & W. Dartmouth St., Flint, MI	3/11/2014
218	Colorado Ave. & Branch Rd., Flint, MI	11/16/2014
219	Comanche Ave. & Eldon Baker Dr., Flint, MI	1/8/2014
220	Comanche Ave. & E. Atherton Rd., Flint, MI	11/18/2014
221	Concord St. & Kirk Ave., Flint, MI	2/4/2014
222	Concord St. & N. Ballenger Hwy., Flint, MI	2/23/2014
223	Cook St. & Oklahoma Ave., Flint, MI	3/13/2014
224	Copeman Blvd. & DuPont St., Flint, MI	1/17/2014
225	Copeman Blvd. & Pontiac St., Flint, MI	3/31/2014
226	Copeman Blvd. & Pontiac St., Flint, MI	3/31/2014
227	Corunna Rd. & Darling St., Flint, MI	1/30/2014
228	Dakota Ave. & N. Dexter St., Flint, MI	3/3/2014
229	Damon St. & N. Saginaw St., Flint, MI	6/24/2014
230	Dewey St. & N. Saginaw St., Flint, MI	3/10/2014
231	N. Dexter St. & Pitkin Ave., Flint, MI	1/30/2014
232	Dolphaine Ln. & Huggins Ave., Flint, MI	1/9/2014
233	Dorothy Dr. & Marmion Ave., Flint, MI	1/28/2014
234	Dorothy Dr. & Marmion Ave., Flint, MI	3/8/2014
235	Dupont St. & W. Genesee St., Flint, MI	1/13/2014
236	Dupont St. & W. Hamilton Ave., Flint, MI	3/27/2014
237	Dupont St. & W. Stewart Ave., Flint, MI	7/16/2014
238	E. Atherton Rd. & Custer Ave., Flint, MI	1/22/2014
239	E. Austin Ave. & N. Saginaw St., Flint, MI	3/24/2014
240	E. Belvidere. Ave. & S. Saginaw St., Flint, MI	1/15/2014

	A	B
241	E. Boulevard Dr. & E. Hamilton Ave., Flint, MI	3/25/2014
242	E. Carpenter Rd. & N. Saginaw St., Flint, MI	7/18/2014
243	E. Carpenter Rd. & Alfred St., Flint, MI	2/18/2014
244	E. Court St. & lafayette St., Flint, MI	1/6/2014
245	E. Dewey St. & N. saginaw st., Flint, MI	2/12/2014
246	E. Foss Ave. & N. Saginaw St., Flint, MI	4/7/2014
247	E. Foss Ave. & N. Saginaw St., Flint, MI	2/7/2014
248	E. Hamilton Ave. & Adams Ave., Flint, MI	4/16/2014
249	E. McClellan St. & N. Saginaw St., Flint, MI	8/25/2014
250	E. Pasadena Ave. & Industrial Ave., Flint, MI	6/24/2014
251	E. Russell Ave. & harvard st, Flint, MI	4/1/2014
252	E. Ruth Ave. & selby St, Flint, MI	1/8/2014
253	E. Second St. & S. Franklin Ave., Flint, MI	4/21/2014
254	E. Stewart Ave. & Maines St., Flint, MI	3/5/2014
255	E. Stewart Ave. & Maines St., Flint, MI	3/5/2014
256	Esther St. & E. Pasadena Ave., Flint, MI	2/17/2014
257	W. First Ave. & M. L. King Ave., Flint, MI	1/28/2014
258	W. First Ave. & M. L. King Ave., Flint, MI	1/28/2014
259	Forest Hill Ave. & Prospect St., Flint, MI	3/20/2014
260	Forest Hill Ave. & Berkley St., Flint, MI	4/28/2014
261	Forest Hill Ave. & Berkley St., Flint, MI	3/11/2014
262	Gainey Ave. & Cumings Ave., Flint, MI	4/28/2014
263	Gibson St. & Gainey Ave., Flint, MI	1/13/2014
264	Gladwyn St. & Flushing Rd., Flint, MI	1/29/2014
265	Glenn Ave. & W. Pierson Rd., Flint, MI	1/5/2014
266	Glenn Ave. & W. Home Ave., Flint, MI	1/15/2014
267	Grandy St. & E. Boulevard Dr., Flint, MI	3/13/2014
268	Harmon St. & Fenton Rd., Flint, MI	3/6/2014
269	Harrison St. & E. First St., Flint, MI	1/14/2014
270	Harrison St. & E. First St., Flint, MI	3/18/2014
271	Harvard St. & E. Lorado Ave., Flint, MI	4/25/2014
272	Herrick St. & Stocker Ave., Flint, MI	4/2/2014
273	Hoff St. & Woodrow Ave., Flint, MI	5/1/2014
274	W. Home Ave. & Glenn Ave., Flint, MI	2/24/2014
275	W. Home Ave. & Glenn Ave., Flint, MI	2/24/2014
276	Horton Ave. & E. Pierson Rd., Flint, MI	3/25/2014
277	Illinois Ave. & N. Vernon Ave., Flint, MI	7/17/2014
278	Industrial Ave. & Leith St., Flint, MI	3/27/2014
279	Johnson Ave. & MannHall Ave., Flint, MI	2/3/2014
280	Joyner St. & Tacken St., Flint, MI	2/10/2014
281	Kelso St. & Robert T. Longway Blvd., Flint, MI	3/10/2014
282	Lafayette St. & E. Court St., Flint, MI	1/5/2014
283	Lapeer Rd. & E. Ninth St., Flint, MI	2/27/2014
284	Lapeer Rd. & S. Dort Hwy., Flint, MI	8/20/2014
285	Leith St. & N. Franklin Ave., Flint, MI	2/6/2014
286	Leslie Dr. & W. Mott Ave., Flint, MI	1/13/2014
287	Lewis St. & Maryland Ave., Flint, MI	3/26/2014
288	Lewis St. & Maryland Ave., Flint, MI	3/24/2014

	A	B
289	Lippincott Blvd. & Whittlesey St., Flint, MI	1/18/2014
290	Lomita Ave. & N. Saginaw St., Flint, MI	3/24/2014
291	Lomita Ave. & Selby St., Flint, MI	3/26/2014
292	Lorraine Ave. & N. Dexter St., Flint, MI	9/21/2014
293	Lyndon Ave. & Fulton St., Flint, MI	3/3/2014
294	Mackin Rd. & DuPont St., Flint, MI	1/30/2014
295	Mackin Rd. & DuPont St., Flint, MI	2/11/2014
296	Mackin Rd. & DuPont St., Flint, MI	4/14/2014
297	Mackin Rd. & N. Chevrolet Ave., Flint, MI	4/21/2014
298	Maplewood Ave. & Davison Rd., Flint, MI	3/18/2014
299	Marja St. & W Mott Ave., Flint, MI	9/25/2014
300	Martin Luther King Ave. & grace st, Flint, MI	4/15/2014
301	Martin Luther King Ave. & W. Philadelphia Blvd., Flint, MI	4/17/2014
302	Martin Luther King Ave. & First Ave., Flint, MI	1/29/2014
303	Mason St. & W. Gillespie Ave., Flint, MI	3/19/2014
304	Meida St. & MannHall Ave., Flint, MI	3/6/2014
305	Meida St. & MannHall Ave., Flint, MI	3/6/2014
306	Miller Rd. & Irene Ave., Flint, MI	3/5/2014
307	N Averill Ave. & Leith St., Flint, MI	2/15/2014
308	N Averill Ave. & Richfield Rd., Flint, MI	1/7/2014
309	N Averill Ave. & Maryland Ave., Flint, MI	2/15/2014
310	N Franklin Ave. & Illinois Ave., Flint, MI	7/22/2014
311	N. Averill Ave. & Davison Rd., Flint, MI	1/5/2014
312	N. Chevrolet Ave. & Prospect St., Flint, MI	2/13/2014
313	N. Dort Hwy. & N. Franklin Ave., Flint, MI	2/15/2014
314	N. Saginaw St. & Carton St., Flint, MI	4/9/2014
315	Nebraska Ave. & Minnesota Ave., Flint, MI	4/3/2014
316	Ninth Ave. & Garland St., Flint, MI	4/14/2014
317	E. Parkway Ave. & Fulton St., Flint, MI	2/25/2014
318	Pennsylvania Ave. & Minnesota Ave., Flint, MI	2/10/2014
319	Pettibone Ave. & Brunswick Ave., Flint, MI	2/21/2014
320	Pitkin Ave. & N. Center Rd., Flint, MI	1/29/2014
321	Pitkin Ave. & Newcombe St., Flint, MI	2/18/2014
322	Pitkin Ave. & Earlmoor Blvd., Flint, MI	4/11/2014
323	Premier St. & E. Bundy Ave., Flint, MI	2/27/2014
324	Raskob St. & Lavender Ave., Flint, MI	2/28/2014
325	Remington Ave. & Fenton Rd., Flint, MI	3/15/2014
326	Richfield Rd. & N. Franklin Ave., Flint, MI	2/4/2014
327	Richfield Rd. & N. Averill Ave., Flint, MI	7/23/2014
328	Richfield Rd. & Term St., Flint, MI	7/29/2014
329	Robert T Longway Blvd. & N. Vernon Ave., Flint, MI	6/10/2014
330	Robert T Longway Blvd. & N. Vernon Ave., Flint, MI	6/10/2014
331	Rosedale Ave. & Horton Ave., Flint, MI	3/3/2014
332	S Dort Hwy. & Lapeer Rd., Flint, MI	2/27/2014
333	S Franklin Ave. & E. Second St., Flint, MI	4/10/2014
334	S Saginaw St. & W. Union St., Flint, MI	4/5/2014
335	S Saginaw St. & E. Kearsley St., Flint, MI	7/2/2014
336	S Saginaw St. & E. Kearsley St., Flint, MI	7/24/2014

	A	B
337	S. Ballenger Hwy. & Whitney Ave., Flint, MI	2/4/2014
338	Selby St. & E. Ruth Ave., Flint, MI	1/17/2014
339	Seneca St. & Concord St., Flint, MI	7/18/2014
340	Shawnee Ave. & Eldon Baker Dr., Flint, MI	11/3/2014
341	Sherwood Dr. & Westcombe Ave., Flint, MI	7/1/2014
342	Simcoe Ave. & Fenton Rd., Flint, MI	3/11/2014
343	Sonny Ave. & Wisner St., Flint, MI	1/2/2014
344	Sonny Ave. & Forest Hill Ave., Flint, MI	1/7/2014
345	Sonny Ave. & Burgess St., Flint, MI	4/1/2014
346	Sonny Ave. & Forest Hill Ave., Flint, MI	4/1/2014
347	St Clair St. & Cartier St., Flint, MI	10/9/2014
348	St Clair St. & Cartier St., Flint, MI	10/7/2014
349	Stafford St. & E. Lorado Ave., Flint, MI	1/22/2014
350	Stevenson St. Woodbridge St., Flint, MI	1/29/2014
351	Susan St. & W. Pierson Rd., Flint, MI	11/15/2014
352	W. Taylor St. & Iroquois Ave., Flint, MI	3/15/2014
353	Utah Ave. & N. Franklin Ave., Flint, MI	2/5/2014
354	Van Slyke Rd. & W. Hemphill Rd., Flint, MI	5/2/2014
355	Van Slyke Rd. & W. Hemphill Rd., Flint, MI	5/22/2014
356	Vosburg St. & W. Court St., Flint, MI	4/2/2014
357	W. Baker St. & Mason St., Flint, MI	4/8/2014
358	W. Boulevard Dr. & N. Dort Hwy., Flint, MI	4/30/2014
359	W. Boulevard Dr. & E. Carpenter Rd., Flint, MI	4/29/2014
360	W. Court St. & Beach St., Flint, MI	4/19/2014
361	W. Court St. & S. Ballenger Hwy., Flint, MI	4/12/2014
362	W. Dartmouth St. & Kellar Ave., Flint, MI	7/23/2014
363	W. Dayton St. & Iroquois Ave., Flint, MI	3/7/2014
364	W. Fifth Ave. & Chippewa St., Flint, MI	4/17/2014
365	W. Kearsley St. & Buckham Alley, Flint, MI	7/9/2014
366	W. Paterson St. & Welch Blvd., Flint, MI	2/14/2014
367	W. Paterson St. & Welch Blvd., Flint, MI	11/12/2014
368	W. Stewart Ave. & Clio Rd., Flint, MI	1/3/2014
369	W. Witherbee St. & M. L. King Ave., Flint, MI	2/13/2014
370	Waldman Ave. & Fenton Rd., Flint, MI	3/13/2014
371	Westcombe Ave. & Beecher Rd., Flint, MI	1/31/2014
372	Western Rd. & McClure Ave., Flint, MI	3/8/2014
373	White St. & Iroquois Ave., Flint, MI	1/31/2014
374	Winifred Dr. & Levern St., Flint, MI	9/21/2014
375	Wisner St. & W. Stewart Ave., Flint, MI	3/18/2014
376	Woodbridge St. & Stevenson St., Flint, MI	7/10/2014
377	Woodrow Ave. & N. Center Rd., Flint, MI	1/22/2014
378	Zimmerman St. & Springer Ave., Flint, MI	1/18/2014

	A	B	C	D	E	F	G	H
1	Flint - city	Ticket	Digstart	Firm	Caller	work type	Address	Addr #
2	FLINTC	B40900116	3/31/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 111	111
3	FLINTC	A41051255	4/16/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 116	116
4	FLINTC	B41472072	5/28/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 123	123
5	FLINTC	B41140140	4/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 131	131
6	FLINTC	B41140140	4/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 131	131
7	FLINTC	B40870068	3/28/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 145	145
8	FLINTC	B40620077	3/3/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 145	145
9	FLINTC	B40700485	3/11/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 147	147
10	FLINTC	B41150234	4/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 200	200
11	FLINTC	B41150234	4/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 200	200
12	FLINTC	B40150416	1/15/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 209	209
13	FLINTC	B40590443	3/1/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 209	209
14	FLINTC	B40350047	2/4/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WMB	Address : 302	302
15	FLINTC	B40870073	3/28/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 306	306
16	FLINTC	B40420062	2/11/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 310	310
17	FLINTC	A40350152	2/4/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 313	313
18	FLINTC	B40520036	2/21/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 326	326
19	FLINTC	B40430075	2/12/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 401	401
20	FLINTC	A40780391	3/19/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 409	409
21	FLINTC	B40280327	1/28/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 410	410
22	FLINTC	B40160706	1/16/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 410	410
23	FLINTC	B40800545	3/21/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 411	411
24	FLINTC	B40620075	3/3/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 413	413
25	FLINTC	B40880071	3/29/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 414	414
26	FLINTC	B40900121	3/31/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 422	422
27	FLINTC	B40900121	3/31/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 422	422
28	FLINTC	B40570505	2/26/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 430	430
29	FLINTC	B42301264	8/18/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 517	517
30	FLINTC	B40640337	3/6/2014	FLINT CITY WATER DEPARTMENT	ROB BINCSIK	WMB	Address : 527	527
31	FLINTC	A43090056	11/5/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 568	568
32	FLINTC	B41120234	4/22/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 600	600
33	FLINTC	B43210926	11/18/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 605	605
34	FLINTC	B42810220	10/8/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 605	605
35	FLINTC	A40710262	3/12/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 613	613
36	FLINTC	B41491228	5/29/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 614	614
37	FLINTC	B41062111	4/17/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 629	629
38	FLINTC	B41150224	4/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 630	630
39	FLINTC	B41150224	4/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 630	630
40	FLINTC	B40480480	2/17/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 711	711
41	FLINTC	B40530104	2/23/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 718	718
42	FLINTC	B43230370	11/19/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB LK	Address : 719	719
43	FLINTC	B40500032	2/19/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 728	728
44	FLINTC	B40580093	2/27/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 804	804
45	FLINTC	B42230456	8/11/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 900	900
46	FLINTC	B40510054	2/20/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 901	901
47	FLINTC	B41061784	4/16/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 906	906

	I	J	K
1	**Street**	**Street fixed**	**Total Address**
2	Street : E MYRTLE AVE	E. Myrtle Ave.	111 E. Myrtle Ave., Flint, MI
3	Street : BRUCE ST	Bruce St.	116 Bruce St., Flint, MI
4	Street : BRUCE ST	Bruce St.	123 Bruce St., Flint, MI
5	Street : E MCCLELLAN ST	E. McClellan St.	131 E. McClellan St., Flint, MI
6	Street : E MCCLELLAN ST	E. McClellan St.	131 E. McClellan St., Flint, MI
7	Street : E ALMA AVE	E. Alma Ave.	145 E. Alma Ave., Flint, MI
8	Street : E FOSS AVE	E. Foss Ave.	145 E. Foss Ave., Flint, MI
9	Street : E HOME AVE	E. Home Ave.	147 E. Home Ave., Flint, MI
10	Street : W H SCHWARTZ DR	W. H. Schwartz Dr	200 W. H. Schwartz Dr, Flint, MI
11	Street : W H SCHWARTZ DR	W. H. Schwartz Dr	200 W. H. Schwartz Dr, Flint, MI
12	Street : W H SCHWARTZ DR	W. H. Schwartz Dr	209 W. H. Schwartz Dr, Flint, MI
13	Street : W H SCHWARTZ DR	W. H. Schwartz Dr	209 W. H. Schwartz Dr, Flint, MI
14	Street : W HOME AVE	W Home Ave.	302 W Home Ave., Flint, MI
15	Street : W PASADENA AVE	W Pasadena Ave.	306 W Pasadena Ave., Flint, MI
16	Street : W PATERSON	W. Paterson St.	310 W. Paterson St., Flint, MI
17	Street : E HOME AVE	E. Home Ave.	313 E. Home Ave., Flint, MI
18	Street : WHITE ST	White St.	326 White St., Flint, MI
19	Street : CARTON ST	Carton St.	401 Carton St., Flint, MI
20	Street : E SHERMAN AVE	E. Sherman Ave.	409 E. Sherman Ave., Flint, MI
21	Street : E NEWALL ST	E. Newall St.	410 E. Newall St., Flint, MI
22	Street : GRACE ST	Grace St.	410 Grace St., Flint, MI
23	Street : W BALTIMORE BLVD	W. Baltimore Blvd.	411 W. Baltimore Blvd., Flint, MI
24	Street : E GENESEE ST	E. Genesee St.	413 E. Genesee St., Flint, MI
25	Street : FREMONT ST	Fremont St.	414 Fremont St., Flint, MI
26	Street : W SECOND ST	W. Second St.	422 W. Second St., Flint, MI
27	Street : W SECOND ST	W. Second St.	422 W. Second St., Flint, MI
28	Street : W BALTIMORE	W. Baltimore Blvd.	430 W. Baltimore Blvd., Flint, MI
29	Street : MARY ST	Mary St.	517 Mary St., Flint, MI
30	Street : E GENESEE ST	E. Genesee St.	527 E. Genesee St., Flint, MI
31	Street : WELCH BLVD	Welch Blvd.	568 Welch Blvd., Flint, MI
32	Street : BLOOR AVE	Bloor Ave.	600 Bloor Ave., Flint, MI
33	Street : N SAGINAW ST	N. Saginaw St.	605 N. Saginaw St., Flint, MI
34	Street : ST CLAIR ST	St Clair St.	605 St Clair St., Flint, MI
35	Street : WHITE ST	White St.	613 White St., Flint, MI
36	Street : GRAND TRAVERSE ST	S. Grand Traverse St.	614 S. Grand Traverse St., Flint, MI
37	Street : E MCCLELLAN ST	E. McClellan St.	629 E. McClellan St., Flint, MI
38	Street : E LORADO AVE	E. Lorado Ave.	630 E. Lorado Ave., Flint, MI
39	Street : E LORADO AVE	E. Lorado Ave.	630 E. Lorado Ave., Flint, MI
40	Street : WELCH BLVD	Welch Blvd.	711 Welch Blvd., Flint, MI
41	Street : FRANK ST	Frank St.	718 Frank St., Flint, MI
42	Street : DELL AVE	Dell Ave.	719 Dell Ave., Flint, MI
43	Street : GARLAND	Garland St.	728 Garland St., Flint, MI
44	Street : E 9TH ST	E. Ninth St.	804 E. Ninth St., Flint, MI
45	Street : BEACH ST	Beach St.	900 Beach St., Flint, MI
46	Street : MARKHAM ST	Markham St.	901 Markham St., Flint, MI
47	Street : W RIDGEWAY AVE	W Ridgeway Ave.	906 W Ridgeway Ave., Flint, MI

	L	M
1	**1st cross st**	**2nd cross st**
2	1st x-st: Dir E of M L KING AVE	2nd x-st: Dir N of PASADENA AVE
3	1st x-st: Dir E of S SAGINAW ST	2nd x-st: Dir S of E TOBIAS ST
4	1st x-st: Dir E of S SAGINAW ST	2nd x-st: Dir N of W ATHERTON RD
5	1st x-st: Dir E of MARTIN L KING AVE	2nd x-st: Dir S of PASADENA AVE
6	1st x-st: Dir E of MARTIN L KING AVE	2nd x-st: Dir S of PASADENA AVE
7	1st x-st: Dir S of CARPENTER RD	2nd x-st: Dir E of M L KING AVE
8	1st x-st: Dir E of MARTIN LUTHER KING AVE	2nd x-st: Dir S of CARPENTER RD
9	1st x-st: Dir E of MARTIN LUTHER King Ave.	2nd x-st: Dir N of PIERSON RD
10	1st x-st: Dir W of CESAR CHAVEZ DR	2nd x-st: Dir S of ROBERT T LONGWAY BLVD
11	1st x-st: Dir W of CESAR CHAVEZ DR	2nd x-st: Dir S of ROBERT T LONGWAY BLVD
12	1st x-st: Dir W of S/B CHAVEZ DR	2nd x-st: Dir S of ROBERT T LONGWAY
13	1st x-st: Dir S of ROBERT T LONGWAY BLVD	2nd x-st: Dir W of CHAVEZ
14	1st x-st: Dir W of MARTIN LUTHER KING JR BLVD	2nd x-st: Dir N of PIERSON RD
15	1st x-st: Dir S of STEWART AVE	2nd x-st: Dir W of M L KING AVE
16	1st x-st: Dir W of MASON ST	2nd x-st: Dir N of WELCH BLVD
17	1st x-st: Dir N of PIERSON RD	2nd x-st: Dir W of SAGINAW ST
18	1st x-st: Dir E of IROQUOIS	2nd x-st: Dir W of MASON
19	1st x-st: Dir of BUICK ST	2nd x-st: Dir E of MARTIN LUTHER KING
20	1st x-st: Dir E of ML KING AVE	2nd x-st: Dir N of PIERSON ROAD
21	1st x-st: Dir W of AVE A	2nd x-st: Dir N of HAMILTON
22	1st x-st: Dir E of DUPONT	2nd x-st: Dir N of WELCH BLVD
23	1st x-st: Dir W of MARTKIN LUTHER KING	2nd x-st: Dir E of LONGFELLOW
24	1st x-st: Dir S of PASADENA AVE	2nd x-st: Dir E of MARTIN LUTHER KING AVE
25	1st x-st: Dir S of FLUSHING	2nd x-st: Dir E of BALLENGER HWY
26	1st x-st: Dir S of COURT ST	2nd x-st: Dir W of S GRAND TRAVERSE ST
27	1st x-st: Dir S of COURT ST	2nd x-st: Dir W of S GRAND TRAVERSE ST
28	1st x-st: Dir E of DUPONT	2nd x-st: Dir S of PIERSON RD
29	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir N of WOOD ST
30	1st x-st: Dir W of SAGINAW	2nd x-st: Dir N of HAMILTON AVE
31	1st x-st: Dir E of DUPONT ST	2nd x-st: Dir W of EUCLID AVE
32	1st x-st: Dir W of S GRAND TRAVERSE ST	2nd x-st: Dir N of ATHERTON RD
33	1st x-st: Dir of UNIVERSITY DR	2nd x-st: Dir of 4TH AVE
34	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir E of NOLEN
35	1st x-st: Dir E of DUPONT ST	2nd x-st: Dir W of IROQUOIS AVE
36	1st x-st: Dir of 2ND ST	2nd x-st: Dir of 3RD ST
37	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir N of LEITH ST
38	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir S of E CARPENTER RD
39	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir S of E CARPENTER RD
40	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir of
41	1st x-st: Dir S of PERRY	2nd x-st: Dir N of UNIVERSITY DR
42	1st x-st: Dir E of OGEMA AVE	2nd x-st: Dir W of SHAWNEE AVE
43	1st x-st: Dir of 5TH AVE	2nd x-st: Dir W of MARTIN LUTHER KING
44	1st x-st: Dir E of LAPEER RD	2nd x-st: Dir N of I-69
45	1st x-st: Dir S of COURT ST	2nd x-st: Dir W of SAGINAW ST
46	1st x-st: Dir E of FENTON RD	2nd x-st: Dir N of HEMPHILL RD
47	1st x-st: Dir N of PIERSON RD	2nd x-st: Dir W of DUPONT ST

	A	B	C	D	E	F	G	H
48	FLINTC	B41220104	5/2/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 917	917
49	FLINTC	A40780392	3/20/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 917	917
50	FLINTC	B40780742	3/20/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 917	917
51	FLINTC	B42310182	8/20/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 919	919
52	FLINTC	A40630217	3/4/2014	FLINT CITY WATER DEPT	HOWARD SWICKARD	WMB	Address : 932	932
53	FLINTC	B41000463	4/10/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 944	944
54	FLINTC	B40760049	3/17/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 948	948
55	FLINTC	B40560097	2/25/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WMB	Address : 965	965
56	FLINTC	B40520501	2/22/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 1009	1009
57	FLINTC	B40590389	3/1/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1010	1010
58	FLINTC	B43151550	11/12/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1016	1016
59	FLINTC	B41330399	5/16/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1017	1017
60	FLINTC	B41330399	5/14/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1017	1017
61	FLINTC	B41680282	6/17/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1037	1037
62	FLINTC	B40410043	2/10/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1106	1106
63	FLINTC	B41070095	4/17/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 1113	1113
64	FLINTC	B40310437	1/31/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1152	1152
65	FLINTC	B41001939	4/11/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1210	1210
66	FLINTC	B40480634	2/17/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1219	1219
67	FLINTC	B40480634	2/18/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1219	1219
68	FLINTC	B40720724	3/14/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1309	1309
69	FLINTC	B40720724	3/14/2014	FLINT CITY WATER DEPARTMENT	CHERI PRIEST	WMB	Address : 1309	1309
70	FLINTC	B40420436	2/11/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1317	1317
71	FLINTC	B40230562	1/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1330	1330
72	FLINTC	B40781033	3/20/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1375	1375
73	FLINTC	A40640393	3/6/2014	FLINT CITY	HOWARD SWICKARD	REPR WMB	Address : 1406	1406
74	FLINTC	B40841030	3/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1407	1407
75	FLINTC	B40760879	3/18/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1421	1421
76	FLINTC	B40270634	1/28/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1421	1421
77	FLINTC	B40240040	1/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1452	1452
78	FLINTC	B40920076	4/2/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1452	1452
79	FLINTC	B40460151	2/17/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1505	1505
80	FLINTC	B40840115	3/25/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 1509	1509
81	FLINTC	B40440061	2/13/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1511	1511
82	FLINTC	B40050061	1/5/2014	FLINT CITY	GARY SMITH	WMB	Address : 1527	1527
83	FLINTC	B40240038	1/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1601	1601
84	FLINTC	B41980357	7/17/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1602	1602
85	FLINTC	B40310596	2/1/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1611	1611
86	FLINTC	B40690321	3/10/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1616	1616
87	FLINTC	B40930488	4/3/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1616	1616
88	FLINTC	B43091445	11/6/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1618	1618
89	FLINTC	B40360395	2/5/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1620	1620
90	FLINTC	B40620546	3/3/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1625	1625
91	FLINTC	A40620335	3/3/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1625	1625
92	FLINTC	B40410258	2/10/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1631	1631
93	FLINTC	A42830161	10/10/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 1636	1636
94	FLINTC	B40380335	2/7/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1701	1701
95	FLINTC	B41042525	4/15/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1703	1703

	I	J	K
48	Street : E 9TH ST	E. Ninth St.	917 E. Ninth St., Flint, MI
49	Street : JOHNSON AVE	Johnson Ave.	917 Johnson Ave., Flint, MI
50	Street : JOHNSON AVE	Johnson Ave.	917 Johnson Ave., Flint, MI
51	Street : FREMONT ST	Fremont St.	919 Fremont St., Flint, MI
52	Street : MARKHAM ST	Markham St.	932 Markham St., Flint, MI
53	Street : PETTIBONE AVE	Pettibone Ave.	944 Pettibone Ave., Flint, MI
54	Street : LELAND ST	Leland St.	948 Leland St., Flint, MI
55	Street : E 7TH ST	E. Seventh St.	965 E. Seventh St., Flint, MI
56	Street : S FRANKLIN AVE	S Franklin Ave.	1009 S Franklin Ave., Flint, MI
57	Street : VICTORIA AVE	Victoria Ave.	1010 Victoria Ave., Flint, MI
58	Street : W RIDGEWAY AVE	W Ridgeway Ave.	1016 W Ridgeway Ave., Flint, MI
59	Street : GLADWYN ST	Gladwyn St.	1017 Gladwyn St., Flint, MI
60	Street : GLADWYN ST	Gladwyn St.	1017 Gladwyn St., Flint, MI
61	Street : E ALMA AVE	E. Alma Ave.	1037 E. Alma Ave., Flint, MI
62	Street : BARRIE AVE	Barrie Ave.	1106 Barrie Ave., Flint, MI
63	Street : W PATERSON ST	W. Paterson St.	1113 W. Paterson St., Flint, MI
64	Street : DONALDSON	Donaldson St.	1152 Donaldson St., Flint, MI
65	Street : DUPONT ST	Dupont St.	1210 Dupont St., Flint, MI
66	Street : SOMERSET LN	Somerset Ln.	1219 Somerset Ln., Flint, MI
67	Street : SOMERSET LN	Somerset Ln.	1219 Somerset Ln., Flint, MI
68	Street : BLANCHARD AVE	Blanchard Ave.	1309 Blanchard Ave., Flint, MI
69	Street : BLANCHARD AVE	Blanchard Ave.	1309 Blanchard Ave., Flint, MI
70	Street : MANN AVE	Mann Ave.	1317 Mann Ave., Flint, MI
71	Street : DUPONT ST	Dupont St.	1330 Dupont St., Flint, MI
72	Street : LAVENDER AVE	Lavender Ave.	1375 Lavender Ave., Flint, MI
73	Street : W MOTT AVE	W Mott Ave.	1406 W Mott Ave., Flint, MI
74	Street : GREENWAY AVE	Greenway Ave.	1407 Greenway Ave., Flint, MI
75	Street : DELAWARE AVE	Delaware Ave.	1421 Delaware Ave., Flint, MI
76	Street : KEARSLEY PARK BLVD	Kearsley Park Blvd.	1421 Kearsley Park Blvd., Flint, MI
77	Street : BROADWAY BLVD	Broadway Blvd.	1452 Broadway Blvd., Flint, MI
78	Street : BROADWAY BLVD	Broadway Blvd.	1452 Broadway Blvd., Flint, MI
79	Street : JANE AVE	Jane Ave.	1505 Jane Ave., Flint, MI
80	Street : CRESTBROOK LN	Crestbrook Ln.	1509 Crestbrook Ln., Flint, MI
81	Street : E ATHERTON RD	E. Atherton Rd.	1511 E. Atherton Rd., Flint, MI
82	Street : KEARSLEY ST	E. Kearsley St.	1527 E. Kearsley St., Flint, MI
83	Street : CRESTBROOK LN	Crestbrook Ln.	1601 Crestbrook Ln., Flint, MI
84	Street : LEITH ST	Leith St.	1602 Leith St., Flint, MI
85	Street : COLORADO AVE	Colorado Ave.	1611 Colorado Ave., Flint, MI
86	Street : ROOT ST	Root St.	1616 Root St., Flint, MI
87	Street : ROOT ST	Root St.	1616 Root St., Flint, MI
88	Street : KENSINGTON AVE	Kensington Ave.	1618 Kensington Ave., Flint, MI
89	Street : NEBRASKA AVE	Nebraska Ave.	1620 Nebraska Ave., Flint, MI
90	Street : NEBRASKA AVE	Nebraska Ave.	1625 Nebraska Ave., Flint, MI
91	Street : PENNSYLVANIA AVE	Pennsylvania Ave.	1625 Pennsylvania Ave., Flint, MI
92	Street : PENNSYLVANIA AVE	Pennsylvania Ave.	1631 Pennsylvania Ave., Flint, MI
93	Street : MONTANA AVE	Montana Ave.	1636 Montana Ave., Flint, MI
94	Street : PENNSYLVANIA AVE	Pennsylvania Ave.	1701 Pennsylvania Ave., Flint, MI
95	Street : MARTIN LUTHER KING AVE	Martin Luther King Ave.	1703 Martin Luther King Ave., Flint, MI

	L	M
48	1st x-st: Dir E of LAPEER RD	2nd x-st: Dir S of COURT ST
49	1st x-st: Dir S of W COURT ST	2nd x-st: Dir W of BALLENGER HWY
50	1st x-st: Dir S of W COURT ST	2nd x-st: Dir W of BALLENGER HWY
51	1st x-st: Dir S of FLUSHING RD	2nd x-st: Dir W of CHEVROLET AVE
52	1st x-st: Dir E of FENTON RD	2nd x-st: Dir N of E HEMPHILL RD
53	1st x-st: Dir E of FENTON RD	2nd x-st: Dir N of W ATHERTON
54	1st x-st: Dir E of FENTON RD	2nd x-st: Dir S of ATHERTON RD
55	1st x-st: Dir S of COURT ST	2nd x-st: Dir E of AVON ST
56	1st x-st: Dir W of S DORT HWY	2nd x-st: Dir S of E COURT ST
57	1st x-st: Dir N of W ATHERTON RD	2nd x-st: Dir W of FENTON RD
58	1st x-st: Dir N of W PIERSON RD	2nd x-st: Dir E of WINTHROP BLVD
59	1st x-st: Dir S of FLUSHING RD	2nd x-st: Dir E of DUPONT ST
60	1st x-st: Dir S of FLUSHING RD	2nd x-st: Dir E of DUPONT ST
61	1st x-st: Dir W of I-475	2nd x-st: Dir S of CARPENTER RD
62	1st x-st: Dir W of FENTON RD	2nd x-st: Dir N of W ATHERTON RD
63	1st x-st: Dir W of CHEVROLET AVE	2nd x-st: Dir N of WELCH BLVD
64	1st x-st: Dir N of FLUSHING RD	2nd x-st: Dir W of BALLENGER HWY
65	1st x-st: Dir N of FLUSHING RD	2nd x-st: Dir S of MACKIN RD
66	1st x-st: Dir W of CENTER RD	2nd x-st: Dir S of E COURT ST
67	1st x-st: Dir W of CENTER RD	2nd x-st: Dir S of E COURT ST
68	1st x-st: Dir S of E COURT ST	2nd x-st: Dir N of LINWOOD AVE
69	1st x-st: Dir S of E COURT ST	2nd x-st: Dir N of LINWOOD AVE
70	1st x-st: Dir S of CORUNNA RD	2nd x-st: Dir N of ARLENE
71	1st x-st: Dir N of FLUSHING RD	2nd x-st: Dir N of WOLCOTT
72	1st x-st: Dir N of PROSPECT ST	2nd x-st: Dir S of MACKIN RD
73	1st x-st: Dir E of FLEMING RD	2nd x-st: Dir N of PIERSON RD
74	1st x-st: Dir W of FOREST HILL AVE	2nd x-st: Dir E of BALLENGER HWY
75	1st x-st: Dir E of LEWIS ST	2nd x-st: Dir S of LEITH ST
76	1st x-st: Dir W of OLIVE AVE	2nd x-st: Dir E of LEWIS ST
77	1st x-st: Dir N of DAVISON RD	2nd x-st: Dir E of LEWIS ST
78	1st x-st: Dir N of DAVISON RD	2nd x-st: Dir W of OLIVE AVE
79	1st x-st: Dir W of N FRANKLIN AVE	2nd x-st: Dir N of DAVIDSON RD
80	1st x-st: Dir W of FENTON RD	2nd x-st: Dir N of HEMPHILL RD
81	1st x-st: Dir E of S DORT HWY	2nd x-st: Dir of
82	1st x-st: Dir S of ROBERT T LONGWAY	2nd x-st: Dir E of CHAVEZ DR
83	1st x-st: Dir W of BLACKBERRY LN	2nd x-st: Dir E of VAN SLYKE RD
84	1st x-st: Dir E of IOWA AVE	2nd x-st: Dir N of DAVISON RD
85	1st x-st: Dir E of IOWA AVE	2nd x-st: Dir N of LEITH ST
86	1st x-st: Dir N of MARY ST	2nd x-st: Dir W of N SAGINAW ST
87	1st x-st: Dir S of PAGE ST	2nd x-st: Dir N of MARY ST
88	1st x-st: Dir N of SUNNYSIDE AVE	2nd x-st: Dir S of E COURT ST
89	1st x-st: Dir W of MINNESOTA	2nd x-st: Dir N of ROBERT T LONGWAY
90	1st x-st: Dir N of ROBERT T LONGWAY BLVD	2nd x-st: Dir W of MINNESOTA AVE
91	1st x-st: Dir N of ROBERT T LONGWAY BLVD	2nd x-st: Dir W of MINNESOTA AVE
92	1st x-st: Dir E of KEARSLEY PARK BLVD	2nd x-st: Dir W of MINNESOTA AVE
93	1st x-st: Dir W of N FRANKLIN AVE	2nd x-st: Dir E of IOWA AVE
94	1st x-st: Dir E of MINNESOTA	2nd x-st: Dir S of DAVISON RD
95	1st x-st: Dir N of WELCH BLVD	2nd x-st: Dir of

	A	B	C	D	E	F	G	H
96	FLINTC	B40350703	2/5/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1705	1705
97	FLINTC	B41602663	6/10/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1713	1713
98	FLINTC	B42520317	9/9/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1776	1776
99	FLINTC	B41040831	4/14/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 1811	1811
100	FLINTC	B40570647	2/27/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1813	1813
101	FLINTC	B40940033	4/4/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1818	1818
102	FLINTC	B40430493	2/12/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1857	1857
103	FLINTC	B40310440	2/1/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1901	1901
104	FLINTC	B43210171	11/17/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1902	1902
105	FLINTC	A40220237	1/22/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1905	1905
106	FLINTC	B42510239	9/8/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1912	1912
107	FLINTC	A40710325	3/13/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1919	1919
108	FLINTC	B40480049	2/17/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 1920	1920
109	FLINTC	B40920073	4/2/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1926	1926
110	FLINTC	B41822360	7/2/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1926	1926
111	FLINTC	B40620341	3/3/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1941	1941
112	FLINTC	B40710038	3/12/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2018	2018
113	FLINTC	A40770493	3/19/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2018	2018
114	FLINTC	B40300160	1/30/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2101	2101
115	FLINTC	B40570121	2/26/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2107	2107
116	FLINTC	B40570047	2/26/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2113	2113
117	FLINTC	B40130055	1/13/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2118	2118
118	FLINTC	B40440474	2/13/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2202	2202
119	FLINTC	B40550053	2/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2210	2210
120	FLINTC	B40490750	2/19/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 2210	2210
121	FLINTC	B40080046	1/8/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2211	2211
122	FLINTC	B40600083	3/1/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2213	2213
123	FLINTC	A40640015	3/5/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2320	2320
124	FLINTC	A42020038	7/21/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2341	2341
125	FLINTC	A41990044	7/18/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 2402	2402
126	FLINTC	B40160107	1/16/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2501	2501
127	FLINTC	A40630016	3/4/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 2502	2502
128	FLINTC	A40630016	3/4/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 2502	2502
129	FLINTC	B40370033	2/6/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2509	2509
130	FLINTC	B40420048	2/11/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2518	2518
131	FLINTC	A40640023	3/5/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2521	2521
132	FLINTC	A40970038	4/7/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2521	2521
133	FLINTC	B41060407	4/16/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	W M B REPR	Address : 2574	2574
134	FLINTC	A40830106	3/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2603	2603
135	FLINTC	B40700343	3/11/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2607	2607
136	FLINTC	B40550238	2/24/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 2618	2618
137	FLINTC	B40851171	3/27/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2633	2633
138	FLINTC	B40880010	3/29/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 2718	2718
139	FLINTC	B40350035	2/4/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2722	2722
140	FLINTC	B40790130	3/20/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2740	2740
141	FLINTC	B40790092	3/21/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2808	2808
142	FLINTC	A42300052	8/18/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2810	2810
143	FLINTC	A42300052	8/18/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2810	2810

	I	J	K
96	Street : MONTCLAIR AVE	Montclair Ave.	1705 Montclair Ave., Flint, MI
97	Street : LEITH ST	Leith St.	1713 Leith St., Flint, MI
98	Street : S DORT HWY	S Dort Hwy.	1776 S Dort Hwy., Flint, MI
99	Street : MARTIN LUTHER KING AVE	Martin Luther King Ave.	1811 Martin Luther King Ave., Flint, MI
100	Street : SENECA ST	Seneca St.	1813 Seneca St., Flint, MI
101	Street : CARMANBROOK PKWY	Carmanbrook Pkwy.	1818 Carmanbrook Pkwy., Flint, MI
102	Street : S AVERILL AVE	S Averill Ave.	1857 S Averill Ave., Flint, MI
103	Street : E 2ND ST	E. Second St.	1901 E. Second St., Flint, MI
104	Street : WOLCOTT ST	Wolcott St.	1902 Wolcott St., Flint, MI
105	Street : MCPHAIL ST	Mcphail St.	1905 Mcphail St., Flint, MI
106	Street : CORUNNA RD	Corunna Rd.	1912 Corunna Rd., Flint, MI
107	Street : CLIFFORD ST	Clifford St.	1919 Clifford St., Flint, MI
108	Street : WOLCOTT AVE	Wolcott Ave.	1920 Wolcott Ave., Flint, MI
109	Street : CORUNNA RD	Corunna Rd.	1926 Corunna Rd., Flint, MI
110	Street : CORUNNA RD	Corunna Rd.	1926 Corunna Rd., Flint, MI
111	Street : HOSLER ST	Hosler St.	1941 Hosler St., Flint, MI
112	Street : SLOAN ST	Sloan St.	2018 Sloan St., Flint, MI
113	Street : STANFORD AVE	Stanford Ave.	2018 Stanford Ave., Flint, MI
114	Street : LEITH ST	Leith St.	2101 Leith St., Flint, MI
115	Street : CALUMET ST	Calumet St.	2107 Calumet St., Flint, MI
116	Street : CALUMET ST	Calumet St.	2113 Calumet St., Flint, MI
117	Street : WELCH BLVD	Welch Blvd.	2118 Welch Blvd., Flint, MI
118	Street : MAYBURY AVE	Maybury Ave.	2202 Maybury Ave., Flint, MI
119	Street : CANNIFF ST	Canniff St.	2210 Canniff St., Flint, MI
120	Street : SANTA BARBARA DR	Santa Barbara Dr.	2210 Santa Barbara Dr., Flint, MI
121	Street : S DORT HWY	S Dort Hwy.	2211 S Dort Hwy., Flint, MI
122	Street : ILLINOIS AVE	Illinois Ave.	2213 Illinois Ave., Flint, MI
123	Street : MILLER RD	Miller Rd.	2320 Miller Rd., Flint, MI
124	Street : S DORT HWY	S Dort Hwy.	2341 S Dort Hwy., Flint, MI
125	Street : HILLS ST	Hills St.	2402 Hills St., Flint, MI
126	Street : S DORT HWY	S Dort Hwy.	2501 S Dort Hwy., Flint, MI
127	Street : BRANCH RD	Branch Rd.	2502 Branch Rd., Flint, MI
128	Street : BRANCH RD	Branch Rd.	2502 Branch Rd., Flint, MI
129	Street : BURNS ST	Burns St.	2509 Burns St., Flint, MI
130	Street : PROSPECT ST	Prospect St.	2518 Prospect St., Flint, MI
131	Street : WOODROW AVE	Woodrow Ave.	2521 Woodrow Ave., Flint, MI
132	Street : WOODROW AVE	Woodrow Ave.	2521 Woodrow Ave., Flint, MI
133	Street : NOLEN DR	Nolen Dr.	2574 Nolen Dr., Flint, MI
134	Street : LEWIS ST	Lewis St.	2603 Lewis St., Flint, MI
135	Street : AVE A	Avenue A	2607 Avenue A, Flint, MI
136	Street : NORBERT ST	Norbert St.	2618 Norbert St., Flint, MI
137	Street : HILLCREST AVE	Hillcrest Ave.	2633 Hillcrest Ave., Flint, MI
138	Street : NORBERT ST	Norbert St.	2718 Norbert St., Flint, MI
139	Street : MACKIN RD	Mackin Rd.	2722 Mackin Rd., Flint, MI
140	Street : CLIO RD	Clio Rd.	2740 Clio Rd., Flint, MI
141	Street : BROWNELL BLVD	Brownell Blvd.	2808 Brownell Blvd., Flint, MI
142	Street : PARKSIDE DR	Parkside Dr.	2810 Parkside Dr., Flint, MI
143	Street : PARKSIDE DR	Parkside Dr.	2810 Parkside Dr., Flint, MI

	L	M
96	1st x-st: Dir W of FRANKLIN	2nd x-st: Dir N of E COURT ST
97	1st x-st: Dir W of N FRANKLIN AVE	2nd x-st: Dir N of DAVISON RD
98	1st x-st: Dir N of LAPEER RD	2nd x-st: Dir S of I-69
99	1st x-st: Dir S of E HAMILTON AVE	2nd x-st: Dir N of WELCH BLVD
100	1st x-st: Dir S of WELCH BLVD	2nd x-st: Dir W of BALLENGER HWY
101	1st x-st: Dir W of BRIARWOOD DR	2nd x-st: Dir N of W ATHERTON RD
102	1st x-st: Dir S of LAPEER RD	2nd x-st: Dir N of KENT ST
103	1st x-st: Dir of S FRANKLIN	2nd x-st: Dir W of S DORT HWY
104	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir N of FLUSHING RD
105	1st x-st: Dir W of S DORT HWY	2nd x-st: Dir N of PINGREE
106	1st x-st: Dir W of PERSHING ST	2nd x-st: Dir S of E COURT ST
107	1st x-st: Dir S of 12TH ST	2nd x-st: Dir E of S SAGINAW ST
108	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir N of FLUSHING RD
109	1st x-st: Dir W of COURT ST	2nd x-st: Dir of
110	1st x-st: Dir S of W COURT ST	2nd x-st: Dir W of PERSHING ST
111	1st x-st: Dir S of LAPEER	2nd x-st: Dir W of S AVERILL
112	1st x-st: Dir N of FLUSHING RD	2nd x-st: Dir E of CHEVROLET AVE
113	1st x-st: Dir N of LIPPINCOTT BLVD	2nd x-st: Dir S of PINGREE AVE
114	1st x-st: Dir E of N FRANKLIN	2nd x-st: Dir W of VERNON AVE
115	1st x-st: Dir W of VERNON AVE	2nd x-st: Dir S of COURT ST
116	1st x-st: Dir W of VERNON DR	2nd x-st: Dir S of COURT ST
117	1st x-st: Dir W of BALLENGER HWY	2nd x-st: Dir E of CLIO RD
118	1st x-st: Dir W of W DORT HWY	2nd x-st: Dir S of LIPPINCOTT
119	1st x-st: Dir E of CLIO RD	2nd x-st: Dir N of STEWART AVE
120	1st x-st: Dir N of STEWART AVE	2nd x-st: Dir E of CLIO RD
121	1st x-st: Dir S of LIPPINCOTT BLVD	2nd x-st: Dir of
122	1st x-st: Dir E of VERNON	2nd x-st: Dir W of DORT HWY
123	1st x-st: Dir E of LINCOLN	2nd x-st: Dir W of IRENE
124	1st x-st: Dir S of LIPPINCOTT BLVD	2nd x-st: Dir N of MITCHELL ST
125	1st x-st: Dir W of DORT HWY	2nd x-st: Dir S of E COURT ST
126	1st x-st: Dir S of LIPPINCOTT BLVD	2nd x-st: Dir N of MOHAWK
127	1st x-st: Dir E of DORT HWY	2nd x-st: Dir N of DAVISON RD
128	1st x-st: Dir E of DORT HWY	2nd x-st: Dir N of DAVISON RD
129	1st x-st: Dir S of DELAWARE AVE	2nd x-st: Dir E of FRANKLIN AVE
130	1st x-st: Dir E of FOREST HILL AVE	2nd x-st: Dir S of MACKIN RD
131	1st x-st: Dir S of LEITH ST	2nd x-st: Dir W of N DORT HWY
132	1st x-st: Dir W of DORT HWY	2nd x-st: Dir N of DAVISON RD
133	1st x-st: Dir N of MARQUETTE ST	2nd x-st: Dir W of THOMAS ST
134	1st x-st: Dir E of I- 475	2nd x-st: Dir S of LEITH ST
135	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir N of E HAMILTON AVE
136	1st x-st: Dir W of CHEVROLET AVE	2nd x-st: Dir S of FLUSHING RD
137	1st x-st: Dir E of CIRCLE DR	2nd x-st: Dir N of ELDON BAKER DR
138	1st x-st: Dir S of FLUSHING RD	2nd x-st: Dir E of BALLENGER HWY
139	1st x-st: Dir E of LAVENDER AVE	2nd x-st: Dir N of FLUSHING RD
140	1st x-st: Dir S of W DARTMOUTH	2nd x-st: Dir N of MACK AVE
141	1st x-st: Dir S of PASADENA AVE	2nd x-st: Dir E of CLIO RD
142	1st x-st: Dir S of WESTWOOD PKWY	2nd x-st: Dir E of COLCHESTER RD
143	1st x-st: Dir S of WESTWOOD PKWY	2nd x-st: Dir E of COLCHESTER RD

	A	B	C	D	E	F	G	H
144	FLINTC	B42790086	10/6/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2890	2890
145	FLINTC	A41190048	4/29/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2910	2910
146	FLINTC	B40020118	1/2/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 2935	2935
147	FLINTC	B41770306	6/26/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2951	2951
148	FLINTC	B40340405	2/3/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 2952	2952
149	FLINTC	B40160621	1/16/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2956	2956
150	FLINTC	B40080341	1/9/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 2959	2959
151	FLINTC	B43240296	11/20/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3009	3009
152	FLINTC	B40590069	2/28/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : G3070	3070
153	FLINTC	B40620046	3/4/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 3106	3106
154	FLINTC	B40560759	2/26/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 3113	3113
155	FLINTC	B40620047	3/4/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 3116	3116
156	FLINTC	A40450037	2/14/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 3202	3202
157	FLINTC	B40520503	2/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 3202	3202
158	FLINTC	A43210049	11/17/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 3220	3220
159	FLINTC	B40510688	2/21/2014	FLINT CITY	HOWARD SWICKARD	WMB	Address : 3299	3299
160	FLINTC	B40780486	3/19/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3307	3307
161	FLINTC	B40340070	2/3/2014	CITY OF FLINT, MI WATER SER	HOWARD SWICKARD	WMB	Address : 3308	3308
162	FLINTC	B41020007	4/12/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 3310	3310
163	FLINTC	B40730921	3/15/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3505	3505
164	FLINTC	A40630014	3/4/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 3514	3514
165	FLINTC	B40230508	1/23/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 3514	3514
166	FLINTC	B40090064	1/9/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 3517	3517
167	FLINTC	B40410506	2/11/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WMB	Address : 3608	3608
168	FLINTC	B40650041	3/7/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 3610	3610
169	FLINTC	B40050064	1/5/2014	FLINT CITY	GARY SMITH	WMB	Address : 3701	3701
170	FLINTC	A40970443	4/7/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 3715	3715
171	FLINTC	B40990320	4/10/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3805	3805
172	FLINTC	B40590390	3/1/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3829	3829
173	FLINTC	B40310397	1/31/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 3837	3837
174	FLINTC	B40130760	1/13/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 3838	3838
175	FLINTC	B42551088	9/13/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3902	3902
176	FLINTC	B40380194	2/7/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 3917	3917
177	FLINTC	B40290462	1/29/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 4140	4140
178	FLINTC	B40240037	1/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 4214	4214
179	FLINTC	B40440088	2/13/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 4226	4226
180	FLINTC	A41551207	6/5/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 5322	5322
181	FLINTC	B40720465	3/13/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 5410	5410
182	FLINTC	B40980197	4/8/2014	FLINT CITY	HOWARD SWICKARD	WMB	Address : 5413	5413
183	FLINTC	B40580049	2/27/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 5414	5414
184	FLINTC	B40370074	2/6/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 5612	5612
185	FLINTC	B40030499	1/3/2014	CITY OF FLINT, MI WATER SER	CHERI PRIEST	WMB	Address : 5614	5614
186	FLINTC	B40370077	2/7/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 5713	5713
187	FLINTC	B40370076	2/7/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 5714	5714
188	FLINTC	B40660714	3/8/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 5806	5806
189	FLINTC	B40070144	1/7/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 5810	5810
190	FLINTC	B43071437	11/3/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 6230	6230
191	FLINTC	B40140470	1/14/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 7010	7010

	I	J	K
144	Street : ROBERT T LONGWAY BLVD	Robert T Longway Blvd.	2890 Robert T Longway Blvd., Flint, MI
145	Street : WYOMING AVE	Wyoming Ave.	2910 Wyoming Ave., Flint, MI
146	Street : RICHFIELD RD	Richfield Rd.	2935 Richfield Rd., Flint, MI
147	Street : HENRY ST	Henry St.	2951 Henry St., Flint, MI
148	Street : CLEMENT ST	Clement St.	2952 Clement St., Flint, MI
149	Street : N STEVENSON ST	N. Stevenson St.	2956 N. Stevenson St., Flint, MI
150	Street : HENRY ST	Henry St.	2959 Henry St., Flint, MI
151	Street : CHEROKEE AVE	Cherokee Ave.	3009 Cherokee Ave., Flint, MI
152	Street : S DORT HWY	S Dort Hwy.	3070 S Dort Hwy., Flint, MI
153	Street : W COURT ST	W. Court St.	3106 W. Court St., Flint, MI
154	Street : LIPPINCOTT BLVD	Lippincott Blvd.	3113 Lippincott Blvd., Flint, MI
155	Street : PENCOMBE PL	Pencombe Pl.	3116 Pencombe Pl., Flint, MI
156	Street : LARCHMONT ST	Larchmont St.	3202 Larchmont St., Flint, MI
157	Street : LAWNDALE AVE	Lawndale Ave.	3202 Lawndale Ave., Flint, MI
158	Street : RICHFIELD RD	Richfield Rd.	3220 Richfield Rd., Flint, MI
159	Street : CHEYENNE AVE	Cheyenne Ave.	3299 Cheyenne Ave., Flint, MI
160	Street : MASON ST	Mason St.	3307 Mason St., Flint, MI
161	Street : DAKOTA AVE	Dakota Ave.	3308 Dakota Ave., Flint, MI
162	Street : BEECHER RD	Beecher Rd.	3310 Beecher Rd., Flint, MI
163	Street : COMANCHE AVE	Comanche Ave.	3505 Comanche Ave., Flint, MI
164	Street : FOSTER ST	Foster St.	3514 Foster St., Flint, MI
165	Street : WINONA ST	Winona St.	3514 Winona St., Flint, MI
166	Street : ESTHER ST	Esther St.	3517 Esther St., Flint, MI
167	Street : DAKOTA AVE	Dakota Ave.	3608 Dakota Ave., Flint, MI
168	Street : WISNER ST	Wisner St.	3610 Wisner St., Flint, MI
169	Street : AVERILL ST	N. Averill Ave.	3701 N. Averill Ave., Flint, MI
170	Street : MARMION AVE	Marmion Ave.	3715 Marmion Ave., Flint, MI
171	Street : FENTON RD	Fenton Rd.	3805 Fenton Rd., Flint, MI
172	Street : WOODROW AVE	Woodrow Ave.	3829 Woodrow Ave., Flint, MI
173	Street : RISEDORPH AVE	Risedorph Ave.	3837 Risedorph Ave., Flint, MI
174	Street : RICHFIELD RD	Richfield Rd.	3838 Richfield Rd., Flint, MI
175	Street : COGGINS ST	Coggins St.	3902 Coggins St., Flint, MI
176	Street : W KEARSLEY ST	W. Kearsley St.	3917 W. Kearsley St., Flint, MI
177	Street : WESTERN RD	Western Rd.	4140 Western Rd., Flint, MI
178	Street : WINONA ST	Winona St.	4214 Winona St., Flint, MI
179	Street : WISNER	Wisner St.	4226 Wisner St., Flint, MI
180	Street : GLENN AVE	Glenn Ave.	5322 Glenn Ave., Flint, MI
181	Street : KERMIT ST	Kermit St.	5410 Kermit St., Flint, MI
182	Street : EDWARDS AVE	Edwards Ave.	5413 Edwards Ave., Flint, MI
183	Street : WINTHROP BLVD	Winthrop Blvd.	5414 Winthrop Blvd., Flint, MI
184	Street : GRIGGS DR	Griggs Dr.	5612 Griggs Dr., Flint, MI
185	Street : GLENN AVE	Glenn Ave.	5614 Glenn Ave., Flint, MI
186	Street : EDWARDS AVE	Edwards Ave.	5713 Edwards Ave., Flint, MI
187	Street : BALDWIN BLVD	Baldwin Blvd.	5714 Baldwin Blvd., Flint, MI
188	Street : GRIGGS DR	Griggs Dr.	5806 Griggs Dr., Flint, MI
189	Street : BALDWIN BLVD	Baldwin Blvd.	5810 Baldwin Blvd., Flint, MI
190	Street : HATHAWAY DR	Hathaway Dr.	6230 Hathaway Dr., Flint, MI
191	Street : DARYLL DR	Daryll Dr.	7010 Daryll Dr., Flint, MI

	L	M
144	1st x-st: Dir E of DORT HWY	2nd x-st: Dir W of S AVERILL AVE
145	1st x-st: Dir N of LEITH ST	2nd x-st: Dir W of BRANCH RD
146	1st x-st: Dir E of WESTERN RD	2nd x-st: Dir W of BRANCH RD
147	1st x-st: Dir E of WESTERN RD	2nd x-st: Dir S of RICHFIELD RD
148	1st x-st: Dir W of BALLENGER HWY	2nd x-st: Dir S of WELCH BLVD
149	1st x-st: Dir N of FLUSHING	2nd x-st: Dir W of BALLENGER HWY
150	1st x-st: Dir S of RICHFIELD RD	2nd x-st: Dir E of WESTERN RD
151	1st x-st: Dir S of MOHAWK AVE	2nd x-st: Dir N of ELDON BAKER DR
152	1st x-st: Dir S of HEMPHILL RD	2nd x-st: Dir N of BRISTOL RD
153	1st x-st: Dir W of BEECHER RD	2nd x-st: Dir E of BALLENGER HWY
154	1st x-st: Dir W of S AVERILL AVE	2nd x-st: Dir E of S DORT HWY
155	1st x-st: Dir W of BRADLEY	2nd x-st: Dir N of COURT ST
156	1st x-st: Dir W of STOCKER	2nd x-st: Dir E of BALLENGER HWY
157	1st x-st: Dir N of MCCLELLAN ST	2nd x-st: Dir W of CHEVROLET
158	1st x-st: Dir W of N AVERILL AVE	2nd x-st: Dir E of BRANCH RD
159	1st x-st: Dir W of DORT HWY	2nd x-st: Dir S of HEMPHILL RD
160	1st x-st: Dir S of PASADENA AVE	2nd x-st: Dir N of DEWEY ST
161	1st x-st: Dir E of AVERILL AVE	2nd x-st: Dir S of RICHFIELD RD
162	1st x-st: Dir E of BALLENGER HWY	2nd x-st: Dir N of COURT ST
163	1st x-st: Dir N of E ATHERTON RD	2nd x-st: Dir S of ELDON BAKER DR
164	1st x-st: Dir W of SAGINAW RD	2nd x-st: Dir N of PASADENA AVE
165	1st x-st: Dir N of PASADENA	2nd x-st: Dir E of CLIO RD
166	1st x-st: Dir E of M L KING	2nd x-st: Dir N of PASADENA
167	1st x-st: Dir W of DEXTER ST	2nd x-st: Dir S of LEITH ST
168	1st x-st: Dir E of CLIO RD	2nd x-st: Dir S of CARPENTER RD
169	1st x-st: Dir of DAVISON	2nd x-st: Dir of LEITH
170	1st x-st: Dir E of N AVERILL AVE	2nd x-st: Dir S of DAVISON RD
171	1st x-st: Dir S of W ATHERTON RD	2nd x-st: Dir of
172	1st x-st: Dir W of CENTER RD	2nd x-st: Dir N of DAVISON RD
173	1st x-st: Dir W of CENTER RD	2nd x-st: Dir N of DAVISON RD
174	1st x-st: Dir W of CENTER RD	2nd x-st: Dir E of AVERILL
175	1st x-st: Dir S of RICHFIELD RD	2nd x-st: Dir W of BRANCH RD
176	1st x-st: Dir W of BALLENGER HWY	2nd x-st: Dir N of COURT ST
177	1st x-st: Dir N of RICHFIELD RD	2nd x-st: Dir E of N DORT HWY
178	1st x-st: Dir S of W STEWART AVE	2nd x-st: Dir E of CLIO RD
179	1st x-st: Dir S of STEWART AVE	2nd x-st: Dir E of CLIO RD
180	1st x-st: Dir N of W PIERSON RD	2nd x-st: Dir W of DUPONT ST
181	1st x-st: Dir N of PIERSON RD	2nd x-st: Dir E of FLEMING RD
182	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir N of PIERSON RD
183	1st x-st: Dir N of PIERSON RD	2nd x-st: Dir E of FLEMING RD
184	1st x-st: Dir S of W HOME AVE	2nd x-st: Dir E of CLOVERLAWN DR
185	1st x-st: Dir N of PIERSON RD	2nd x-st: Dir W of DUPONT
186	1st x-st: Dir S of W HOME AVE	2nd x-st: Dir W of DUPONT ST
187	1st x-st: Dir S of W HOME AVE	2nd x-st: Dir W of DUPONT ST
188	1st x-st: Dir S of W HOME AVE	2nd x-st: Dir E of CLIO RD
189	1st x-st: Dir W of DUPONT	2nd x-st: Dir S of HOME AVE
190	1st x-st: Dir E of N DORT HWY	2nd x-st: Dir N of E WEBSTER RD
191	1st x-st: Dir W of DUPONT	2nd x-st: Dir S of W CARPENTER RD

	A	B	C	D	E	F	G	H
192	FLINTC	B40760038	3/17/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
193	FLINTC	A40090142	1/9/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
194	FLINTC	B40630318	3/4/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
195	FLINTC	B40700477	3/11/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
196	FLINTC	B40840075	3/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
197	FLINTC	B40300487	1/30/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
198	FLINTC	B41070586	4/17/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
199	FLINTC	B40140056	1/14/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
200	FLINTC	B40720062	3/13/2014	FLINT CITY	HOWARD SWICKARD	REPR WMB	Address :	
201	FLINTC	B42030145	7/22/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
202	FLINTC	A40170181	1/17/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
203	FLINTC	B40700611	3/12/2014	FLINT CITY	HOWARD SWICKARD	WMB	Address :	
204	FLINTC	B42620257	9/19/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
205	FLINTC	B40982132	4/9/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
206	FLINTC	B40800192	3/21/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
207	FLINTC	A40830112	3/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
208	FLINTC	B40210080	1/21/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
209	FLINTC	B40910032	4/1/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
210	FLINTC	B40370039	2/6/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WMB	Address :	
211	FLINTC	A40510011	2/20/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WMB	Address :	
212	FLINTC	B41041293	4/14/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
213	FLINTC	B40290452	1/29/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WMB	Address :	
214	FLINTC	B41120180	4/22/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
215	FLINTC	A40930506	4/4/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
216	FLINTC	B40690553	3/11/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB BLOWING	Address :	
217	FLINTC	B40690555	3/11/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB BLOWING	Address :	
218	FLINTC	B43190150	11/16/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
219	FLINTC	B40080049	1/8/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
220	FLINTC	B43220103	11/18/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
221	FLINTC	B40350046	2/4/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
222	FLINTC	B40530105	2/23/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
223	FLINTC	B40720742	3/13/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
224	FLINTC	A40170043	1/17/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
225	FLINTC	B40900842	3/31/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
226	FLINTC	B40900842	3/31/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
227	FLINTC	A40300007	1/30/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
228	FLINTC	B40620042	3/3/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
229	FLINTC	B41750281	6/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
230	FLINTC	B40690104	3/10/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
231	FLINTC	B40290458	1/30/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WMB	Address :	
232	FLINTC	B40080343	1/9/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
233	FLINTC	B40270606	1/28/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
234	FLINTC	B40660572	3/8/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
235	FLINTC	B40130063	1/13/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
236	FLINTC	B40851169	3/27/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
237	FLINTC	A41970082	7/16/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
238	FLINTC	B40220057	1/22/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
239	FLINTC	B40830099	3/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	

	I	J	K
192	Street : ADAMS AVE	Adams Ave. & E. Hamilton Ave.	Adams Ave. & E. Hamilton Ave., Flint, MI
193	Street : ARLENE	Arlene Ave. & Mann Ave.	Arlene Ave. & Mann Ave., Flint, MI
194	Street : AVE B	Avenue B & E. Wood St.	Avenue B & E. Wood St., Flint, MI
195	Street : BALDWIN BLVD	Baldwin Blvd. & W. Marengo Ave.	Baldwin Blvd. & W. Marengo Ave., Flint, MI
196	Street : BEGOLE ST	Begole St. & N. Ballenger Hwy.	Begole St. & N. Ballenger Hwy., Flint, MI
197	Street : BENNETT AVE	Bennett Ave. & Lyman St.	Bennett Ave. & Lyman St., Flint, MI
198	Street : BENNETT AVE	Bennett Ave. & Iowa Ave.	Bennett Ave. & Iowa Ave., Flint, MI
199	Street : BENT DR	Bent Dr. & Woodhall Dr.	Bent Dr. & Woodhall Dr., Flint, MI
200	Street : BERKLEY ST	Berkley St. & Forest Hill Ave.	Berkley St. & Forest Hill Ave., Flint, MI
201	Street : BINGHAM ST	Bingham St. & Pitkin Ave.	Bingham St. & Pitkin Ave., Flint, MI
202	Street : BLANCHARD	Blanchard Ave. & Calumet St.	Blanchard Ave. & Calumet St., Flint, MI
203	Street : BLANCHARD AVE	Blanchard Ave. & Calumet St.	Blanchard Ave. & Calumet St., Flint, MI
204	Street : BRENTWOOD DR	Brentwood Dr. & Westcombe Ave.	Brentwood Dr. & Westcombe Ave., Flint, MI
205	Street : BRYN MAWR PL	Bryn Mawr Pl. & W. McClellan St.	Bryn Mawr Pl. & W. McClellan St., Flint, MI
206	Street : BUCKHAM ALY	Buckham Aly. & W. First St.	Buckham Aly. & W. First St., Flint, MI
207	Street : BUCKHAM ALY	Buckham Aly. & W. First St.	Buckham Aly. & W. First St., Flint, MI
208	Street : BUICK	Buick St. & E. Gillespie Ave.	Buick St. & E. Gillespie Ave., Flint, MI
209	Street : BURGESS ST	Burgess St. & Sonny Ave.	Burgess St. & Sonny Ave., Flint, MI
210	Street : BURLINGTON DR	Burlington Dr. & Brimfield Dr.	Burlington Dr. & Brimfield Dr., Flint, MI
211	Street : CHEROKEE AVE	Cherokee Ave. & Eldon Baker Dr.	Cherokee Ave. & Eldon Baker Dr., Flint, MI
212	Street : CHESTNUT ST	Chestnut St. & W. Austin Ave.	Chestnut St. & W. Austin Ave., Flint, MI
213	Street : CHEYENNE AVE	Cheyenne Ave. & Mohawk Ave.	Cheyenne Ave. & Mohawk Ave., Flint, MI
214	Street : CHIPPEWA ST	Chippewa St. & Mary St.	Chippewa St. & Mary St., Flint, MI
215	Street : CLIFFORD ST	Clifford St. & E. Twelfth St.	Clifford St. & E. Twelfth St., Flint, MI
216	Street : CLIO RD	Clio Rd. & W. Dartmouth St.	Clio Rd. & W. Dartmouth St., Flint, MI
217	Street : CLIO RD	Clio Rd. & W. Dartmouth St.	Clio Rd. & W. Dartmouth St., Flint, MI
218	Street : COLORADO AVE	Colorado Ave. & Branch Rd.	Colorado Ave. & Branch Rd., Flint, MI
219	Street : COMANCHE AVE	Comanche Ave. & Eldon Baker Dr.	Comanche Ave. & Eldon Baker Dr., Flint, MI
220	Street : COMANCHE AVE	Comanche Ave. & E. Atherton Rd.	Comanche Ave. & E. Atherton Rd., Flint, MI
221	Street : CONCORD ST	Concord St. & Kirk Ave.	Concord St. & Kirk Ave., Flint, MI
222	Street : CONCORD ST	Concord St. & N. Ballenger Hwy.	Concord St. & N. Ballenger Hwy., Flint, MI
223	Street : COOK ST	Cook St. & Oklahoma Ave.	Cook St. & Oklahoma Ave., Flint, MI
224	Street : COPEMAN	Copeman Blvd. & DuPont St.	Copeman Blvd. & DuPont St., Flint, MI
225	Street : COPEMAN BLVD	Copeman Blvd. & Pontiac St.	Copeman Blvd. & Pontiac St., Flint, MI
226	Street : COPEMAN BLVD	Copeman Blvd. & Pontiac St.	Copeman Blvd. & Pontiac St., Flint, MI
227	Street : CORUNNA RD	Corunna Rd. & Darling St.	Corunna Rd. & Darling St., Flint, MI
228	Street : DAKOTA AVE	Dakota Ave. & N. Dexter St.	Dakota Ave. & N. Dexter St., Flint, MI
229	Street : DAMON ST	Damon St. & N. Saginaw St.	Damon St. & N. Saginaw St., Flint, MI
230	Street : DEWEY ST	Dewey St. & N. Saginaw St.	Dewey St. & N. Saginaw St., Flint, MI
231	Street : DEXTER AVE	N. Dexter St. & Pitkin Ave.	N. Dexter St. & Pitkin Ave., Flint, MI
232	Street : DOLPHAINE LN	Dolphaine Ln. & Huggins Ave.	Dolphaine Ln. & Huggins Ave., Flint, MI
233	Street : DOROTHY DR	Dorothy Dr. & Marmion Ave.	Dorothy Dr. & Marmion Ave., Flint, MI
234	Street : DOROTHY DR	Dorothy Dr. & Marmion Ave.	Dorothy Dr. & Marmion Ave., Flint, MI
235	Street : DUPONT	Dupont St. & W. Genesee St.	Dupont St. & W. Genesee St., Flint, MI
236	Street : DUPONT ST	Dupont St. & W. Hamilton Ave.	Dupont St. & W. Hamilton Ave., Flint, MI
237	Street : DUPONT ST	Dupont St. & W. Stewart Ave.	Dupont St. & W. Stewart Ave., Flint, MI
238	Street : ATHERTON RD	E. Atherton Rd. & Custer Ave.	E. Atherton Rd. & Custer Ave., Flint, MI
239	Street : E AUSTIN AVE	E. Austin Ave. & N. Saginaw St.	E. Austin Ave. & N. Saginaw St., Flint, MI

	L	M
192	1st x-st: Dir S of HAMILTON AVE	2nd x-st: Dir E of MARTIN LUTHER King Ave.
193	1st x-st: Dir of MANN	2nd x-st: Dir of
194	1st x-st: Dir W of SAGINAW	2nd x-st: Dir N of WOOD ST
195	1st x-st: Dir S of W MARENGO AVE	2nd x-st: Dir S of PIERSON RD
196	1st x-st: Dir S of WELCH BLVD	2nd x-st: Dir E of BALLENGER HWY
197	1st x-st: Dir W of I-475	2nd x-st: Dir N of HAMILTON AVE
198	1st x-st: Dir of IOWA AVE	2nd x-st: Dir W of FRANKLIN
199	1st x-st: Dir E of FLEMING RD	2nd x-st: Dir N of STEWART AVE
200	1st x-st: Dir E of CHEVROLET AVE	2nd x-st: Dir N of FLUSHING RD
201	1st x-st: Dir of PITKIN AVE	2nd x-st: Dir S of DAVISON RD
202	1st x-st: Dir W of FRANKLIN	2nd x-st: Dir S of COURT ST
203	1st x-st: Dir N of LINWOOD AVE	2nd x-st: Dir S of COURT ST
204	1st x-st: Dir N of BEECHER RD	2nd x-st: Dir W of WESTCOMBE AVE
205	1st x-st: Dir W of FLEMING RD	2nd x-st: Dir N of W MCCLELLAN ST
206	1st x-st: Dir S of FIRST ST	2nd x-st: Dir N of SECOND ST
207	1st x-st: Dir of FIRST ST	2nd x-st: Dir of SECOND ST
208	1st x-st: Dir S of GILLESPIE	2nd x-st: Dir N of PASADENA
209	1st x-st: Dir N of SONNY AVE	2nd x-st: Dir E of FLEMING RD
210	1st x-st: Dir of EASTHAMPTON DR	2nd x-st: Dir W of CENTER RD
211	1st x-st: Dir W of DORT HWY	2nd x-st: Dir N of ATHERTON RD
212	1st x-st: Dir of W AUSTIN AVE	2nd x-st: Dir E of DUPONT ST
213	1st x-st: Dir W of DORT HWY	2nd x-st: Dir S of MOHAWK AVE
214	1st x-st: Dir of MARY ST	2nd x-st: Dir N of 5TH AVE
215	1st x-st: Dir S of E 12TH ST	2nd x-st: Dir N of E 14TH ST
216	1st x-st: Dir S of WEST DARTMOUTH	2nd x-st: Dir N of MACK ST
217	1st x-st: Dir S of WEST DARTMOUTH	2nd x-st: Dir N of MACK ST
218	1st x-st: Dir of BRANCH RD	2nd x-st: Dir of
219	1st x-st: Dir S of ELDON BAKER	2nd x-st: Dir W of DORT HWY
220	1st x-st: Dir of ATHERTON RD	2nd x-st: Dir W of S DORT HWY
221	1st x-st: Dir of KIRK AVE	2nd x-st: Dir E of DUPONT ST
222	1st x-st: Dir W of BALLENGER HWY	2nd x-st: Dir N of MACKIN RD
223	1st x-st: Dir of OKLAHOMA AVE	2nd x-st: Dir of
224	1st x-st: Dir of DUPONT	2nd x-st: Dir S of WELCH BLVD
225	1st x-st: Dir of PONTIAC ST	2nd x-st: Dir E of DUPONT ST
226	1st x-st: Dir of PONTIAC ST	2nd x-st: Dir E of DUPONT ST
227	1st x-st: Dir of DARLING ST	2nd x-st: Dir W of BALENGER HWY
228	1st x-st: Dir W of CENTER RD	2nd x-st: Dir S of LEITH ST
229	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir S of E STEWART AVE
230	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir S of PASADENA AVE
231	1st x-st: Dir of PITKIN AVE	2nd x-st: Dir W of CENTER RD
232	1st x-st: Dir of HUGGINS AVE	2nd x-st: Dir S of RICHFIELD RD
233	1st x-st: Dir S of DAVISON RD	2nd x-st: Dir E of N AVERILL
234	1st x-st: Dir S of DAVISON RD	2nd x-st: Dir E of AVERILL
235	1st x-st: Dir of GENESEE	2nd x-st: Dir of MCCLELLAN
236	1st x-st: Dir N of WELCH BLVD	2nd x-st: Dir S of HAMILTON AVE
237	1st x-st: Dir N of PASADENA AVE	2nd x-st: Dir S of STEWART AVE
238	1st x-st: Dir E of CUSTER	2nd x-st: Dir W of S DORT HWY
239	1st x-st: Dir E of N SAGINAW ST	2nd x-st: Dir S of CARPENTER RD

	A	B	C	D	E	F	G	H
240	FLINTC	B40150422	1/15/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
241	FLINTC	B40840070	3/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
242	FLINTC	B41981709	7/18/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
243	FLINTC	B40490533	2/18/2014	FLINT CITY WATER DEPARTMENT	ROB BINCSIK	WMB	Address :	
244	FLINTC	B40060280	1/6/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
245	FLINTC	B40420886	2/12/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
246	FLINTC	B40970115	4/7/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
247	FLINTC	B40370414	2/7/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WMB	Address :	
248	FLINTC	B41060127	4/16/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
249	FLINTC	B42370106	8/25/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
250	FLINTC	B41750272	6/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
251	FLINTC	B40910917	4/1/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
252	FLINTC	B40080051	1/8/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
253	FLINTC	A41110063	4/21/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
254	FLINTC	B40640519	3/5/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
255	FLINTC	B40640519	3/5/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
256	FLINTC	B40480062	2/17/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
257	FLINTC	B40280002	1/28/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
258	FLINTC	B40280002	1/28/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
259	FLINTC	A40790125	3/20/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
260	FLINTC	A41180355	4/28/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
261	FLINTC	B40700122	3/11/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
262	FLINTC	B41180183	4/28/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
263	FLINTC	A40130111	1/13/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
264	FLINTC	B40290063	1/29/2014	FLINT CITY WATER DEPARTMENT	MARK PAVWOSKI	WMB	Address :	
265	FLINTC	B40050059	1/5/2014	FLINT CITY	GARY SMITH	WMB	Address :	
266	FLINTC	B40140815	1/15/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
267	FLINTC	A40710326	3/13/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
268	FLINTC	A40640436	3/6/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
269	FLINTC	B40140048	1/14/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
270	FLINTC	B40770067	3/18/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
271	FLINTC	B41151631	4/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
272	FLINTC	B40920744	4/2/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
273	FLINTC	A41200933	5/1/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
274	FLINTC	B40550050	2/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
275	FLINTC	B40550331	2/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
276	FLINTC	B40840072	3/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
277	FLINTC	A41980126	7/17/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
278	FLINTC	B40851170	3/27/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
279	FLINTC	B40340308	2/3/2014	FLINT CITY	GARY SMITH	WMB	Address :	
280	FLINTC	B40410283	2/10/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
281	FLINTC	B40690266	3/10/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
282	FLINTC	B40050058	1/5/2014	FLINT CITY	GARY SMITH	WMB	Address :	
283	FLINTC	B40570690	2/27/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
284	FLINTC	B42311445	8/20/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
285	FLINTC	B40370481	2/6/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
286	FLINTC	B40130060	1/13/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WMB	Address :	
287	FLINTC	B40850220	3/26/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	

	I	J	K
240	Street : E BELVIDERE AVE	E. Belvidere. Ave. & S. Saginaw St.	E. Belvidere. Ave. & S. Saginaw St., Flint, MI
241	Street : E BOULEVARD DR	E. Boulevard Dr. & E. Hamilton Ave.	E. Boulevard Dr. & E. Hamilton Ave., Flint, MI
242	Street : E CARPENTER RD	E. Carpenter Rd. & N. Saginaw St.	E. Carpenter Rd. & N. Saginaw St., Flint, MI
243	Street : CARPENTER RD	E. Carpenter Rd. & Alfred St.	E. Carpenter Rd. & Alfred St., Flint, MI
244	Street : E COURT ST	E. Court St. & lafayette St.	E. Court St. & lafayette St., Flint, MI
245	Street : E DEWEY ST	E. Dewey St. & N. saginaw st.	E. Dewey St. & N. saginaw st., Flint, MI
246	Street : E FOSS	E. Foss Ave. & N. Saginaw St.	E. Foss Ave. & N. Saginaw St., Flint, MI
247	Street : E FOSS AVE	E. Foss Ave. & N. Saginaw St.	E. Foss Ave. & N. Saginaw St., Flint, MI
248	Street : E HAMILTON AVE	E. Hamilton Ave. & Adams Ave.	E. Hamilton Ave. & Adams Ave., Flint, MI
249	Street : E MCCLELLAN ST	E. McClellan St. & N. Saginaw St.	E. McClellan St. & N. Saginaw St., Flint, MI
250	Street : E PASADENA AVE	E. Pasadena Ave. & Industrial Ave.	E. Pasadena Ave. & Industrial Ave., Flint, MI
251	Street : RUSSELL	E. Russell Ave. & harvard st	E. Russell Ave. & harvard st, Flint, MI
252	Street : E RUTH AVE	E. Ruth Ave. & selby St	E. Ruth Ave. & selby St, Flint, MI
253	Street : 2ND ST	E. Second St. & S. Franklin Ave.	E. Second St. & S. Franklin Ave., Flint, MI
254	Street : E STEWART AVE	E. Stewart Ave. & Maines St.	E. Stewart Ave. & Maines St., Flint, MI
255	Street : E STEWART AVE	E. Stewart Ave. & Maines St.	E. Stewart Ave. & Maines St., Flint, MI
256	Street : ESTHER ST	Esther St. & E. Pasadena Ave.	Esther St. & E. Pasadena Ave., Flint, MI
257	Street : 1ST AVE	W. First Ave. & M. L. King Ave.	W. First Ave. & M. L. King Ave., Flint, MI
258	Street : 1ST AVE	W. First Ave. & M. L. King Ave.	W. First Ave. & M. L. King Ave., Flint, MI
259	Street : FOREST HILL AVE	Forest Hill Ave. & Prospect St.	Forest Hill Ave. & Prospect St., Flint, MI
260	Street : FOREST HILL AVE	Forest Hill Ave. & Berkley St.	Forest Hill Ave. & Berkley St., Flint, MI
261	Street : FOREST HILL AVE	Forest Hill Ave. & Berkley St.	Forest Hill Ave. & Berkley St., Flint, MI
262	Street : GAINEY AVE	Gainey Ave. & Cumings Ave.	Gainey Ave. & Cumings Ave., Flint, MI
263	Street : GIBSON ST	Gibson St. & Gainey Ave.	Gibson St. & Gainey Ave., Flint, MI
264	Street : GLADWYN ST	Gladwyn St. & Flushing Rd.	Gladwyn St. & Flushing Rd., Flint, MI
265	Street : GLENN AVE	Glenn Ave. & W. Pierson Rd.	Glenn Ave. & W. Pierson Rd., Flint, MI
266	Street : GLENN AVE	Glenn Ave. & W. Home Ave.	Glenn Ave. & W. Home Ave., Flint, MI
267	Street : GRANDY ST	Grandy St. & E. Boulevard Dr.	Grandy St. & E. Boulevard Dr., Flint, MI
268	Street : HARMON ST	Harmon St. & Fenton Rd.	Harmon St. & Fenton Rd., Flint, MI
269	Street : HARRISON ST	Harrison St. & E. First St.	Harrison St. & E. First St., Flint, MI
270	Street : HARRISON ST	Harrison St. & E. First St.	Harrison St. & E. First St., Flint, MI
271	Street : HARVARD ST	Harvard St. & E. Lorado Ave.	Harvard St. & E. Lorado Ave., Flint, MI
272	Street : HERRICK ST	Herrick St. & Stocker Ave.	Herrick St. & Stocker Ave., Flint, MI
273	Street : HOFF ST	Hoff St. & Woodrow Ave.	Hoff St. & Woodrow Ave., Flint, MI
274	Street : HOME AVE	W. Home Ave. & Glenn Ave.	W. Home Ave. & Glenn Ave., Flint, MI
275	Street : HOME AVE	W. Home Ave. & Glenn Ave.	W. Home Ave. & Glenn Ave., Flint, MI
276	Street : HORTON AVE	Horton Ave. & E. Pierson Rd.	Horton Ave. & E. Pierson Rd., Flint, MI
277	Street : ILLINOIS AVE	Illinois Ave. & N. Vernon Ave.	Illinois Ave. & N. Vernon Ave., Flint, MI
278	Street : INDUSTRIAL AVE	Industrial Ave. & Leith St.	Industrial Ave. & Leith St., Flint, MI
279	Street : JOHNSON AVE	Johnson Ave. & MannHall Ave.	Johnson Ave. & MannHall Ave., Flint, MI
280	Street : JOYNER	Joyner St. & Tacken St.	Joyner St. & Tacken St., Flint, MI
281	Street : KELSO ST	Kelso St. & Robert T. Longway Blvd.	Kelso St. & Robert T. Longway Blvd., Flint, MI
282	Street : LAFAYETTE ST	Lafayette St. & E. Court St.	Lafayette St. & E. Court St., Flint, MI
283	Street : LAPEER RD	Lapeer Rd. & E. Ninth St.	Lapeer Rd. & E. Ninth St., Flint, MI
284	Street : LAPEER RD	Lapeer Rd. & S. Dort Hwy.	Lapeer Rd. & S. Dort Hwy., Flint, MI
285	Street : LEITH ST	Leith St. & N. Franklin Ave.	Leith St. & N. Franklin Ave., Flint, MI
286	Street : LESLIE DR	Leslie Dr. & W. Mott Ave.	Leslie Dr. & W. Mott Ave., Flint, MI
287	Street : LEWIS ST	Lewis St. & Maryland Ave.	Lewis St. & Maryland Ave., Flint, MI

	L	M
240	1st x-st: Dir E of S SAGINAW ST	2nd x-st: Dir N of W ATHERTON RD
241	1st x-st: Dir of E HAMILTON AVE	2nd x-st: Dir W of I-475
242	1st x-st: Dir E of N SAGINAW RD	2nd x-st: Dir W of SELBY ST
243	1st x-st: Dir W of ALFRED	2nd x-st: Dir W of SELBY ST
244	1st x-st: Dir of LAFAYETTE ST	2nd x-st: Dir E of S FRANKLIN
245	1st x-st: Dir S of PASADENA AVE	2nd x-st: Dir W of N SAGINAW ST
246	1st x-st: Dir of INDUSTRIAL	2nd x-st: Dir E of N SAGINAW ST
247	1st x-st: Dir E of INDUSTRIAL AVE	2nd x-st: Dir S of CARPENTER RD
248	1st x-st: Dir of ADAMS AVE	2nd x-st: Dir E of MARTIN LUTHER KING JR BLVD
249	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir N of LEITH ST
250	1st x-st: Dir W of INDUSTRIAL AVE	2nd x-st: Dir S of PEARSON RD
251	1st x-st: Dir of HARVARD	2nd x-st: Dir of
252	1st x-st: Dir of SELBY ST	2nd x-st: Dir S of CARPENTER
253	1st x-st: Dir of S FRANKLIN AVE	2nd x-st: Dir of
254	1st x-st: Dir of MAINES ST	2nd x-st: Dir W of I 475
255	1st x-st: Dir of MAINES ST	2nd x-st: Dir W of I 475
256	1st x-st: Dir N of PASADENA AVE	2nd x-st: Dir E of MARTIN LUTHER KING
257	1st x-st: Dir of MARTIN L King Ave.	2nd x-st: Dir of SAGINAW ST
258	1st x-st: Dir of MARTIN L King Ave.	2nd x-st: Dir of SAGINAW ST
259	1st x-st: Dir of PROSPECT ST	2nd x-st: Dir S of MACKIN RD
260	1st x-st: Dir of BERKLEY ST	2nd x-st: Dir W of CHEVROLET AVE
261	1st x-st: Dir of BERKLEY ST	2nd x-st: Dir N of FLUSHING RD
262	1st x-st: Dir of CUMMINGS AVE	2nd x-st: Dir S of CORUNNA RD
263	1st x-st: Dir E of GAINEY AVE	2nd x-st: Dir N of CORUNNA RD
264	1st x-st: Dir of FLUSHING RD	2nd x-st: Dir of COTTAGE GROVE
265	1st x-st: Dir N of PIERSON	2nd x-st: Dir of
266	1st x-st: Dir S of HOME	2nd x-st: Dir W of DUPONT
267	1st x-st: Dir of E BOULEVARD DR	2nd x-st: Dir of
268	1st x-st: Dir W of FENTON RD	2nd x-st: Dir N of 12TH ST
269	1st x-st: Dir of E FIRST ST	2nd x-st: Dir of E SECOND ST
270	1st x-st: Dir S of FIRST ST	2nd x-st: Dir E of S SAGINAW ST
271	1st x-st: Dir of E LORADO AVE	2nd x-st: Dir E of MARTIN LUTHER KING
272	1st x-st: Dir of STOCKER AVE	2nd x-st: Dir of KNAPP AVE
273	1st x-st: Dir of WOODROW AVE	2nd x-st: Dir S of DELAWARE AVE
274	1st x-st: Dir of GLENN AVE	2nd x-st: Dir of BALDWIN BLVD
275	1st x-st: Dir of GLENN AVE	2nd x-st: Dir of
276	1st x-st: Dir N of PIERSON RD	2nd x-st: Dir S of FAIRFAX ST
277	1st x-st: Dir of N VERNON DR	2nd x-st: Dir S of DAVISON RD
278	1st x-st: Dir S of LEITH ST	2nd x-st: Dir of
279	1st x-st: Dir S of MANN HALL AVE	2nd x-st: Dir W of BALLENGER HWY
280	1st x-st: Dir W of BALLENGER HWY	2nd x-st: Dir W of N COURT ST
281	1st x-st: Dir of ROBERT T LONGWAY BLVD	2nd x-st: Dir E of DORT HWY
282	1st x-st: Dir of COURT ST	2nd x-st: Dir W of DORT HWY
283	1st x-st: Dir N of I 69	2nd x-st: Dir S of 9TH ST
284	1st x-st: Dir W of DORT HWY	2nd x-st: Dir S of I- 69
285	1st x-st: Dir W of FRANKLIN AVE	2nd x-st: Dir E of MINNESOTA AVE
286	1st x-st: Dir N of PIERSON RD	2nd x-st: Dir E of CLIO RD
287	1st x-st: Dir of MARYLAND AVE	2nd x-st: Dir of DELAWARE AVE

	A	B	C	D	E	F	G	H
288	FLINTC	B40830096	3/24/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
289	FLINTC	B40180005	1/18/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
290	FLINTC	B40830525	3/24/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
291	FLINTC	B40850224	3/26/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
292	FLINTC	B42640003	9/21/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
293	FLINTC	B40620051	3/3/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
294	FLINTC	B40300029	1/30/2014	FLINT CITY WATER DEPARTMENT	CHERI PRIEST	WMB	Address :	
295	FLINTC	B40420058	2/11/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
296	FLINTC	B41040165	4/14/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
297	FLINTC	A41110061	4/21/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
298	FLINTC	B40770486	3/18/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
299	FLINTC	B42681237	9/25/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
300	FLINTC	B41050167	4/15/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
301	FLINTC	B41061795	4/17/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
302	FLINTC	B40290035	1/29/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
303	FLINTC	B40780468	3/19/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
304	FLINTC	A40640438	3/6/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
305	FLINTC	A40640439	3/6/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
306	FLINTC	B40640308	3/5/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
307	FLINTC	B40460020	2/15/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
308	FLINTC	B40060582	1/7/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
309	FLINTC	B40450477	2/15/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
310	FLINTC	B42022353	7/22/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
311	FLINTC	B40050063	1/5/2014	FLINT CITY	GARY SMITH	WMB	Address :	
312	FLINTC	B40440055	2/13/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
313	FLINTC	B40450356	2/15/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
314	FLINTC	B40990311	4/9/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
315	FLINTC	A40921379	4/3/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
316	FLINTC	B41020248	4/14/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
317	FLINTC	B40550828	2/25/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
318	FLINTC	A40410067	2/10/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
319	FLINTC	B40520398	2/21/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
320	FLINTC	B40290133	1/29/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
321	FLINTC	B40480675	2/18/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
322	FLINTC	A41010342	4/11/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
323	FLINTC	B40570646	2/27/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
324	FLINTC	B40590058	2/28/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
325	FLINTC	B40730920	3/15/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
326	FLINTC	B40350365	2/4/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
327	FLINTC	B42030242	7/23/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
328	FLINTC	B42100139	7/29/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
329	FLINTC	B41602665	6/10/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
330	FLINTC	B41602665	6/10/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
331	FLINTC	B40620509	3/3/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
332	FLINTC	A40580057	2/27/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
333	FLINTC	B40992267	4/10/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
334	FLINTC	B40941311	4/5/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
335	FLINTC	B41822359	7/2/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	

	I	J	K
288	Street : LEWIS ST	Lewis St. & Maryland Ave.	Lewis St. & Maryland Ave., Flint, MI
289	Street : LIPPINCOTT	Lippincott Blvd. & Whittlesey St.	Lippincott Blvd. & Whittlesey St., Flint, MI
290	Street : LOMITA AVE	Lomita Ave. & N. Saginaw St.	Lomita Ave. & N. Saginaw St., Flint, MI
291	Street : LOMITA AVE	Lomita Ave. & Selby St.	Lomita Ave. & Selby St., Flint, MI
292	Street : LORRAINE AVE	Lorraine Ave. & N. Dexter St.	Lorraine Ave. & N. Dexter St., Flint, MI
293	Street : LYNDON AVE	Lyndon Ave. & Fulton St.	Lyndon Ave. & Fulton St., Flint, MI
294	Street : MACKIN RD	Mackin Rd. & DuPont St.	Mackin Rd. & DuPont St., Flint, MI
295	Street : MACKIN RD	Mackin Rd. & DuPont St.	Mackin Rd. & DuPont St., Flint, MI
296	Street : MACKIN RD	Mackin Rd. & DuPont St.	Mackin Rd. & DuPont St., Flint, MI
297	Street : MACKIN RD	Mackin Rd. & N. Chevrolet Ave.	Mackin Rd. & N. Chevrolet Ave., Flint, MI
298	Street : MAPLEWOOD AVE	Maplewood Ave. & Davison Rd.	Maplewood Ave. & Davison Rd., Flint, MI
299	Street : MARJA ST	Marja St. & W Mott Ave.	Marja St. & W Mott Ave., Flint, MI
300	Street : MARTIN LUTHER KING AVE	Martin Luther King Ave. & grace st	Martin Luther King Ave. & grace st, Flint, MI
301	Street : MARTIN LUTHER KING AVE	Martin Luther King Ave. & W. Philadelphia Blvd.	Martin Luther King Ave. & W. Philadelphia Blvd., Flint, MI
302	Street : MARTIN LUTHER King Ave.	Martin Luther King Ave. & First Ave.	Martin Luther King Ave. & First Ave., Flint, MI
303	Street : MASON ST	Mason St. & W. Gillespie Ave.	Mason St. & W. Gillespie Ave., Flint, MI
304	Street : MEIDIA ST	Meida St. & MannHall Ave.	Meida St. & MannHall Ave., Flint, MI
305	Street : MEIDIA ST	Meida St. & MannHall Ave.	Meida St. & MannHall Ave., Flint, MI
306	Street : MILLER RD	Miller Rd. & Irene Ave.	Miller Rd. & Irene Ave., Flint, MI
307	Street : N AVERILL AVE	N Averill Ave. & Leith St.	N Averill Ave. & Leith St., Flint, MI
308	Street : N AVERILL AVE	N Averill Ave. & Richfield Rd.	N Averill Ave. & Richfield Rd., Flint, MI
309	Street : N AVERILL AVE	N Averill Ave. & Maryland Ave.	N Averill Ave. & Maryland Ave., Flint, MI
310	Street : N FRANKLIN AVE	N Franklin Ave. & Illinois Ave.	N Franklin Ave. & Illinois Ave., Flint, MI
311	Street : AVERILL ST	N. Averill Ave. & Davison Rd.	N. Averill Ave. & Davison Rd., Flint, MI
312	Street : CHEVROLET AVE	N. Chevrolet Ave. & Prospect St.	N. Chevrolet Ave. & Prospect St., Flint, MI
313	Street : N DORT HWY	N. Dort Hwy. & N. Franklin Ave.	N. Dort Hwy. & N. Franklin Ave., Flint, MI
314	Street : N SAGINAW ST	N. Saginaw St. & Carton St.	N. Saginaw St. & Carton St., Flint, MI
315	Street : NEBRASKA AVE	Nebraska Ave. & Minnesota Ave.	Nebraska Ave. & Minnesota Ave., Flint, MI
316	Street : NINTH AVE	Ninth Ave. & Garland St.	Ninth Ave. & Garland St., Flint, MI
317	Street : PARKWAY AVE	E. Parkway Ave. & Fulton St.	E. Parkway Ave. & Fulton St., Flint, MI
318	Street : PENNSYLVANIA AVE	Pennsylvania Ave. & Minnesota Ave.	Pennsylvania Ave. & Minnesota Ave., Flint, MI
319	Street : PETTIBONE AVE	Pettibone Ave. & Brunswick Ave.	Pettibone Ave. & Brunswick Ave., Flint, MI
320	Street : PITKIN AVE	Pitkin Ave. & N. Center Rd.	Pitkin Ave. & N. Center Rd., Flint, MI
321	Street : PITKIN AVE	Pitkin Ave. & Newcombe St.	Pitkin Ave. & Newcombe St., Flint, MI
322	Street : PITKIN AVE	Pitkin Ave. & Earlmoor Blvd.	Pitkin Ave. & Earlmoor Blvd., Flint, MI
323	Street : PREMIER	Premier St. & E. Bundy Ave.	Premier St. & E. Bundy Ave., Flint, MI
324	Street : RASKOB ST	Raskob St. & Lavender Ave.	Raskob St. & Lavender Ave., Flint, MI
325	Street : REMINGTON AVE	Remington Ave. & Fenton Rd.	Remington Ave. & Fenton Rd., Flint, MI
326	Street : RICHFIELD RD	Richfield Rd. & N. Franklin Ave.	Richfield Rd. & N. Franklin Ave., Flint, MI
327	Street : RICHFIELD RD	Richfield Rd. & N. Averill Ave.	Richfield Rd. & N. Averill Ave., Flint, MI
328	Street : RICHFIELD RD	Richfield Rd. & Term St.	Richfield Rd. & Term St., Flint, MI
329	Street : ROBERT T LONGWAY BLVD	Robert T Longway Blvd. & N. Vernon Ave.	Robert T Longway Blvd. & N. Vernon Ave., Flint, MI
330	Street : ROBERT T LONGWAY BLVD	Robert T Longway Blvd. & N. Vernon Ave.	Robert T Longway Blvd. & N. Vernon Ave., Flint, MI
331	Street : ROSEDALE ST	Rosedale Ave. & Horton Ave.	Rosedale Ave. & Horton Ave., Flint, MI
332	Street : S DORT HWY	S Dort Hwy. & Lapeer Rd.	S Dort Hwy. & Lapeer Rd., Flint, MI
333	Street : S FRANKLIN AVE	S Franklin Ave. & E. Second St.	S Franklin Ave. & E. Second St., Flint, MI
334	Street : S SAGINAW ST	S Saginaw St. & W. Union St.	S Saginaw St. & W. Union St., Flint, MI
335	Street : S SAGINAW ST	S Saginaw St. & E. Kearsley St.	S Saginaw St. & E. Kearsley St., Flint, MI

	L	M
288	1st x-st: Dir of MARYLAND	2nd x-st: Dir of DELAWARE
289	1st x-st: Dir of WHITTLESEY ST	2nd x-st: Dir of CHELAN
290	1st x-st: Dir S of E PIERSON RD	2nd x-st: Dir E of N SAGINAW ST
291	1st x-st: Dir of SELBY ST	2nd x-st: Dir of HORTON
292	1st x-st: Dir of N DEXTER ST	2nd x-st: Dir S of DAVISON RD
293	1st x-st: Dir of FULTON ST	2nd x-st: Dir W of SAGINAW ST
294	1st x-st: Dir E of DUPONT ST	2nd x-st: Dir of
295	1st x-st: Dir of DUPONT	2nd x-st: Dir of MCINTOSH ST
296	1st x-st: Dir of DUPONT ST	2nd x-st: Dir of MCINTOSH ST
297	1st x-st: Dir of CHEVROLET AVE	2nd x-st: Dir of
298	1st x-st: Dir N of DAVISON RD	2nd x-st: Dir E of FRANKLIN AVE
299	1st x-st: Dir S of W MOTT AVE	2nd x-st: Dir E of FLEMING RD
300	1st x-st: Dir of GRACE ST	2nd x-st: Dir N of WELCH BLVD
301	1st x-st: Dir of W PHILADELPHIA BLVD	2nd x-st: Dir S of PIERSON RD
302	1st x-st: Dir of 1ST AVE	2nd x-st: Dir of
303	1st x-st: Dir N of PASADENA	2nd x-st: Dir W of MARTIN LUTHER KING
304	1st x-st: Dir of MANN HALL AVE	2nd x-st: Dir S of W COURT ST
305	1st x-st: Dir of MANN HALL AVE	2nd x-st: Dir S of W COURT ST
306	1st x-st: Dir of IRENE AVE	2nd x-st: Dir W of PERSHING ST
307	1st x-st: Dir S of LEITH ST	2nd x-st: Dir N of MARYLAND AVE
308	1st x-st: Dir S of RICHFIELD RD	2nd x-st: Dir W of CENTER RD
309	1st x-st: Dir of MARYLAND AVE	2nd x-st: Dir S of LEITH ST
310	1st x-st: Dir of ILLINOIS AVE	2nd x-st: Dir of
311	1st x-st: Dir of DAVISON	2nd x-st: Dir of LEITH
312	1st x-st: Dir of PROSPECT ST	2nd x-st: Dir W of DUPONT ST
313	1st x-st: Dir E of N FRANKLIN AVE	2nd x-st: Dir of
314	1st x-st: Dir of CARTON ST	2nd x-st: Dir N of PASADENA AVE
315	1st x-st: Dir W of MINNESOTA AVE	2nd x-st: Dir E of KEARSLEY PARK BLVD
316	1st x-st: Dir E of GARLAND ST	2nd x-st: Dir W of MARTIN LUTHER KING JR AVE
317	1st x-st: Dir of FULTON ST	2nd x-st: Dir W of SAGINAW
318	1st x-st: Dir E of MINNESOTA AVE	2nd x-st: Dir W of FRANKLIN
319	1st x-st: Dir of BRUNSWICK AVE	2nd x-st: Dir of
320	1st x-st: Dir W of CENTER RD	2nd x-st: Dir S of DAVISON RD
321	1st x-st: Dir of NEWCOMBE ST	2nd x-st: Dir N of DAVISON RD
322	1st x-st: Dir of EARLMOOR BLVD	2nd x-st: Dir S of DAVISON RD
323	1st x-st: Dir of BUNDY	2nd x-st: Dir S of E CARPETER RD
324	1st x-st: Dir E of LAVENDER AVE	2nd x-st: Dir W of FOREST HILL AVE
325	1st x-st: Dir of FENTON RD	2nd x-st: Dir N of W ATHERTON RD
326	1st x-st: Dir of N FRANKLIN RD	2nd x-st: Dir of N DORT HWY
327	1st x-st: Dir of N AVERILL AVE	2nd x-st: Dir W of CENTER RD
328	1st x-st: Dir of TERM ST	2nd x-st: Dir E of AVERILL AVE
329	1st x-st: Dir of VERNON AVE	2nd x-st: Dir W of N DORT HWY
330	1st x-st: Dir of VERNON AVE	2nd x-st: Dir W of N DORT HWY
331	1st x-st: Dir W of HORTON AVE	2nd x-st: Dir E of SELBY ST
332	1st x-st: Dir of LAPEER RD	2nd x-st: Dir S of I- 69
333	1st x-st: Dir of E 2ND ST	2nd x-st: Dir of
334	1st x-st: Dir S of W UNION ST	2nd x-st: Dir N of KEARSLEY ST
335	1st x-st: Dir of E KEARSLEY ST	2nd x-st: Dir of

	A	B	C	D	E	F	G	H
336	FLINTC	B42041665	7/24/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
337	FLINTC	B40350033	2/4/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
338	FLINTC	B40170031	1/17/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
339	FLINTC	A41980993	7/18/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
340	FLINTC	B43070183	11/3/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
341	FLINTC	B41812498	7/1/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
342	FLINTC	B40700763	3/11/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
343	FLINTC	B40020085	1/2/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
344	FLINTC	B40070125	1/7/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
345	FLINTC	B40901372	4/1/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
346	FLINTC	B40901376	4/1/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
347	FLINTC	A42820026	10/9/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
348	FLINTC	B42791822	10/7/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
349	FLINTC	B40210694	1/22/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
350	FLINTC	A40290044	1/29/2014	FLINT CITY WATER DEPARTMENT	LAURA MILLER	WMB	Address :	
351	FLINTC	B43180278	11/15/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
352	FLINTC	B40740068	3/15/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	W M B REPR	Address :	
353	FLINTC	B40350678	2/5/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
354	FLINTC	B41211593	5/2/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
355	FLINTC	B41211593	5/22/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
356	FLINTC	B40911636	4/2/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
357	FLINTC	B40980395	4/8/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
358	FLINTC	B41200422	4/30/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
359	FLINTC	B41190177	4/29/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
360	FLINTC	B41070592	4/19/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
361	FLINTC	B41011357	4/12/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
362	FLINTC	B42031680	7/23/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
363	FLINTC	B40660046	3/7/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
364	FLINTC	B41071195	4/17/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
365	FLINTC	B41892535	7/9/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
366	FLINTC	B40450084	2/14/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
367	FLINTC	B43160130	11/12/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
368	FLINTC	B40020119	1/3/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
369	FLINTC	A40440183	2/13/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
370	FLINTC	A40720018	3/13/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	
371	FLINTC	B40310106	1/31/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	
372	FLINTC	B40660715	3/8/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
373	FLINTC	B40310463	1/31/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
374	FLINTC	B42640004	9/21/2014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	
375	FLINTC	B40760864	3/18/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
376	FLINTC	B41901578	7/10/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	
377	FLINTC	B40220156	1/22/2014	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	
378	FLINTC	B40170625	1/18/2014	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	

	I	J	K
336	Street : S SAGINAW ST	S Saginaw St. & E. Kearsley St.	S Saginaw St. & E. Kearsley St., Flint, MI
337	Street : BALLENGER HWY	S. Ballenger Hwy. & Whitney Ave.	S. Ballenger Hwy. & Whitney Ave., Flint, MI
338	Street : SELBY ST	Selby St. & E. Ruth Ave.	Selby St. & E. Ruth Ave., Flint, MI
339	Street : SENECA ST	Seneca St. & Concord St.	Seneca St. & Concord St., Flint, MI
340	Street : SHAWNEE AVE	Shawnee Ave. & Eldon Baker Dr.	Shawnee Ave. & Eldon Baker Dr., Flint, MI
341	Street : SHERWOOD DR	Sherwood Dr. & Westcombe Ave.	Sherwood Dr. & Westcombe Ave., Flint, MI
342	Street : SIMCOE AVE	Simcoe Ave. & Fenton Rd.	Simcoe Ave. & Fenton Rd., Flint, MI
343	Street : SONNY AVE	Sonny Ave. & Wisner St.	Sonny Ave. & Wisner St., Flint, MI
344	Street : SONNY AVE	Sonny Ave. & Forest Hill Ave.	Sonny Ave. & Forest Hill Ave., Flint, MI
345	Street : SONNY AVE	Sonny Ave. & Burgess St.	Sonny Ave. & Burgess St., Flint, MI
346	Street : SONNY AVE	Sonny Ave. & Forest Hill Ave.	Sonny Ave. & Forest Hill Ave., Flint, MI
347	Street : ST CLAIR ST	St Clair St. & Cartier St.	St Clair St. & Cartier St., Flint, MI
348	Street : ST CLAIR ST	St Clair St. & Cartier St.	St Clair St. & Cartier St., Flint, MI
349	Street : STAFFORD ST	Stafford St. & E. Lorado Ave.	Stafford St. & E. Lorado Ave., Flint, MI
350	Street : STEVENSON ST	Stevenson St. Woodbridge St.	Stevenson St. Woodbridge St., Flint, MI
351	Street : SUSAN ST	Susan St. & W. Pierson Rd.	Susan St. & W. Pierson Rd., Flint, MI
352	Street : TAYLOR ST	W. Taylor St. & Iroquois Ave.	W. Taylor St. & Iroquois Ave., Flint, MI
353	Street : UTAH AVE	Utah Ave. & N. Franklin Ave.	Utah Ave. & N. Franklin Ave., Flint, MI
354	Street : VAN SLYKE	Van Slyke Rd. & W. Hemphill Rd.	Van Slyke Rd. & W. Hemphill Rd., Flint, MI
355	Street : VAN SLYKE	Van Slyke Rd. & W. Hemphill Rd.	Van Slyke Rd. & W. Hemphill Rd., Flint, MI
356	Street : VOSBURG ST	Vosburg St. & W. Court St.	Vosburg St. & W. Court St., Flint, MI
357	Street : W BAKER	W. Baker St. & Mason St.	W. Baker St. & Mason St., Flint, MI
358	Street : W BOULEVARD DR	W. Boulevard Dr. & N. Dort Hwy.	W. Boulevard Dr. & N. Dort Hwy., Flint, MI
359	Street : W BOULEVARD DR	W. Boulevard Dr. & E. Carpenter Rd.	W. Boulevard Dr. & E. Carpenter Rd., Flint, MI
360	Street : COURT ST	W. Court St. & Beach St.	W. Court St. & Beach St., Flint, MI
361	Street : W COURT ST	W. Court St. & S. Ballenger Hwy.	W. Court St. & S. Ballenger Hwy., Flint, MI
362	Street : W DARTMOUTH ST	W. Dartmouth St. & Kellar Ave.	W. Dartmouth St. & Kellar Ave., Flint, MI
363	Street : W DAYTON ST	W. Dayton St. & Iroquois Ave.	W. Dayton St. & Iroquois Ave., Flint, MI
364	Street : 4TH AVE	W. Fifth Ave. & Chippewa St.	W. Fifth Ave. & Chippewa St., Flint, MI
365	Street : W KEARSLEY ST	W. Kearsley St. & Buckham Alley	W. Kearsley St. & Buckham Alley, Flint, MI
366	Street : PATERSON	W. Paterson St. & Welch Blvd.	W. Paterson St. & Welch Blvd., Flint, MI
367	Street : PATERSON ST	W. Paterson St. & Welch Blvd.	W. Paterson St. & Welch Blvd., Flint, MI
368	Street : STEWART AVE	W. Stewart Ave. & Clio Rd.	W. Stewart Ave. & Clio Rd., Flint, MI
369	Street : W WITHERBEE ST	W. Witherbee St. & M. L. King Ave.	W. Witherbee St. & M. L. King Ave., Flint, MI
370	Street : WALDMAN AVE	Waldman Ave. & Fenton Rd.	Waldman Ave. & Fenton Rd., Flint, MI
371	Street : WESTCOMBE AVE	Westcombe Ave. & Beecher Rd.	Westcombe Ave. & Beecher Rd., Flint, MI
372	Street : WESTERN RD	Western Rd. & McClure Ave.	Western Rd. & McClure Ave., Flint, MI
373	Street : WHITE ST	White St. & Iroquois Ave.	White St. & Iroquois Ave., Flint, MI
374	Street : WINIFRED DR	Winifred Dr. & Levern St.	Winifred Dr. & Levern St., Flint, MI
375	Street : WISNER ST	Wisner St. & W. Stewart Ave.	Wisner St. & W. Stewart Ave., Flint, MI
376	Street : WOODBRIDGE ST	Woodbridge St. & Stevenson St.	Woodbridge St. & Stevenson St., Flint, MI
377	Street : WOODROW AVE	Woodrow Ave. & N. Center Rd.	Woodrow Ave. & N. Center Rd., Flint, MI
378	Street : ZIMMERMAN ST	Zimmerman St. & Springer Ave.	Zimmerman St. & Springer Ave., Flint, MI

	L	M
336	1st x-st: Dir of E KEARSLEY ST	2nd x-st: Dir W of HARRISON ST
337	1st x-st: Dir of WHITNEY AVE	2nd x-st: Dir S of CORUNNA RD
338	1st x-st: Dir of E RUTH AVE	2nd x-st: Dir W of I-475
339	1st x-st: Dir of CONCORD ST	2nd x-st: Dir of
340	1st x-st: Dir of ELDON BAKER DR	2nd x-st: Dir W of S DORT HWY
341	1st x-st: Dir of WESTCOMBE AVE	2nd x-st: Dir of
342	1st x-st: Dir E of FENTON RD	2nd x-st: Dir N of ATHERTON RD
343	1st x-st: Dir of WISNER	2nd x-st: Dir of SENECA
344	1st x-st: Dir of FOREST HILL AVE	2nd x-st: Dir N of PASADENA
345	1st x-st: Dir of BURGESS ST	2nd x-st: Dir E of FLEMING RD
346	1st x-st: Dir of FOREST HILL AVE	2nd x-st: Dir E of FLEMING RD
347	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir E of NOLEN DR
348	1st x-st: Dir N of UNIVERSITY AVE	2nd x-st: Dir W of CHEVROLET AVE
349	1st x-st: Dir S of E LORADO AVE	2nd x-st: Dir N of RUTH AVE
350	1st x-st: Dir of WOODBRIDGE ST	2nd x-st: Dir W of DUPONT ST
351	1st x-st: Dir N of W PIERSON RD	2nd x-st: Dir S of W MOTT AVE
352	1st x-st: Dir of IROQUOIS AVE	2nd x-st: Dir of
353	1st x-st: Dir E of FRANKLIN AVE	2nd x-st: Dir S of RICHFIELD RD
354	1st x-st: Dir of HEMPHILL RD	2nd x-st: Dir of
355	1st x-st: Dir of HEMPHILL RD	2nd x-st: Dir of
356	1st x-st: Dir S of W COURT ST	2nd x-st: Dir N of CORUNNA RD
357	1st x-st: Dir of MASON ST	2nd x-st: Dir N of DAYTON
358	1st x-st: Dir E of N DORT HWY	2nd x-st: Dir N of STEWART AVE
359	1st x-st: Dir of CARPENTER RD	2nd x-st: Dir E of DORT HWY
360	1st x-st: Dir of BEACH ST	2nd x-st: Dir W of S SAGINAW
361	1st x-st: Dir W of BALLENGER HWY	2nd x-st: Dir N of CORUNNA RD
362	1st x-st: Dir of KELLAR AVE	2nd x-st: Dir of
363	1st x-st: Dir of IROQUOIS AVE	2nd x-st: Dir E of DUPONT ST
364	1st x-st: Dir of CHIPPEWA ST	2nd x-st: Dir W of N SAGINAW ST
365	1st x-st: Dir of BUCKHAM ALY	2nd x-st: Dir of S SAGINAW ST
366	1st x-st: Dir of WELCH BLVD	2nd x-st: Dir N of MACKIN RD
367	1st x-st: Dir of WELCH BLVD	2nd x-st: Dir E of BALLENGER HWY
368	1st x-st: Dir E of CLIO RD	2nd x-st: Dir W of FLEMING RD
369	1st x-st: Dir W of MARTIN LUTHER KING	2nd x-st: Dir S of HAMILTON
370	1st x-st: Dir W of FENTON RD	2nd x-st: Dir of
371	1st x-st: Dir of BEECHER RD	2nd x-st: Dir of BALLENGER HWY
372	1st x-st: Dir S of MCCLURE AVE	2nd x-st: Dir N of COLORADO AVE
373	1st x-st: Dir of IROQUOIS AVE	2nd x-st: Dir S of DAYTON ST
374	1st x-st: Dir of LEVERN ST	2nd x-st: Dir N of DAIVSON RD
375	1st x-st: Dir E of CLIO RD	2nd x-st: Dir S of W STEWART AVE
376	1st x-st: Dir of STEVENSON ST	2nd x-st: Dir N of FLUSHING RD
377	1st x-st: Dir W of CENTER RD	2nd x-st: Dir N of DAVISON RD
378	1st x-st: Dir of SPRINGER	2nd x-st: Dir S of COURT ST

Cell: J364
Comment: Alan Roberts:
This was W Fourth Ave & Chippewa St, but these street segments do not intersect.

	A	B	C	D
1	Data	Address from Miss Dig	Possible correction	
2	1/2/2014	Sonny Ave		
3	1/2/2014	2935 Richfield Rd.		
4	1/3/2014	W. Stewart Ave.		
5	1/3/2014	5614 Glenn Ave.		
6	1/5/2014	Lafayette St.		
7	1/5/2014	5610 Glenn Ave.		
8	1/5/2014	1527 E. Kearsley St.		
9	1/5/2014	N. Averill Ave.		
10	1/6/2014	E. Court St.		
11	1/7/2014	N. Averill Ave.		
12	1/7/2014	Sonny Ave		
13	1/7/2014	5810 Baldwin Blvd.		
14	1/8/2014	2211 S. Dort Hwy.		
15	1/8/2014	Comanche Ave.		
16	1/8/2014	E. Ruth Ave.		
17	1/9/2014	2959 Henry St.		
18	1/9/2014	Dolpahine Ln.		
19	1/9/2014	3517 Esther St.		
20	1/9/2014	Arlene Ave.		
21	1/13/2014	2118 Welch Blvd.		
22	1/13/2014	Leslie Dr.		
23	1/13/2014	DuPont St.		
24	1/13/2014	Gibson St.		
25	1/13/2014	3838 Richfield Rd.		
26	1/14/2014	Harrison St.		
27	1/14/2014	Bent Dr.		
28	1/14/2014	7010 Daryll Dr.		
29	1/15/2014	Glenn Ave.		
30	1/15/2014	209 W H Schwartz Dr.		
31	1/15/2014	E. Belvidere Ave.		
32	1/16/2014	2501 S. Dort Hwy.		
33	1/16/2014	2956 N. Stevenson St.		
34	1/16/2014	410 Grace St.		
35	1/17/2014	Selby St.		
36	1/17/2014	Copeman Blvd.		
37	1/17/2014	Blanchard Ave.		
38	1/18/2014	Zimmerman St.		
39	1/18/2014	Lippincott Blvd.		
40	1/21/2014	Buick St.		
41	1/22/2014	Stafford St.		
42	1/22/2014	E. Atherton Rd.		
43	1/22/2014	Woodrow Ave.		
44	1/22/2014	1905 McPhail St.		
45	1/23/2014	3514 Winona St.		
46	1/24/2014	1330 DuPont St.		
47	1/24/2014	4214 Winona St.		
48	1/24/2014	1601 Crestbrook Ln.		

	A	B	C	D
49	1/24/2014	1452 Broadway Blvd.		
50	1/28/2014	Dorothy Dr.		
51	1/28/2014	1421 Kearsley Park Blvd.		
52	1/28/2014	1st Ave. & M. L. King Ave.		
53	1/29/2014	1st Ave. & M. L. King Ave.		
54	1/29/2014	Gladwyn St. & Flushing Rd.		
55	1/29/2014	Pitkin Ave.		
56	1/29/2014	Stevenson St. & Woodbridge St.		
57	1/29/2014	Cheyenne Ave.		
58	1/30/2014	Dexter Ave.	N. Dexter St.	
59	1/29/2014	4140 Western Rd.		
60	1/30/2014	Mackin Rd.		
61	1/30/2014	Corunna Rd.		
62	1/30/2014	2101 Leith St.		
63	1/30/2014	Bennett Ave.		
64	1/31/2014	Westcombe Ave.		
65	1/31/2014	3837 Risedorph Ave.		
66	1/31/2014	1152 Donaldson St.		
67	2/1/2014	1901 E. Second St.		
68	1/31/2014	White St.		
69	2/1/2014	1611 Colorado Ave.		
70	2/3/2014	3308 Dakota Ave.		
71	2/3/2014	Johnson Ave.		
72	2/3/2014	2952 Clement St.		
73	2/4/2014	S. Ballenger Hwy.		
74	2/4/2014	2722 Mackin Rd.		
75	2/4/2014	Concord St.		
76	2/4/2014	302 E. Home Ave.		
77	2/4/2014	Richfield Rd.		
78	2/5/2014	Utah Ave.		
79	2/5/2014	1705 Montclair Ave.		
80	2/5/2014	1620 Nebraska Ave.		
81	2/6/2014	2509 Burns St.		
82	2/6/2014	Burlington Dr.		
83	2/6/2014	5612 Griggs Dr.		
84	2/7/2014	5714 Baldwin Blvd.		
85	2/7/2014	5713 Edwards Ave.		
86	2/7/2014	E. Foss Ave.		
87	2/6/2014	Leith St.		
88	2/7/2014	2426 Zimmerman St.		
89	2/7/2014	3917 W. Kearsley St.		
90	2/7/2014	1701 Pennsylvania Ave.		
91	2/10/2014	1106 Barrie Ave.		
92	2/10/2014	Pennsylvania Ave.		
93	2/10/2014	1631 Pennsylvania Ave.		
94	2/10/2014	Joyner St.		
95	2/10/2014	Cartier St.		
96	2/11/2014	3608 Dakota Ave.		

	A	B	C	D
97	2/11/2014	2518 Prospect St.		
98	2/11/2014	Mackin Rd.		
99	2/11/2014	310 W. Paterson St.		
100	2/11/2014	1317 Mann Ave.		
101	2/12/2014	E. Dewey St.		
102	2/12/2014	830 Addison St.		
103	2/12/2014	2001 DuPont St.		
104	2/12/2014	401 Carton St.		
105	2/12/2014	1857 S. Averill Ave.		
106	2/12/2014	4606 Maines St.		
107	2/13/2014	N. Chevrolet Ave.		
108	2/13/2014	1511 E. Atherton Rd.		
109	2/13/2014	4226 Wisner St.		
110	2/13/2014	W. Witherbee St.		
111	2/13/2014	2202 Maybury Ave.		
112	2/14/2014	W. Paterson St.		
113	2/14/2014	3202 Larchmont St.		
114	2/15/2014	N. Dort Hwy.		
115	2/15/2014	N. Averill Ave.		
116	2/15/2014	N. Averill Ave.		
117	2/17/2014	1505 Jane Ave.		
118	2/17/2014	1920 Wolcott St.		
119	2/17/2014	Esther St.		
120	2/17/2014	624 Frost St.		
121	2/17/2014	711 Welch Blvd.		
122	2/17/2014	1219 Somerset Ln.		
123	2/18/2014	Pitkin Ave.		
124	2/18/2014	1219 Somerset Ln.	dup of above	
125	2/18/2014	E. Carpenter Rd.		
126	2/19/2014	2210 Santa Barbara Dr.		
127	2/19/2014	728 Garland St.		
128	2/20/2014	901 Markham St.		
129	2/20/2014	Cherokee Ave.		
130	2/21/2014	3299 Cheyenne Ave.		
131	2/21/2014	202 Commonwealth Ave.		
132	2/21/2014	2220 Zimmerman St.		
133	2/21/2014	326 White St.		
134	2/21/2014	Pettibone Ave.		
135	2/22/2014	1009 S. Franklin Ave.		
136	2/24/2014	3202 Lawndale Ave.		
137	2/23/2014	718 Frank St.		
138	2/23/2014	Concord St.		
139	2/24/2014	W. Home Ave.	by baldwin blvd	
140	2/24/2014	2210 Canniff St.		
141	2/24/2014	2744 Norbert St.		
142	2/24/2014	226 E. Dartmouth St.		
143	2/27/2014	1617 Wisconsin Ave.	repair water leak - do not use	
144	2/24/2014	2618 Norbert St.		

	A	B	C	D
145	2/24/2014	W. Home Ave.		
146	2/25/2014	E. Parkway Ave.		
147	2/25/2014	965 E. Seventh St.		
148	2/26/2014	N. Chevrolet Ave.		
149	2/26/2014	3113 Lippincott Blvd.		
150	2/26/2014	430 W. Baltimore Blvd.		
151	2/27/2014	Premier St.		
152	2/27/2014	1813 Seneca St.		
153	2/27/2014	Lapeer Rd.		
154	2/27/2014	5414 Winthrop Blvd.		
155	2/27/2014	804 E. Ninth St.		
156	2/27/2014	S. Dort Hwy.	A40580057-00A	ticket 252
157	2/28/2014	3016 S. Grand Traverse St.		
158	2/28/2014	Raskob St.		
159	2/28/2014	G-3070 S. Dort Hwy.		
160	3/1/2014	1010 Victoria Ave.		
161	3/1/2014	3829 Woodrow Ave.		
162	3/1/2014	209 W H Schwartz Dr.		
163	2/26/2014	2113 Calumet St.		
164	3/1/2014	2213 Illinois Ave.		
165	2/26/2014	2107 Calumet St.		
166	3/3/2014	Dakota Ave.	3720 & 3724	
167	3/4/2014	3106 W. Court St.		
168	3/4/2014	3116 Pencombe Pl.		
169	3/3/2014	E. Lyndon Ave. & Fulton St.		
170	3/3/2014	413 E. Genesee St.		
171	3/3/2014	145 E. Foss Ave.		

	A	B	C	D	E
1	Row#	Data	Flint - city	Ticket	Digstart
2	1	FLINTC 00010 MISDIGb 03/03/14 08:01:32 B40620075-00B EMER NEW GRID	FLINTC	B40620075	03/03/14
3	3	**** Underground ****			
4	4	Ticket : B40620075 Rcvd: 03/03/14 07:59 Oper: DJH Rev: 00B			
5	5	Org Tkt : B40620075 Rcvd: 03/03/14 08:01 Oper: DJH			
6	7	Digstart: 03/03/14 Time: 09:00			
7	8	Tkt Life: 03/24/14 Time: 23:59			
8	10	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
9	11	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
10	12	E-mail : NONE			
11	13	FieldCnt: HOWARD - CELL Number: 810-577-8263			
12	15	County : GENESEE Place : FLINT /C			
13	17	Grids : 4302B8341A 4302B8342D			
14	18	Polygon : 43.043822/-83.702130 43.043867/-83.696680			
15	19	: 43.042450/-83.702119 43.042495/-83.696669			
16	20	Lat : Long:			
17	21	Work Typ: WMB Done For:			
18	22	Address : 413			
19	23	Street : E GENESEE ST			
20	24	1st x-st: Dir S of PASADENA AVE			
21	25	2nd x-st: Dir E of MARTIN LUTHER KING AVE			
22	26	Subdivsn: Lots:			
23	27	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD CREW ENROUTE			
24	28	Boring : N On-going project: N Working In or Near R/R Easement: N			
25	29	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
26	31	FLINTC 00011 MISDIGb 03/03/14 08:02:32 B40620077-00B EMER NEW GRID	FLINTC	B40620077	03/03/14
27	33	**** Underground ****			
28	34	Ticket : B40620077 Rcvd: 03/03/14 08:01 Oper: DJH Rev: 00B			
29	35	Org Tkt : B40620077 Rcvd: 03/03/14 08:02 Oper: DJH			
30	37	Digstart: 03/03/14 Time: 13:00			
31	38	Tkt Life: 03/24/14 Time: 23:59			
32	40	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
33	41	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
34	42	E-mail : NONE			
35	43	FieldCnt: HOWARD - CELL Number: 810-577-8263			
36	45	County : GENESEE Place : FLINT /C			
37	47	Grids : 4304C8342C 4304C8342D			
38	48	Polygon : 43.072251/-83.707226 43.072297/-83.702938			
39	49	: 43.070879/-83.707211 43.070925/-83.702924			
40	50	Lat : Long:			
41	51	Work Typ: WMB Done For:			
42	52	Address : 145			
43	53	Street : E FOSS AVE			
44	54	1st x-st: Dir E of MARTIN LUTHER KING AVE			
45	55	2nd x-st: Dir S of CARPENTER RD			
46	56	Subdivsn: Lots:			
47	57	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD			
48	58	Boring : N On-going project: N Working In or Near R/R Easement: N			

	F	G	H	I	J
1	Firm	Caller	work type	Address	Street
2	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 413	Street : E GENESEE ST
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26	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 145	Street : E FOSS AVE
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	A	B	C	D	E
49	59	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
50	61	FLINTC 00016 MISDIGb 03/03/14 11:10:49 B40620341-00B EMER NEW GRID	FLINTC	B40620341	03/03/14
51	63	**** Underground ****			
52	64	Ticket : B40620341 Rcvd: 03/03/14 11:02 Oper: DJH Rev: 00B			
53	65	Org Tkt : B40620341 Rcvd: 03/03/14 11:04 Oper: DJH			
54	67	Digstart: 03/03/14 Time: 14:00			
55	68	Tkt Life: 03/24/14 Time: 23:59			
56	70	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
57	71	Phone : 810-577-8261 Ext: Fax :			
58	72	E-mail : NONE			
59	73	FieldCnt: Number:			
60	75	County : GENESEE Place : FLINT /C			
61	77	Grids : 4300C8338A 4300C8338B			
62	78	Polygon : 43.008208/-83.646244 43.008264/-83.644348			
63	79	: 43.005100/-83.646152 43.005156/-83.644255			
64	80	Lat : Long:			
65	81	Work Typ: WMB Done For:			
66	82	Address : 1941			
67	83	Street : HOSLER ST			
68	84	1st x-st: Dir S of LAPEER			
69	85	2nd x-st: Dir W of S AVERILL			
70	86	Subdivsn: Lots:			
71	87	Stk Info: STK FRT OF PROP & BTH SDS OF RD			
72	88	Boring : N On-going project: N Working In or Near R/R Easement: N			
73	89	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
74	91	FLINTC 00019 MISDIGb 03/03/14 13:43:45 B40620509-00B EMER NEW GRID	FLINTC	B40620509	03/03/14
75	93	**** Underground ****			
76	94	Ticket : B40620509 Rcvd: 03/03/14 13:41 Oper: JLK Rev: 00B			
77	95	Org Tkt : B40620509 Rcvd: 03/03/14 13:43 Oper: JLK			
78	97	Digstart: 03/03/14 Time: 16:00			
79	98	Tkt Life: 03/24/14 Time: 23:59			
80	100	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
81	101	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
82	102	E-mail : NONE			
83	103	FieldCnt: PAUL SIMPSON CELL Number: 810-397-7247			
84	105	County : GENESEE Place : FLINT /C			
85	107	Grids : 4303A8340A 4303B8340A 4303A8341D 4303B8341D			
86	108	Polygon : 43.063406/-83.685142 43.063395/-83.681308			
87	109	: 43.062047/-83.685146 43.062036/-83.681312			
88	110	Lat : Long:			
89	111	Work Typ: WMB Done For:			
90	112	Address :			
91	113	Street : ROSEDALE ST			
92	114	1st x-st: Dir W of HORTON AVE			
93	115	2nd x-st: Dir E of SELBY ST			
94	116	Subdivsn: Lots:			
95	117	Stk Info: STK 75 FT RADIUS OF LOC MARKED W/ BARRICADE APX 50 FT W OF HORTON ON N			
96	118	: SD OF ROSEDALE			

	F	G	H	I	J
49					
50	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1941	Street : HOSLER ST
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74	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : ROSEDALE ST
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74	1st x-st: Dir W of HORTON AVE	2nd x-st: Dir E of SELBY ST
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	A	B	C	D	E
97	119	Boring : N On-going project: N Working In or Near R/R Easement: N			
98	120	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
99	122	FLINTC 00004 MISDIGa 03/03/14 14:12:28 A40620335-00A EMER NEW GRID	FLINTC	A40620335	03/03/14
100	124	**** Underground ****			
101	125	Ticket : A40620335 Rcvd: 03/03/14 14:10 Oper: GMH Rev: 00A			
102	126	Org Tkt : A40620335 Rcvd: 03/03/14 14:12 Oper: GMH			
103	128	Digstart: 03/03/14 Time: 14:10			
104	129	Tkt Life: 03/24/14 Time: 23:59			
105	131	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
106	132	Phone : 810-577-8261 Ext: Fax :			
107	133	E-mail : NONE			
108	134	FieldCnt: Number:			
109	136	County : GENESEE Place : FLINT /C			
110	138	Grids : 4301A8340C 4301A8340D 4301B8340C 4301B8340D			
111	139	Polygon : 43.030019/-83.671064 43.030103/-83.666727			
112	140	: 43.028646/-83.671038 43.028730/-83.666700			
113	141	Lat : Long:			
114	142	Work Typ: WMB Done For:			
115	143	Address : 1625			
116	144	Street : PENNSYLVANIA AVE			
117	145	1st x-st: Dir N of ROBERT T LONGWAY BLVD			
118	146	2nd x-st: Dir W of MINNESOTA AVE			
119	147	Subdivsn: Lots:			
120	148	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ON SITE			
121	149	Boring : N On-going project: N Working In or Near R/R Easement: N			
122	150	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
123	152	FLINTC 00021 MISDIGb 03/03/14 14:19:53 B40620546-00B EMER NEW GRID	FLINTC	B40620546	03/03/14
124	154	**** Underground ****			
125	155	Ticket : B40620546 Rcvd: 03/03/14 14:18 Oper: MRP Rev: 00B			
126	156	Org Tkt : B40620546 Rcvd: 03/03/14 14:19 Oper: MRP			
127	158	Digstart: 03/03/14 Time: 14:18			
128	159	Tkt Life: 03/24/14 Time: 23:59			
129	161	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
130	162	Phone : 810-577-8261 Ext: Fax :			
131	163	E-mail : NONE			
132	164	FieldCnt: Number:			
133	166	County : GENESEE Place : FLINT /C			
134	168	Grids : 4301B8340C 4301B8340D			
135	169	Polygon : 43.028037/-83.670907 43.027816/-83.666630			
136	170	: 43.026517/-83.670986 43.026296/-83.666709			
137	171	Lat : Long:			
138	172	Work Typ: WMB Done For:			
139	173	Address : 1625			
140	174	Street : NEBRASKA AVE			
141	175	1st x-st: Dir N of ROBERT T LONGWAY BLVD			
142	176	2nd x-st: Dir W of MINNESOTA AVE			
143	177	Subdivsn: Lots:			
144	178	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ON SITE			

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99	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1625	Street : PENNSYLVANIA AVE
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123	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1625	Street : NEBRASKA AVE
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99	1st x-st: Dir N of ROBERT T LONGWAY BLVD	2nd x-st: Dir W of MINNESOTA AVE
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123	1st x-st: Dir N of ROBERT T LONGWAY BLVD	2nd x-st: Dir W of MINNESOTA AVE
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	A	B	C	D	E
145	179	Boring : N On-going project: N Working In or Near R/R Easement: N			
146	181	AddlInfo: REPLCS CANCELED A40620335 FRM 2/12PM CORR FRM ADDR 1625 PENNSYLVANIA			
147	183	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
148	185	FLINTC 00001 MISDIGa 03/04/14 07:36:34 A40630014-00A EMER NEW GRID	FLINTC	A40630014	03/04/14
149	187	**** Underground ****			
150	188	Ticket : A40630014 Rcvd: 03/04/14 07:34 Oper: GMH Rev: 00A			
151	189	Org Tkt : A40630014 Rcvd: 03/04/14 07:36 Oper: GMH			
152	191	Digstart: 03/04/14 Time: 09:00			
153	192	Tkt Life: 03/25/14 Time: 23:59			
154	194	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
155	195	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
156	196	E-mail : NONE			
157	197	FieldCnt: HOWARD Number: 810-577-8263			
158	199	County : GENESEE Place : FLINT /C			
159	201	Grids : 4302A8341A 4302A8341B			
160	202	Polygon : 43.048523/-83.697203 43.048517/-83.695331			
161	203	: 43.046187/-83.697209 43.046182/-83.695337			
162	204	Lat : Long:			
163	205	Work Typ: WMB Done For:			
164	206	Address : 3514			
165	207	Street : FOSTER ST			
166	208	1st x-st: Dir W of SAGINAW RD			
167	209	2nd x-st: Dir N of PASADENA AVE			
168	210	Subdivsn: Lots:			
169	211	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
170	212	Boring : N On-going project: N Working In or Near R/R Easement: N			
171	213	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
172	215	FLINTC 00002 MISDIGa 03/04/14 07:37:56 A40630016-00A SHRT NEW GRID	FLINTC	A40630016	03/04/14
173	217	**** Underground ****			
174	218	Ticket : A40630016 Rcvd: 03/04/14 07:36 Oper: GMH Rev: 00A			
175	219	Org Tkt : A40630016 Rcvd: 03/04/14 07:37 Oper: GMH			
176	221	Digstart: 03/04/14 Time: 13:00			
177	222	Tkt Life: 03/25/14 Time: 23:59			
178	224	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
179	225	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
180	226	E-mail : NONE			
181	227	FieldCnt: HOWARD Number: 810-577-8263			
182	229	County : GENESEE Place : FLINT /C			
183	231	Grids : 4302C8338A 4302C8339D			
184	232	Polygon : 43.041237/-83.651414 43.041234/-83.649544			
185	233	: 43.039330/-83.651417 43.039327/-83.649547			
186	234	Lat : Long:			
187	235	Work Typ: WMB Done For:			
188	236	Address : 2502			
189	237	Street : BRANCH RD			
190	238	1st x-st: Dir E of DORT HWY			
191	239	2nd x-st: Dir N of DAVISON RD			
192	240	Subdivsn: Lots:			

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148	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 3514	Street : FOSTER ST
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172	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 2502	Street : BRANCH RD
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148	1st x-st: Dir W of SAGINAW RD	2nd x-st: Dir N of PASADENA AVE
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172	1st x-st: Dir E of DORT HWY	2nd x-st: Dir N of DAVISON RD
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	A	B	C	D	E
193	241	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD			
194	242	Boring : N On-going project: N Working In or Near R/R Easement: N			
195	243	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
196	245	FLINTC 00002 MISDIGa 03/04/14 07:37:56 A40630016-00A SHRT NEW GRID	FLINTC	A40630016	03/04/14
197	247	**** Underground ****			
198	248	Ticket : A40630016 Rcvd: 03/04/14 07:36 Oper: GMH Rev: 00A			
199	249	Org Tkt : A40630016 Rcvd: 03/04/14 07:37 Oper: GMH			
200	251	Digstart: 03/04/14 Time: 13:00			
201	252	Tkt Life: 03/25/14 Time: 23:59			
202	254	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
203	255	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
204	256	E-mail : NONE			
205	257	FieldCnt: HOWARD Number: 810-577-8263			
206	259	County : GENESEE Place : FLINT /C			
207	261	Grids : 4302C8338A 4302C8339D			
208	262	Polygon : 43.041237/-83.651414 43.041234/-83.649544			
209	263	: 43.039330/-83.651417 43.039327/-83.649547			
210	264	Lat : Long:			
211	265	Work Typ: WMB Done For:			
212	266	Address : 2502			
213	267	Street : BRANCH RD			
214	268	1st x-st: Dir E of DORT HWY			
215	269	2nd x-st: Dir N of DAVISON RD			
216	270	Subdivsn: Lots:			
217	271	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD			
218	272	Boring : N On-going project: N Working In or Near R/R Easement: N			
219	273	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
220	275	FLINTC 00004 MISDIGa 03/04/14 11:45:06 A40630217-00A EMER NEW GRID	FLINTC	A40630217	03/04/14
221	277	**** Underground ****			
222	278	Ticket : A40630217 Rcvd: 03/04/14 11:41 Oper: LCP Rev: 00A			
223	279	Org Tkt : A40630217 Rcvd: 03/04/14 11:44 Oper: LCP			
224	281	Digstart: 03/04/14 Time: 15:00			
225	282	Tkt Life: 03/25/14 Time: 23:59			
226	284	Firm : FLINT CITY WATER DEPT Caller: HOWARD SWICKARD			
227	285	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
228	286	E-mail : AROBERTS@CITYOFFLINT.COM			
229	287	FieldCnt: BOBBY VAUGHN Number: 810-577-7180			
230	289	County : GENESEE Place : FLINT /C			
231	291	Grids : 4258A8341B 4258A8341C			
232	292	Polygon : 42.982841/-83.693830 42.982896/-83.689369			
233	293	: 42.981469/-83.693813 42.981524/-83.689352			
234	294	Lat : Long:			
235	295	Work Typ: WMB Done For:			
236	296	Address : 932			
237	297	Street : MARKHAM ST			
238	298	1st x-st: Dir E of FENTON RD			
239	299	2nd x-st: Dir N of E HEMPHILL RD			
240	300	Subdivsn: Lots:			

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196	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 2502	Street : BRANCH RD
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220	FLINT CITY WATER DEPT	HOWARD SWICKARD	WMB	Address : 932	Street : MARKHAM ST
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196	1st x-st: Dir E of DORT HWY	2nd x-st: Dir N of DAVISON RD
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220	1st x-st: Dir E of FENTON RD	2nd x-st: Dir N of E HEMPHILL RD
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	A	B	C	D	E
241	301	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD			
242	302	Boring : N On-going project: N Working In or Near R/R Easement: N			
243	303	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
244	305	FLINTC 00003 MISDIGb 03/04/14 12:50:26 B40630318-00B EMER NEW GRID	FLINTC	B40630318	03/04/14
245	307	**** Underground ****			
246	308	Ticket : B40630318 Rcvd: 03/04/14 12:48 Oper: SLD Rev: 00B			
247	309	Org Tkt : B40630318 Rcvd: 03/04/14 12:50 Oper: SLD			
248	311	Digstart: 03/04/14 Time: 12:48			
249	312	Tkt Life: 03/25/14 Time: 23:59			
250	314	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
251	315	Phone : 810-577-8261 Ext: Fax :			
252	316	E-mail : NONE			
253	317	FieldCnt: Number:			
254	319	County : GENESEE Place : FLINT /C			
255	321	Grids : 4301A8341A 4301B8341A			
256	322	Polygon : 43.031392/-83.699408 43.031390/-83.697536			
257	323	: 43.028703/-83.699412 43.028700/-83.697540			
258	324	Lat : Long:			
259	325	Work Typ: WMB Done For:			
260	326	Address :			
261	327	Street : AVE B			
262	328	1st x-st: Dir W of SAGINAW			
263	329	2nd x-st: Dir N of WOOD ST			
264	330	Subdivsn: Lots:			
265	331	Stk Info: STK FRT OF PROP & BTH SDS OF RD AT ADDRS 1514 & 1518 CREW ON			
266	332	: SITE			
267	333	Boring : N On-going project: N Working In or Near R/R Easement: N			
268	334	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
269	336	FLINTC 00006 MISDIGb 03/04/14 19:45:58 B40630522-00B EMER NEW GRID	FLINTC	B40630522	03/05/14
270	338	**** Underground ****			
271	339	Ticket : B40630522 Rcvd: 03/04/14 19:44 Oper: AMA Rev: 00B			
272	340	Org Tkt : B40630522 Rcvd: 03/04/14 19:45 Oper: AMA			
273	342	Digstart: 03/05/14 Time: 11:00			
274	343	Tkt Life: 03/26/14 Time: 23:59			
275	345	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
276	346	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
277	347	E-mail : NONE			
278	348	FieldCnt: HOWARD SWICKARD Number: 810-577-8263			
279	350	County : GENESEE Place : FLINT /C			
280	352	Grids : 4300C8339A			
281	353	Polygon : 43.008055/-83.664788 43.008007/-83.662937			
282	354	: 43.005920/-83.664843 43.005872/-83.662992			
283	355	Lat : Long:			
284	356	Work Typ: REPR BRKN WTR SERV Done For:			
285	357	Address : 1909			
286	358	Street : BURR BLVD			
287	359	1st x-st: Dir W of DORT HWY			
288	360	2nd x-st: Dir N of LIPPINCOTT BLVD			

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244	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : AVE B
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269	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR BRKN WTR SERV	Address : 1909	Street : BURR BLVD
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269	1st x-st: Dir W of DORT HWY	2nd x-st: Dir N of LIPPINCOTT BLVD
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	A	B	C	D	E
289	361	Subdivsn: Lots:			
290	362	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
291	363	Boring : N On-going project: N Working In or Near R/R Easement: N			
292	364	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
293	366	FLINTC 00001 MISDIGa 03/05/14 07:26:34 A40640015-00A EMER NEW GRID	FLINTC	A40640015	03/05/14
294	368	**** Underground ****			
295	369	Ticket : A40640015 Rcvd: 03/05/14 07:24 Oper: LCG Rev: 00A			
296	370	Org Tkt : A40640015 Rcvd: 03/05/14 07:26 Oper: LCG			
297	372	Digstart: 03/05/14 Time: 08:00			
298	373	Tkt Life: 03/26/14 Time: 23:59			
299	375	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
300	376	Phone : 810-577-8261 Ext: Fax :			
301	377	E-mail : NONE			
302	378	FieldCnt: Number:			
303	380	County : GENESEE Place : FLINT /C			
304	382	Grids : 4259A8342A 4300D8342A			
305	383	Polygon : 43.000373/-83.716673 43.001542/-83.714134			
306	384	: 42.999037/-83.716058 43.000206/-83.713519			
307	385	Lat : Long:			
308	386	Work Typ: WMB Done For:			
309	387	Address : 2320			
310	388	Street : MILLER RD			
311	389	1st x-st: Dir E of LINCOLN			
312	390	2nd x-st: Dir W of IRENE			
313	391	Subdivsn: Lots:			
314	392	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ENROUTE			
315	393	Boring : N On-going project: N Working In or Near R/R Easement: N			
316	394	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
317	396	FLINTC 00002 MISDIGa 03/05/14 07:46:11 A40640023-00A EMER NEW GRID	FLINTC	A40640023	03/05/14
318	398	**** Underground ****			
319	399	Ticket : A40640023 Rcvd: 03/05/14 07:43 Oper: LCG Rev: 00A			
320	400	Org Tkt : A40640023 Rcvd: 03/05/14 07:45 Oper: LCG			
321	402	Digstart: 03/05/14 Time: 08:00			
322	403	Tkt Life: 03/26/14 Time: 23:59			
323	405	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
324	406	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
325	407	E-mail : NONE			
326	408	FieldCnt: Number: 810-397-7247			
327	410	County : GENESEE Place : FLINT /C			
328	412	Grids : 4302C8339B 4302C8339C 4302D8339B 4302D8339C			
329	413	Polygon : 43.038303/-83.659547 43.037743/-83.656655			
330	414	: 43.036936/-83.659812 43.036376/-83.656920			
331	415	Lat : Long:			
332	416	Work Typ: WMB Done For:			
333	417	Address : 2521			
334	418	Street : WOODROW AVE			
335	419	1st x-st: Dir S of LEITH ST			
336	420	2nd x-st: Dir W of N DORT HWY			

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293	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2320	Street : MILLER RD
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317	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2521	Street : WOODROW AVE
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317	1st x-st: Dir S of LEITH ST	2nd x-st: Dir W of N DORT HWY
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	A	B	C	D	E
337	421	Subdivsn: Lots:			
338	422	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ENROUTE			
339	423	Boring : N On-going project: N Working In or Near R/R Easement: N			
340	424	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
341	426	FLINTC 00008 MISDIGb 03/05/14 12:24:19 B40640308-00B EMER NEW GRID	FLINTC	B40640308	03/05/14
342	428	**** Underground ****			
343	429	Ticket : B40640308 Rcvd: 03/05/14 12:21 Oper: JLK Rev: 00B			
344	430	Org Tkt : B40640308 Rcvd: 03/05/14 12:24 Oper: JLK			
345	432	Digstart: 03/05/14 Time: 12:21			
346	433	Tkt Life: 03/26/14 Time: 23:59			
347	435	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
348	436	Phone : 810-577-8261 Ext: Fax :			
349	437	E-mail : NONE			
350	438	FieldCnt: Number:			
351	440	County : GENESEE Place : FLINT /C			
352	442	Grids : 4259A8342A 4259A8343D 4300D8342A 4300D8343D			
353	443	Polygon : 43.001222/-83.718960 43.001206/-83.715224			
354	444	: 42.998702/-83.718970 42.998686/-83.715234			
355	445	Lat : Long:			
356	446	Work Typ: WMB Done For:			
357	447	Address :			
358	448	Street : MILLER RD			
359	449	1st x-st: Dir of IRENE AVE			
360	450	2nd x-st: Dir W of PERSHING ST			
361	451	Subdivsn: Lots:			
362	452	Stk Info: E OF BRADLEY STK 50 FT RADIUS OF EXIST HYDT LOC NE COR OF			
363	453	: MILLER & IRENE CREW EN ROUTE			
364	454	Boring : N On-going project: N Working In or Near R/R Easement: N			
365	455	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
366	457	FLINTC 00005 MISDIGa 03/05/14 12:43:59 A40640258-00A EMER NEW GRID	FLINTC	A40640258	03/06/14
367	459	**** Underground ****			
368	460	Ticket : A40640258 Rcvd: 03/05/14 12:40 Oper: LCG Rev: 00A			
369	461	Org Tkt : A40640258 Rcvd: 03/05/14 12:43 Oper: LCG			
370	463	Digstart: 03/06/14 Time: 09:00			
371	464	Tkt Life: 03/27/14 Time: 23:59			
372	466	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
373	467	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
374	468	E-mail : NONE			
375	469	FieldCnt: Number: 810-577-8263			
376	471	County : GENESEE Place : FLINT /C			
377	473	Grids : 4302B8340C 4302B8340D 4302C8340C 4302C8340D			
378	474	Polygon : 43.042091/-83.673792 43.042226/-83.669666			
379	475	: 43.040720/-83.673747 43.040854/-83.669621			
380	476	Lat : Long:			
381	477	Work Typ: REPR BRKN WTR SERV Done For:			
382	478	Address : 1506			
383	479	Street : DAKOTA AVE			
384	480	1st x-st: Dir N of DAVISON RD			

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341	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : MILLER RD
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366	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR BRKN WTR SERV	Address : 1506	Street : DAKOTA AVE
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366	1st x-st: Dir N of DAVISON RD	2nd x-st: Dir W of DORT HWY
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385	481	2nd x-st: Dir W of DORT HWY			
386	482	Subdivsn: Lots:			
387	483	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
388	484	Boring : N On-going project: N Working In or Near R/R Easement: N			
389	485	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
390	487	FLINTC 00009 MISDIGb 03/05/14 13:12:28 B40640337-00B EMER NEW GRID	FLINTC	B40640337	03/06/14
391	489	**** Underground ****			
392	490	Ticket : B40640337 Rcvd: 03/05/14 13:08 Oper: SLD Rev: 00B			
393	491	Org Tkt : B40640337 Rcvd: 03/05/14 13:12 Oper: SLD			
394	493	Digstart: 03/06/14 Time: 08:00			
395	494	Tkt Life: 03/27/14 Time: 23:59			
396	496	Firm : FLINT CITY WATER DEPARTMENT Caller: ROB BINCSIK			
397	497	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
398	498	E-mail : NONE			
399	499	FieldCnt: HOWARD SWICKARD Number: 810-577-8263			
400	501	County : GENESEE Place : FLINT /C			
401	503	Grids : 4302B8341A 4302B8341B 4302C8341B			
402	504	Polygon : 43.042545/-83.698013 43.043892/-83.697594			
403	505	: 43.041159/-83.693558 43.042505/-83.693139			
404	506	Lat : Long:			
405	507	Work Typ: WMB Done For:			
406	508	Address : 527			
407	509	Street : E GENESEE ST			
408	510	1st x-st: Dir W of SAGINAW			
409	511	2nd x-st: Dir N of HAMILTON AVE			
410	512	Subdivsn: Lots:			
411	513	Stk Info: STK FRT OF PROP TO C/L OF RD			
412	514	Boring : N On-going project: N Working In or Near R/R Easement: N			
413	515	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
414	517	FLINTC 00010 MISDIGa 03/05/14 16:10:51 A40640393-00A EMER NEW GRID	FLINTC	A40640393	03/06/14
415	519	**** Underground ****			
416	520	Ticket : A40640393 Rcvd: 03/05/14 16:08 Oper: AMA Rev: 00A			
417	521	Org Tkt : A40640393 Rcvd: 03/05/14 16:10 Oper: AMA			
418	523	Digstart: 03/06/14 Time: 09:00			
419	524	Tkt Life: 03/27/14 Time: 23:59			
420	526	Firm : FLINT CITY Caller: HOWARD SWICKARD			
421	527	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
422	528	E-mail : AROBERTS@CITYOFFLINT.COM			
423	529	FieldCnt: BOBBY VAUGHN Number: 810-577-7180			
424	531	County : GENESEE Place : FLINT /C			
425	533	Grids : 4303A8343C 4303A8343D			
426	534	Polygon : 43.064654/-83.723446 43.064696/-83.720608			
427	535	: 43.063282/-83.723425 43.063324/-83.720587			
428	536	Lat : Long:			
429	537	Work Typ: REPR WMB Done For:			
430	538	Address : 1406			
431	539	Street : W MOTT AVE			
432	540	1st x-st: Dir E of FLEMING RD			

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390	FLINT CITY WATER DEPARTMENT	ROB BINCSIK	WMB	Address : 527	Street : E GENESEE ST
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414	FLINT CITY	HOWARD SWICKARD	REPR WMB	Address : 1406	Street : W MOTT AVE
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414	1st x-st: Dir E of FLEMING RD	2nd x-st: Dir N of PIERSON RD
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433	541	2nd x-st: Dir N of PIERSON RD			
434	542	Subdivsn: Lots:			
435	543	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
436	544	Boring : N On-going project: N Working In or Near R/R Easement: N			
437	545	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
438	547	FLINTC 00013 MISDIGb 03/05/14 17:01:24 B40640519-00B EMER NEW GRID	FLINTC	B40640519	03/05/14
439	549	**** Underground ****			
440	550	Ticket : B40640519 Rcvd: 03/05/14 16:59 Oper: DMS Rev: 00B			
441	551	Org Tkt : B40640519 Rcvd: 03/05/14 17:01 Oper: DMS			
442	553	Digstart: 03/05/14 Time: 16:59			
443	554	Tkt Life: 03/26/14 Time: 23:59			
444	556	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
445	557	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
446	558	E-mail : NONE			
447	559	FieldCnt: PAUL/CELL Number: 810-397-7247			
448	561	County : GENESEE Place : FLINT /C			
449	563	Grids : 4303C8341C 4303C8341D 4303D8341C 4303D8341D			
450	564	Polygon : 43.055758/-83.689370 43.054643/-83.683439			
451	565	: 43.052911/-83.689905 43.051796/-83.683974			
452	566	Lat : Long:			
453	567	Work Typ: WMB Done For:			
454	568	Address :			
455	569	Street : E STEWART AVE			
456	570	1st x-st: Dir of MAINES ST			
457	571	2nd x-st: Dir W of I 475			
458	572	Subdivsn: Lots:			
459	573	Stk Info: LOCATE 75FT RADIUS OF ENTIRE NE COR OF STEWART & MAINES CREW ON			
460	574	: SITE			
461	575	Boring : N On-going project: N Working In or Near R/R Easement: N			
462	576	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC			
463	578	FLINTC 00013 MISDIGb 03/05/14 17:01:24 B40640519-00B EMER NEW GRID	FLINTC	B40640519	03/05/14
464	580	**** Underground ****			
465	581	Ticket : B40640519 Rcvd: 03/05/14 16:59 Oper: DMS Rev: 00B			
466	582	Org Tkt : B40640519 Rcvd: 03/05/14 17:01 Oper: DMS			
467	584	Digstart: 03/05/14 Time: 16:59			
468	585	Tkt Life: 03/26/14 Time: 23:59			
469	587	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
470	588	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
471	589	E-mail : NONE			
472	590	FieldCnt: PAUL/CELL Number: 810-397-7247			
473	592	County : GENESEE Place : FLINT /C			
474	594	Grids : 4303C8341C 4303C8341D 4303D8341C 4303D8341D			
475	595	Polygon : 43.055758/-83.689370 43.054643/-83.683439			
476	596	: 43.052911/-83.689905 43.051796/-83.683974			
477	597	Lat : Long:			
478	598	Work Typ: WMB Done For:			
479	599	Address :			
480	600	Street : E STEWART AVE			

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438	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : E STEWART AVE
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463	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : E STEWART AVE
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481	601	1st x-st: Dir of MAINES ST			
482	602	2nd x-st: Dir W of I 475			
483	603	Subdivsn: Lots:			
484	604	Stk Info: LOCATE 75FT RADIUS OF ENTIRE NE COR OF STEWART & MAINES CREW ON			
485	605	: SITE			
486	606	Boring : N On-going project: N Working In or Near R/R Easement: N			
487	607	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC			
488	609	FLINTC 00018 MISDIGa 03/05/14 18:49:32 A40640436-00A EMER NEW GRID	FLINTC	A40640436	03/06/14
489	611	**** Underground ****			
490	612	Ticket : A40640436 Rcvd: 03/05/14 18:47 Oper: AMA Rev: 00A			
491	613	Org Tkt : A40640436 Rcvd: 03/05/14 18:49 Oper: AMA			
492	615	Digstart: 03/06/14 Time: 06:00			
493	616	Tkt Life: 03/27/14 Time: 23:59			
494	618	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
495	619	Phone : 810-577-8261 Ext: Fax :			
496	620	E-mail : NONE			
497	621	FieldCnt: Number:			
498	623	County : GENESEE Place : FLINT /C			
499	625	Grids : 4300D8341B			
500	626	Polygon : 43.002112/-83.695562 43.002498/-83.692627			
501	627	: 43.000741/-83.695382 43.001127/-83.692447			
502	628	Lat : Long:			
503	629	Work Typ: REPR WMB Done For:			
504	630	Address :			
505	631	Street : HARMON ST			
506	632	1st x-st: Dir W of FENTON RD			
507	633	2nd x-st: Dir N of 12TH ST			
508	634	Subdivsn: Lots:			
509	635	Stk Info: LOCATE FRT OF PROP & BTH SDS OF ST AT ADDRS 1012 & 1016			
510	636	Boring : N On-going project: N Working In or Near R/R Easement: N			
511	637	Members : ATT ATTD CCFIBR CEEDIS CEGDIS COMTV2 CTMN FLINTC GENCRC GISD			
512	639	FLINTC 00019 MISDIGa 03/05/14 19:09:49 A40640438-00A EMER NEW GRID	FLINTC	A40640438	03/06/14
513	641	**** Underground ****			
514	642	Ticket : A40640438 Rcvd: 03/05/14 19:06 Oper: AMA Rev: 00A			
515	643	Org Tkt : A40640438 Rcvd: 03/05/14 19:09 Oper: AMA			
516	645	Digstart: 03/06/14 Time: 12:00			
517	646	Tkt Life: 03/27/14 Time: 23:59			
518	648	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
519	649	Phone : 810-577-8261 Ext: Fax :			
520	650	E-mail : NONE			
521	651	FieldCnt: Number:			
522	653	County : GENESEE Place : FLINT /C			
523	655	Grids : 4300C8344C			
524	656	Polygon : 43.006530/-83.740560 43.005448/-83.739272			
525	657	: 43.005000/-83.741844 43.003919/-83.740557			
526	658	Lat : Long:			
527	659	Work Typ: REPR WMB Done For:			
528	660	Address :			

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488	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : HARMON ST
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512	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : MEIDIA ST
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512	1st x-st: Dir of MANN HALL AVE	2nd x-st: Dir S of W COURT ST
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529	661	Street : MEIDIA ST			
530	662	1st x-st: Dir of MANN HALL AVE			
531	663	2nd x-st: Dir S of W COURT ST			
532	664	Subdivsn: Lots:			
533	665	Stk Info: W OF BALLENGER HWY LOCATE 30 FT RADIUS OF SE COR OF MEIDIA & MAN			
534	666	: HALL TKT SENT TO FLINT CY & FLINT TWP			
535	667	Boring : N On-going project: N Working In or Near R/R Easement: N			
536	668	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
537	670	FLINTC 00020 MISDIGa 03/05/14 19:10:31 A40640439-00A EMER NEW GRID	FLINTC	A40640439	03/06/14
538	672	**** Underground ****			
539	673	Ticket : A40640439 Rcvd: 03/05/14 19:09 Oper: AMA Rev: 00A			
540	674	Org Tkt : A40640439 Rcvd: 03/05/14 19:10 Oper: AMA			
541	676	Digstart: 03/06/14 Time: 12:00			
542	677	Tkt Life: 03/27/14 Time: 23:59			
543	679	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
544	680	Phone : 810-577-8261 Ext: Fax :			
545	681	E-mail : NONE			
546	682	FieldCnt: Number:			
547	684	County : GENESEE Place : FLINT /T			
548	686	Grids : 4300C8344C			
549	687	Polygon : 43.005416/-83.741840 43.006316/-83.739765			
550	688	: 43.004087/-83.741264 43.004987/-83.739189			
551	689	Lat : Long:			
552	690	Work Typ: REPR WMB Done For:			
553	691	Address :			
554	692	Street : MEIDIA ST			
555	693	1st x-st: Dir of MANN HALL AVE			
556	694	2nd x-st: Dir S of W COURT ST			
557	695	Subdivsn: Lots:			
558	696	Stk Info: W OF BALLENGER HWY LOCATE 30 FT RADIUS OF SE COR OF MEIDIA & MAN			
559	697	: HALL TKT SENT TO FLINT CY & FLINT TWP			
560	698	Boring : N On-going project: N Working In or Near R/R Easement: N			
561	699	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCWWFBR GENCWWSANI			
562	700	Members : GENCWWWTR VERZ02			
563	702	FLINTC 00001 MISDIGb 03/06/14 07:37:33 B40650041-00B EMER NEW GRID	FLINTC	B40650041	03/07/14
564	704	**** Underground ****			
565	705	Ticket : B40650041 Rcvd: 03/06/14 07:35 Oper: SLD Rev: 00B			
566	706	Org Tkt : B40650041 Rcvd: 03/06/14 07:37 Oper: SLD			
567	708	Digstart: 03/07/14 Time: 09:00			
568	709	Tkt Life: 03/28/14 Time: 23:59			
569	711	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
570	712	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
571	713	E-mail : NONE			
572	714	FieldCnt: BOBBY VAUGHN Number: 810-577-7180			
573	716	County : GENESEE Place : FLINT /C			
574	718	Grids : 4302A8343A 4302B8343A			
575	719	Polygon : 43.048956/-83.732653 43.049013/-83.730781			
576	720	: 43.045554/-83.732551 43.045611/-83.730678			

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537	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : MEIDIA ST
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563	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 3610	Street : WISNER ST
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563	1st x-st: Dir E of CLIO RD	2nd x-st: Dir S of CARPENTER RD
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577	721	Lat : Long:			
578	722	Work Typ: WMB Done For:			
579	723	Address : 3610			
580	724	Street : WISNER ST			
581	725	1st x-st: Dir E of CLIO RD			
582	726	2nd x-st: Dir S of CARPENTER RD			
583	727	Subdivsn: Lots:			
584	728	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD			
585	729	Boring : N On-going project: N Working In or Near R/R Easement: N			
586	730	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
587	732	FLINTC 00003 MISDIGb 03/07/14 07:42:18 B40660046-00B EMER NEW GRID	FLINTC	B40660046	03/07/14
588	734	**** Underground ****			
589	735	Ticket : B40660046 Rcvd: 03/07/14 07:40 Oper: LCG Rev: 00B			
590	736	Org Tkt : B40660046 Rcvd: 03/07/14 07:42 Oper: LCG			
591	738	Digstart: 03/07/14 Time: 08:00			
592	739	Tkt Life: 03/28/14 Time: 23:59			
593	741	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
594	742	Phone : 810-577-8261 Ext: Fax :			
595	743	E-mail : NONE			
596	744	FieldCnt: Number:			
597	746	County : GENESEE Place : FLINT /C			
598	748	Grids : 4302C8342B			
599	749	Polygon : 43.039185/-83.711728 43.039451/-83.709896			
600	750	: 43.037842/-83.711533 43.038108/-83.709701			
601	751	Lat : Long:			
602	752	Work Typ: WMB Done For:			
603	753	Address :			
604	754	Street : W DAYTON ST			
605	755	1st x-st: Dir of IROQUOIS AVE			
606	756	2nd x-st: Dir E of DUPONT ST			
607	757	Subdivsn: Lots:			
608	758	Stk Info: LOCATE 100 FT RADIUS OF BARRICADE IN CENTER OF INTER CREW ENROUTE			
609	759	Boring : N On-going project: N Working In or Near R/R Easement: N			
610	760	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
611	762	FLINTC 00016 MISDIGb 03/07/14 14:35:29 B40660572-00B EMER NEW GRID	FLINTC	B40660572	03/08/14
612	764	**** Underground ****			
613	765	Ticket : B40660572 Rcvd: 03/07/14 14:30 Oper: DLG Rev: 00B			
614	766	Org Tkt : B40660572 Rcvd: 03/07/14 14:35 Oper: DLG			
615	768	Digstart: 03/08/14 Time: 06:00			
616	769	Tkt Life: 03/29/14 Time: 23:59			
617	771	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
618	772	Phone : 810-577-8261 Ext: Fax :			
619	773	E-mail : NONE			
620	774	FieldCnt: Number:			
621	776	County : GENESEE Place : FLINT /C			
622	778	Grids : 4301A8338B 4301A8338C			
623	779	Polygon : 43.033419/-83.642665 43.032424/-83.640849			
624	780	: 43.031034/-83.643972 43.030039/-83.642157			

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587	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : W DAYTON ST
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611	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : DOROTHY DR
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587	1st x-st: Dir of IROQUOIS AVE	2nd x-st: Dir E of DUPONT ST
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611	1st x-st: Dir S of DAVISON RD	2nd x-st: Dir E of AVERILL
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625	781	Lat : Long:			
626	782	Work Typ: WMB Done For:			
627	783	Address :			
628	784	Street : DOROTHY DR			
629	785	1st x-st: Dir S of DAVISON RD			
630	786	2nd x-st: Dir E of AVERILL			
631	787	Subdivsn: Lots:			
632	788	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD ON BTH ADDR 1717 & 1723			
633	789	Boring : N On-going project: N Working In or Near R/R Easement: N			
634	790	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC			
635	792	FLINTC 00023 MISDIGb 03/07/14 18:44:59 B40660714-00B EMER NEW GRID	FLINTC	B40660714	03/08/14
636	794	**** Underground ****			
637	795	Ticket : B40660714 Rcvd: 03/07/14 18:35 Oper: JAL Rev: 00B			
638	796	Org Tkt : B40660714 Rcvd: 03/07/14 18:44 Oper: JAL			
639	798	Digstart: 03/08/14 Time: 06:00			
640	799	Tkt Life: 03/29/14 Time: 23:59			
641	801	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
642	802	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
643	803	E-mail : NONE			
644	804	FieldCnt: PAUL Number: 810-397-7247			
645	806	County : GENESEE Place : FLINT /C			
646	808	Grids : 4303A8343B 4304D8343B			
647	809	Polygon : 43.067450/-83.727630 43.067552/-83.725658			
648	810	: 43.063594/-83.727431 43.063696/-83.725459			
649	811	Lat : Long:			
650	812	Work Typ: WMB Done For:			
651	813	Address : 5806			
652	814	Street : GRIGGS DR			
653	815	1st x-st: Dir S of W HOME AVE			
654	816	2nd x-st: Dir E of CLIO RD			
655	817	Subdivsn: Lots:			
656	818	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
657	819	Boring : N On-going project: N Working In or Near R/R Easement: N			
658	820	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
659	822	FLINTC 00024 MISDIGb 03/07/14 18:46:43 B40660715-00B EMER NEW GRID	FLINTC	B40660715	03/08/14
660	824	**** Underground ****			
661	825	Ticket : B40660715 Rcvd: 03/07/14 18:45 Oper: JAL Rev: 00B			
662	826	Org Tkt : B40660715 Rcvd: 03/07/14 18:46 Oper: JAL			
663	828	Digstart: 03/08/14 Time: 06:00			
664	829	Tkt Life: 03/29/14 Time: 23:59			
665	831	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
666	832	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
667	833	E-mail : NONE			
668	834	FieldCnt: PAUL Number: 810-397-7247			
669	836	County : GENESEE Place : FLINT /C			
670	838	Grids : 4302A8339C 4302B8339C			
671	839	Polygon : 43.047805/-83.656347 43.047805/-83.654474			
672	840	: 43.044235/-83.656347 43.044235/-83.654474			

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635	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 5806	Street : GRIGGS DR
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659	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : WESTERN RD
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635	1st x-st: Dir S of W HOME AVE	2nd x-st: Dir E of CLIO RD
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659	1st x-st: Dir S of MCCLURE AVE	2nd x-st: Dir N of COLORADO AVE
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673	841	Lat : Long:			
674	842	Work Typ: WMB Done For:			
675	843	Address :			
676	844	Street : WESTERN RD			
677	845	1st x-st: Dir S of MCCLURE AVE			
678	846	2nd x-st: Dir N of COLORADO AVE			
679	847	Subdivsn: Lots:			
680	848	Stk Info: LOCATE 50FT RADIUS OF BARRICADE LOC ON E SD OF RD BET X-STS			
681	849	Boring : N On-going project: N Working In or Near R/R Easement: N			
682	850	Members : ATT ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC SPRNT4			
683	852	FLINTC 00003 MISDIGb 03/10/14 08:14:13 B40690104-00B EMER NEW GRID	FLINTC	B40690104	03/10/14
684	854	**** Underground ****			
685	855	Ticket : B40690104 Rcvd: 03/10/14 08:11 Oper: AMA Rev: 00B			
686	856	Org Tkt : B40690104 Rcvd: 03/10/14 08:13 Oper: AMA			
687	858	Digstart: 03/10/14 Time: 08:11			
688	859	Tkt Life: 03/31/14 Time: 23:59			
689	861	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
690	862	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
691	863	E-mail : NONE			
692	864	FieldCnt: PAUL SIMPSON/CELL Number: 810-397-7247			
693	866	County : GENESEE Place : FLINT /C			
694	868	Grids : 4302A8341B 4302B8341B			
695	869	Polygon : 43.045849/-83.695658 43.046215/-83.692836			
696	870	: 43.044479/-83.695481 43.044845/-83.692658			
697	871	Lat : Long:			
698	872	Work Typ: REPR WMB Done For:			
699	873	Address :			
700	874	Street : DEWEY ST			
701	875	1st x-st: Dir W of N SAGINAW ST			
702	876	2nd x-st: Dir S of PASADENA AVE			
703	877	Subdivsn: Lots:			
704	878	Stk Info: LOCATE 50 FT RADIUS OF CONE ON N SD OF DEWEY APX 50 FT W OF N SAGINAW			
705	879	: ST CREW ENROUTE			
706	880	Boring : N On-going project: N Working In or Near R/R Easement: N			
707	881	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
708	883	FLINTC 00005 MISDIGb 03/10/14 09:42:21 B40690266-00B EMER NEW GRID	FLINTC	B40690266	03/10/14
709	885	**** Underground ****			
710	886	Ticket : B40690266 Rcvd: 03/10/14 09:39 Oper: DJH Rev: 00B			
711	887	Org Tkt : B40690266 Rcvd: 03/10/14 09:41 Oper: DJH			
712	889	Digstart: 03/10/14 Time: 12:00			
713	890	Tkt Life: 03/31/14 Time: 23:59			
714	892	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
715	893	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
716	894	E-mail : NONE			
717	895	FieldCnt: PAUL - CELL Number: 810-397-7247			
718	897	County : GENESEE Place : FLINT /C			
719	899	Grids : 4301B8339D 4301C8339D			
720	900	Polygon : 43.026146/-83.653099 43.026412/-83.651267			

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683	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	Street : DEWEY ST
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708	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : KELSO ST
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683	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir S of PASADENA AVE
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708	1st x-st: Dir of ROBERT T LONGWAY BLVD	2nd x-st: Dir E of DORT HWY
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721	901	: 43.024803/-83.652904 43.025069/-83.651072			
722	902	Lat : Long:			
723	903	Work Typ: WMB Done For:			
724	904	Address :			
725	905	Street : KELSO ST			
726	906	1st x-st: Dir of ROBERT T LONGWAY BLVD			
727	907	2nd x-st: Dir E of DORT HWY			
728	908	Subdivsn: Lots:			
729	909	Stk Info: LOCATE 50FT RADIUS OF SE COR W/ ROBERT T LONGWAY			
730	910	Boring : N On-going project: N Working In or Near R/R Easement: N			
731	911	Members : ATT ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
732	913	FLINTC 00007 MISDIGb 03/10/14 10:21:58 B40690321-00B EMER NEW GRID	FLINTC	B40690321	03/10/14
733	915	**** Underground ****			
734	916	Ticket : B40690321 Rcvd: 03/10/14 10:20 Oper: DJH Rev: 00B			
735	917	Org Tkt : B40690321 Rcvd: 03/10/14 10:21 Oper: DJH			
736	919	Digstart: 03/10/14 Time: 10:20			
737	920	Tkt Life: 03/31/14 Time: 23:59			
738	922	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
739	923	Phone : 810-577-8261 Ext: Fax :			
740	924	E-mail : NONE			
741	925	FieldCnt: Number:			
742	927	County : GENESEE Place : FLINT /C			
743	929	Grids : 4301A8341A 4301A8341B			
744	930	Polygon : 43.032410/-83.697069 43.032410/-83.695199			
745	931	: 43.030109/-83.697069 43.030109/-83.695199			
746	932	Lat : Long:			
747	933	Work Typ: WMB Done For:			
748	934	Address : 1616			
749	935	Street : ROOT ST			
750	936	1st x-st: Dir N of MARY ST			
751	937	2nd x-st: Dir W of N SAGINAW ST			
752	938	Subdivsn: Lots:			
753	939	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
754	940	Boring : N On-going project: N Working In or Near R/R Easement: N			
755	941	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
756	943	FLINTC 00008 MISDIGb 03/10/14 13:27:13 B40690553-00B EMER NEW GRID	FLINTC	B40690553	03/11/14
757	945	**** Underground ****			
758	946	Ticket : B40690553 Rcvd: 03/10/14 13:22 Oper: DLG Rev: 00B			
759	947	Org Tkt : B40690553 Rcvd: 03/10/14 13:26 Oper: DLG			
760	949	Digstart: 03/11/14 Time: 07:00			
761	950	Tkt Life: 04/01/14 Time: 23:59			
762	952	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
763	953	Phone : 810-577-8261 Ext: Fax :			
764	954	E-mail : NONE			
765	955	FieldCnt: Number:			
766	957	County : GENESEE Place : FLINT /C			
767	959	Grids : 4302B8343A 4302C8343A 4302B8344D 4302C8344D			
768	960	Polygon : 43.042635/-83.733451 43.042693/-83.731582			

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732	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1616	Street : ROOT ST
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756	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB BLOWING	Address :	Street : CLIO RD
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756	1st x-st: Dir S of WEST DARTMOUTH	2nd x-st: Dir N of MACK ST
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769	961	: 43.038817/-83.733333 43.038874/-83.731464			
770	962	Lat : Long:			
771	963	Work Typ: WMB BLOWING Done For:			
772	964	Address :			
773	965	Street : CLIO RD			
774	966	1st x-st: Dir S of WEST DARTMOUTH			
775	967	2nd x-st: Dir N of MACK ST			
776	968	Subdivsn: Lots:			
777	969	Stk Info: LOCATE FRT OF BOTH PROP & BTH SDS OF RD ADDR 2719 & 2731			
778	970	Boring : N On-going project: N Working In or Near R/R Easement: N			
779	971	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD MCLEO1			
780	973	FLINTC 00009 MISDIGb 03/10/14 13:28:35 B40690555-00B EMER NEW PLCE	FLINTC	B40690555	03/11/14
781	975	**** Underground ****			
782	976	Ticket : B40690555 Rcvd: 03/10/14 13:27 Oper: DLG Rev: 00B			
783	977	Org Tkt : B40690555 Rcvd: 03/10/14 13:28 Oper: DLG			
784	979	Digstart: 03/11/14 Time: 07:00			
785	980	Tkt Life: 04/01/14 Time: 23:59			
786	982	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
787	983	Phone : 810-577-8261 Ext: Fax :			
788	984	E-mail : NONE			
789	985	FieldCnt: Number:			
790	987	County : GENESEE Place : FLINT /T			
791	989	Grids :			
792	990	Polygon :			
793	991	Lat : Long:			
794	992	Work Typ: WMB BLOWING Done For:			
795	993	Address :			
796	994	Street : CLIO RD			
797	995	1st x-st: Dir S of WEST DARTMOUTH			
798	996	2nd x-st: Dir N of MACK ST			
799	997	Subdivsn: Lots:			
800	998	Stk Info: LOCATE FRT OF BOTH PROP & BTH SDS OF RD ADDR 2719 & 2731			
801	999	Boring : N On-going project: N Working In or Near R/R Easement: N			
802	1000	Members : 123NET ATT ATTD CCFIBR CEEDIS CEESBM CEETRN CEGD20 CEGDIS COMTV2			
803	1001	Members : CTMN FLINTC FLINTT GENCRC GENCWWFBR GENCWWSANI GENCWWWTR			
804	1002	Members : GISD GRTLKC LEVEL3 MCLEO1 SPRNT4 USSIG VERZ02			
805	1004	FLINTC 00002 MISDIGb 03/11/14 07:41:10 B40700076-00B EMER NEW GRID	FLINTC	B40700076	03/11/14
806	1006	**** Underground ****			
807	1007	Ticket : B40700076 Rcvd: 03/11/14 07:38 Oper: GMH Rev: 00B			
808	1008	Org Tkt : B40700076 Rcvd: 03/11/14 07:41 Oper: GMH			
809	1010	Digstart: 03/11/14 Time: 11:00			
810	1011	Tkt Life: 04/01/14 Time: 23:59			
811	1013	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
812	1014	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
813	1015	E-mail : NONE			
814	1016	FieldCnt: HOWARD Number: 810-577-8263			
815	1018	County : GENESEE Place : FLINT /C			
816	1020	Grids : 4300D8340D			

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780	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB BLOWING	Address :	Street : CLIO RD
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805	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WTR SERV	Address : 2206	Street : HOWARD AVE
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780	1st x-st: Dir S of WEST DARTMOUTH	2nd x-st: Dir N of MACK ST
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805	1st x-st: Dir S of LIPPINCOTT BLVD	2nd x-st: Dir W of DORT HWY
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817	1021	Polygon : 43.002834/-83.669783 43.002823/-83.667913			
818	1022	: 43.000507/-83.669796 43.000496/-83.667926			
819	1023	Lat : Long:			
820	1024	Work Typ: REPR WTR SERV/LKG Done For:			
821	1025	Address : 2206			
822	1026	Street : HOWARD AVE			
823	1027	1st x-st: Dir S of LIPPINCOTT BLVD			
824	1028	2nd x-st: Dir W of DORT HWY			
825	1029	Subdivsn: Lots:			
826	1030	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
827	1031	Boring : N On-going project: N Working In or Near R/R Easement: N			
828	1032	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
829	1034	FLINTC 00005 MISDIGb 03/11/14 08:13:52 B40700122-00B EMER NEW GRID	FLINTC	B40700122	03/11/14
830	1036	**** Underground ****			
831	1037	Ticket : B40700122 Rcvd: 03/11/14 08:10 Oper: DLF Rev: 00B			
832	1038	Org Tkt : B40700122 Rcvd: 03/11/14 08:13 Oper: DLF			
833	1040	Digstart: 03/11/14 Time: 08:10			
834	1041	Tkt Life: 04/01/14 Time: 23:59			
835	1043	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
836	1044	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
837	1045	E-mail : NONE			
838	1046	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247			
839	1048	County : GENESEE Place : FLINT /C			
840	1050	Grids : 4301B8343B 4301B8343C 4301C8343B 4301C8343C			
841	1051	Polygon : 43.026819/-83.727053 43.026543/-83.723333			
842	1052	: 43.024088/-83.727255 43.023812/-83.723535			
843	1053	Lat : Long:			
844	1054	Work Typ: WMB Done For:			
845	1055	Address :			
846	1056	Street : FOREST HILL AVE			
847	1057	1st x-st: Dir of BERKLEY ST			
848	1058	2nd x-st: Dir N of FLUSHING RD			
849	1059	Subdivsn: Lots:			
850	1060	Stk Info: W OF N CHEVROLET AVE LOCATE ENTIRE E SD OF INTER OF FOREST HILL AVE			
851	1061	: & BERKLEY ST CREW EN ROUTE			
852	1062	Boring : N On-going project: N Working In or Near R/R Easement: N			
853	1063	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
854	1065	FLINTC 00009 MISDIGb 03/11/14 10:17:00 B40700343-00B EMER NEW GRID	FLINTC	B40700343	03/11/14
855	1067	**** Underground ****			
856	1068	Ticket : B40700343 Rcvd: 03/11/14 10:11 Oper: MCD Rev: 00B			
857	1069	Org Tkt : B40700343 Rcvd: 03/11/14 10:16 Oper: MCD			
858	1071	Digstart: 03/11/14 Time: 10:11			
859	1072	Tkt Life: 04/01/14 Time: 23:59			
860	1074	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
861	1075	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
862	1076	E-mail : NONE			
863	1077	FieldCnt: PAUL -CELL Number: 810-397-7247			
864	1079	County : GENESEE Place : FLINT /C			

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829	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : FOREST HILL AVE
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854	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2607	Street : AVE A
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829	1st x-st: Dir of BERKLEY ST	2nd x-st: Dir N of FLUSHING RD
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865	1081	Grids : 4302C8341A			
866	1082	Polygon : 43.040317/-83.698446 43.040237/-83.696559			
867	1083	: 43.038251/-83.698533 43.038172/-83.696646			
868	1084	Lat : Long:			
869	1085	Work Typ: WMB Done For:			
870	1086	Address : 2607			
871	1087	Street : AVE A			
872	1088	1st x-st: Dir W of N SAGINAW ST			
873	1089	2nd x-st: Dir N of E HAMILTON AVE			
874	1090	Subdivsn: Lots:			
875	1091	Stk Info: LOCATE 50 FT RADIUS OF BARRICADE APX 20 FT S OF HSE CREW ON SITE			
876	1092	Boring : N On-going project: N Working In or Near R/R Easement: N			
877	1093	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
878	1095	FLINTC 00014 MISDIGb 03/11/14 11:30:38 B40700485-00B EMER NEW GRID	FLINTC	B40700485	03/11/14
879	1097	**** Underground ****			
880	1098	Ticket : B40700485 Rcvd: 03/11/14 11:28 Oper: AMA Rev: 00B			
881	1099	Org Tkt : B40700485 Rcvd: 03/11/14 11:30 Oper: AMA			
882	1101	Digstart: 03/11/14 Time: 16:00			
883	1102	Tkt Life: 04/01/14 Time: 23:59			
884	1104	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
885	1105	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
886	1106	E-mail : NONE			
887	1107	FieldCnt: PAUL SIMPSON-CELL Number: 810-397-7247			
888	1109	County : GENESEE Place : FLINT /C			
889	1111	Grids : 4303A8342C 4303A8342D 4304D8342C 4304D8342D			
890	1112	Polygon : 43.067854/-83.707153 43.067865/-83.702811			
891	1113	: 43.066482/-83.707150 43.066493/-83.702808			
892	1114	Lat : Long:			
893	1115	Work Typ: REPR WMB Done For:			
894	1116	Address : 147			
895	1117	Street : E HOME AVE			
896	1118	1st x-st: Dir E of MARTIN LUTHER KING BLVD			
897	1119	2nd x-st: Dir N of PIERSON RD			
898	1120	Subdivsn: Lots:			
899	1121	Stk Info: LOCATE FRT OF PROP & BTH SDS OF ST			
900	1122	Boring : N On-going project: N Working In or Near R/R Easement: N			
901	1123	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
902	1125	FLINTC 00012 MISDIGb 03/11/14 11:28:59 B40700477-00B EMER NEW GRID	FLINTC	B40700477	03/11/14
903	1127	**** Underground ****			
904	1128	Ticket : B40700477 Rcvd: 03/11/14 11:25 Oper: AMA Rev: 00B			
905	1129	Org Tkt : B40700477 Rcvd: 03/11/14 11:28 Oper: AMA			
906	1131	Digstart: 03/11/14 Time: 11:25			
907	1132	Tkt Life: 04/01/14 Time: 23:59			
908	1134	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
909	1135	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
910	1136	E-mail : NONE			
911	1137	FieldCnt: PAUL SIMPSON-CELL Number: 810-397-7247			
912	1139	County : GENESEE Place : FLINT /C			

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878	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 147	Street : E HOME AVE
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902	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	Street : BALDWIN BLVD
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902	1st x-st: Dir S of W MARENGO AVE	2nd x-st: Dir S of PIERSON RD
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913	1141	Grids : 4303B8342A 4303C8342A 4303B8343D			
914	1142	Polygon : 43.059840/-83.716814 43.060110/-83.714972			
915	1143	: 43.058170/-83.716569 43.058440/-83.714727			
916	1144	Lat : Long:			
917	1145	Work Typ: REPR WMB Done For:			
918	1146	Address :			
919	1147	Street : BALDWIN BLVD			
920	1148	1st x-st: Dir S of W MARENGO AVE			
921	1149	2nd x-st: Dir S of PIERSON RD			
922	1150	Subdivsn: Lots:			
923	1151	Stk Info: W OF DUPONT ST LOCATE 30 FT RADIUS OF BARRICADE ON E SD OF BALDWIN			
924	1152	: 30 FT S OF W MARENGO CREW ENROUTE			
925	1153	Boring : N On-going project: N Working In or Near R/R Easement: N			
926	1154	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
927	1156	FLINTC 00016 MISDIGb 03/11/14 12:50:10 B40700611-00B EMER NEW GRID	FLINTC	B40700611	03/12/14
928	1158	**** Underground ****			
929	1159	Ticket : B40700611 Rcvd: 03/11/14 12:47 Oper: SJG Rev: 00B			
930	1160	Org Tkt : B40700611 Rcvd: 03/11/14 12:49 Oper: SJG			
931	1162	Digstart: 03/12/14 Time: 09:00			
932	1163	Tkt Life: 04/02/14 Time: 23:59			
933	1165	Firm : FLINT CITY Caller: HOWARD SWICKARD			
934	1166	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
935	1167	E-mail : AROBERTS@CITYOFFLINT.COM			
936	1168	FieldCnt: HOWARD Number: 810-577-8263			
937	1170	County : GENESEE Place : FLINT /C			
938	1172	Grids : 4300A8339A 4300A8340D			
939	1173	Polygon : 43.015868/-83.668326 43.015976/-83.666460			
940	1174	: 43.012788/-83.668148 43.012896/-83.666282			
941	1175	Lat : Long:			
942	1176	Work Typ: WMB Done For:			
943	1177	Address :			
944	1178	Street : BLANCHARD AVE			
945	1179	1st x-st: Dir N of LINWOOD AVE			
946	1180	2nd x-st: Dir S of COURT ST			
947	1181	Subdivsn: Lots:			
948	1182	Stk Info: LOCATE BEG FRM LINWOOD AVE GOING N APX 75FT ON BTH SD OF RD			
949	1183	Boring : N On-going project: N Working In or Near R/R Easement: N			
950	1184	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
951	1186	FLINTC 00020 MISDIGb 03/11/14 14:13:07 B40700763-00B EMER NEW GRID	FLINTC	B40700763	03/11/14
952	1188	**** Underground ****			
953	1189	Ticket : B40700763 Rcvd: 03/11/14 14:12 Oper: DMS Rev: 00B			
954	1190	Org Tkt : B40700763 Rcvd: 03/11/14 14:12 Oper: DMS			
955	1192	Digstart: 03/11/14 Time: 16:00			
956	1193	Tkt Life: 04/01/14 Time: 23:59			
957	1195	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
958	1196	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
959	1197	E-mail : NONE			
960	1198	FieldCnt: PAUL/CELL Number: 810-397-7247			

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927	FLINT CITY	HOWARD SWICKARD	WMB	Address :	Street : BLANCHARD AVE
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951	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : SIMCOE AVE
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951	1st x-st: Dir E of FENTON RD	2nd x-st: Dir N of ATHERTON RD
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961	1200	County : GENESEE Place : FLINT /C			
962	1202	Grids : 4259B8341C 4259B8341D			
963	1203	Polygon : 42.994935/-83.691480 42.995039/-83.687141			
964	1204	: 42.993562/-83.691447 42.993667/-83.687108			
965	1205	Lat : Long:			
966	1206	Work Typ: WMB Done For:			
967	1207	Address :			
968	1208	Street : SIMCOE AVE			
969	1209	1st x-st: Dir E of FENTON RD			
970	1210	2nd x-st: Dir N of ATHERTON RD			
971	1211	Subdivsn: Lots:			
972	1212	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD AT ADDRS 828 & 832			
973	1213	Boring : N On-going project: N Working In or Near R/R Easement: N			
974	1214	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
975	1216	FLINTC 00001 MISDIGb 03/12/14 07:37:02 B40710038-00B EMER NEW GRID	FLINTC	B40710038	03/12/14
976	1218	**** Underground ****			
977	1219	Ticket : B40710038 Rcvd: 03/12/14 07:35 Oper: SLD Rev: 00B			
978	1220	Org Tkt : B40710038 Rcvd: 03/12/14 07:36 Oper: SLD			
979	1222	Digstart: 03/12/14 Time: 08:00			
980	1223	Tkt Life: 04/02/14 Time: 23:59			
981	1225	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
982	1226	Phone : 810-577-8261 Ext: Fax :			
983	1227	E-mail : NONE			
984	1228	FieldCnt: Number:			
985	1230	County : GENESEE Place : FLINT /C			
986	1232	Grids : 4301C8342A 4301D8342A 4301C8343D 4301D8343D			
987	1233	Polygon : 43.022092/-83.717558 43.020958/-83.713992			
988	1234	: 43.020733/-83.717991 43.019599/-83.714425			
989	1235	Lat : Long:			
990	1236	Work Typ: WMB Done For:			
991	1237	Address : 2018			
992	1238	Street : SLOAN ST			
993	1239	1st x-st: Dir N of FLUSHING RD			
994	1240	2nd x-st: Dir E of CHEVROLET AVE			
995	1241	Subdivsn: Lots:			
996	1242	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
997	1243	Boring : N On-going project: N Working In or Near R/R Easement: N			
998	1244	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD USSIG			
999	1246	FLINTC 00002 MISDIGb 03/12/14 07:56:18 B40710045-00B EMER NEW GRID	FLINTC	B40710045	03/12/14
1000	1248	**** Underground ****			
1001	1249	Ticket : B40710045 Rcvd: 03/12/14 07:54 Oper: GMH Rev: 00B			
1002	1250	Org Tkt : B40710045 Rcvd: 03/12/14 07:55 Oper: GMH			
1003	1252	Digstart: 03/12/14 Time: 12:00			
1004	1253	Tkt Life: 04/02/14 Time: 23:59			
1005	1255	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
1006	1256	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1007	1257	E-mail : NONE			
1008	1258	FieldCnt: HOWARD Number: 810-577-8263			

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975	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2018	Street : SLOAN ST
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999	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WTR SERV	Address : 2813	Street : N STEVENSON ST
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999	1st x-st: Dir E of BALLENGER HWY	2nd x-st: Dir S of MACKIN RD
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1009	1260	County : GENESEE Place : FLINT /C			
1010	1262	Grids : 4301B8343A 4301B8343B			
1011	1263	Polygon : 43.028472/-83.730677 43.027226/-83.726581			
1012	1264	: 43.027112/-83.731091 43.025866/-83.726994			
1013	1265	Lat : Long:			
1014	1266	Work Typ: REPR WTR SERV/LTD FACIL Done For:			
1015	1267	Address : 2813			
1016	1268	Street : N STEVENSON ST			
1017	1269	1st x-st: Dir E of BALLENGER HWY			
1018	1270	2nd x-st: Dir S of MACKIN RD			
1019	1271	Subdivsn: Lots:			
1020	1272	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
1021	1273	Boring : N On-going project: N Working In or Near R/R Easement: N			
1022	1274	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1023	1276	FLINTC 00003 MISDIGb 03/12/14 07:57:23 B40710046-00B EMER NEW GRID	FLINTC	B40710046	03/12/14
1024	1278	**** Underground ****			
1025	1279	Ticket : B40710046 Rcvd: 03/12/14 07:56 Oper: GMH Rev: 00B			
1026	1280	Org Tkt : B40710046 Rcvd: 03/12/14 07:56 Oper: GMH			
1027	1282	Digstart: 03/12/14 Time: 13:00			
1028	1283	Tkt Life: 04/02/14 Time: 23:59			
1029	1285	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
1030	1286	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1031	1287	E-mail : NONE			
1032	1288	FieldCnt: HOWARD Number: 810-577-8263			
1033	1290	County : GENESEE Place : FLINT /C			
1034	1292	Grids : 4301B8343B 4301B8343C 4301C8343C			
1035	1293	Polygon : 43.025546/-83.725998 43.026906/-83.725571			
1036	1294	: 43.024038/-83.721198 43.025397/-83.720771			
1037	1295	Lat : Long:			
1038	1296	Work Typ: REPR WTR SERV/LTD FACIL Done For:			
1039	1297	Address : 2521			
1040	1298	Street : N STEVENSON ST			
1041	1299	1st x-st: Dir E of BALLENGER HWY			
1042	1300	2nd x-st: Dir S of MACKIN RD			
1043	1301	Subdivsn: Lots:			
1044	1302	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
1045	1303	Boring : N On-going project: N Working In or Near R/R Easement: N			
1046	1304	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1047	1306	FLINTC 00018 MISDIGa 03/12/14 13:35:09 A40710262-00A EMER NEW GRID	FLINTC	A40710262	03/12/14
1048	1308	**** Underground ****			
1049	1309	Ticket : A40710262 Rcvd: 03/12/14 13:26 Oper: NCT Rev: 00A			
1050	1310	Org Tkt : A40710262 Rcvd: 03/12/14 13:28 Oper: NCT			
1051	1312	Digstart: 03/12/14 Time: 13:26			
1052	1313	Tkt Life: 04/02/14 Time: 23:59			
1053	1315	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1054	1316	Phone : 810-577-8261 Ext: Fax :			
1055	1317	E-mail : NONE			
1056	1318	FieldCnt: Number:			

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1023	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WTR SERV	Address : 2521	Street : N STEVENSON ST
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1047	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 613	Street : WHITE ST
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1023	1st x-st: Dir E of BALLENGER HWY	2nd x-st: Dir S of MACKIN RD
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1047	1st x-st: Dir E of DUPONT ST	2nd x-st: Dir W of IROQUOIS AVE
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1057	1320	County : GENESEE Place : FLINT /C			
1058	1322	Grids : 4302C8342A 4302C8342B 4302D8342A 4302D8342B			
1059	1323	Polygon : 43.038672/-83.714131 43.038694/-83.709745			
1060	1324	: 43.037300/-83.714124 43.037322/-83.709738			
1061	1325	Lat : Long:			
1062	1326	Work Typ: WMB Done For:			
1063	1327	Address : 613			
1064	1328	Street : WHITE ST			
1065	1329	1st x-st: Dir E of DUPONT ST			
1066	1330	2nd x-st: Dir W of IROQUOIS AVE			
1067	1331	Subdivsn: Lots:			
1068	1332	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD CREW ON SITE			
1069	1333	Boring : N On-going project: N Working In or Near R/R Easement: N			
1070	1334	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
1071	1336	FLINTC 00019 MISDIGa 03/12/14 15:40:09 A40710325-00A EMER NEW GRID	FLINTC	A40710325	03/13/14
1072	1338	**** Underground ****			
1073	1339	Ticket : A40710325 Rcvd: 03/12/14 15:37 Oper: JAL Rev: 00A			
1074	1340	Org Tkt : A40710325 Rcvd: 03/12/14 15:39 Oper: JAL			
1075	1342	Digstart: 03/13/14 Time: 20:00			
1076	1343	Tkt Life: 04/03/14 Time: 23:59			
1077	1345	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1078	1346	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1079	1347	E-mail : NONE			
1080	1348	FieldCnt: PAUL - CELL Number: 810-397-7247			
1081	1350	County : GENESEE Place : FLINT /C			
1082	1352	Grids : 4300C8340B 4300C8340C			
1083	1353	Polygon : 43.005958/-83.677425 43.007059/-83.676111			
1084	1354	: 43.004066/-83.675841 43.005167/-83.674526			
1085	1355	Lat : Long:			
1086	1356	Work Typ: WMB Done For:			
1087	1357	Address : 1919			
1088	1358	Street : CLIFFORD ST			
1089	1359	1st x-st: Dir S of 12TH ST			
1090	1360	2nd x-st: Dir E of S SAGINAW ST			
1091	1361	Subdivsn: Lots:			
1092	1362	Stk Info: LOCATE 50FT RADIUS OF HYDT IFO ADDR			
1093	1363	Boring : N On-going project: N Working In or Near R/R Easement: N			
1094	1364	Members : ATT ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC SPRNT4			
1095	1366	FLINTC 00020 MISDIGa 03/12/14 15:42:32 A40710326-00A EMER NEW GRID	FLINTC	A40710326	03/13/14
1096	1368	**** Underground ****			
1097	1369	Ticket : A40710326 Rcvd: 03/12/14 15:39 Oper: JAL Rev: 00A			
1098	1370	Org Tkt : A40710326 Rcvd: 03/12/14 15:42 Oper: JAL			
1099	1372	Digstart: 03/13/14 Time: 08:00			
1100	1373	Tkt Life: 04/03/14 Time: 23:59			
1101	1375	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1102	1376	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1103	1377	E-mail : NONE			
1104	1378	FieldCnt: PAUL - CELL Number: 810-397-7247			

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1071	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1919	Street : CLIFFORD ST
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1095	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : GRANDY ST
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1095	1st x-st: Dir of E BOULEVARD DR	2nd x-st: Dir of
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1105	1380	County : GENESEE Place : FLINT /C			
1106	1382	Grids : 4301A8340A			
1107	1383	Polygon : 43.032395/-83.683195 43.032129/-83.681363			
1108	1384	: 43.031052/-83.683390 43.030786/-83.681558			
1109	1385	Lat : Long:			
1110	1386	Work Typ: WMB Done For:			
1111	1387	Address :			
1112	1388	Street : GRANDY ST			
1113	1389	1st x-st: Dir of E BOULEVARD DR			
1114	1390	2nd x-st: Dir of			
1115	1391	Subdivsn: Lots:			
1116	1392	Stk Info: LOCATE 50FT RADIUS OF ENTIRE E SD OF INTER			
1117	1393	Boring : N On-going project: N Working In or Near R/R Easement: N			
1118	1394	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1119	1396	FLINTC 00003 MISDIGb 03/13/14 07:39:33 B40720062-00B EMER NEW GRID	FLINTC	B40720062	03/13/14
1120	1398	**** Underground ****			
1121	1399	Ticket : B40720062 Rcvd: 03/13/14 07:36 Oper: AMA Rev: 00B			
1122	1400	Org Tkt : B40720062 Rcvd: 03/13/14 07:39 Oper: AMA			
1123	1402	Digstart: 03/13/14 Time: 09:00			
1124	1403	Tkt Life: 04/03/14 Time: 23:59			
1125	1405	Firm : FLINT CITY Caller: HOWARD SWICKARD			
1126	1406	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1127	1407	E-mail : AROBERTS@CITYOFFLINT.COM			
1128	1408	FieldCnt: HOWARD SWICKARD/CELL Number: 810-577-8263			
1129	1410	County : GENESEE Place : FLINT /C			
1130	1412	Grids : 4301C8342A 4301C8343C 4301C8343D			
1131	1413	Polygon : 43.023288/-83.721266 43.024635/-83.720851			
1132	1414	: 43.021646/-83.715928 43.022993/-83.715513			
1133	1415	Lat : Long:			
1134	1416	Work Typ: REPR WMB Done For:			
1135	1417	Address :			
1136	1418	Street : BERKLEY ST			
1137	1419	1st x-st: Dir E of CHEVROLET AVE			
1138	1420	2nd x-st: Dir N of FLUSHING RD			
1139	1421	Subdivsn: Lots:			
1140	1422	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF ST AT ADDRS 2108 & 2326			
1141	1423	: CREW ENROUTE			
1142	1424	Boring : N On-going project: N Working In or Near R/R Easement: N			
1143	1425	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
1144	1427	FLINTC 00001 MISDIGa 03/13/14 07:52:17 A40720018-00A EMER NEW GRID	FLINTC	A40720018	03/13/14
1145	1429	**** Underground ****			
1146	1430	Ticket : A40720018 Rcvd: 03/13/14 07:49 Oper: MLD Rev: 00A			
1147	1431	Org Tkt : A40720018 Rcvd: 03/13/14 07:52 Oper: MLD			
1148	1433	Digstart: 03/13/14 Time: 08:00			
1149	1434	Tkt Life: 04/03/14 Time: 23:59			
1150	1436	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1151	1437	Phone : 810-577-8261 Ext: Fax :			
1152	1438	E-mail : NONE			

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1119	FLINT CITY	HOWARD SWICKARD	REPR WMB	Address :	Street : BERKLEY ST
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1144	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : WALDMAN AVE
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1153	1439	FieldCnt: Number:			
1154	1441	County : GENESEE Place : FLINT /C			
1155	1443	Grids : 4259C8341B 4259C8341C			
1156	1444	Polygon : 42.989876/-83.693940 42.990207/-83.691344			
1157	1445	: 42.988506/-83.693765 42.988838/-83.691169			
1158	1446	Lat : Long:			
1159	1447	Work Typ: REPR WMB Done For:			
1160	1448	Address :			
1161	1449	Street : WALDMAN AVE			
1162	1450	1st x-st: Dir W of FENTON RD			
1163	1451	2nd x-st: Dir of			
1164	1452	Subdivsn: Lots:			
1165	1453	Stk Info: LOCATE 40FT RADIUS OF BARRICADE LOC APX 100FT W OF FENTON RD CREW			
1166	1454	: EN ROUTE			
1167	1455	Boring : N On-going project: N Working In or Near R/R Easement: N			
1168	1456	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1169	1458	FLINTC 00014 MISDIGb 03/13/14 13:01:38 B40720465-00B EMER NEW GRID	FLINTC	B40720465	03/13/14
1170	1460	**** Underground ****			
1171	1461	Ticket : B40720465 Rcvd: 03/13/14 13:00 Oper: AMA Rev: 00B			
1172	1462	Org Tkt : B40720465 Rcvd: 03/13/14 13:01 Oper: AMA			
1173	1464	Digstart: 03/13/14 Time: 13:00			
1174	1465	Tkt Life: 04/03/14 Time: 23:59			
1175	1467	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1176	1468	Phone : 810-577-8261 Ext: Fax :			
1177	1469	E-mail : NONE			
1178	1470	FieldCnt: Number:			
1179	1472	County : GENESEE Place : FLINT /C			
1180	1474	Grids : 4303A8343C 4303B8343C			
1181	1475	Polygon : 43.064642/-83.723463 43.064670/-83.721592			
1182	1476	: 43.061863/-83.723422 43.061890/-83.721550			
1183	1477	Lat : Long:			
1184	1478	Work Typ: REPR WMB Done For:			
1185	1479	Address : 5410			
1186	1480	Street : KERMIT ST			
1187	1481	1st x-st: Dir N of PIERSON RD			
1188	1482	2nd x-st: Dir E of FLEMING RD			
1189	1483	Subdivsn: Lots:			
1190	1484	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ENROUTE			
1191	1485	Boring : N On-going project: N Working In or Near R/R Easement: N			
1192	1486	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1193	1488	FLINTC 00018 MISDIGb 03/13/14 17:08:45 B40720724-00B EMER NEW GRID	FLINTC	B40720724	03/14/14
1194	1490	**** Underground ****			
1195	1491	Ticket : B40720724 Rcvd: 03/13/14 17:00 Oper: HDK Rev: 00B			
1196	1492	Org Tkt : B40720724 Rcvd: 03/13/14 17:02 Oper: HDK			
1197	1494	Digstart: 03/14/14 Time: 06:00			
1198	1495	Tkt Life: 04/04/14 Time: 23:59			
1199	1497	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1200	1498	Phone : 810-577-8261 Ext: Fax :			

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1169	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 5410	Street : KERMIT ST
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1193	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1309	Street : BLANCHARD AVE
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1193	1st x-st: Dir S of E COURT ST	2nd x-st: Dir N of LINWOOD AVE
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1201	1499	E-mail : NONE			
1202	1500	FieldCnt: Number:			
1203	1502	County : GENESEE Place : FLINT /C			
1204	1504	Grids : 4300A8339A 4300A8340D 4301D8340D			
1205	1505	Polygon : 43.016763/-83.668338 43.016821/-83.666469			
1206	1506	: 43.012902/-83.668218 43.012960/-83.666349			
1207	1507	Lat : Long:			
1208	1508	Work Typ: WMB Done For:			
1209	1509	Address : 1309			
1210	1510	Street : BLANCHARD AVE			
1211	1511	1st x-st: Dir S of E COURT ST			
1212	1512	2nd x-st: Dir N of LINWOOD AVE			
1213	1513	Subdivsn: Lots:			
1214	1514	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
1215	1515	Boring : N On-going project: N Working In or Near R/R Easement: N			
1216	1516	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
1217	1518	FLINTC 00019 MISDIGb 03/13/14 17:59:41 B40720742-00B EMER NEW GRID	FLINTC	B40720742	03/13/14
1218	1520	**** Underground ****			
1219	1521	Ticket : B40720742 Rcvd: 03/13/14 17:56 Oper: MEP Rev: 00B			
1220	1522	Org Tkt : B40720742 Rcvd: 03/13/14 17:59 Oper: MEP			
1221	1524	Digstart: 03/13/14 Time: 17:56			
1222	1525	Tkt Life: 04/03/14 Time: 23:59			
1223	1527	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1224	1528	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1225	1529	E-mail : NONE			
1226	1530	FieldCnt: Number: 810-397-7247			
1227	1532	County : GENESEE Place : FLINT /C			
1228	1534	Grids : 4302B8339B 4302C8339B			
1229	1535	Polygon : 43.042768/-83.661182 43.042502/-83.659349			
1230	1536	: 43.041425/-83.661377 43.041159/-83.659544			
1231	1537	Lat : Long:			
1232	1538	Work Typ: WMB Done For:			
1233	1539	Address :			
1234	1540	Street : COOK ST			
1235	1541	1st x-st: Dir of OKLAHOMA AVE			
1236	1542	2nd x-st: Dir of			
1237	1543	Subdivsn: Lots:			
1238	1544	Stk Info: LOCATE 50 FT RADIUS OF ENTIRE S SD OF INTER CREW ON SITE			
1239	1545	Boring : N On-going project: N Working In or Near R/R Easement: N			
1240	1546	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1241	1548	FLINTC 00013 MISDIGb 03/14/14 14:38:22 B40720724-01B EMER RXMT GRID	FLINTC	B40720724	03/14/14
1242	1550	**** Underground ****			
1243	1551	Ticket : B40720724 Rcvd: 03/14/14 14:37 Oper: SLD Rev: 01B			
1244	1552	Org Tkt : B40720724 Rcvd: 03/13/14 17:02 Oper: HDK			
1245	1554	Digstart: 03/14/14 Time: 14:37			
1246	1555	Tkt Life: 04/04/14 Time: 23:59			
1247	1557	Firm : FLINT CITY WATER DEPARTMENT Caller: CHERI PRIEST			
1248	1558	Phone : 810-577-8261 Ext: Fax :			

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1217	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : COOK ST
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1241	FLINT CITY WATER DEPARTMENT	CHERI PRIEST	WMB	Address : 1309	Street : BLANCHARD AVE
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1249	1559	E-mail : NONE			
1250	1560	FieldCnt: Number:			
1251	1562	County : GENESEE Place : FLINT /C			
1252	1564	Grids : 4300A8339A 4300A8340D 4301D8340D			
1253	1565	Polygon : 43.016763/-83.668338 43.016821/-83.666469			
1254	1566	: 43.012902/-83.668218 43.012960/-83.666349			
1255	1567	Lat : Long:			
1256	1568	Work Typ: WMB Done For:			
1257	1569	Address : 1309			
1258	1570	Street : BLANCHARD AVE			
1259	1571	1st x-st: Dir S of E COURT ST			
1260	1572	2nd x-st: Dir N of LINWOOD AVE			
1261	1573	Subdivsn: Lots:			
1262	1574	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
1263	1575	Boring : N On-going project: N Working In or Near R/R Easement: N			
1264	1577	AddlInfo: UNMARKED FACILITY			
1265	1578	: 2ND CALL ALL UTILS STILL NEEDED PER CHERI REFER TO TKT FRM 3/13			
1266	1579	: CREW ON SITE --[SLD 03/14/2014 02:37 PM]			
1267	1581	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
1268	1583	FLINTC 00017 MISDIGb 03/14/14 17:34:51 B40730921-00B EMER NEW GRID	FLINTC	B40730921	03/15/14
1269	1585	**** Underground ****			
1270	1586	Ticket : B40730921 Rcvd: 03/14/14 17:32 Oper: JAL Rev: 00B			
1271	1587	Org Tkt : B40730921 Rcvd: 03/14/14 17:34 Oper: JAL			
1272	1589	Digstart: 03/15/14 Time: 09:00			
1273	1590	Tkt Life: 04/05/14 Time: 23:59			
1274	1592	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1275	1593	Phone : 810-577-8261 Ext: Fax :			
1276	1594	E-mail : NONE			
1277	1595	FieldCnt: Number:			
1278	1597	County : GENESEE Place : FLINT /C			
1279	1599	Grids : 4259B8339B 4259B8339C 4259C8339B 4259C8339C			
1280	1600	Polygon : 42.993762/-83.659998 42.993811/-83.658128			
1281	1601	: 42.990140/-83.659904 42.990189/-83.658034			
1282	1602	Lat : Long:			
1283	1603	Work Typ: WMB Done For:			
1284	1604	Address : 3505			
1285	1605	Street : COMANCHE AVE			
1286	1606	1st x-st: Dir N of E ATHERTON RD			
1287	1607	2nd x-st: Dir S of ELDON BAKER DR			
1288	1608	Subdivsn: Lots:			
1289	1609	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
1290	1610	Boring : N On-going project: N Working In or Near R/R Easement: N			
1291	1611	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1292	1613	FLINTC 00016 MISDIGb 03/14/14 17:33:12 B40730920-00B EMER NEW GRID	FLINTC	B40730920	03/15/14
1293	1615	**** Underground ****			
1294	1616	Ticket : B40730920 Rcvd: 03/14/14 17:29 Oper: JAL Rev: 00B			
1295	1617	Org Tkt : B40730920 Rcvd: 03/14/14 17:32 Oper: JAL			
1296	1619	Digstart: 03/15/14 Time: 06:00			

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1268	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3505	Street : COMANCHE AVE
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1292	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : REMINGTON AVE
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1268	1st x-st: Dir N of E ATHERTON RD	2nd x-st: Dir S of ELDON BAKER DR
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1292	1st x-st: Dir of FENTON RD	2nd x-st: Dir N of W ATHERTON RD
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1297	1620	Tkt Life: 04/05/14 Time: 23:59			
1298	1622	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1299	1623	Phone : 810-577-8261 Ext: Fax :			
1300	1624	E-mail : NONE			
1301	1625	FieldCnt: Number:			
1302	1627	County : GENESEE Place : FLINT /C			
1303	1629	Grids : 4259A8341B			
1304	1630	Polygon : 42.997669/-83.694038 42.997735/-83.692170			
1305	1631	: 42.996058/-83.693980 42.996125/-83.692113			
1306	1632	Lat : Long:			
1307	1633	Work Typ: WMB Done For:			
1308	1634	Address :			
1309	1635	Street : REMINGTON AVE			
1310	1636	1st x-st: Dir of FENTON RD			
1311	1637	2nd x-st: Dir N of W ATHERTON RD			
1312	1638	Subdivsn: Lots:			
1313	1639	Stk Info: SOUTHERN INTER OF FENTON & REMINGTON LOCATE 50FT RADIUS OF NW COR			
1314	1640	: OF REMINGTON & FENTON			
1315	1641	Boring : N On-going project: N Working In or Near R/R Easement: N			
1316	1642	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
1317	1644	FLINTC 00004 MISDIGb 03/15/14 11:57:44 B40740068-00B EMER NEW GRID	FLINTC	B40740068	03/15/14
1318	1646	**** Underground ****			
1319	1647	Ticket : B40740068 Rcvd: 03/15/14 11:54 Oper: LRS Rev: 00B			
1320	1648	Org Tkt : B40740068 Rcvd: 03/15/14 11:57 Oper: LRS			
1321	1650	Digstart: 03/15/14 Time: 11:54			
1322	1651	Tkt Life: 04/05/14 Time: 23:59			
1323	1653	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1324	1654	Phone : 810-577-8261 Ext: Fax :			
1325	1655	E-mail : NONE			
1326	1656	FieldCnt: Number:			
1327	1658	County : GENESEE Place : FLINT /C			
1328	1660	Grids : 4302C8342B			
1329	1661	Polygon : 43.041251/-83.711709 43.041517/-83.709876			
1330	1662	: 43.039908/-83.711514 43.040174/-83.709681			
1331	1663	Lat : Long:			
1332	1664	Work Typ: W M B REPR Done For:			
1333	1665	Address :			
1334	1666	Street : TAYLOR ST			
1335	1667	1st x-st: Dir of IROQUOIS AVE			
1336	1668	2nd x-st: Dir of			
1337	1669	Subdivsn: Lots:			
1338	1670	Stk Info: NE COR OF TAYLOR & IROQUOIS A 75 FT RADIUS CREW EN ROUTE			
1339	1671	Boring : N On-going project: N Working In or Near R/R Easement: N			
1340	1672	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
1341	1674	FLINTC 00001 MISDIGb 03/17/14 07:36:26 B40760038-00B EMER NEW GRID	FLINTC	B40760038	03/17/14
1342	1676	**** Underground ****			
1343	1677	Ticket : B40760038 Rcvd: 03/17/14 07:33 Oper: DLF Rev: 00B			
1344	1678	Org Tkt : B40760038 Rcvd: 03/17/14 07:36 Oper: DLF			

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1317	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	W M B REPR	Address :	Street : TAYLOR ST
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1341	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : ADAMS AVE
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1341	1st x-st: Dir S of HAMILTON AVE	2nd x-st: Dir E of MARTIN LUTHER KING BLVD
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1345	1680	Digstart: 03/17/14 Time: 12:00			
1346	1681	Tkt Life: 04/07/14 Time: 23:59			
1347	1683	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1348	1684	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1349	1685	E-mail : NONE			
1350	1686	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247			
1351	1688	County : GENESEE Place : FLINT /C			
1352	1690	Grids : 4301A8342C 4301A8342D 4302D8342C 4302D8342D			
1353	1691	Polygon : 43.035630/-83.704230 43.035664/-83.702360			
1354	1692	: 43.032569/-83.704174 43.032604/-83.702304			
1355	1693	Lat : Long:			
1356	1694	Work Typ: WMB Done For:			
1357	1695	Address :			
1358	1696	Street : ADAMS AVE			
1359	1697	1st x-st: Dir S of HAMILTON AVE			
1360	1698	2nd x-st: Dir E of MARTIN LUTHER KING BLVD			
1361	1699	Subdivsn: Lots:			
1362	1700	Stk Info: LOCATE ENTIRE FRT OF PROP AND BTH SDS OF RD AT ADDRS 1922 & 1926			
1363	1701	Boring : N On-going project: N Working In or Near R/R Easement: N			
1364	1702	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1365	1704	FLINTC 00002 MISDIGb 03/17/14 07:42:16 B40760049-00B EMER NEW GRID	FLINTC	B40760049	03/17/14
1366	1706	**** Underground ****			
1367	1707	Ticket : B40760049 Rcvd: 03/17/14 07:40 Oper: GMH Rev: 00B			
1368	1708	Org Tkt : B40760049 Rcvd: 03/17/14 07:42 Oper: GMH			
1369	1710	Digstart: 03/17/14 Time: 09:00			
1370	1711	Tkt Life: 04/07/14 Time: 23:59			
1371	1713	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
1372	1714	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1373	1715	E-mail : NONE			
1374	1716	FieldCnt: HOWARD Number: 810-577-8263			
1375	1718	County : GENESEE Place : FLINT /C			
1376	1720	Grids : 4259C8341B 4259C8341C 4259D8341B 4259D8341C			
1377	1721	Polygon : 42.987846/-83.693935 42.987945/-83.689615			
1378	1722	: 42.986473/-83.693904 42.986573/-83.689584			
1379	1723	Lat : Long:			
1380	1724	Work Typ: WMB Done For:			
1381	1725	Address : 948			
1382	1726	Street : LELAND ST			
1383	1727	1st x-st: Dir E of FENTON RD			
1384	1728	2nd x-st: Dir S of ATHERTON RD			
1385	1729	Subdivsn: Lots:			
1386	1730	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
1387	1731	Boring : N On-going project: N Working In or Near R/R Easement: N			
1388	1732	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1389	1734	FLINTC 00012 MISDIGb 03/17/14 16:50:09 B40760864-00B EMER NEW GRID	FLINTC	B40760864	03/18/14
1390	1736	**** Underground ****			
1391	1737	Ticket : B40760864 Rcvd: 03/17/14 16:44 Oper: DLG Rev: 00B			
1392	1738	Org Tkt : B40760864 Rcvd: 03/17/14 16:50 Oper: DLG			

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1365	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 948	Street : LELAND ST
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1389	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	Street : WISNER ST
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1389	1st x-st: Dir E of CLIO RD	2nd x-st: Dir S of W STEWART AVE
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1393	1740	Digstart: 03/18/14 Time: 09:00			
1394	1741	Tkt Life: 04/08/14 Time: 23:59			
1395	1743	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
1396	1744	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1397	1745	E-mail : NONE			
1398	1746	FieldCnt: HOWARD Number: 810-577-8263			
1399	1748	County : GENESEE Place : FLINT /C			
1400	1750	Grids : 4302A8343A 4303D8343A			
1401	1751	Polygon : 43.051067/-83.732578 43.051064/-83.730706			
1402	1752	: 43.047622/-83.732582 43.047619/-83.730710			
1403	1753	Lat : Long:			
1404	1754	Work Typ: WMB Done For:			
1405	1755	Address :			
1406	1756	Street : WISNER ST			
1407	1757	1st x-st: Dir E of CLIO RD			
1408	1758	2nd x-st: Dir S of W STEWART AVE			
1409	1759	Subdivsn: Lots:			
1410	1760	Stk Info: LOCATE ENTIRE FRT OF PROPS & BTH SDS OF ST AT ADDRS 3714 & 3706			
1411	1761	Boring : N On-going project: N Working In or Near R/R Easement: N			
1412	1762	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
1413	1764	FLINTC 00013 MISDIGb 03/17/14 17:14:36 B40760879-00B EMER NEW GRID	FLINTC	B40760879	03/18/14
1414	1766	**** Underground ****			
1415	1767	Ticket : B40760879 Rcvd: 03/17/14 17:12 Oper: BMB Rev: 00B			
1416	1768	Org Tkt : B40760879 Rcvd: 03/17/14 17:14 Oper: BMB			
1417	1770	Digstart: 03/18/14 Time: 08:00			
1418	1771	Tkt Life: 04/08/14 Time: 23:59			
1419	1773	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1420	1774	Phone : 810-577-8261 Ext: Fax :			
1421	1775	E-mail : NONE			
1422	1776	FieldCnt: Number:			
1423	1778	County : GENESEE Place : FLINT /C			
1424	1780	Grids : 4302C8340B 4302C8340C			
1425	1781	Polygon : 43.040287/-83.676208 43.040410/-83.671848			
1426	1782	: 43.038914/-83.676169 43.039038/-83.671809			
1427	1783	Lat : Long:			
1428	1784	Work Typ: WMB Done For:			
1429	1785	Address : 1421			
1430	1786	Street : DELAWARE AVE			
1431	1787	1st x-st: Dir E of LEWIS ST			
1432	1788	2nd x-st: Dir S of LEITH ST			
1433	1789	Subdivsn: Lots:			
1434	1790	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
1435	1791	Boring : N On-going project: N Working In or Near R/R Easement: N			
1436	1792	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
1437	1794	FLINTC 00001 MISDIGb 03/18/14 07:27:42 B40770067-00B EMER NEW GRID	FLINTC	B40770067	03/18/14
1438	1796	**** Underground ****			
1439	1797	Ticket : B40770067 Rcvd: 03/18/14 07:25 Oper: SLD Rev: 00B			
1440	1798	Org Tkt : B40770067 Rcvd: 03/18/14 07:27 Oper: SLD			

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1413	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1421	Street : DELAWARE AVE
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1437	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : HARRISON ST
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1437	1st x-st: Dir S of FIRST ST	2nd x-st: Dir E of S SAGINAW ST
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1441	1800	Digstart: 03/18/14 Time: 08:00			
1442	1801	Tkt Life: 04/08/14 Time: 23:59			
1443	1803	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1444	1804	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1445	1805	E-mail : NONE			
1446	1806	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247			
1447	1808	County : GENESEE Place : FLINT /C			
1448	1810	Grids : 4300A8341C 4301D8341C			
1449	1811	Polygon : 43.016574/-83.690670 43.017723/-83.689492			
1450	1812	: 43.014335/-83.688485 43.015484/-83.687307			
1451	1813	Lat : Long:			
1452	1814	Work Typ: WMB Done For:			
1453	1815	Address :			
1454	1816	Street : HARRISON ST			
1455	1817	1st x-st: Dir S of FIRST ST			
1456	1818	2nd x-st: Dir E of S SAGINAW ST			
1457	1819	Subdivsn: Lots:			
1458	1820	Stk Info: LOCATE BTH SDS OF HARRISON BEG AT 1ST GOING APX 75FT S CREW EN			
1459	1821	: ROUTE			
1460	1822	Boring : N On-going project: N Working In or Near R/R Easement: N			
1461	1823	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC			
1462	1825	FLINTC 00013 MISDIGb 03/18/14 12:03:05 B40770486-00B EMER NEW GRID	FLINTC	B40770486	03/18/14
1463	1827	**** Underground ****			
1464	1828	Ticket : B40770486 Rcvd: 03/18/14 11:55 Oper: AMA Rev: 00B			
1465	1829	Org Tkt : B40770486 Rcvd: 03/18/14 11:56 Oper: AMA			
1466	1831	Digstart: 03/18/14 Time: 11:55			
1467	1832	Tkt Life: 04/08/14 Time: 23:59			
1468	1834	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1469	1835	Phone : 810-577-8261 Ext: Fax :			
1470	1836	E-mail : NONE			
1471	1837	FieldCnt: Number:			
1472	1839	County : GENESEE Place : FLINT /C			
1473	1841	Grids : 4301A8339A 4302D8339A			
1474	1842	Polygon : 43.034909/-83.665166 43.034909/-83.663296			
1475	1843	: 43.032472/-83.665166 43.032472/-83.663296			
1476	1844	Lat : Long:			
1477	1845	Work Typ: REPR WMB Done For:			
1478	1846	Address :			
1479	1847	Street : MAPLEWOOD AVE			
1480	1848	1st x-st: Dir N of DAVISON RD			
1481	1849	2nd x-st: Dir E of FRANKLIN AVE			
1482	1850	Subdivsn: Lots:			
1483	1851	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD AT ADDRS 1918 & 1922 CREW EN			
1484	1852	: ROUTE			
1485	1853	Boring : N On-going project: N Working In or Near R/R Easement: N			
1486	1854	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1487	1856	FLINTC 00007 MISDIGa 03/18/14 17:25:25 A40770493-00A EMER NEW GRID	FLINTC	A40770493	03/19/14
1488	1858	**** Underground ****			

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1462	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : MAPLEWOOD AVE
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1487	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2018	Street : STANFORD AVE
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1487	1st x-st: Dir N of LIPPINCOTT BLVD	2nd x-st: Dir S of PINGREE AVE
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1489	1859	Ticket : A40770493 Rcvd: 03/18/14 17:22 Oper: NCT Rev: 00A			
1490	1860	Org Tkt : A40770493 Rcvd: 03/18/14 17:25 Oper: NCT			
1491	1862	Digstart: 03/19/14 Time: 08:00			
1492	1863	Tkt Life: 04/09/14 Time: 23:59			
1493	1865	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1494	1866	Phone : 810-577-8261 Ext: Fax :			
1495	1867	E-mail : NONE			
1496	1868	FieldCnt: Number:			
1497	1870	County : GENESEE Place : FLINT /C			
1498	1872	Grids : 4300C8340C 4300C8340D 4300D8340C 4300D8340D			
1499	1873	Polygon : 43.006376/-83.671875 43.006410/-83.670006			
1500	1874	: 43.002803/-83.671811 43.002837/-83.669942			
1501	1875	Lat : Long:			
1502	1876	Work Typ: WMB Done For:			
1503	1877	Address : 2018			
1504	1878	Street : STANFORD AVE			
1505	1879	1st x-st: Dir N of LIPPINCOTT BLVD			
1506	1880	2nd x-st: Dir S of PINGREE AVE			
1507	1881	Subdivsn: Lots:			
1508	1882	Stk Info: LOCATE IFO ADDR & BTH SDS OF RD			
1509	1883	Boring : N On-going project: N Working In or Near R/R Easement: N			
1510	1884	Members : ATT ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC SPRNT4			
1511	1886	FLINTC 00008 MISDIGb 03/19/14 10:53:33 B40780468-00B EMER NEW GRID	FLINTC	B40780468	03/19/14
1512	1888	**** Underground ****			
1513	1889	Ticket : B40780468 Rcvd: 03/19/14 10:50 Oper: HDK Rev: 00B			
1514	1890	Org Tkt : B40780468 Rcvd: 03/19/14 10:53 Oper: HDK			
1515	1892	Digstart: 03/19/14 Time: 10:50			
1516	1893	Tkt Life: 04/09/14 Time: 23:59			
1517	1895	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1518	1896	Phone : 810-577-8261 Ext: Fax :			
1519	1897	E-mail : NONE			
1520	1898	FieldCnt: Number:			
1521	1900	County : GENESEE Place : FLINT /C			
1522	1902	Grids : 4302A8342B 4302A8342C 4303D8342B 4303D8342C			
1523	1903	Polygon : 43.050286/-83.708898 43.050282/-83.707026			
1524	1904	: 43.047205/-83.708905 43.047201/-83.707033			
1525	1905	Lat : Long:			
1526	1906	Work Typ: WMB Done For:			
1527	1907	Address :			
1528	1908	Street : MASON ST			
1529	1909	1st x-st: Dir N of PASADENA			
1530	1910	2nd x-st: Dir W of MARTIN LUTHER KING			
1531	1911	Subdivsn: Lots:			
1532	1912	Stk Info: LOCATE 75FT RADIUS OF BARRICADE IN CENTER OF RD ON 3700 BLK OF MASON			
1533	1913	: CREW ON SITE			
1534	1914	Boring : N On-going project: N Working In or Near R/R Easement: N			
1535	1915	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1536	1917	FLINTC 00010 MISDIGb 03/19/14 11:12:08 B40780486-00B EMER NEW GRID	FLINTC	B40780486	03/19/14

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1511	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : MASON ST
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1536	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3307	Street : MASON ST

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1511	1st x-st: Dir N of PASADENA	2nd x-st: Dir W of MARTIN LUTHER KING
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1536	1st x-st: Dir S of PASADENA AVE	2nd x-st: Dir N of DEWEY ST

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1537	1919	**** Underground ****			
1538	1920	Ticket : B40780486 Rcvd: 03/19/14 11:09 Oper: JLK Rev: 00B			
1539	1921	Org Tkt : B40780486 Rcvd: 03/19/14 11:11 Oper: JLK			
1540	1923	Digstart: 03/19/14 Time: 11:09			
1541	1924	Tkt Life: 04/09/14 Time: 23:59			
1542	1926	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1543	1927	Phone : 810-577-8261 Ext: Fax :			
1544	1928	E-mail : NONE			
1545	1929	FieldCnt: Number:			
1546	1931	County : GENESEE Place : FLINT /C			
1547	1933	Grids : 4302A8342B 4302A8342C 4302B8342B 4302B8342C			
1548	1934	Polygon : 43.047002/-83.708935 43.047089/-83.707068			
1549	1935	: 43.044800/-83.708832 43.044887/-83.706965			
1550	1936	Lat : Long:			
1551	1937	Work Typ: WMB Done For:			
1552	1938	Address : 3307			
1553	1939	Street : MASON ST			
1554	1940	1st x-st: Dir S of PASADENA AVE			
1555	1941	2nd x-st: Dir N of DEWEY ST			
1556	1942	Subdivsn: Lots:			
1557	1943	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ON SITE			
1558	1944	Boring : N On-going project: N Working In or Near R/R Easement: N			
1559	1946	AddlInfo: REPLCS CANCELLED TKT #B40780468 FRM 3/19 10:55 AM SENT IN ERROR TO			
1560	1947	: 3700 BLK OF MASON			
1561	1949	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1562	1951	FLINTC 00025 MISDIGa 03/19/14 13:28:48 A40780391-00A EMER NEW GRID	FLINTC	A40780391	03/19/14
1563	1953	**** Underground ****			
1564	1954	Ticket : A40780391 Rcvd: 03/19/14 13:23 Oper: MJG Rev: 00A			
1565	1955	Org Tkt : A40780391 Rcvd: 03/19/14 13:28 Oper: MJG			
1566	1957	Digstart: 03/19/14 Time: 13:23			
1567	1958	Tkt Life: 04/09/14 Time: 23:59			
1568	1960	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1569	1961	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1570	1962	E-mail : NONE			
1571	1963	FieldCnt: PAUL/CELL Number: 810-397-7247			
1572	1965	County : GENESEE Place : FLINT /C			
1573	1967	Grids : 4303A8341A 4303A8341B			
1574	1968	Polygon : 43.065789/-83.699792 43.065800/-83.695526			
1575	1969	: 43.064417/-83.699788 43.064428/-83.695523			
1576	1970	Lat : Long:			
1577	1971	Work Typ: WMB Done For:			
1578	1972	Address : 409			
1579	1973	Street : E SHERMAN AVE			
1580	1974	1st x-st: Dir E of ML KING AVE			
1581	1975	2nd x-st: Dir N of PIERSON ROAD			
1582	1976	Subdivsn: Lots:			
1583	1977	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF ST CREW EN ROUTE			
1584	1978	Boring : N On-going project: N Working In or Near R/R Easement: N			

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1562	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 409	Street : E SHERMAN AVE
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1585	1979	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1586	1981	FLINTC 00026 MISDIGa 03/19/14 13:30:56 A40780392-00A EMER NEW GRID	FLINTC	A40780392	03/20/14
1587	1983	**** Underground ****			
1588	1984	Ticket : A40780392 Rcvd: 03/19/14 13:28 Oper: MJG Rev: 00A			
1589	1985	Org Tkt : A40780392 Rcvd: 03/19/14 13:30 Oper: MJG			
1590	1987	Digstart: 03/20/14 Time: 08:00			
1591	1988	Tkt Life: 04/10/14 Time: 23:59			
1592	1990	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1593	1991	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1594	1992	E-mail : NONE			
1595	1993	FieldCnt: PAUL/CELL Number: 810-397-7247			
1596	1995	County : GENESEE Place : FLINT /C			
1597	1997	Grids : 4303A8341A 4303A8341B			
1598	1998	Polygon : 43.065789/-83.699792 43.065800/-83.695526			
1599	1999	: 43.064417/-83.699788 43.064428/-83.695523			
1600	2000	Lat : Long:			
1601	2001	Work Typ: WMB Done For:			
1602	2002	Address : 917			
1603	2003	Street : JOHNSON AVE			
1604	2004	1st x-st: Dir S of W COURT ST			
1605	2005	2nd x-st: Dir W of BALLENGER HWY			
1606	2006	Subdivsn: Lots:			
1607	2007	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF ST			
1608	2008	Boring : N On-going project: N Working In or Near R/R Easement: N			
1609	2009	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1610	2011	FLINTC 00037 MISDIGb 03/19/14 13:50:04 B40780742-00B EMER NEW GRID	FLINTC	B40780742	03/20/14
1611	2013	**** Underground ****			
1612	2014	Ticket : B40780742 Rcvd: 03/19/14 13:48 Oper: DMS Rev: 00B			
1613	2015	Org Tkt : B40780742 Rcvd: 03/19/14 13:49 Oper: DMS			
1614	2017	Digstart: 03/20/14 Time: 08:00			
1615	2018	Tkt Life: 04/10/14 Time: 23:59			
1616	2020	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1617	2021	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1618	2022	E-mail : NONE			
1619	2023	FieldCnt: PAUL/CELL Number: 810-397-7247			
1620	2025	County : GENESEE Place : FLINT /C			
1621	2027	Grids : 4300C8343A 4300C8344D			
1622	2028	Polygon : 43.007588/-83.735135 43.007584/-83.733265			
1623	2029	: 43.004662/-83.735142 43.004657/-83.733272			
1624	2030	Lat : Long:			
1625	2031	Work Typ: WMB Done For:			
1626	2032	Address : 917			
1627	2033	Street : JOHNSON AVE			
1628	2034	1st x-st: Dir S of W COURT ST			
1629	2035	2nd x-st: Dir W of BALLENGER HWY			
1630	2036	Subdivsn: Lots:			
1631	2037	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
1632	2038	Boring : N On-going project: N Working In or Near R/R Easement: N			

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1586	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 917	Street : JOHNSON AVE
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1610	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 917	Street : JOHNSON AVE
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1586	1st x-st: Dir S of W COURT ST	2nd x-st: Dir W of BALLENGER HWY
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1633	2040	AddlInfo: REPLCS CANCELED TKT A40780392 FRM 03/19 SENT IN ERROR W/WRONG			
1634	2041	: GRIDDING			
1635	2043	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC GISD			
1636	2045	FLINTC 00039 MISDIGb 03/19/14 17:55:45 B40781033-00B EMER NEW GRID	FLINTC	B40781033	03/20/14
1637	2047	**** Underground ****			
1638	2048	Ticket : B40781033 Rcvd: 03/19/14 17:53 Oper: NCT Rev: 00B			
1639	2049	Org Tkt : B40781033 Rcvd: 03/19/14 17:55 Oper: NCT			
1640	2051	Digstart: 03/20/14 Time: 08:00			
1641	2052	Tkt Life: 04/10/14 Time: 23:59			
1642	2054	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1643	2055	Phone : 810-577-8261 Ext: Fax :			
1644	2056	E-mail : NONE			
1645	2057	FieldCnt: Number:			
1646	2059	County : GENESEE Place : FLINT /C			
1647	2061	Grids : 4301A8343B 4301B8343B			
1648	2062	Polygon : 43.029796/-83.726335 43.028762/-83.724980			
1649	2063	: 43.027935/-83.727755 43.026901/-83.726400			
1650	2064	Lat : Long:			
1651	2065	Work Typ: WMB Done For:			
1652	2066	Address : 1375			
1653	2067	Street : LAVENDER AVE			
1654	2068	1st x-st: Dir N of PROSPECT ST			
1655	2069	2nd x-st: Dir S of MACKIN RD			
1656	2070	Subdivsn: Lots:			
1657	2071	Stk Info: LOCATE IFO ADDR & BTH SDS OF RD			
1658	2072	Boring : N On-going project: N Working In or Near R/R Easement: N			
1659	2073	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1660	2075	FLINTC 00003 MISDIGb 03/20/14 08:19:26 B40790092-00B EMER NEW GRID	FLINTC	B40790092	03/21/14
1661	2077	**** Underground ****			
1662	2078	Ticket : B40790092 Rcvd: 03/20/14 08:18 Oper: GMH Rev: 00B			
1663	2079	Org Tkt : B40790092 Rcvd: 03/20/14 08:19 Oper: GMH			
1664	2081	Digstart: 03/21/14 Time: 08:00			
1665	2082	Tkt Life: 04/11/14 Time: 23:59			
1666	2084	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1667	2085	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1668	2086	E-mail : NONE			
1669	2087	FieldCnt: PAUL Number: 810-397-7247			
1670	2089	County : GENESEE Place : FLINT /C			
1671	2091	Grids : 4302B8343B 4302C8343B			
1672	2092	Polygon : 43.043524/-83.728541 43.043636/-83.726690			
1673	2093	: 43.041395/-83.728412 43.041507/-83.726561			
1674	2094	Lat : Long:			
1675	2095	Work Typ: WMB Done For:			
1676	2096	Address : 2808			
1677	2097	Street : BROWNELL BLVD			
1678	2098	1st x-st: Dir S of PASADENA AVE			
1679	2099	2nd x-st: Dir E of CLIO RD			
1680	2100	Subdivsn: Lots:			

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1636	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1375	Street : LAVENDER AVE
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1660	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2808	Street : BROWNELL BLVD
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1681	2101	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
1682	2102	Boring : N On-going project: N Working In or Near R/R Easement: N			
1683	2103	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1684	2105	FLINTC 00006 MISDIGb 03/20/14 08:37:45 B40790130-00B EMER NEW GRID	FLINTC	B40790130	03/20/14
1685	2107	**** Underground ****			
1686	2108	Ticket : B40790130 Rcvd: 03/20/14 08:36 Oper: DMS Rev: 00B			
1687	2109	Org Tkt : B40790130 Rcvd: 03/20/14 08:37 Oper: DMS			
1688	2111	Digstart: 03/20/14 Time: 13:00			
1689	2112	Tkt Life: 04/10/14 Time: 23:59			
1690	2114	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1691	2115	Phone : 810-577-8261 Ext: Fax :			
1692	2116	E-mail : NONE			
1693	2117	FieldCnt: Number:			
1694	2119	County : GENESEE Place : FLINT /C			
1695	2121	Grids : 4302B8343A 4302C8343A 4302B8344D 4302C8344D			
1696	2122	Polygon : 43.042635/-83.733451 43.042693/-83.731582			
1697	2123	: 43.038817/-83.733333 43.038874/-83.731464			
1698	2124	Lat : Long:			
1699	2125	Work Typ: WMB Done For:			
1700	2126	Address : 2740			
1701	2127	Street : CLIO RD			
1702	2128	1st x-st: Dir S of W DARTMOUTH			
1703	2129	2nd x-st: Dir N of MACK AVE			
1704	2130	Subdivsn: Lots:			
1705	2131	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
1706	2132	Boring : N On-going project: N Working In or Near R/R Easement: N			
1707	2133	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD MCLEO1			
1708	2135	FLINTC 00003 MISDIGa 03/20/14 09:32:45 A40790125-00A EMER NEW GRID	FLINTC	A40790125	03/20/14
1709	2137	**** Underground ****			
1710	2138	Ticket : A40790125 Rcvd: 03/20/14 09:23 Oper: MLD Rev: 00A			
1711	2139	Org Tkt : A40790125 Rcvd: 03/20/14 09:25 Oper: MLD			
1712	2141	Digstart: 03/20/14 Time: 09:23			
1713	2142	Tkt Life: 04/10/14 Time: 23:59			
1714	2144	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1715	2145	Phone : 810-577-8261 Ext: Fax :			
1716	2146	E-mail : NONE			
1717	2147	FieldCnt: Number:			
1718	2149	County : GENESEE Place : FLINT /C			
1719	2151	Grids : 4301B8343C			
1720	2152	Polygon : 43.027725/-83.724840 43.027991/-83.723008			
1721	2153	: 43.026382/-83.724645 43.026648/-83.722813			
1722	2154	Lat : Long:			
1723	2155	Work Typ: REPR WMB Done For:			
1724	2156	Address :			
1725	2157	Street : FOREST HILL AVE			
1726	2158	1st x-st: Dir of PROSPECT ST			
1727	2159	2nd x-st: Dir S of MACKIN RD			
1728	2160	Subdivsn: Lots:			

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1684	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2740	Street : CLIO RD
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1708	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : FOREST HILL AVE
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1684	1st x-st: Dir S of W DARTMOUTH	2nd x-st: Dir N of MACK AVE
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1708	1st x-st: Dir of PROSPECT ST	2nd x-st: Dir S of MACKIN RD
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1729	2161	Stk Info: E OF BALLENGER HWY LOCATE 50FT RADIUS OF BARRICADE LOC NW COR OF			
1730	2162	: INTER OF FOREST HILL & PROSPECT CREW ON SITE			
1731	2163	Boring : N On-going project: N Working In or Near R/R Easement: N			
1732	2164	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1733	2166	FLINTC 00003 MISDIGb 03/21/14 09:06:34 B40800192-00B EMER NEW GRID	FLINTC	B40800192	03/21/14
1734	2168	**** Underground ****			
1735	2169	Ticket : B40800192 Rcvd: 03/21/14 09:02 Oper: GMH Rev: 00B			
1736	2170	Org Tkt : B40800192 Rcvd: 03/21/14 09:06 Oper: GMH			
1737	2172	Digstart: 03/21/14 Time: 09:02			
1738	2173	Tkt Life: 04/11/14 Time: 23:59			
1739	2175	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1740	2176	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1741	2177	E-mail : NONE			
1742	2178	FieldCnt: PAUL Number: 810-397-7247			
1743	2180	County : GENESEE Place : FLINT /C			
1744	2182	Grids : 4300A8341B 4300A8341C 4301D8341C			
1745	2183	Polygon : 43.015974/-83.692369 43.017280/-83.689190			
1746	2184	: 43.013534/-83.691366 43.014840/-83.688187			
1747	2185	Lat : Long:			
1748	2186	Work Typ: WMB Done For:			
1749	2187	Address :			
1750	2188	Street : BUCKHAM ALY			
1751	2189	1st x-st: Dir S of FIRST ST			
1752	2190	2nd x-st: Dir N of SECOND ST			
1753	2191	Subdivsn: Lots:			
1754	2192	Stk Info: W OF SAGINAW ST LOCATE BTH SDS OF BUCKHAM ALY BEG AT 1ST GOING S			
1755	2193	: FOR 150FT CREW ON SITE			
1756	2194	Boring : N On-going project: N Working In or Near R/R Easement: N			
1757	2195	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC MCLEO1			
1758	2196	Members : WINDFBR			
1759	2198	FLINTC 00014 MISDIGb 03/21/14 13:18:27 B40800545-00B EMER NEW GRID	FLINTC	B40800545	03/21/14
1760	2200	**** Underground ****			
1761	2201	Ticket : B40800545 Rcvd: 03/21/14 13:16 Oper: SJG Rev: 00B			
1762	2202	Org Tkt : B40800545 Rcvd: 03/21/14 13:18 Oper: SJG			
1763	2204	Digstart: 03/21/14 Time: 13:16			
1764	2205	Tkt Life: 04/11/14 Time: 23:59			
1765	2207	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
1766	2208	Phone : 810-577-8261 Ext: Fax :			
1767	2209	E-mail : NONE			
1768	2210	FieldCnt: Number:			
1769	2212	County : GENESEE Place : FLINT /C			
1770	2214	Grids : 4303B8342B 4303B8342C 4303B8342D 4303C8342B 4303C8342C			
1771	2215	: 4303C8342D			
1772	2216	Polygon : 43.058648/-83.710784 43.058733/-83.703862			
1773	2217	: 43.057289/-83.710767 43.057373/-83.703845			
1774	2218	Lat : Long:			
1775	2219	Work Typ: WMB Done For:			
1776	2220	Address : 411			

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1733	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : BUCKHAM ALY
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1759	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 411	Street : W BALTIMORE BLVD
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1759	1st x-st: Dir W of MARTKIN LUTHER KING	2nd x-st: Dir E of LONGFELLOW
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1777	2221	Street : W BALTIMORE BLVD			
1778	2222	1st x-st: Dir W of MARTKIN LUTHER KING			
1779	2223	2nd x-st: Dir E of LONGFELLOW			
1780	2224	Subdivsn: Lots:			
1781	2225	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD CREW ON SITE			
1782	2226	Boring : N On-going project: N Working In or Near R/R Easement: N			
1783	2227	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1784	2229	FLINTC 00003 MISDIGb 03/24/14 08:08:59 B40830096-00B EMER NEW GRID	FLINTC	B40830096	03/24/14
1785	2231	**** Underground ****			
1786	2232	Ticket : B40830096 Rcvd: 03/24/14 08:05 Oper: MRP Rev: 00B			
1787	2233	Org Tkt : B40830096 Rcvd: 03/24/14 08:08 Oper: MRP			
1788	2235	Digstart: 03/24/14 Time: 08:05			
1789	2236	Tkt Life: 04/14/14 Time: 23:59			
1790	2238	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1791	2239	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1792	2240	E-mail : NONE			
1793	2241	FieldCnt: CELL Number: 810-397-7427			
1794	2243	County : GENESEE Place : FLINT /C			
1795	2245	Grids : 4302C8340B 4302C8340C			
1796	2246	Polygon : 43.041300/-83.676159 43.041337/-83.674289			
1797	2247	: 43.038850/-83.676110 43.038888/-83.674239			
1798	2248	Lat : Long:			
1799	2249	Work Typ: WMB Done For:			
1800	2250	Address :			
1801	2251	Street : LEWIS ST			
1802	2252	1st x-st: Dir of MARYLAND			
1803	2253	2nd x-st: Dir of DELAWARE			
1804	2254	Subdivsn: Lots:			
1805	2255	Stk Info: LOCATE BTH SDS OF RD BET XSTS CREW EN ROUTE			
1806	2256	Boring : N On-going project: N Working In or Near R/R Easement: N			
1807	2257	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
1808	2259	FLINTC 00004 MISDIGb 03/24/14 08:12:00 B40830099-00B EMER NEW GRID	FLINTC	B40830099	03/24/14
1809	2261	**** Underground ****			
1810	2262	Ticket : B40830099 Rcvd: 03/24/14 08:08 Oper: MRP Rev: 00B			
1811	2263	Org Tkt : B40830099 Rcvd: 03/24/14 08:11 Oper: MRP			
1812	2265	Digstart: 03/24/14 Time: 08:08			
1813	2266	Tkt Life: 04/14/14 Time: 23:59			
1814	2268	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1815	2269	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1816	2270	E-mail : NONE			
1817	2271	FieldCnt: CELL Number: 810-397-7247			
1818	2273	County : GENESEE Place : FLINT /C			
1819	2275	Grids : 4304D8341C 4304D8341D			
1820	2276	Polygon : 43.070216/-83.691592 43.070275/-83.686729			
1821	2277	: 43.068856/-83.691576 43.068915/-83.686713			
1822	2278	Lat : Long:			
1823	2279	Work Typ: WMB Done For:			
1824	2280	Address :			

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1784	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : LEWIS ST
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1808	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : E AUSTIN AVE
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1808	1st x-st: Dir E of N SAGINAW ST	2nd x-st: Dir S of CARPENTER RD
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1825	2281	Street : E AUSTIN AVE			
1826	2282	1st x-st: Dir E of N SAGINAW ST			
1827	2283	2nd x-st: Dir S of CARPENTER RD			
1828	2284	Subdivsn: Lots:			
1829	2285	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF ST ADDR 902, 906, 910 CREW EN ROUTE			
1830	2286	Boring : N On-going project: N Working In or Near R/R Easement: N			
1831	2287	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
1832	2289	FLINTC 00001 MISDIGa 03/24/14 08:54:20 A40830106-00A EMER NEW GRID	FLINTC	A40830106	03/24/14
1833	2291	**** Underground ****			
1834	2292	Ticket : A40830106 Rcvd: 03/24/14 08:52 Oper: BMF Rev: 00A			
1835	2293	Org Tkt : A40830106 Rcvd: 03/24/14 08:54 Oper: BMF			
1836	2295	Digstart: 03/24/14 Time: 08:52			
1837	2296	Tkt Life: 04/14/14 Time: 23:59			
1838	2298	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1839	2299	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1840	2300	E-mail : NONE			
1841	2301	FieldCnt: PAUL /CELL Number: 810-397-7247			
1842	2303	County : GENESEE Place : FLINT /C			
1843	2305	Grids : 4302C8340B 4302C8340C			
1844	2306	Polygon : 43.040259/-83.676240 43.040364/-83.674390			
1845	2307	: 43.038123/-83.676119 43.038228/-83.674269			
1846	2308	Lat : Long:			
1847	2309	Work Typ: WMB Done For:			
1848	2310	Address : 2603			
1849	2311	Street : LEWIS ST			
1850	2312	1st x-st: Dir E of I- 475			
1851	2313	2nd x-st: Dir S of LEITH ST			
1852	2314	Subdivsn: Lots:			
1853	2315	Stk Info: LOCATE FRT OF LOT & BTH SDS OF RD CREW ON SITE			
1854	2316	Boring : N On-going project: N Working In or Near R/R Easement: N			
1855	2317	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
1856	2319	FLINTC 00002 MISDIGa 03/24/14 08:56:29 A40830112-00A EMER NEW GRID	FLINTC	A40830112	03/24/14
1857	2321	**** Underground ****			
1858	2322	Ticket : A40830112 Rcvd: 03/24/14 08:54 Oper: BMF Rev: 00A			
1859	2323	Org Tkt : A40830112 Rcvd: 03/24/14 08:56 Oper: BMF			
1860	2325	Digstart: 03/24/14 Time: 08:54			
1861	2326	Tkt Life: 04/14/14 Time: 23:59			
1862	2328	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1863	2329	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1864	2330	E-mail : NONE			
1865	2331	FieldCnt: PAUL /CELL Number: 810-397-7247			
1866	2333	County : GENESEE Place : FLINT /C			
1867	2335	Grids : 4300A8341B 4300A8341C			
1868	2336	Polygon : 43.015671/-83.692463 43.016740/-83.691156			
1869	2337	: 43.013520/-83.690705 43.014589/-83.689398			
1870	2338	Lat : Long:			
1871	2339	Work Typ: WMB Done For:			
1872	2340	Address :			

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1832	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2603	Street : LEWIS ST
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1856	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : BUCKHAM ALY
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1873	2341	Street : BUCKHAM ALY			
1874	2342	1st x-st: Dir of FIRST ST			
1875	2343	2nd x-st: Dir of SECOND ST			
1876	2344	Subdivsn: Lots:			
1877	2345	Stk Info: BET X-STS LOCATE ENTIRE ALLEY GOING APX 100 FT N OF 2ND ST CREW			
1878	2346	: ON SITE			
1879	2347	Boring : N On-going project: N Working In or Near R/R Easement: N			
1880	2348	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC MCLEO1			
1881	2350	FLINTC 00009 MISDIGb 03/24/14 11:37:22 B40830525-00B EMER NEW GRID	FLINTC	B40830525	03/24/14
1882	2352	**** Underground ****			
1883	2353	Ticket : B40830525 Rcvd: 03/24/14 11:34 Oper: LCG Rev: 00B			
1884	2354	Org Tkt : B40830525 Rcvd: 03/24/14 11:37 Oper: LCG			
1885	2356	Digstart: 03/24/14 Time: 13:30			
1886	2357	Tkt Life: 04/14/14 Time: 23:59			
1887	2359	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
1888	2360	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1889	2361	E-mail : NONE			
1890	2362	FieldCnt: Number: 810-577-8263			
1891	2364	County : GENESEE Place : FLINT /C			
1892	2366	Grids : 4303B8341C 4303B8341D			
1893	2367	Polygon : 43.061106/-83.691513 43.061149/-83.686622			
1894	2368	: 43.059747/-83.691501 43.059790/-83.686610			
1895	2369	Lat : Long:			
1896	2370	Work Typ: WMB Done For:			
1897	2371	Address :			
1898	2372	Street : LOMITA AVE			
1899	2373	1st x-st: Dir S of E PIERSON RD			
1900	2374	2nd x-st: Dir E of N SAGINAW ST			
1901	2375	Subdivsn: Lots:			
1902	2376	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD AT ADDR 906 & ADDR 914			
1903	2377	: CREW ENROUTE			
1904	2378	Boring : N On-going project: N Working In or Near R/R Easement: N			
1905	2379	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1906	2381	FLINTC 00021 MISDIGb 03/24/14 18:58:33 B40831203-00B EMER NEW GRID	FLINTC	B40831203	03/25/14
1907	2383	**** Underground ****			
1908	2384	Ticket : B40831203 Rcvd: 03/24/14 18:56 Oper: SMG Rev: 00B			
1909	2385	Org Tkt : B40831203 Rcvd: 03/24/14 18:58 Oper: SMG			
1910	2387	Digstart: 03/25/14 Time: 09:00			
1911	2388	Tkt Life: 04/15/14 Time: 23:59			
1912	2390	Firm : FLINT CITY Caller: HOWARD SWICKARD			
1913	2391	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1914	2392	E-mail : AROBERTS@CITYOFFLINT.COM			
1915	2393	FieldCnt: HOWARD - CELL Number: 810-577-8263			
1916	2395	County : GENESEE Place : FLINT /C			
1917	2397	Grids : 4303A8342A 4303B8342A			
1918	2398	Polygon : 43.063234/-83.714967 43.063336/-83.713115			
1919	2399	: 43.061105/-83.714850 43.061206/-83.712998			
1920	2400	Lat : Long:			

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1881	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address :	Street : LOMITA AVE
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1906	FLINT CITY	HOWARD SWICKARD	REPR WTR SERV	Address : 5313	Street : DUPONT ST
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1906	1st x-st: Dir N of PIERSON RD	2nd x-st: Dir E of FLEMING RD
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1921	2401	Work Typ: REPR WTR SERV/NO WTR Done For:			
1922	2402	Address : 5313			
1923	2403	Street : DUPONT ST			
1924	2404	1st x-st: Dir N of PIERSON RD			
1925	2405	2nd x-st: Dir E of FLEMING RD			
1926	2406	Subdivsn: Lots:			
1927	2407	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
1928	2408	Boring : N On-going project: N Working In or Near R/R Easement: N			
1929	2409	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
1930	2411	FLINTC 00002 MISDIGb 03/25/14 07:47:11 B40840070-00B EMER NEW GRID	FLINTC	B40840070	03/25/14
1931	2413	**** Underground ****			
1932	2414	Ticket : B40840070 Rcvd: 03/25/14 07:40 Oper: GMH Rev: 00B			
1933	2415	Org Tkt : B40840070 Rcvd: 03/25/14 07:46 Oper: GMH			
1934	2417	Digstart: 03/25/14 Time: 08:00			
1935	2418	Tkt Life: 04/15/14 Time: 23:59			
1936	2420	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1937	2421	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1938	2422	E-mail : NONE			
1939	2423	FieldCnt: PAUL Number: 810-397-7247			
1940	2425	County : GENESEE Place : FLINT /C			
1941	2427	Grids : 4301A8340A 4302D8340A 4302D8340B			
1942	2428	Polygon : 43.034798/-83.682603 43.034587/-83.678833			
1943	2429	: 43.033426/-83.682680 43.033215/-83.678910			
1944	2430	Lat : Long:			
1945	2431	Work Typ: WMB Done For:			
1946	2432	Address :			
1947	2433	Street : E BOULEVARD DR			
1948	2434	1st x-st: Dir of E HAMILTON AVE			
1949	2435	2nd x-st: Dir W of I-475			
1950	2436	Subdivsn: Lots:			
1951	2437	Stk Info: LOCATE 50FT RADIUS OF SW COR OF E BOULEVARD & HAMILTON CREW EN ROUTE			
1952	2438	Boring : N On-going project: N Working In or Near R/R Easement: N			
1953	2439	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
1954	2441	FLINTC 00003 MISDIGb 03/25/14 07:48:53 B40840072-00B EMER NEW GRID	FLINTC	B40840072	03/25/14
1955	2443	**** Underground ****			
1956	2444	Ticket : B40840072 Rcvd: 03/25/14 07:46 Oper: GMH Rev: 00B			
1957	2445	Org Tkt : B40840072 Rcvd: 03/25/14 07:48 Oper: GMH			
1958	2447	Digstart: 03/25/14 Time: 08:00			
1959	2448	Tkt Life: 04/15/14 Time: 23:59			
1960	2450	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1961	2451	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1962	2452	E-mail : NONE			
1963	2453	FieldCnt: PAUL Number: 810-397-7247			
1964	2455	County : GENESEE Place : FLINT /C			
1965	2457	Grids : 4303A8340A 4303B8340A 4303A8341D 4303B8341D			
1966	2458	Polygon : 43.063330/-83.683284 43.063096/-83.681433			
1967	2459	: 43.060556/-83.683634 43.060323/-83.681783			
1968	2460	Lat : Long:			

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1930	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : E BOULEVARD DR
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1954	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : HORTON AVE
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1930	1st x-st: Dir of E HAMILTON AVE	2nd x-st: Dir W of I-475
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1954	1st x-st: Dir N of PIERSON RD	2nd x-st: Dir S of FAIRFAX ST
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1969	2461	Work Typ: WMB Done For:			
1970	2462	Address :			
1971	2463	Street : HORTON AVE			
1972	2464	1st x-st: Dir N of PIERSON RD			
1973	2465	2nd x-st: Dir S of FAIRFAX ST			
1974	2466	Subdivsn: Lots:			
1975	2467	Stk Info: LOCATE BTH SDS OF HORTON BEG AT PIERSON GOING N FOR 100FT CREW EN			
1976	2468	: ROUTE			
1977	2469	Boring : N On-going project: N Working In or Near R/R Easement: N			
1978	2470	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
1979	2472	FLINTC 00004 MISDIGb 03/25/14 07:50:57 B40840075-00B EMER NEW GRID	FLINTC	B40840075	03/25/14
1980	2474	**** Underground ****			
1981	2475	Ticket : B40840075 Rcvd: 03/25/14 07:48 Oper: GMH Rev: 00B			
1982	2476	Org Tkt : B40840075 Rcvd: 03/25/14 07:50 Oper: GMH			
1983	2478	Digstart: 03/25/14 Time: 08:00			
1984	2479	Tkt Life: 04/15/14 Time: 23:59			
1985	2481	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
1986	2482	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
1987	2483	E-mail : NONE			
1988	2484	FieldCnt: PAUL Number: 810-397-7247			
1989	2486	County : GENESEE Place : FLINT /C			
1990	2488	Grids : 4301A8343B 4301A8343C 4301A8343D			
1991	2489	Polygon : 43.031682/-83.725220 43.033041/-83.724795			
1992	2490	: 43.030261/-83.720676 43.031620/-83.720251			
1993	2491	Lat : Long:			
1994	2492	Work Typ: WMB Done For:			
1995	2493	Address :			
1996	2494	Street : BEGOLE ST			
1997	2495	1st x-st: Dir S of WELCH BLVD			
1998	2496	2nd x-st: Dir E of BALLENGER HWY			
1999	2497	Subdivsn: Lots:			
2000	2498	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD AT ADDR 2714 & 2718 CREW EN			
2001	2499	: ROUTE			
2002	2500	Boring : N On-going project: N Working In or Near R/R Easement: N			
2003	2501	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2004	2503	FLINTC 00006 MISDIGb 03/25/14 08:16:54 B40840115-00B EMER NEW GRID	FLINTC	B40840115	03/25/14
2005	2505	**** Underground ****			
2006	2506	Ticket : B40840115 Rcvd: 03/25/14 08:14 Oper: SLD Rev: 00B			
2007	2507	Org Tkt : B40840115 Rcvd: 03/25/14 08:16 Oper: SLD			
2008	2509	Digstart: 03/25/14 Time: 13:00			
2009	2510	Tkt Life: 04/15/14 Time: 23:59			
2010	2512	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2011	2513	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2012	2514	E-mail : NONE			
2013	2515	FieldCnt: HOWARD SWICKARD CELL Number: 810-577-8263			
2014	2517	County : GENESEE Place : FLINT /C			
2015	2519	Grids : 4258A8341A 4259D8341A 4259D8342D			
2016	2520	Polygon : 42.984589/-83.700651 42.985760/-83.699333			

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1979	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : BEGOLE ST
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2004	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 1509	Street : CRESTBROOK LN
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1979	1st x-st: Dir S of WELCH BLVD	2nd x-st: Dir E of BALLENGER HWY
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2004	1st x-st: Dir W of FENTON RD	2nd x-st: Dir N of HEMPHILL RD
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2017	2521	: 42.982218/-83.698545 42.983388/-83.697227			
2018	2522	Lat : Long:			
2019	2523	Work Typ: WMB Done For:			
2020	2524	Address : 1509			
2021	2525	Street : CRESTBROOK LN			
2022	2526	1st x-st: Dir W of FENTON RD			
2023	2527	2nd x-st: Dir N of HEMPHILL RD			
2024	2528	Subdivsn: Lots:			
2025	2529	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD			
2026	2530	Boring : N On-going project: N Working In or Near R/R Easement: N			
2027	2531	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
2028	2533	FLINTC 00026 MISDIGb 03/25/14 16:38:46 B40841030-00B EMER NEW GRID	FLINTC	B40841030	03/25/14
2029	2535	**** Underground ****			
2030	2536	Ticket : B40841030 Rcvd: 03/25/14 16:36 Oper: JAL Rev: 00B			
2031	2537	Org Tkt : B40841030 Rcvd: 03/25/14 16:38 Oper: JAL			
2032	2539	Digstart: 03/25/14 Time: 16:36			
2033	2540	Tkt Life: 04/15/14 Time: 23:59			
2034	2542	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2035	2543	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2036	2544	E-mail : NONE			
2037	2545	FieldCnt: PAUL - CELL Number: 810-397-7247			
2038	2547	County : GENESEE Place : FLINT /C			
2039	2549	Grids : 4302D8343B 4302D8343C 4302D8343D			
2040	2550	Polygon : 43.035471/-83.727174 43.036206/-83.719625			
2041	2551	: 43.033801/-83.727011 43.034536/-83.719463			
2042	2552	Lat : Long:			
2043	2553	Work Typ: WMB Done For:			
2044	2554	Address : 1407			
2045	2555	Street : GREENWAY AVE			
2046	2556	1st x-st: Dir W of FOREST HILL AVE			
2047	2557	2nd x-st: Dir E of BALLENGER HWY			
2048	2558	Subdivsn: Lots:			
2049	2559	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ON SITE			
2050	2560	Boring : N On-going project: N Working In or Near R/R Easement: N			
2051	2561	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2052	2563	FLINTC 00005 MISDIGb 03/26/14 08:46:32 B40850220-00B EMER NEW GRID	FLINTC	B40850220	03/26/14
2053	2565	**** Underground ****			
2054	2566	Ticket : B40850220 Rcvd: 03/26/14 08:44 Oper: AMA Rev: 00B			
2055	2567	Org Tkt : B40850220 Rcvd: 03/26/14 08:46 Oper: AMA			
2056	2569	Digstart: 03/26/14 Time: 08:44			
2057	2570	Tkt Life: 04/16/14 Time: 23:59			
2058	2572	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2059	2573	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2060	2574	E-mail : NONE			
2061	2575	FieldCnt: PAUL SIMPSON-CELL Number: 810-397-7247			
2062	2577	County : GENESEE Place : FLINT /C			
2063	2579	Grids : 4302C8340B 4302C8340C			
2064	2580	Polygon : 43.041278/-83.676279 43.041355/-83.674421			

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2028	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1407	Street : GREENWAY AVE
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2052	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	Street : LEWIS ST
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2028	1st x-st: Dir W of FOREST HILL AVE	2nd x-st: Dir E of BALLENGER HWY
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2052	1st x-st: Dir of MARYLAND AVE	2nd x-st: Dir of DELAWARE AVE
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2065	2581	: 43.038901/-83.676180 43.038978/-83.674322			
2066	2582	Lat : Long:			
2067	2583	Work Typ: REPR WMB Done For:			
2068	2584	Address :			
2069	2585	Street : LEWIS ST			
2070	2586	1st x-st: Dir of MARYLAND AVE			
2071	2587	2nd x-st: Dir of DELAWARE AVE			
2072	2588	Subdivsn: Lots:			
2073	2589	Stk Info: LOCATE BTH SDS OF LEWIS BET X STS CREW ENROUTE			
2074	2590	Boring : N On-going project: N Working In or Near R/R Easement: N			
2075	2591	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
2076	2593	FLINTC 00006 MISDIGb 03/26/14 08:49:44 B40850224-00B EMER NEW GRID	FLINTC	B40850224	03/26/14
2077	2595	**** Underground ****			
2078	2596	Ticket : B40850224 Rcvd: 03/26/14 08:47 Oper: LCG Rev: 00B			
2079	2597	Org Tkt : B40850224 Rcvd: 03/26/14 08:49 Oper: LCG			
2080	2599	Digstart: 03/26/14 Time: 08:47			
2081	2600	Tkt Life: 04/16/14 Time: 23:59			
2082	2602	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2083	2603	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2084	2604	E-mail : NONE			
2085	2605	FieldCnt: Number: 810-397-7247			
2086	2607	County : GENESEE Place : FLINT /C			
2087	2609	Grids : 4303B8340A 4303B8341D			
2088	2610	Polygon : 43.061147/-83.685386 43.061217/-83.681597			
2089	2611	: 43.059774/-83.685360 43.059845/-83.681572			
2090	2612	Lat : Long:			
2091	2613	Work Typ: WMB Done For:			
2092	2614	Address :			
2093	2615	Street : LOMITA AVE			
2094	2616	1st x-st: Dir of SELBY ST			
2095	2617	2nd x-st: Dir of HORTON			
2096	2618	Subdivsn: Lots:			
2097	2619	Stk Info: BET X-STS LOCATE BTH SDS OF RD BEG AT ADDR 1110 GOING E 50 FT			
2098	2620	: CREW ENROUTE			
2099	2621	Boring : N On-going project: N Working In or Near R/R Easement: N			
2100	2622	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
2101	2624	FLINTC 00018 MISDIGb 03/26/14 21:07:03 B40851169-00B EMER NEW GRID	FLINTC	B40851169	03/27/14
2102	2626	**** Underground ****			
2103	2627	Ticket : B40851169 Rcvd: 03/26/14 21:04 Oper: LCP Rev: 00B			
2104	2628	Org Tkt : B40851169 Rcvd: 03/26/14 21:06 Oper: LCP			
2105	2630	Digstart: 03/27/14 Time: 08:30			
2106	2631	Tkt Life: 04/17/14 Time: 23:59			
2107	2633	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2108	2634	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2109	2635	E-mail : NONE			
2110	2636	FieldCnt: PAUL CELL Number: 810-397-7247			
2111	2638	County : GENESEE Place : FLINT /C			
2112	2640	Grids : 4301A8342A 4302D8342A 4302D8342B			

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2076	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : LOMITA AVE
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2101	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : DUPONT ST
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2076	1st x-st: Dir of SELBY ST	2nd x-st: Dir of HORTON
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2101	1st x-st: Dir N of WELCH BLVD	2nd x-st: Dir S of HAMILTON AVE
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2113	2641	Polygon : 43.035216/-83.714096 43.035321/-83.712246			
2114	2642	: 43.033134/-83.713978 43.033239/-83.712128			
2115	2643	Lat : Long:			
2116	2644	Work Typ: WMB Done For:			
2117	2645	Address :			
2118	2646	Street : DUPONT ST			
2119	2647	1st x-st: Dir N of WELCH BLVD			
2120	2648	2nd x-st: Dir S of HAMILTON AVE			
2121	2649	Subdivsn: Lots:			
2122	2650	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD IFO ADDRS 2004 & 2008			
2123	2651	Boring : N On-going project: N Working In or Near R/R Easement: N			
2124	2652	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2125	2654	FLINTC 00019 MISDIGb 03/26/14 21:10:31 B40851170-00B EMER NEW GRID	FLINTC	B40851170	03/27/14
2126	2656	**** Underground ****			
2127	2657	Ticket : B40851170 Rcvd: 03/26/14 21:06 Oper: LCP Rev: 00B			
2128	2658	Org Tkt : B40851170 Rcvd: 03/26/14 21:10 Oper: LCP			
2129	2660	Digstart: 03/27/14 Time: 09:00			
2130	2661	Tkt Life: 04/17/14 Time: 23:59			
2131	2663	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2132	2664	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2133	2665	E-mail : NONE			
2134	2666	FieldCnt: PAUL CELL Number: 810-397-7247			
2135	2668	County : GENESEE Place : FLINT /C			
2136	2670	Grids : 4302B8341C 4302B8341D 4302C8341C 4302C8341D			
2137	2671	Polygon : 43.043810/-83.688180 43.043770/-83.686309			
2138	2672	: 43.040349/-83.688254 43.040309/-83.686383			
2139	2673	Lat : Long:			
2140	2674	Work Typ: WMB Done For:			
2141	2675	Address :			
2142	2676	Street : INDUSTRIAL AVE			
2143	2677	1st x-st: Dir S of LEITH ST			
2144	2678	2nd x-st: Dir of			
2145	2679	Subdivsn: Lots:			
2146	2680	Stk Info: LOCATE 75 FT RADIUS AROUND BARRICADE ON SITE LOC ON BTH SDS OF RD LOC			
2147	2681	: APX 200 FT S OF LEITH MUST MEET AT GATE BEFORE STKG PLS CALL			
2148	2682	: PAUL			
2149	2683	Boring : N On-going project: N Working In or Near R/R Easement: N			
2150	2684	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2151	2686	FLINTC 00020 MISDIGb 03/26/14 21:12:58 B40851171-00B EMER NEW GRID	FLINTC	B40851171	03/27/14
2152	2688	**** Underground ****			
2153	2689	Ticket : B40851171 Rcvd: 03/26/14 21:10 Oper: LCP Rev: 00B			
2154	2690	Org Tkt : B40851171 Rcvd: 03/26/14 21:12 Oper: LCP			
2155	2692	Digstart: 03/27/14 Time: 08:30			
2156	2693	Tkt Life: 04/17/14 Time: 23:59			
2157	2695	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2158	2696	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2159	2697	E-mail : NONE			
2160	2698	FieldCnt: PAUL CELL Number: 810-397-7247			

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2125	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : INDUSTRIAL AVE
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2151	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2633	Street : HILLCREST AVE
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2125	1st x-st: Dir S of LEITH ST	2nd x-st: Dir of
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2151	1st x-st: Dir E of CIRCLE DR	2nd x-st: Dir N of ELDON BAKER DR
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2161	2700	County : GENESEE Place : FLINT /C			
2162	2702	Grids : 4259A8339A 4259A8339B			
2163	2703	Polygon : 42.999585/-83.663365 43.000043/-83.661342			
2164	2704	: 42.996988/-83.662777 42.997446/-83.660754			
2165	2705	Lat : Long:			
2166	2706	Work Typ: WMB Done For:			
2167	2707	Address : 2633			
2168	2708	Street : HILLCREST AVE			
2169	2709	1st x-st: Dir E of CIRCLE DR			
2170	2710	2nd x-st: Dir N of ELDON BAKER DR			
2171	2711	Subdivsn: Lots:			
2172	2712	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
2173	2713	Boring : N On-going project: N Working In or Near R/R Easement: N			
2174	2714	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2175	2716	FLINTC 00027 MISDIGb 03/27/14 17:54:25 B40861022-00B EMER NEW GRID	FLINTC	B40861022	03/28/14
2176	2718	**** Underground ****			
2177	2719	Ticket : B40861022 Rcvd: 03/27/14 17:50 Oper: DFB Rev: 00B			
2178	2720	Org Tkt : B40861022 Rcvd: 03/27/14 17:54 Oper: DFB			
2179	2722	Digstart: 03/28/14 Time: 09:00			
2180	2723	Tkt Life: 04/18/14 Time: 23:59			
2181	2725	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2182	2726	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2183	2727	E-mail : NONE			
2184	2728	FieldCnt: HOWARD /CELL Number: 810-577-8263			
2185	2730	County : GENESEE Place : FLINT /C			
2186	2732	Grids : 4301B8343B 4301B8343C 4301C8343B 4301C8343C			
2187	2733	Polygon : 43.027054/-83.725301 43.026169/-83.723784			
2188	2734	: 43.025079/-83.726453 43.024194/-83.724935			
2189	2735	Lat : Long:			
2190	2736	Work Typ: REPR WTR SERV NO FACIL Done For:			
2191	2737	Address : 1257			
2192	2738	Street : FOREST HILL AVE			
2193	2739	1st x-st: Dir N of FLUSHING RD			
2194	2740	2nd x-st: Dir E of BALLENGER HWY			
2195	2741	Subdivsn: Lots:			
2196	2742	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF ST			
2197	2743	Boring : N On-going project: N Working In or Near R/R Easement: N			
2198	2744	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2199	2746	FLINTC 00028 MISDIGb 03/27/14 17:59:55 B40861024-00B EMER NEW GRID	FLINTC	B40861024	03/28/14
2200	2748	**** Underground ****			
2201	2749	Ticket : B40861024 Rcvd: 03/27/14 17:57 Oper: MEP Rev: 00B			
2202	2750	Org Tkt : B40861024 Rcvd: 03/27/14 17:59 Oper: MEP			
2203	2752	Digstart: 03/28/14 Time: 11:00			
2204	2753	Tkt Life: 04/18/14 Time: 23:59			
2205	2755	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2206	2756	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2207	2757	E-mail : NONE			
2208	2758	FieldCnt: CELL Number: 810-577-8263			

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2175	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WTR SERV	Address : 1257	Street : FOREST HILL AVE
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2199	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WTR SERV	Address : 2613	Street : PROCTOR AVE
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2175	1st x-st: Dir N of FLUSHING RD	2nd x-st: Dir E of BALLENGER HWY
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2199	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir N of DAYTON ST
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2209	2760	County : GENESEE Place : FLINT /C			
2210	2762	Grids : 4302B8343D 4302C8343D			
2211	2763	Polygon : 43.042873/-83.719308 43.042919/-83.717439			
2212	2764	: 43.039521/-83.719224 43.039567/-83.717355			
2213	2765	Lat : Long:			
2214	2766	Work Typ: REPR WTR SERV/NO FACIL Done For:			
2215	2767	Address : 2613			
2216	2768	Street : PROCTOR AVE			
2217	2769	1st x-st: Dir W of DUPONT ST			
2218	2770	2nd x-st: Dir N of DAYTON ST			
2219	2771	Subdivsn: Lots:			
2220	2772	Stk Info: LOCATE FRT OF PROP TO C/L OF ST			
2221	2773	Boring : N On-going project: N Working In or Near R/R Easement: N			
2222	2774	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2223	2776	FLINTC 00029 MISDIGb 03/27/14 18:01:59 B40861025-00B EMER NEW GRID	FLINTC	B40861025	03/28/14
2224	2778	**** Underground ****			
2225	2779	Ticket : B40861025 Rcvd: 03/27/14 17:59 Oper: MEP Rev: 00B			
2226	2780	Org Tkt : B40861025 Rcvd: 03/27/14 18:01 Oper: MEP			
2227	2782	Digstart: 03/28/14 Time: 11:00			
2228	2783	Tkt Life: 04/18/14 Time: 23:59			
2229	2785	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2230	2786	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2231	2787	E-mail : NONE			
2232	2788	FieldCnt: CELL Number: 810-577-8263			
2233	2790	County : GENESEE Place : FLINT /C			
2234	2792	Grids : 4300C8338A 4300C8338B			
2235	2793	Polygon : 43.008210/-83.646243 43.008267/-83.644338			
2236	2794	: 43.005067/-83.646150 43.005124/-83.644245			
2237	2795	Lat : Long:			
2238	2796	Work Typ: REPR WTR SERV/NO FACIL Done For:			
2239	2797	Address : 1926			
2240	2798	Street : HOSLER ST			
2241	2799	1st x-st: Dir W of AVERILL AVE			
2242	2800	2nd x-st: Dir S of LAPEER RD			
2243	2801	Subdivsn: Lots:			
2244	2802	Stk Info: LOCATE FRT OF PROP TO C/L OF ST			
2245	2803	Boring : N On-going project: N Working In or Near R/R Easement: N			
2246	2804	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2247	2806	FLINTC 00001 MISDIGb 03/28/14 07:43:42 B40870068-00B EMER NEW GRID	FLINTC	B40870068	03/28/14
2248	2808	**** Underground ****			
2249	2809	Ticket : B40870068 Rcvd: 03/28/14 07:41 Oper: SLD Rev: 00B			
2250	2810	Org Tkt : B40870068 Rcvd: 03/28/14 07:43 Oper: SLD			
2251	2812	Digstart: 03/28/14 Time: 08:00			
2252	2813	Tkt Life: 04/18/14 Time: 23:59			
2253	2815	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2254	2816	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2255	2817	E-mail : NONE			
2256	2818	FieldCnt: PAUL SIMPSON CELL Number: 810-397-7247			

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2223	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WTR SERV	Address : 1926	Street : HOSLER ST
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2247	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 145	Street : E ALMA AVE
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2247	1st x-st: Dir S of CARPENTER RD	2nd x-st: Dir E of M L KING AVE
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2257	2820	County : GENESEE Place : FLINT /C			
2258	2822	Grids : 4304C8342C 4304C8342D			
2259	2823	Polygon : 43.073725/-83.707200 43.073759/-83.702899			
2260	2824	: 43.072353/-83.707189 43.072387/-83.702888			
2261	2825	Lat : Long:			
2262	2826	Work Typ: WMB Done For:			
2263	2827	Address : 145			
2264	2828	Street : E ALMA AVE			
2265	2829	1st x-st: Dir S of CARPENTER RD			
2266	2830	2nd x-st: Dir E of M L KING AVE			
2267	2831	Subdivsn: Lots:			
2268	2832	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
2269	2833	Boring : N On-going project: N Working In or Near R/R Easement: N			
2270	2834	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
2271	2836	FLINTC 00002 MISDIGb 03/28/14 07:45:44 B40870073-00B EMER NEW GRID	FLINTC	B40870073	03/28/14
2272	2838	**** Underground ****			
2273	2839	Ticket : B40870073 Rcvd: 03/28/14 07:43 Oper: SLD Rev: 00B			
2274	2840	Org Tkt : B40870073 Rcvd: 03/28/14 07:45 Oper: SLD			
2275	2842	Digstart: 03/28/14 Time: 08:00			
2276	2843	Tkt Life: 04/18/14 Time: 23:59			
2277	2845	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2278	2846	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2279	2847	E-mail : NONE			
2280	2848	FieldCnt: PAUL SIMPSON CELL Number: 810-397-7247			
2281	2850	County : GENESEE Place : FLINT /C			
2282	2852	Grids : 4302A8342B 4302A8342C 4302B8342B 4302B8342C			
2283	2853	Polygon : 43.047036/-83.708895 43.047068/-83.706090			
2284	2854	: 43.045664/-83.708879 43.045696/-83.706074			
2285	2855	Lat : Long:			
2286	2856	Work Typ: WMB Done For:			
2287	2857	Address : 306			
2288	2858	Street : W PASADENA AVE			
2289	2859	1st x-st: Dir S of STEWART AVE			
2290	2860	2nd x-st: Dir W of M L KING AVE			
2291	2861	Subdivsn: Lots:			
2292	2862	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
2293	2863	Boring : N On-going project: N Working In or Near R/R Easement: N			
2294	2864	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2295	2866	FLINTC 00001 MISDIGb 03/29/14 06:35:20 B40880010-00B EMER NEW GRID	FLINTC	B40880010	03/29/14
2296	2868	**** Underground ****			
2297	2869	Ticket : B40880010 Rcvd: 03/29/14 06:32 Oper: MLD Rev: 00B			
2298	2870	Org Tkt : B40880010 Rcvd: 03/29/14 06:34 Oper: MLD			
2299	2872	Digstart: 03/29/14 Time: 06:32			
2300	2873	Tkt Life: 04/19/14 Time: 23:59			
2301	2875	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2302	2876	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2303	2877	E-mail : NONE			
2304	2878	FieldCnt: PAUL Number: 810-397-7247			

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2271	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 306	Street : W PASADENA AVE
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2295	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 2718	Street : NORBERT ST
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2295	1st x-st: Dir S of FLUSHING RD	2nd x-st: Dir E of BALLENGER HWY
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2305	2880	County : GENESEE Place : FLINT /C			
2306	2882	Grids : 4301C8343A 4301C8343B 4301D8343A 4301D8343B			
2307	2883	Polygon : 43.023808/-83.727360 43.022666/-83.725743			
2308	2884	: 43.019182/-83.730625 43.018040/-83.729007			
2309	2885	Lat : Long:			
2310	2886	Work Typ: REPR WMB Done For:			
2311	2887	Address : 2718			
2312	2888	Street : NORBERT ST			
2313	2889	1st x-st: Dir S of FLUSHING RD			
2314	2890	2nd x-st: Dir E of BALLENGER HWY			
2315	2891	Subdivsn: Lots:			
2316	2892	Stk Info: LOCATE IFO ADDR & BTH SDS OF RD CREW EN ROUTE			
2317	2893	Boring : N On-going project: N Working In or Near R/R Easement: N			
2318	2894	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG			
2319	2896	FLINTC 00002 MISDIGb 03/29/14 10:46:19 B40880071-00B EMER NEW GRID	FLINTC	B40880071	03/29/14
2320	2898	**** Underground ****			
2321	2899	Ticket : B40880071 Rcvd: 03/29/14 10:44 Oper: LCG Rev: 00B			
2322	2900	Org Tkt : B40880071 Rcvd: 03/29/14 10:46 Oper: LCG			
2323	2902	Digstart: 03/29/14 Time: 10:44			
2324	2903	Tkt Life: 04/19/14 Time: 23:59			
2325	2905	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2326	2906	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2327	2907	E-mail : NONE			
2328	2908	FieldCnt: Number: 810-397-7247			
2329	2910	County : GENESEE Place : FLINT /C			
2330	2912	Grids : 4301D8343A 4301D8343B			
2331	2913	Polygon : 43.019587/-83.731196 43.019972/-83.728429			
2332	2914	: 43.018217/-83.731005 43.018602/-83.728238			
2333	2915	Lat : Long:			
2334	2916	Work Typ: WMB Done For:			
2335	2917	Address : 414			
2336	2918	Street : FREMONT ST			
2337	2919	1st x-st: Dir S of FLUSHING			
2338	2920	2nd x-st: Dir E of BALLENGER HWY			
2339	2921	Subdivsn: Lots:			
2340	2922	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ON SITE			
2341	2923	Boring : N On-going project: N Working In or Near R/R Easement: N			
2342	2924	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2343	2926	FLINTC 00001 MISDIGb 03/31/14 07:53:18 B40900116-00B EMER NEW GRID	FLINTC	B40900116	03/31/14
2344	2928	**** Underground ****			
2345	2929	Ticket : B40900116 Rcvd: 03/31/14 07:49 Oper: DLF Rev: 00B			
2346	2930	Org Tkt : B40900116 Rcvd: 03/31/14 07:52 Oper: DLF			
2347	2932	Digstart: 03/31/14 Time: 08:00			
2348	2933	Tkt Life: 04/21/14 Time: 23:59			
2349	2935	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2350	2936	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2351	2937	E-mail : NONE			
2352	2938	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-3247			

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2319	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 414	Street : FREMONT ST
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2343	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 111	Street : E MYRTLE AVE
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2343	1st x-st: Dir E of M L KING AVE	2nd x-st: Dir N of PASADENA AVE
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2353	2940	County : GENESEE Place : FLINT /C			
2354	2942	Grids : 4303D8342C 4303D8342D			
2355	2943	Polygon : 43.051747/-83.705640 43.051781/-83.701432			
2356	2944	: 43.050375/-83.705629 43.050409/-83.701421			
2357	2945	Lat : Long:			
2358	2946	Work Typ: WMB Done For:			
2359	2947	Address : 111			
2360	2948	Street : E MYRTLE AVE			
2361	2949	1st x-st: Dir E of M L KING AVE			
2362	2950	2nd x-st: Dir N of PASADENA AVE			
2363	2951	Subdivsn: Lots:			
2364	2952	Stk Info: LOCATE ENTIRE FRT OF PROP AND BTH SDS OF RD CREW EN ROUTE			
2365	2953	Boring : N On-going project: N Working In or Near R/R Easement: N			
2366	2954	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2367	2956	FLINTC 00002 MISDIGb 03/31/14 07:56:02 B40900121-00B EMER NEW GRID	FLINTC	B40900121	03/31/14
2368	2958	**** Underground ****			
2369	2959	Ticket : B40900121 Rcvd: 03/31/14 07:53 Oper: DLF Rev: 00B			
2370	2960	Org Tkt : B40900121 Rcvd: 03/31/14 07:55 Oper: DLF			
2371	2962	Digstart: 03/31/14 Time: 12:00			
2372	2963	Tkt Life: 04/21/14 Time: 23:59			
2373	2965	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2374	2966	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2375	2967	E-mail : NONE			
2376	2968	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-3247			
2377	2970	County : GENESEE Place : FLINT /C			
2378	2972	Grids : 4300A8341B 4300B8341B			
2379	2973	Polygon : 43.012971/-83.695904 43.014248/-83.693198			
2380	2974	: 43.011638/-83.695275 43.012914/-83.692569			
2381	2975	Lat : Long:			
2382	2976	Work Typ: WMB Done For:			
2383	2977	Address : 422			
2384	2978	Street : W SECOND ST			
2385	2979	1st x-st: Dir S of COURT ST			
2386	2980	2nd x-st: Dir W of S GRAND TRAVERSE ST			
2387	2981	Subdivsn: Lots:			
2388	2982	Stk Info: LOCATE ENTIRE FRT OF PROP AND BTH SDS OF RD			
2389	2983	Boring : N On-going project: N Working In or Near R/R Easement: N			
2390	2984	Members : ATT ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC			
2391	2985	Members : GRTLKC USSIG WINDFBR			
2392	2987	FLINTC 00002 MISDIGb 03/31/14 07:56:02 B40900121-00B EMER NEW GRID	FLINTC	B40900121	03/31/14
2393	2989	**** Underground ****			
2394	2990	Ticket : B40900121 Rcvd: 03/31/14 07:53 Oper: DLF Rev: 00B			
2395	2991	Org Tkt : B40900121 Rcvd: 03/31/14 07:55 Oper: DLF			
2396	2993	Digstart: 03/31/14 Time: 12:00			
2397	2994	Tkt Life: 04/21/14 Time: 23:59			
2398	2996	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2399	2997	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2400	2998	E-mail : NONE			

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2367	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 422	Street : W SECOND ST
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2392	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 422	Street : W SECOND ST
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2401	2999	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-3247			
2402	3001	County : GENESEE Place : FLINT /C			
2403	3003	Grids : 4300A8341B 4300B8341B			
2404	3004	Polygon : 43.012971/-83.695904 43.014248/-83.693198			
2405	3005	: 43.011638/-83.695275 43.012914/-83.692569			
2406	3006	Lat : Long:			
2407	3007	Work Typ: WMB Done For:			
2408	3008	Address : 422			
2409	3009	Street : W SECOND ST			
2410	3010	1st x-st: Dir S of COURT ST			
2411	3011	2nd x-st: Dir W of S GRAND TRAVERSE ST			
2412	3012	Subdivsn: Lots:			
2413	3013	Stk Info: LOCATE ENTIRE FRT OF PROP AND BTH SDS OF RD			
2414	3014	Boring : N On-going project: N Working In or Near R/R Easement: N			
2415	3015	Members : ATT ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC			
2416	3016	Members : GRTLKC USSIG WINDFBR			
2417	3018	FLINTC 00005 MISDIGb 03/31/14 08:30:35 B40900195-00B EMER NEW GRID	FLINTC	B40900195	04/01/14
2418	3020	**** Underground ****			
2419	3021	Ticket : B40900195 Rcvd: 03/31/14 08:29 Oper: AMA Rev: 00B			
2420	3022	Org Tkt : B40900195 Rcvd: 03/31/14 08:30 Oper: AMA			
2421	3024	Digstart: 04/01/14 Time: 09:00			
2422	3025	Tkt Life: 04/22/14 Time: 23:59			
2423	3027	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2424	3028	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2425	3029	E-mail : NONE			
2426	3030	FieldCnt: HOWARD SWICKARD-CELL Number: 810-577-8263			
2427	3032	County : GENESEE Place : FLINT /C			
2428	3034	Grids : 4300D8340A 4300D8341D			
2429	3035	Polygon : 43.002920/-83.686029 43.003897/-83.683126			
2430	3036	: 43.001565/-83.685572 43.002542/-83.682670			
2431	3037	Lat : Long:			
2432	3038	Work Typ: REPR BRKN WTR SERV Done For:			
2433	3039	Address : 416			
2434	3040	Street : MORLEY AVE			
2435	3041	1st x-st: Dir W of GRAND TRAVERS ST			
2436	3042	2nd x-st: Dir S of 12TH ST			
2437	3043	Subdivsn: Lots:			
2438	3044	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
2439	3045	Boring : N On-going project: N Working In or Near R/R Easement: N			
2440	3046	Members : ATT ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC LEVEL3 SPRNT4			
2441	3047	Members : WINDFBR			
2442	3049	FLINTC 00006 MISDIGb 03/31/14 08:31:50 B40900198-00B EMER NEW GRID	FLINTC	B40900198	04/01/14
2443	3051	**** Underground ****			
2444	3052	Ticket : B40900198 Rcvd: 03/31/14 08:30 Oper: AMA Rev: 00B			
2445	3053	Org Tkt : B40900198 Rcvd: 03/31/14 08:31 Oper: AMA			
2446	3055	Digstart: 04/01/14 Time: 09:00			
2447	3056	Tkt Life: 04/22/14 Time: 23:59			
2448	3058	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			

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2417	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR BRKN WTR SERV	Address : 416	Street : MORLEY AVE
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2442	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR BRKN WTR SERV	Address : 3016	Street : S GRAND TRAVERSE ST
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2449	3059	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2450	3060	E-mail : NONE			
2451	3061	FieldCnt: HOWARD SWICKARD-CELL Number: 810-577-8263			
2452	3063	County : GENESEE Place : FLINT /C			
2453	3065	Grids : 4259B8340A 4259C8340A 4259B8341D 4259C8341D			
2454	3066	Polygon : 42.995555/-83.684393 42.995588/-83.682477			
2455	3067	: 42.991613/-83.684325 42.991647/-83.682409			
2456	3068	Lat : Long:			
2457	3069	Work Typ: REPR BRKN WTR SERV Done For:			
2458	3070	Address : 3016			
2459	3071	Street : S GRAND TRAVERSE ST			
2460	3072	1st x-st: Dir W of SAGINAW ST			
2461	3073	2nd x-st: Dir N of ATHERTON RD			
2462	3074	Subdivsn: Lots:			
2463	3075	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
2464	3076	Boring : N On-going project: N Working In or Near R/R Easement: N			
2465	3077	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD SPRNT4			
2466	3079	FLINTC 00015 MISDIGb 03/31/14 12:43:37 B40900842-00B EMER NEW GRID	FLINTC	B40900842	03/31/14
2467	3081	**** Underground ****			
2468	3082	Ticket : B40900842 Rcvd: 03/31/14 12:41 Oper: JLK Rev: 00B			
2469	3083	Org Tkt : B40900842 Rcvd: 03/31/14 12:43 Oper: JLK			
2470	3085	Digstart: 03/31/14 Time: 12:41			
2471	3086	Tkt Life: 04/21/14 Time: 23:59			
2472	3088	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2473	3089	Phone : 810-577-8261 Ext: Fax :			
2474	3090	E-mail : NONE			
2475	3091	FieldCnt: Number:			
2476	3093	County : GENESEE Place : FLINT /C			
2477	3095	Grids : 4301A8342A 4301A8342B 4301B8342A 4301B8342B			
2478	3096	Polygon : 43.029876/-83.712848 43.029038/-83.710143			
2479	3097	: 43.028517/-83.713269 43.027679/-83.710564			
2480	3098	Lat : Long:			
2481	3099	Work Typ: WMB Done For:			
2482	3100	Address :			
2483	3101	Street : COPEMAN BLVD			
2484	3102	1st x-st: Dir of PONTIAC ST			
2485	3103	2nd x-st: Dir E of DUPONT ST			
2486	3104	Subdivsn: Lots:			
2487	3105	Stk Info: S OF WELCH BLVD LOCATE S SD OF COPEMAN AT T INTER OF COPEMAN &			
2488	3106	: PONTIAC LOC MARKED W/ BARRICADE CREW EN ROUTE			
2489	3107	Boring : N On-going project: N Working In or Near R/R Easement: N			
2490	3108	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2491	3110	FLINTC 00015 MISDIGb 03/31/14 12:43:37 B40900842-00B EMER NEW GRID	FLINTC	B40900842	03/31/14
2492	3112	**** Underground ****			
2493	3113	Ticket : B40900842 Rcvd: 03/31/14 12:41 Oper: JLK Rev: 00B			
2494	3114	Org Tkt : B40900842 Rcvd: 03/31/14 12:43 Oper: JLK			
2495	3116	Digstart: 03/31/14 Time: 12:41			
2496	3117	Tkt Life: 04/21/14 Time: 23:59			

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2466	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : COPEMAN BLVD
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2491	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : COPEMAN BLVD
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2497	3119	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2498	3120	Phone : 810-577-8261 Ext: Fax :			
2499	3121	E-mail : NONE			
2500	3122	FieldCnt: Number:			
2501	3124	County : GENESEE Place : FLINT /C			
2502	3126	Grids : 4301A8342A 4301A8342B 4301B8342A 4301B8342B			
2503	3127	Polygon : 43.029876/-83.712848 43.029038/-83.710143			
2504	3128	: 43.028517/-83.713269 43.027679/-83.710564			
2505	3129	Lat : Long:			
2506	3130	Work Typ: WMB Done For:			
2507	3131	Address :			
2508	3132	Street : COPEMAN BLVD			
2509	3133	1st x-st: Dir of PONTIAC ST			
2510	3134	2nd x-st: Dir E of DUPONT ST			
2511	3135	Subdivsn: Lots:			
2512	3136	Stk Info: S OF WELCH BLVD LOCATE S SD OF COPEMAN AT T INTER OF COPEMAN &			
2513	3137	: PONTIAC LOC MARKED W/ BARRICADE CREW EN ROUTE			
2514	3138	Boring : N On-going project: N Working In or Near R/R Easement: N			
2515	3139	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2516	3141	FLINTC 00018 MISDIGb 03/31/14 13:06:21 B40900884-00B EMER NEW GRID	FLINTC	B40900884	04/01/14
2517	3143	**** Underground ****			
2518	3144	Ticket : B40900884 Rcvd: 03/31/14 13:05 Oper: DJH Rev: 00B			
2519	3145	Org Tkt : B40900884 Rcvd: 03/31/14 13:06 Oper: DJH			
2520	3147	Digstart: 04/01/14 Time: 13:00			
2521	3148	Tkt Life: 04/22/14 Time: 23:59			
2522	3150	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2523	3151	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2524	3152	E-mail : NONE			
2525	3153	FieldCnt: Number:			
2526	3155	County : GENESEE Place : FLINT /C			
2527	3157	Grids : 4258A8341A 4258A8341B 4258B8341B			
2528	3158	Polygon : 42.981731/-83.695917 42.981920/-83.692186			
2529	3159	: 42.976350/-83.695644 42.976539/-83.691913			
2530	3160	Lat : Long:			
2531	3161	Work Typ: REPR WTR SERV/ LTD FACIL Done For:			
2532	3162	Address :			
2533	3163	Street : HULL AVE			
2534	3164	1st x-st: Dir W of FENTON RD			
2535	3165	2nd x-st: Dir S of HEMPHILL RD			
2536	3166	Subdivsn: Lots:			
2537	3167	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD AT ADDR G3320 SENT ALSO TO			
2538	3168	: FLINT /T			
2539	3169	Boring : N On-going project: N Working In or Near R/R Easement: N			
2540	3170	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
2541	3172	FLINTC 00019 MISDIGb 03/31/14 13:07:43 B40900890-00B EMER NEW GRID	FLINTC	B40900890	04/01/14
2542	3174	**** Underground ****			
2543	3175	Ticket : B40900890 Rcvd: 03/31/14 13:06 Oper: DJH Rev: 00B			
2544	3176	Org Tkt : B40900890 Rcvd: 03/31/14 13:07 Oper: DJH			

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2516	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WTR SERV	Address :	Street : HULL AVE
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2541	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WTR SERV	Address : 638	Street : W STEWART AVE
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2545	3178	Digstart: 04/01/14 Time: 13:00			
2546	3179	Tkt Life: 04/22/14 Time: 23:59			
2547	3181	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2548	3182	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2549	3183	E-mail : NONE			
2550	3184	FieldCnt: Number:			
2551	3186	County : GENESEE Place : FLINT /C			
2552	3188	Grids : 4303C8342A 4303C8342B 4303D8342A 4303D8342B			
2553	3189	Polygon : 43.054701/-83.714427 43.054772/-83.708830			
2554	3190	: 43.053342/-83.714410 43.053412/-83.708812			
2555	3191	Lat : Long:			
2556	3192	Work Typ: REPR WTR SERV/ LTD FACIL Done For:			
2557	3193	Address : 638			
2558	3194	Street : W STEWART AVE			
2559	3195	1st x-st: Dir N of PASADENA AVE			
2560	3196	2nd x-st: Dir E of DUPONT ST			
2561	3197	Subdivsn: Lots:			
2562	3198	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
2563	3199	Boring : N On-going project: N Working In or Near R/R Easement: N			
2564	3200	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC			
2565	3202	FLINTC 00028 MISDIGb 03/31/14 17:42:19 B40901372-00B EMER NEW GRID	FLINTC	B40901372	04/01/14
2566	3204	**** Underground ****			
2567	3205	Ticket : B40901372 Rcvd: 03/31/14 17:39 Oper: DLG Rev: 00B			
2568	3206	Org Tkt : B40901372 Rcvd: 03/31/14 17:42 Oper: DLG			
2569	3208	Digstart: 04/01/14 Time: 08:00			
2570	3209	Tkt Life: 04/22/14 Time: 23:59			
2571	3211	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2572	3212	Phone : 810-577-8261 Ext: Fax :			
2573	3213	E-mail : NONE			
2574	3214	FieldCnt: Number:			
2575	3216	County : GENESEE Place : FLINT /C			
2576	3218	Grids : 4302A8343C			
2577	3219	Polygon : 43.049109/-83.723140 43.048843/-83.721306			
2578	3220	: 43.047766/-83.723335 43.047500/-83.721501			
2579	3221	Lat : Long:			
2580	3222	Work Typ: WMB Done For:			
2581	3223	Address :			
2582	3224	Street : SONNY AVE			
2583	3225	1st x-st: Dir of BURGESS ST			
2584	3226	2nd x-st: Dir E of FLEMING RD			
2585	3227	Subdivsn: Lots:			
2586	3228	Stk Info: LOCATE ENTIRE INTER			
2587	3229	Boring : N On-going project: N Working In or Near R/R Easement: N			
2588	3230	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2589	3232	FLINTC 00029 MISDIGb 03/31/14 17:43:42 B40901376-00B EMER NEW GRID	FLINTC	B40901376	04/01/14
2590	3234	**** Underground ****			
2591	3235	Ticket : B40901376 Rcvd: 03/31/14 17:42 Oper: DLG Rev: 00B			
2592	3236	Org Tkt : B40901376 Rcvd: 03/31/14 17:43 Oper: DLG			

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2565	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : SONNY AVE
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2589	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : SONNY AVE
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2565	1st x-st: Dir of BURGESS ST	2nd x-st: Dir E of FLEMING RD
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2589	1st x-st: Dir of FOREST HILL AVE	2nd x-st: Dir E of FLEMING RD
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2593	3238	Digstart: 04/01/14 Time: 08:00			
2594	3239	Tkt Life: 04/22/14 Time: 23:59			
2595	3241	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2596	3242	Phone : 810-577-8261 Ext: Fax :			
2597	3243	E-mail : NONE			
2598	3244	FieldCnt: Number:			
2599	3246	County : GENESEE Place : FLINT /C			
2600	3248	Grids : 4302A8343C 4302A8343D			
2601	3249	Polygon : 43.048896/-83.722446 43.049162/-83.720612			
2602	3250	: 43.047553/-83.722251 43.047819/-83.720417			
2603	3251	Lat : Long:			
2604	3252	Work Typ: WMB Done For:			
2605	3253	Address :			
2606	3254	Street : SONNY AVE			
2607	3255	1st x-st: Dir of FOREST HILL AVE			
2608	3256	2nd x-st: Dir E of FLEMING RD			
2609	3257	Subdivsn: Lots:			
2610	3258	Stk Info: LOCATE ENTIRE INTER			
2611	3259	Boring : N On-going project: N Working In or Near R/R Easement: N			
2612	3260	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2613	3262	FLINTC 00001 MISDIGb 04/01/14 07:26:20 B40910032-00B EMER NEW GRID	FLINTC	B40910032	04/01/14
2614	3264	**** Underground ****			
2615	3265	Ticket : B40910032 Rcvd: 04/01/14 07:24 Oper: SLD Rev: 00B			
2616	3266	Org Tkt : B40910032 Rcvd: 04/01/14 07:26 Oper: SLD			
2617	3268	Digstart: 04/01/14 Time: 08:00			
2618	3269	Tkt Life: 04/22/14 Time: 23:59			
2619	3271	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2620	3272	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2621	3273	E-mail : NONE			
2622	3274	FieldCnt: PAUL SIMPSON CELL Number: 810-397-7247			
2623	3276	County : GENESEE Place : FLINT /C			
2624	3278	Grids : 4302A8343C 4303D8343C			
2625	3279	Polygon : 43.051095/-83.723379 43.051126/-83.721508			
2626	3280	: 43.047641/-83.723323 43.047672/-83.721451			
2627	3281	Lat : Long:			
2628	3282	Work Typ: WMB Done For:			
2629	3283	Address :			
2630	3284	Street : BURGESS ST			
2631	3285	1st x-st: Dir N of SONNY AVE			
2632	3286	2nd x-st: Dir E of FLEMING RD			
2633	3287	Subdivsn: Lots:			
2634	3288	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD AT ADDRS 3710 & 3714			
2635	3289	Boring : N On-going project: N Working In or Near R/R Easement: N			
2636	3290	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2637	3292	FLINTC 00006 MISDIGb 04/01/14 08:19:23 B40910107-00B NORM NEW GRID	FLINTC	B40910107	04/04/14
2638	3294	**** Underground ****			
2639	3295	Ticket : B40910107 Rcvd: 04/01/14 08:17 Oper: AMA Rev: 00B			
2640	3296	Org Tkt : B40910107 Rcvd: 04/01/14 08:19 Oper: AMA			

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2613	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : BURGESS ST
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2637	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	CUT & CAP WT	Address : 2016	Street : N FRANKLIN AVE
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2637	1st x-st: Dir N of DAVISON RD	2nd x-st: Dir W of DORT HWY
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2641	3298	Digstart: 04/04/14 Time: 08:17			
2642	3299	Tkt Life: 04/25/14 Time: 23:59			
2643	3301	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2644	3302	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2645	3303	E-mail : NONE			
2646	3304	FieldCnt: HOWARD SWICKARD-CELL Number: 810-577-8263			
2647	3306	County : GENESEE Place : FLINT /C			
2648	3308	Grids : 4302D8339A			
2649	3309	Polygon : 43.035751/-83.666180 43.035772/-83.664310			
2650	3310	: 43.033569/-83.666156 43.033590/-83.664286			
2651	3311	Lat : Long:			
2652	3312	Work Typ: CUT & CAP WTR SERV FOR DEM Done For:			
2653	3313	Address : 2016			
2654	3314	Street : N FRANKLIN AVE			
2655	3315	1st x-st: Dir N of DAVISON RD			
2656	3316	2nd x-st: Dir W of DORT HWY			
2657	3317	Subdivsn: Lots:			
2658	3318	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
2659	3319	Boring : N On-going project: N Working In or Near R/R Easement: N			
2660	3320	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2661	3322	FLINTC 00007 MISDIGb 04/01/14 08:20:22 B40910112-00B NORM NEW GRID	FLINTC	B40910112	04/04/14
2662	3324	**** Underground ****			
2663	3325	Ticket : B40910112 Rcvd: 04/01/14 08:19 Oper: AMA Rev: 00B			
2664	3326	Org Tkt : B40910112 Rcvd: 04/01/14 08:20 Oper: AMA			
2665	3328	Digstart: 04/04/14 Time: 08:19			
2666	3329	Tkt Life: 04/25/14 Time: 23:59			
2667	3331	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2668	3332	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2669	3333	E-mail : NONE			
2670	3334	FieldCnt: HOWARD SWICKARD-CELL Number: 810-577-8263			
2671	3336	County : GENESEE Place : FLINT /C			
2672	3338	Grids : 4301C8340A 4301D8340A 4301C8341D 4301D8341D			
2673	3339	Polygon : 43.020556/-83.685230 43.021825/-83.682216			
2674	3340	: 43.019211/-83.684664 43.020481/-83.681650			
2675	3341	Lat : Long:			
2676	3342	Work Typ: CUT & CAP WTR SERV FOR DEM Done For:			
2677	3343	Address : 716			
2678	3344	Street : E KEARSLEY ST			
2679	3345	1st x-st: Dir S of ROBERT T LONGWAY BLVD			
2680	3346	2nd x-st: Dir E of CHAVEZ DR			
2681	3347	Subdivsn: Lots:			
2682	3348	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
2683	3349	Boring : N On-going project: N Working In or Near R/R Easement: N			
2684	3350	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD WINDFBR			
2685	3352	FLINTC 00008 MISDIGb 04/01/14 08:20:42 B40910114-00B NORM NEW GRID	FLINTC	B40910114	04/04/14
2686	3354	**** Underground ****			
2687	3355	Ticket : B40910114 Rcvd: 04/01/14 08:20 Oper: AMA Rev: 00B			
2688	3356	Org Tkt : B40910114 Rcvd: 04/01/14 08:20 Oper: AMA			

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2661	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	CUT & CAP WT	Address : 716	Street : E KEARSLEY ST
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2685	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	CUT & CAP WT	Address : 808	Street : LINCOLN AVE
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2685	1st x-st: Dir E of FENTON RD	2nd x-st: Dir N of ATHERTON RD
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2689	3358	Digstart: 04/04/14 Time: 08:20			
2690	3359	Tkt Life: 04/25/14 Time: 23:59			
2691	3361	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2692	3362	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2693	3363	E-mail : NONE			
2694	3364	FieldCnt: HOWARD SWICKARD-CELL Number: 810-577-8263			
2695	3366	County : GENESEE Place : FLINT /C			
2696	3368	Grids : 4259C8341C 4259C8341D			
2697	3369	Polygon : 42.991555/-83.691594 42.991614/-83.687426			
2698	3370	: 42.990182/-83.691575 42.990242/-83.687407			
2699	3371	Lat : Long:			
2700	3372	Work Typ: CUT & CAP WTR SERV FOR DEM Done For:			
2701	3373	Address : 808			
2702	3374	Street : LINCOLN AVE			
2703	3375	1st x-st: Dir E of FENTON RD			
2704	3376	2nd x-st: Dir N of ATHERTON RD			
2705	3377	Subdivsn: Lots:			
2706	3378	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD			
2707	3379	Boring : N On-going project: N Working In or Near R/R Easement: N			
2708	3380	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2709	3382	FLINTC 00033 MISDIGb 04/01/14 12:47:37 B40910917-00B EMER NEW GRID	FLINTC	B40910917	04/01/14
2710	3384	**** Underground ****			
2711	3385	Ticket : B40910917 Rcvd: 04/01/14 12:45 Oper: SJG Rev: 00B			
2712	3386	Org Tkt : B40910917 Rcvd: 04/01/14 12:47 Oper: SJG			
2713	3388	Digstart: 04/01/14 Time: 12:45			
2714	3389	Tkt Life: 04/22/14 Time: 23:59			
2715	3391	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2716	3392	Phone : 810-577-8261 Ext: Fax :			
2717	3393	E-mail : NONE			
2718	3394	FieldCnt: Number:			
2719	3396	County : GENESEE Place : FLINT /C			
2720	3398	Grids : 4304D8342D			
2721	3399	Polygon : 43.070115/-83.702286 43.070198/-83.700416			
2722	3400	: 43.067235/-83.702158 43.067318/-83.700289			
2723	3401	Lat : Long:			
2724	3402	Work Typ: WMB Done For:			
2725	3403	Address :			
2726	3404	Street : RUSSELL			
2727	3405	1st x-st: Dir of HARVARD			
2728	3406	2nd x-st: Dir of			
2729	3407	Subdivsn: Lots:			
2730	3408	Stk Info: LOCATE 30FT RADIUS OF NE & NW COR OF INTER CREW ENROUTE			
2731	3409	Boring : N On-going project: N Working In or Near R/R Easement: N			
2732	3410	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2733	3412	FLINTC 00045 MISDIGb 04/01/14 18:03:23 B40911623-00B EMER NEW GRID	FLINTC	B40911623	04/02/14
2734	3414	**** Underground ****			
2735	3415	Ticket : B40911623 Rcvd: 04/01/14 17:59 Oper: NCT Rev: 00B			
2736	3416	Org Tkt : B40911623 Rcvd: 04/01/14 18:03 Oper: NCT			

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2709	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : RUSSELL
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2733	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	REPR WTR SERV	Address : 1609	Street : KEARSLEY PARK BLVD
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2733	1st x-st: Dir S of DAVISON RD	2nd x-st: Dir W of N FRANKLIN AVE
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2737	3418	Digstart: 04/02/14 Time: 11:00			
2738	3419	Tkt Life: 04/23/14 Time: 23:59			
2739	3421	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
2740	3422	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2741	3423	E-mail : NONE			
2742	3424	FieldCnt: HOWARD / CELL Number: 810-577-8263			
2743	3426	County : GENESEE Place : FLINT /C			
2744	3428	Grids : 4301A8340C 4301A8340D 4301B8340D			
2745	3429	Polygon : 43.030423/-83.670963 43.030157/-83.669131			
2746	3430	: 43.029080/-83.671158 43.028814/-83.669326			
2747	3431	Lat : Long:			
2748	3432	Work Typ: REPR WTR SERV / LTD FACIL Done For:			
2749	3433	Address : 1609			
2750	3434	Street : KEARSLEY PARK BLVD			
2751	3435	1st x-st: Dir S of DAVISON RD			
2752	3436	2nd x-st: Dir W of N FRANKLIN AVE			
2753	3437	Subdivsn: Lots:			
2754	3438	Stk Info: LOCATE FRT OF PROP TO C/L OF RD			
2755	3439	Boring : N On-going project: N Working In or Near R/R Easement: N			
2756	3440	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2757	3442	FLINTC 00046 MISDIGb 04/01/14 18:44:20 B40911636-00B EMER NEW GRID	FLINTC	B40911636	04/02/14
2758	3444	**** Underground ****			
2759	3445	Ticket : B40911636 Rcvd: 04/01/14 18:35 Oper: DFB Rev: 00B			
2760	3446	Org Tkt : B40911636 Rcvd: 04/01/14 18:39 Oper: DFB			
2761	3448	Digstart: 04/02/14 Time: 08:00			
2762	3449	Tkt Life: 04/23/14 Time: 23:59			
2763	3451	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2764	3452	Phone : 810-577-8261 Ext: Fax :			
2765	3453	E-mail : NONE			
2766	3454	FieldCnt: Number:			
2767	3456	County : GENESEE Place : FLINT /C			
2768	3458	Grids : 4300C8342A			
2769	3459	Polygon : 43.007543/-83.715628 43.007501/-83.713774			
2770	3460	: 43.005507/-83.715673 43.005465/-83.713820			
2771	3461	Lat : Long:			
2772	3462	Work Typ: WMB Done For:			
2773	3463	Address :			
2774	3464	Street : VOSBURG ST			
2775	3465	1st x-st: Dir S of W COURT ST			
2776	3466	2nd x-st: Dir N of CORUNNA RD			
2777	3467	Subdivsn: Lots:			
2778	3468	Stk Info: LOCATE FRT OF ADDRS & BTH SD OF RD AT ADDRS 912 & 914			
2779	3469	Boring : N On-going project: N Working In or Near R/R Easement: N			
2780	3470	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG			
2781	3472	FLINTC 00001 MISDIGb 04/02/14 07:30:18 B40920073-00B EMER NEW GRID	FLINTC	B40920073	04/02/14
2782	3474	**** Underground ****			
2783	3475	Ticket : B40920073 Rcvd: 04/02/14 07:28 Oper: GMH Rev: 00B			
2784	3476	Org Tkt : B40920073 Rcvd: 04/02/14 07:30 Oper: GMH			

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2757	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : VOSBURG ST
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2781	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1926	Street : CORUNNA RD
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2781	1st x-st: Dir W of COURT ST	2nd x-st: Dir of
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2785	3478	Digstart: 04/02/14 Time: 08:00			
2786	3479	Tkt Life: 04/23/14 Time: 23:59			
2787	3481	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2788	3482	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2789	3483	E-mail : NONE			
2790	3484	FieldCnt: PAUL Number: 810-397-7247			
2791	3486	County : GENESEE Place : FLINT /C			
2792	3488	Grids : 4300C8342A 4300C8342B			
2793	3489	Polygon : 43.007957/-83.710457 43.006612/-83.709682			
2794	3490	: 43.006209/-83.713491 43.004864/-83.712717			
2795	3491	Lat : Long:			
2796	3492	Work Typ: WMB Done For:			
2797	3493	Address : 1926			
2798	3494	Street : CORUNNA RD			
2799	3495	1st x-st: Dir W of COURT ST			
2800	3496	2nd x-st: Dir of			
2801	3497	Subdivsn: Lots:			
2802	3498	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
2803	3499	Boring : N On-going project: N Working In or Near R/R Easement: N			
2804	3500	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG			
2805	3502	FLINTC 00002 MISDIGb 04/02/14 07:31:15 B40920076-00B EMER NEW GRID	FLINTC	B40920076	04/02/14
2806	3504	**** Underground ****			
2807	3505	Ticket : B40920076 Rcvd: 04/02/14 07:30 Oper: GMH Rev: 00B			
2808	3506	Org Tkt : B40920076 Rcvd: 04/02/14 07:31 Oper: GMH			
2809	3508	Digstart: 04/02/14 Time: 08:00			
2810	3509	Tkt Life: 04/23/14 Time: 23:59			
2811	3511	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
2812	3512	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
2813	3513	E-mail : NONE			
2814	3514	FieldCnt: PAUL Number: 810-397-7247			
2815	3516	County : GENESEE Place : FLINT /C			
2816	3518	Grids : 4302D8340B 4302D8340C			
2817	3519	Polygon : 43.034865/-83.675941 43.034817/-83.671612			
2818	3520	: 43.033493/-83.675956 43.033445/-83.671627			
2819	3521	Lat : Long:			
2820	3522	Work Typ: WMB Done For:			
2821	3523	Address : 1452			
2822	3524	Street : BROADWAY BLVD			
2823	3525	1st x-st: Dir N of DAVISON RD			
2824	3526	2nd x-st: Dir W of OLIVE AVE			
2825	3527	Subdivsn: Lots:			
2826	3528	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
2827	3529	Boring : N On-going project: N Working In or Near R/R Easement: N			
2828	3530	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
2829	3532	FLINTC 00017 MISDIGb 04/02/14 10:50:44 B40920744-00B EMER NEW GRID	FLINTC	B40920744	04/02/14
2830	3534	**** Underground ****			
2831	3535	Ticket : B40920744 Rcvd: 04/02/14 10:48 Oper: SJG Rev: 00B			
2832	3536	Org Tkt : B40920744 Rcvd: 04/02/14 10:50 Oper: SJG			

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2805	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1452	Street : BROADWAY BLVD
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2829	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : HERRICK ST
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2805	1st x-st: Dir N of DAVISON RD	2nd x-st: Dir W of OLIVE AVE
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2829	1st x-st: Dir of STOCKER AVE	2nd x-st: Dir of KNAPP AVE
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2833	3538	Digstart: 04/02/14 Time: 10:48			
2834	3539	Tkt Life: 04/23/14 Time: 23:59			
2835	3541	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2836	3542	Phone : 810-577-8261 Ext: Fax :			
2837	3543	E-mail : NONE			
2838	3544	FieldCnt: Number:			
2839	3546	County : GENESEE Place : FLINT /C			
2840	3548	Grids : 4259A8343A 4259A8343B			
2841	3549	Polygon : 42.998992/-83.730090 42.999131/-83.727289			
2842	3550	: 42.997620/-83.730022 42.997759/-83.727221			
2843	3551	Lat : Long:			
2844	3552	Work Typ: WMB Done For:			
2845	3553	Address :			
2846	3554	Street : HERRICK ST			
2847	3555	1st x-st: Dir of STOCKER AVE			
2848	3556	2nd x-st: Dir of KNAPP AVE			
2849	3557	Subdivsn: Lots:			
2850	3558	Stk Info: LOCATE BTH SDS OF RD BET X-STS CREW ENROUTE			
2851	3559	Boring : N On-going project: N Working In or Near R/R Easement: N			
2852	3560	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2853	3562	FLINTC 00055 MISDIGa 04/02/14 16:19:25 A40921379-00A EMER NEW GRID	FLINTC	A40921379	04/03/14
2854	3564	**** Underground ****			
2855	3565	Ticket : A40921379 Rcvd: 04/02/14 16:16 Oper: BMF Rev: 00A			
2856	3566	Org Tkt : A40921379 Rcvd: 04/02/14 16:19 Oper: BMF			
2857	3568	Digstart: 04/03/14 Time: 08:00			
2858	3569	Tkt Life: 04/24/14 Time: 23:59			
2859	3571	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2860	3572	Phone : 810-577-8261 Ext: Fax :			
2861	3573	E-mail : NONE			
2862	3574	FieldCnt: Number:			
2863	3576	County : GENESEE Place : FLINT /C			
2864	3578	Grids : 4301B8340C 4301B8340D			
2865	3579	Polygon : 43.028043/-83.670943 43.027816/-83.666633			
2866	3580	: 43.026522/-83.671023 43.026295/-83.666713			
2867	3581	Lat : Long:			
2868	3582	Work Typ: WMB Done For:			
2869	3583	Address :			
2870	3584	Street : NEBRASKA AVE			
2871	3585	1st x-st: Dir W of MINNESOTA AVE			
2872	3586	2nd x-st: Dir E of KEARSLEY PARK BLVD			
2873	3587	Subdivsn: Lots:			
2874	3588	Stk Info: LOCATE 30 FT RADIUS OF BARRICADES LOC IN RD WAY BET X-STS			
2875	3589	Boring : N On-going project: N Working In or Near R/R Easement: N			
2876	3590	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2877	3592	FLINTC 00006 MISDIGb 04/03/14 10:19:19 B40930488-00B EMER NEW GRID	FLINTC	B40930488	04/03/14
2878	3594	**** Underground ****			
2879	3595	Ticket : B40930488 Rcvd: 04/03/14 10:17 Oper: SJG Rev: 00B			
2880	3596	Org Tkt : B40930488 Rcvd: 04/03/14 10:18 Oper: SJG			

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2853	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : NEBRASKA AVE
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2877	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1616	Street : ROOT ST
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2853	1st x-st: Dir W of MINNESOTA AVE	2nd x-st: Dir E of KEARSLEY PARK BLVD
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2877	1st x-st: Dir S of PAGE ST	2nd x-st: Dir N of MARY ST
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2881	3598	Digstart: 04/03/14 Time: 10:17			
2882	3599	Tkt Life: 04/24/14 Time: 23:59			
2883	3601	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2884	3602	Phone : 810-577-8261 Ext: Fax :			
2885	3603	E-mail : NONE			
2886	3604	FieldCnt: Number:			
2887	3606	County : GENESEE Place : FLINT /C			
2888	3608	Grids : 4301A8341A 4301A8341B			
2889	3609	Polygon : 43.032410/-83.697069 43.032410/-83.695199			
2890	3610	: 43.030109/-83.697069 43.030109/-83.695199			
2891	3611	Lat : Long:			
2892	3612	Work Typ: WMB Done For:			
2893	3613	Address : 1616			
2894	3614	Street : ROOT ST			
2895	3615	1st x-st: Dir S of PAGE ST			
2896	3616	2nd x-st: Dir N of MARY ST			
2897	3617	Subdivsn: Lots:			
2898	3618	Stk Info: LOCATE FRT OF PROP & BTH SDS OF ST CREW ENROUTE			
2899	3619	Boring : N On-going project: N Working In or Near R/R Easement: N			
2900	3620	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
2901	3622	FLINTC 00010 MISDIGa 04/03/14 17:18:33 A40930506-00A EMER NEW GRID	FLINTC	A40930506	04/04/14
2902	3624	**** Underground ****			
2903	3625	Ticket : A40930506 Rcvd: 04/03/14 17:14 Oper: NCT Rev: 00A			
2904	3626	Org Tkt : A40930506 Rcvd: 04/03/14 17:18 Oper: NCT			
2905	3628	Digstart: 04/04/14 Time: 08:00			
2906	3629	Tkt Life: 04/25/14 Time: 23:59			
2907	3631	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2908	3632	Phone : 810-577-8261 Ext: Fax :			
2909	3633	E-mail : NONE			
2910	3634	FieldCnt: Number:			
2911	3636	County : GENESEE Place : FLINT /C			
2912	3638	Grids : 4300C8340B			
2913	3639	Polygon : 43.007030/-83.678303 43.008095/-83.676783			
2914	3640	: 43.004725/-83.676688 43.005791/-83.675168			
2915	3641	Lat : Long:			
2916	3642	Work Typ: WMB Done For:			
2917	3643	Address :			
2918	3644	Street : CLIFFORD ST			
2919	3645	1st x-st: Dir S of E 12TH ST			
2920	3646	2nd x-st: Dir N of E 14TH ST			
2921	3647	Subdivsn: Lots:			
2922	3648	Stk Info: LOCATE 50FT RADIUS OF BARACADE LOC ON W SD OF RD BET X-STS			
2923	3649	Boring : N On-going project: N Working In or Near R/R Easement: N			
2924	3650	Members : ATT ATTD CCFIBR CEEDIS CEGDIS COMTV2 CTMN FLINTC GENCRC SPRNT4			
2925	3652	FLINTC 00001 MISDIGb 04/04/14 07:23:56 B40940033-00B EMER NEW GRID	FLINTC	B40940033	04/04/14
2926	3654	**** Underground ****			
2927	3655	Ticket : B40940033 Rcvd: 04/04/14 07:21 Oper: GMH Rev: 00B			
2928	3656	Org Tkt : B40940033 Rcvd: 04/04/14 07:23 Oper: GMH			

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2901	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : CLIFFORD ST
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2925	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1818	Street : CARMANBROOK PKWY
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2901	1st x-st: Dir S of E 12TH ST	2nd x-st: Dir N of E 14TH ST
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2925	1st x-st: Dir W of BRIARWOOD DR	2nd x-st: Dir N of W ATHERTON RD
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2929	3658	Digstart: 04/04/14 Time: 08:00			
2930	3659	Tkt Life: 04/25/14 Time: 23:59			
2931	3661	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2932	3662	Phone : 810-577-8261 Ext: Fax :			
2933	3663	E-mail : NONE			
2934	3664	FieldCnt: Number:			
2935	3666	County : GENESEE Place : FLINT /C			
2936	3668	Grids : 4259B8342B 4259B8342C 4259C8342B 4259C8342C 4259C8342D			
2937	3670	Polygon : 42.991616/-83.709142 42.993234/-83.707797			
2938	3671	: 42.987433/-83.704106 42.989051/-83.702762			
2939	3672	Lat : Long:			
2940	3673	Work Typ: WMB Done For:			
2941	3674	Address : 1818			
2942	3675	Street : CARMANBROOK PKWY			
2943	3676	1st x-st: Dir W of BRIARWOOD DR			
2944	3677	2nd x-st: Dir N of W ATHERTON RD			
2945	3678	Subdivsn: Lots:			
2946	3679	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
2947	3680	Boring : N On-going project: N Working In or Near R/R Easement: N			
2948	3681	Members : ATT ATTD CCFIBR CEEDIS CEGDIS COMTV2 CTMN FLINTC GENCRC LEVEL3			
2949	3682	Members : SPRNT4			
2950	3684	FLINTC 00031 MISDIGb 04/04/14 11:34:41 B40940791-00B EMER NEW GRID	FLINTC	B40940791	04/05/14
2951	3686	**** Underground ****			
2952	3687	Ticket : B40940791 Rcvd: 04/04/14 11:32 Oper: GMH Rev: 00B			
2953	3688	Org Tkt : B40940791 Rcvd: 04/04/14 11:34 Oper: GMH			
2954	3690	Digstart: 04/05/14 Time: 08:00			
2955	3691	Tkt Life: 04/26/14 Time: 23:59			
2956	3693	Firm : BURTON CITY Caller: DAVE MARSHKE			
2957	3694	Phone : 810-743-1500 Ext: Fax : 810-742-8015			
2958	3695	E-mail : NONE			
2959	3696	FieldCnt: Number:			
2960	3698	County : GENESEE Place : BURTON /C			
2961	3700	Grids : 4258B8340A 4258B8340B			
2962	3701	Polygon : 42.978562/-83.682380 42.978664/-83.678253			
2963	3702	: 42.977190/-83.682346 42.977291/-83.678220			
2964	3703	Lat : Long:			
2965	3704	Work Typ: WMB Done For:			
2966	3705	Address : 1331			
2967	3706	Street : CARMAN ST			
2968	3707	1st x-st: Dir W of SAGINAW ST			
2969	3708	2nd x-st: Dir N of BRISTOL RD			
2970	3709	Subdivsn: Lots:			
2971	3710	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
2972	3711	Boring : N On-going project: N Working In or Near R/R Easement: N			
2973	3712	Members : ATTD BURTON CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
2974	3714	FLINTC 00036 MISDIGb 04/04/14 14:00:29 B40941311-00B EMER NEW GRID	FLINTC	B40941311	04/05/14
2975	3716	**** Underground ****			
2976	3717	Ticket : B40941311 Rcvd: 04/04/14 13:57 Oper: GMH Rev: 00B			

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2950	BURTON CITY	DAVE MARSHKE	WMB	Address : 1331	Street : CARMAN ST
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2974	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : S SAGINAW ST
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2950	1st x-st: Dir W of SAGINAW ST	2nd x-st: Dir N of BRISTOL RD
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2974	1st x-st: Dir S of W UNION ST	2nd x-st: Dir N of KEARSLEY ST
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2977	3718	Org Tkt : B40941311 Rcvd: 04/04/14 14:00 Oper: GMH			
2978	3720	Digstart: 04/05/14 Time: 06:00			
2979	3721	Tkt Life: 04/26/14 Time: 23:59			
2980	3723	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
2981	3724	Phone : 810-577-8261 Ext: Fax :			
2982	3725	E-mail : NONE			
2983	3726	FieldCnt: Number:			
2984	3728	County : GENESEE Place : FLINT /C			
2985	3730	Grids : 4300A8341B 4300A8341C 4301D8341B 4301D8341C			
2986	3731	Polygon : 43.017694/-83.693188 43.018817/-83.691893			
2987	3732	: 43.015281/-83.691098 43.016404/-83.689802			
2988	3733	Lat : Long:			
2989	3734	Work Typ: WMB Done For:			
2990	3735	Address :			
2991	3736	Street : S SAGINAW ST			
2992	3737	1st x-st: Dir S of W UNION ST			
2993	3738	2nd x-st: Dir N of KEARSLEY ST			
2994	3739	Subdivsn: Lots:			
2995	3740	Stk Info: LOCATE BTH SDS OF S SAGINAW BET X-STS			
2996	3741	Boring : N On-going project: N Working In or Near R/R Easement: N			
2997	3742	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC			
2998	3744	FLINTC 00010 MISDIGb 04/07/14 07:33:23 B40970115-00B EMER NEW GRID	FLINTC	B40970115	04/07/14
2999	3746	**** Underground ****			
3000	3747	Ticket : B40970115 Rcvd: 04/07/14 07:31 Oper: LCG Rev: 00B			
3001	3748	Org Tkt : B40970115 Rcvd: 04/07/14 07:33 Oper: LCG			
3002	3750	Digstart: 04/07/14 Time: 08:00			
3003	3751	Tkt Life: 04/28/14 Time: 23:59			
3004	3753	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3005	3754	Phone : 810-577-8261 Ext: Fax :			
3006	3755	E-mail : NONE			
3007	3756	FieldCnt: Number:			
3008	3758	County : GENESEE Place : FLINT /C			
3009	3760	Grids : 4304C8341C 4304C8341D 4304D8341C 4304D8341D			
3010	3761	Polygon : 43.072985/-83.689826 43.073348/-83.685418			
3011	3762	: 43.070102/-83.689588 43.070465/-83.685181			
3012	3763	Lat : Long:			
3013	3764	Work Typ: WMB Done For:			
3014	3765	Address :			
3015	3766	Street : E FOSS			
3016	3767	1st x-st: Dir of INDUSTRIAL			
3017	3768	2nd x-st: Dir E of N SAGINAW ST			
3018	3769	Subdivsn: Lots:			
3019	3770	Stk Info: LOCATE 100 FT RADIUS OF NE COR OF E FOSS & INDUSTRIAL INTER CREW			
3020	3771	: ENROUTE			
3021	3772	Boring : N On-going project: N Working In or Near R/R Easement: N			
3022	3773	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
3023	3775	FLINTC 00004 MISDIGa 04/07/14 07:48:29 A40970038-00A EMER NEW GRID	FLINTC	A40970038	04/07/14
3024	3777	**** Underground ****			

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2998	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : E FOSS
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3023	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2521	Street : WOODROW AVE
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2998	1st x-st: Dir of INDUSTRIAL	2nd x-st: Dir E of N SAGINAW ST
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3023	1st x-st: Dir W of DORT HWY	2nd x-st: Dir N of DAVISON RD
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3025	3778	Ticket : A40970038 Rcvd: 04/07/14 07:46 Oper: LCP Rev: 00A			
3026	3779	Org Tkt : A40970038 Rcvd: 04/07/14 07:48 Oper: LCP			
3027	3781	Digstart: 04/07/14 Time: 08:00			
3028	3782	Tkt Life: 04/28/14 Time: 23:59			
3029	3784	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3030	3785	Phone : 810-577-8261 Ext: Fax :			
3031	3786	E-mail : NONE			
3032	3787	FieldCnt: Number:			
3033	3789	County : GENESEE Place : FLINT /C			
3034	3791	Grids : 4302C8339B 4302C8339C 4302D8339B 4302D8339C			
3035	3792	Polygon : 43.038303/-83.659547 43.037743/-83.656655			
3036	3793	: 43.036936/-83.659812 43.036376/-83.656920			
3037	3794	Lat : Long:			
3038	3795	Work Typ: WMB Done For:			
3039	3796	Address : 2521			
3040	3797	Street : WOODROW AVE			
3041	3798	1st x-st: Dir W of DORT HWY			
3042	3799	2nd x-st: Dir N of DAVISON RD			
3043	3800	Subdivsn: Lots:			
3044	3801	Stk Info: LOCATE FRT OF PROP FRM HSE TO RD & BTH SDS OF RD IFO ADDR CREW EN			
3045	3802	: ROUTE			
3046	3803	Boring : N On-going project: N Working In or Near R/R Easement: N			
3047	3804	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3048	3806	FLINTC 00013 MISDIGa 04/07/14 12:42:13 A40970443-00A EMER NEW GRID	FLINTC	A40970443	04/07/14
3049	3808	**** Underground ****			
3050	3809	Ticket : A40970443 Rcvd: 04/07/14 12:39 Oper: BMF Rev: 00A			
3051	3810	Org Tkt : A40970443 Rcvd: 04/07/14 12:41 Oper: BMF			
3052	3812	Digstart: 04/07/14 Time: 12:39			
3053	3813	Tkt Life: 04/28/14 Time: 23:59			
3054	3815	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD			
3055	3816	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3056	3817	E-mail : NONE			
3057	3818	FieldCnt: HOWARD /CELL Number: 810-577-8263			
3058	3820	County : GENESEE Place : FLINT /C			
3059	3822	Grids : 4301A8338C 4301A8338D			
3060	3823	Polygon : 43.033042/-83.641254 43.033125/-83.636955			
3061	3824	: 43.031670/-83.641228 43.031752/-83.636928			
3062	3825	Lat : Long:			
3063	3826	Work Typ: WMB Done For:			
3064	3827	Address : 3715			
3065	3828	Street : MARMION AVE			
3066	3829	1st x-st: Dir E of N AVERILL AVE			
3067	3830	2nd x-st: Dir S of DAVISON RD			
3068	3831	Subdivsn: Lots:			
3069	3832	Stk Info: LOCATE ENTIRE FRT OF LOT & BTH SDS OF RD CREW EN ROUTE			
3070	3833	Boring : N On-going project: N Working In or Near R/R Easement: N			
3071	3834	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC			
3072	3836	FLINTC 00005 MISDIGb 04/08/14 08:28:53 B40980197-00B EMER NEW GRID	FLINTC	B40980197	04/08/14

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3048	FLINT CITY WATER DEPARTMENT	HOWARD SWICKARD	WMB	Address : 3715	Street : MARMION AVE
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3072	FLINT CITY	HOWARD SWICKARD	WMB	Address : 5413	Street : EDWARDS AVE

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3048	1st x-st: Dir E of N AVERILL AVE	2nd x-st: Dir S of DAVISON RD
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3072	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir N of PIERSON RD

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3073	3838	**** Underground ****			
3074	3839	Ticket : B40980197 Rcvd: 04/08/14 08:28 Oper: DMS Rev: 00B			
3075	3840	Org Tkt : B40980197 Rcvd: 04/08/14 08:28 Oper: DMS			
3076	3842	Digstart: 04/08/14 Time: 08:28			
3077	3843	Tkt Life: 04/29/14 Time: 23:59			
3078	3845	Firm : FLINT CITY Caller: HOWARD SWICKARD			
3079	3846	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3080	3847	E-mail : AROBERTS@CITYOFFLINT.COM			
3081	3848	FieldCnt: HOWARD/CELL Number: 810-577-8263			
3082	3850	County : GENESEE Place : FLINT /C			
3083	3852	Grids : 4303A8342A 4303B8342A			
3084	3853	Polygon : 43.064764/-83.716057 43.064815/-83.714186			
3085	3854	: 43.061107/-83.715959 43.061158/-83.714087			
3086	3855	Lat : Long:			
3087	3856	Work Typ: WMB Done For:			
3088	3857	Address : 5413			
3089	3858	Street : EDWARDS AVE			
3090	3859	1st x-st: Dir W of DUPONT ST			
3091	3860	2nd x-st: Dir N of PIERSON RD			
3092	3861	Subdivsn: Lots:			
3093	3862	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
3094	3863	Boring : N On-going project: N Working In or Near R/R Easement: N			
3095	3864	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3096	3866	FLINTC 00012 MISDIGb 04/08/14 09:29:46 B40980395-00B EMER NEW GRID	FLINTC	B40980395	04/08/14
3097	3868	**** Underground ****			
3098	3869	Ticket : B40980395 Rcvd: 04/08/14 09:27 Oper: DJH Rev: 00B			
3099	3870	Org Tkt : B40980395 Rcvd: 04/08/14 09:29 Oper: DJH			
3100	3872	Digstart: 04/08/14 Time: 09:27			
3101	3873	Tkt Life: 04/29/14 Time: 23:59			
3102	3875	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3103	3876	Phone : 810-577-8261 Ext: Fax :			
3104	3877	E-mail : NONE			
3105	3878	FieldCnt: Number:			
3106	3880	County : GENESEE Place : FLINT /C			
3107	3882	Grids : 4302C8342B 4302C8342C			
3108	3883	Polygon : 43.040005/-83.708881 43.040005/-83.706448			
3109	3884	: 43.038646/-83.708881 43.038646/-83.706448			
3110	3885	Lat : Long:			
3111	3886	Work Typ: WMB Done For:			
3112	3887	Address :			
3113	3888	Street : W BAKER			
3114	3889	1st x-st: Dir of MASON ST			
3115	3890	2nd x-st: Dir N of DAYTON			
3116	3891	Subdivsn: Lots:			
3117	3892	Stk Info: E OF DUPONT LOCATE 50FT RADIUS OF NW COR OF INTER W/ MASON CREW			
3118	3893	: EN ROUTE			
3119	3894	Boring : N On-going project: N Working In or Near R/R Easement: N			
3120	3895	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			

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3096	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : W BAKER
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3121	3897	FLINTC 00081 MISDIGb 04/08/14 17:53:50 B40982132-00B EMER NEW GRID	FLINTC	B40982132	04/09/14
3122	3899	**** Underground ****			
3123	3900	Ticket : B40982132 Rcvd: 04/08/14 17:50 Oper: NCT Rev: 00B			
3124	3901	Org Tkt : B40982132 Rcvd: 04/08/14 17:53 Oper: NCT			
3125	3903	Digstart: 04/09/14 Time: 08:00			
3126	3904	Tkt Life: 04/30/14 Time: 23:59			
3127	3906	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3128	3907	Phone : 810-577-8261 Ext: Fax :			
3129	3908	E-mail : NONE			
3130	3909	FieldCnt: Number:			
3131	3911	County : GENESEE Place : FLINT /C			
3132	3913	Grids : 4302A8343B 4302B8343B 4302B8343C			
3133	3914	Polygon : 43.045836/-83.726233 43.045878/-83.724363			
3134	3915	: 43.043013/-83.726169 43.043056/-83.724299			
3135	3916	Lat : Long:			
3136	3917	Work Typ: WMB Done For:			
3137	3918	Address :			
3138	3919	Street : BRYN MAWR PL			
3139	3920	1st x-st: Dir W of FLEMING RD			
3140	3921	2nd x-st: Dir N of W MCCLELLAN ST			
3141	3922	Subdivsn: Lots:			
3142	3923	Stk Info: LOCATE IFO ADDR 3101 & BTH SDS OF RD			
3143	3924	Boring : N On-going project: N Working In or Near R/R Easement: N			
3144	3925	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3145	3927	FLINTC 00005 MISDIGb 04/09/14 08:49:52 B40990311-00B EMER NEW GRID	FLINTC	B40990311	04/09/14
3146	3929	**** Underground ****			
3147	3930	Ticket : B40990311 Rcvd: 04/09/14 08:47 Oper: GMH Rev: 00B			
3148	3931	Org Tkt : B40990311 Rcvd: 04/09/14 08:49 Oper: GMH			
3149	3933	Digstart: 04/09/14 Time: 08:47			
3150	3934	Tkt Life: 04/30/14 Time: 23:59			
3151	3936	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3152	3937	Phone : 810-577-8261 Ext: Fax :			
3153	3938	E-mail : NONE			
3154	3939	FieldCnt: Number:			
3155	3941	County : GENESEE Place : FLINT /C			
3156	3943	Grids : 4302A8341B 4302A8341C			
3157	3944	Polygon : 43.049771/-83.695701 43.049983/-83.691279			
3158	3945	: 43.046878/-83.695562 43.047090/-83.691141			
3159	3946	Lat : Long:			
3160	3947	Work Typ: WMB Done For:			
3161	3948	Address :			
3162	3949	Street : N SAGINAW ST			
3163	3950	1st x-st: Dir of CARTON ST			
3164	3951	2nd x-st: Dir N of PASADENA AVE			
3165	3952	Subdivsn: Lots:			
3166	3953	Stk Info: LOCATE 50FT RADIUS OF SW COR OF N SAGINAW & CARTON CREW EN ROUTE			
3167	3954	Boring : N On-going project: N Working In or Near R/R Easement: N			
3168	3955	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			

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3121	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : BRYN MAWR PL
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3145	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : N SAGINAW ST
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3145	1st x-st: Dir of CARTON ST	2nd x-st: Dir N of PASADENA AVE
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3169	3957	FLINTC 00006 MISDIGb 04/09/14 08:51:38 B40990320-00B EMER NEW GRID	FLINTC	B40990320	04/10/14
3170	3959	**** Underground ****			
3171	3960	Ticket : B40990320 Rcvd: 04/09/14 08:49 Oper: GMH Rev: 00B			
3172	3961	Org Tkt : B40990320 Rcvd: 04/09/14 08:51 Oper: GMH			
3173	3963	Digstart: 04/10/14 Time: 08:00			
3174	3964	Tkt Life: 05/01/14 Time: 23:59			
3175	3966	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3176	3967	Phone : 810-577-8261 Ext: Fax :			
3177	3968	E-mail : NONE			
3178	3969	FieldCnt: Number:			
3179	3971	County : GENESEE Place : FLINT /C			
3180	3973	Grids : 4259C8341B 4259D8341B			
3181	3974	Polygon : 42.988673/-83.693878 42.988557/-83.692014			
3182	3975	: 42.986988/-83.693983 42.986872/-83.692119			
3183	3976	Lat : Long:			
3184	3977	Work Typ: WMB Done For:			
3185	3978	Address : 3805			
3186	3979	Street : FENTON RD			
3187	3980	1st x-st: Dir S of W ATHERTON RD			
3188	3981	2nd x-st: Dir of			
3189	3982	Subdivsn: Lots:			
3190	3983	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
3191	3984	Boring : N On-going project: N Working In or Near R/R Easement: N			
3192	3985	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3193	3987	FLINTC 00033 MISDIGb 04/09/14 18:14:56 B40992267-00B EMER NEW GRID	FLINTC	B40992267	04/10/14
3194	3989	**** Underground ****			
3195	3990	Ticket : B40992267 Rcvd: 04/09/14 18:13 Oper: JAL Rev: 00B			
3196	3991	Org Tkt : B40992267 Rcvd: 04/09/14 18:14 Oper: JAL			
3197	3993	Digstart: 04/10/14 Time: 12:00			
3198	3994	Tkt Life: 05/01/14 Time: 23:59			
3199	3996	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3200	3997	Phone : 810-577-8261 Ext: Fax :			
3201	3998	E-mail : NONE			
3202	3999	FieldCnt: Number:			
3203	4001	County : GENESEE Place : FLINT /C			
3204	4003	Grids : 4301C8339A			
3205	4004	Polygon : 43.022423/-83.666134 43.022689/-83.664302			
3206	4005	: 43.021080/-83.665939 43.021346/-83.664107			
3207	4006	Lat : Long:			
3208	4007	Work Typ: WMB Done For:			
3209	4008	Address :			
3210	4009	Street : S FRANKLIN AVE			
3211	4010	1st x-st: Dir of E 2ND ST			
3212	4011	2nd x-st: Dir of			
3213	4012	Subdivsn: Lots:			
3214	4013	Stk Info: LOCATE 50FT RADIUS OF NE COR OF INTER			
3215	4014	Boring : N On-going project: N Working In or Near R/R Easement: N			
3216	4015	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			

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3169	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3805	Street : FENTON RD
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3193	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : S FRANKLIN AVE
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3193	1st x-st: Dir of E 2ND ST	2nd x-st: Dir of
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3217	4017	FLINTC 00007 MISDIGb 04/10/14 09:54:49 B41000463-00B EMER NEW GRID	FLINTC	B41000463	04/10/14
3218	4019	**** Underground ****			
3219	4020	Ticket : B41000463 Rcvd: 04/10/14 09:52 Oper: DJH Rev: 00B			
3220	4021	Org Tkt : B41000463 Rcvd: 04/10/14 09:54 Oper: DJH			
3221	4023	Digstart: 04/10/14 Time: 09:52			
3222	4024	Tkt Life: 05/01/14 Time: 23:59			
3223	4026	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3224	4027	Phone : 810-577-8261 Ext: Fax :			
3225	4028	E-mail : NONE			
3226	4029	FieldCnt: Number:			
3227	4031	County : GENESEE Place : FLINT /C			
3228	4033	Grids : 4259C8341B 4259C8341C			
3229	4034	Polygon : 42.990831/-83.693951 42.990866/-83.689688			
3230	4035	: 42.989459/-83.693940 42.989494/-83.689677			
3231	4036	Lat : Long:			
3232	4037	Work Typ: WMB Done For:			
3233	4038	Address : 944			
3234	4039	Street : PETTIBONE AVE			
3235	4040	1st x-st: Dir E of FENTON RD			
3236	4041	2nd x-st: Dir N of W ATHERTON			
3237	4042	Subdivsn: Lots:			
3238	4043	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
3239	4044	Boring : N On-going project: N Working In or Near R/R Easement: N			
3240	4045	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3241	4047	FLINTC 00042 MISDIGb 04/10/14 16:45:28 B41001939-00B EMER NEW GRID	FLINTC	B41001939	04/11/14
3242	4049	**** Underground ****			
3243	4050	Ticket : B41001939 Rcvd: 04/10/14 16:42 Oper: MEP Rev: 00B			
3244	4051	Org Tkt : B41001939 Rcvd: 04/10/14 16:45 Oper: MEP			
3245	4053	Digstart: 04/11/14 Time: 08:00			
3246	4054	Tkt Life: 05/02/14 Time: 23:59			
3247	4056	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3248	4057	Phone : 810-577-8261 Ext: Fax :			
3249	4058	E-mail : NONE			
3250	4059	FieldCnt: Number:			
3251	4061	County : GENESEE Place : FLINT /C			
3252	4063	Grids : 4301C8342A 4301C8342B 4301D8342A 4301D8342B			
3253	4064	Polygon : 43.022686/-83.713607 43.022286/-83.711311			
3254	4065	: 43.018760/-83.714290 43.018360/-83.711994			
3255	4066	Lat : Long:			
3256	4067	Work Typ: WMB Done For:			
3257	4068	Address : 1210			
3258	4069	Street : DUPONT ST			
3259	4070	1st x-st: Dir N of FLUSHING RD			
3260	4071	2nd x-st: Dir S of MACKIN RD			
3261	4072	Subdivsn: Lots:			
3262	4073	Stk Info: LOCATE INF OF ADDR & BTH SDS OF RD			
3263	4074	Boring : N On-going project: N Working In or Near R/R Easement: N			
3264	4075	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG			

	F	G	H	I	J
3217	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 944	Street : PETTIBONE AVE
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3241	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1210	Street : DUPONT ST
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3217	1st x-st: Dir E of FENTON RD	2nd x-st: Dir N of W ATHERTON
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3241	1st x-st: Dir N of FLUSHING RD	2nd x-st: Dir S of MACKIN RD
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	A	B	C	D	E
3265	4077	FLINTC 00010 MISDIGa 04/11/14 10:53:34 A41010342-00A EMER NEW GRID	FLINTC	A41010342	04/11/14
3266	4079	**** Underground ****			
3267	4080	Ticket : A41010342 Rcvd: 04/11/14 10:50 Oper: LCP Rev: 00A			
3268	4081	Org Tkt : A41010342 Rcvd: 04/11/14 10:53 Oper: LCP			
3269	4083	Digstart: 04/11/14 Time: 10:50			
3270	4084	Tkt Life: 05/02/14 Time: 23:59			
3271	4086	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3272	4087	Phone : 810-577-8261 Ext: Fax :			
3273	4088	E-mail : NONE			
3274	4089	FieldCnt: Number:			
3275	4091	County : GENESEE Place : FLINT /C			
3276	4093	Grids : 4301A8338B			
3277	4094	Polygon : 43.031934/-83.643473 43.031668/-83.641640			
3278	4095	: 43.030591/-83.643668 43.030325/-83.641835			
3279	4096	Lat : Long:			
3280	4097	Work Typ: WMB Done For:			
3281	4098	Address :			
3282	4099	Street : PITKIN AVE			
3283	4100	1st x-st: Dir of EARLMOOR BLVD			
3284	4101	2nd x-st: Dir S of DAVISON RD			
3285	4102	Subdivsn: Lots:			
3286	4103	Stk Info: E OF AVERILL LOCATE 50 FT RADIUS AROUND EXIST HYDT LOC ON NW COR OF			
3287	4104	: INTER OF PITKIN & EARLMOOR CREW EN ROUTE			
3288	4105	Boring : N On-going project: N Working In or Near R/R Easement: N			
3289	4106	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3290	4108	FLINTC 00014 MISDIGb 04/11/14 13:33:28 B41011357-00B EMER NEW GRID	FLINTC	B41011357	04/12/14
3291	4110	**** Underground ****			
3292	4111	Ticket : B41011357 Rcvd: 04/11/14 13:29 Oper: MEP Rev: 00B			
3293	4112	Org Tkt : B41011357 Rcvd: 04/11/14 13:33 Oper: MEP			
3294	4114	Digstart: 04/12/14 Time: 06:00			
3295	4115	Tkt Life: 05/03/14 Time: 23:59			
3296	4117	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3297	4118	Phone : 810-577-8261 Ext: Fax :			
3298	4119	E-mail : NONE			
3299	4120	FieldCnt: Number:			
3300	4122	County : GENESEE Place : FLINT /C			
3301	4124	Grids : 4300C8344C 4300C8344D			
3302	4125	Polygon : 43.007586/-83.738763 43.007598/-83.734231			
3303	4126	: 43.006214/-83.738759 43.006226/-83.734228			
3304	4127	Lat : Long:			
3305	4128	Work Typ: WMB Done For:			
3306	4129	Address :			
3307	4130	Street : W COURT ST			
3308	4131	1st x-st: Dir W of BALLENGER HWY			
3309	4132	2nd x-st: Dir N of CORUNNA RD			
3310	4133	Subdivsn: Lots:			
3311	4134	Stk Info: LOCATE IFO ADDRS 3818 & 3814 & BTH SDS OF RD			
3312	4135	Boring : N On-going project: N Working In or Near R/R Easement: N			

	F	G	H	I	J
3265	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : PITKIN AVE
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3290	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : W COURT ST
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3265	1st x-st: Dir of EARLMOOR BLVD	2nd x-st: Dir S of DAVISON RD
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3290	1st x-st: Dir W of BALLENGER HWY	2nd x-st: Dir N of CORUNNA RD
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3313	4136	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC			
3314	4138	FLINTC 00002 MISDIGb 04/12/14 05:33:31 B41020007-00B EMER NEW GRID	FLINTC	B41020007	04/12/14
3315	4140	**** Underground ****			
3316	4141	Ticket : B41020007 Rcvd: 04/12/14 05:31 Oper: MLD Rev: 00B			
3317	4142	Org Tkt : B41020007 Rcvd: 04/12/14 05:33 Oper: MLD			
3318	4144	Digstart: 04/12/14 Time: 05:31			
3319	4145	Tkt Life: 05/03/14 Time: 23:59			
3320	4147	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3321	4148	Phone : 810-577-8261 Ext: Fax :			
3322	4149	E-mail : NONE			
3323	4150	FieldCnt: Number:			
3324	4152	County : GENESEE Place : FLINT /C			
3325	4154	Grids : 4300B8343A 4300B8343B			
3326	4155	Polygon : 43.010288/-83.731924 43.011537/-83.730960			
3327	4156	: 43.008072/-83.729053 43.009320/-83.728089			
3328	4157	Lat : Long:			
3329	4158	Work Typ: REPR WMB Done For:			
3330	4159	Address : 3310			
3331	4160	Street : BEECHER RD			
3332	4161	1st x-st: Dir E of BALLENGER HWY			
3333	4162	2nd x-st: Dir N of COURT ST			
3334	4163	Subdivsn: Lots:			
3335	4164	Stk Info: LOCATE IFO PROP & BTH SDS OF RD CREW ON SITE			
3336	4165	Boring : N On-going project: N Working In or Near R/R Easement: N			
3337	4166	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3338	4168	FLINTC 00010 MISDIGb 04/12/14 13:05:46 B41020248-00B EMER NEW GRID	FLINTC	B41020248	04/14/14
3339	4170	**** Underground ****			
3340	4171	Ticket : B41020248 Rcvd: 04/12/14 13:03 Oper: SJG Rev: 00B			
3341	4172	Org Tkt : B41020248 Rcvd: 04/12/14 13:05 Oper: SJG			
3342	4174	Digstart: 04/14/14 Time: 08:00			
3343	4175	Tkt Life: 05/05/14 Time: 23:59			
3344	4177	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3345	4178	Phone : 810-577-8261 Ext: Fax :			
3346	4179	E-mail : NONE			
3347	4180	FieldCnt: Number:			
3348	4182	County : GENESEE Place : FLINT /C			
3349	4184	Grids : 4301B8341A 4301B8342D			
3350	4185	Polygon : 43.027729/-83.698800 43.026400/-83.698226			
3351	4186	: 43.026194/-83.702361 43.024864/-83.701788			
3352	4187	Lat : Long:			
3353	4188	Work Typ: WMB Done For:			
3354	4189	Address :			
3355	4190	Street : NINTH AVE			
3356	4191	1st x-st: Dir E of GARLAND ST			
3357	4192	2nd x-st: Dir W of MARTIN LUTHER KING JR AVE			
3358	4193	Subdivsn: Lots:			
3359	4194	Stk Info: LOCATE BTH SDS OF RD BET X-STS			
3360	4195	Boring : N On-going project: N Working In or Near R/R Easement: N			

	F	G	H	I	J
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3314	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 3310	Street : BEECHER RD
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3338	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : NINTH AVE
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3314	1st x-st: Dir E of BALLENGER HWY	2nd x-st: Dir N of COURT ST
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3338	1st x-st: Dir E of GARLAND ST	2nd x-st: Dir W of MARTIN LUTHER KING JR AVE
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3361	4196	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3362	4198	FLINTC 00002 MISDIGb 04/14/14 07:40:45 B41040165-00B EMER NEW GRID	FLINTC	B41040165	04/14/14
3363	4200	**** Underground ****			
3364	4201	Ticket : B41040165 Rcvd: 04/14/14 07:38 Oper: LCG Rev: 00B			
3365	4202	Org Tkt : B41040165 Rcvd: 04/14/14 07:40 Oper: LCG			
3366	4204	Digstart: 04/14/14 Time: 08:00			
3367	4205	Tkt Life: 05/05/14 Time: 23:59			
3368	4207	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3369	4208	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3370	4209	E-mail : NONE			
3371	4210	FieldCnt: Number: 810-397-7247			
3372	4212	County : GENESEE Place : FLINT /C			
3373	4214	Grids : 4301B8342A 4301B8342B 4301C8342A 4301C8342B			
3374	4215	Polygon : 43.025650/-83.713711 43.024350/-83.710096			
3375	4216	: 43.024297/-83.714198 43.022997/-83.710582			
3376	4217	Lat : Long:			
3377	4218	Work Typ: WMB Done For:			
3378	4219	Address :			
3379	4220	Street : MACKIN RD			
3380	4221	1st x-st: Dir of DUPONT ST			
3381	4222	2nd x-st: Dir of MCINTOSH ST			
3382	4223	Subdivsn: Lots:			
3383	4224	Stk Info: LOCATE BTH SDS OF RD BET X-STS CREW ENROUTE			
3384	4225	Boring : N On-going project: N Working In or Near R/R Easement: N			
3385	4226	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG			
3386	4228	FLINTC 00009 MISDIGb 04/14/14 10:39:59 B41040831-00B EMER NEW GRID	FLINTC	B41040831	04/14/14
3387	4230	**** Underground ****			
3388	4231	Ticket : B41040831 Rcvd: 04/14/14 10:36 Oper: LRS Rev: 00B			
3389	4232	Org Tkt : B41040831 Rcvd: 04/14/14 10:39 Oper: LRS			
3390	4234	Digstart: 04/14/14 Time: 13:00			
3391	4235	Tkt Life: 05/05/14 Time: 23:59			
3392	4237	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3393	4238	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3394	4239	E-mail : NONE			
3395	4240	FieldCnt: CELL Number: 810-397-7247			
3396	4242	County : GENESEE Place : FLINT /C			
3397	4244	Grids : 4301A8342C 4301A8342D 4302D8342C 4302D8342D			
3398	4245	Polygon : 43.033910/-83.705255 43.033940/-83.703401			
3399	4246	: 43.031834/-83.705221 43.031864/-83.703366			
3400	4247	Lat : Long:			
3401	4248	Work Typ: W M B REPR Done For:			
3402	4249	Address : 1811			
3403	4250	Street : MARTIN LUTHER KING AVE			
3404	4251	1st x-st: Dir S of E HAMILTON AVE			
3405	4252	2nd x-st: Dir N of WELCH BLVD			
3406	4253	Subdivsn: Lots:			
3407	4254	Stk Info: LOCATE IFO ADDR & BTH SDS OF RD			
3408	4255	Boring : N On-going project: N Working In or Near R/R Easement: N			

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3362	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : MACKIN RD
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3386	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 1811	Street : MARTIN LUTHER KING AVE
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3362	1st x-st: Dir of DUPONT ST	2nd x-st: Dir of MCINTOSH ST
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3386	1st x-st: Dir S of E HAMILTON AVE	2nd x-st: Dir N of WELCH BLVD
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3409	4256	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3410	4258	FLINTC 00012 MISDIGb 04/14/14 12:15:10 B41041293-00B EMER NEW GRID	FLINTC	B41041293	04/14/14
3411	4260	**** Underground ****			
3412	4261	Ticket : B41041293 Rcvd: 04/14/14 12:12 Oper: DLG Rev: 00B			
3413	4262	Org Tkt : B41041293 Rcvd: 04/14/14 12:15 Oper: DLG			
3414	4264	Digstart: 04/14/14 Time: 12:12			
3415	4265	Tkt Life: 05/05/14 Time: 23:59			
3416	4267	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3417	4268	Phone : 810-577-8261 Ext: Fax :			
3418	4269	E-mail : NONE			
3419	4270	FieldCnt: Number:			
3420	4272	County : GENESEE Place : FLINT /C			
3421	4274	Grids : 4304D8342B 4304D8342C			
3422	4275	Polygon : 43.070225/-83.709831 43.069959/-83.707997			
3423	4276	: 43.068882/-83.710026 43.068616/-83.708192			
3424	4277	Lat : Long:			
3425	4278	Work Typ: WMB Done For:			
3426	4279	Address :			
3427	4280	Street : CHESTNUT ST			
3428	4281	1st x-st: Dir of W AUSTIN AVE			
3429	4282	2nd x-st: Dir E of DUPONT ST			
3430	4283	Subdivsn: Lots:			
3431	4284	Stk Info: LOCATE 50 FT RADIUS OF NE COR CREW EN ROUTE			
3432	4285	Boring : N On-going project: N Working In or Near R/R Easement: N			
3433	4286	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3434	4288	FLINTC 00044 MISDIGb 04/14/14 18:51:16 B41042525-00B EMER NEW GRID	FLINTC	B41042525	04/15/14
3435	4290	**** Underground ****			
3436	4291	Ticket : B41042525 Rcvd: 04/14/14 18:46 Oper: MEP Rev: 00B			
3437	4292	Org Tkt : B41042525 Rcvd: 04/14/14 18:50 Oper: MEP			
3438	4294	Digstart: 04/15/14 Time: 08:30			
3439	4295	Tkt Life: 05/06/14 Time: 23:59			
3440	4297	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3441	4298	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3442	4299	E-mail : NONE			
3443	4300	FieldCnt: PAUL Number: 810-397-7247			
3444	4302	County : GENESEE Place : FLINT /C			
3445	4304	Grids : 4301A8342C 4301A8342D			
3446	4305	Polygon : 43.033011/-83.705440 43.033404/-83.703557			
3447	4306	: 43.030938/-83.705007 43.031331/-83.703124			
3448	4307	Lat : Long:			
3449	4308	Work Typ: WMB Done For:			
3450	4309	Address : 1703			
3451	4310	Street : MARTIN LUTHER KING AVE			
3452	4311	1st x-st: Dir N of WELCH BLVD			
3453	4312	2nd x-st: Dir of			
3454	4313	Subdivsn: Lots:			
3455	4314	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
3456	4315	Boring : N On-going project: N Working In or Near R/R Easement: N			

	F	G	H	I	J
3409					
3410	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : CHESTNUT ST
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3434	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1703	Street : MARTIN LUTHER KING AVE
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3410	1st x-st: Dir of W AUSTIN AVE	2nd x-st: Dir E of DUPONT ST
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3434	1st x-st: Dir N of WELCH BLVD	2nd x-st: Dir of
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3457	4316	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3458	4318	FLINTC 00003 MISDIGb 04/15/14 07:55:47 B41050167-00B EMER NEW GRID	FLINTC	B41050167	04/15/14
3459	4320	**** Underground ****			
3460	4321	Ticket : B41050167 Rcvd: 04/15/14 07:53 Oper: AMA Rev: 00B			
3461	4322	Org Tkt : B41050167 Rcvd: 04/15/14 07:55 Oper: AMA			
3462	4324	Digstart: 04/15/14 Time: 10:00			
3463	4325	Tkt Life: 05/06/14 Time: 23:59			
3464	4327	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3465	4328	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3466	4329	E-mail : NONE			
3467	4330	FieldCnt: PAUL SIMPSON-CELL Number: 810-397-7247			
3468	4332	County : GENESEE Place : FLINT /C			
3469	4334	Grids : 4301A8342C 4301A8342D 4302D8342C 4302D8342D			
3470	4335	Polygon : 43.034031/-83.705183 43.032697/-83.703167			
3471	4336	: 43.032692/-83.706069 43.031358/-83.704054			
3472	4337	Lat : Long:			
3473	4338	Work Typ: REPR WMB Done For:			
3474	4339	Address :			
3475	4340	Street : MARTIN LUTHER KING AVE			
3476	4341	1st x-st: Dir of GRACE ST			
3477	4342	2nd x-st: Dir N of WELCH BLVD			
3478	4343	Subdivsn: Lots:			
3479	4344	Stk Info: LOCATE 50 FT RADIUS OF NW COR OF MARTIN LUTHER KING & GRACE ST			
3480	4345	: CREW ENROUTE			
3481	4346	Boring : N On-going project: N Working In or Near R/R Easement: N			
3482	4347	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3483	4349	FLINTC 00026 MISDIGa 04/15/14 18:44:05 A41051255-00A EMER NEW GRID	FLINTC	A41051255	04/16/14
3484	4351	**** Underground ****			
3485	4352	Ticket : A41051255 Rcvd: 04/15/14 18:41 Oper: DFB Rev: 00A			
3486	4353	Org Tkt : A41051255 Rcvd: 04/15/14 18:43 Oper: DFB			
3487	4355	Digstart: 04/16/14 Time: 08:00			
3488	4356	Tkt Life: 05/07/14 Time: 23:59			
3489	4358	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3490	4359	Phone : 810-577-8261 Ext: Fax :			
3491	4360	E-mail : NONE			
3492	4361	FieldCnt: Number:			
3493	4363	County : GENESEE Place : FLINT /C			
3494	4365	Grids : 4259A8340B 4259A8340C 4300D8340B 4300D8340C			
3495	4366	Polygon : 43.000377/-83.678728 43.000379/-83.674667			
3496	4367	: 42.998976/-83.678727 42.998978/-83.674666			
3497	4368	Lat : Long:			
3498	4369	Work Typ: WMB Done For:			
3499	4370	Address : 116			
3500	4371	Street : BRUCE ST			
3501	4372	1st x-st: Dir E of S SAGINAW ST			
3502	4373	2nd x-st: Dir S of E TOBIAS ST			
3503	4374	Subdivsn: Lots:			
3504	4375	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD			

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3458	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	Street : MARTIN LUTHER KING AVE
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3483	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 116	Street : BRUCE ST
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3458	1st x-st: Dir of GRACE ST	2nd x-st: Dir N of WELCH BLVD
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3483	1st x-st: Dir E of S SAGINAW ST	2nd x-st: Dir S of E TOBIAS ST
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3505	4376	Boring : N On-going project: N Working In or Near R/R Easement: N			
3506	4377	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
3507	4379	FLINTC 00001 MISDIGb 04/16/14 07:37:58 B41060127-00B EMER NEW GRID	FLINTC	B41060127	04/16/14
3508	4381	**** Underground ****			
3509	4382	Ticket : B41060127 Rcvd: 04/16/14 07:34 Oper: AMA Rev: 00B			
3510	4383	Org Tkt : B41060127 Rcvd: 04/16/14 07:37 Oper: AMA			
3511	4385	Digstart: 04/16/14 Time: 08:00			
3512	4386	Tkt Life: 05/07/14 Time: 23:59			
3513	4388	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3514	4389	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3515	4390	E-mail : NONE			
3516	4391	FieldCnt: PAUL SIMPSON-CELL Number: 810-397-7247			
3517	4393	County : GENESEE Place : FLINT /C			
3518	4395	Grids : 4302D8342C 4302D8342D			
3519	4396	Polygon : 43.036866/-83.704405 43.036746/-83.701940			
3520	4397	: 43.035504/-83.704471 43.035384/-83.702006			
3521	4398	Lat : Long:			
3522	4399	Work Typ: REPR WMB Done For:			
3523	4400	Address :			
3524	4401	Street : E HAMILTON AVE			
3525	4402	1st x-st: Dir of ADAMS AVE			
3526	4403	2nd x-st: Dir E of MARTIN LUTHER KING JR BLVD			
3527	4404	Subdivsn: Lots:			
3528	4405	Stk Info: LOCATE 50 FT RADIUS OF N SD OF E HAMILTON AT ADAMS CREW ENROUTE			
3529	4406	Boring : N On-going project: N Working In or Near R/R Easement: N			
3530	4407	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3531	4409	FLINTC 00011 MISDIGb 04/16/14 09:05:23 B41060407-00B EMER NEW GRID	FLINTC	B41060407	04/16/14
3532	4411	**** Underground ****			
3533	4412	Ticket : B41060407 Rcvd: 04/16/14 09:02 Oper: LRS Rev: 00B			
3534	4413	Org Tkt : B41060407 Rcvd: 04/16/14 09:05 Oper: LRS			
3535	4415	Digstart: 04/16/14 Time: 09:02			
3536	4416	Tkt Life: 05/07/14 Time: 23:59			
3537	4418	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3538	4419	Phone : 810-577-8261 Ext: Fax :			
3539	4420	E-mail : NONE			
3540	4421	FieldCnt: Number:			
3541	4423	County : GENESEE Place : FLINT /C			
3542	4425	Grids : 4300A8343A 4300A8343B 4301D8343A 4301D8343B			
3543	4426	Polygon : 43.017750/-83.732312 43.019235/-83.731707			
3544	4427	: 43.015508/-83.726814 43.016992/-83.726208			
3545	4428	Lat : Long:			
3546	4429	Work Typ: W M B REPR Done For:			
3547	4430	Address : 2574			
3548	4431	Street : NOLEN DR			
3549	4432	1st x-st: Dir N of MARQUETTE ST			
3550	4433	2nd x-st: Dir W of THOMAS ST			
3551	4434	Subdivsn: Lots:			
3552	4435	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD CREW EN ROUTE			

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3507	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	Street : E HAMILTON AVE
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3531	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	W M B REPR	Address : 2574	Street : NOLEN DR
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3507	1st x-st: Dir of ADAMS AVE	2nd x-st: Dir E of MARTIN LUTHER KING JR BLVD
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3553	4436	Boring : N On-going project: N Working In or Near R/R Easement: N			
3554	4437	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3555	4439	FLINTC 00045 MISDIGb 04/16/14 14:30:49 B41061784-00B EMER NEW GRID	FLINTC	B41061784	04/16/14
3556	4441	**** Underground ****			
3557	4442	Ticket : B41061784 Rcvd: 04/16/14 14:28 Oper: GMH Rev: 00B			
3558	4443	Org Tkt : B41061784 Rcvd: 04/16/14 14:30 Oper: GMH			
3559	4445	Digstart: 04/16/14 Time: 14:28			
3560	4446	Tkt Life: 05/07/14 Time: 23:59			
3561	4448	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3562	4449	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3563	4450	E-mail : NONE			
3564	4451	FieldCnt: PAUL Number: 810-397-7247			
3565	4453	County : GENESEE Place : FLINT /C			
3566	4455	Grids : 4303B8342A 4303B8343D			
3567	4456	Polygon : 43.062439/-83.718055 43.062508/-83.715152			
3568	4457	: 43.061066/-83.718023 43.061136/-83.715119			
3569	4458	Lat : Long:			
3570	4459	Work Typ: WMB Done For:			
3571	4460	Address : 906			
3572	4461	Street : W RIDGEWAY AVE			
3573	4462	1st x-st: Dir N of PIERSON RD			
3574	4463	2nd x-st: Dir W of DUPONT ST			
3575	4464	Subdivsn: Lots:			
3576	4465	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
3577	4466	Boring : N On-going project: N Working In or Near R/R Easement: N			
3578	4467	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3579	4469	FLINTC 00046 MISDIGb 04/16/14 14:32:31 B41061795-00B EMER NEW GRID	FLINTC	B41061795	04/17/14
3580	4471	**** Underground ****			
3581	4472	Ticket : B41061795 Rcvd: 04/16/14 14:30 Oper: GMH Rev: 00B			
3582	4473	Org Tkt : B41061795 Rcvd: 04/16/14 14:32 Oper: GMH			
3583	4475	Digstart: 04/17/14 Time: 08:30			
3584	4476	Tkt Life: 05/08/14 Time: 23:59			
3585	4478	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3586	4479	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3587	4480	E-mail : NONE			
3588	4481	FieldCnt: PAUL Number: 810-397-7247			
3589	4483	County : GENESEE Place : FLINT /C			
3590	4485	Grids : 4303B8342C 4303B8342D 4303C8342C 4303C8342D			
3591	4486	Polygon : 43.059977/-83.706016 43.060271/-83.704195			
3592	4487	: 43.057877/-83.705676 43.058171/-83.703855			
3593	4488	Lat : Long:			
3594	4489	Work Typ: WMB Done For:			
3595	4490	Address :			
3596	4491	Street : MARTIN LUTHER KING AVE			
3597	4492	1st x-st: Dir of W PHILADELPHIA BLVD			
3598	4493	2nd x-st: Dir S of PIERSON RD			
3599	4494	Subdivsn: Lots:			
3600	4495	Stk Info: LOCATE 75FT RADIUS OF NW COR OF MARTIN LUTHER KING & W PHILADELPHIA			

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3555	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 906	Street : W RIDGEWAY AVE
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3579	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : MARTIN LUTHER KING AVE
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3579	1st x-st: Dir of W PHILADELPHIA BLVD	2nd x-st: Dir S of PIERSON RD
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3601	4496	Boring : N On-going project: N Working In or Near R/R Easement: N			
3602	4497	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3603	4499	FLINTC 00055 MISDIGb 04/16/14 15:44:44 B41062111-00B EMER NEW GRID	FLINTC	B41062111	04/17/14
3604	4501	**** Underground ****			
3605	4502	Ticket : B41062111 Rcvd: 04/16/14 15:42 Oper: LCG Rev: 00B			
3606	4503	Org Tkt : B41062111 Rcvd: 04/16/14 15:44 Oper: LCG			
3607	4505	Digstart: 04/17/14 Time: 06:00			
3608	4506	Tkt Life: 05/08/14 Time: 23:59			
3609	4508	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3610	4509	Phone : 810-577-8261 Ext: Fax :			
3611	4510	E-mail : NONE			
3612	4511	FieldCnt: Number:			
3613	4513	County : GENESEE Place : FLINT /C			
3614	4515	Grids : 4302B8341A 4302B8341B			
3615	4516	Polygon : 43.044588/-83.698231 43.044604/-83.692866			
3616	4517	: 43.043229/-83.698227 43.043246/-83.692862			
3617	4518	Lat : Long:			
3618	4519	Work Typ: WMB Done For:			
3619	4520	Address : 629			
3620	4521	Street : E MCCLELLAN ST			
3621	4522	1st x-st: Dir W of N SAGINAW ST			
3622	4523	2nd x-st: Dir N of LEITH ST			
3623	4524	Subdivsn: Lots:			
3624	4525	Stk Info: LOCATE 30 FT RADIUS OF BARRICADE IFO ADDR			
3625	4526	Boring : N On-going project: N Working In or Near R/R Easement: N			
3626	4527	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3627	4529	FLINTC 00003 MISDIGb 04/17/14 07:51:25 B41070095-00B EMER NEW GRID	FLINTC	B41070095	04/17/14
3628	4531	**** Underground ****			
3629	4532	Ticket : B41070095 Rcvd: 04/17/14 07:50 Oper: AMA Rev: 00B			
3630	4533	Org Tkt : B41070095 Rcvd: 04/17/14 07:51 Oper: AMA			
3631	4535	Digstart: 04/17/14 Time: 12:00			
3632	4536	Tkt Life: 05/08/14 Time: 23:59			
3633	4538	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3634	4539	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3635	4540	E-mail : NONE			
3636	4541	FieldCnt: PAUL SIMPSON-CELL Number: 810-397-7247			
3637	4543	County : GENESEE Place : FLINT /C			
3638	4545	Grids : 4301A8343D 4302D8343D			
3639	4546	Polygon : 43.035102/-83.719872 43.034417/-83.717097			
3640	4547	: 43.033737/-83.720208 43.033053/-83.717433			
3641	4548	Lat : Long:			
3642	4549	Work Typ: REPR WMB Done For:			
3643	4550	Address : 1113			
3644	4551	Street : W PATERSON ST			
3645	4552	1st x-st: Dir W of CHEVROLET AVE			
3646	4553	2nd x-st: Dir N of WELCH BLVD			
3647	4554	Subdivsn: Lots:			
3648	4555	Stk Info: LOCATE FRT OF PROP & BTH SDS OF ST			

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3603	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 629	Street : E MCCLELLAN ST
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3627	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 1113	Street : W PATERSON ST
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3627	1st x-st: Dir W of CHEVROLET AVE	2nd x-st: Dir N of WELCH BLVD
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3649	4556	Boring : N On-going project: N Working In or Near R/R Easement: N			
3650	4557	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3651	4559	FLINTC 00009 MISDIGb 04/17/14 10:12:00 B41070586-00B EMER NEW GRID	FLINTC	B41070586	04/17/14
3652	4561	**** Underground ****			
3653	4562	Ticket : B41070586 Rcvd: 04/17/14 10:09 Oper: DJH Rev: 00B			
3654	4563	Org Tkt : B41070586 Rcvd: 04/17/14 10:11 Oper: DJH			
3655	4565	Digstart: 04/17/14 Time: 10:09			
3656	4566	Tkt Life: 05/08/14 Time: 23:59			
3657	4568	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3658	4569	Phone : 810-577-8261 Ext: Fax :			
3659	4570	E-mail : NONE			
3660	4571	FieldCnt: Number:			
3661	4573	County : GENESEE Place : FLINT /C			
3662	4575	Grids : 4302D8340C 4302D8340D			
3663	4576	Polygon : 43.036614/-83.671150 43.036348/-83.669318			
3664	4577	: 43.035271/-83.671345 43.035005/-83.669513			
3665	4578	Lat : Long:			
3666	4579	Work Typ: WMB Done For:			
3667	4580	Address :			
3668	4581	Street : BENNETT AVE			
3669	4582	1st x-st: Dir of IOWA AVE			
3670	4583	2nd x-st: Dir W of FRANKLIN			
3671	4584	Subdivsn: Lots:			
3672	4585	Stk Info: E OF LEWIS LOCATE 75FT RADIUS OF NE COR OF INTER W/ IOWA CREW			
3673	4586	: EN ROUTE			
3674	4587	Boring : N On-going project: N Working In or Near R/R Easement: N			
3675	4588	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3676	4590	FLINTC 00010 MISDIGb 04/17/14 10:13:25 B41070592-00B EMER NEW GRID	FLINTC	B41070592	04/19/14
3677	4592	**** Underground ****			
3678	4593	Ticket : B41070592 Rcvd: 04/17/14 10:11 Oper: DJH Rev: 00B			
3679	4594	Org Tkt : B41070592 Rcvd: 04/17/14 10:13 Oper: DJH			
3680	4596	Digstart: 04/19/14 Time: 06:00			
3681	4597	Tkt Life: 05/10/14 Time: 23:59			
3682	4599	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3683	4600	Phone : 810-577-8261 Ext: Fax :			
3684	4601	E-mail : NONE			
3685	4602	FieldCnt: Number:			
3686	4604	County : GENESEE Place : FLINT /C			
3687	4606	Grids : 4300A8341C 4300B8341C			
3688	4607	Polygon : 43.012126/-83.690515 43.013103/-83.688261			
3689	4608	: 43.010797/-83.689939 43.011774/-83.687685			
3690	4609	Lat : Long:			
3691	4610	Work Typ: WMB Done For:			
3692	4611	Address :			
3693	4612	Street : COURT ST			
3694	4613	1st x-st: Dir of BEACH ST			
3695	4614	2nd x-st: Dir W of S SAGINAW			
3696	4615	Subdivsn: Lots:			

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3651	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : BENNETT AVE
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3676	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : COURT ST
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3651	1st x-st: Dir of IOWA AVE	2nd x-st: Dir W of FRANKLIN
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3676	1st x-st: Dir of BEACH ST	2nd x-st: Dir W of S SAGINAW
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3697	4616	Stk Info: LOCATE 50FT RADIUS OF NE COR OF INTER W/ BEACH			
3698	4617	Boring : N On-going project: N Working In or Near R/R Easement: N			
3699	4618	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC USSIG			
3700	4620	FLINTC 00022 MISDIGb 04/17/14 12:40:49 B41071195-00B EMER NEW GRID	FLINTC	B41071195	04/17/14
3701	4622	**** Underground ****			
3702	4623	Ticket : B41071195 Rcvd: 04/17/14 12:37 Oper: AMA Rev: 00B			
3703	4624	Org Tkt : B41071195 Rcvd: 04/17/14 12:40 Oper: AMA			
3704	4626	Digstart: 04/17/14 Time: 12:38			
3705	4627	Tkt Life: 05/08/14 Time: 23:59			
3706	4629	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3707	4630	Phone : 810-577-8261 Ext: Fax :			
3708	4631	E-mail : NONE			
3709	4632	FieldCnt: Number:			
3710	4634	County : GENESEE Place : FLINT /C			
3711	4636	Grids : 4301C8341A 4301C8341B			
3712	4637	Polygon : 43.023705/-83.697123 43.024164/-83.692820			
3713	4638	: 43.020860/-83.696820 43.021319/-83.692517			
3714	4639	Lat : Long:			
3715	4640	Work Typ: REPR WMB Done For:			
3716	4641	Address :			
3717	4642	Street : 4TH AVE			
3718	4643	1st x-st: Dir of CHIPPEWA ST			
3719	4644	2nd x-st: Dir W of N SAGINAW ST			
3720	4645	Subdivsn: Lots:			
3721	4646	Stk Info: LOCATE ENTIRE PKG LOT AT NW COR OF 4TH AVE & CHIPPEWA ST CREW			
3722	4647	: ENROUTE			
3723	4648	Boring : N On-going project: N Working In or Near R/R Easement: N			
3724	4649	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 FLINTC			
3725	4651	FLINTC 00002 MISDIGa 04/21/14 08:01:14 A41110061-00A EMER NEW GRID	FLINTC	A41110061	04/21/14
3726	4653	**** Underground ****			
3727	4654	Ticket : A41110061 Rcvd: 04/21/14 07:59 Oper: BMF Rev: 00A			
3728	4655	Org Tkt : A41110061 Rcvd: 04/21/14 08:01 Oper: BMF			
3729	4657	Digstart: 04/21/14 Time: 07:59			
3730	4658	Tkt Life: 05/12/14 Time: 23:59			
3731	4660	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3732	4661	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3733	4662	E-mail : NONE			
3734	4663	FieldCnt: PAUL /CELL Number: 810-397-7247			
3735	4665	County : GENESEE Place : FLINT /C			
3736	4667	Grids : 4301B8342A 4301B8343D 4301C8343D			
3737	4668	Polygon : 43.027972/-83.717691 43.026888/-83.716406			
3738	4669	: 43.025488/-83.719784 43.024405/-83.718498			
3739	4670	Lat : Long:			
3740	4671	Work Typ: WMB Done For:			
3741	4672	Address :			
3742	4673	Street : MACKIN RD			
3743	4674	1st x-st: Dir of CHEVROLET AVE			
3744	4675	2nd x-st: Dir of			

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3700	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : 4TH AVE
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3725	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : MACKIN RD
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3725	1st x-st: Dir of CHEVROLET AVE	2nd x-st: Dir of
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3745	4676	Subdivsn: Lots:			
3746	4677	Stk Info: LOCATE 50 FT RADIUS OF NE COR OF INTER CREW EN ROUTE			
3747	4678	Boring : N On-going project: N Working In or Near R/R Easement: N			
3748	4679	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
3749	4681	FLINTC 00003 MISDIGa 04/21/14 08:02:17 A41110063-00A EMER NEW GRID	FLINTC	A41110063	04/21/14
3750	4683	**** Underground ****			
3751	4684	Ticket : A41110063 Rcvd: 04/21/14 08:01 Oper: BMF Rev: 00A			
3752	4685	Org Tkt : A41110063 Rcvd: 04/21/14 08:02 Oper: BMF			
3753	4687	Digstart: 04/21/14 Time: 08:01			
3754	4688	Tkt Life: 05/12/14 Time: 23:59			
3755	4690	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3756	4691	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3757	4692	E-mail : NONE			
3758	4693	FieldCnt: PAUL /CELL Number: 810-397-7247			
3759	4695	County : GENESEE Place : FLINT /C			
3760	4697	Grids : 4301C8339A 4301D8339A 4301C8340D			
3761	4698	Polygon : 43.022091/-83.667805 43.024426/-83.665167			
3762	4699	: 43.019170/-83.665220 43.021505/-83.662581			
3763	4700	Lat : Long:			
3764	4701	Work Typ: WMB Done For:			
3765	4702	Address :			
3766	4703	Street : 2ND ST			
3767	4704	1st x-st: Dir of S FRANKLIN AVE			
3768	4705	2nd x-st: Dir of			
3769	4706	Subdivsn: Lots:			
3770	4707	Stk Info: LOCATE 50 FT RADIUS OF NE COR OF INTER CREW EN ROUTE			
3771	4708	Boring : N On-going project: N Working In or Near R/R Easement: N			
3772	4709	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3773	4711	FLINTC 00002 MISDIGb 04/22/14 07:34:03 B41120180-00B EMER NEW GRID	FLINTC	B41120180	04/22/14
3774	4713	**** Underground ****			
3775	4714	Ticket : B41120180 Rcvd: 04/22/14 07:31 Oper: GMH Rev: 00B			
3776	4715	Org Tkt : B41120180 Rcvd: 04/22/14 07:33 Oper: GMH			
3777	4717	Digstart: 04/22/14 Time: 08:00			
3778	4718	Tkt Life: 05/13/14 Time: 23:59			
3779	4720	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3780	4721	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3781	4722	E-mail : NONE			
3782	4723	FieldCnt: PAUL Number: 810-397-7247			
3783	4725	County : GENESEE Place : FLINT /C			
3784	4727	Grids : 4301A8341A 4301A8341B			
3785	4728	Polygon : 43.031583/-83.695736 43.031317/-83.693904			
3786	4729	: 43.030240/-83.695931 43.029974/-83.694099			
3787	4730	Lat : Long:			
3788	4731	Work Typ: WMB Done For:			
3789	4732	Address :			
3790	4733	Street : CHIPPEWA ST			
3791	4734	1st x-st: Dir of MARY ST			
3792	4735	2nd x-st: Dir N of 5TH AVE			

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3749	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : 2ND ST
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3773	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : CHIPPEWA ST
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3749	1st x-st: Dir of S FRANKLIN AVE	2nd x-st: Dir of
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3773	1st x-st: Dir of MARY ST	2nd x-st: Dir N of 5TH AVE
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3793	4736	Subdivsn: Lots:			
3794	4737	Stk Info: LOCATE 50FT RADIUS OF S SD OF INTER CREW EN ROUTE			
3795	4738	Boring : N On-going project: N Working In or Near R/R Easement: N			
3796	4739	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 FLINTC			
3797	4741	FLINTC 00003 MISDIGb 04/22/14 07:48:52 B41120234-00B EMER NEW GRID	FLINTC	B41120234	04/22/14
3798	4743	**** Underground ****			
3799	4744	Ticket : B41120234 Rcvd: 04/22/14 07:45 Oper: AMA Rev: 00B			
3800	4745	Org Tkt : B41120234 Rcvd: 04/22/14 07:48 Oper: AMA			
3801	4747	Digstart: 04/22/14 Time: 07:45			
3802	4748	Tkt Life: 05/13/14 Time: 23:59			
3803	4750	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3804	4751	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3805	4752	E-mail : NONE			
3806	4753	FieldCnt: PAUL SIMPSON Number: 810-397-7247			
3807	4755	County : GENESEE Place : FLINT /C			
3808	4757	Grids : 4259A8340A 4259B8340A 4259A8341D 4259B8341D			
3809	4758	Polygon : 42.997110/-83.686328 42.995889/-83.682517			
3810	4759	: 42.995427/-83.686867 42.994206/-83.683056			
3811	4760	Lat : Long:			
3812	4761	Work Typ: REPR WMB Done For:			
3813	4762	Address : 600			
3814	4763	Street : BLOOR AVE			
3815	4764	1st x-st: Dir W of S GRAND TRAVERSE ST			
3816	4765	2nd x-st: Dir N of ATHERTON RD			
3817	4766	Subdivsn: Lots:			
3818	4767	Stk Info: LOCATE FRT OF PROP & BTH SDS OF ST CREW ENROUTE			
3819	4768	Boring : N On-going project: N Working In or Near R/R Easement: N			
3820	4769	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC SPRNT4			
3821	4771	FLINTC 00001 MISDIGb 04/24/14 07:49:04 B41140140-00B EMER NEW GRID	FLINTC	B41140140	04/24/14
3822	4773	**** Underground ****			
3823	4774	Ticket : B41140140 Rcvd: 04/24/14 07:46 Oper: GMH Rev: 00B			
3824	4775	Org Tkt : B41140140 Rcvd: 04/24/14 07:48 Oper: GMH			
3825	4777	Digstart: 04/24/14 Time: 08:00			
3826	4778	Tkt Life: 05/15/14 Time: 23:59			
3827	4780	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3828	4781	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3829	4782	E-mail : NONE			
3830	4783	FieldCnt: PAUL Number: 810-397-7247			
3831	4785	County : GENESEE Place : FLINT /C			
3832	4787	Grids : 4302B8342C 4302B8342D			
3833	4788	Polygon : 43.044688/-83.705521 43.044574/-83.700255			
3834	4789	: 43.043279/-83.705551 43.043166/-83.700286			
3835	4790	Lat : Long:			
3836	4791	Work Typ: WMB Done For:			
3837	4792	Address : 131			
3838	4793	Street : E MCCLELLAN ST			
3839	4794	1st x-st: Dir E of MARTIN L KING AVE			
3840	4795	2nd x-st: Dir S of PASADENA AVE			

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3797	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address : 600	Street : BLOOR AVE
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3821	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 131	Street : E MCCLELLAN ST
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3821	1st x-st: Dir E of MARTIN L KING AVE	2nd x-st: Dir S of PASADENA AVE
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3841	4796	Subdivsn: Lots:			
3842	4797	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
3843	4798	Boring : N On-going project: N Working In or Near R/R Easement: N			
3844	4799	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
3845	4801	FLINTC 00002 MISDIGb 04/25/14 08:20:40 B41150224-00B EMER NEW GRID	FLINTC	B41150224	04/25/14
3846	4803	**** Underground ****			
3847	4804	Ticket : B41150224 Rcvd: 04/25/14 08:17 Oper: LRS Rev: 00B			
3848	4805	Org Tkt : B41150224 Rcvd: 04/25/14 08:20 Oper: LRS			
3849	4807	Digstart: 04/25/14 Time: 08:17			
3850	4808	Tkt Life: 05/16/14 Time: 23:59			
3851	4810	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3852	4811	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3853	4812	E-mail : NONE			
3854	4813	FieldCnt: CELL Number: 810-397-7247			
3855	4815	County : GENESEE Place : FLINT /C			
3856	4817	Grids : 4304C8341A 4304C8341B 4304D8341A 4304D8341B			
3857	4818	Polygon : 43.071615/-83.697436 43.071674/-83.693057			
3858	4819	: 43.070243/-83.697417 43.070302/-83.693038			
3859	4820	Lat : Long:			
3860	4821	Work Typ: W M B REPR Done For:			
3861	4822	Address : 630			
3862	4823	Street : E LORADO AVE			
3863	4824	1st x-st: Dir W of N SAGINAW ST			
3864	4825	2nd x-st: Dir S of E CARPENTER RD			
3865	4826	Subdivsn: Lots:			
3866	4827	Stk Info: LOCATE IFO ADDR & BTH SDS OF RD CREW EN ROUTE			
3867	4828	Boring : N On-going project: N Working In or Near R/R Easement: N			
3868	4829	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
3869	4831	FLINTC 00003 MISDIGb 04/25/14 08:24:04 B41150234-00B EMER NEW GRID	FLINTC	B41150234	04/25/14
3870	4833	**** Underground ****			
3871	4834	Ticket : B41150234 Rcvd: 04/25/14 08:20 Oper: LRS Rev: 00B			
3872	4835	Org Tkt : B41150234 Rcvd: 04/25/14 08:23 Oper: LRS			
3873	4837	Digstart: 04/25/14 Time: 12:00			
3874	4838	Tkt Life: 05/16/14 Time: 23:59			
3875	4840	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3876	4841	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3877	4842	E-mail : NONE			
3878	4843	FieldCnt: CELL Number: 810-397-7247			
3879	4845	County : GENESEE Place : FLINT /C			
3880	4847	Grids : 4301C8340A 4301C8341D			
3881	4848	Polygon : 43.023645/-83.686783 43.024990/-83.686233			
3882	4849	: 43.022023/-83.682818 43.023368/-83.682268			
3883	4850	Lat : Long:			
3884	4851	Work Typ: W M B REPR Done For:			
3885	4852	Address : 200			
3886	4853	Street : W H SCHWARTZ DR			
3887	4854	1st x-st: Dir W of CESAR CHAVEZ DR			
3888	4855	2nd x-st: Dir S of ROBERT T LONGWAY BLVD			

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3845	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 630	Street : E LORADO AVE
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3869	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 200	Street : W H SCHWARTZ DR
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3845	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir S of E CARPENTER RD
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3869	1st x-st: Dir W of CESAR CHAVEZ DR	2nd x-st: Dir S of ROBERT T LONGWAY BLVD
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3889	4856	Subdivsn: Lots:			
3890	4857	Stk Info: LOCATE 50 FT RADIUS OF THE BARRICADE AREA			
3891	4858	Boring : N On-going project: N Working In or Near R/R Easement: N			
3892	4859	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
3893	4861	FLINTC 00001 MISDIGb 04/24/14 07:49:04 B41140140-00B EMER NEW GRID	FLINTC	B41140140	04/24/14
3894	4863	**** Underground ****			
3895	4864	Ticket : B41140140 Rcvd: 04/24/14 07:46 Oper: GMH Rev: 00B			
3896	4865	Org Tkt : B41140140 Rcvd: 04/24/14 07:48 Oper: GMH			
3897	4867	Digstart: 04/24/14 Time: 08:00			
3898	4868	Tkt Life: 05/15/14 Time: 23:59			
3899	4870	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3900	4871	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3901	4872	E-mail : NONE			
3902	4873	FieldCnt: PAUL Number: 810-397-7247			
3903	4875	County : GENESEE Place : FLINT /C			
3904	4877	Grids : 4302B8342C 4302B8342D			
3905	4878	Polygon : 43.044688/-83.705521 43.044574/-83.700255			
3906	4879	: 43.043279/-83.705551 43.043166/-83.700286			
3907	4880	Lat : Long:			
3908	4881	Work Typ: WMB Done For:			
3909	4882	Address : 131			
3910	4883	Street : E MCCLELLAN ST			
3911	4884	1st x-st: Dir E of MARTIN L KING AVE			
3912	4885	2nd x-st: Dir S of PASADENA AVE			
3913	4886	Subdivsn: Lots:			
3914	4887	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
3915	4888	Boring : N On-going project: N Working In or Near R/R Easement: N			
3916	4889	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
3917	4891	FLINTC 00002 MISDIGb 04/25/14 08:20:40 B41150224-00B EMER NEW GRID	FLINTC	B41150224	04/25/14
3918	4893	**** Underground ****			
3919	4894	Ticket : B41150224 Rcvd: 04/25/14 08:17 Oper: LRS Rev: 00B			
3920	4895	Org Tkt : B41150224 Rcvd: 04/25/14 08:20 Oper: LRS			
3921	4897	Digstart: 04/25/14 Time: 08:17			
3922	4898	Tkt Life: 05/16/14 Time: 23:59			
3923	4900	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3924	4901	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3925	4902	E-mail : NONE			
3926	4903	FieldCnt: CELL Number: 810-397-7247			
3927	4905	County : GENESEE Place : FLINT /C			
3928	4907	Grids : 4304C8341A 4304C8341B 4304D8341A 4304D8341B			
3929	4908	Polygon : 43.071615/-83.697436 43.071674/-83.693057			
3930	4909	: 43.070243/-83.697417 43.070302/-83.693038			
3931	4910	Lat : Long:			
3932	4911	Work Typ: W M B REPR Done For:			
3933	4912	Address : 630			
3934	4913	Street : E LORADO AVE			
3935	4914	1st x-st: Dir W of N SAGINAW ST			
3936	4915	2nd x-st: Dir S of E CARPENTER RD			

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3893	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 131	Street : E MCCLELLAN ST
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3917	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 630	Street : E LORADO AVE
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3917	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir S of E CARPENTER RD
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3937	4916	Subdivsn: Lots:			
3938	4917	Stk Info: LOCATE IFO ADDR & BTH SDS OF RD CREW EN ROUTE			
3939	4918	Boring : N On-going project: N Working In or Near R/R Easement: N			
3940	4919	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
3941	4921	FLINTC 00003 MISDIGb 04/25/14 08:24:04 B41150234-00B EMER NEW GRID	FLINTC	B41150234	04/25/14
3942	4923	**** Underground ****			
3943	4924	Ticket : B41150234 Rcvd: 04/25/14 08:20 Oper: LRS Rev: 00B			
3944	4925	Org Tkt : B41150234 Rcvd: 04/25/14 08:23 Oper: LRS			
3945	4927	Digstart: 04/25/14 Time: 12:00			
3946	4928	Tkt Life: 05/16/14 Time: 23:59			
3947	4930	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3948	4931	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3949	4932	E-mail : NONE			
3950	4933	FieldCnt: CELL Number: 810-397-7247			
3951	4935	County : GENESEE Place : FLINT /C			
3952	4937	Grids : 4301C8340A 4301C8341D			
3953	4938	Polygon : 43.023645/-83.686783 43.024990/-83.686233			
3954	4939	: 43.022023/-83.682818 43.023368/-83.682268			
3955	4940	Lat : Long:			
3956	4941	Work Typ: W M B REPR Done For:			
3957	4942	Address : 200			
3958	4943	Street : W H SCHWARTZ DR			
3959	4944	1st x-st: Dir W of CESAR CHAVEZ DR			
3960	4945	2nd x-st: Dir S of ROBERT T LONGWAY BLVD			
3961	4946	Subdivsn: Lots:			
3962	4947	Stk Info: LOCATE 50 FT RADIUS OF THE BARRICADE AREA			
3963	4948	Boring : N On-going project: N Working In or Near R/R Easement: N			
3964	4949	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
3965	4951	FLINTC 00026 MISDIGb 04/25/14 14:51:31 B41151631-00B EMER NEW GRID	FLINTC	B41151631	04/25/14
3966	4953	**** Underground ****			
3967	4954	Ticket : B41151631 Rcvd: 04/25/14 14:49 Oper: HDK Rev: 00B			
3968	4955	Org Tkt : B41151631 Rcvd: 04/25/14 14:51 Oper: HDK			
3969	4957	Digstart: 04/25/14 Time: 14:49			
3970	4958	Tkt Life: 05/16/14 Time: 23:59			
3971	4960	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
3972	4961	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
3973	4962	E-mail : NONE			
3974	4963	FieldCnt: PAUL Number: 810-397-7247			
3975	4965	County : GENESEE Place : FLINT /C			
3976	4967	Grids : 4304C8342D 4304D8342D			
3977	4968	Polygon : 43.071715/-83.702171 43.071449/-83.700337			
3978	4969	: 43.070372/-83.702366 43.070106/-83.700532			
3979	4970	Lat : Long:			
3980	4971	Work Typ: WMB Done For:			
3981	4972	Address :			
3982	4973	Street : HARVARD ST			
3983	4974	1st x-st: Dir of E LORADO AVE			
3984	4975	2nd x-st: Dir E of MARTIN LUTHER KING			

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3941	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 200	Street : W H SCHWARTZ DR
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3965	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : HARVARD ST
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3941	1st x-st: Dir W of CESAR CHAVEZ DR	2nd x-st: Dir S of ROBERT T LONGWAY BLVD
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3965	1st x-st: Dir of E LORADO AVE	2nd x-st: Dir E of MARTIN LUTHER KING
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3985	4976	Subdivsn: Lots:			
3986	4977	Stk Info: S OF E CARPENTER RD LOCATE 50FT RADIUS OF NW COR OF HARVARD & E			
3987	4978	: LORADO CREW ON SITE			
3988	4979	Boring : N On-going project: N Working In or Near R/R Easement: N			
3989	4980	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
3990	4982	FLINTC 00005 MISDIGb 04/28/14 07:51:08 B41180183-00B EMER NEW GRID	FLINTC	B41180183	04/28/14
3991	4984	**** Underground ****			
3992	4985	Ticket : B41180183 Rcvd: 04/28/14 07:49 Oper: LCG Rev: 00B			
3993	4986	Org Tkt : B41180183 Rcvd: 04/28/14 07:50 Oper: LCG			
3994	4988	Digstart: 04/28/14 Time: 08:00			
3995	4989	Tkt Life: 05/19/14 Time: 23:59			
3996	4991	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
3997	4992	Phone : 810-577-8261 Ext: Fax :			
3998	4993	E-mail : NONE			
3999	4994	FieldCnt: Number:			
4000	4996	County : GENESEE Place : FLINT /C			
4001	4998	Grids : 4259A8343C 4259A8343D 4300D8343C 4300D8343D			
4002	4999	Polygon : 43.001934/-83.722572 43.003458/-83.718728			
4003	5000	: 42.999166/-83.721474 43.000690/-83.717630			
4004	5001	Lat : Long:			
4005	5002	Work Typ: WMB Done For:			
4006	5003	Address :			
4007	5004	Street : GAINEY AVE			
4008	5005	1st x-st: Dir of CUMMINGS AVE			
4009	5006	2nd x-st: Dir S of CORUNNA RD			
4010	5007	Subdivsn: Lots:			
4011	5008	Stk Info: LOCATE ENTIRE INTER CREW ENROUTE			
4012	5009	Boring : N On-going project: N Working In or Near R/R Easement: N			
4013	5010	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4014	5012	FLINTC 00008 MISDIGa 04/28/14 09:56:11 A41180355-00A EMER NEW GRID	FLINTC	A41180355	04/28/14
4015	5014	**** Underground ****			
4016	5015	Ticket : A41180355 Rcvd: 04/28/14 09:54 Oper: MRA Rev: 00A			
4017	5016	Org Tkt : A41180355 Rcvd: 04/28/14 09:55 Oper: MRA			
4018	5018	Digstart: 04/28/14 Time: 09:54			
4019	5019	Tkt Life: 05/19/14 Time: 23:59			
4020	5021	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4021	5022	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4022	5023	E-mail : NONE			
4023	5024	FieldCnt: CELL Number: 810-397-7247			
4024	5026	County : GENESEE Place : FLINT /C			
4025	5028	Grids : 4301B8343B 4301B8343C 4301C8343B 4301C8343C			
4026	5029	Polygon : 43.026088/-83.726136 43.025822/-83.724304			
4027	5030	: 43.024745/-83.726331 43.024479/-83.724499			
4028	5031	Lat : Long:			
4029	5032	Work Typ: REPR WMB Done For:			
4030	5033	Address :			
4031	5034	Street : FOREST HILL AVE			
4032	5035	1st x-st: Dir of BERKLEY ST			

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3990	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : GAINEY AVE
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4014	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	Street : FOREST HILL AVE
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3990	1st x-st: Dir of CUMMINGS AVE	2nd x-st: Dir S of CORUNNA RD
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4014	1st x-st: Dir of BERKLEY ST	2nd x-st: Dir W of CHEVROLET AVE
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4033	5036	2nd x-st: Dir W of CHEVROLET AVE			
4034	5037	Subdivsn: Lots:			
4035	5038	Stk Info: LOC ENTIRE INTER N OF FLUSHING RD CREW ON SITE			
4036	5039	Boring : N On-going project: N Working In or Near R/R Easement: N			
4037	5040	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4038	5042	FLINTC 00005 MISDIGb 04/29/14 07:46:41 B41190177-00B EMER NEW GRID	FLINTC	B41190177	04/29/14
4039	5044	**** Underground ****			
4040	5045	Ticket : B41190177 Rcvd: 04/29/14 07:42 Oper: MRP Rev: 00B			
4041	5046	Org Tkt : B41190177 Rcvd: 04/29/14 07:46 Oper: MRP			
4042	5048	Digstart: 04/29/14 Time: 07:42			
4043	5049	Tkt Life: 05/20/14 Time: 23:59			
4044	5051	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4045	5052	Phone : 810-577-8261 Ext: Fax :			
4046	5053	E-mail : NONE			
4047	5054	FieldCnt: Number:			
4048	5056	County : GENESEE Place : FLINT /C			
4049	5058	Grids : 4304B8339C			
4050	5059	Polygon : 43.076904/-83.657593 43.077147/-83.655638			
4051	5060	: 43.074936/-83.657349 43.075178/-83.655394			
4052	5061	Lat : Long:			
4053	5062	Work Typ: WMB Done For:			
4054	5063	Address :			
4055	5064	Street : W BOULEVARD DR			
4056	5065	1st x-st: Dir of CARPENTER RD			
4057	5066	2nd x-st: Dir E of DORT HWY			
4058	5067	Subdivsn: Lots:			
4059	5068	Stk Info: W OF BRANCH LOCATE 100FT RADIUS SE COR OF INTER W BOULEVARD &			
4060	5069	: CARPENTER CREW ON SITE			
4061	5070	Boring : N On-going project: N Working In or Near R/R Easement: N			
4062	5071	Members : ATTD BUCK01 CCFIBR CEEDIS CEGD20 CEGDIS CEGTRN COMTV2 FLINTC			
4063	5072	Members : GENCWWSANI			
4064	5074	FLINTC 00001 MISDIGa 04/29/14 07:49:58 A41190048-00A EMER NEW GRID	FLINTC	A41190048	04/29/14
4065	5076	**** Underground ****			
4066	5077	Ticket : A41190048 Rcvd: 04/29/14 07:47 Oper: PXP Rev: 00A			
4067	5078	Org Tkt : A41190048 Rcvd: 04/29/14 07:49 Oper: PXP			
4068	5080	Digstart: 04/29/14 Time: 12:00			
4069	5081	Tkt Life: 05/20/14 Time: 23:59			
4070	5083	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4071	5084	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4072	5085	E-mail : NONE			
4073	5086	FieldCnt: PAUL /CELL Number: 810-397-7247			
4074	5088	County : GENESEE Place : FLINT /C			
4075	5090	Grids : 4302A8338A 4302B8338A 4302A8339C 4302A8339D 4302B8339C			
4076	5091	: 4302B8339D			
4077	5092	Polygon : 43.046330/-83.655139 43.046438/-83.649603			
4078	5093	: 43.044934/-83.655111 43.045042/-83.649576			
4079	5094	Lat : Long:			
4080	5095	Work Typ: WMB Done For:			

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4038	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : W BOULEVARD DR
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4064	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2910	Street : WYOMING AVE
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4038	1st x-st: Dir of CARPENTER RD	2nd x-st: Dir E of DORT HWY
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4064	1st x-st: Dir N of LEITH ST	2nd x-st: Dir W of BRANCH RD
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4081	5096	Address : 2910			
4082	5097	Street : WYOMING AVE			
4083	5098	1st x-st: Dir N of LEITH ST			
4084	5099	2nd x-st: Dir W of BRANCH RD			
4085	5100	Subdivsn: Lots:			
4086	5101	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
4087	5102	Boring : N On-going project: N Working In or Near R/R Easement: N			
4088	5103	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
4089	5105	FLINTC 00013 MISDIGb 04/30/14 08:58:49 B41200422-00B EMER NEW GRID	FLINTC	B41200422	04/30/14
4090	5107	**** Underground ****			
4091	5108	Ticket : B41200422 Rcvd: 04/30/14 08:56 Oper: AMA Rev: 00B			
4092	5109	Org Tkt : B41200422 Rcvd: 04/30/14 08:58 Oper: AMA			
4093	5111	Digstart: 04/30/14 Time: 08:56			
4094	5112	Tkt Life: 05/21/14 Time: 23:59			
4095	5114	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4096	5115	Phone : 810-577-8261 Ext: Fax :			
4097	5116	E-mail : NONE			
4098	5117	FieldCnt: Number:			
4099	5119	County : GENESEE Place : FLINT /C			
4100	5121	Grids : 4303A8339A 4303B8339A 4303B8340D			
4101	5122	Polygon : 43.063576/-83.664454 43.062157/-83.663168			
4102	5123	: 43.059450/-83.669006 43.058031/-83.667720			
4103	5124	Lat : Long:			
4104	5125	Work Typ: REPR WMB Done For:			
4105	5126	Address :			
4106	5127	Street : W BOULEVARD DR			
4107	5128	1st x-st: Dir E of N DORT HWY			
4108	5129	2nd x-st: Dir N of STEWART AVE			
4109	5130	Subdivsn: Lots:			
4110	5131	Stk Info: LOCATE E SD W BOULEVARD ENTIRE 5100 BLOCK CREW ON SITE			
4111	5132	Boring : N On-going project: N Working In or Near R/R Easement: N			
4112	5133	Members : ATT ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC SPRNT4			
4113	5135	FLINTC 00028 MISDIGa 04/30/14 13:00:06 A41200933-00A EMER NEW GRID	FLINTC	A41200933	05/01/14
4114	5137	**** Underground ****			
4115	5138	Ticket : A41200933 Rcvd: 04/30/14 12:57 Oper: MRA Rev: 00A			
4116	5139	Org Tkt : A41200933 Rcvd: 04/30/14 12:59 Oper: MRA			
4117	5141	Digstart: 05/01/14 Time: 08:00			
4118	5142	Tkt Life: 05/22/14 Time: 23:59			
4119	5144	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4120	5145	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4121	5146	E-mail : NONE			
4122	5147	FieldCnt: CELL Number: 810-397-7247			
4123	5149	County : GENESEE Place : FLINT /C			
4124	5151	Grids : 4302C8339B 4302C8339C 4302D8339B 4302D8339C			
4125	5152	Polygon : 43.038039/-83.658515 43.037773/-83.656683			
4126	5153	: 43.036696/-83.658710 43.036430/-83.656878			
4127	5154	Lat : Long:			
4128	5155	Work Typ: REPR WMB Done For:			

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4089	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : W BOULEVARD DR
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4113	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	Street : HOFF ST
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4089	1st x-st: Dir E of N DORT HWY	2nd x-st: Dir N of STEWART AVE
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4113	1st x-st: Dir of WOODROW AVE	2nd x-st: Dir S of DELAWARE AVE
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4129	5156	Address :			
4130	5157	Street : HOFF ST			
4131	5158	1st x-st: Dir of WOODROW AVE			
4132	5159	2nd x-st: Dir S of DELAWARE AVE			
4133	5160	Subdivsn: Lots:			
4134	5161	Stk Info: W OF N DORT HWY LOC 50 FT RADIUS OF SE COR OF INTER W/ WOODROW RD			
4135	5162	Boring : N On-going project: N Working In or Near R/R Easement: N			
4136	5163	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4137	5165	FLINTC 00033 MISDIGb 05/01/14 14:46:06 B41211593-00B EMER NEW GRID	FLINTC	B41211593	05/02/14
4138	5167	**** Underground ****			
4139	5168	Ticket : B41211593 Rcvd: 05/01/14 14:43 Oper: DLG Rev: 00B			
4140	5169	Org Tkt : B41211593 Rcvd: 05/01/14 14:45 Oper: DLG			
4141	5171	Digstart: 05/02/14 Time: 08:00			
4142	5172	Tkt Life: 05/23/14 Time: 23:59			
4143	5174	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4144	5175	Phone : 810-577-8261 Ext: Fax :			
4145	5176	E-mail : NONE			
4146	5177	FieldCnt: Number:			
4147	5179	County : GENESEE Place : FLINT /C			
4148	5181	Grids : 4258A8342A 4258A8342B			
4149	5182	Polygon : 42.981265/-83.714083 42.981536/-83.712254			
4150	5183	: 42.979921/-83.713884 42.980192/-83.712055			
4151	5184	Lat : Long:			
4152	5185	Work Typ: WMB Done For:			
4153	5186	Address :			
4154	5187	Street : VAN SLYKE			
4155	5188	1st x-st: Dir of HEMPHILL RD			
4156	5189	2nd x-st: Dir of			
4157	5190	Subdivsn: Lots:			
4158	5191	Stk Info: SW COR OF INTER LOCATE 50 FT RADIUS OF BARRICADE IN PLACE			
4159	5192	Boring : N On-going project: N Working In or Near R/R Easement: N			
4160	5193	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
4161	5195	FLINTC 00003 MISDIGb 05/02/14 07:56:01 B41220104-00B EMER NEW GRID	FLINTC	B41220104	05/02/14
4162	5197	**** Underground ****			
4163	5198	Ticket : B41220104 Rcvd: 05/02/14 07:54 Oper: GMH Rev: 00B			
4164	5199	Org Tkt : B41220104 Rcvd: 05/02/14 07:55 Oper: GMH			
4165	5201	Digstart: 05/02/14 Time: 08:00			
4166	5202	Tkt Life: 05/23/14 Time: 23:59			
4167	5204	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4168	5205	Phone : 810-577-8261 Ext: Fax :			
4169	5206	E-mail : NONE			
4170	5207	FieldCnt: Number:			
4171	5209	County : GENESEE Place : FLINT /C			
4172	5211	Grids : 4300A8340B 4300A8340C			
4173	5212	Polygon : 43.015128/-83.673553 43.013810/-83.672826			
4174	5213	: 43.013768/-83.676016 43.012451/-83.675289			
4175	5214	Lat : Long:			
4176	5215	Work Typ: WMB Done For:			

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4137	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : VAN SLYKE
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4161	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 917	Street : E 9TH ST
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4161	1st x-st: Dir E of LAPEER RD	2nd x-st: Dir S of COURT ST
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4177	5216	Address : 917			
4178	5217	Street : E 9TH ST			
4179	5218	1st x-st: Dir E of LAPEER RD			
4180	5219	2nd x-st: Dir S of COURT ST			
4181	5220	Subdivsn: Lots:			
4182	5221	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
4183	5222	Boring : N On-going project: N Working In or Near R/R Easement: N			
4184	5223	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4185	5225	FLINTC 00007 MISDIGb 05/13/14 09:03:54 B41330399-00B NORM NEW GRID	FLINTC	B41330399	05/16/14
4186	5227	**** Underground ****			
4187	5228	Ticket : B41330399 Rcvd: 05/13/14 09:01 Oper: HDK Rev: 00B			
4188	5229	Org Tkt : B41330399 Rcvd: 05/13/14 09:03 Oper: HDK			
4189	5231	Digstart: 05/16/14 Time: 09:01			
4190	5232	Tkt Life: 06/06/14 Time: 23:59			
4191	5234	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4192	5235	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4193	5236	E-mail : NONE			
4194	5237	FieldCnt: PAUL Number: 810-397-7247			
4195	5239	County : GENESEE Place : FLINT /C			
4196	5241	Grids : 4300A8342A 4300A8342B 4301D8342A 4301D8342B			
4197	5242	Polygon : 43.020028/-83.711535 43.018949/-83.710270			
4198	5243	: 43.016891/-83.714209 43.015812/-83.712944			
4199	5244	Lat : Long:			
4200	5245	Work Typ: WMB Done For:			
4201	5246	Address : 1017			
4202	5247	Street : GLADWYN ST			
4203	5248	1st x-st: Dir S of FLUSHING RD			
4204	5249	2nd x-st: Dir E of DUPONT ST			
4205	5250	Subdivsn: Lots:			
4206	5251	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ON SITE			
4207	5252	Boring : N On-going project: N Working In or Near R/R Easement: N			
4208	5253	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD USSIG			
4209	5255	FLINTC 00009 MISDIGb 05/14/14 08:34:30 B41330399-01B EMER RXMT GRID	FLINTC	B41330399	05/14/14
4210	5257	**** Underground ****			
4211	5258	Ticket : B41330399 Rcvd: 05/14/14 08:33 Oper: LCG Rev: 01B			
4212	5259	Org Tkt : B41330399 Rcvd: 05/13/14 09:03 Oper: HDK			
4213	5261	Digstart: 05/14/14 Time: 08:33			
4214	5262	Tkt Life: 06/06/14 Time: 23:59			
4215	5264	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4216	5265	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4217	5266	E-mail : NONE			
4218	5267	FieldCnt: PAUL Number: 810-397-7247			
4219	5269	County : GENESEE Place : FLINT /C			
4220	5271	Grids : 4300A8342A 4300A8342B 4301D8342A 4301D8342B			
4221	5272	Polygon : 43.020028/-83.711535 43.018949/-83.710270			
4222	5273	: 43.016891/-83.714209 43.015812/-83.712944			
4223	5274	Lat : Long:			
4224	5275	Work Typ: WMB Done For:			

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4185	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1017	Street : GLADWYN ST
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4209	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1017	Street : GLADWYN ST
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4185	1st x-st: Dir S of FLUSHING RD	2nd x-st: Dir E of DUPONT ST
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4225	5276	Address : 1017			
4226	5277	Street : GLADWYN ST			
4227	5278	1st x-st: Dir S of FLUSHING RD			
4228	5279	2nd x-st: Dir E of DUPONT ST			
4229	5280	Subdivsn: Lots:			
4230	5281	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ON SITE			
4231	5282	Boring : N On-going project: N Working In or Near R/R Easement: N			
4232	5284	AddlInfo: 2ND CALL NOTE CHANGE IN PRIORITY, START DATE & TIME PER CALLER			
4233	5285	: CREW ON SITE REFER TO TKT FRM 5/13 --[LCG 05/14/2014 08:34 AM]			
4234	5287	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD USSIG			
4235	5289	FLINTC 00005 MISDIGb 05/22/14 07:23:19 B41211593-01B EMER RXMT GRID	FLINTC	B41211593	05/22/14
4236	5291	**** Underground ****			
4237	5292	Ticket : B41211593 Rcvd: 05/22/14 07:22 Oper: AMA Rev: 01B			
4238	5293	Org Tkt : B41211593 Rcvd: 05/01/14 14:45 Oper: DLG			
4239	5295	Digstart: 05/22/14 Time: 08:00			
4240	5296	Tkt Life: 05/23/14 Time: 23:59			
4241	5298	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4242	5299	Phone : 810-577-8261 Ext: Fax :			
4243	5300	E-mail : NONE			
4244	5301	FieldCnt: Number:			
4245	5303	County : GENESEE Place : FLINT /C			
4246	5305	Grids : 4258A8342A 4258A8342B			
4247	5306	Polygon : 42.981265/-83.714083 42.981536/-83.712254			
4248	5307	: 42.979921/-83.713884 42.980192/-83.712055			
4249	5308	Lat : Long:			
4250	5309	Work Typ: WMB Done For:			
4251	5310	Address :			
4252	5311	Street : VAN SLYKE			
4253	5312	1st x-st: Dir of HEMPHILL RD			
4254	5313	2nd x-st: Dir of			
4255	5314	Subdivsn: Lots:			
4256	5315	Stk Info: SW COR OF INTER LOCATE 50 FT RADIUS OF BARRICADE IN PLACE			
4257	5316	Boring : N On-going project: N Working In or Near R/R Easement: N			
4258	5318	AddlInfo: DESTROYED MARKINGS			
4259	5319	: 2ND CALL ALL UTILS NEEDED PER JEFF CREW ENROUTE REFER TO TKT FRM			
4260	5320	: 5/1--[AMA 05/22/2014 07:23 AM]			
4261	5322	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
4262	5324	FLINTC 00033 MISDIGb 05/27/14 14:30:15 B41472072-00B EMER NEW GRID	FLINTC	B41472072	05/28/14
4263	5326	**** Underground ****			
4264	5327	Ticket : B41472072 Rcvd: 05/27/14 14:27 Oper: LRS Rev: 00B			
4265	5328	Org Tkt : B41472072 Rcvd: 05/27/14 14:30 Oper: LRS			
4266	5330	Digstart: 05/28/14 Time: 08:00			
4267	5331	Tkt Life: 06/18/14 Time: 23:59			
4268	5333	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4269	5334	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4270	5335	E-mail : NONE			
4271	5336	FieldCnt: CEEL Number: 810-397-7247			
4272	5338	County : GENESEE Place : FLINT /C			

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4235	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : VAN SLYKE
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4262	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	W M B REPR	Address : 123	Street : BRUCE ST
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4262	1st x-st: Dir E of S SAGINAW ST	2nd x-st: Dir N of W ATHERTON RD
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4273	5340	Grids : 4259A8340B 4259A8340C 4300D8340B 4300D8340C			
4274	5341	Polygon : 43.000377/-83.678728 43.000379/-83.674667			
4275	5342	: 42.998976/-83.678727 42.998978/-83.674666			
4276	5343	Lat : Long:			
4277	5344	Work Typ: W M B REPR Done For:			
4278	5345	Address : 123			
4279	5346	Street : BRUCE ST			
4280	5347	1st x-st: Dir E of S SAGINAW ST			
4281	5348	2nd x-st: Dir N of W ATHERTON RD			
4282	5349	Subdivsn: Lots:			
4283	5350	Stk Info: LOCATE IFO ADDR & BTH SDS OF RD			
4284	5351	Boring : N On-going project: N Working In or Near R/R Easement: N			
4285	5352	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
4286	5354	FLINTC 00034 MISDIGb 05/27/14 14:32:24 B41472080-00B EMER NEW GRID	FLINTC	B41472080	05/28/14
4287	5356	**** Underground ****			
4288	5357	Ticket : B41472080 Rcvd: 05/27/14 14:30 Oper: LRS Rev: 00B			
4289	5358	Org Tkt : B41472080 Rcvd: 05/27/14 14:32 Oper: LRS			
4290	5360	Digstart: 05/28/14 Time: 08:00			
4291	5361	Tkt Life: 06/18/14 Time: 23:59			
4292	5363	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4293	5364	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4294	5365	E-mail : NONE			
4295	5366	FieldCnt: CEEL Number: 810-397-7247			
4296	5368	County : GENESEE Place : FLINT /C			
4297	5370	Grids : 4302C8342A 4302C8343D			
4298	5371	Polygon : 43.040919/-83.717064 43.040964/-83.715194			
4299	5372	: 43.037861/-83.716990 43.037906/-83.715120			
4300	5373	Lat : Long:			
4301	5374	Work Typ: REPR LEAKY VALVE BOX Done For:			
4302	5375	Address : 2502			
4303	5376	Street : N CHEVROLET AVE			
4304	5377	1st x-st: Dir N of DAYTON ST			
4305	5378	2nd x-st: Dir of			
4306	5379	Subdivsn: Lots:			
4307	5380	Stk Info: NE COR LOCATE IFO ADDR TO C/L OF RD			
4308	5381	Boring : N On-going project: N Working In or Near R/R Easement: N			
4309	5382	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4310	5384	FLINTC 00035 MISDIGb 05/27/14 14:34:29 B41472089-00B EMER NEW GRID	FLINTC	B41472089	05/28/14
4311	5386	**** Underground ****			
4312	5387	Ticket : B41472089 Rcvd: 05/27/14 14:32 Oper: LRS Rev: 00B			
4313	5388	Org Tkt : B41472089 Rcvd: 05/27/14 14:34 Oper: LRS			
4314	5390	Digstart: 05/28/14 Time: 08:00			
4315	5391	Tkt Life: 06/18/14 Time: 23:59			
4316	5393	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4317	5394	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4318	5395	E-mail : NONE			
4319	5396	FieldCnt: CEEL Number: 810-397-7247			
4320	5398	County : GENESEE Place : FLINT /C			

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4286	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR LEAKY VALVE BOX	Address : 2502	Street : N CHEVROLET AVE
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4310	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR LEAKY VALVE BOX	Address : 3617	Street : CLAIRMONT ST
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4286	1st x-st: Dir N of DAYTON ST	2nd x-st: Dir of
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4310	1st x-st: Dir W of S BALLENGER HWY	2nd x-st: Dir S of CORUNNA RD
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4321	5400	Grids : 4259A8343A 4259A8344D			
4322	5401	Polygon : 42.998022/-83.736334 42.998158/-83.732233			
4323	5402	: 42.996650/-83.736288 42.996787/-83.732187			
4324	5403	Lat : Long:			
4325	5404	Work Typ: REPR LEAKY VALVE BOX Done For:			
4326	5405	Address : 3617			
4327	5406	Street : CLAIRMONT ST			
4328	5407	1st x-st: Dir W of S BALLENGER HWY			
4329	5408	2nd x-st: Dir S of CORUNNA RD			
4330	5409	Subdivsn: Lots:			
4331	5410	Stk Info: LOCATE IFO ADDR TO C/L OF RD			
4332	5411	Boring : N On-going project: N Working In or Near R/R Easement: N			
4333	5412	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC			
4334	5414	FLINTC 00014 MISDIGb 05/29/14 11:55:24 B41491228-00B EMER NEW GRID	FLINTC	B41491228	05/29/14
4335	5416	**** Underground ****			
4336	5417	Ticket : B41491228 Rcvd: 05/29/14 11:50 Oper: DJH Rev: 00B			
4337	5418	Org Tkt : B41491228 Rcvd: 05/29/14 11:55 Oper: DJH			
4338	5420	Digstart: 05/29/14 Time: 11:50			
4339	5421	Tkt Life: 06/19/14 Time: 23:59			
4340	5423	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4341	5424	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4342	5425	E-mail : NONE			
4343	5426	FieldCnt: PAUL - CELL Number: 810-397-7247			
4344	5428	County : GENESEE Place : FLINT /C			
4345	5430	Grids : 4300A8341B 4300B8341B			
4346	5431	Polygon : 43.013398/-83.694899 43.014436/-83.693551			
4347	5432	: 43.010997/-83.693050 43.012036/-83.691702			
4348	5433	Lat : Long:			
4349	5434	Work Typ: WMB Done For:			
4350	5435	Address : 614			
4351	5436	Street : GRAND TRAVERSE ST			
4352	5437	1st x-st: Dir of 2ND ST			
4353	5438	2nd x-st: Dir of 3RD ST			
4354	5439	Subdivsn: Lots:			
4355	5440	Stk Info: LOCATE BTH SDS OF RD IFO ADDR 614 S/B GRAND TRAVERSE GOING 60FT S			
4356	5441	: CREW EN ROUTE			
4357	5442	Boring : N On-going project: N Working In or Near R/R Easement: N			
4358	5443	Members : ATT ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC			
4359	5444	Members : GRTLKC USSIG WINDFBR			
4360	5446	FLINTC 00019 MISDIGa 06/04/14 17:15:34 A41551207-00A EMER NEW GRID	FLINTC	A41551207	06/05/14
4361	5448	**** Underground ****			
4362	5449	Ticket : A41551207 Rcvd: 06/04/14 17:13 Oper: BMF Rev: 00A			
4363	5450	Org Tkt : A41551207 Rcvd: 06/04/14 17:15 Oper: BMF			
4364	5452	Digstart: 06/05/14 Time: 08:00			
4365	5453	Tkt Life: 06/26/14 Time: 23:59			
4366	5455	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4367	5456	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4368	5457	E-mail : NONE			

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4334	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 614	Street : GRAND TRAVERSE ST
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4360	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 5322	Street : GLENN AVE
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4334	1st x-st: Dir of 2ND ST	2nd x-st: Dir of 3RD ST
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4360	1st x-st: Dir N of W PIERSON RD	2nd x-st: Dir W of DUPONT ST
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4369	5458	FieldCnt: PAUL /CELL Number: 810-397-7247			
4370	5460	County : GENESEE Place : FLINT /C			
4371	5462	Grids : 4303A8342A 4303B8342A 4303A8343D 4303B8343D			
4372	5463	Polygon : 43.064704/-83.718179 43.064782/-83.716310			
4373	5464	: 43.061050/-83.718027 43.061127/-83.716159			
4374	5465	Lat : Long:			
4375	5466	Work Typ: WMB Done For:			
4376	5467	Address : 5322			
4377	5468	Street : GLENN AVE			
4378	5469	1st x-st: Dir N of W PIERSON RD			
4379	5470	2nd x-st: Dir W of DUPONT ST			
4380	5471	Subdivsn: Lots:			
4381	5472	Stk Info: LOCATE FRT OF LOT & BTH SDS OF RD			
4382	5473	Boring : N On-going project: N Working In or Near R/R Easement: N			
4383	5474	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4384	5476	FLINTC 00034 MISDIGb 06/09/14 18:04:48 B41602663-00B EMER NEW GRID	FLINTC	B41602663	06/10/14
4385	5478	**** Underground ****			
4386	5479	Ticket : B41602663 Rcvd: 06/09/14 18:03 Oper: SMG Rev: 00B			
4387	5480	Org Tkt : B41602663 Rcvd: 06/09/14 18:04 Oper: SMG			
4388	5482	Digstart: 06/10/14 Time: 08:00			
4389	5483	Tkt Life: 07/01/14 Time: 23:59			
4390	5485	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4391	5486	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4392	5487	E-mail : NONE			
4393	5488	FieldCnt: PAUL - CELL Number: 810-397-7247			
4394	5490	County : GENESEE Place : FLINT /C			
4395	5492	Grids : 4302B8339A 4302B8340D			
4396	5493	Polygon : 43.043722/-83.669138 43.043838/-83.664801			
4397	5494	: 43.042349/-83.669101 43.042465/-83.664764			
4398	5495	Lat : Long:			
4399	5496	Work Typ: WMB Done For:			
4400	5497	Address : 1713			
4401	5498	Street : LEITH ST			
4402	5499	1st x-st: Dir W of N FRANKLIN AVE			
4403	5500	2nd x-st: Dir N of DAVISON RD			
4404	5501	Subdivsn: Lots:			
4405	5502	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
4406	5503	Boring : N On-going project: N Working In or Near R/R Easement: N			
4407	5504	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
4408	5506	FLINTC 00035 MISDIGb 06/09/14 18:06:30 B41602665-00B EMER NEW GRID	FLINTC	B41602665	06/10/14
4409	5508	**** Underground ****			
4410	5509	Ticket : B41602665 Rcvd: 06/09/14 18:04 Oper: SMG Rev: 00B			
4411	5510	Org Tkt : B41602665 Rcvd: 06/09/14 18:06 Oper: SMG			
4412	5512	Digstart: 06/10/14 Time: 08:00			
4413	5513	Tkt Life: 07/01/14 Time: 23:59			
4414	5515	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4415	5516	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4416	5517	E-mail : NONE			

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4384	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1713	Street : LEITH ST
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4408	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : ROBERT T LONGWAY BLVD
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4384	1st x-st: Dir W of N FRANKLIN AVE	2nd x-st: Dir N of DAVISON RD
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4408	1st x-st: Dir of VERNON AVE	2nd x-st: Dir W of N DORT HWY
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4417	5518	FieldCnt: PAUL - CELL Number: 810-397-7247			
4418	5520	County : GENESEE Place : FLINT /C			
4419	5522	Grids : 4301B8339B 4301C8339B			
4420	5523	Polygon : 43.026957/-83.662349 43.026980/-83.660478			
4421	5524	: 43.024271/-83.662316 43.024294/-83.660446			
4422	5525	Lat : Long:			
4423	5526	Work Typ: WMB Done For:			
4424	5527	Address :			
4425	5528	Street : ROBERT T LONGWAY BLVD			
4426	5529	1st x-st: Dir of VERNON AVE			
4427	5530	2nd x-st: Dir W of N DORT HWY			
4428	5531	Subdivsn: Lots:			
4429	5532	Stk Info: LOCATE 50FT RADIUS OF BARRICADE AT INTER OF ROBERT T LONGWAY BLVD &			
4430	5533	: VERNON AVE			
4431	5534	Boring : N On-going project: N Working In or Near R/R Easement: N			
4432	5535	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4433	5537	FLINTC 00035 MISDIGb 06/09/14 18:06:30 B41602665-00B EMER NEW GRID	FLINTC	B41602665	06/10/14
4434	5539	**** Underground ****			
4435	5540	Ticket : B41602665 Rcvd: 06/09/14 18:04 Oper: SMG Rev: 00B			
4436	5541	Org Tkt : B41602665 Rcvd: 06/09/14 18:06 Oper: SMG			
4437	5543	Digstart: 06/10/14 Time: 08:00			
4438	5544	Tkt Life: 07/01/14 Time: 23:59			
4439	5546	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4440	5547	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4441	5548	E-mail : NONE			
4442	5549	FieldCnt: PAUL - CELL Number: 810-397-7247			
4443	5551	County : GENESEE Place : FLINT /C			
4444	5553	Grids : 4301B8339B 4301C8339B			
4445	5554	Polygon : 43.026957/-83.662349 43.026980/-83.660478			
4446	5555	: 43.024271/-83.662316 43.024294/-83.660446			
4447	5556	Lat : Long:			
4448	5557	Work Typ: WMB Done For:			
4449	5558	Address :			
4450	5559	Street : ROBERT T LONGWAY BLVD			
4451	5560	1st x-st: Dir of VERNON AVE			
4452	5561	2nd x-st: Dir W of N DORT HWY			
4453	5562	Subdivsn: Lots:			
4454	5563	Stk Info: LOCATE 50FT RADIUS OF BARRICADE AT INTER OF ROBERT T LONGWAY BLVD &			
4455	5564	: VERNON AVE			
4456	5565	Boring : N On-going project: N Working In or Near R/R Easement: N			
4457	5566	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4458	5568	FLINTC 00007 MISDIGb 06/17/14 08:04:05 B41680282-00B EMER NEW GRID	FLINTC	B41680282	06/17/14
4459	5570	**** Underground ****			
4460	5571	Ticket : B41680282 Rcvd: 06/17/14 08:02 Oper: SLD Rev: 00B			
4461	5572	Org Tkt : B41680282 Rcvd: 06/17/14 08:03 Oper: SLD			
4462	5574	Digstart: 06/17/14 Time: 08:02			
4463	5575	Tkt Life: 07/08/14 Time: 23:59			
4464	5577	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			

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4433	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : ROBERT T LONGWAY BLVD
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4458	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1037	Street : E ALMA AVE
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4433	1st x-st: Dir of VERNON AVE	2nd x-st: Dir W of N DORT HWY
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4458	1st x-st: Dir W of I-475	2nd x-st: Dir S of CARPENTER RD
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4465	5578	Phone : 810-577-8261 Ext: Fax :			
4466	5579	E-mail : NONE			
4467	5580	FieldCnt: Number:			
4468	5582	County : GENESEE Place : FLINT /C			
4469	5584	Grids : 4304C8341C 4304C8341D			
4470	5585	Polygon : 43.073843/-83.688608 43.073890/-83.683732			
4471	5586	: 43.072484/-83.688595 43.072532/-83.683719			
4472	5587	Lat : Long:			
4473	5588	Work Typ: WMB Done For:			
4474	5589	Address : 1037			
4475	5590	Street : E ALMA AVE			
4476	5591	1st x-st: Dir W of I-475			
4477	5592	2nd x-st: Dir S of CARPENTER RD			
4478	5593	Subdivsn: Lots:			
4479	5594	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
4480	5595	Boring : N On-going project: N Working In or Near R/R Easement: N			
4481	5596	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
4482	5598	FLINTC 00005 MISDIGb 06/24/14 08:02:13 B41750272-00B EMER NEW GRID	FLINTC	B41750272	06/24/14
4483	5600	**** Underground ****			
4484	5601	Ticket : B41750272 Rcvd: 06/24/14 07:59 Oper: BMB Rev: 00B			
4485	5602	Org Tkt : B41750272 Rcvd: 06/24/14 08:01 Oper: BMB			
4486	5604	Digstart: 06/24/14 Time: 08:00			
4487	5605	Tkt Life: 07/15/14 Time: 23:59			
4488	5607	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4489	5608	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4490	5609	E-mail : NONE			
4491	5610	FieldCnt: PAUL SIMPSON - CELL Number: 810-397-7247			
4492	5612	County : GENESEE Place : FLINT /C			
4493	5614	Grids : 4302A8341B 4302A8341C 4302A8341D			
4494	5615	Polygon : 43.047503/-83.691772 43.047643/-83.686298			
4495	5616	: 43.046137/-83.691737 43.046278/-83.686263			
4496	5617	Lat : Long:			
4497	5618	Work Typ: WMB Done For:			
4498	5619	Address :			
4499	5620	Street : E PASADENA AVE			
4500	5621	1st x-st: Dir W of INDUSTRIAL AVE			
4501	5622	2nd x-st: Dir S of PEARSON RD			
4502	5623	Subdivsn: Lots:			
4503	5624	Stk Info: E OF SAGINAW RD LOCATE 50 FT RADIUS OF BARRICADE LOC APX 150 FT W			
4504	5625	: OF INDUSTRIAL AVE CREW EN ROUTE			
4505	5626	Boring : N On-going project: N Working In or Near R/R Easement: N			
4506	5627	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4507	5629	FLINTC 00006 MISDIGb 06/24/14 08:03:57 B41750281-00B EMER NEW GRID	FLINTC	B41750281	06/24/14
4508	5631	**** Underground ****			
4509	5632	Ticket : B41750281 Rcvd: 06/24/14 08:02 Oper: BMB Rev: 00B			
4510	5633	Org Tkt : B41750281 Rcvd: 06/24/14 08:03 Oper: BMB			
4511	5635	Digstart: 06/24/14 Time: 12:00			
4512	5636	Tkt Life: 07/15/14 Time: 23:59			

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4482	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : E PASADENA AVE
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4507	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : DAMON ST
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4482	1st x-st: Dir W of INDUSTRIAL AVE	2nd x-st: Dir S of PEARSON RD
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4507	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir S of E STEWART AVE
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4513	5638	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4514	5639	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4515	5640	E-mail : NONE			
4516	5641	FieldCnt: PAUL SIMPSON - CELL Number: 810-397-7247			
4517	5643	County : GENESEE Place : FLINT /C			
4518	5645	Grids : 4303D8341A 4303D8341B 4303D8342D			
4519	5646	Polygon : 43.052763/-83.700274 43.052850/-83.692651			
4520	5647	: 43.051404/-83.700259 43.051491/-83.692635			
4521	5648	Lat : Long:			
4522	5649	Work Typ: WMB Done For:			
4523	5650	Address :			
4524	5651	Street : DAMON ST			
4525	5652	1st x-st: Dir W of N SAGINAW ST			
4526	5653	2nd x-st: Dir S of E STEWART AVE			
4527	5654	Subdivsn: Lots:			
4528	5655	Stk Info: LOCATE 50 FT RADIUS OF BARRICADE LOC APX 150 FT W OF N SAGINAW ST			
4529	5656	: CREW EN ROUTE			
4530	5657	Boring : N On-going project: N Working In or Near R/R Easement: N			
4531	5658	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4532	5660	FLINTC 00019 MISDIGa 06/25/14 13:26:09 A41760603-00A EMER NEW GRID	FLINTC	A41760603	06/26/14
4533	5662	**** Underground ****			
4534	5663	Ticket : A41760603 Rcvd: 06/25/14 13:22 Oper: LCP Rev: 00A			
4535	5664	Org Tkt : A41760603 Rcvd: 06/25/14 13:25 Oper: LCP			
4536	5666	Digstart: 06/26/14 Time: 08:00			
4537	5667	Tkt Life: 07/17/14 Time: 23:59			
4538	5669	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4539	5670	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4540	5671	E-mail : NONE			
4541	5672	FieldCnt: PAUL CELL Number: 810-397-7247			
4542	5674	County : GENESEE Place : BURTON /C			
4543	5676	Grids : 4302A8338D 4302B8338D			
4544	5677	Polygon : 43.048066/-83.636576 43.048107/-83.634723			
4545	5678	: 43.042404/-83.636449 43.042445/-83.634596			
4546	5679	Lat : Long:			
4547	5680	Work Typ: REPR WTR SERV LKG Done For:			
4548	5681	Address :			
4549	5682	Street : N CENTER RD			
4550	5683	1st x-st: Dir S of RICHFIELD RD			
4551	5684	2nd x-st: Dir N of LEITH ST			
4552	5685	Subdivsn: Lots:			
4553	5686	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD IFO ADDR G3062 ALSO SENT TO			
4554	5687	: FLINT/C			
4555	5688	Boring : N On-going project: N Working In or Near R/R Easement: N			
4556	5689	Members : ATTD BURTON CEEDIS CEGDIS CEGTRN COMTV2 DETWTR FLINTC GENCRC			
4557	5691	FLINTC 00020 MISDIGa 06/25/14 13:26:59 A41760605-00A EMER NEW GRID	FLINTC	A41760605	06/26/14
4558	5693	**** Underground ****			
4559	5694	Ticket : A41760605 Rcvd: 06/25/14 13:25 Oper: LCP Rev: 00A			
4560	5695	Org Tkt : A41760605 Rcvd: 06/25/14 13:26 Oper: LCP			

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4532	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WTR SERV	Address :	Street : N CENTER RD
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4557	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WTR SERV	Address :	Street : N CENTER RD
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4532	1st x-st: Dir S of RICHFIELD RD	2nd x-st: Dir N of LEITH ST
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4561	5697	Digstart: 06/26/14 Time: 08:00			
4562	5698	Tkt Life: 07/17/14 Time: 23:59			
4563	5700	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4564	5701	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4565	5702	E-mail : NONE			
4566	5703	FieldCnt: PAUL CELL Number: 810-397-7247			
4567	5705	County : GENESEE Place : FLINT /C			
4568	5707	Grids : 4302A8338D 4302B8338D			
4569	5708	Polygon : 43.048041/-83.636499 43.048083/-83.634645			
4570	5709	: 43.042398/-83.636372 43.042440/-83.634518			
4571	5710	Lat : Long:			
4572	5711	Work Typ: REPR WTR SERV LKG Done For:			
4573	5712	Address :			
4574	5713	Street : N CENTER RD			
4575	5714	1st x-st: Dir S of RICHFIELD RD			
4576	5715	2nd x-st: Dir N of LEITH ST			
4577	5716	Subdivsn: Lots:			
4578	5717	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD IFO ADDR G3062 ALSO SENT TO			
4579	5718	: BURTON/C			
4580	5719	Boring : N On-going project: N Working In or Near R/R Easement: N			
4581	5720	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 DETWTR FLINTC GENCRC			
4582	5722	FLINTC 00003 MISDIGb 06/26/14 08:17:08 B41770306-00B EMER NEW GRID	FLINTC	B41770306	06/26/14
4583	5724	**** Underground ****			
4584	5725	Ticket : B41770306 Rcvd: 06/26/14 08:15 Oper: HDK Rev: 00B			
4585	5726	Org Tkt : B41770306 Rcvd: 06/26/14 08:17 Oper: HDK			
4586	5728	Digstart: 06/26/14 Time: 08:15			
4587	5729	Tkt Life: 07/17/14 Time: 23:59			
4588	5731	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4589	5732	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4590	5733	E-mail : NONE			
4591	5734	FieldCnt: PAUL Number: 810-397-7247			
4592	5736	County : GENESEE Place : FLINT /C			
4593	5738	Grids : 4302A8338A 4302A8339C 4302A8339D			
4594	5739	Polygon : 43.049214/-83.655191 43.049289/-83.649642			
4595	5740	: 43.047855/-83.655173 43.047930/-83.649623			
4596	5741	Lat : Long:			
4597	5742	Work Typ: WMB Done For:			
4598	5743	Address : 2951			
4599	5744	Street : HENRY ST			
4600	5745	1st x-st: Dir E of WESTERN RD			
4601	5746	2nd x-st: Dir S of RICHFIELD RD			
4602	5747	Subdivsn: Lots:			
4603	5748	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
4604	5749	Boring : Y On-going project: N Working In or Near R/R Easement: N			
4605	5750	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
4606	5752	FLINTC 00004 MISDIGb 06/26/14 08:19:35 B41770312-00B NORM NEW GRID	FLINTC	B41770312	07/01/14
4607	5754	**** Underground ****			
4608	5755	Ticket : B41770312 Rcvd: 06/26/14 08:17 Oper: HDK Rev: 00B			

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4582	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 2951	Street : HENRY ST
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4606	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	CUT & CAP WT	Address :	Street : E FIRST ST
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4582	1st x-st: Dir E of WESTERN RD	2nd x-st: Dir S of RICHFIELD RD
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4606	1st x-st: Dir of HARRISON ST	2nd x-st: Dir N of COURT ST
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4609	5756	Org Tkt : B41770312 Rcvd: 06/26/14 08:19 Oper: HDK			
4610	5758	Digstart: 07/01/14 Time: 08:17			
4611	5759	Tkt Life: 07/22/14 Time: 23:59			
4612	5761	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4613	5762	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4614	5763	E-mail : NONE			
4615	5764	FieldCnt: PAUL Number: 810-397-7247			
4616	5766	County : GENESEE Place : FLINT /C			
4617	5768	Grids : 4300A8341C 4300A8341D 4301D8341C 4301D8341D			
4618	5769	Polygon : 43.018122/-83.687765 43.016804/-83.687046			
4619	5770	: 43.016636/-83.690490 43.015318/-83.689771			
4620	5771	Lat : Long:			
4621	5772	Work Typ: CUT & CAP WTR SERV Done For:			
4622	5773	Address :			
4623	5774	Street : E FIRST ST			
4624	5775	1st x-st: Dir of HARRISON ST			
4625	5776	2nd x-st: Dir N of COURT ST			
4626	5777	Subdivsn: Lots:			
4627	5778	Stk Info: E OF SAGINAW LOCATE BTH SDS OF E 1ST ST BEG AT HARRISON GO E 125FT			
4628	5779	Boring : N On-going project: N Working In or Near R/R Easement: N			
4629	5780	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC GENCRC			
4630	5782	FLINTC 00063 MISDIGb 06/30/14 17:46:42 B41812498-00B EMER NEW GRID	FLINTC	B41812498	07/01/14
4631	5784	**** Underground ****			
4632	5785	Ticket : B41812498 Rcvd: 06/30/14 17:43 Oper: DLG Rev: 00B			
4633	5786	Org Tkt : B41812498 Rcvd: 06/30/14 17:46 Oper: DLG			
4634	5788	Digstart: 07/01/14 Time: 08:00			
4635	5789	Tkt Life: 07/22/14 Time: 23:59			
4636	5791	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4637	5792	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4638	5793	E-mail : NONE			
4639	5794	FieldCnt: PAUL CELL Number: 810-397-7247			
4640	5796	County : GENESEE Place : FLINT /C			
4641	5798	Grids : 4300A8343B 4300B8343A 4300B8343B			
4642	5799	Polygon : 43.012483/-83.729470 43.012749/-83.727638			
4643	5800	: 43.011140/-83.729275 43.011406/-83.727443			
4644	5801	Lat : Long:			
4645	5802	Work Typ: WMB Done For:			
4646	5803	Address :			
4647	5804	Street : SHERWOOD DR			
4648	5805	1st x-st: Dir of WESTCOMBE AVE			
4649	5806	2nd x-st: Dir of			
4650	5807	Subdivsn: Lots:			
4651	5808	Stk Info: LOCATE 50 FT RADIUS OF NW COR OF INTER			
4652	5809	Boring : N On-going project: N Working In or Near R/R Easement: N			
4653	5810	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4654	5812	FLINTC 00055 MISDIGb 07/01/14 20:40:42 B41822359-00B EMER NEW GRID	FLINTC	B41822359	07/02/14
4655	5814	**** Underground ****			
4656	5815	Ticket : B41822359 Rcvd: 07/01/14 20:38 Oper: JAL Rev: 00B			

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4630	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : SHERWOOD DR
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4654	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : S SAGINAW ST
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4654	1st x-st: Dir of E KEARSLEY ST	2nd x-st: Dir of
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4657	5816	Org Tkt : B41822359 Rcvd: 07/01/14 20:40 Oper: JAL			
4658	5818	Digstart: 07/02/14 Time: 08:00			
4659	5819	Tkt Life: 07/23/14 Time: 23:59			
4660	5821	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4661	5822	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4662	5823	E-mail : NONE			
4663	5824	FieldCnt: PAUL - CELL Number: 810-397-7247			
4664	5826	County : GENESEE Place : FLINT /C			
4665	5828	Grids : 4300A8341B 4300A8341C 4301D8341B 4301D8341C			
4666	5829	Polygon : 43.017590/-83.692233 43.017324/-83.690401			
4667	5830	: 43.016247/-83.692428 43.015981/-83.690596			
4668	5831	Lat : Long:			
4669	5832	Work Typ: WMB Done For:			
4670	5833	Address :			
4671	5834	Street : S SAGINAW ST			
4672	5835	1st x-st: Dir of E KEARSLEY ST			
4673	5836	2nd x-st: Dir of			
4674	5837	Subdivsn: Lots:			
4675	5838	Stk Info: LOCATE 50FT RADIUS OF NE COR OF INTER			
4676	5839	Boring : N On-going project: N Working In or Near R/R Easement: N			
4677	5840	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC USSIG			
4678	5842	FLINTC 00056 MISDIGb 07/01/14 20:42:05 B41822360-00B EMER NEW GRID	FLINTC	B41822360	07/02/14
4679	5844	**** Underground ****			
4680	5845	Ticket : B41822360 Rcvd: 07/01/14 20:40 Oper: JAL Rev: 00B			
4681	5846	Org Tkt : B41822360 Rcvd: 07/01/14 20:41 Oper: JAL			
4682	5848	Digstart: 07/02/14 Time: 08:00			
4683	5849	Tkt Life: 07/23/14 Time: 23:59			
4684	5851	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4685	5852	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4686	5853	E-mail : NONE			
4687	5854	FieldCnt: PAUL - CELL Number: 810-397-7247			
4688	5856	County : GENESEE Place : FLINT /C			
4689	5858	Grids : 4300C8342A 4300C8342B			
4690	5859	Polygon : 43.007957/-83.710457 43.006612/-83.709682			
4691	5860	: 43.006209/-83.713491 43.004864/-83.712717			
4692	5861	Lat : Long:			
4693	5862	Work Typ: WMB Done For:			
4694	5863	Address : 1926			
4695	5864	Street : CORUNNA RD			
4696	5865	1st x-st: Dir S of W COURT ST			
4697	5866	2nd x-st: Dir W of PERSHING ST			
4698	5867	Subdivsn: Lots:			
4699	5868	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
4700	5869	Boring : N On-going project: N Working In or Near R/R Easement: N			
4701	5870	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG			
4702	5872	FLINTC 00025 MISDIGb 07/08/14 19:11:18 B41892535-00B EMER NEW GRID	FLINTC	B41892535	07/09/14
4703	5874	**** Underground ****			
4704	5875	Ticket : B41892535 Rcvd: 07/08/14 19:09 Oper: DFB Rev: 00B			

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4678	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1926	Street : CORUNNA RD
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4702	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : W KEARSLEY ST
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4702	1st x-st: Dir of BUCKHAM ALY	2nd x-st: Dir of S SAGINAW ST
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4705	5876	Org Tkt : B41892535 Rcvd: 07/08/14 19:10 Oper: DFB			
4706	5878	Digstart: 07/09/14 Time: 08:00			
4707	5879	Tkt Life: 07/30/14 Time: 23:59			
4708	5881	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4709	5882	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4710	5883	E-mail : NONE			
4711	5884	FieldCnt: Number:			
4712	5886	County : GENESEE Place : FLINT /C			
4713	5888	Grids : 4300A8341B 4300A8341C 4301D8341B 4301D8341C			
4714	5889	Polygon : 43.017892/-83.691247 43.016607/-83.690396			
4715	5890	: 43.016542/-83.693287 43.015256/-83.692436			
4716	5891	Lat : Long:			
4717	5892	Work Typ: WMB Done For:			
4718	5893	Address :			
4719	5894	Street : W KEARSLEY ST			
4720	5895	1st x-st: Dir of BUCKHAM ALY			
4721	5896	2nd x-st: Dir of S SAGINAW ST			
4722	5897	Subdivsn: Lots:			
4723	5898	Stk Info: LOCATE BTH SDS OF RD BET X-STS			
4724	5899	Boring : N On-going project: N Working In or Near R/R Easement: N			
4725	5900	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC USSIG			
4726	5902	FLINTC 00039 MISDIGb 07/09/14 13:31:54 B41901578-00B EMER NEW GRID	FLINTC	B41901578	07/10/14
4727	5904	**** Underground ****			
4728	5905	Ticket : B41901578 Rcvd: 07/09/14 13:29 Oper: JLK Rev: 00B			
4729	5906	Org Tkt : B41901578 Rcvd: 07/09/14 13:31 Oper: JLK			
4730	5908	Digstart: 07/10/14 Time: 08:00			
4731	5909	Tkt Life: 07/31/14 Time: 23:59			
4732	5911	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4733	5912	Phone : 810-577-8261 Ext: Fax :			
4734	5913	E-mail : NONE			
4735	5914	FieldCnt: Number:			
4736	5916	County : GENESEE Place : FLINT /C			
4737	5918	Grids : 4301C8342A 4301C8343D			
4738	5919	Polygon : 43.024855/-83.716371 43.023776/-83.713732			
4739	5920	: 43.022846/-83.717192 43.021767/-83.714553			
4740	5921	Lat : Long:			
4741	5922	Work Typ: WMB Done For:			
4742	5923	Address :			
4743	5924	Street : WOODBRIDGE ST			
4744	5925	1st x-st: Dir of STEVENSON ST			
4745	5926	2nd x-st: Dir N of FLUSHING RD			
4746	5927	Subdivsn: Lots:			
4747	5928	Stk Info: E OF CHEVROLET LOCATE 30 FT RADIUS OF EXIST FIRE HYDT LOC NE COR			
4748	5929	: OF INTER OF WOODBRIDGE & STEVENSON			
4749	5930	Boring : N On-going project: N Working In or Near R/R Easement: N			
4750	5931	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
4751	5933	FLINTC 00002 MISDIGa 07/16/14 07:44:41 A41970082-00A EMER NEW GRID	FLINTC	A41970082	07/16/14
4752	5935	**** Underground ****			

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4726	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : WOODBRIDGE ST
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4751	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : DUPONT ST
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4726	1st x-st: Dir of STEVENSON ST	2nd x-st: Dir N of FLUSHING RD
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4751	1st x-st: Dir N of PASADENA AVE	2nd x-st: Dir S of STEWART AVE
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4753	5936	Ticket : A41970082 Rcvd: 07/16/14 07:41 Oper: LCP Rev: 00A			
4754	5937	Org Tkt : A41970082 Rcvd: 07/16/14 07:44 Oper: LCP			
4755	5939	Digstart: 07/16/14 Time: 08:00			
4756	5940	Tkt Life: 08/06/14 Time: 23:59			
4757	5942	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4758	5943	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4759	5944	E-mail : NONE			
4760	5945	FieldCnt: PAUL CELL Number: 810-397-7247			
4761	5947	County : GENESEE Place : FLINT /C			
4762	5949	Grids : 4302A8342A 4302A8342B 4302B8342A			
4763	5950	Polygon : 43.049514/-83.714459 43.049629/-83.712593			
4764	5951	: 43.045595/-83.714219 43.045710/-83.712352			
4765	5952	Lat : Long:			
4766	5953	Work Typ: WMB Done For:			
4767	5954	Address :			
4768	5955	Street : DUPONT ST			
4769	5956	1st x-st: Dir N of PASADENA AVE			
4770	5957	2nd x-st: Dir S of STEWART AVE			
4771	5958	Subdivsn: Lots:			
4772	5959	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD IFO ADDRS 3605 & 3609 CREW EN			
4773	5960	: ROUTE			
4774	5961	Boring : N On-going project: N Working In or Near R/R Easement: N			
4775	5962	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4776	5964	FLINTC 00007 MISDIGa 07/17/14 07:51:13 A41980126-00A EMER NEW GRID	FLINTC	A41980126	07/17/14
4777	5966	**** Underground ****			
4778	5967	Ticket : A41980126 Rcvd: 07/17/14 07:48 Oper: MLD Rev: 00A			
4779	5968	Org Tkt : A41980126 Rcvd: 07/17/14 07:51 Oper: MLD			
4780	5970	Digstart: 07/17/14 Time: 08:00			
4781	5971	Tkt Life: 08/07/14 Time: 23:59			
4782	5973	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4783	5974	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4784	5975	E-mail : NONE			
4785	5976	FieldCnt: PAUL Number: 810-397-7247			
4786	5978	County : GENESEE Place : FLINT /C			
4787	5980	Grids : 4301A8339A 4301A8339B			
4788	5981	Polygon : 43.032539/-83.662534 43.032273/-83.660701			
4789	5982	: 43.031196/-83.662729 43.030930/-83.660896			
4790	5983	Lat : Long:			
4791	5984	Work Typ: REPR WMB Done For:			
4792	5985	Address :			
4793	5986	Street : ILLINOIS AVE			
4794	5987	1st x-st: Dir of N VERNON DR			
4795	5988	2nd x-st: Dir S of DAVISON RD			
4796	5989	Subdivsn: Lots:			
4797	5990	Stk Info: LOCATE 50FT RADIUS OF INTER OF ILLINOIS & N VERNON CREW EN ROUTE			
4798	5991	Boring : N On-going project: N Working In or Near R/R Easement: N			
4799	5992	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4800	5994	FLINTC 00006 MISDIGb 07/17/14 09:31:05 B41980357-00B EMER NEW GRID	FLINTC	B41980357	07/17/14

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4776	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	REPR WMB	Address :	Street : ILLINOIS AVE
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4800	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1602	Street : LEITH ST

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4776	1st x-st: Dir of N VERNON DR	2nd x-st: Dir S of DAVISON RD
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4800	1st x-st: Dir E of IOWA AVE	2nd x-st: Dir N of DAVISON RD

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4801	5996	**** Underground ****			
4802	5997	Ticket : B41980357 Rcvd: 07/17/14 09:29 Oper: HDK Rev: 00B			
4803	5998	Org Tkt : B41980357 Rcvd: 07/17/14 09:30 Oper: HDK			
4804	6000	Digstart: 07/17/14 Time: 09:29			
4805	6001	Tkt Life: 08/07/14 Time: 23:59			
4806	6003	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4807	6004	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4808	6005	E-mail : NONE			
4809	6006	FieldCnt: PAUL Number: 810-397-7247			
4810	6008	County : GENESEE Place : FLINT /C			
4811	6010	Grids : 4302B8340C 4302B8340D			
4812	6011	Polygon : 43.043687/-83.671591 43.043747/-83.667272			
4813	6012	: 43.042315/-83.671572 43.042374/-83.667253			
4814	6013	Lat : Long:			
4815	6014	Work Typ: WMB Done For:			
4816	6015	Address : 1602			
4817	6016	Street : LEITH ST			
4818	6017	1st x-st: Dir E of IOWA AVE			
4819	6018	2nd x-st: Dir N of DAVISON RD			
4820	6019	Subdivsn: Lots:			
4821	6020	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
4822	6021	Boring : N On-going project: N Working In or Near R/R Easement: N			
4823	6022	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
4824	6024	FLINTC 00037 MISDIGb 07/17/14 15:32:47 B41981709-00B EMER NEW GRID	FLINTC	B41981709	07/18/14
4825	6026	**** Underground ****			
4826	6027	Ticket : B41981709 Rcvd: 07/17/14 15:29 Oper: DFB Rev: 00B			
4827	6028	Org Tkt : B41981709 Rcvd: 07/17/14 15:32 Oper: DFB			
4828	6030	Digstart: 07/18/14 Time: 08:00			
4829	6031	Tkt Life: 08/08/14 Time: 23:59			
4830	6033	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4831	6034	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4832	6035	E-mail : NONE			
4833	6036	FieldCnt: PAUL /C Number: 810-397-7247			
4834	6038	County : GENESEE Place : FLINT /C			
4835	6040	Grids : 4304B8341C 4304B8341D			
4836	6041	Polygon : 43.076469/-83.690678 43.076490/-83.686787			
4837	6042	: 43.075097/-83.690671 43.075118/-83.686780			
4838	6043	Lat : Long:			
4839	6044	Work Typ: WMB Done For:			
4840	6045	Address :			
4841	6046	Street : E CARPENTER RD			
4842	6047	1st x-st: Dir E of N SAGINAW RD			
4843	6048	2nd x-st: Dir W of SELBY ST			
4844	6049	Subdivsn: Lots:			
4845	6050	Stk Info: LOCATE FRM ADDR 914 GOING E APX 75FT TO & INCL C/L OF RD			
4846	6051	Boring : N On-going project: N Working In or Near R/R Easement: N			
4847	6052	Members : ATTD BEECMD BUCK01 CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
4848	6054	FLINTC 00020 MISDIGa 07/17/14 17:29:33 A41980993-00A EMER NEW GRID	FLINTC	A41980993	07/18/14

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4824	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : E CARPENTER RD
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4848	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : SENECA ST

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4824	1st x-st: Dir E of N SAGINAW RD	2nd x-st: Dir W of SELBY ST
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4848	1st x-st: Dir of CONCORD ST	2nd x-st: Dir of

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4849	6056	**** Underground ****			
4850	6057	Ticket : A41980993 Rcvd: 07/17/14 17:27 Oper: BMF Rev: 00A			
4851	6058	Org Tkt : A41980993 Rcvd: 07/17/14 17:29 Oper: BMF			
4852	6060	Digstart: 07/18/14 Time: 08:00			
4853	6061	Tkt Life: 08/08/14 Time: 23:59			
4854	6063	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4855	6064	Phone : 810-577-8261 Ext: Fax :			
4856	6065	E-mail : NONE			
4857	6066	FieldCnt: Number:			
4858	6068	County : GENESEE Place : FLINT /C			
4859	6070	Grids : 4301A8343A 4301A8344D 4302D8343A 4302D8344D			
4860	6071	Polygon : 43.033790/-83.734147 43.034056/-83.732315			
4861	6072	: 43.032447/-83.733952 43.032713/-83.732120			
4862	6073	Lat : Long:			
4863	6074	Work Typ: REPR WMB Done For:			
4864	6075	Address :			
4865	6076	Street : SENECA ST			
4866	6077	1st x-st: Dir of CONCORD ST			
4867	6078	2nd x-st: Dir of			
4868	6079	Subdivsn: Lots:			
4869	6080	Stk Info: LOCATE ENTIRE INTER			
4870	6081	Boring : N On-going project: N Working In or Near R/R Easement: N			
4871	6082	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
4872	6084	FLINTC 00006 MISDIGa 07/18/14 07:36:00 A41990044-00A EMER NEW GRID	FLINTC	A41990044	07/18/14
4873	6086	**** Underground ****			
4874	6087	Ticket : A41990044 Rcvd: 07/18/14 07:34 Oper: MLD Rev: 00A			
4875	6088	Org Tkt : A41990044 Rcvd: 07/18/14 07:35 Oper: MLD			
4876	6090	Digstart: 07/18/14 Time: 08:00			
4877	6091	Tkt Life: 08/08/14 Time: 23:59			
4878	6093	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4879	6094	Phone : 810-577-8261 Ext: Fax :			
4880	6095	E-mail : NONE			
4881	6096	FieldCnt: Number:			
4882	6098	County : GENESEE Place : FLINT /C			
4883	6100	Grids : 4300A8339B 4300A8339C 4301D8339B 4301D8339C			
4884	6101	Polygon : 43.017610/-83.661698 43.017672/-83.657045			
4885	6102	: 43.016252/-83.661680 43.016313/-83.657027			
4886	6103	Lat : Long:			
4887	6104	Work Typ: REPR WMB Done For:			
4888	6105	Address : 2402			
4889	6106	Street : HILLS ST			
4890	6107	1st x-st: Dir W of DORT HWY			
4891	6108	2nd x-st: Dir S of E COURT ST			
4892	6109	Subdivsn: Lots:			
4893	6110	Stk Info: LOCATE IFO PROP & BTH SDS OF RD CREW EN ROUTE			
4894	6111	Boring : N On-going project: N Working In or Near R/R Easement: N			
4895	6112	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD			
4896	6114	FLINTC 00002 MISDIGa 07/21/14 07:46:11 A42020038-00A EMER NEW GRID	FLINTC	A42020038	07/21/14

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4872	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 2402	Street : HILLS ST
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4896	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2341	Street : S DORT HWY

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4872	1st x-st: Dir W of DORT HWY	2nd x-st: Dir S of E COURT ST
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4896	1st x-st: Dir S of LIPPINCOTT BLVD	2nd x-st: Dir N of MITCHELL ST

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4897	6116	**** Underground ****			
4898	6117	Ticket : A42020038 Rcvd: 07/21/14 07:44 Oper: LCP Rev: 00A			
4899	6118	Org Tkt : A42020038 Rcvd: 07/21/14 07:45 Oper: LCP			
4900	6120	Digstart: 07/21/14 Time: 08:00			
4901	6121	Tkt Life: 08/11/14 Time: 23:59			
4902	6123	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4903	6124	Phone : 810-577-8261 Ext: Fax :			
4904	6125	E-mail : NONE			
4905	6126	FieldCnt: Number:			
4906	6128	County : GENESEE Place : FLINT /C			
4907	6130	Grids : 4259A8339C 4259A8339D 4300D8339C 4300D8339D			
4908	6131	Polygon : 43.002477/-83.654910 43.002597/-83.653046			
4909	6132	: 42.999361/-83.654710 42.999481/-83.652846			
4910	6133	Lat : Long:			
4911	6134	Work Typ: WMB Done For:			
4912	6135	Address : 2341			
4913	6136	Street : S DORT HWY			
4914	6137	1st x-st: Dir S of LIPPINCOTT BLVD			
4915	6138	2nd x-st: Dir N of MITCHELL ST			
4916	6139	Subdivsn: Lots:			
4917	6140	Stk Info: LOCATE FRT OF PROP FRM BLDG TO C/L OF RD CREW EN ROUTE			
4918	6141	Boring : N On-going project: N Working In or Near R/R Easement: N			
4919	6142	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MWFN			
4920	6144	FLINTC 00048 MISDIGb 07/21/14 17:34:55 B42022353-00B EMER NEW GRID	FLINTC	B42022353	07/22/14
4921	6146	**** Underground ****			
4922	6147	Ticket : B42022353 Rcvd: 07/21/14 17:33 Oper: DFB Rev: 00B			
4923	6148	Org Tkt : B42022353 Rcvd: 07/21/14 17:34 Oper: DFB			
4924	6150	Digstart: 07/22/14 Time: 08:00			
4925	6151	Tkt Life: 08/12/14 Time: 23:59			
4926	6153	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
4927	6154	Phone : 810-577-8261 Ext: Fax :			
4928	6155	E-mail : NONE			
4929	6156	FieldCnt: Number:			
4930	6158	County : GENESEE Place : FLINT /C			
4931	6160	Grids : 4301A8339A			
4932	6161	Polygon : 43.032443/-83.665834 43.032172/-83.664003			
4933	6162	: 43.031099/-83.666033 43.030828/-83.664202			
4934	6163	Lat : Long:			
4935	6164	Work Typ: WMB Done For:			
4936	6165	Address :			
4937	6166	Street : N FRANKLIN AVE			
4938	6167	1st x-st: Dir of ILLINOIS AVE			
4939	6168	2nd x-st: Dir of			
4940	6169	Subdivsn: Lots:			
4941	6170	Stk Info: LOCATE 30FT RADIUS OF SW COR OF INTER			
4942	6171	Boring : N On-going project: N Working In or Near R/R Easement: N			
4943	6172	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4944	6174	FLINTC 00003 MISDIGb 07/22/14 07:40:51 B42030145-00B EMER NEW GRID	FLINTC	B42030145	07/22/14

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4920	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : N FRANKLIN AVE
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4944	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : BINGHAM ST

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4944	1st x-st: Dir of PITKIN AVE	2nd x-st: Dir S of DAVISON RD

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4945	6176	**** Underground ****			
4946	6177	Ticket : B42030145 Rcvd: 07/22/14 07:38 Oper: MRP Rev: 00B			
4947	6178	Org Tkt : B42030145 Rcvd: 07/22/14 07:40 Oper: MRP			
4948	6180	Digstart: 07/22/14 Time: 08:00			
4949	6181	Tkt Life: 08/12/14 Time: 23:59			
4950	6183	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4951	6184	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4952	6185	E-mail : NONE			
4953	6186	FieldCnt: CELL Number: 810-397-7247			
4954	6188	County : GENESEE Place : FLINT /C			
4955	6190	Grids : 4301A8338B			
4956	6191	Polygon : 43.031750/-83.645221 43.032016/-83.643389			
4957	6192	: 43.030407/-83.645026 43.030673/-83.643194			
4958	6193	Lat : Long:			
4959	6194	Work Typ: WMB Done For:			
4960	6195	Address :			
4961	6196	Street : BINGHAM ST			
4962	6197	1st x-st: Dir of PITKIN AVE			
4963	6198	2nd x-st: Dir S of DAVISON RD			
4964	6199	Subdivsn: Lots:			
4965	6200	Stk Info: E OF AVERIL LOCATE 50FT RADIUS NE COR OF INTER BINGHAM & PITKIN			
4966	6201	: CREW EN ROUTE			
4967	6202	Boring : N On-going project: N Working In or Near R/R Easement: N			
4968	6203	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
4969	6205	FLINTC 00007 MISDIGb 07/22/14 08:26:15 B42030242-00B EMER NEW GRID	FLINTC	B42030242	07/23/14
4970	6207	**** Underground ****			
4971	6208	Ticket : B42030242 Rcvd: 07/22/14 08:23 Oper: DJH Rev: 00B			
4972	6209	Org Tkt : B42030242 Rcvd: 07/22/14 08:26 Oper: DJH			
4973	6211	Digstart: 07/23/14 Time: 08:00			
4974	6212	Tkt Life: 08/13/14 Time: 23:59			
4975	6214	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
4976	6215	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
4977	6216	E-mail : NONE			
4978	6217	FieldCnt: Number:			
4979	6219	County : GENESEE Place : FLINT /C			
4980	6221	Grids : 4303D8338A 4303D8338B			
4981	6222	Polygon : 43.051493/-83.647016 43.051686/-83.643844			
4982	6223	: 43.050122/-83.646933 43.050314/-83.643760			
4983	6224	Lat : Long:			
4984	6225	Work Typ: WMB Done For:			
4985	6226	Address :			
4986	6227	Street : RICHFIELD RD			
4987	6228	1st x-st: Dir of N AVERILL AVE			
4988	6229	2nd x-st: Dir W of CENTER RD			
4989	6230	Subdivsn: Lots:			
4990	6231	Stk Info: E OF WESTERN RD LOCATE APX 50FT RADIUS OF SE COR W/ N AVERILL AVE			
4991	6232	Boring : N On-going project: N Working In or Near R/R Easement: N			
4992	6233	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC			

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4969	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : RICHFIELD RD
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4969	1st x-st: Dir of N AVERILL AVE	2nd x-st: Dir W of CENTER RD
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4993	6235	FLINTC 00056 MISDIGb 07/22/14 14:34:48 B42031680-00B EMER NEW GRID	FLINTC	B42031680	07/23/14
4994	6237	**** Underground ****			
4995	6238	Ticket : B42031680 Rcvd: 07/22/14 14:33 Oper: HDK Rev: 00B			
4996	6239	Org Tkt : B42031680 Rcvd: 07/22/14 14:34 Oper: HDK			
4997	6241	Digstart: 07/23/14 Time: 08:00			
4998	6242	Tkt Life: 08/13/14 Time: 23:59			
4999	6244	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5000	6245	Phone : 810-577-8261 Ext: Fax :			
5001	6246	E-mail : NONE			
5002	6247	FieldCnt: Number:			
5003	6249	County : GENESEE Place : FLINT /C			
5004	6251	Grids : 4302B8343A 4302B8343B 4302C8343A 4302C8343B			
5005	6252	Polygon : 43.042633/-83.730550 43.042899/-83.728716			
5006	6253	: 43.041290/-83.730355 43.041556/-83.728521			
5007	6254	Lat : Long:			
5008	6255	Work Typ: WMB Done For:			
5009	6256	Address :			
5010	6257	Street : W DARTMOUTH ST			
5011	6258	1st x-st: Dir of KELLAR AVE			
5012	6259	2nd x-st: Dir of			
5013	6260	Subdivsn: Lots:			
5014	6261	Stk Info: LOCATE 30FT RADIUS OF BARRICADE AT NW COR OF INTER			
5015	6262	Boring : N On-going project: N Working In or Near R/R Easement: N			
5016	6263	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD			
5017	6265	FLINTC 00049 MISDIGb 07/23/14 14:00:29 B42041665-00B EMER NEW GRID	FLINTC	B42041665	07/24/14
5018	6267	**** Underground ****			
5019	6268	Ticket : B42041665 Rcvd: 07/23/14 13:58 Oper: JLK Rev: 00B			
5020	6269	Org Tkt : B42041665 Rcvd: 07/23/14 14:00 Oper: JLK			
5021	6271	Digstart: 07/24/14 Time: 08:00			
5022	6272	Tkt Life: 08/14/14 Time: 23:59			
5023	6274	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5024	6275	Phone : 810-577-8261 Ext: Fax :			
5025	6276	E-mail : NONE			
5026	6277	FieldCnt: Number:			
5027	6279	County : GENESEE Place : FLINT /C			
5028	6281	Grids : 4300A8341B 4300A8341C 4301D8341B 4301D8341C			
5029	6282	Polygon : 43.017680/-83.693043 43.019125/-83.690393			
5030	6283	: 43.015617/-83.691917 43.017062/-83.689268			
5031	6284	Lat : Long:			
5032	6285	Work Typ: WMB Done For:			
5033	6286	Address :			
5034	6287	Street : S SAGINAW ST			
5035	6288	1st x-st: Dir of E KEARSLEY ST			
5036	6289	2nd x-st: Dir W of HARRISON ST			
5037	6290	Subdivsn: Lots:			
5038	6291	Stk Info: N OF FIRST ST LOCATE 30 FT RADIUS OF EXIST HYDT ON NE COR OF INTER			
5039	6292	: OF S SAGINAW & E KEARSLEY			
5040	6293	Boring : N On-going project: N Working In or Near R/R Easement: N			

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4993	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : W DARTMOUTH ST
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5017	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : S SAGINAW ST
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5017	1st x-st: Dir of E KEARSLEY ST	2nd x-st: Dir W of HARRISON ST
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5041	6294	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC USSIG			
5042	6296	FLINTC 00004 MISDIGb 07/29/14 07:39:36 B42100139-00B EMER NEW GRID	FLINTC	B42100139	07/29/14
5043	6298	**** Underground ****			
5044	6299	Ticket : B42100139 Rcvd: 07/29/14 07:37 Oper: LCG Rev: 00B			
5045	6300	Org Tkt : B42100139 Rcvd: 07/29/14 07:39 Oper: LCG			
5046	6302	Digstart: 07/29/14 Time: 08:00			
5047	6303	Tkt Life: 08/19/14 Time: 23:59			
5048	6305	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5049	6306	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5050	6307	E-mail : NONE			
5051	6308	FieldCnt: Number: 810-397-7247			
5052	6310	County : GENESEE Place : FLINT /C			
5053	6312	Grids : 4302A8338A 4302A8338B 4303D8338A 4303D8338B			
5054	6313	Polygon : 43.051435/-83.647325 43.052052/-83.643007			
5055	6314	: 43.048245/-83.646868 43.048863/-83.642551			
5056	6315	Lat : Long:			
5057	6316	Work Typ: WMB Done For:			
5058	6317	Address :			
5059	6318	Street : RICHFIELD RD			
5060	6319	1st x-st: Dir of TERM ST			
5061	6320	2nd x-st: Dir E of AVERILL AVE			
5062	6321	Subdivsn: Lots:			
5063	6322	Stk Info: W OF CENTER RD LOCATE 50 FT RADIUS OF SW COR OF RICHFIELD & TERM			
5064	6323	: INTER CREW ENROUTE			
5065	6324	Boring : N On-going project: N Working In or Near R/R Easement: N			
5066	6325	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC			
5067	6327	FLINTC 00007 MISDIGb 08/11/14 09:36:01 B42230456-00B EMER NEW GRID	FLINTC	B42230456	08/11/14
5068	6329	**** Underground ****			
5069	6330	Ticket : B42230456 Rcvd: 08/11/14 09:33 Oper: PXP Rev: 00B			
5070	6331	Org Tkt : B42230456 Rcvd: 08/11/14 09:35 Oper: PXP			
5071	6333	Digstart: 08/11/14 Time: 09:33			
5072	6334	Tkt Life: 09/01/14 Time: 23:59			
5073	6336	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5074	6337	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5075	6338	E-mail : NONE			
5076	6339	FieldCnt: PAUL /CELL Number: 810-397-7247			
5077	6341	County : GENESEE Place : FLINT /C			
5078	6343	Grids : 4300A8341C 4300B8341C 4300B8341D			
5079	6344	Polygon : 43.011950/-83.690300 43.013084/-83.689051			
5080	6345	: 43.009678/-83.688238 43.010812/-83.686988			
5081	6346	Lat : Long:			
5082	6347	Work Typ: WMB Done For:			
5083	6348	Address : 900			
5084	6349	Street : BEACH ST			
5085	6350	1st x-st: Dir S of COURT ST			
5086	6351	2nd x-st: Dir W of SAGINAW ST			
5087	6352	Subdivsn: Lots:			
5088	6353	Stk Info: LOCATE 50FT RADIUS OF ORANGE CONE LOC IFO ADDR CREW EN ROUTE			

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5042	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : RICHFIELD RD
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5067	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 900	Street : BEACH ST
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5042	1st x-st: Dir of TERM ST	2nd x-st: Dir E of AVERILL AVE
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5089	6354	Boring : N On-going project: N Working In or Near R/R Easement: N			
5090	6355	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC GENCRC			
5091	6356	Members : USSIG			
5092	6358	FLINTC 00001 MISDIGa 08/18/14 08:06:01 A42300052-00A EMER NEW GRID	FLINTC	A42300052	08/18/14
5093	6360	**** Underground ****			
5094	6361	Ticket : A42300052 Rcvd: 08/18/14 08:04 Oper: PXP Rev: 00A			
5095	6362	Org Tkt : A42300052 Rcvd: 08/18/14 08:05 Oper: PXP			
5096	6364	Digstart: 08/18/14 Time: 08:04			
5097	6365	Tkt Life: 09/08/14 Time: 23:59			
5098	6367	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5099	6368	Phone : 810-577-8261 Ext: Fax :			
5100	6369	E-mail : NONE			
5101	6370	FieldCnt: Number:			
5102	6372	County : GENESEE Place : FLINT /C			
5103	6374	Grids : 4259B8343C 4259B8343D 4259C8343C 4259C8343D			
5104	6375	Polygon : 42.994313/-83.718738 42.992555/-83.717836			
5105	6376	: 42.991581/-83.724064 42.989823/-83.723162			
5106	6377	Lat : Long:			
5107	6378	Work Typ: WMB Done For:			
5108	6379	Address : 2810			
5109	6380	Street : PARKSIDE DR			
5110	6381	1st x-st: Dir S of WESTWOOD PKWY			
5111	6382	2nd x-st: Dir E of COLCHESTER RD			
5112	6383	Subdivsn: Lots:			
5113	6384	Stk Info: LOCATE ENTIRE E P/L ALONG HAMPDEN RD CREW ON SITE			
5114	6385	Boring : N On-going project: N Working In or Near R/R Easement: N			
5115	6386	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
5116	6388	FLINTC 00033 MISDIGb 08/18/14 11:36:38 A42300052-01B EMER RXMT GRID	FLINTC	A42300052	08/18/14
5117	6390	**** Underground ****			
5118	6391	Ticket : A42300052 Rcvd: 08/18/14 11:35 Oper: LRS Rev: 01B			
5119	6392	Org Tkt : A42300052 Rcvd: 08/18/14 08:05 Oper: PXP			
5120	6394	Digstart: 08/18/14 Time: 11:35			
5121	6395	Tkt Life: 09/08/14 Time: 23:59			
5122	6397	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5123	6398	Phone : 810-577-8261 Ext: Fax :			
5124	6399	E-mail : NONE			
5125	6400	FieldCnt: Number:			
5126	6402	County : GENESEE Place : FLINT /C			
5127	6404	Grids : 4259B8343C 4259B8343D 4259C8343C 4259C8343D			
5128	6405	Polygon : 42.994313/-83.718738 42.992555/-83.717836			
5129	6406	: 42.991581/-83.724064 42.989823/-83.723162			
5130	6407	Lat : Long:			
5131	6408	Work Typ: WMB Done For:			
5132	6409	Address : 2810			
5133	6410	Street : PARKSIDE DR			
5134	6411	1st x-st: Dir S of WESTWOOD PKWY			
5135	6412	2nd x-st: Dir E of COLCHESTER RD			
5136	6413	Subdivsn: Lots:			

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5092	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2810	Street : PARKSIDE DR
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5116	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2810	Street : PARKSIDE DR
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5116	1st x-st: Dir S of WESTWOOD PKWY	2nd x-st: Dir E of COLCHESTER RD
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5137	6414	Stk Info: LOCATE ENTIRE E P/L ALONG HAMPDEN RD CREW ON SITE			
5138	6415	Boring : N On-going project: N Working In or Near R/R Easement: N			
5139	6417	AddlInfo: UNMARKED FACILITY			
5140	6418	: 2ND CALL - ONLY GAS STILL NEEDED PER JEFF REFER TO TKT FRM 8:05 AM			
5141	6419	: CREW ON SITE --[LRS 08/18/2014 11:36 AM]			
5142	6421	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC			
5143	6423	FLINTC 00043 MISDIGb 08/18/14 12:56:41 B42301264-00B EMER NEW GRID	FLINTC	B42301264	08/18/14
5144	6425	**** Underground ****			
5145	6426	Ticket : B42301264 Rcvd: 08/18/14 12:54 Oper: MAG Rev: 00B			
5146	6427	Org Tkt : B42301264 Rcvd: 08/18/14 12:56 Oper: MAG			
5147	6429	Digstart: 08/18/14 Time: 12:54			
5148	6430	Tkt Life: 09/08/14 Time: 23:59			
5149	6432	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5150	6433	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5151	6434	E-mail : NONE			
5152	6435	FieldCnt: PAUL Number: 810-397-7247			
5153	6437	County : GENESEE Place : FLINT /C			
5154	6439	Grids : 4301A8341A 4301A8341B			
5155	6440	Polygon : 43.031417/-83.698278 43.031490/-83.695218			
5156	6441	: 43.030044/-83.698245 43.030118/-83.695185			
5157	6442	Lat : Long:			
5158	6443	Work Typ: WMB Done For:			
5159	6444	Address : 517			
5160	6445	Street : MARY ST			
5161	6446	1st x-st: Dir W of N SAGINAW ST			
5162	6447	2nd x-st: Dir N of WOOD ST			
5163	6448	Subdivsn: Lots:			
5164	6449	Stk Info: LOCATE BTH SDS OF RD IFO ADDR CREW EN ROUTE			
5165	6450	Boring : N On-going project: N Working In or Near R/R Easement: N			
5166	6451	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
5167	6453	FLINTC 00004 MISDIGb 08/19/14 08:03:30 B42310182-00B EMER NEW GRID	FLINTC	B42310182	08/20/14
5168	6455	**** Underground ****			
5169	6456	Ticket : B42310182 Rcvd: 08/19/14 08:01 Oper: MCD Rev: 00B			
5170	6457	Org Tkt : B42310182 Rcvd: 08/19/14 08:03 Oper: MCD			
5171	6459	Digstart: 08/20/14 Time: 08:00			
5172	6460	Tkt Life: 09/10/14 Time: 23:59			
5173	6462	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5174	6463	Phone : 810-577-8261 Ext: Fax :			
5175	6464	E-mail : NONE			
5176	6465	FieldCnt: Number:			
5177	6467	County : GENESEE Place : FLINT /C			
5178	6469	Grids : 4301C8343B 4301D8343B			
5179	6470	Polygon : 43.023044/-83.726311 43.021923/-83.725084			
5180	6471	: 43.021245/-83.727955 43.020124/-83.726729			
5181	6472	Lat : Long:			
5182	6473	Work Typ: WMB Done For:			
5183	6474	Address : 919			
5184	6475	Street : FREMONT ST			

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5143	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 517	Street : MARY ST
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5167	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 919	Street : FREMONT ST
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5143	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir N of WOOD ST
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5167	1st x-st: Dir S of FLUSHING RD	2nd x-st: Dir W of CHEVROLET AVE
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5185	6476	1st x-st: Dir S of FLUSHING RD			
5186	6477	2nd x-st: Dir W of CHEVROLET AVE			
5187	6478	Subdivsn: Lots:			
5188	6479	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD			
5189	6480	Boring : N On-going project: N Working In or Near R/R Easement: N			
5190	6481	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG			
5191	6483	FLINTC 00049 MISDIGb 08/19/14 13:31:16 B42311445-00B EMER NEW GRID	FLINTC	B42311445	08/20/14
5192	6485	**** Underground ****			
5193	6486	Ticket : B42311445 Rcvd: 08/19/14 13:28 Oper: MCD Rev: 00B			
5194	6487	Org Tkt : B42311445 Rcvd: 08/19/14 13:30 Oper: MCD			
5195	6489	Digstart: 08/20/14 Time: 08:00			
5196	6490	Tkt Life: 09/10/14 Time: 23:59			
5197	6492	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5198	6493	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5199	6494	E-mail : NONE			
5200	6495	FieldCnt: CELL Number: 810-397-7247			
5201	6497	County : GENESEE Place : FLINT /C			
5202	6499	Grids : 4300B8339A 4300B8339B 4300C8339A			
5203	6500	Polygon : 43.010891/-83.665907 43.010626/-83.662186			
5204	6501	: 43.008161/-83.666101 43.007896/-83.662380			
5205	6502	Lat : Long:			
5206	6503	Work Typ: WMB Done For:			
5207	6504	Address :			
5208	6505	Street : LAPEER RD			
5209	6506	1st x-st: Dir W of DORT HWY			
5210	6507	2nd x-st: Dir S of I- 69			
5211	6508	Subdivsn: Lots:			
5212	6509	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD AT ADDR 2349 & 2345			
5213	6510	Boring : N On-going project: N Working In or Near R/R Easement: N			
5214	6511	Members : ATT ATTD CCFIBR CEEDIS CEGDIS COMTV2 CTMN FLINTC GENCRC SPRNT4			
5215	6513	FLINTC 00002 MISDIGb 08/25/14 07:51:22 B42370106-00B EMER NEW GRID	FLINTC	B42370106	08/25/14
5216	6515	**** Underground ****			
5217	6516	Ticket : B42370106 Rcvd: 08/25/14 07:48 Oper: DLF Rev: 00B			
5218	6517	Org Tkt : B42370106 Rcvd: 08/25/14 07:51 Oper: DLF			
5219	6519	Digstart: 08/25/14 Time: 08:00			
5220	6520	Tkt Life: 09/15/14 Time: 23:59			
5221	6522	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5222	6523	Phone : 810-577-8261 Ext: Fax :			
5223	6524	E-mail : NONE			
5224	6525	FieldCnt: Number:			
5225	6527	County : GENESEE Place : FLINT /C			
5226	6529	Grids : 4302B8341A 4302B8341B			
5227	6530	Polygon : 43.044588/-83.698231 43.044604/-83.692866			
5228	6531	: 43.043229/-83.698227 43.043246/-83.692862			
5229	6532	Lat : Long:			
5230	6533	Work Typ: WMB Done For:			
5231	6534	Address :			
5232	6535	Street : E MCCLELLAN ST			

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5191	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : LAPEER RD
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5215	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : E MCCLELLAN ST
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5191	1st x-st: Dir W of DORT HWY	2nd x-st: Dir S of I- 69
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5215	1st x-st: Dir W of N SAGINAW ST	2nd x-st: Dir N of LEITH ST
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5233	6536	1st x-st: Dir W of N SAGINAW ST			
5234	6537	2nd x-st: Dir N of LEITH ST			
5235	6538	Subdivsn: Lots:			
5236	6539	Stk Info: LOCATE 50FT RADIUS OF LOC MARKED W/ BARRICADE ON N SD OF RD AT 600			
5237	6540	: BLOCK OF E MCLELLAN ST CREW EN ROUTE			
5238	6541	Boring : N On-going project: N Working In or Near R/R Easement: N			
5239	6542	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC			
5240	6544	FLINTC 00007 MISDIGb 09/08/14 08:30:34 B42510239-00B EMER NEW GRID	FLINTC	B42510239	09/08/14
5241	6546	**** Underground ****			
5242	6547	Ticket : B42510239 Rcvd: 09/08/14 08:29 Oper: DMS Rev: 00B			
5243	6548	Org Tkt : B42510239 Rcvd: 09/08/14 08:30 Oper: DMS			
5244	6550	Digstart: 09/08/14 Time: 08:29			
5245	6551	Tkt Life: 09/29/14 Time: 23:59			
5246	6553	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5247	6554	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5248	6555	E-mail : NONE			
5249	6556	FieldCnt: PAUL/CELL Number: 810-397-7247			
5250	6558	County : GENESEE Place : FLINT /C			
5251	6560	Grids : 4300C8342A 4300C8342B			
5252	6561	Polygon : 43.007957/-83.710457 43.006612/-83.709682			
5253	6562	: 43.006209/-83.713491 43.004864/-83.712717			
5254	6563	Lat : Long:			
5255	6564	Work Typ: WMB Done For:			
5256	6565	Address : 1912			
5257	6566	Street : CORUNNA RD			
5258	6567	1st x-st: Dir W of PERSHING ST			
5259	6568	2nd x-st: Dir S of E COURT ST			
5260	6569	Subdivsn: Lots:			
5261	6570	Stk Info: CORUNNA AKA M 21 LOCATE ENTIRE FRT OF PROP & BTH SD OF RD			
5262	6571	: CREW EN ROUTE			
5263	6572	Boring : N On-going project: N Working In or Near R/R Easement: N			
5264	6573	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT USSIG			
5265	6575	FLINTC 00006 MISDIGb 09/09/14 08:20:16 B42520317-00B EMER NEW GRID	FLINTC	B42520317	09/09/14
5266	6577	**** Underground ****			
5267	6578	Ticket : B42520317 Rcvd: 09/09/14 08:18 Oper: SLD Rev: 00B			
5268	6579	Org Tkt : B42520317 Rcvd: 09/09/14 08:20 Oper: SLD			
5269	6581	Digstart: 09/09/14 Time: 08:18			
5270	6582	Tkt Life: 09/30/14 Time: 23:59			
5271	6584	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5272	6585	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5273	6586	E-mail : NONE			
5274	6587	FieldCnt: PAUL SIMPSON CELL Number: 810-397-7247			
5275	6589	County : GENESEE Place : FLINT /C			
5276	6591	Grids : 4300B8339C 4300B8339D			
5277	6592	Polygon : 43.011411/-83.655215 43.011450/-83.653346			
5278	6593	: 43.008980/-83.655165 43.009018/-83.653296			
5279	6594	Lat : Long:			
5280	6595	Work Typ: WMB Done For:			

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5240	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1912	Street : CORUNNA RD
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5265	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1776	Street : S DORT HWY
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5265	1st x-st: Dir N of LAPEER RD	2nd x-st: Dir S of I-69
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5281	6596	Address : 1776			
5282	6597	Street : S DORT HWY			
5283	6598	1st x-st: Dir N of LAPEER RD			
5284	6599	2nd x-st: Dir S of I-69			
5285	6600	Subdivsn: Lots:			
5286	6601	Stk Info: LOCATE FRT OF PROP TO C/L OF RD CREW EN ROUTE			
5287	6602	Boring : N On-going project: N Working In or Near R/R Easement: N			
5288	6603	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 CTMN FLINTC GENCRC GISD MOTT			
5289	6604	Members : MWFN			
5290	6606	FLINTC 00009 MISDIGb 09/12/14 13:25:53 B42551088-00B EMER NEW GRID	FLINTC	B42551088	09/13/14
5291	6608	**** Underground ****			
5292	6609	Ticket : B42551088 Rcvd: 09/12/14 13:23 Oper: SJG Rev: 00B			
5293	6610	Org Tkt : B42551088 Rcvd: 09/12/14 13:25 Oper: SJG			
5294	6612	Digstart: 09/13/14 Time: 06:00			
5295	6613	Tkt Life: 10/04/14 Time: 23:59 Positive response required: Y			
5296	6614	Resp Due: 09/13/14 Time: 06:00			
5297	6616	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5298	6617	Phone : 810-577-8261 Ext: Fax :			
5299	6618	E-mail : NONE			
5300	6619	FieldCnt: Number:			
5301	6621	County : GENESEE Place : FLINT /C			
5302	6623	Grids : 4302A8339D 4303D8339D			
5303	6624	Polygon : 43.050695/-83.652519 43.050754/-83.650665			
5304	6625	: 43.048616/-83.652453 43.048675/-83.650599			
5305	6626	Lat : Long:			
5306	6627	Work Typ: WMB Done For:			
5307	6628	Address : 3902			
5308	6629	Street : COGGINS ST			
5309	6630	1st x-st: Dir S of RICHFIELD RD			
5310	6631	2nd x-st: Dir W of BRANCH RD			
5311	6632	Subdivsn: Lots:			
5312	6633	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
5313	6634	Boring : N On-going project: N Working In or Near R/R Easement: N			
5314	6635	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC MOTT			
5315	6637	FLINTC 00002 MISDIGb 09/19/14 08:20:12 B42620257-00B EMER NEW GRID	FLINTC	B42620257	09/19/14
5316	6639	**** Underground ****			
5317	6640	Ticket : B42620257 Rcvd: 09/19/14 08:17 Oper: MCD Rev: 00B			
5318	6641	Org Tkt : B42620257 Rcvd: 09/19/14 08:19 Oper: MCD			
5319	6643	Digstart: 09/19/14 Time: 08:17			
5320	6644	Tkt Life: 10/10/14 Time: 23:59 Positive response required: Y			
5321	6645	Resp Due: 09/19/14 Time: 11:19			
5322	6647	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5323	6648	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5324	6649	E-mail : NONE			
5325	6650	FieldCnt: PAUL Number: 810-397-7247			
5326	6652	County : GENESEE Place : FLINT /C			
5327	6654	Grids : 4300A8343A 4300A8343B 4300B8343A 4300B8343B			
5328	6655	Polygon : 43.013322/-83.733581 43.015713/-83.730524			

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5290	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3902	Street : COGGINS ST
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5315	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : BRENTWOOD DR
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5315	1st x-st: Dir N of BEECHER RD	2nd x-st: Dir W of WESTCOMBE AVE
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5329	6656	: 43.008812/-83.730053 43.011203/-83.726996			
5330	6657	Lat : Long:			
5331	6658	Work Typ: WMB Done For:			
5332	6659	Address :			
5333	6660	Street : BRENTWOOD DR			
5334	6661	1st x-st: Dir N of BEECHER RD			
5335	6662	2nd x-st: Dir W of WESTCOMBE AVE			
5336	6663	Subdivsn: Lots:			
5337	6664	Stk Info: LOCATE IFO OF PROP & BTH SDS OF RD AT ADDR 3716 & 3720 CREW EN			
5338	6665	: ROUTE			
5339	6666	Boring : N On-going project: N Working In or Near R/R Easement: N			
5340	6667	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC MOTT USSIG			
5341	6669	FLINTC 00001 MISDIGb 09/21/14 06:24:29 B42640003-00B EMER NEW GRID	FLINTC	B42640003	09/21/14
5342	6671	**** Underground ****			
5343	6672	Ticket : B42640003 Rcvd: 09/21/14 06:20 Oper: DLF Rev: 00B			
5344	6673	Org Tkt : B42640003 Rcvd: 09/21/14 06:24 Oper: DLF			
5345	6675	Digstart: 09/21/14 Time: 06:20			
5346	6676	Tkt Life: 10/12/14 Time: 23:59 Positive response required: Y			
5347	6677	Resp Due: 09/21/14 Time: 09:24			
5348	6679	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5349	6680	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5350	6681	E-mail : NONE			
5351	6682	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247			
5352	6684	County : GENESEE Place : FLINT /C			
5353	6686	Grids : 4301A8338C			
5354	6687	Polygon : 43.030753/-83.641217 43.031019/-83.639385			
5355	6688	: 43.029410/-83.641022 43.029676/-83.639190			
5356	6689	Lat : Long:			
5357	6690	Work Typ: WMB Done For:			
5358	6691	Address :			
5359	6692	Street : LORRAINE AVE			
5360	6693	1st x-st: Dir of N DEXTER ST			
5361	6694	2nd x-st: Dir S of DAVISON RD			
5362	6695	Subdivsn: Lots:			
5363	6696	Stk Info: W OF N CENTER RD LOCATE 75FT RADIUS OF ENTIRE INTER OF LORRAINE ST &			
5364	6697	: N EXTER ST CREW ON SITE			
5365	6698	Boring : N On-going project: N Working In or Near R/R Easement: N			
5366	6699	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN CETS COMTV2 FLINTC MOTT			
5367	6701	FLINTC 00002 MISDIGb 09/21/14 06:26:31 B42640004-00B EMER NEW GRID	FLINTC	B42640004	09/21/14
5368	6703	**** Underground ****			
5369	6704	Ticket : B42640004 Rcvd: 09/21/14 06:24 Oper: DLF Rev: 00B			
5370	6705	Org Tkt : B42640004 Rcvd: 09/21/14 06:26 Oper: DLF			
5371	6707	Digstart: 09/21/14 Time: 06:24			
5372	6708	Tkt Life: 10/12/14 Time: 23:59 Positive response required: Y			
5373	6709	Resp Due: 09/21/14 Time: 09:26			
5374	6711	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5375	6712	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5376	6713	E-mail : NONE			

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5341	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : LORRAINE AVE
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5367	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : WINIFRED DR
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5341	1st x-st: Dir of N DEXTER ST	2nd x-st: Dir S of DAVISON RD
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5367	1st x-st: Dir of LEVERN ST	2nd x-st: Dir N of DAIVSON RD
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5377	6714	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247			
5378	6716	County : GENESEE Place : FLINT /C			
5379	6718	Grids : 4302D8339B 4302D8339C			
5380	6719	Polygon : 43.037159/-83.659812 43.037425/-83.657980			
5381	6720	: 43.035816/-83.659617 43.036082/-83.657785			
5382	6721	Lat : Long:			
5383	6722	Work Typ: WMB Done For:			
5384	6723	Address :			
5385	6724	Street : WINIFRED DR			
5386	6725	1st x-st: Dir of LEVERN ST			
5387	6726	2nd x-st: Dir N of DAIVSON RD			
5388	6727	Subdivsn: Lots:			
5389	6728	Stk Info: W OF DORT HWY LOCATE 75FT RADIUS OF INTER OF WINIFRED DR & LEVERN DR			
5390	6729	: CREW ON SITE			
5391	6730	Boring : N On-going project: N Working In or Near R/R Easement: N			
5392	6731	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5393	6733	FLINTC 00023 MISDIGb 09/25/14 13:20:23 B42681237-00B EMER NEW GRID	FLINTC	B42681237	09/25/14
5394	6735	**** Underground ****			
5395	6736	Ticket : B42681237 Rcvd: 09/25/14 13:17 Oper: MRP Rev: 00B			
5396	6737	Org Tkt : B42681237 Rcvd: 09/25/14 13:19 Oper: MRP			
5397	6739	Digstart: 09/25/14 Time: 13:17			
5398	6740	Tkt Life: 10/16/14 Time: 23:59 Positive response required: Y			
5399	6741	Resp Due: 09/25/14 Time: 16:19			
5400	6743	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5401	6744	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5402	6745	E-mail : NONE			
5403	6746	FieldCnt: CELL Number: 810-397-7247			
5404	6748	County : GENESEE Place : FLINT /C			
5405	6750	Grids : 4303A8343C 4303A8343D 4303B8343C 4303B8343D			
5406	6751	Polygon : 43.064600/-83.721348 43.064725/-83.719482			
5407	6752	: 43.061882/-83.721167 43.062007/-83.719301			
5408	6753	Lat : Long:			
5409	6754	Work Typ: WMB Done For:			
5410	6755	Address :			
5411	6756	Street : MARJA ST			
5412	6757	1st x-st: Dir S of W MOTT AVE			
5413	6758	2nd x-st: Dir E of FLEMING RD			
5414	6759	Subdivsn: Lots:			
5415	6760	Stk Info: LOCATE BTH SDS OF RD BEG W MOTT GO 100FT S CREW EN ROUTE			
5416	6761	Boring : N On-going project: N Working In or Near R/R Easement: N			
5417	6762	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5418	6764	FLINTC 00003 MISDIGb 10/06/14 07:45:00 B42790086-00B EMER NEW GRID	FLINTC	B42790086	10/06/14
5419	6766	**** Underground ****			
5420	6767	Ticket : B42790086 Rcvd: 10/06/14 07:42 Oper: PXP Rev: 00B			
5421	6768	Org Tkt : B42790086 Rcvd: 10/06/14 07:44 Oper: PXP			
5422	6770	Digstart: 10/06/14 Time: 08:00			
5423	6771	Tkt Life: 10/27/14 Time: 23:59 Positive response required: Y			
5424	6772	Resp Due: 10/06/14 Time: 10:44			

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5393	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : MARJA ST
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5418	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 2890	Street : ROBERT T LONGWAY BLVD
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5393	1st x-st: Dir S of W MOTT AVE	2nd x-st: Dir E of FLEMING RD
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5418	1st x-st: Dir E of DORT HWY	2nd x-st: Dir W of S AVERILL AVE
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5425	6774	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5426	6775	Phone : 810-577-8261 Ext: Fax :			
5427	6776	E-mail : NONE			
5428	6777	FieldCnt: Number:			
5429	6779	County : GENESEE Place : FLINT /C			
5430	6781	Grids : 4301B8339C 4301B8339D 4301C8339C 4301C8339D			
5431	6782	Polygon : 43.026200/-83.656027 43.026307/-83.652936			
5432	6783	: 43.024828/-83.655980 43.024935/-83.652888			
5433	6784	Lat : Long:			
5434	6785	Work Typ: WMB Done For:			
5435	6786	Address : 2890			
5436	6787	Street : ROBERT T LONGWAY BLVD			
5437	6788	1st x-st: Dir E of DORT HWY			
5438	6789	2nd x-st: Dir W of S AVERILL AVE			
5439	6790	Subdivsn: Lots:			
5440	6791	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW ON SITE			
5441	6792	Boring : N On-going project: N Working In or Near R/R Easement: N			
5442	6793	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5443	6795	FLINTC 00037 MISDIGb 10/06/14 14:31:56 B42791822-00B EMER NEW GRID	FLINTC	B42791822	10/07/14
5444	6797	**** Underground ****			
5445	6798	Ticket : B42791822 Rcvd: 10/06/14 14:29 Oper: JLK Rev: 00B			
5446	6799	Org Tkt : B42791822 Rcvd: 10/06/14 14:31 Oper: JLK			
5447	6801	Digstart: 10/07/14 Time: 08:00			
5448	6802	Tkt Life: 10/28/14 Time: 23:59 Positive response required: Y			
5449	6803	Resp Due: 10/07/14 Time: 08:00			
5450	6805	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5451	6806	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5452	6807	E-mail : NONE			
5453	6808	FieldCnt: PAUL CELL Number: 810-397-7247			
5454	6810	County : GENESEE Place : FLINT /C			
5455	6812	Grids : 4300A8342A 4300B8342A 4300A8343D 4300B8343D			
5456	6813	Polygon : 43.013820/-83.717971 43.014815/-83.716150			
5457	6814	: 43.010776/-83.716308 43.011771/-83.714487			
5458	6815	Lat : Long:			
5459	6816	Work Typ: WMB Done For:			
5460	6817	Address :			
5461	6818	Street : ST CLAIR ST			
5462	6819	1st x-st: Dir N of UNIVERSITY AVE			
5463	6820	2nd x-st: Dir W of CHEVROLET AVE			
5464	6821	Subdivsn: Lots:			
5465	6822	Stk Info: LOCATE BTH SDS OF RD R-O-W TO R-O-W BEG IFO ADDR 616 GOING S TO			
5466	6823	: UNIVERSITY			
5467	6824	Boring : N On-going project: N Working In or Near R/R Easement: N			
5468	6825	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5469	6827	FLINTC 00004 MISDIGb 10/08/14 08:00:05 B42810220-00B EMER NEW GRID	FLINTC	B42810220	10/08/14
5470	6829	**** Underground ****			
5471	6830	Ticket : B42810220 Rcvd: 10/08/14 07:58 Oper: MRP Rev: 00B			
5472	6831	Org Tkt : B42810220 Rcvd: 10/08/14 08:00 Oper: MRP			

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5443	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : ST CLAIR ST
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5469	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 605	Street : ST CLAIR ST
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5443	1st x-st: Dir N of UNIVERSITY AVE	2nd x-st: Dir W of CHEVROLET AVE
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5469	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir E of NOLEN
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5473	6833	Digstart: 10/08/14 Time: 08:00			
5474	6834	Tkt Life: 10/29/14 Time: 23:59 Positive response required: Y			
5475	6835	Resp Due: 10/08/14 Time: 11:00			
5476	6837	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5477	6838	Phone : 810-577-8261 Ext: Fax :			
5478	6839	E-mail : NONE			
5479	6840	FieldCnt: Number:			
5480	6842	County : GENESEE Place : FLINT /C			
5481	6844	Grids : 4300A8342A 4300B8342A 4300A8343D 4300B8343D			
5482	6845	Polygon : 43.013820/-83.717971 43.014815/-83.716150			
5483	6846	: 43.010776/-83.716308 43.011771/-83.714487			
5484	6847	Lat : Long:			
5485	6848	Work Typ: WMB Done For:			
5486	6849	Address : 605			
5487	6850	Street : ST CLAIR ST			
5488	6851	1st x-st: Dir W of DUPONT ST			
5489	6852	2nd x-st: Dir E of NOLEN			
5490	6853	Subdivsn: Lots:			
5491	6854	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD CREW EN ROUTE			
5492	6855	Boring : N On-going project: N Working In or Near R/R Easement: N			
5493	6856	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5494	6858	FLINTC 00001 MISDIGa 10/09/14 07:35:09 A42820026-00A EMER NEW GRID	FLINTC	A42820026	10/09/14
5495	6860	**** Underground ****			
5496	6861	Ticket : A42820026 Rcvd: 10/09/14 07:32 Oper: MRA Rev: 00A			
5497	6862	Org Tkt : A42820026 Rcvd: 10/09/14 07:34 Oper: MRA			
5498	6864	Digstart: 10/09/14 Time: 08:00			
5499	6865	Tkt Life: 10/30/14 Time: 23:59 Positive response required: Y			
5500	6866	Resp Due: 10/09/14 Time: 10:34			
5501	6868	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5502	6869	Phone : 810-577-8261 Ext: Fax :			
5503	6870	E-mail : NONE			
5504	6871	FieldCnt: Number:			
5505	6873	County : GENESEE Place : FLINT /C			
5506	6875	Grids : 4300A8342A 4300B8342A 4300A8343D 4300B8343D			
5507	6876	Polygon : 43.013820/-83.717971 43.014815/-83.716150			
5508	6877	: 43.010776/-83.716308 43.011771/-83.714487			
5509	6878	Lat : Long:			
5510	6879	Work Typ: REPR WMB Done For:			
5511	6880	Address :			
5512	6881	Street : ST CLAIR ST			
5513	6882	1st x-st: Dir W of DUPONT ST			
5514	6883	2nd x-st: Dir E of NOLEN DR			
5515	6884	Subdivsn: Lots:			
5516	6885	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD IFO ADDRS 702 & 708 CREW EN ROUTE			
5517	6886	Boring : N On-going project: N Working In or Near R/R Easement: N			
5518	6887	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5519	6889	FLINTC 00002 MISDIGa 10/10/14 09:00:48 A42830161-00A EMER NEW GRID	FLINTC	A42830161	10/10/14
5520	6891	**** Underground ****			

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5494	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address :	Street : ST CLAIR ST
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5519	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 1636	Street : MONTANA AVE
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5494	1st x-st: Dir W of DUPONT ST	2nd x-st: Dir E of NOLEN DR
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5519	1st x-st: Dir W of N FRANKLIN AVE	2nd x-st: Dir E of IOWA AVE
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5521	6892	Ticket : A42830161 Rcvd: 10/10/14 08:58 Oper: MRA Rev: 00A			
5522	6893	Org Tkt : A42830161 Rcvd: 10/10/14 09:00 Oper: MRA			
5523	6895	Digstart: 10/10/14 Time: 08:58			
5524	6896	Tkt Life: 10/31/14 Time: 23:59 Positive response required: Y			
5525	6897	Resp Due: 10/10/14 Time: 12:00			
5526	6899	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5527	6900	Phone : 810-577-8261 Ext: Fax :			
5528	6901	E-mail : NONE			
5529	6902	FieldCnt: Number:			
5530	6904	County : GENESEE Place : FLINT /C			
5531	6906	Grids : 4302B8340C 4302B8340D			
5532	6907	Polygon : 43.044466/-83.671602 43.044538/-83.667285			
5533	6908	: 43.043094/-83.671579 43.043166/-83.667262			
5534	6909	Lat : Long:			
5535	6910	Work Typ: REPR WMB Done For:			
5536	6911	Address : 1636			
5537	6912	Street : MONTANA AVE			
5538	6913	1st x-st: Dir W of N FRANKLIN AVE			
5539	6914	2nd x-st: Dir E of IOWA AVE			
5540	6915	Subdivsn: Lots:			
5541	6916	Stk Info: LOCATE FRT OF LOT & BTH SDS OF RD CREW ON SITE			
5542	6917	Boring : N On-going project: N Working In or Near R/R Easement: N			
5543	6918	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD MOTT			
5544	6920	FLINTC 00004 MISDIGb 11/03/14 07:59:29 B43070183-00B EMER NEW GRID	FLINTC	B43070183	11/03/14
5545	6922	**** Underground ****			
5546	6923	Ticket : B43070183 Rcvd: 11/03/14 07:55 Oper: DLF Rev: 00B			
5547	6924	Org Tkt : B43070183 Rcvd: 11/03/14 07:59 Oper: DLF			
5548	6926	Digstart: 11/03/14 Time: 08:00			
5549	6927	Tkt Life: 11/24/14 Time: 23:59 Positive response required: Y			
5550	6928	Resp Due: 11/03/14 Time: 10:59			
5551	6930	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5552	6931	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5553	6932	E-mail : NONE			
5554	6933	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247			
5555	6935	County : GENESEE Place : FLINT /C			
5556	6937	Grids : 4259B8339B 4259B8339C			
5557	6938	Polygon : 42.994655/-83.658793 42.994390/-83.655072			
5558	6939	: 42.991925/-83.658987 42.991660/-83.655266			
5559	6940	Lat : Long:			
5560	6941	Work Typ: WMB Done For:			
5561	6942	Address :			
5562	6943	Street : SHAWNEE AVE			
5563	6944	1st x-st: Dir of ELDON BAKER DR			
5564	6945	2nd x-st: Dir W of S DORT HWY			
5565	6946	Subdivsn: Lots:			
5566	6947	Stk Info: LOCATE 75FT RADIUS OF LOC ON NE COR OF INTER OF SHAWNEE AVE & ELDON			
5567	6948	: BAKER DR CREW EN ROUTE			
5568	6949	Boring : N On-going project: N Working In or Near R/R Easement: N			

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5544	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : SHAWNEE AVE
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5569	6950	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5570	6952	FLINTC 00026 MISDIGb 11/03/14 13:20:34 B43071437-00B EMER NEW GRID	FLINTC	B43071437	11/03/14
5571	6954	**** Underground ****			
5572	6955	Ticket : B43071437 Rcvd: 11/03/14 13:18 Oper: LCG Rev: 00B			
5573	6956	Org Tkt : B43071437 Rcvd: 11/03/14 13:20 Oper: LCG			
5574	6958	Digstart: 11/03/14 Time: 13:18			
5575	6959	Tkt Life: 11/24/14 Time: 23:59 Positive response required: Y			
5576	6960	Resp Due: 11/03/14 Time: 16:20			
5577	6962	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5578	6963	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5579	6964	E-mail : NONE			
5580	6965	FieldCnt: Number: 810-397-7247			
5581	6967	County : GENESEE Place : FLINT /C			
5582	6969	Grids : 4304C8340D 4304D8340C 4304D8340D			
5583	6970	Polygon : 43.070990/-83.671069 43.071322/-83.668920			
5584	6971	: 43.067861/-83.670585 43.068193/-83.668437			
5585	6972	Lat : Long:			
5586	6973	Work Typ: WMB Done For:			
5587	6974	Address : 6230			
5588	6975	Street : HATHAWAY DR			
5589	6976	1st x-st: Dir E of N DORT HWY			
5590	6977	2nd x-st: Dir N of E WEBSTER RD			
5591	6978	Subdivsn: Lots:			
5592	6979	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ENROUTE			
5593	6980	Boring : N On-going project: N Working In or Near R/R Easement: N			
5594	6981	Members : ATTD BUCK01 CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5595	6983	FLINTC 00001 MISDIGa 11/05/14 07:43:59 A43090056-00A EMER NEW GRID	FLINTC	A43090056	11/05/14
5596	6985	**** Underground ****			
5597	6986	Ticket : A43090056 Rcvd: 11/05/14 07:42 Oper: PXP Rev: 00A			
5598	6987	Org Tkt : A43090056 Rcvd: 11/05/14 07:43 Oper: PXP			
5599	6989	Digstart: 11/05/14 Time: 08:00			
5600	6990	Tkt Life: 11/26/14 Time: 23:59 Positive response required: Y			
5601	6991	Resp Due: 11/05/14 Time: 10:43			
5602	6993	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5603	6994	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5604	6995	E-mail : NONE			
5605	6996	FieldCnt: PAUL /CELL Number: 810-397-7247			
5606	6998	County : GENESEE Place : FLINT /C			
5607	7000	Grids : 4301A8342B			
5608	7001	Polygon : 43.031332/-83.711978 43.031473/-83.709095			
5609	7002	: 43.029961/-83.711911 43.030102/-83.709028			
5610	7003	Lat : Long:			
5611	7004	Work Typ: WMB Done For:			
5612	7005	Address : 568			
5613	7006	Street : WELCH BLVD			
5614	7007	1st x-st: Dir E of DUPONT ST			
5615	7008	2nd x-st: Dir W of EUCLID AVE			
5616	7009	Subdivsn: Lots:			

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5570	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 6230	Street : HATHAWAY DR
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5595	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 568	Street : WELCH BLVD
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5570	1st x-st: Dir E of N DORT HWY	2nd x-st: Dir N of E WEBSTER RD
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5595	1st x-st: Dir E of DUPONT ST	2nd x-st: Dir W of EUCLID AVE
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5617	7010	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
5618	7011	Boring : N On-going project: N Working In or Near R/R Easement: N			
5619	7012	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5620	7014	FLINTC 00035 MISDIGb 11/05/14 14:28:01 B43091445-00B EMER NEW GRID	FLINTC	B43091445	11/06/14
5621	7016	**** Underground ****			
5622	7017	Ticket : B43091445 Rcvd: 11/05/14 14:27 Oper: DMS Rev: 00B			
5623	7018	Org Tkt : B43091445 Rcvd: 11/05/14 14:27 Oper: DMS			
5624	7020	Digstart: 11/06/14 Time: 08:00			
5625	7021	Tkt Life: 11/27/14 Time: 23:59 Positive response required: Y			
5626	7022	Resp Due: 11/06/14 Time: 08:00			
5627	7024	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5628	7025	Phone : 810-577-8261 Ext: Fax :			
5629	7026	E-mail : NONE			
5630	7027	FieldCnt: Number:			
5631	7029	County : GENESEE Place : FLINT /C			
5632	7031	Grids : 4300A8339A 4300B8339A 4300A8340D 4300B8340D			
5633	7032	Polygon : 43.014045/-83.667058 43.014113/-83.665189			
5634	7033	: 43.010667/-83.666937 43.010735/-83.665068			
5635	7034	Lat : Long:			
5636	7035	Work Typ: WMB Done For:			
5637	7036	Address : 1618			
5638	7037	Street : KENSINGTON AVE			
5639	7038	1st x-st: Dir N of SUNNYSIDE AVE			
5640	7039	2nd x-st: Dir S of E COURT ST			
5641	7040	Subdivsn: Lots:			
5642	7041	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD			
5643	7042	Boring : N On-going project: N Working In or Near R/R Easement: N			
5644	7043	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 CTMN FLINTC GENCRC MOTT			
5645	7045	FLINTC 00024 MISDIGb 11/11/14 15:55:40 B43151550-00B EMER NEW GRID	FLINTC	B43151550	11/12/14
5646	7047	**** Underground ****			
5647	7048	Ticket : B43151550 Rcvd: 11/11/14 15:53 Oper: MEP Rev: 00B			
5648	7049	Org Tkt : B43151550 Rcvd: 11/11/14 15:55 Oper: MEP			
5649	7051	Digstart: 11/12/14 Time: 08:00			
5650	7052	Tkt Life: 12/03/14 Time: 23:59 Positive response required: Y			
5651	7053	Resp Due: 11/12/14 Time: 08:00			
5652	7055	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5653	7056	Phone : 810-577-8261 Ext: Fax :			
5654	7057	E-mail : NONE			
5655	7058	FieldCnt: Number:			
5656	7060	County : GENESEE Place : FLINT /C			
5657	7062	Grids : 4303B8342A 4303B8343D			
5658	7063	Polygon : 43.062451/-83.719064 43.062472/-83.716209			
5659	7064	: 43.061079/-83.719053 43.061100/-83.716198			
5660	7065	Lat : Long:			
5661	7066	Work Typ: WMB Done For:			
5662	7067	Address : 1016			
5663	7068	Street : W RIDGEWAY AVE			
5664	7069	1st x-st: Dir N of W PIERSON RD			

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5620	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1618	Street : KENSINGTON AVE
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5645	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 1016	Street : W RIDGEWAY AVE
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5645	1st x-st: Dir N of W PIERSON RD	2nd x-st: Dir E of WINTHROP BLVD
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5665	7070	2nd x-st: Dir E of WINTHROP BLVD			
5666	7071	Subdivsn: Lots:			
5667	7072	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD			
5668	7073	Boring : N On-going project: N Working In or Near R/R Easement: N			
5669	7074	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5670	7076	FLINTC 00004 MISDIGb 11/12/14 07:59:02 B43160130-00B EMER NEW GRID	FLINTC	B43160130	11/12/14
5671	7078	**** Underground ****			
5672	7079	Ticket : B43160130 Rcvd: 11/12/14 07:56 Oper: LCG Rev: 00B			
5673	7080	Org Tkt : B43160130 Rcvd: 11/12/14 07:58 Oper: LCG			
5674	7082	Digstart: 11/12/14 Time: 08:00			
5675	7083	Tkt Life: 12/03/14 Time: 23:59 Positive response required: Y			
5676	7084	Resp Due: 11/12/14 Time: 10:58			
5677	7086	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5678	7087	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5679	7088	E-mail : NONE			
5680	7089	FieldCnt: Number: 810-397-7247			
5681	7091	County : GENESEE Place : FLINT /C			
5682	7093	Grids : 4301A8343C 4302D8343B 4302D8343C			
5683	7094	Polygon : 43.034639/-83.724997 43.034373/-83.723165			
5684	7095	: 43.033296/-83.725192 43.033030/-83.723360			
5685	7096	Lat : Long:			
5686	7097	Work Typ: WMB Done For:			
5687	7098	Address :			
5688	7099	Street : PATERSON ST			
5689	7100	1st x-st: Dir of WELCH BLVD			
5690	7101	2nd x-st: Dir E of BALLENGER HWY			
5691	7102	Subdivsn: Lots:			
5692	7103	Stk Info: LOCATE 50 FT RADIUS OF PATERSON & WELCH INTER CREW ENROUTE			
5693	7104	Boring : N On-going project: N Working In or Near R/R Easement: N			
5694	7105	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5695	7107	FLINTC 00006 MISDIGb 11/14/14 09:27:50 B43180278-00B EMER NEW GRID	FLINTC	B43180278	11/15/14
5696	7109	**** Underground ****			
5697	7110	Ticket : B43180278 Rcvd: 11/14/14 09:25 Oper: JLK Rev: 00B			
5698	7111	Org Tkt : B43180278 Rcvd: 11/14/14 09:27 Oper: JLK			
5699	7113	Digstart: 11/15/14 Time: 06:00			
5700	7114	Tkt Life: 12/06/14 Time: 23:59 Positive response required: Y			
5701	7115	Resp Due: 11/15/14 Time: 06:00			
5702	7117	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5703	7118	Phone : 810-577-8261 Ext: Fax :			
5704	7119	E-mail : NONE			
5705	7120	FieldCnt: Number:			
5706	7122	County : GENESEE Place : FLINT /C			
5707	7124	Grids : 4303A8343D 4303B8343D			
5708	7125	Polygon : 43.064656/-83.720344 43.064720/-83.718473			
5709	7126	: 43.061200/-83.720225 43.061265/-83.718354			
5710	7127	Lat : Long:			
5711	7128	Work Typ: WMB Done For:			
5712	7129	Address :			

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5670	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : PATERSON ST
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5695	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : SUSAN ST
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5670	1st x-st: Dir of WELCH BLVD	2nd x-st: Dir E of BALLENGER HWY
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5695	1st x-st: Dir N of W PIERSON RD	2nd x-st: Dir S of W MOTT AVE
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5713	7130	Street : SUSAN ST			
5714	7131	1st x-st: Dir N of W PIERSON RD			
5715	7132	2nd x-st: Dir S of W MOTT AVE			
5716	7133	Subdivsn: Lots:			
5717	7134	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD R-O-W TO R-O-W INCLUDING ENTIRE RD			
5718	7135	: AT ADDRS 5316 & 5320			
5719	7136	Boring : N On-going project: N Working In or Near R/R Easement: N			
5720	7137	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5721	7139	FLINTC 00003 MISDIGb 11/15/14 13:30:22 B43190150-00B EMER NEW GRID	FLINTC	B43190150	11/16/14
5722	7141	**** Underground ****			
5723	7142	Ticket : B43190150 Rcvd: 11/15/14 13:28 Oper: JLK Rev: 00B			
5724	7143	Org Tkt : B43190150 Rcvd: 11/15/14 13:30 Oper: JLK			
5725	7145	Digstart: 11/16/14 Time: 06:00			
5726	7146	Tkt Life: 12/07/14 Time: 23:59 Positive response required: Y			
5727	7147	Resp Due: 11/16/14 Time: 06:00			
5728	7149	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5729	7150	Phone : 810-577-8261 Ext: Fax :			
5730	7151	E-mail : NONE			
5731	7152	FieldCnt: Number:			
5732	7154	County : GENESEE Place : FLINT /C			
5733	7156	Grids : 4302B8338A 4302B8339D			
5734	7157	Polygon : 43.045742/-83.651349 43.045476/-83.649515			
5735	7158	: 43.044399/-83.651544 43.044133/-83.649710			
5736	7159	Lat : Long:			
5737	7160	Work Typ: WMB Done For:			
5738	7161	Address :			
5739	7162	Street : COLORADO AVE			
5740	7163	1st x-st: Dir of BRANCH RD			
5741	7164	2nd x-st: Dir of			
5742	7165	Subdivsn: Lots:			
5743	7166	Stk Info: LOCATE 30 FT RADIUS OF LOC MARKED W/ BARRICADE ON SW COR OF COLORADO &			
5744	7167	: BRANCH			
5745	7168	Boring : N On-going project: N Working In or Near R/R Easement: N			
5746	7169	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5747	7171	FLINTC 00001 MISDIGa 11/17/14 08:24:35 A43210049-00A EMER NEW GRID	FLINTC	A43210049	11/17/14
5748	7173	**** Underground ****			
5749	7174	Ticket : A43210049 Rcvd: 11/17/14 08:22 Oper: NPG Rev: 00A			
5750	7175	Org Tkt : A43210049 Rcvd: 11/17/14 08:24 Oper: NPG			
5751	7177	Digstart: 11/17/14 Time: 08:22			
5752	7178	Tkt Life: 12/08/14 Time: 23:59 Positive response required: Y			
5753	7179	Resp Due: 11/17/14 Time: 11:24			
5754	7181	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5755	7182	Phone : 810-577-8261 Ext: Fax :			
5756	7183	E-mail : NONE			
5757	7184	FieldCnt: Number:			
5758	7186	County : GENESEE Place : FLINT /C			
5759	7188	Grids : 4303D8338A			
5760	7189	Polygon : 43.051521/-83.649307 43.051592/-83.646583			

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5721	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address :	Street : COLORADO AVE
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5747	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB	Address : 3220	Street : RICHFIELD RD
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5747	1st x-st: Dir W of N AVERILL AVE	2nd x-st: Dir E of BRANCH RD
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5761	7190	: 43.050149/-83.649271 43.050220/-83.646547			
5762	7191	Lat : Long:			
5763	7192	Work Typ: REPR WMB Done For:			
5764	7193	Address : 3220			
5765	7194	Street : RICHFIELD RD			
5766	7195	1st x-st: Dir W of N AVERILL AVE			
5767	7196	2nd x-st: Dir E of BRANCH RD			
5768	7197	Subdivsn: Lots:			
5769	7198	Stk Info: LOCATE IFO ADDR & BTH SDS OF RD CREW ON SITE			
5770	7199	Boring : N On-going project: N Working In or Near R/R Easement: N			
5771	7200	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC MOTT			
5772	7202	FLINTC 00005 MISDIGb 11/17/14 08:36:53 B43210171-00B EMER NEW GRID	FLINTC	B43210171	11/17/14
5773	7204	**** Underground ****			
5774	7205	Ticket : B43210171 Rcvd: 11/17/14 08:36 Oper: DMS Rev: 00B			
5775	7206	Org Tkt : B43210171 Rcvd: 11/17/14 08:36 Oper: DMS			
5776	7208	Digstart: 11/17/14 Time: 08:36			
5777	7209	Tkt Life: 12/08/14 Time: 23:59 Positive response required: Y			
5778	7210	Resp Due: 11/17/14 Time: 11:36			
5779	7212	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5780	7213	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5781	7214	E-mail : NONE			
5782	7215	FieldCnt: PAUL/CELL Number: 810-397-7247			
5783	7217	County : GENESEE Place : FLINT /C			
5784	7219	Grids : 4301C8342A 4301C8342B 4301C8343D			
5785	7220	Polygon : 43.023488/-83.716898 43.024849/-83.716478			
5786	7221	: 43.022041/-83.712205 43.023402/-83.711785			
5787	7222	Lat : Long:			
5788	7223	Work Typ: WMB Done For:			
5789	7224	Address : 1902			
5790	7225	Street : WOLCOTT ST			
5791	7226	1st x-st: Dir W of DUPONT ST			
5792	7227	2nd x-st: Dir N of FLUSHING RD			
5793	7228	Subdivsn: Lots:			
5794	7229	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
5795	7230	Boring : N On-going project: N Working In or Near R/R Easement: N			
5796	7231	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD MOTT USSIG			
5797	7233	FLINTC 00023 MISDIGb 11/17/14 13:45:02 B43210926-00B EMER NEW GRID	FLINTC	B43210926	11/18/14
5798	7235	**** Underground ****			
5799	7236	Ticket : B43210926 Rcvd: 11/17/14 13:43 Oper: SLD Rev: 00B			
5800	7237	Org Tkt : B43210926 Rcvd: 11/17/14 13:44 Oper: SLD			
5801	7239	Digstart: 11/18/14 Time: 06:00			
5802	7240	Tkt Life: 12/09/14 Time: 23:59 Positive response required: Y			
5803	7241	Resp Due: 11/18/14 Time: 06:00			
5804	7243	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5805	7244	Phone : 810-577-8261 Ext: Fax :			
5806	7245	E-mail : NONE			
5807	7246	FieldCnt: Number:			
5808	7248	County : GENESEE Place : FLINT /C			

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5772	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address : 1902	Street : WOLCOTT ST
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5797	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 605	Street : N SAGINAW ST
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5797	1st x-st: Dir of UNIVERSITY DR	2nd x-st: Dir of 4TH AVE
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5809	7250	Grids : 4301C8341B 4301D8341B			
5810	7251	Polygon : 43.022802/-83.694404 43.022802/-83.692549			
5811	7252	: 43.020643/-83.694404 43.020643/-83.692549			
5812	7253	Lat : Long:			
5813	7254	Work Typ: WMB Done For:			
5814	7255	Address : 605			
5815	7256	Street : N SAGINAW ST			
5816	7257	1st x-st: Dir of UNIVERSITY DR			
5817	7258	2nd x-st: Dir of 4TH AVE			
5818	7259	Subdivsn: Lots:			
5819	7260	Stk Info: BET X STS LOCATE FRT OF PROP & BTH SDS OF RD			
5820	7261	Boring : N On-going project: N Working In or Near R/R Easement: N			
5821	7262	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 FLINTC MOTT			
5822	7264	FLINTC 00009 MISDIGb 11/18/14 08:17:07 B43220103-00B EMER NEW GRID	FLINTC	B43220103	11/18/14
5823	7266	**** Underground ****			
5824	7267	Ticket : B43220103 Rcvd: 11/18/14 08:14 Oper: MRP Rev: 00B			
5825	7268	Org Tkt : B43220103 Rcvd: 11/18/14 08:16 Oper: MRP			
5826	7270	Digstart: 11/18/14 Time: 08:14			
5827	7271	Tkt Life: 12/09/14 Time: 23:59 Positive response required: Y			
5828	7272	Resp Due: 11/18/14 Time: 11:16			
5829	7274	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON			
5830	7275	Phone : 810-766-7202 Ext: Fax : 810-742-6283			
5831	7276	E-mail : NONE			
5832	7277	FieldCnt: CELL Number: 810-397-7247			
5833	7279	County : GENESEE Place : FLINT /C			
5834	7281	Grids : 4259C8339B 4259C8339C			
5835	7282	Polygon : 42.989658/-83.659928 42.989926/-83.658090			
5836	7283	: 42.988290/-83.659729 42.988558/-83.657891			
5837	7284	Lat : Long:			
5838	7285	Work Typ: WMB Done For:			
5839	7286	Address :			
5840	7287	Street : COMANCHE AVE			
5841	7288	1st x-st: Dir of ATHERTON RD			
5842	7289	2nd x-st: Dir W of S DORT HWY			
5843	7290	Subdivsn: Lots:			
5844	7291	Stk Info: LOCATE 75FT RADIUS NW COR OF COMANCHE & ATHERTON CREW EN ROUTE			
5845	7292	Boring : N On-going project: N Working In or Near R/R Easement: N			
5846	7293	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
5847	7295	FLINTC 00005 MISDIGb 11/19/14 09:44:34 B43230370-00B EMER NEW GRID	FLINTC	B43230370	11/19/14
5848	7297	**** Underground ****			
5849	7298	Ticket : B43230370 Rcvd: 11/19/14 09:42 Oper: CMG Rev: 00B			
5850	7299	Org Tkt : B43230370 Rcvd: 11/19/14 09:44 Oper: CMG			
5851	7301	Digstart: 11/19/14 Time: 09:42			
5852	7302	Tkt Life: 12/10/14 Time: 23:59 Positive response required: Y			
5853	7303	Resp Due: 11/19/14 Time: 12:44			
5854	7305	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5855	7306	Phone : 810-577-8261 Ext: Fax :			
5856	7307	E-mail : NONE			

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5822	FLINT CITY WATER DEPARTMENT	PAUL SIMPSON	WMB	Address :	Street : COMANCHE AVE
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5847	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	REPR WMB LK	Address : 719	Street : DELL AVE
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5847	1st x-st: Dir E of OGEMA AVE	2nd x-st: Dir W of SHAWNEE AVE
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5857	7308	FieldCnt: Number:			
5858	7310	County : GENESEE Place : FLINT /C			
5859	7312	Grids : 4259D8339B 4259D8339C			
5860	7313	Polygon : 42.984916/-83.661902 42.985274/-83.655657			
5861	7314	: 42.983421/-83.661816 42.983778/-83.655571			
5862	7315	Lat : Long:			
5863	7316	Work Typ: REPR WMB LK Done For:			
5864	7317	Address : 719			
5865	7318	Street : DELL AVE			
5866	7319	1st x-st: Dir E of OGEMA AVE			
5867	7320	2nd x-st: Dir W of SHAWNEE AVE			
5868	7321	Subdivsn: Lots:			
5869	7322	Stk Info: LOCATE IFO OF ADDR & BTH SDS OF RD CREW ENROUTE			
5870	7323	Boring : N On-going project: N Working In or Near R/R Easement: N			
5871	7324	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD MOTT			
5872	7326	FLINTC 00010 MISDIGb 11/20/14 10:10:48 B43240296-00B EMER NEW GRID	FLINTC	B43240296	11/20/14
5873	7328	**** Underground ****			
5874	7329	Ticket : B43240296 Rcvd: 11/20/14 10:09 Oper: SLD Rev: 00B			
5875	7330	Org Tkt : B43240296 Rcvd: 11/20/14 10:10 Oper: SLD			
5876	7332	Digstart: 11/20/14 Time: 10:09			
5877	7333	Tkt Life: 12/11/14 Time: 23:59 Positive response required: Y			
5878	7334	Resp Due: 11/20/14 Time: 13:10			
5879	7336	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH			
5880	7337	Phone : 810-577-8261 Ext: Fax :			
5881	7338	E-mail : NONE			
5882	7339	FieldCnt: Number:			
5883	7341	County : GENESEE Place : FLINT /C			
5884	7343	Grids : 4259A8339B 4259A8339C 4259B8339B 4259B8339C			
5885	7344	Polygon : 42.996665/-83.659102 42.996718/-83.657233			
5886	7345	: 42.992427/-83.658982 42.992480/-83.657113			
5887	7346	Lat : Long:			
5888	7347	Work Typ: WMB Done For:			
5889	7348	Address : 3009			
5890	7349	Street : CHEROKEE AVE			
5891	7350	1st x-st: Dir S of MOHAWK AVE			
5892	7351	2nd x-st: Dir N of ELDON BAKER DR			
5893	7352	Subdivsn: Lots:			
5894	7353	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE			
5895	7354	Boring : N On-going project: N Working In or Near R/R Easement: N			
5896	7355	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MOTT			
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5872	FLINT CITY WATER DEPARTMENT	JEFF CHURCH	WMB	Address : 3009	Street : CHEROKEE AVE
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1	Row#	Data	Flint - city	Ticket	Digstart	Firm
2	1	FLINTC 00005 MISDIGb 01/02/14 08:40:33 B40020085-00B EMER NEW GRID	FLINTC	B40020085	01/02/14	FLINT CITY WATER DEPARTMENT
3	3	**** Underground ****				
4	4	Ticket : B40020085 Rcvd: 01/02/14 08:38 Oper: AMA Rev: 00B				
5	5	Org Tkt : B40020085 Rcvd: 01/02/14 08:40 Oper: AMA				
6	7	Digstart: 01/02/14 Time: 08:38				
7	8	Tkt Life: 01/23/14 Time: 23:59				
8	10	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
9	11	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
10	12	E-mail : NONE				
11	13	FieldCnt: PAUL SIMPSON /CELL Number: 810-397-7247				
12	15	County : GENESEE Place : FLINT /C				
13	17	Grids : 4302A8343A				
14	18	Polygon : 43.048875/-83.732606 43.049026/-83.729801				
15	19	: 43.047572/-83.732535 43.047723/-83.729731				
16	20	Lat : Long:				
17	21	Work Typ: REPR WMB Done For:				
18	22	Address :				
19	23	Street : SONNY AVE				
20	24	1st x-st: Dir of WISNER				
21	25	2nd x-st: Dir of SENECA				
22	26	Subdivsn: Lots:				
23	27	Stk Info: BET X STS STK BTH SDS OF SONNY ST BET X STS CREW ENROUTE				
24	28	Boring : N On-going project: N Working In or Near R/R Easement: N				
25	29	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
26	30	FLINTC 00006 MISDIGb 01/02/14 09:08:06 B40020118-00B EMER NEW GRID	FLINTC	B40020118	01/02/14	FLINT CITY WATER DEPARTMENT
27	32	**** Underground ****				
28	33	Ticket : B40020118 Rcvd: 01/02/14 09:06 Oper: AMA Rev: 00B				
29	34	Org Tkt : B40020118 Rcvd: 01/02/14 09:07 Oper: AMA				
30	36	Digstart: 01/02/14 Time: 09:06				
31	37	Tkt Life: 01/23/14 Time: 23:59				
32	39	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
33	40	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
34	41	E-mail : NONE				
35	42	FieldCnt: PAUL SIMPSON /CELL Number: 810-397-7247				
36	44	County : GENESEE Place : FLINT /C				
37	46	Grids : 4303D8339C 4303D8339D				
38	47	Polygon : 43.051389/-83.655275 43.051547/-83.651955				
39	48	: 43.050031/-83.655211 43.050189/-83.651891				
40	49	Lat : Long:				
41	50	Work Typ: REPR WMB Done For:				
42	51	Address : 2935				
43	52	Street : RICHFIELD RD				
44	53	1st x-st: Dir E of WESTERN RD				
45	54	2nd x-st: Dir W of BRANCH RD				
46	55	Subdivsn: Lots:				
47	56	Stk Info: STK FRT OF PROP & BTH SDS OF ST CREW ON SITE				

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1	**Caller**	**work type**	**Address**	**Street**	**1st cross st**
2	PAUL SIMPSON	REPR WMB	Address :	Street : SONNY AVE	1st x-st: Dir of WISNER
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26	PAUL SIMPSON	REPR WMB	Address : 2935	Street : RICHFIELD RD	1st x-st: Dir E of WESTERN RD
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48	57	Boring : N On-going project: N Working In or Near R/R Easement: N				
49	58	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
50	59	FLINTC 00007 MISDIGb 01/02/14 09:09:55 B40020119-00B EMER NEW GRID	FLINTC	B40020119	01/03/14	FLINT CITY WATER DEPARTMENT
51	61	**** Underground ****				
52	62	Ticket : B40020119 Rcvd: 01/02/14 09:08 Oper: AMA Rev: 00B				
53	63	Org Tkt : B40020119 Rcvd: 01/02/14 09:09 Oper: AMA				
54	65	Digstart: 01/03/14 Time: 08:00				
55	66	Tkt Life: 01/24/14 Time: 23:59				
56	68	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
57	69	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
58	70	E-mail : NONE				
59	71	FieldCnt: PAUL SIMPSON /CELL Number: 810-397-7247				
60	73	County : GENESEE Place : FLINT /C				
61	75	Grids : 4303C8343B 4303C8343C 4303D8343B 4303D8343C				
62	76	Polygon : 43.054607/-83.727525 43.054607/-83.723612				
63	77	: 43.053228/-83.727525 43.053228/-83.723612				
64	78	Lat : Long:				
65	79	Work Typ: REPR WMB Done For:				
66	80	Address :				
67	81	Street : STEWART AVE				
68	82	1st x-st: Dir E of CLIO RD				
69	83	2nd x-st: Dir W of FLEMING RD				
70	84	Subdivsn: Lots:				
71	85	Stk Info: STK FRT OF PROP & BTH SDS OF ST AT ADDRS 1712 & 1716				
72	86	Boring : N On-going project: N Working In or Near R/R Easement: N				
73	87	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
74	88	FLINTC 00015 MISDIGb 01/03/14 15:58:15 B40030499-00B EMER NEW GRID	FLINTC	B40030499	01/03/14	CITY OF FLINT, MI WATER SER
75	90	**** Underground ****				
76	91	Ticket : B40030499 Rcvd: 01/03/14 15:55 Oper: HDK Rev: 00B				
77	92	Org Tkt : B40030499 Rcvd: 01/03/14 15:58 Oper: HDK				
78	94	Digstart: 01/03/14 Time: 15:55				
79	95	Tkt Life: 01/24/14 Time: 23:59				
80	97	Firm : CITY OF FLINT, MI WATER SERVICE CEN Caller: CHERI PRIEST				
81	98	Phone : 810-766-7202 Ext: 3401 Fax : 810-742-6283				
82	99	E-mail : AROBERTS@CITYOFFLINT.COM				
83	100	FieldCnt: DAN WELLS Number: 810-577-1408				
84	102	County : GENESEE Place : FLINT /C				
85	104	Grids : 4303A8342A 4303A8343D 4304D8342A 4304D8343D				
86	105	Polygon : 43.067777/-83.718262 43.067831/-83.716389				
87	106	: 43.063439/-83.718136 43.063493/-83.716262				
88	107	Lat : Long:				
89	108	Work Typ: WMB Done For:				
90	109	Address : 5614				
91	110	Street : GLENN AVE				
92	111	1st x-st: Dir N of PIERSON RD				
93	112	2nd x-st: Dir W of DUPONT				
94	113	Subdivsn: Lots:				
95	114	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				

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50	PAUL SIMPSON	REPR WMB	Address :	Street : STEWART AVE	1st x-st: Dir E of CLIO RD
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74	CHERI PRIEST	WMB	Address : 5614	Street : GLENN AVE	1st x-st: Dir N of PIERSON RD
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96	115	Boring : N On-going project: N Working In or Near R/R Easement: N				
97	116	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GISD				
98	117	FLINTC 00001 MISDIGb 01/05/14 14:01:39 B40050058-00B EMER NEW GRID	FLINTC	B40050058	01/05/14	FLINT CITY
99	119	**** Underground ****				
100	120	Ticket : B40050058 Rcvd: 01/05/14 13:58 Oper: DJH Rev: 00B				
101	121	Org Tkt : B40050058 Rcvd: 01/05/14 14:01 Oper: DJH				
102	123	Digstart: 01/05/14 Time: 13:58				
103	124	Tkt Life: 01/26/14 Time: 23:59				
104	126	Firm : FLINT CITY Caller: GARY SMITH				
105	127	Phone : 810-265-4571 Ext: Fax :				
106	128	E-mail : NONE				
107	129	FieldCnt: Number:				
108	131	County : GENESEE Place : FLINT /C				
109	133	Grids : 4301D8339A				
110	134	Polygon : 43.019117/-83.664868 43.019073/-83.662996				
111	135	: 43.016815/-83.664923 43.016770/-83.663051				
112	136	Lat : Long:				
113	137	Work Typ: WMB Done For:				
114	138	Address :				
115	139	Street : LAFAYETTE ST				
116	140	1st x-st: Dir of COURT ST				
117	141	2nd x-st: Dir W of DORT HWY				
118	142	Subdivsn: Lots:				
119	143	Stk Info: STK ENTIRE INTER W/ COURT THEN GOING S 100FT ON BTH SDS OF RD				
120	144	: CREW EN ROUTE				
121	145	Boring : N On-going project: N Working In or Near R/R Easement: N				
122	146	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
123	147	FLINTC 00002 MISDIGb 01/05/14 14:04:01 B40050059-00B EMER NEW GRID	FLINTC	B40050059	01/05/14	FLINT CITY
124	149	**** Underground ****				
125	150	Ticket : B40050059 Rcvd: 01/05/14 14:01 Oper: DJH Rev: 00B				
126	151	Org Tkt : B40050059 Rcvd: 01/05/14 14:03 Oper: DJH				
127	153	Digstart: 01/05/14 Time: 14:01				
128	154	Tkt Life: 01/26/14 Time: 23:59				
129	156	Firm : FLINT CITY Caller: GARY SMITH				
130	157	Phone : 810-265-4571 Ext: Fax :				
131	158	E-mail : NONE				
132	159	FieldCnt: Number:				
133	161	County : GENESEE Place : FLINT /C				
134	163	Grids : 4303A8342A 4303A8343D 4304D8342A 4304D8343D				
135	164	Polygon : 43.067797/-83.718358 43.067931/-83.716491				
136	165	: 43.063412/-83.718045 43.063545/-83.716178				
137	166	Lat : Long:				
138	167	Work Typ: WMB Done For:				
139	168	Address :				
140	169	Street : GLENN AVE				
141	170	1st x-st: Dir N of PIERSON				
142	171	2nd x-st: Dir of				
143	172	Subdivsn: Lots:				

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98	GARY SMITH	WMB	Address :	Street : LAFAYETTE ST	1st x-st: Dir of COURT ST
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123	GARY SMITH	WMB	Address :	Street : GLENN AVE	1st x-st: Dir N of PIERSON
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144	173	Stk Info: ADDRS 5610 & 5614 STK ENTIRE FRT OF PROP & BTH SDS OF ST AT BTH				
145	174	: ADDRS CREW EN ROUTE				
146	175	Boring : N On-going project: N Working In or Near R/R Easement: N				
147	176	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GISD				
148	177	FLINTC 00003 MISDIGb 01/05/14 14:08:44 B40050061-00B EMER NEW GRID	FLINTC	B40050061	01/05/14	FLINT CITY
149	179	**** Underground ****				
150	180	Ticket : B40050061 Rcvd: 01/05/14 14:03 Oper: DJH Rev: 00B				
151	181	Org Tkt : B40050061 Rcvd: 01/05/14 14:08 Oper: DJH				
152	183	Digstart: 01/05/14 Time: 14:03				
153	184	Tkt Life: 01/26/14 Time: 23:59				
154	186	Firm : FLINT CITY Caller: GARY SMITH				
155	187	Phone : 810-265-4571 Ext: Fax :				
156	188	E-mail : NONE				
157	189	FieldCnt: Number:				
158	191	County : GENESEE Place : FLINT /C				
159	193	Grids : 4301B8340C 4301C8340C				
160	194	Polygon : 43.026183/-83.674037 43.026632/-83.671771				
161	195	: 43.024649/-83.673733 43.025097/-83.671467				
162	196	Lat : Long:				
163	197	Work Typ: WMB Done For:				
164	198	Address : 1527				
165	199	Street : KEARSLEY ST				
166	200	1st x-st: Dir S of ROBERT T LONGWAY				
167	201	2nd x-st: Dir E of CHAVEZ DR				
168	202	Subdivsn: Lots:				
169	203	Stk Info: N OF COURT STK ENTIRE FRT OF PROP & BTH SDS OF ST CREW EN				
170	204	: ROUTE				
171	205	Boring : N On-going project: N Working In or Near R/R Easement: N				
172	206	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GISD				
173	207	FLINTC 00005 MISDIGb 01/05/14 14:15:56 B40050064-00B EMER NEW GRID	FLINTC	B40050064	01/05/14	FLINT CITY
174	209	**** Underground ****				
175	210	Ticket : B40050064 Rcvd: 01/05/14 14:15 Oper: DJH Rev: 00B				
176	211	Org Tkt : B40050064 Rcvd: 01/05/14 14:15 Oper: DJH				
177	213	Digstart: 01/05/14 Time: 14:15				
178	214	Tkt Life: 01/26/14 Time: 23:59				
179	216	Firm : FLINT CITY Caller: GARY SMITH				
180	217	Phone : 810-265-4571 Ext: Fax :				
181	218	E-mail : NONE				
182	219	FieldCnt: Number:				
183	221	County : GENESEE Place : FLINT /C				
184	223	Grids : 4302A8338A 4302A8338B				
185	224	Polygon : 43.048909/-83.646622 43.048923/-83.644748				
186	225	: 43.046534/-83.646604 43.046548/-83.644730				
187	226	Lat : Long:				
188	227	Work Typ: WMB Done For:				
189	228	Address : 3701				
190	229	Street : AVERILL ST				
191	230	1st x-st: Dir of DAVISON				

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148	GARY SMITH	WMB	Address : 1527	Street : KEARSLEY ST	1st x-st: Dir S of ROBERT T LONGWAY
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173	GARY SMITH	WMB	Address : 3701	Street : AVERILL ST	1st x-st: Dir of DAVISON
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173	2nd x-st: Dir of LEITH
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192	231	2nd x-st: Dir of LEITH				
193	232	Subdivsn: Lots:				
194	233	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
195	234	Boring : N On-going project: N Working In or Near R/R Easement: N				
196	235	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN CETS COMTV2 FLINTC GENCRC				
197	236	FLINTC 00004 MISDIGb 01/05/14 14:15:12 B40050063-00B EMER NEW GRID	FLINTC	B40050063	01/05/14	FLINT CITY
198	238	**** Underground ****				
199	239	Ticket : B40050063 Rcvd: 01/05/14 14:11 Oper: DJH Rev: 00B				
200	240	Org Tkt : B40050063 Rcvd: 01/05/14 14:14 Oper: DJH				
201	242	Digstart: 01/05/14 Time: 14:11				
202	243	Tkt Life: 01/26/14 Time: 23:59				
203	245	Firm : FLINT CITY Caller: GARY SMITH				
204	246	Phone : 810-265-4571 Ext: Fax :				
205	247	E-mail : NONE				
206	248	FieldCnt: Number:				
207	250	County : GENESEE Place : FLINT /C				
208	252	Grids : 4302A8338A 4302A8338B 4302B8338A 4302B8338B 4302C8338A				
209	253	: 4302C8338B				
210	254	Polygon : 43.049788/-83.646712 43.049833/-83.644839				
211	255	: 43.039121/-83.646458 43.039166/-83.644586				
212	256	Lat : Long:				
213	257	Work Typ: WMB Done For:				
214	258	Address :				
215	259	Street : AVERILL ST				
216	260	1st x-st: Dir of DAVISON				
217	261	2nd x-st: Dir of LEITH				
218	262	Subdivsn: Lots:				
219	263	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD IFO ADDRS 3602 & 3610 CREW				
220	264	: EN ROUTE				
221	265	Boring : N On-going project: N Working In or Near R/R Easement: N				
222	266	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN CETS COMTV2 FILINK FLINTC GENCRC				
223	267	Members : GISD				
224	268	FLINTC 00007 MISDIGb 01/06/14 11:41:20 B40060280-00B EMER NEW GRID	FLINTC	B40060280	01/06/14	FLINT CITY WATER DEPARTMENT
225	270	**** Underground ****				
226	271	Ticket : B40060280 Rcvd: 01/06/14 11:40 Oper: AMA Rev: 00B				
227	272	Org Tkt : B40060280 Rcvd: 01/06/14 11:41 Oper: AMA				
228	274	Digstart: 01/06/14 Time: 11:40				
229	275	Tkt Life: 01/27/14 Time: 23:59				
230	277	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
231	278	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
232	279	E-mail : NONE				
233	280	FieldCnt: PAUL SIMPSON /CELL Number: 810-397-7247				
234	282	County : GENESEE Place : FLINT /C				
235	284	Grids : 4301D8339A				
236	285	Polygon : 43.019112/-83.664784 43.018889/-83.662677				
237	286	: 43.017754/-83.664928 43.017531/-83.662821				
238	287	Lat : Long:				
239	288	Work Typ: REPR WMB Done For:				

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197	GARY SMITH	WMB	Address :	Street : AVERILL ST	1st x-st: Dir of DAVISON
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224	PAUL SIMPSON	REPR WMB	Address :	Street : E COURT ST	1st x-st: Dir of LAFAYETTE ST
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240	289	Address :				
241	290	Street : E COURT ST				
242	291	1st x-st: Dir of LAFAYETTE ST				
243	292	2nd x-st: Dir E of S FRANKLIN				
244	293	Subdivsn: Lots:				
245	294	Stk Info: W OF S DORT HWY STK 50 FT RADIUS OF SE COR OF E COURT ST &				
246	295	: LAFAYETTE CREW ON SITE				
247	296	Boring : N On-going project: N Working In or Near R/R Easement: N				
248	297	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
249	298	FLINTC 00012 MISDIGb 01/06/14 19:44:23 B40060582-00B EMER NEW GRID	FLINTC	B40060582	01/07/14	FLINT CITY WATER DEPARTMENT
250	300	**** Underground ****				
251	301	Ticket : B40060582 Rcvd: 01/06/14 19:41 Oper: HDK Rev: 00B				
252	302	Org Tkt : B40060582 Rcvd: 01/06/14 19:44 Oper: HDK				
253	304	Digstart: 01/07/14 Time: 08:30				
254	305	Tkt Life: 01/28/14 Time: 23:59				
255	307	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
256	308	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
257	309	E-mail : NONE				
258	310	FieldCnt: PAUL Number: 810-397-7247				
259	312	County : GENESEE Place : FLINT /C				
260	314	Grids : 4302A8338A 4302A8338B				
261	315	Polygon : 43.048909/-83.646622 43.048923/-83.644748				
262	316	: 43.046534/-83.646604 43.046548/-83.644730				
263	317	Lat : Long:				
264	318	Work Typ: WMB Done For:				
265	319	Address :				
266	320	Street : N AVERILL AVE				
267	321	1st x-st: Dir S of RICHFIELD RD				
268	322	2nd x-st: Dir W of CENTER RD				
269	323	Subdivsn: Lots:				
270	324	Stk Info: STK FRT OF PROP & BTH SDS OF RD AT ADDR 3602 & 3701				
271	325	Boring : N On-going project: N Working In or Near R/R Easement: N				
272	326	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN CETS COMTV2 FLINTC GENCRC				
273	327	FLINTC 00002 MISDIGb 01/07/14 09:39:32 B40070125-00B EMER NEW GRID	FLINTC	B40070125	01/07/14	FLINT CITY WATER DEPARTMENT
274	329	**** Underground ****				
275	330	Ticket : B40070125 Rcvd: 01/07/14 09:34 Oper: MRP Rev: 00B				
276	331	Org Tkt : B40070125 Rcvd: 01/07/14 09:39 Oper: MRP				
277	333	Digstart: 01/07/14 Time: 09:34				
278	334	Tkt Life: 01/28/14 Time: 23:59				
279	336	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
280	337	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
281	338	E-mail : NONE				
282	339	FieldCnt: CELL Number: 810-397-7247				
283	341	County : GENESEE Place : FLINT /C				
284	343	Grids : 4302A8343C 4302A8343D				
285	344	Polygon : 43.049621/-83.723863 43.049630/-83.719325				
286	345	: 43.046886/-83.723858 43.046894/-83.719320				
287	346	Lat : Long:				

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249	PAUL SIMPSON	WMB	Address :	Street : N AVERILL AVE	1st x-st: Dir S of RICHFIELD RD
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273	PAUL SIMPSON	WMB	Address :	Street : SONNY AVE	1st x-st: Dir of FOREST HILL AVE
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288	347	Work Typ: WMB Done For:				
289	348	Address :				
290	349	Street : SONNY AVE				
291	350	1st x-st: Dir of FOREST HILL AVE				
292	351	2nd x-st: Dir N of PASADENA				
293	352	Subdivsn: Lots:				
294	353	Stk Info: E OF FLEMING STK 50FT RADIUS OF ENTIRE INTER SONNY & FOREST HILL				
295	354	: CREW EN ROUTE				
296	355	Boring : N On-going project: N Working In or Near R/R Easement: N				
297	356	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
298	357	FLINTC 00006 MISDIGb 01/07/14 10:08:15 B40070144-00B EMER NEW GRID	FLINTC	B40070144	01/07/14	FLINT CITY WATER DEPARTMENT
299	359	**** Underground ****				
300	360	Ticket : B40070144 Rcvd: 01/07/14 10:06 Oper: SJG Rev: 00B				
301	361	Org Tkt : B40070144 Rcvd: 01/07/14 10:08 Oper: SJG				
302	363	Digstart: 01/07/14 Time: 10:06				
303	364	Tkt Life: 01/28/14 Time: 23:59				
304	366	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
305	367	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
306	368	E-mail : NONE				
307	369	FieldCnt: PAUL - CELL Number: 810-397-7247				
308	371	County : GENESEE Place : FLINT /C				
309	373	Grids : 4303A8342A 4303A8343D 4304D8342A 4304D8343D				
310	374	Polygon : 43.067763/-83.717257 43.067849/-83.715387				
311	375	: 43.063422/-83.717056 43.063509/-83.715185				
312	376	Lat : Long:				
313	377	Work Typ: WMB Done For:				
314	378	Address : 5810				
315	379	Street : BALDWIN BLVD				
316	380	1st x-st: Dir W of DUPONT				
317	381	2nd x-st: Dir S of HOME AVE				
318	382	Subdivsn: Lots:				
319	383	Stk Info: STK FRT OF PROP & BTH SDS OF ST CREW ENROUTE				
320	384	Boring : N On-going project: N Working In or Near R/R Easement: N				
321	385	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GISD				
322	386	FLINTC 00002 MISDIGb 01/08/14 07:42:09 B40080046-00B EMER NEW GRID	FLINTC	B40080046	01/08/14	FLINT CITY WATER DEPARTMENT
323	388	**** Underground ****				
324	389	Ticket : B40080046 Rcvd: 01/08/14 07:40 Oper: GMH Rev: 00B				
325	390	Org Tkt : B40080046 Rcvd: 01/08/14 07:42 Oper: GMH				
326	392	Digstart: 01/08/14 Time: 08:00				
327	393	Tkt Life: 01/29/14 Time: 23:59				
328	395	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
329	396	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
330	397	E-mail : NONE				
331	398	FieldCnt: PAUL Number: 810-397-7247				
332	400	County : GENESEE Place : FLINT /C				
333	402	Grids : 4300C8339C 4300C8339D 4300D8339C 4300D8339D				
334	403	Polygon : 43.004361/-83.655051 43.004495/-83.653188				
335	404	: 43.001165/-83.654821 43.001299/-83.652957				

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298	PAUL SIMPSON	WMB	Address : 5810	Street : BALDWIN BLVD	1st x-st: Dir W of DUPONT
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322	PAUL SIMPSON	WMB	Address : 2211	Street : S DORT HWY	1st x-st: Dir S of LIPPINCOTT BLVD
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336	405	Lat : Long:				
337	406	Work Typ: WMB Done For:				
338	407	Address : 2211				
339	408	Street : S DORT HWY				
340	409	1st x-st: Dir S of LIPPINCOTT BLVD				
341	410	2nd x-st: Dir of				
342	411	Subdivsn: Lots:				
343	412	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
344	413	Boring : N On-going project: N Working In or Near R/R Easement: N				
345	414	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MWFN				
346	415	FLINTC 00003 MISDIGb 01/08/14 07:45:50 B40080049-00B EMER NEW GRID	FLINTC	B40080049	01/08/14	FLINT CITY WATER DEPARTMENT
347	417	**** Underground ****				
348	418	Ticket : B40080049 Rcvd: 01/08/14 07:43 Oper: MRP Rev: 00B				
349	419	Org Tkt : B40080049 Rcvd: 01/08/14 07:45 Oper: MRP				
350	421	Digstart: 01/08/14 Time: 08:00				
351	422	Tkt Life: 01/29/14 Time: 23:59				
352	424	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
353	425	Phone : 810-577-8261 Ext: Fax :				
354	426	E-mail : NONE				
355	427	FieldCnt: Number:				
356	429	County : GENESEE Place : FLINT /C				
357	431	Grids : 4259B8339B 4259B8339C 4259C8339B 4259C8339C				
358	432	Polygon : 42.993744/-83.660065 42.993835/-83.658196				
359	433	: 42.990161/-83.659890 42.990252/-83.658021				
360	434	Lat : Long:				
361	435	Work Typ: WMB Done For:				
362	436	Address :				
363	437	Street : COMANCHE AVE				
364	438	1st x-st: Dir S of ELDON BAKER				
365	439	2nd x-st: Dir W of DORT HWY				
366	440	Subdivsn: Lots:				
367	441	Stk Info: STK FRT OF PROP & BTH SDS OF RD ADDRS 3301 & 3305 CREW EN ROUTE				
368	442	Boring : N On-going project: N Working In or Near R/R Easement: N				
369	443	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
370	444	FLINTC 00004 MISDIGb 01/08/14 07:48:25 B40080051-00B EMER NEW GRID	FLINTC	B40080051	01/08/14	FLINT CITY WATER DEPARTMENT
371	446	**** Underground ****				
372	447	Ticket : B40080051 Rcvd: 01/08/14 07:45 Oper: MRP Rev: 00B				
373	448	Org Tkt : B40080051 Rcvd: 01/08/14 07:48 Oper: MRP				
374	450	Digstart: 01/08/14 Time: 14:00				
375	451	Tkt Life: 01/29/14 Time: 23:59				
376	453	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
377	454	Phone : 810-577-8261 Ext: Fax :				
378	455	E-mail : NONE				
379	456	FieldCnt: Number:				
380	458	County : GENESEE Place : FLINT /C				
381	460	Grids : 4304C8341C 4304C8341D 4304D8341C 4304D8341D				
382	461	Polygon : 43.071619/-83.688212 43.071337/-83.683362				
383	462	: 43.069165/-83.688354 43.068883/-83.683504				

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346	JEFF CHURCH	WMB	Address :	Street : COMANCHE AVE	1st x-st: Dir S of ELDON BAKER
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370	JEFF CHURCH	WMB	Address :	Street : E RUTH AVE	1st x-st: Dir of SELBY ST
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384	463	Lat : Long:				
385	464	Work Typ: WMB Done For:				
386	465	Address :				
387	466	Street : E RUTH AVE				
388	467	1st x-st: Dir of SELBY ST				
389	468	2nd x-st: Dir S of CARPENTER				
390	469	Subdivsn: Lots:				
391	470	Stk Info: JUST W OF I- 475 STK 30FT RADIUS OF BARRICADES NW COR E RUTH &				
392	471	: SELBY				
393	472	Boring : N On-going project: N Working In or Near R/R Easement: N				
394	473	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
395	474	FLINTC 00007 MISDIGb 01/08/14 13:07:30 B40080341-00B EMER NEW GRID	FLINTC	B40080341	01/09/14	FLINT CITY WATER DEPARTMENT
396	476	**** Underground ****				
397	477	Ticket : B40080341 Rcvd: 01/08/14 13:05 Oper: JLK Rev: 00B				
398	478	Org Tkt : B40080341 Rcvd: 01/08/14 13:07 Oper: JLK				
399	480	Digstart: 01/09/14 Time: 08:00				
400	481	Tkt Life: 01/30/14 Time: 23:59				
401	483	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
402	484	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
403	485	E-mail : NONE				
404	486	FieldCnt: HOWARD SWICKARD CELL Number: 810-577-8263				
405	488	County : GENESEE Place : FLINT /C				
406	490	Grids : 4302A8338A 4302A8339C 4302A8339D				
407	491	Polygon : 43.049214/-83.655192 43.049289/-83.649640				
408	492	: 43.047842/-83.655174 43.047917/-83.649622				
409	493	Lat : Long:				
410	494	Work Typ: WMB Done For:				
411	495	Address : 2959				
412	496	Street : HENRY ST				
413	497	1st x-st: Dir S of RICHFIELD RD				
414	498	2nd x-st: Dir E of WESTERN RD				
415	499	Subdivsn: Lots:				
416	500	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF HENRY R-O-W TO R-O-W				
417	501	Boring : N On-going project: N Working In or Near R/R Easement: N				
418	502	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
419	503	FLINTC 00008 MISDIGb 01/08/14 13:09:38 B40080343-00B EMER NEW GRID	FLINTC	B40080343	01/09/14	FLINT CITY WATER DEPARTMENT
420	505	**** Underground ****				
421	506	Ticket : B40080343 Rcvd: 01/08/14 13:07 Oper: JLK Rev: 00B				
422	507	Org Tkt : B40080343 Rcvd: 01/08/14 13:09 Oper: JLK				
423	509	Digstart: 01/09/14 Time: 08:00				
424	510	Tkt Life: 01/30/14 Time: 23:59				
425	512	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
426	513	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
427	514	E-mail : NONE				
428	515	FieldCnt: HOWARD SWICKARD CELL Number: 810-577-8263				
429	517	County : GENESEE Place : FLINT /C				
430	519	Grids : 4302A8338B 4302A8338C 4302B8338B 4302B8338C				
431	520	Polygon : 43.050064/-83.644922 43.048680/-83.637356				

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395	HOWARD SWICKARD	WMB	Address : 2959	Street : HENRY ST	1st x-st: Dir S of RICHFIELD RD
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419	HOWARD SWICKARD	WMB	Address :	Street : DOLPHAINE LN	1st x-st: Dir of HUGGINS AVE
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432	521	: 43.044989/-83.645850 43.043605/-83.638284				
433	522	Lat : Long:				
434	523	Work Typ: WMB Done For:				
435	524	Address :				
436	525	Street : DOLPHAINE LN				
437	526	1st x-st: Dir of HUGGINS AVE				
438	527	2nd x-st: Dir S of RICHFIELD RD				
439	528	Subdivsn: Lots:				
440	529	Stk Info: W OF CENTER RD STK ENTIRE INTER OF DOLPHAINE & HUGGINS				
441	530	Boring : N On-going project: N Working In or Near R/R Easement: N				
442	531	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 DETWTR FLINTC GENCRC				
443	532	FLINTC 00003 MISDIGb 01/09/14 07:55:26 B40090064-00B EMER NEW GRID	FLINTC	B40090064	01/09/14	FLINT CITY WATER DEPARTMENT
444	534	**** Underground ****				
445	535	Ticket : B40090064 Rcvd: 01/09/14 07:53 Oper: MRP Rev: 00B				
446	536	Org Tkt : B40090064 Rcvd: 01/09/14 07:55 Oper: MRP				
447	538	Digstart: 01/09/14 Time: 08:00				
448	539	Tkt Life: 01/30/14 Time: 23:59				
449	541	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
450	542	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
451	543	E-mail : NONE				
452	544	FieldCnt: CELL Number: 810-397-7247				
453	546	County : GENESEE Place : FLINT /C				
454	548	Grids : 4302A8342C 4302A8342D 4302B8342D				
455	549	Polygon : 43.048515/-83.704420 43.048508/-83.702546				
456	550	: 43.045730/-83.704430 43.045723/-83.702556				
457	551	Lat : Long:				
458	552	Work Typ: WMB Done For:				
459	553	Address : 3517				
460	554	Street : ESTHER ST				
461	555	1st x-st: Dir E of M L KING				
462	556	2nd x-st: Dir N of PASADENA				
463	557	Subdivsn: Lots:				
464	558	Stk Info: STK FRT OF ADDR & BTH SDS OF ST CREW EN ROUTE				
465	559	Boring : N On-going project: N Working In or Near R/R Easement: N				
466	560	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GISD				
467	561	FLINTC 00004 MISDIGa 01/09/14 10:26:46 A40090142-00A EMER NEW GRID	FLINTC	A40090142	01/09/14	FLINT CITY WATER DEPARTMENT
468	563	**** Underground ****				
469	564	Ticket : A40090142 Rcvd: 01/09/14 10:24 Oper: BMF Rev: 00A				
470	565	Org Tkt : A40090142 Rcvd: 01/09/14 10:26 Oper: BMF				
471	567	Digstart: 01/09/14 Time: 14:00				
472	568	Tkt Life: 01/30/14 Time: 23:59				
473	570	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
474	571	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
475	572	E-mail : NONE				
476	573	FieldCnt: HOWARD /CELL Number: 810-577-8263				
477	575	County : GENESEE Place : FLINT /C				
478	577	Grids : 4259A8343A				
479	578	Polygon : 42.999731/-83.731175 42.999968/-83.729332				

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443	PAUL SIMPSON	WMB	Address : 3517	Street : ESTHER ST	1st x-st: Dir E of M L KING
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467	HOWARD SWICKARD	WMB	Address :	Street : ARLENE	1st x-st: Dir of MANN
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480	579	: 42.998413/-83.731006 42.998650/-83.729163				
481	580	Lat : Long:				
482	581	Work Typ: WMB Done For:				
483	582	Address :				
484	583	Street : ARLENE				
485	584	1st x-st: Dir of MANN				
486	585	2nd x-st: Dir of				
487	586	Subdivsn: Lots:				
488	587	Stk Info: LOCATE ENTIRE INTER				
489	588	Boring : N On-going project: N Working In or Near R/R Easement: N				
490	589	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
491	590	FLINTC 00001 MISDIGb 01/13/14 07:30:11 B40130055-00B EMER NEW GRID	FLINTC	B40130055	01/13/14	FLINT CITY WATER DEPARTMENT
492	592	**** Underground ****				
493	593	Ticket : B40130055 Rcvd: 01/13/14 07:28 Oper: LCG Rev: 00B				
494	594	Org Tkt : B40130055 Rcvd: 01/13/14 07:30 Oper: LCG				
495	596	Digstart: 01/13/14 Time: 08:30				
496	597	Tkt Life: 02/03/14 Time: 23:59				
497	599	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
498	600	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
499	601	E-mail : NONE				
500	602	FieldCnt: Number: 810-397-7247				
501	604	County : GENESEE Place : FLINT /C				
502	606	Grids : 4302D8343A 4302D8343B				
503	607	Polygon : 43.036197/-83.730138 43.037484/-83.729294				
504	608	: 43.034541/-83.727612 43.035828/-83.726768				
505	609	Lat : Long:				
506	610	Work Typ: WMB Done For:				
507	611	Address : 2118				
508	612	Street : WELCH BLVD				
509	613	1st x-st: Dir W of BALLENGER HWY				
510	614	2nd x-st: Dir E of CLIO RD				
511	615	Subdivsn: Lots:				
512	616	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW ENROUTE				
513	617	Boring : N On-going project: N Working In or Near R/R Easement: N				
514	618	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GISD				
515	619	FLINTC 00002 MISDIGb 01/13/14 07:48:24 B40130060-00B EMER NEW GRID	FLINTC	B40130060	01/13/14	FLINT CITY WATER DEPARTMENT
516	621	**** Underground ****				
517	622	Ticket : B40130060 Rcvd: 01/13/14 07:46 Oper: AMA Rev: 00B				
518	623	Org Tkt : B40130060 Rcvd: 01/13/14 07:48 Oper: AMA				
519	625	Digstart: 01/13/14 Time: 08:00				
520	626	Tkt Life: 02/03/14 Time: 23:59				
521	628	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
522	629	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
523	630	E-mail : NONE				
524	631	FieldCnt: HOWARD SWICKARD /CELL Number: 810-577-8263				
525	633	County : GENESEE Place : FLINT /C				
526	635	Grids : 4303A8343B 4303A8343C 4303B8343B 4303B8343C				
527	636	Polygon : 43.065185/-83.725901 43.065298/-83.723939				

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491	PAUL SIMPSON	WMB	Address : 2118	Street : WELCH BLVD	1st x-st: Dir W of BALLENGER HWY
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515	HOWARD SWICKARD	REPR WMB	Address :	Street : LESLIE DR	1st x-st: Dir N of PIERSON RD
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528	637	: 43.061844/-83.725710 43.061956/-83.723748				
529	638	Lat : Long:				
530	639	Work Typ: REPR WMB Done For:				
531	640	Address :				
532	641	Street : LESLIE DR				
533	642	1st x-st: Dir N of PIERSON RD				
534	643	2nd x-st: Dir E of CLIO RD				
535	644	Subdivsn: Lots:				
536	645	Stk Info: STK BTH SDS OF RD AT ADDRS 5402, 5406, 5410 CREW ENROUTE				
537	646	Boring : N On-going project: N Working In or Near R/R Easement: N				
538	647	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
539	648	FLINTC 00003 MISDIGb 01/13/14 07:50:26 B40130063-00B EMER NEW GRID	FLINTC	B40130063	01/13/14	FLINT CITY WATER DEPARTMENT
540	650	**** Underground ****				
541	651	Ticket : B40130063 Rcvd: 01/13/14 07:48 Oper: MRP Rev: 00B				
542	652	Org Tkt : B40130063 Rcvd: 01/13/14 07:50 Oper: MRP				
543	654	Digstart: 01/13/14 Time: 08:00				
544	655	Tkt Life: 02/03/14 Time: 23:59				
545	657	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
546	658	Phone : 810-577-8261 Ext: Fax :				
547	659	E-mail : NONE				
548	660	FieldCnt: Number:				
549	662	County : GENESEE Place : FLINT /C				
550	664	Grids : 4302B8342A 4302B8342B				
551	665	Polygon : 43.044604/-83.714281 43.044552/-83.712409				
552	666	: 43.042156/-83.714349 43.042103/-83.712477				
553	667	Lat : Long:				
554	668	Work Typ: WMB Done For:				
555	669	Address :				
556	670	Street : DUPONT				
557	671	1st x-st: Dir of GENESEE				
558	672	2nd x-st: Dir of MCCLELLAN				
559	673	Subdivsn: Lots:				
560	674	Stk Info: STK 50FT RADIUS OF BARRICADE E SD OF RD BET XSTS CREW EN ROUTE				
561	675	Boring : N On-going project: N Working In or Near R/R Easement: N				
562	676	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
563	677	FLINTC 00006 MISDIGa 01/13/14 11:06:11 A40130111-00A EMER NEW GRID	FLINTC	A40130111	01/13/14	FLINT CITY WATER DEPARTMENT
564	679	**** Underground ****				
565	680	Ticket : A40130111 Rcvd: 01/13/14 11:03 Oper: BMF Rev: 00A				
566	681	Org Tkt : A40130111 Rcvd: 01/13/14 11:05 Oper: BMF				
567	683	Digstart: 01/13/14 Time: 11:03				
568	684	Tkt Life: 02/03/14 Time: 23:59				
569	686	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
570	687	Phone : 810-577-8261 Ext: Fax :				
571	688	E-mail : NONE				
572	689	FieldCnt: Number:				
573	691	County : GENESEE Place : FLINT /C				
574	693	Grids : 4300C8343C 4300C8343D 4300D8343C 4300D8343D				
575	694	Polygon : 43.005016/-83.722477 43.005782/-83.718136				

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539	JEFF CHURCH	WMB	Address :	Street : DUPONT	1st x-st: Dir of GENESEE
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563	JEFF CHURCH	WMB	Address :	Street : GIBSON ST	1st x-st: Dir E of GAINEY AVE
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576	695	: 43.003551/-83.722218 43.004316/-83.717877				
577	696	Lat : Long:				
578	697	Work Typ: WMB Done For:				
579	698	Address :				
580	699	Street : GIBSON ST				
581	700	1st x-st: Dir E of GAINEY AVE				
582	701	2nd x-st: Dir N of CORUNNA RD				
583	702	Subdivsn: Lots:				
584	703	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD AT ADDRS 2520, 2525 & 2529 CREW				
585	704	: ON SITE				
586	705	Boring : N On-going project: N Working In or Near R/R Easement: N				
587	706	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
588	707	FLINTC 00010 MISDIGb 01/13/14 13:19:59 B40130760-00B EMER NEW GRID	FLINTC	B40130760	01/13/14	FLINT CITY WATER DEPARTMENT
589	709	**** Underground ****				
590	710	Ticket : B40130760 Rcvd: 01/13/14 13:16 Oper: MRP Rev: 00B				
591	711	Org Tkt : B40130760 Rcvd: 01/13/14 13:19 Oper: MRP				
592	713	Digstart: 01/13/14 Time: 16:00				
593	714	Tkt Life: 02/03/14 Time: 23:59				
594	716	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
595	717	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
596	718	E-mail : NONE				
597	719	FieldCnt: CELL Number: 810-397-7247				
598	721	County : GENESEE Place : FLINT /C				
599	723	Grids : 4303D8338C 4303D8338D				
600	724	Polygon : 43.051656/-83.641599 43.051723/-83.634864				
601	725	: 43.050295/-83.641586 43.050362/-83.634851				
602	726	Lat : Long:				
603	727	Work Typ: WMB Done For:				
604	728	Address : 3838				
605	729	Street : RICHFIELD RD				
606	730	1st x-st: Dir W of CENTER RD				
607	731	2nd x-st: Dir E of AVERILL				
608	732	Subdivsn: Lots:				
609	733	Stk Info: STK FRT OF ADDR TO C/L OF RD S SD OF RD				
610	734	Boring : N On-going project: N Working In or Near R/R Easement: N				
611	735	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC				
612	736	FLINTC 00002 MISDIGb 01/14/14 07:34:39 B40140048-00B EMER NEW GRID	FLINTC	B40140048	01/14/14	FLINT CITY WATER DEPARTMENT
613	738	**** Underground ****				
614	739	Ticket : B40140048 Rcvd: 01/14/14 07:32 Oper: AMA Rev: 00B				
615	740	Org Tkt : B40140048 Rcvd: 01/14/14 07:34 Oper: AMA				
616	742	Digstart: 01/14/14 Time: 08:30				
617	743	Tkt Life: 02/04/14 Time: 23:59				
618	745	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
619	746	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
620	747	E-mail : NONE				
621	748	FieldCnt: PAUL SIMPSON /CELL Number: 810-397-7247				
622	750	County : GENESEE Place : FLINT /C				
623	752	Grids : 4300A8341C 4301D8341C				

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588	PAUL SIMPSON	WMB	Address : 3838	Street : RICHFIELD RD	1st x-st: Dir W of CENTER RD
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612	PAUL SIMPSON	REPR WMB	Address :	Street : HARRISON ST	1st x-st: Dir of E FIRST ST
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624	753	Polygon : 43.016574/-83.690550 43.017555/-83.689450				
625	754	: 43.014474/-83.688678 43.015456/-83.687577				
626	755	Lat : Long:				
627	756	Work Typ: REPR WMB Done For:				
628	757	Address :				
629	758	Street : HARRISON ST				
630	759	1st x-st: Dir of E FIRST ST				
631	760	2nd x-st: Dir of E SECOND ST				
632	761	Subdivsn: Lots:				
633	762	Stk Info: STK FRM SDWLK TO C/L OF RD ON E SD OF HARRISON BET X STS CREW EN				
634	763	: ROUTE				
635	764	Boring : N On-going project: N Working In or Near R/R Easement: N				
636	765	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 CTMN FLINTC				
637	766	FLINTC 00004 MISDIGb 01/14/14 07:45:23 B40140056-00B EMER NEW GRID	FLINTC	B40140056	01/14/14	FLINT CITY WATER DEPARTMENT
638	768	**** Underground ****				
639	769	Ticket : B40140056 Rcvd: 01/14/14 07:39 Oper: MRP Rev: 00B				
640	770	Org Tkt : B40140056 Rcvd: 01/14/14 07:41 Oper: MRP				
641	772	Digstart: 01/14/14 Time: 08:00				
642	773	Tkt Life: 02/04/14 Time: 23:59				
643	775	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
644	776	Phone : 810-577-8261 Ext: Fax :				
645	777	E-mail : NONE				
646	778	FieldCnt: Number:				
647	780	County : GENESEE Place : FLINT /C				
648	782	Grids : 4303C8343C 4303C8343D 4303D8343C				
649	783	Polygon : 43.056097/-83.723565 43.055515/-83.719157				
650	784	: 43.054367/-83.723793 43.053785/-83.719385				
651	785	Lat : Long:				
652	786	Work Typ: WMB Done For:				
653	787	Address :				
654	788	Street : BENT DR				
655	789	1st x-st: Dir E of FLEMING RD				
656	790	2nd x-st: Dir N of STEWART AVE				
657	791	Subdivsn: Lots:				
658	792	Stk Info: STK FRT OF PROP & BTH SDS OF RD ADDRS 1406, 1410 CREW EN ROUTE				
659	793	Boring : N On-going project: N Working In or Near R/R Easement: N				
660	794	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
661	795	FLINTC 00016 MISDIGb 01/14/14 11:36:10 B40140470-00B EMER NEW GRID	FLINTC	B40140470	01/14/14	FLINT CITY WATER DEPARTMENT
662	797	**** Underground ****				
663	798	Ticket : B40140470 Rcvd: 01/14/14 11:33 Oper: HDK Rev: 00B				
664	799	Org Tkt : B40140470 Rcvd: 01/14/14 11:36 Oper: HDK				
665	801	Digstart: 01/14/14 Time: 13:00				
666	802	Tkt Life: 02/04/14 Time: 23:59				
667	804	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
668	805	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
669	806	E-mail : NONE				
670	807	FieldCnt: PAUL Number: 810-397-7247				
671	809	County : GENESEE Place : FLINT /C				

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637	JEFF CHURCH	WMB	Address :	Street : BENT DR	1st x-st: Dir E of FLEMING RD
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661	PAUL SIMPSON	WMB	Address : 7010	Street : DARYLL DR	1st x-st: Dir W of DUPONT
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672	811	Grids : 4304B8343D 4304C8343D				
673	812	Polygon : 43.075761/-83.719545 43.076195/-83.717651				
674	813	: 43.072071/-83.718700 43.072505/-83.716806				
675	814	Lat : Long:				
676	815	Work Typ: WMB Done For:				
677	816	Address : 7010				
678	817	Street : DARYLL DR				
679	818	1st x-st: Dir W of DUPONT				
680	819	2nd x-st: Dir S of W CARPENTER RD				
681	820	Subdivsn: Lots:				
682	821	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
683	822	Boring : N On-going project: N Working In or Near R/R Easement: N				
684	823	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GENCRC GISD MCLEO1				
685	824	FLINTC 00020 MISDIGb 01/14/14 14:41:03 B40140815-00B EMER NEW GRID	FLINTC	B40140815	01/15/14	FLINT CITY WATER DEPARTMENT
686	826	**** Underground ****				
687	827	Ticket : B40140815 Rcvd: 01/14/14 14:39 Oper: HDK Rev: 00B				
688	828	Org Tkt : B40140815 Rcvd: 01/14/14 14:40 Oper: HDK				
689	830	Digstart: 01/15/14 Time: 08:00				
690	831	Tkt Life: 02/05/14 Time: 23:59				
691	833	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
692	834	Phone : 810-577-8261 Ext: Fax :				
693	835	E-mail : NONE				
694	836	FieldCnt: Number:				
695	838	County : GENESEE Place : FLINT /C				
696	840	Grids : 4303A8342A 4303A8343D 4304D8342A 4304D8343D				
697	841	Polygon : 43.067777/-83.718262 43.067831/-83.716389				
698	842	: 43.063439/-83.718136 43.063493/-83.716262				
699	843	Lat : Long:				
700	844	Work Typ: WMB Done For:				
701	845	Address :				
702	846	Street : GLENN AVE				
703	847	1st x-st: Dir S of HOME				
704	848	2nd x-st: Dir W of DUPONT				
705	849	Subdivsn: Lots:				
706	850	Stk Info: STK FRT OF PROP & BTH SDS OF RD AT ADDR 5714 & 5710				
707	851	Boring : N On-going project: N Working In or Near R/R Easement: N				
708	852	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GISD				
709	853	FLINTC 00026 MISDIGb 01/15/14 11:43:29 B40150416-00B EMER NEW GRID	FLINTC	B40150416	01/15/14	FLINT CITY WATER DEPARTMENT
710	855	**** Underground ****				
711	856	Ticket : B40150416 Rcvd: 01/15/14 11:41 Oper: AMA Rev: 00B				
712	857	Org Tkt : B40150416 Rcvd: 01/15/14 11:43 Oper: AMA				
713	859	Digstart: 01/15/14 Time: 13:00				
714	860	Tkt Life: 02/05/14 Time: 23:59				
715	862	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
716	863	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
717	864	E-mail : NONE				
718	865	FieldCnt: PAUL SIMPSON /CELL Number: 810-397-7247				
719	867	County : GENESEE Place : FLINT /C				

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685	JEFF CHURCH	WMB	Address :	Street : GLENN AVE	1st x-st: Dir S of HOME
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709	PAUL SIMPSON	REPR WMB	Address : 209	Street : W H SCHWARTZ DR	1st x-st: Dir W of S/B CHAVEZ DR
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720	869	Grids : 4301C8340A 4301C8341D				
721	870	Polygon : 43.023613/-83.686803 43.024950/-83.686274				
722	871	: 43.022038/-83.682826 43.023375/-83.682297				
723	872	Lat : Long:				
724	873	Work Typ: REPR WMB Done For:				
725	874	Address : 209				
726	875	Street : W H SCHWARTZ DR				
727	876	1st x-st: Dir W of S/B CHAVEZ DR				
728	877	2nd x-st: Dir S of ROBERT T LONGWAY				
729	878	Subdivsn: Lots:				
730	879	Stk Info: STK FRT OF PROP & BTH SDS OF ST CREW ENROUTE				
731	880	Boring : N On-going project: N Working In or Near R/R Easement: N				
732	881	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GENCRC GISD MCLEO1				
733	882	FLINTC 00027 MISDIGb 01/15/14 11:46:07 B40150422-00B EMER NEW GRID	FLINTC	B40150422	01/15/14	FLINT CITY WATER DEPARTMENT
734	884	**** Underground ****				
735	885	Ticket : B40150422 Rcvd: 01/15/14 11:43 Oper: AMA Rev: 00B				
736	886	Org Tkt : B40150422 Rcvd: 01/15/14 11:45 Oper: AMA				
737	888	Digstart: 01/15/14 Time: 16:00				
738	889	Tkt Life: 02/05/14 Time: 23:59				
739	891	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
740	892	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
741	893	E-mail : NONE				
742	894	FieldCnt: PAUL SIMPSON /CELL Number: 810-397-7247				
743	896	County : GENESEE Place : FLINT /C				
744	898	Grids : 4259B8340B 4259B8340C				
745	899	Polygon : 42.995483/-83.677772 42.995450/-83.671873				
746	900	: 42.994126/-83.677780 42.994092/-83.671881				
747	901	Lat : Long:				
748	902	Work Typ: REPR WMB Done For:				
749	903	Address :				
750	904	Street : E BELVIDERE AVE				
751	905	1st x-st: Dir E of S SAGINAW ST				
752	906	2nd x-st: Dir N of W ATHERTON RD				
753	907	Subdivsn: Lots:				
754	908	Stk Info: STK FRT OF PROP & BTH SDS OF ST AT ADDRS 233 & 225				
755	909	Boring : N On-going project: N Working In or Near R/R Easement: N				
756	910	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FILINK FLINTC GENCRC GISD KDL				
757	911	Members : MCLEO1				
758	912	FLINTC 00004 MISDIGb 01/16/14 08:13:32 B40160107-00B EMER NEW GRID	FLINTC	B40160107	01/16/14	FLINT CITY WATER DEPARTMENT
759	914	**** Underground ****				
760	915	Ticket : B40160107 Rcvd: 01/16/14 08:11 Oper: HDK Rev: 00B				
761	916	Org Tkt : B40160107 Rcvd: 01/16/14 08:13 Oper: HDK				
762	918	Digstart: 01/16/14 Time: 08:11				
763	919	Tkt Life: 02/06/14 Time: 23:59				
764	921	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
765	922	Phone : 810-577-8261 Ext: Fax :				
766	923	E-mail : NONE				
767	924	FieldCnt: Number:				

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733	PAUL SIMPSON	REPR WMB	Address :	Street : E BELVIDERE AVE	1st x-st: Dir E of S SAGINAW ST
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758	JEFF CHURCH	WMB	Address : 2501	Street : S DORT HWY	1st x-st: Dir S of LIPPINCOTT BLVD
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768	926	County : GENESEE Place : FLINT /C				
769	928	Grids : 4259A8339C 4259A8339D 4300D8339C 4300D8339D				
770	929	Polygon : 43.000656/-83.654828 43.000828/-83.652951				
771	930	: 42.997842/-83.654571 42.998013/-83.652694				
772	931	Lat : Long:				
773	932	Work Typ: WMB Done For:				
774	933	Address : 2501				
775	934	Street : S DORT HWY				
776	935	1st x-st: Dir S of LIPPINCOTT BLVD				
777	936	2nd x-st: Dir N of MOHAWK				
778	937	Subdivsn: Lots:				
779	938	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
780	939	Boring : N On-going project: N Working In or Near R/R Easement: N				
781	940	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
782	941	FLINTC 00019 MISDIGb 01/16/14 13:18:04 B40160621-00B EMER NEW GRID	FLINTC	B40160621	01/16/14	FLINT CITY WATER DEPARTMENT
783	943	**** Underground ****				
784	944	Ticket : B40160621 Rcvd: 01/16/14 13:15 Oper: HDK Rev: 00B				
785	945	Org Tkt : B40160621 Rcvd: 01/16/14 13:17 Oper: HDK				
786	947	Digstart: 01/16/14 Time: 13:15				
787	948	Tkt Life: 02/06/14 Time: 23:59				
788	950	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
789	951	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
790	952	E-mail : NONE				
791	953	FieldCnt: PAUL Number: 810-397-7247				
792	955	County : GENESEE Place : FLINT /C				
793	957	Grids : 4301A8343A 4301B8343A 4301A8344D 4301B8344D				
794	958	Polygon : 43.029674/-83.734726 43.028447/-83.730590				
795	959	: 43.028326/-83.735125 43.027099/-83.730990				
796	960	Lat : Long:				
797	961	Work Typ: WMB Done For:				
798	962	Address : 2956				
799	963	Street : N STEVENSON ST				
800	964	1st x-st: Dir N of FLUSHING				
801	965	2nd x-st: Dir W of BALLENGER HWY				
802	966	Subdivsn: Lots:				
803	967	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
804	968	Boring : N On-going project: N Working In or Near R/R Easement: N				
805	969	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
806	970	FLINTC 00021 MISDIGb 01/16/14 14:11:39 B40160706-00B EMER NEW GRID	FLINTC	B40160706	01/16/14	FLINT CITY WATER DEPARTMENT
807	972	**** Underground ****				
808	973	Ticket : B40160706 Rcvd: 01/16/14 14:09 Oper: MRP Rev: 00B				
809	974	Org Tkt : B40160706 Rcvd: 01/16/14 14:11 Oper: MRP				
810	976	Digstart: 01/16/14 Time: 14:09				
811	977	Tkt Life: 02/06/14 Time: 23:59				
812	979	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
813	980	Phone : 810-577-8261 Ext: Fax :				
814	981	E-mail : NONE				
815	982	FieldCnt: Number:				

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782	PAUL SIMPSON	WMB	Address : 2956	Street : N STEVENSON ST	1st x-st: Dir N of FLUSHING
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806	JEFF CHURCH	WMB	Address : 410	Street : GRACE ST	1st x-st: Dir E of DUPONT
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816	984	County : GENESEE Place : FLINT /C				
817	986	Grids : 4301A8342B 4301A8342C				
818	987	Polygon : 43.033146/-83.711491 43.033102/-83.706704				
819	988	: 43.031789/-83.711504 43.031745/-83.706717				
820	989	Lat : Long:				
821	990	Work Typ: WMB Done For:				
822	991	Address : 410				
823	992	Street : GRACE ST				
824	993	1st x-st: Dir E of DUPONT				
825	994	2nd x-st: Dir N of WELCH BLVD				
826	995	Subdivsn: Lots:				
827	996	Stk Info: STK FRT OF PROP & BTH SDS OF ST CREW EN ROUTE				
828	997	Boring : N On-going project: N Working In or Near R/R Easement: N				
829	998	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
830	999	FLINTC 00001 MISDIGb 01/17/14 07:31:39 B40170031-00B EMER NEW GRID	FLINTC	B40170031	01/17/14	FLINT CITY WATER DEPARTMENT
831	1001	**** Underground ****				
832	1002	Ticket : B40170031 Rcvd: 01/17/14 07:29 Oper: GMH Rev: 00B				
833	1003	Org Tkt : B40170031 Rcvd: 01/17/14 07:31 Oper: GMH				
834	1005	Digstart: 01/17/14 Time: 08:00				
835	1006	Tkt Life: 02/07/14 Time: 23:59				
836	1008	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
837	1009	Phone : 810-577-8261 Ext: Fax :				
838	1010	E-mail : NONE				
839	1011	FieldCnt: Number:				
840	1013	County : GENESEE Place : FLINT /C				
841	1015	Grids : 4304C8340A 4304D8340A 4304C8341D 4304D8341C 4304D8341D				
842	1017	Polygon : 43.072966/-83.686962 43.071819/-83.681867				
843	1018	: 43.068660/-83.687931 43.067514/-83.682836				
844	1019	Lat : Long:				
845	1020	Work Typ: WMB Done For:				
846	1021	Address :				
847	1022	Street : SELBY ST				
848	1023	1st x-st: Dir of E RUTH AVE				
849	1024	2nd x-st: Dir W of I-475				
850	1025	Subdivsn: Lots:				
851	1026	Stk Info: S OF CARPENTER RD STK ENTIRE INTER OF SELBY & E RUTH CREW EN				
852	1027	: ROUTE				
853	1028	Boring : N On-going project: N Working In or Near R/R Easement: N				
854	1029	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
855	1030	FLINTC 00001 MISDIGa 01/17/14 08:43:14 A40170043-00A EMER NEW GRID	FLINTC	A40170043	01/17/14	FLINT CITY WATER DEPARTMENT
856	1032	**** Underground ****				
857	1033	Ticket : A40170043 Rcvd: 01/17/14 08:40 Oper: LCP Rev: 00A				
858	1034	Org Tkt : A40170043 Rcvd: 01/17/14 08:43 Oper: LCP				
859	1036	Digstart: 01/17/14 Time: 08:40				
860	1037	Tkt Life: 02/07/14 Time: 23:59				
861	1039	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
862	1040	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
863	1041	E-mail : NONE				

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830	JEFF CHURCH	WMB	Address :	Street : SELBY ST	1st x-st: Dir of E RUTH AVE
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855	HOWARD SWICKARD	WMB	Address :	Street : COPEMAN	1st x-st: Dir of DUPONT
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855	2nd x-st: Dir S of WELCH BLVD
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864	1042	FieldCnt: HOWARD CELL Number: 810-577-8263				
865	1044	County : GENESEE Place : FLINT /C				
866	1046	Grids : 4301A8342A 4301A8342B 4301B8342A 4301B8342B				
867	1047	Polygon : 43.029748/-83.714025 43.029987/-83.712181				
868	1048	: 43.028430/-83.713854 43.028670/-83.712010				
869	1049	Lat : Long:				
870	1050	Work Typ: WMB Done For:				
871	1051	Address :				
872	1052	Street : COPEMAN				
873	1053	1st x-st: Dir of DUPONT				
874	1054	2nd x-st: Dir S of WELCH BLVD				
875	1055	Subdivsn: Lots:				
876	1056	Stk Info: E OF CHEVROLET AVE LOCATE 100 FT RADIUS AROUND ENTIRE INTER OF				
877	1057	: COPEMAN & DUPONT CREW EN ROUTE				
878	1058	Boring : N On-going project: N Working In or Near R/R Easement: N				
879	1059	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
880	1060	FLINTC 00006 MISDIGa 01/17/14 13:27:31 A40170181-00A EMER NEW GRID	FLINTC	A40170181	01/17/14	FLINT CITY WATER DEPARTMENT
881	1062	**** Underground ****				
882	1063	Ticket : A40170181 Rcvd: 01/17/14 13:25 Oper: LCG Rev: 00A				
883	1064	Org Tkt : A40170181 Rcvd: 01/17/14 13:27 Oper: LCG				
884	1066	Digstart: 01/17/14 Time: 13:25				
885	1067	Tkt Life: 02/07/14 Time: 23:59				
886	1069	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
887	1070	Phone : 810-577-8261 Ext: Fax :				
888	1071	E-mail : NONE				
889	1072	FieldCnt: Number:				
890	1074	County : GENESEE Place : FLINT /C				
891	1076	Grids : 4300A8339A 4300B8339A 4300A8340D 4300B8340D 4301D8339A				
892	1077	: 4301D8340D				
893	1078	Polygon : 43.017186/-83.668296 43.017306/-83.666429				
894	1079	: 43.012333/-83.667986 43.012452/-83.666118				
895	1080	Lat : Long:				
896	1081	Work Typ: WMB Done For:				
897	1082	Address :				
898	1083	Street : BLANCHARD				
899	1084	1st x-st: Dir W of FRANKLIN				
900	1085	2nd x-st: Dir S of COURT ST				
901	1086	Subdivsn: Lots:				
902	1087	Stk Info: LOCATE FRT OF PROP TO C/L OF RD AT ADDR 1309 & 1310 CREW ENROUTE				
903	1088	Boring : N On-going project: N Working In or Near R/R Easement: N				
904	1089	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD				
905	1090	FLINTC 00017 MISDIGb 01/17/14 16:07:48 B40170625-00B EMER NEW GRID	FLINTC	B40170625	01/18/14	FLINT CITY WATER DEPARTMENT
906	1092	**** Underground ****				
907	1093	Ticket : B40170625 Rcvd: 01/17/14 16:05 Oper: MRP Rev: 00B				
908	1094	Org Tkt : B40170625 Rcvd: 01/17/14 16:07 Oper: MRP				
909	1096	Digstart: 01/18/14 Time: 07:00				
910	1097	Tkt Life: 02/08/14 Time: 23:59				
911	1099	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				

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880	JEFF CHURCH	WMB	Address :	Street : BLANCHARD	1st x-st: Dir W of FRANKLIN
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905	JEFF CHURCH	WMB	Address :	Street : ZIMMERMAN ST	1st x-st: Dir of SPRINGER
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912	1100	Phone : 810-577-8261 Ext: Fax :				
913	1101	E-mail : NONE				
914	1102	FieldCnt: Number:				
915	1104	County : GENESEE Place : FLINT /C				
916	1106	Grids : 4300C8343C 4300C8343D				
917	1107	Polygon : 43.006731/-83.721504 43.006968/-83.717907				
918	1108	: 43.004999/-83.721390 43.005235/-83.717793				
919	1109	Lat : Long:				
920	1110	Work Typ: WMB Done For:				
921	1111	Address :				
922	1112	Street : ZIMMERMAN ST				
923	1113	1st x-st: Dir of SPRINGER				
924	1114	2nd x-st: Dir S of COURT ST				
925	1115	Subdivsn: Lots:				
926	1116	Stk Info: N OF CORUNNA RD SE COR ZIMMERMAN & SPRINGER STK 50FT RADIUS				
927	1117	: OF BARRICADE				
928	1118	Boring : N On-going project: N Working In or Near R/R Easement: N				
929	1119	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
930	1120	FLINTC 00001 MISDIGb 01/18/14 06:08:10 B40180005-00B EMER NEW GRID	FLINTC	B40180005	01/18/14	FLINT CITY WATER DEPARTMENT
931	1122	**** Underground ****				
932	1123	Ticket : B40180005 Rcvd: 01/18/14 06:05 Oper: MLD Rev: 00B				
933	1124	Org Tkt : B40180005 Rcvd: 01/18/14 06:08 Oper: MLD				
934	1126	Digstart: 01/18/14 Time: 06:05				
935	1127	Tkt Life: 02/08/14 Time: 23:59				
936	1129	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
937	1130	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
938	1131	E-mail : NONE				
939	1132	FieldCnt: PAUL Number: 810-397-7247				
940	1134	County : GENESEE Place : FLINT /C				
941	1136	Grids : 4300C8339B 4300C8339C 4300D8339B 4300D8339C				
942	1137	Polygon : 43.004261/-83.660407 43.004404/-83.657475				
943	1138	: 43.002959/-83.660344 43.003103/-83.657411				
944	1139	Lat : Long:				
945	1140	Work Typ: REPR WMB Done For:				
946	1141	Address :				
947	1142	Street : LIPPINCOTT				
948	1143	1st x-st: Dir of WHITTLESEY ST				
949	1144	2nd x-st: Dir of CHELAN				
950	1145	Subdivsn: Lots:				
951	1146	Stk Info: STK 50FT RADIUS OF BARRICADE LOC ON RD BET X-STS CREW EN ROUTE				
952	1147	Boring : N On-going project: N Working In or Near R/R Easement: N				
953	1148	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
954	1149	FLINTC 00003 MISDIGb 01/21/14 08:16:10 B40210080-00B EMER NEW GRID	FLINTC	B40210080	01/21/14	FLINT CITY WATER DEPARTMENT
955	1151	**** Underground ****				
956	1152	Ticket : B40210080 Rcvd: 01/21/14 08:13 Oper: LCG Rev: 00B				
957	1153	Org Tkt : B40210080 Rcvd: 01/21/14 08:16 Oper: LCG				
958	1155	Digstart: 01/21/14 Time: 08:13				
959	1156	Tkt Life: 02/11/14 Time: 23:59				

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930	PAUL SIMPSON	REPR WMB	Address :	Street : LIPPINCOTT	1st x-st: Dir of WHITTLESEY ST
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954	PAUL SIMPSON	WMB	Address :	Street : BUICK	1st x-st: Dir S of GILLESPIE
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954	2nd x-st: Dir N of PASADENA
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960	1158	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
961	1159	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
962	1160	E-mail : NONE				
963	1161	FieldCnt: Number: 810-397-7247				
964	1163	County : GENESEE Place : FLINT /C				
965	1165	Grids : 4302A8341A 4302A8342D				
966	1166	Polygon : 43.048847/-83.701839 43.049550/-83.696089				
967	1167	: 43.045882/-83.701477 43.046585/-83.695727				
968	1168	Lat : Long:				
969	1169	Work Typ: WMB Done For:				
970	1170	Address :				
971	1171	Street : BUICK				
972	1172	1st x-st: Dir S of GILLESPIE				
973	1173	2nd x-st: Dir N of PASADENA				
974	1174	Subdivsn: Lots:				
975	1175	Stk Info: W OF N SAGINAW LOCATE E SD OF BUICK BEG AT GILLESPIE GOING S APX				
976	1176	: 100 FT CREW ENROUTE				
977	1177	Boring : N On-going project: N Working In or Near R/R Easement: N				
978	1178	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
979	1179	FLINTC 00019 MISDIGb 01/21/14 15:17:54 B40210694-00B EMER NEW GRID	FLINTC	B40210694	01/22/14	FLINT CITY WATER DEPARTMENT
980	1181	**** Underground ****				
981	1182	Ticket : B40210694 Rcvd: 01/21/14 15:16 Oper: DMS Rev: 00B				
982	1183	Org Tkt : B40210694 Rcvd: 01/21/14 15:17 Oper: DMS				
983	1185	Digstart: 01/22/14 Time: 08:00				
984	1186	Tkt Life: 02/12/14 Time: 23:59				
985	1188	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
986	1189	Phone : 810-577-8261 Ext: Fax :				
987	1190	E-mail : NONE				
988	1191	FieldCnt: Number:				
989	1193	County : GENESEE Place : FLINT /C				
990	1195	Grids : 4304C8341B 4304C8341C 4304D8341B 4304D8341C				
991	1196	Polygon : 43.072480/-83.693145 43.072365/-83.691277				
992	1197	: 43.069149/-83.693350 43.069033/-83.691483				
993	1198	Lat : Long:				
994	1199	Work Typ: WMB Done For:				
995	1200	Address :				
996	1201	Street : STAFFORD ST				
997	1202	1st x-st: Dir S of E LORADO AVE				
998	1203	2nd x-st: Dir N of RUTH AVE				
999	1204	Subdivsn: Lots:				
1000	1205	Stk Info: STK 50FT RADIUS OF BARRICADE LOC IN MIDDLE OF ST BET X-STS				
1001	1206	Boring : N On-going project: N Working In or Near R/R Easement: N				
1002	1207	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
1003	1208	FLINTC 00001 MISDIGb 01/22/14 08:07:36 B40220057-00B EMER NEW GRID	FLINTC	B40220057	01/22/14	FLINT CITY WATER DEPARTMENT
1004	1210	**** Underground ****				
1005	1211	Ticket : B40220057 Rcvd: 01/22/14 08:04 Oper: DJH Rev: 00B				
1006	1212	Org Tkt : B40220057 Rcvd: 01/22/14 08:07 Oper: DJH				
1007	1214	Digstart: 01/22/14 Time: 08:04				

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979	JEFF CHURCH	WMB	Address :	Street : STAFFORD ST	1st x-st: Dir S of E LORADO AVE
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1003	PAUL SIMPSON	WMB	Address :	Street : ATHERTON RD	1st x-st: Dir E of CUSTER
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1008	1215	Tkt Life: 02/12/14 Time: 23:59				
1009	1217	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1010	1218	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1011	1219	E-mail : NONE				
1012	1220	FieldCnt: PAUL - CELL Number: 810-397-7247				
1013	1222	County : GENESEE Place : FLINT /C				
1014	1224	Grids : 4259C8339A 4259C8340D				
1015	1225	Polygon : 42.989679/-83.669359 42.989762/-83.665148				
1016	1226	: 42.988307/-83.669332 42.988391/-83.665121				
1017	1227	Lat : Long:				
1018	1228	Work Typ: WMB Done For:				
1019	1229	Address :				
1020	1230	Street : ATHERTON RD				
1021	1231	1st x-st: Dir E of CUSTER				
1022	1232	2nd x-st: Dir W of S DORT HWY				
1023	1233	Subdivsn: Lots:				
1024	1234	Stk Info: STK BTH SDS OF RD FRM CUSTER GOING 100FT E CREW EN ROUTE				
1025	1235	Boring : N On-going project: N Working In or Near R/R Easement: N				
1026	1236	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1027	1237	FLINTC 00006 MISDIGb 01/22/14 09:08:28 B40220156-00B EMER NEW GRID	FLINTC	B40220156	01/22/14	FLINT CITY WATER DEPARTMENT
1028	1239	**** Underground ****				
1029	1240	Ticket : B40220156 Rcvd: 01/22/14 09:07 Oper: DMS Rev: 00B				
1030	1241	Org Tkt : B40220156 Rcvd: 01/22/14 09:08 Oper: DMS				
1031	1243	Digstart: 01/22/14 Time: 09:07				
1032	1244	Tkt Life: 02/12/14 Time: 23:59				
1033	1246	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
1034	1247	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1035	1248	E-mail : NONE				
1036	1249	FieldCnt: HOWARD/CELL Number: 810-577-8263				
1037	1251	County : GENESEE Place : FLINT /C				
1038	1253	Grids : 4302C8338C 4302C8338D 4302D8338C 4302D8338D				
1039	1254	Polygon : 43.038493/-83.638891 43.038585/-83.634647				
1040	1255	: 43.037121/-83.638861 43.037212/-83.634618				
1041	1256	Lat : Long:				
1042	1257	Work Typ: WMB Done For:				
1043	1258	Address :				
1044	1259	Street : WOODROW AVE				
1045	1260	1st x-st: Dir W of CENTER RD				
1046	1261	2nd x-st: Dir N of DAVISON RD				
1047	1262	Subdivsn: Lots:				
1048	1263	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD AT ADDRS 3825 & 3829				
1049	1264	: CREW ON SITE				
1050	1265	Boring : N On-going project: N Working In or Near R/R Easement: N				
1051	1266	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC				
1052	1267	FLINTC 00007 MISDIGa 01/22/14 15:21:23 A40220237-00A EMER NEW GRID	FLINTC	A40220237	01/22/14	FLINT CITY WATER DEPARTMENT
1053	1269	**** Underground ****				
1054	1270	Ticket : A40220237 Rcvd: 01/22/14 15:18 Oper: LCP Rev: 00A				
1055	1271	Org Tkt : A40220237 Rcvd: 01/22/14 15:21 Oper: LCP				

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1027	HOWARD SWICKARD	WMB	Address :	Street : WOODROW AVE	1st x-st: Dir W of CENTER RD
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1052	PAUL SIMPSON	WMB	Address : 1905	Street : MCPHAIL ST	1st x-st: Dir W of S DORT HWY
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1056	1273	Digstart: 01/22/14 Time: 15:18				
1057	1274	Tkt Life: 02/12/14 Time: 23:59				
1058	1276	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1059	1277	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1060	1278	E-mail : NONE				
1061	1279	FieldCnt: PAUL CELL Number: 810-397-7247				
1062	1281	County : GENESEE Place : FLINT /C				
1063	1283	Grids : 4300C8339C				
1064	1284	Polygon : 43.008102/-83.658297 43.008182/-83.656427				
1065	1285	: 43.005272/-83.658177 43.005352/-83.656307				
1066	1286	Lat : Long:				
1067	1287	Work Typ: WMB Done For:				
1068	1288	Address : 1905				
1069	1289	Street : MCPHAIL ST				
1070	1290	1st x-st: Dir W of S DORT HWY				
1071	1291	2nd x-st: Dir N of PINGREE				
1072	1292	Subdivsn: Lots:				
1073	1293	Stk Info: LOCATE FRT OF PROP FRM HSE TO RD & BTH SDS OF RD IFO ADDR CREW EN				
1074	1294	: ROUTE				
1075	1295	Boring : N On-going project: N Working In or Near R/R Easement: N				
1076	1296	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1077	1297	FLINTC 00018 MISDIGb 01/23/14 14:56:24 B40230508-00B EMER NEW GRID	FLINTC	B40230508	01/23/14	FLINT CITY WATER DEPARTMENT
1078	1299	**** Underground ****				
1079	1300	Ticket : B40230508 Rcvd: 01/23/14 14:55 Oper: DMS Rev: 00B				
1080	1301	Org Tkt : B40230508 Rcvd: 01/23/14 14:56 Oper: DMS				
1081	1303	Digstart: 01/23/14 Time: 14:55				
1082	1304	Tkt Life: 02/13/14 Time: 23:59				
1083	1306	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1084	1307	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1085	1308	E-mail : NONE				
1086	1309	FieldCnt: PAUL/CELL Number: 810-397-7247				
1087	1311	County : GENESEE Place : FLINT /C				
1088	1313	Grids : 4302A8343A 4302A8343B 4302B8343A 4302B8343B				
1089	1314	Polygon : 43.048962/-83.729747 43.049027/-83.727875				
1090	1315	: 43.045562/-83.729628 43.045627/-83.727756				
1091	1316	Lat : Long:				
1092	1317	Work Typ: WMB Done For:				
1093	1318	Address : 3514				
1094	1319	Street : WINONA ST				
1095	1320	1st x-st: Dir N of PASADENA				
1096	1321	2nd x-st: Dir E of CLIO RD				
1097	1322	Subdivsn: Lots:				
1098	1323	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
1099	1324	Boring : N On-going project: N Working In or Near R/R Easement: N				
1100	1325	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
1101	1326	FLINTC 00021 MISDIGb 01/23/14 16:01:01 B40230562-00B EMER NEW GRID	FLINTC	B40230562	01/24/14	FLINT CITY WATER DEPARTMENT
1102	1328	**** Underground ****				
1103	1329	Ticket : B40230562 Rcvd: 01/23/14 15:58 Oper: HDK Rev: 00B				

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1077	PAUL SIMPSON	WMB	Address : 3514	Street : WINONA ST	1st x-st: Dir N of PASADENA
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1101	PAUL SIMPSON	WMB	Address : 1330	Street : DUPONT ST	1st x-st: Dir N of FLUSHING RD
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1101	2nd x-st: Dir N of WOLCOTT
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1104	1330	Org Tkt : B40230562 Rcvd: 01/23/14 16:00 Oper: HDK				
1105	1332	Digstart: 01/24/14 Time: 08:00				
1106	1333	Tkt Life: 02/14/14 Time: 23:59				
1107	1335	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1108	1336	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1109	1337	E-mail : NONE				
1110	1338	FieldCnt: PAUL Number: 810-397-7247				
1111	1340	County : GENESEE Place : FLINT /C				
1112	1342	Grids : 4301C8342A 4301C8342B				
1113	1343	Polygon : 43.024459/-83.713805 43.024438/-83.711952				
1114	1344	: 43.022318/-83.713830 43.022297/-83.711977				
1115	1345	Lat : Long:				
1116	1346	Work Typ: WMB Done For:				
1117	1347	Address : 1330				
1118	1348	Street : DUPONT ST				
1119	1349	1st x-st: Dir N of FLUSHING RD				
1120	1350	2nd x-st: Dir N of WOLCOTT				
1121	1351	Subdivsn: Lots:				
1122	1352	Stk Info: STK FRT OF PROP & BTH SDS OF RD				
1123	1353	Boring : N On-going project: N Working In or Near R/R Easement: N				
1124	1354	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
1125	1355	FLINTC 00002 MISDIGb 01/24/14 07:39:11 B40240037-00B EMER NEW GRID	FLINTC	B40240037	01/24/14	FLINT CITY WATER DEPARTMENT
1126	1357	**** Underground ****				
1127	1358	Ticket : B40240037 Rcvd: 01/24/14 07:37 Oper: GMH Rev: 00B				
1128	1359	Org Tkt : B40240037 Rcvd: 01/24/14 07:38 Oper: GMH				
1129	1361	Digstart: 01/24/14 Time: 08:00				
1130	1362	Tkt Life: 02/14/14 Time: 23:59				
1131	1364	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1132	1365	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1133	1366	E-mail : NONE				
1134	1367	FieldCnt: PAUL Number: 810-397-7247				
1135	1369	County : GENESEE Place : FLINT /C				
1136	1371	Grids : 4303C8343A 4303C8343B 4303D8343A 4303D8343B				
1137	1372	Polygon : 43.054488/-83.729714 43.054540/-83.727841				
1138	1373	: 43.051814/-83.729639 43.051866/-83.727766				
1139	1374	Lat : Long:				
1140	1375	Work Typ: WMB Done For:				
1141	1376	Address : 4214				
1142	1377	Street : WINONA ST				
1143	1378	1st x-st: Dir S of W STEWART AVE				
1144	1379	2nd x-st: Dir E of CLIO RD				
1145	1380	Subdivsn: Lots:				
1146	1381	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
1147	1382	Boring : N On-going project: N Working In or Near R/R Easement: N				
1148	1383	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
1149	1384	FLINTC 00003 MISDIGb 01/24/14 07:41:01 B40240038-00B EMER NEW GRID	FLINTC	B40240038	01/24/14	FLINT CITY WATER DEPARTMENT
1150	1386	**** Underground ****				
1151	1387	Ticket : B40240038 Rcvd: 01/24/14 07:39 Oper: GMH Rev: 00B				

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1125	PAUL SIMPSON	WMB	Address : 4214	Street : WINONA ST	1st x-st: Dir S of W STEWART AVE
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1149	PAUL SIMPSON	WMB	Address : 1601	Street : CRESTBROOK LN	1st x-st: Dir W of BLACKBERRY LN
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1149	2nd x-st: Dir E of VAN SLYKE RD
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1152	1388	Org Tkt : B40240038 Rcvd: 01/24/14 07:40 Oper: GMH				
1153	1390	Digstart: 01/24/14 Time: 12:00				
1154	1391	Tkt Life: 02/14/14 Time: 23:59				
1155	1393	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1156	1394	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1157	1395	E-mail : NONE				
1158	1396	FieldCnt: PAUL Number: 810-397-7247				
1159	1398	County : GENESEE Place : FLINT /C				
1160	1400	Grids : 4259D8341A 4259D8342D				
1161	1401	Polygon : 42.985926/-83.700980 42.984880/-83.698387				
1162	1402	: 42.984579/-83.701523 42.983533/-83.698930				
1163	1403	Lat : Long:				
1164	1404	Work Typ: WMB Done For:				
1165	1405	Address : 1601				
1166	1406	Street : CRESTBROOK LN				
1167	1407	1st x-st: Dir W of BLACKBERRY LN				
1168	1408	2nd x-st: Dir E of VAN SLYKE RD				
1169	1409	Subdivsn: Lots:				
1170	1410	Stk Info: S OF W ATHERTON RD STK FRT OF PROP & BTH SDS OF RD				
1171	1411	Boring : N On-going project: N Working In or Near R/R Easement: N				
1172	1412	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
1173	1413	FLINTC 00004 MISDIGb 01/24/14 07:41:51 B40240040-00B EMER NEW GRID	FLINTC	B40240040	01/24/14	FLINT CITY WATER DEPARTMENT
1174	1415	**** Underground ****				
1175	1416	Ticket : B40240040 Rcvd: 01/24/14 07:40 Oper: GMH Rev: 00B				
1176	1417	Org Tkt : B40240040 Rcvd: 01/24/14 07:41 Oper: GMH				
1177	1419	Digstart: 01/24/14 Time: 12:00				
1178	1420	Tkt Life: 02/14/14 Time: 23:59				
1179	1422	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1180	1423	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1181	1424	E-mail : NONE				
1182	1425	FieldCnt: PAUL Number: 810-397-7247				
1183	1427	County : GENESEE Place : FLINT /C				
1184	1429	Grids : 4302D8340B 4302D8340C				
1185	1430	Polygon : 43.034800/-83.675959 43.034819/-83.671633				
1186	1431	: 43.033441/-83.675953 43.033460/-83.671627				
1187	1432	Lat : Long:				
1188	1433	Work Typ: WMB Done For:				
1189	1434	Address : 1452				
1190	1435	Street : BROADWAY BLVD				
1191	1436	1st x-st: Dir N of DAVISON RD				
1192	1437	2nd x-st: Dir E of LEWIS ST				
1193	1438	Subdivsn: Lots:				
1194	1439	Stk Info: STK FRT OF PROP & BTH SDS OF RD				
1195	1440	Boring : N On-going project: N Working In or Near R/R Easement: N				
1196	1441	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
1197	1442	FLINTC 00010 MISDIGb 01/27/14 15:57:07 B40270606-00B EMER NEW GRID	FLINTC	B40270606	01/28/14	FLINT CITY WATER DEPARTMENT
1198	1444	**** Underground ****				
1199	1445	Ticket : B40270606 Rcvd: 01/27/14 15:55 Oper: DMS Rev: 00B				

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1173	PAUL SIMPSON	WMB	Address : 1452	Street : BROADWAY BLVD	1st x-st: Dir N of DAVISON RD
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1197	PAUL SIMPSON	WMB	Address :	Street : DOROTHY DR	1st x-st: Dir S of DAVISON RD
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1200	1446	Org Tkt : B40270606 Rcvd: 01/27/14 15:56 Oper: DMS				
1201	1448	Digstart: 01/28/14 Time: 08:00				
1202	1449	Tkt Life: 02/18/14 Time: 23:59				
1203	1451	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1204	1452	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1205	1453	E-mail : NONE				
1206	1454	FieldCnt: PAUL/CELL Number: 810-397-7247				
1207	1456	County : GENESEE Place : FLINT /C				
1208	1458	Grids : 4301A8338B 4301A8338C				
1209	1459	Polygon : 43.033408/-83.642723 43.032452/-83.640883				
1210	1460	: 43.031036/-83.643954 43.030081/-83.642113				
1211	1461	Lat : Long:				
1212	1462	Work Typ: WMB Done For:				
1213	1463	Address :				
1214	1464	Street : DOROTHY DR				
1215	1465	1st x-st: Dir S of DAVISON RD				
1216	1466	2nd x-st: Dir E of N AVERILL				
1217	1467	Subdivsn: Lots:				
1218	1468	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD AT ADDRS 1711 & 1717				
1219	1469	Boring : N On-going project: N Working In or Near R/R Easement: N				
1220	1470	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC				
1221	1471	FLINTC 00012 MISDIGb 01/27/14 17:18:04 B40270634-00B EMER NEW GRID	FLINTC	B40270634	01/28/14	FLINT CITY WATER DEPARTMENT
1222	1473	**** Underground ****				
1223	1474	Ticket : B40270634 Rcvd: 01/27/14 17:16 Oper: BMF Rev: 00B				
1224	1475	Org Tkt : B40270634 Rcvd: 01/27/14 17:17 Oper: BMF				
1225	1477	Digstart: 01/28/14 Time: 08:00				
1226	1478	Tkt Life: 02/18/14 Time: 23:59				
1227	1480	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
1228	1481	Phone : 810-577-8261 Ext: Fax :				
1229	1482	E-mail : NONE				
1230	1483	FieldCnt: Number:				
1231	1485	County : GENESEE Place : FLINT /C				
1232	1487	Grids : 4301A8340B 4301A8340C				
1233	1488	Polygon : 43.031932/-83.675337 43.031733/-83.671583				
1234	1489	: 43.030122/-83.675433 43.029923/-83.671679				
1235	1490	Lat : Long:				
1236	1491	Work Typ: WMB Done For:				
1237	1492	Address : 1421				
1238	1493	Street : KEARSLEY PARK BLVD				
1239	1494	1st x-st: Dir W of OLIVE AVE				
1240	1495	2nd x-st: Dir E of LEWIS ST				
1241	1496	Subdivsn: Lots:				
1242	1497	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
1243	1498	Boring : N On-going project: N Working In or Near R/R Easement: N				
1244	1499	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
1245	1500	FLINTC 00001 MISDIGb 01/28/14 00:44:52 B40280002-00B EMER NEW GRID	FLINTC	B40280002	01/28/14	FLINT CITY WATER DEPARTMENT
1246	1502	**** Underground ****				
1247	1503	Ticket : B40280002 Rcvd: 01/28/14 00:40 Oper: DLF Rev: 00B				

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1221	JEFF CHURCH	WMB	Address : 1421	Street : KEARSLEY PARK BLVD	1st x-st: Dir W of OLIVE AVE
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1245	PAUL SIMPSON	WMB	Address :	Street : 1ST AVE	1st x-st: Dir of MARTIN L KING BLVD
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1248	1504	Org Tkt : B40280002 Rcvd: 01/28/14 00:44 Oper: DLF				
1249	1506	Digstart: 01/28/14 Time: 08:00				
1250	1507	Tkt Life: 02/18/14 Time: 23:59				
1251	1509	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1252	1510	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1253	1511	E-mail : NONE				
1254	1512	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247				
1255	1514	County : GENESEE Place : FLINT /C				
1256	1516	Grids : 4301D8341B				
1257	1517	Polygon : 43.020190/-83.694039 43.019493/-83.692389				
1258	1518	: 43.018928/-83.694572 43.018231/-83.692922				
1259	1519	Lat : Long:				
1260	1520	Work Typ: WMB Done For:				
1261	1521	Address :				
1262	1522	Street : 1ST AVE				
1263	1523	1st x-st: Dir of MARTIN L KING BLVD				
1264	1524	2nd x-st: Dir of SAGINAW ST				
1265	1525	Subdivsn: Lots:				
1266	1526	Stk Info: LOCATE ENTIRE 3 WAY INTER OF 1ST AVE, MARTIN L KING BLVD, & SAGINAW ST				
1267	1527	Boring : N On-going project: N Working In or Near R/R Easement: N				
1268	1528	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 FLINTC				
1269	1529	FLINTC 00010 MISDIGb 01/28/14 12:39:09 B40280327-00B EMER NEW GRID	FLINTC	B40280327	01/28/14	FLINT CITY WATER DEPARTMENT
1270	1531	**** Underground ****				
1271	1532	Ticket : B40280327 Rcvd: 01/28/14 12:37 Oper: SJG Rev: 00B				
1272	1533	Org Tkt : B40280327 Rcvd: 01/28/14 12:38 Oper: SJG				
1273	1535	Digstart: 01/28/14 Time: 12:37				
1274	1536	Tkt Life: 02/18/14 Time: 23:59				
1275	1538	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
1276	1539	Phone : 810-577-8261 Ext: Fax :				
1277	1540	E-mail : NONE				
1278	1541	FieldCnt: Number:				
1279	1543	County : GENESEE Place : FLINT /C				
1280	1545	Grids : 4302D8341A 4302D8342D				
1281	1546	Polygon : 43.037480/-83.700053 43.036414/-83.696401				
1282	1547	: 43.036132/-83.700446 43.035066/-83.696795				
1283	1548	Lat : Long:				
1284	1549	Work Typ: WMB Done For:				
1285	1550	Address : 410				
1286	1551	Street : E NEWALL ST				
1287	1552	1st x-st: Dir W of AVE A				
1288	1553	2nd x-st: Dir N of HAMILTON				
1289	1554	Subdivsn: Lots:				
1290	1555	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW ENROUTE				
1291	1556	Boring : N On-going project: N Working In or Near R/R Easement: N				
1292	1557	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1293	1558	FLINTC 00038 MISDIGb 01/28/14 15:59:41 B40280002-01B EMER RXMT GRID	FLINTC	B40280002	01/28/14	FLINT CITY WATER DEPARTMENT
1294	1560	**** Underground ****				
1295	1561	Ticket : B40280002 Rcvd: 01/28/14 15:58 Oper: AMA Rev: 01B				

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1269	JEFF CHURCH	WMB	Address : 410	Street : E NEWALL ST	1st x-st: Dir W of AVE A
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1293	PAUL SIMPSON	WMB	Address :	Street : 1ST AVE	1st x-st: Dir of MARTIN L KING BLVD
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1296	1562	Org Tkt : B40280002 Rcvd: 01/28/14 00:44 Oper: DLF				
1297	1564	Digstart: 01/28/14 Time: 15:58				
1298	1565	Tkt Life: 02/18/14 Time: 23:59				
1299	1567	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1300	1568	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1301	1569	E-mail : NONE				
1302	1570	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247				
1303	1572	County : GENESEE Place : FLINT /C				
1304	1574	Grids : 4301D8341B				
1305	1575	Polygon : 43.020190/-83.694039 43.019493/-83.692389				
1306	1576	: 43.018928/-83.694572 43.018231/-83.692922				
1307	1577	Lat : Long:				
1308	1578	Work Typ: WMB Done For:				
1309	1579	Address :				
1310	1580	Street : 1ST AVE				
1311	1581	1st x-st: Dir of MARTIN L KING BLVD				
1312	1582	2nd x-st: Dir of SAGINAW ST				
1313	1583	Subdivsn: Lots:				
1314	1584	Stk Info: LOCATE ENTIRE 3 WAY INTER OF 1ST AVE, MARTIN L KING BLVD, & SAGINAW ST				
1315	1585	Boring : N On-going project: N Working In or Near R/R Easement: N				
1316	1587	AddlInfo: 2ND CALL RESTK ONLY ELEC MARKS REMV PER PAUL CREW ON SITE REFER				
1317	1588	: TO TKT FRM 1/28 12:44PM--[AMA 01/28/2014 03:59PM]				
1318	1590	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 FLINTC				
1319	1591	FLINTC 00001 MISDIGb 01/29/14 07:40:36 B40290035-00B EMER NEW GRID	FLINTC	B40290035	01/29/14	FLINT CITY WATER DEPARTMENT
1320	1593	**** Underground ****				
1321	1594	Ticket : B40290035 Rcvd: 01/29/14 07:31 Oper: GMH Rev: 00B				
1322	1595	Org Tkt : B40290035 Rcvd: 01/29/14 07:34 Oper: GMH				
1323	1597	Digstart: 01/29/14 Time: 08:00				
1324	1598	Tkt Life: 02/19/14 Time: 23:59				
1325	1600	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1326	1601	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1327	1602	E-mail : NONE				
1328	1603	FieldCnt: PAUL Number: 810-397-7247				
1329	1605	County : GENESEE Place : FLINT /C				
1330	1607	Grids : 4301C8341A 4301C8341B 4301C8341C 4301D8341A 4301D8341B				
1331	1608	: 4301D8341C				
1332	1609	Polygon : 43.022122/-83.696699 43.020948/-83.689664				
1333	1610	: 43.017636/-83.697447 43.016462/-83.690412				
1334	1611	Lat : Long:				
1335	1612	Work Typ: WMB Done For:				
1336	1613	Address :				
1337	1614	Street : MARTIN LUTHER KING BLVD				
1338	1615	1st x-st: Dir of 1ST AVE				
1339	1616	2nd x-st: Dir of				
1340	1617	Subdivsn: Lots:				
1341	1618	Stk Info: STK N SD OF T INTER GOING N FOR 50FT CREW EN ROUTE				
1342	1619	Boring : N On-going project: N Working In or Near R/R Easement: N				
1343	1620	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 FLINTC				

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1319	PAUL SIMPSON	WMB	Address :	Street : MARTIN LUTHER KING BLVD	1st x-st: Dir of 1ST AVE
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1344	1621	FLINTC 00002 MISDIGb 01/29/14 07:54:59 B40290063-00B EMER NEW GRID	FLINTC	B40290063	01/29/14	FLINT CITY WATER DEPARTMENT
1345	1623	**** Underground ****				
1346	1624	Ticket : B40290063 Rcvd: 01/29/14 07:51 Oper: LCG Rev: 00B				
1347	1625	Org Tkt : B40290063 Rcvd: 01/29/14 07:54 Oper: LCG				
1348	1627	Digstart: 01/29/14 Time: 08:00				
1349	1628	Tkt Life: 02/19/14 Time: 23:59				
1350	1630	Firm : FLINT CITY WATER DEPARTMENT Caller: MARK PAVWOSKI				
1351	1631	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1352	1632	E-mail : NONE				
1353	1633	FieldCnt: JEFF CHURCH Number: 810-577-8261				
1354	1635	County : GENESEE Place : FLINT /C				
1355	1637	Grids : 4301D8342A 4301D8342B 4301D8342C				
1356	1638	Polygon : 43.020929/-83.714322 43.020584/-83.708162				
1357	1639	: 43.017578/-83.714510 43.017232/-83.708350				
1358	1640	Lat : Long:				
1359	1641	Work Typ: WMB Done For:				
1360	1642	Address :				
1361	1643	Street : GLADWYN ST				
1362	1644	1st x-st: Dir of FLUSHING RD				
1363	1645	2nd x-st: Dir of COTTAGE GROVE				
1364	1646	Subdivsn: Lots:				
1365	1647	Stk Info: LOCATE BTH SDS OF RD BET X-STS CREW ENROUTE				
1366	1648	Boring : N On-going project: N Working In or Near R/R Easement: N				
1367	1649	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
1368	1650	FLINTC 00003 MISDIGb 01/29/14 08:58:30 B40290133-00B EMER NEW GRID	FLINTC	B40290133	01/29/14	FLINT CITY WATER DEPARTMENT
1369	1652	**** Underground ****				
1370	1653	Ticket : B40290133 Rcvd: 01/29/14 08:55 Oper: DLF Rev: 00B				
1371	1654	Org Tkt : B40290133 Rcvd: 01/29/14 08:58 Oper: DLF				
1372	1656	Digstart: 01/29/14 Time: 12:00				
1373	1657	Tkt Life: 02/19/14 Time: 23:59				
1374	1659	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1375	1660	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1376	1661	E-mail : NONE				
1377	1662	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247				
1378	1664	County : GENESEE Place : FLINT /C				
1379	1666	Grids : 4301A8338C 4301A8338D				
1380	1667	Polygon : 43.031670/-83.638699 43.031609/-83.634350				
1381	1668	: 43.030314/-83.638718 43.030253/-83.634369				
1382	1669	Lat : Long:				
1383	1670	Work Typ: WMB Done For:				
1384	1671	Address :				
1385	1672	Street : PITKIN AVE				
1386	1673	1st x-st: Dir W of CENTER RD				
1387	1674	2nd x-st: Dir S of DAVISON RD				
1388	1675	Subdivsn: Lots:				
1389	1676	Stk Info: LOCATE ENTIRE FRT OF PROP AND BTH SDS OF RD AT ADDRS 3821 & 3813				
1390	1677	Boring : N On-going project: N Working In or Near R/R Easement: N				
1391	1678	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC				

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1344	MARK PAVWOSKI	WMB	Address :	Street : GLADWYN ST	1st x-st: Dir of FLUSHING RD
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1368	PAUL SIMPSON	WMB	Address :	Street : PITKIN AVE	1st x-st: Dir W of CENTER RD
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1392	1679	FLINTC 00002 MISDIGa 01/29/14 09:47:54 A40290044-00A EMER NEW GRID	FLINTC	A40290044	01/29/14	FLINT CITY WATER DEPARTMENT
1393	1681	**** Underground ****				
1394	1682	Ticket : A40290044 Rcvd: 01/29/14 09:44 Oper: BMF Rev: 00A				
1395	1683	Org Tkt : A40290044 Rcvd: 01/29/14 09:47 Oper: BMF				
1396	1685	Digstart: 01/29/14 Time: 12:00				
1397	1686	Tkt Life: 02/19/14 Time: 23:59				
1398	1688	Firm : FLINT CITY WATER DEPARTMENT Caller: LAURA MILLER				
1399	1689	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1400	1690	E-mail : NONE				
1401	1691	FieldCnt: JEFF /CELL Number: 810-577-8261				
1402	1693	County : GENESEE Place : FLINT /C				
1403	1695	Grids : 4301C8342A 4301C8343D				
1404	1696	Polygon : 43.023833/-83.717168 43.024069/-83.715324				
1405	1697	: 43.022514/-83.716999 43.022751/-83.715155				
1406	1698	Lat : Long:				
1407	1699	Work Typ: WMB Done For:				
1408	1700	Address :				
1409	1701	Street : STEVENSON ST				
1410	1702	1st x-st: Dir of WOODBRIDGE ST				
1411	1703	2nd x-st: Dir W of DUPONT ST				
1412	1704	Subdivsn: Lots:				
1413	1705	Stk Info: N OF FLUSHING LOCATE ENTIRE INTER OF RD W/ WOODBRIDGE CREW EN				
1414	1706	: ROUTE				
1415	1707	Boring : N On-going project: N Working In or Near R/R Easement: N				
1416	1708	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
1417	1709	FLINTC 00019 MISDIGb 01/29/14 13:47:58 B40290452-00B EMER NEW GRID	FLINTC	B40290452	01/29/14	FLINT CITY WATER DEPARTMENT
1418	1711	**** Underground ****				
1419	1712	Ticket : B40290452 Rcvd: 01/29/14 13:45 Oper: AMA Rev: 00B				
1420	1713	Org Tkt : B40290452 Rcvd: 01/29/14 13:47 Oper: AMA				
1421	1715	Digstart: 01/29/14 Time: 13:45				
1422	1716	Tkt Life: 02/19/14 Time: 23:59				
1423	1718	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
1424	1719	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1425	1720	E-mail : NONE				
1426	1721	FieldCnt: HOWARD SWICKARD /CELL Number: 810-577-8263				
1427	1723	County : GENESEE Place : FLINT /C				
1428	1725	Grids : 4259A8339C 4259B8339C				
1429	1726	Polygon : 42.996671/-83.657079 42.996728/-83.655208				
1430	1727	: 42.992547/-83.656953 42.992604/-83.655082				
1431	1728	Lat : Long:				
1432	1729	Work Typ: REPR WMB Done For:				
1433	1730	Address :				
1434	1731	Street : CHEYENNE AVE				
1435	1732	1st x-st: Dir W of DORT HWY				
1436	1733	2nd x-st: Dir S of MOHAWK AVE				
1437	1734	Subdivsn: Lots:				
1438	1735	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD AT ADDRS 2917 & 3001 CREW				
1439	1736	: EN ROUTE				

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1392	LAURA MILLER	WMB	Address :	Street : STEVENSON ST	1st x-st: Dir of WOODBRIDGE ST
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1417	HOWARD SWICKARD	REPR WMB	Address :	Street : CHEYENNE AVE	1st x-st: Dir W of DORT HWY
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1440	1737	Boring : N On-going project: N Working In or Near R/R Easement: N				
1441	1738	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1442	1739	FLINTC 00020 MISDIGb 01/29/14 13:50:17 B40290458-00B EMER NEW GRID	FLINTC	B40290458	01/30/14	FLINT CITY WATER DEPARTMENT
1443	1741	**** Underground ****				
1444	1742	Ticket : B40290458 Rcvd: 01/29/14 13:49 Oper: AMA Rev: 00B				
1445	1743	Org Tkt : B40290458 Rcvd: 01/29/14 13:49 Oper: AMA				
1446	1745	Digstart: 01/30/14 Time: 09:00				
1447	1746	Tkt Life: 02/20/14 Time: 23:59				
1448	1748	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
1449	1749	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1450	1750	E-mail : NONE				
1451	1751	FieldCnt: HOWARD SWICKARD /CELL Number: 810-577-8263				
1452	1753	County : GENESEE Place : FLINT /C				
1453	1755	Grids : 4301A8338C				
1454	1756	Polygon : 43.031018/-83.641383 43.032046/-83.639998				
1455	1757	: 43.029780/-83.640463 43.030808/-83.639078				
1456	1758	Lat : Long:				
1457	1759	Work Typ: REPR WMB Done For:				
1458	1760	Address :				
1459	1761	Street : DEXTER AVE				
1460	1762	1st x-st: Dir of PITKIN AVE				
1461	1763	2nd x-st: Dir W of CENTER RD				
1462	1764	Subdivsn: Lots:				
1463	1765	Stk Info: S DAVIDSON RD STK BTH SDS OF DEXTER AVE BEG AT PITKIN & GO S 50 FT				
1464	1766	Boring : N On-going project: N Working In or Near R/R Easement: N				
1465	1767	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC				
1466	1768	FLINTC 00021 MISDIGb 01/29/14 13:52:09 B40290462-00B EMER NEW GRID	FLINTC	B40290462	01/29/14	FLINT CITY WATER DEPARTMENT
1467	1770	**** Underground ****				
1468	1771	Ticket : B40290462 Rcvd: 01/29/14 13:50 Oper: SLD Rev: 00B				
1469	1772	Org Tkt : B40290462 Rcvd: 01/29/14 13:52 Oper: SLD				
1470	1774	Digstart: 01/29/14 Time: 13:50				
1471	1775	Tkt Life: 02/19/14 Time: 23:59				
1472	1777	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1473	1778	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1474	1779	E-mail : NONE				
1475	1780	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247				
1476	1782	County : GENESEE Place : FLINT /C				
1477	1784	Grids : 4303D8339C				
1478	1785	Polygon : 43.053375/-83.656447 43.053444/-83.654575				
1479	1786	: 43.050101/-83.656326 43.050170/-83.654454				
1480	1787	Lat : Long:				
1481	1788	Work Typ: WMB Done For:				
1482	1789	Address : 4140				
1483	1790	Street : WESTERN RD				
1484	1791	1st x-st: Dir N of RICHFIELD RD				
1485	1792	2nd x-st: Dir E of N DORT HWY				
1486	1793	Subdivsn: Lots:				
1487	1794	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				

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1442	HOWARD SWICKARD	REPR WMB	Address :	Street : DEXTER AVE	1st x-st: Dir of PITKIN AVE
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1466	PAUL SIMPSON	WMB	Address : 4140	Street : WESTERN RD	1st x-st: Dir N of RICHFIELD RD
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1488	1795	Boring : N On-going project: N Working In or Near R/R Easement: N				
1489	1796	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1490	1797	FLINTC 00001 MISDIGb 01/30/14 06:44:34 B40300029-00B EMER NEW GRID	FLINTC	B40300029	01/30/14	FLINT CITY WATER DEPARTMENT
1491	1799	**** Underground ****				
1492	1800	Ticket : B40300029 Rcvd: 01/30/14 06:42 Oper: GMH Rev: 00B				
1493	1801	Org Tkt : B40300029 Rcvd: 01/30/14 06:44 Oper: GMH				
1494	1803	Digstart: 01/30/14 Time: 08:00				
1495	1804	Tkt Life: 02/20/14 Time: 23:59				
1496	1806	Firm : FLINT CITY WATER DEPARTMENT Caller: CHERI PRIEST				
1497	1807	Phone : 810-766-7202 Ext: 3401 Fax : 810-742-6283				
1498	1808	E-mail : AROBERTS@CITYOFFLINT.COM				
1499	1809	FieldCnt: Number:				
1500	1811	County : GENESEE Place : FLINT /C				
1501	1813	Grids : 4301B8342A 4301B8342B 4301C8342A 4301C8342B 4301C8342C				
1502	1815	Polygon : 43.026549/-83.714483 43.025227/-83.708045				
1503	1816	: 43.023145/-83.715182 43.021822/-83.708744				
1504	1817	Lat : Long:				
1505	1818	Work Typ: WMB Done For:				
1506	1819	Address :				
1507	1820	Street : MACKIN RD				
1508	1821	1st x-st: Dir E of DUPONT ST				
1509	1822	2nd x-st: Dir of				
1510	1823	Subdivsn: Lots:				
1511	1824	Stk Info: STK BTH SDS OF RD AT A POINT 100FT E OF DUPONT IN AREA OF BUBBLING				
1512	1825	: UP CREW EN ROUTE				
1513	1826	Boring : N On-going project: N Working In or Near R/R Easement: N				
1514	1827	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
1515	1828	FLINTC 00001 MISDIGa 01/30/14 07:33:34 A40300007-00A EMER NEW GRID	FLINTC	A40300007	01/30/14	FLINT CITY WATER DEPARTMENT
1516	1830	**** Underground ****				
1517	1831	Ticket : A40300007 Rcvd: 01/30/14 07:31 Oper: MLD Rev: 00A				
1518	1832	Org Tkt : A40300007 Rcvd: 01/30/14 07:33 Oper: MLD				
1519	1834	Digstart: 01/30/14 Time: 08:00				
1520	1835	Tkt Life: 02/20/14 Time: 23:59				
1521	1837	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
1522	1838	Phone : 810-577-8261 Ext: Fax :				
1523	1839	E-mail : NONE				
1524	1840	FieldCnt: Number:				
1525	1842	County : GENESEE Place : FLINT /C				
1526	1844	Grids : 4300D8344C 4300D8344D				
1527	1845	Polygon : 43.002946/-83.738538 43.003185/-83.736695				
1528	1846	: 43.001627/-83.738367 43.001867/-83.736524				
1529	1847	Lat : Long:				
1530	1848	Work Typ: REPR WMB Done For:				
1531	1849	Address :				
1532	1850	Street : CORUNNA RD				
1533	1851	1st x-st: Dir of DARLING ST				
1534	1852	2nd x-st: Dir W of BALENGER HWY				
1535	1853	Subdivsn: Lots:				

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1490	CHERI PRIEST	WMB	Address :	Street : MACKIN RD	1st x-st: Dir E of DUPONT ST
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1515	JEFF CHURCH	REPR WMB	Address :	Street : CORUNNA RD	1st x-st: Dir of DARLING ST
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1536	1854	Stk Info: LOCATE 100FT RADIUS OF BARRICADES LOC NW COR OF CORUNNA & DARLING				
1537	1855	: CREW EN ROUTE				
1538	1856	Boring : N On-going project: N Working In or Near R/R Easement: N				
1539	1857	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1540	1858	FLINTC 00008 MISDIGb 01/30/14 09:03:09 B40300160-00B EMER NEW GRID	FLINTC	B40300160	01/30/14	FLINT CITY WATER DEPARTMENT
1541	1860	**** Underground ****				
1542	1861	Ticket : B40300160 Rcvd: 01/30/14 09:01 Oper: DJH Rev: 00B				
1543	1862	Org Tkt : B40300160 Rcvd: 01/30/14 09:02 Oper: DJH				
1544	1864	Digstart: 01/30/14 Time: 12:00				
1545	1865	Tkt Life: 02/20/14 Time: 23:59				
1546	1867	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1547	1868	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1548	1869	E-mail : NONE				
1549	1870	FieldCnt: PAUL - CELL Number: 810-397-7247				
1550	1872	County : GENESEE Place : FLINT /C				
1551	1874	Grids : 4302B8339A 4302B8339B				
1552	1875	Polygon : 43.043655/-83.666095 43.043445/-83.661490				
1553	1876	: 43.042218/-83.666160 43.042008/-83.661556				
1554	1877	Lat : Long:				
1555	1878	Work Typ: WMB Done For:				
1556	1879	Address : 2101				
1557	1880	Street : LEITH ST				
1558	1881	1st x-st: Dir E of N FRANKLIN				
1559	1882	2nd x-st: Dir W of VERNON AVE				
1560	1883	Subdivsn: Lots:				
1561	1884	Stk Info: STK FRT OF PROP & BTH SDS OF RD				
1562	1885	Boring : N On-going project: N Working In or Near R/R Easement: N				
1563	1886	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1564	1887	FLINTC 00014 MISDIGb 01/30/14 14:25:30 B40300487-00B EMER NEW GRID	FLINTC	B40300487	01/30/14	FLINT CITY WATER DEPARTMENT
1565	1889	**** Underground ****				
1566	1890	Ticket : B40300487 Rcvd: 01/30/14 14:22 Oper: GMH Rev: 00B				
1567	1891	Org Tkt : B40300487 Rcvd: 01/30/14 14:25 Oper: GMH				
1568	1893	Digstart: 01/30/14 Time: 14:22				
1569	1894	Tkt Life: 02/20/14 Time: 23:59				
1570	1896	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
1571	1897	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1572	1898	E-mail : NONE				
1573	1899	FieldCnt: BOBBY Number: 810-577-7180				
1574	1901	County : GENESEE Place : FLINT /C				
1575	1903	Grids : 4302D8340A 4302D8340B 4302D8340C				
1576	1904	Polygon : 43.036863/-83.683031 43.036337/-83.674308				
1577	1905	: 43.034081/-83.683199 43.033555/-83.674476				
1578	1906	Lat : Long:				
1579	1907	Work Typ: WMB Done For:				
1580	1908	Address :				
1581	1909	Street : BENNETT AVE				
1582	1910	1st x-st: Dir W of I-475				
1583	1911	2nd x-st: Dir N of HAMILTON AVE				

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1540	PAUL SIMPSON	WMB	Address : 2101	Street : LEITH ST	1st x-st: Dir E of N FRANKLIN
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1564	HOWARD SWICKARD	WMB	Address :	Street : BENNETT AVE	1st x-st: Dir W of I-475
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1584	1912	Subdivsn: Lots:				
1585	1913	Stk Info: STK BTH SDS OF RD IFO ADDR 1215,1217 & 1223 CREW EN ROUTE				
1586	1914	Boring : N On-going project: N Working In or Near R/R Easement: N				
1587	1915	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
1588	1916	FLINTC 00002 MISDIGb 01/31/14 08:32:28 B40310106-00B EMER NEW GRID	FLINTC	B40310106	01/31/14	FLINT CITY WATER DEPARTMENT
1589	1918	**** Underground ****				
1590	1919	Ticket : B40310106 Rcvd: 01/31/14 08:30 Oper: AMA Rev: 00B				
1591	1920	Org Tkt : B40310106 Rcvd: 01/31/14 08:32 Oper: AMA				
1592	1922	Digstart: 01/31/14 Time: 08:30				
1593	1923	Tkt Life: 02/21/14 Time: 23:59				
1594	1925	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1595	1926	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1596	1927	E-mail : NONE				
1597	1928	FieldCnt: PAUL SIMPSON Number: 810-397-7247				
1598	1930	County : GENESEE Place : FLINT /C				
1599	1932	Grids : 4300B8343A 4300C8343A 4300B8344D 4300C8344D				
1600	1933	Polygon : 43.011720/-83.730847 43.010337/-83.729622				
1601	1934	: 43.008199/-83.734822 43.006816/-83.733597				
1602	1935	Lat : Long:				
1603	1936	Work Typ: REPR WMB Done For:				
1604	1937	Address :				
1605	1938	Street : WESTCOMBE AVE				
1606	1939	1st x-st: Dir of BEECHER RD				
1607	1940	2nd x-st: Dir of BALLENGER HWY				
1608	1941	Subdivsn: Lots:				
1609	1942	Stk Info: LOCATE E SD OF WESTCOMBE BET X STS CREW EN ROUTE				
1610	1943	Boring : N On-going project: N Working In or Near R/R Easement: N				
1611	1944	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC GISD				
1612	1945	FLINTC 00009 MISDIGb 01/31/14 13:09:06 B40310397-00B EMER NEW GRID	FLINTC	B40310397	01/31/14	FLINT CITY WATER DEPARTMENT
1613	1947	**** Underground ****				
1614	1948	Ticket : B40310397 Rcvd: 01/31/14 13:04 Oper: SLD Rev: 00B				
1615	1949	Org Tkt : B40310397 Rcvd: 01/31/14 13:08 Oper: SLD				
1616	1951	Digstart: 01/31/14 Time: 16:00				
1617	1952	Tkt Life: 02/21/14 Time: 23:59				
1618	1954	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
1619	1955	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1620	1956	E-mail : NONE				
1621	1957	FieldCnt: BOBBY Number: 810-577-7180				
1622	1959	County : GENESEE Place : FLINT /C				
1623	1961	Grids : 4302C8338C 4302C8338D				
1624	1962	Polygon : 43.039223/-83.638905 43.039301/-83.634675				
1625	1963	: 43.037850/-83.638880 43.037929/-83.634649				
1626	1964	Lat : Long:				
1627	1965	Work Typ: WMB Done For:				
1628	1966	Address : 3837				
1629	1967	Street : RISEDORPH AVE				
1630	1968	1st x-st: Dir W of CENTER RD				
1631	1969	2nd x-st: Dir N of DAVISON RD				

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1588	PAUL SIMPSON	REPR WMB	Address :	Street : WESTCOMBE AVE	1st x-st: Dir of BEECHER RD
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1612	HOWARD SWICKARD	WMB	Address : 3837	Street : RISEDORPH AVE	1st x-st: Dir W of CENTER RD
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1632	1970	Subdivsn: Lots:				
1633	1971	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD IFO ADDR				
1634	1972	Boring : N On-going project: N Working In or Near R/R Easement: N				
1635	1973	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC				
1636	1974	FLINTC 00023 MISDIGb 01/31/14 13:47:35 B40310437-00B EMER NEW GRID	FLINTC	B40310437	01/31/14	FLINT CITY WATER DEPARTMENT
1637	1976	**** Underground ****				
1638	1977	Ticket : B40310437 Rcvd: 01/31/14 13:45 Oper: LCG Rev: 00B				
1639	1978	Org Tkt : B40310437 Rcvd: 01/31/14 13:47 Oper: LCG				
1640	1980	Digstart: 01/31/14 Time: 13:45				
1641	1981	Tkt Life: 02/21/14 Time: 23:59				
1642	1983	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1643	1984	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1644	1985	E-mail : NONE				
1645	1986	FieldCnt: Number: 810-397-7247				
1646	1988	County : GENESEE Place : FLINT /C				
1647	1990	Grids : 4301B8343A 4301B8344D				
1648	1991	Polygon : 43.027893/-83.732855 43.026834/-83.731562				
1649	1992	: 43.026039/-83.734374 43.024980/-83.733082				
1650	1993	Lat : Long:				
1651	1994	Work Typ: WMB Done For:				
1652	1995	Address : 1152				
1653	1996	Street : DONALDSON				
1654	1997	1st x-st: Dir N of FLUSHING RD				
1655	1998	2nd x-st: Dir W of BALLENGER HWY				
1656	1999	Subdivsn: Lots:				
1657	2000	Stk Info: LOCATE ENTIRE S SD OF PROP & BTH SDS OF RD CREW ENROUTE				
1658	2001	Boring : N On-going project: N Working In or Near R/R Easement: N				
1659	2002	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1660	2003	FLINTC 00025 MISDIGb 01/31/14 13:51:13 B40310440-00B EMER NEW GRID	FLINTC	B40310440	02/01/14	FLINT CITY WATER DEPARTMENT
1661	2005	**** Underground ****				
1662	2006	Ticket : B40310440 Rcvd: 01/31/14 13:47 Oper: LCG Rev: 00B				
1663	2007	Org Tkt : B40310440 Rcvd: 01/31/14 13:51 Oper: LCG				
1664	2009	Digstart: 02/01/14 Time: 18:00				
1665	2010	Tkt Life: 02/22/14 Time: 23:59				
1666	2012	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1667	2013	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1668	2014	E-mail : NONE				
1669	2015	FieldCnt: Number: 810-397-7247				
1670	2017	County : GENESEE Place : FLINT /C				
1671	2019	Grids : 4301C8339A 4301C8339B 4301D8339A 4301D8339B 4301C8340D				
1672	2020	: 4301D8340D				
1673	2021	Polygon : 43.023332/-83.668991 43.024133/-83.660905				
1674	2022	: 43.019839/-83.668645 43.020641/-83.660559				
1675	2023	Lat : Long:				
1676	2024	Work Typ: WMB Done For:				
1677	2025	Address : 1901				
1678	2026	Street : E 2ND ST				
1679	2027	1st x-st: Dir of S FRANKLIN				

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1636	PAUL SIMPSON	WMB	Address : 1152	Street : DONALDSON	1st x-st: Dir N of FLUSHING RD
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1660	PAUL SIMPSON	WMB	Address : 1901	Street : E 2ND ST	1st x-st: Dir of S FRANKLIN
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1680	2028	2nd x-st: Dir W of S DORT HWY				
1681	2029	Subdivsn: Lots:				
1682	2030	Stk Info: NE COR LOCATE W SD OF PROP & BTH SDS OF S FRANKLIN				
1683	2031	Boring : N On-going project: N Working In or Near R/R Easement: N				
1684	2032	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
1685	2033	FLINTC 00026 MISDIGb 01/31/14 14:06:18 B40310463-00B EMER NEW GRID	FLINTC	B40310463	01/31/14	FLINT CITY WATER DEPARTMENT
1686	2035	**** Underground ****				
1687	2036	Ticket : B40310463 Rcvd: 01/31/14 14:04 Oper: SLD Rev: 00B				
1688	2037	Org Tkt : B40310463 Rcvd: 01/31/14 14:06 Oper: SLD				
1689	2039	Digstart: 01/31/14 Time: 14:04				
1690	2040	Tkt Life: 02/21/14 Time: 23:59				
1691	2042	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
1692	2043	Phone : 810-577-8261 Ext: Fax :				
1693	2044	E-mail : NONE				
1694	2045	FieldCnt: Number:				
1695	2047	County : GENESEE Place : FLINT /C				
1696	2049	Grids : 4302C8342A 4302C8342B 4302C8342C 4302D8342A 4302D8342B				
1697	2050	: 4302D8342C				
1698	2051	Polygon : 43.040251/-83.714968 43.039863/-83.707944				
1699	2052	: 43.036012/-83.715203 43.035623/-83.708178				
1700	2053	Lat : Long:				
1701	2054	Work Typ: WMB Done For:				
1702	2055	Address :				
1703	2056	Street : WHITE ST				
1704	2057	1st x-st: Dir of IROQUOIS AVE				
1705	2058	2nd x-st: Dir S of DAYTON ST				
1706	2059	Subdivsn: Lots:				
1707	2060	Stk Info: E OF DUPONT ST STK 30FT RADIUS OF NW COR OF INTER OF WHITE &				
1708	2061	: IROQUOIS CREW ON SITE				
1709	2062	Boring : N On-going project: N Working In or Near R/R Easement: N				
1710	2063	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
1711	2064	FLINTC 00033 MISDIGb 01/31/14 17:04:51 B40310596-00B EMER NEW GRID	FLINTC	B40310596	02/01/14	FLINT CITY WATER DEPARTMENT
1712	2066	**** Underground ****				
1713	2067	Ticket : B40310596 Rcvd: 01/31/14 17:01 Oper: JAL Rev: 00B				
1714	2068	Org Tkt : B40310596 Rcvd: 01/31/14 17:04 Oper: JAL				
1715	2070	Digstart: 02/01/14 Time: 07:00				
1716	2071	Tkt Life: 02/22/14 Time: 23:59				
1717	2073	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
1718	2074	Phone : 810-577-8261 Ext: Fax :				
1719	2075	E-mail : NONE				
1720	2076	FieldCnt: Number:				
1721	2078	County : GENESEE Place : FLINT /C				
1722	2080	Grids : 4302B8340C 4302B8340D				
1723	2081	Polygon : 43.045217/-83.671620 43.045306/-83.667328				
1724	2082	: 43.043844/-83.671592 43.043933/-83.667300				
1725	2083	Lat : Long:				
1726	2084	Work Typ: WMB Done For:				
1727	2085	Address : 1611				

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1685	JEFF CHURCH	WMB	Address :	Street : WHITE ST	1st x-st: Dir of IROQUOIS AVE
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1711	JEFF CHURCH	WMB	Address : 1611	Street : COLORADO AVE	1st x-st: Dir E of IOWA AVE
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1728	2086	Street : COLORADO AVE				
1729	2087	1st x-st: Dir E of IOWA AVE				
1730	2088	2nd x-st: Dir N of LEITH ST				
1731	2089	Subdivsn: Lots:				
1732	2090	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
1733	2091	Boring : N On-going project: N Working In or Near R/R Easement: N				
1734	2092	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD				
1735	2093	FLINTC 00001 MISDIGb 02/03/14 07:49:41 B40340070-00B EMER NEW GRID	FLINTC	B40340070	02/03/14	CITY OF FLINT, MI WATER SER
1736	2095	**** Underground ****				
1737	2096	Ticket : B40340070 Rcvd: 02/03/14 07:47 Oper: BMB Rev: 00B				
1738	2097	Org Tkt : B40340070 Rcvd: 02/03/14 07:49 Oper: BMB				
1739	2099	Digstart: 02/03/14 Time: 07:47				
1740	2100	Tkt Life: 02/24/14 Time: 23:59				
1741	2102	Firm : CITY OF FLINT, MI WATER SERVICE CEN Caller: HOWARD SWICKARD				
1742	2103	Phone : 810-766-7202 Ext: 3401 Fax : 810-742-6283				
1743	2104	E-mail : AROBERTS@CITYOFFLINT.COM				
1744	2105	FieldCnt: HOWARD SWICKARD - CELL Number: 810-577-8263				
1745	2107	County : GENESEE Place : FLINT /C				
1746	2109	Grids : 4302B8338A 4302B8338B 4302B8338C 4302C8338A 4302C8338B				
1747	2110	: 4302C8338C				
1748	2111	Polygon : 43.042250/-83.646397 43.042312/-83.639686				
1749	2112	: 43.040889/-83.646384 43.040952/-83.639673				
1750	2113	Lat : Long:				
1751	2114	Work Typ: WMB Done For:				
1752	2115	Address : 3308				
1753	2116	Street : DAKOTA AVE				
1754	2117	1st x-st: Dir E of AVERILL AVE				
1755	2118	2nd x-st: Dir S of RICHFIELD RD				
1756	2119	Subdivsn: Lots:				
1757	2120	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
1758	2121	Boring : N On-going project: N Working In or Near R/R Easement: N				
1759	2122	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GISD				
1760	2123	FLINTC 00003 MISDIGb 02/03/14 10:21:00 B40340308-00B EMER NEW GRID	FLINTC	B40340308	02/03/14	FLINT CITY
1761	2125	**** Underground ****				
1762	2126	Ticket : B40340308 Rcvd: 02/03/14 10:17 Oper: JLK Rev: 00B				
1763	2127	Org Tkt : B40340308 Rcvd: 02/03/14 10:20 Oper: JLK				
1764	2129	Digstart: 02/03/14 Time: 10:17				
1765	2130	Tkt Life: 02/24/14 Time: 23:59				
1766	2132	Firm : FLINT CITY Caller: GARY SMITH				
1767	2133	Phone : 810-265-4571 Ext: Fax :				
1768	2134	E-mail : NONE				
1769	2135	FieldCnt: Number:				
1770	2137	County : GENESEE Place : FLINT /C				
1771	2139	Grids : 4300C8343A 4300D8343A 4300C8344D 4300D8344D				
1772	2140	Polygon : 43.005983/-83.735147 43.005999/-83.733275				
1773	2141	: 43.003190/-83.735123 43.003206/-83.733251				
1774	2142	Lat : Long:				
1775	2143	Work Typ: WMB Done For:				

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1735	HOWARD SWICKARD	WMB	Address : 3308	Street : DAKOTA AVE	1st x-st: Dir E of AVERILL AVE
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1760	GARY SMITH	WMB	Address :	Street : JOHNSON AVE	1st x-st: Dir S of MANN HALL AVE
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1760	2nd x-st: Dir W of BALLENGER HWY
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1776	2144	Address :				
1777	2145	Street : JOHNSON AVE				
1778	2146	1st x-st: Dir S of MANN HALL AVE				
1779	2147	2nd x-st: Dir W of BALLENGER HWY				
1780	2148	Subdivsn: Lots:				
1781	2149	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF JOHNSON R-O-W TO R-O-W AT ADDRS				
1782	2150	: 975 & 963 CREW EN ROUTE				
1783	2151	Boring : N On-going project: N Working In or Near R/R Easement: N				
1784	2152	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC GISD				
1785	2153	FLINTC 00005 MISDIGb 02/03/14 11:40:34 B40340405-00B EMER NEW GRID	FLINTC	B40340405	02/03/14	FLINT CITY WATER DEPARTMENT
1786	2155	**** Underground ****				
1787	2156	Ticket : B40340405 Rcvd: 02/03/14 11:38 Oper: HDK Rev: 00B				
1788	2157	Org Tkt : B40340405 Rcvd: 02/03/14 11:40 Oper: HDK				
1789	2159	Digstart: 02/03/14 Time: 14:00				
1790	2160	Tkt Life: 02/24/14 Time: 23:59				
1791	2162	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
1792	2163	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1793	2164	E-mail : NONE				
1794	2165	FieldCnt: HOWARD Number: 810-577-8263				
1795	2167	County : GENESEE Place : FLINT /C				
1796	2169	Grids : 4301A8343A 4301A8343B				
1797	2170	Polygon : 43.032630/-83.731562 43.031302/-83.727025				
1798	2171	: 43.031280/-83.731957 43.029952/-83.727419				
1799	2172	Lat : Long:				
1800	2173	Work Typ: WMB Done For:				
1801	2174	Address : 2952				
1802	2175	Street : CLEMENT ST				
1803	2176	1st x-st: Dir W of BALLENGER HWY				
1804	2177	2nd x-st: Dir S of WELCH BLVD				
1805	2178	Subdivsn: Lots:				
1806	2179	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
1807	2180	Boring : N On-going project: N Working In or Near R/R Easement: N				
1808	2181	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1809	2182	FLINTC 00003 MISDIGb 02/04/14 07:29:43 B40350033-00B EMER NEW GRID	FLINTC	B40350033	02/04/14	FLINT CITY WATER DEPARTMENT
1810	2184	**** Underground ****				
1811	2185	Ticket : B40350033 Rcvd: 02/04/14 07:27 Oper: GMH Rev: 00B				
1812	2186	Org Tkt : B40350033 Rcvd: 02/04/14 07:29 Oper: GMH				
1813	2188	Digstart: 02/04/14 Time: 08:00				
1814	2189	Tkt Life: 02/25/14 Time: 23:59				
1815	2191	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1816	2192	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1817	2193	E-mail : NONE				
1818	2194	FieldCnt: PAUL Number: 810-397-7247				
1819	2196	County : GENESEE Place : FLINT /C				
1820	2198	Grids : 4259A8343A 4259A8343B 4259A8344D 4300D8343A 4300D8343B				
1821	2199	: 4300D8344D				
1822	2200	Polygon : 43.001971/-83.735972 43.001392/-83.728484				
1823	2201	: 42.997921/-83.736285 42.997342/-83.728797				

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1785	HOWARD SWICKARD	WMB	Address : 2952	Street : CLEMENT ST	1st x-st: Dir W of BALLENGER HWY
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1809	PAUL SIMPSON	WMB	Address :	Street : BALLENGER HWY	1st x-st: Dir of WHITNEY AVE
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1824	2202	Lat : Long:				
1825	2203	Work Typ: WMB Done For:				
1826	2204	Address :				
1827	2205	Street : BALLENGER HWY				
1828	2206	1st x-st: Dir of WHITNEY AVE				
1829	2207	2nd x-st: Dir S of CORUNNA RD				
1830	2208	Subdivsn: Lots:				
1831	2209	Stk Info: STK 75FT RADIUS OF NW COR OF BALLENGER & WHITNEY CREW EN ROUTE				
1832	2210	Boring : N On-going project: N Working In or Near R/R Easement: N				
1833	2211	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
1834	2212	FLINTC 00004 MISDIGb 02/04/14 07:31:21 B40350035-00B EMER NEW GRID	FLINTC	B40350035	02/04/14	FLINT CITY WATER DEPARTMENT
1835	2214	**** Underground ****				
1836	2215	Ticket : B40350035 Rcvd: 02/04/14 07:29 Oper: GMH Rev: 00B				
1837	2216	Org Tkt : B40350035 Rcvd: 02/04/14 07:31 Oper: GMH				
1838	2218	Digstart: 02/04/14 Time: 12:00				
1839	2219	Tkt Life: 02/25/14 Time: 23:59				
1840	2221	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1841	2222	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1842	2223	E-mail : NONE				
1843	2224	FieldCnt: PAUL Number: 810-397-7247				
1844	2226	County : GENESEE Place : FLINT /C				
1845	2228	Grids : 4301A8343B 4301B8343B 4301B8343C				
1846	2229	Polygon : 43.029559/-83.726824 43.028236/-83.722348				
1847	2230	: 43.028211/-83.727223 43.026887/-83.722746				
1848	2231	Lat : Long:				
1849	2232	Work Typ: WMB Done For:				
1850	2233	Address : 2722				
1851	2234	Street : MACKIN RD				
1852	2235	1st x-st: Dir E of LAVENDER AVE				
1853	2236	2nd x-st: Dir N of FLUSHING RD				
1854	2237	Subdivsn: Lots:				
1855	2238	Stk Info: STK FRT OF PROP & BTH SDS OF RD				
1856	2239	Boring : N On-going project: N Working In or Near R/R Easement: N				
1857	2240	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1858	2241	FLINTC 00006 MISDIGb 02/04/14 07:39:51 B40350046-00B EMER NEW GRID	FLINTC	B40350046	02/04/14	FLINT CITY WATER DEPARTMENT
1859	2243	**** Underground ****				
1860	2244	Ticket : B40350046 Rcvd: 02/04/14 07:37 Oper: SLD Rev: 00B				
1861	2245	Org Tkt : B40350046 Rcvd: 02/04/14 07:39 Oper: SLD				
1862	2247	Digstart: 02/04/14 Time: 08:00				
1863	2248	Tkt Life: 02/25/14 Time: 23:59				
1864	2250	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
1865	2251	Phone : 810-577-8261 Ext: Fax :				
1866	2252	E-mail : NONE				
1867	2253	FieldCnt: Number:				
1868	2255	County : GENESEE Place : FLINT /C				
1869	2257	Grids : 4301B8342A 4301B8342B 4301B8342C 4301C8342B				
1870	2258	Polygon : 43.028054/-83.712888 43.027642/-83.708167				
1871	2259	: 43.024734/-83.713178 43.024321/-83.708457				

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1834	PAUL SIMPSON	WMB	Address : 2722	Street : MACKIN RD	1st x-st: Dir E of LAVENDER AVE
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1858	JEFF CHURCH	WMB	Address :	Street : CONCORD ST	1st x-st: Dir of KIRK AVE
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1872	2260	Lat : Long:				
1873	2261	Work Typ: WMB Done For:				
1874	2262	Address :				
1875	2263	Street : CONCORD ST				
1876	2264	1st x-st: Dir of KIRK AVE				
1877	2265	2nd x-st: Dir E of DUPONT ST				
1878	2266	Subdivsn: Lots:				
1879	2267	Stk Info: N OF MACKIN RD STK 50FT RADIUS OF NW COR OF INTER OF CONCORD &				
1880	2268	: KIRK CREW EN ROUTE				
1881	2269	Boring : N On-going project: N Working In or Near R/R Easement: N				
1882	2270	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
1883	2271	FLINTC 00007 MISDIGb 02/04/14 07:40:39 B40350047-00B EMER NEW GRID	FLINTC	B40350047	02/04/14	FLINT CITY WATER DEPARTMENT
1884	2273	**** Underground ****				
1885	2274	Ticket : B40350047 Rcvd: 02/04/14 07:38 Oper: AMA Rev: 00B				
1886	2275	Org Tkt : B40350047 Rcvd: 02/04/14 07:40 Oper: AMA				
1887	2277	Digstart: 02/04/14 Time: 08:00				
1888	2278	Tkt Life: 02/25/14 Time: 23:59				
1889	2280	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
1890	2281	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1891	2282	E-mail : NONE				
1892	2283	FieldCnt: HOWARD SWICKARD Number: 810-577-8263				
1893	2285	County : GENESEE Place : FLINT /C				
1894	2287	Grids : 4303A8342B 4303A8342C 4304D8342B 4304D8342C				
1895	2288	Polygon : 43.067819/-83.709965 43.067865/-83.705359				
1896	2289	: 43.066447/-83.709951 43.066493/-83.705345				
1897	2290	Lat : Long:				
1898	2291	Work Typ: REPR WMB Done For:				
1899	2292	Address : 302				
1900	2293	Street : W HOME AVE				
1901	2294	1st x-st: Dir W of MARTIN LUTHER KING JR BLVD				
1902	2295	2nd x-st: Dir N of PIERSON RD				
1903	2296	Subdivsn: Lots:				
1904	2297	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
1905	2298	Boring : N On-going project: N Working In or Near R/R Easement: N				
1906	2299	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1907	2300	FLINTC 00001 MISDIGa 02/04/14 11:47:32 A40350152-00A EMER NEW GRID	FLINTC	A40350152	02/04/14	FLINT CITY WATER DEPARTMENT
1908	2302	**** Underground ****				
1909	2303	Ticket : A40350152 Rcvd: 02/04/14 11:45 Oper: BMF Rev: 00A				
1910	2304	Org Tkt : A40350152 Rcvd: 02/04/14 11:47 Oper: BMF				
1911	2306	Digstart: 02/04/14 Time: 11:45				
1912	2307	Tkt Life: 02/25/14 Time: 23:59				
1913	2309	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
1914	2310	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1915	2311	E-mail : NONE				
1916	2312	FieldCnt: HOWARD /CELL Number: 810-577-8263				
1917	2314	County : GENESEE Place : FLINT /C				
1918	2316	Grids : 4303A8341A 4303A8342D 4304D8341A 4304D8342D				
1919	2317	Polygon : 43.067900/-83.702255 43.067902/-83.698002				

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1883	HOWARD SWICKARD	REPR WMB	Address : 302	Street : W HOME AVE	1st x-st: Dir W of MARTIN LUTHER KING JR BLVD
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1907	HOWARD SWICKARD	WMB	Address : 313	Street : E HOME AVE	1st x-st: Dir N of PIERSON RD
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1920	2318	: 43.066528/-83.702254 43.066530/-83.698001				
1921	2319	Lat : Long:				
1922	2320	Work Typ: WMB Done For:				
1923	2321	Address : 313				
1924	2322	Street : E HOME AVE				
1925	2323	1st x-st: Dir N of PIERSON RD				
1926	2324	2nd x-st: Dir W of SAGINAW ST				
1927	2325	Subdivsn: Lots:				
1928	2326	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
1929	2327	Boring : N On-going project: N Working In or Near R/R Easement: N				
1930	2328	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1931	2329	FLINTC 00019 MISDIGb 02/04/14 12:45:30 B40350365-00B EMER NEW GRID	FLINTC	B40350365	02/04/14	FLINT CITY WATER DEPARTMENT
1932	2331	**** Underground ****				
1933	2332	Ticket : B40350365 Rcvd: 02/04/14 12:37 Oper: JLK Rev: 00B				
1934	2333	Org Tkt : B40350365 Rcvd: 02/04/14 12:40 Oper: JLK				
1935	2335	Digstart: 02/04/14 Time: 16:00				
1936	2336	Tkt Life: 02/25/14 Time: 23:59				
1937	2338	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
1938	2339	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1939	2340	E-mail : NONE				
1940	2341	FieldCnt: PAUL SIMPSON CELL Number: 810-397-7247				
1941	2343	County : GENESEE Place : FLINT /C				
1942	2345	Grids : 4302A8339A 4303D8339A 4303D8339B				
1943	2346	Polygon : 43.051322/-83.666243 43.051147/-83.662261				
1944	2347	: 43.049972/-83.666302 43.049798/-83.662320				
1945	2348	Lat : Long:				
1946	2349	Work Typ: WMB Done For:				
1947	2350	Address :				
1948	2351	Street : RICHFIELD RD				
1949	2352	1st x-st: Dir of N FRANKLIN RD				
1950	2353	2nd x-st: Dir of N DORT HWY				
1951	2354	Subdivsn: Lots:				
1952	2355	Stk Info: BET X-STS STK BTH SDS OF RICHFIELD RD R-O-W TO R-O-W BEG AT N				
1953	2356	: FRANKLIN RD GOING E 100 FT				
1954	2357	Boring : N On-going project: N Working In or Near R/R Easement: N				
1955	2358	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1956	2359	FLINTC 00022 MISDIGb 02/04/14 18:13:24 B40350678-00B EMER NEW GRID	FLINTC	B40350678	02/05/14	FLINT CITY WATER DEPARTMENT
1957	2361	**** Underground ****				
1958	2362	Ticket : B40350678 Rcvd: 02/04/14 18:11 Oper: SMG Rev: 00B				
1959	2363	Org Tkt : B40350678 Rcvd: 02/04/14 18:13 Oper: SMG				
1960	2365	Digstart: 02/05/14 Time: 08:00				
1961	2366	Tkt Life: 02/26/14 Time: 23:59				
1962	2368	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
1963	2369	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
1964	2370	E-mail : NONE				
1965	2371	FieldCnt: HOWARD - CELL Number: 810-577-8263				
1966	2373	County : GENESEE Place : FLINT /C				
1967	2375	Grids : 4302A8339A 4302A8339B				

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1931	PAUL SIMPSON	WMB	Address :	Street : RICHFIELD RD	1st x-st: Dir of N FRANKLIN RD
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1956	HOWARD SWICKARD	WMB	Address :	Street : UTAH AVE	1st x-st: Dir E of FRANKLIN AVE
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1968	2376	Polygon : 43.047638/-83.666091 43.047700/-83.662089				
1969	2377	: 43.046266/-83.666069 43.046328/-83.662067				
1970	2378	Lat : Long:				
1971	2379	Work Typ: WMB Done For:				
1972	2380	Address :				
1973	2381	Street : UTAH AVE				
1974	2382	1st x-st: Dir E of FRANKLIN AVE				
1975	2383	2nd x-st: Dir S of RICHFIELD RD				
1976	2384	Subdivsn: Lots:				
1977	2385	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD AT ADDRS 1917 & 2005				
1978	2386	Boring : N On-going project: N Working In or Near R/R Easement: N				
1979	2387	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
1980	2388	FLINTC 00024 MISDIGb 02/04/14 21:26:30 B40350703-00B EMER NEW GRID	FLINTC	B40350703	02/05/14	FLINT CITY WATER DEPARTMENT
1981	2390	**** Underground ****				
1982	2391	Ticket : B40350703 Rcvd: 02/04/14 21:25 Oper: DMS Rev: 00B				
1983	2392	Org Tkt : B40350703 Rcvd: 02/04/14 21:26 Oper: DMS				
1984	2394	Digstart: 02/05/14 Time: 08:00				
1985	2395	Tkt Life: 02/26/14 Time: 23:59				
1986	2397	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
1987	2398	Phone : 810-577-8261 Ext: Fax :				
1988	2399	E-mail : NONE				
1989	2400	FieldCnt: Number:				
1990	2402	County : GENESEE Place : FLINT /C				
1991	2404	Grids : 4301C8339A 4301D8339A 4301C8340D 4301D8340D				
1992	2405	Polygon : 43.020629/-83.668566 43.021098/-83.665681				
1993	2406	: 43.019280/-83.668346 43.019749/-83.665462				
1994	2407	Lat : Long:				
1995	2408	Work Typ: WMB Done For:				
1996	2409	Address : 1705				
1997	2410	Street : MONTCLAIR AVE				
1998	2411	1st x-st: Dir W of FRANKLIN				
1999	2412	2nd x-st: Dir N of E COURT ST				
2000	2413	Subdivsn: Lots:				
2001	2414	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD				
2002	2415	Boring : N On-going project: N Working In or Near R/R Easement: N				
2003	2416	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2004	2417	FLINTC 00008 MISDIGb 02/05/14 13:07:44 B40360395-00B EMER NEW GRID	FLINTC	B40360395	02/05/14	FLINT CITY WATER DEPARTMENT
2005	2419	**** Underground ****				
2006	2420	Ticket : B40360395 Rcvd: 02/05/14 13:05 Oper: SJG Rev: 00B				
2007	2421	Org Tkt : B40360395 Rcvd: 02/05/14 13:07 Oper: SJG				
2008	2423	Digstart: 02/05/14 Time: 13:05				
2009	2424	Tkt Life: 02/26/14 Time: 23:59				
2010	2426	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2011	2427	Phone : 810-577-8261 Ext: Fax :				
2012	2428	E-mail : NONE				
2013	2429	FieldCnt: Number:				
2014	2431	County : GENESEE Place : FLINT /C				
2015	2433	Grids : 4301B8340C 4301B8340D				

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1980	JEFF CHURCH	WMB	Address : 1705	Street : MONTCLAIR AVE	1st x-st: Dir W of FRANKLIN
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2004	JEFF CHURCH	WMB	Address : 1620	Street : NEBRASKA AVE	1st x-st: Dir W of MINNESOTA
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2016	2434	Polygon : 43.028037/-83.670907 43.027816/-83.666630				
2017	2435	: 43.026517/-83.670986 43.026296/-83.666709				
2018	2436	Lat : Long:				
2019	2437	Work Typ: WMB Done For:				
2020	2438	Address : 1620				
2021	2439	Street : NEBRASKA AVE				
2022	2440	1st x-st: Dir W of MINNESOTA				
2023	2441	2nd x-st: Dir N of ROBERT T LONGWAY				
2024	2442	Subdivsn: Lots:				
2025	2443	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ON SITE				
2026	2444	Boring : N On-going project: N Working In or Near R/R Easement: N				
2027	2445	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2028	2446	FLINTC 00001 MISDIGb 02/06/14 07:23:25 B40370033-00B EMER NEW GRID	FLINTC	B40370033	02/06/14	FLINT CITY WATER DEPARTMENT
2029	2448	**** Underground ****				
2030	2449	Ticket : B40370033 Rcvd: 02/06/14 07:21 Oper: SLD Rev: 00B				
2031	2450	Org Tkt : B40370033 Rcvd: 02/06/14 07:23 Oper: SLD				
2032	2452	Digstart: 02/06/14 Time: 08:00				
2033	2453	Tkt Life: 02/27/14 Time: 23:59				
2034	2455	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2035	2456	Phone : 810-577-8261 Ext: Fax :				
2036	2457	E-mail : NONE				
2037	2458	FieldCnt: Number:				
2038	2460	County : GENESEE Place : FLINT /C				
2039	2462	Grids : 4302C8339B				
2040	2463	Polygon : 43.040378/-83.662183 43.040371/-83.660300				
2041	2464	: 43.037864/-83.662193 43.037856/-83.660310				
2042	2465	Lat : Long:				
2043	2466	Work Typ: WMB Done For:				
2044	2467	Address : 2509				
2045	2468	Street : BURNS ST				
2046	2469	1st x-st: Dir S of DELAWARE AVE				
2047	2470	2nd x-st: Dir E of FRANKLIN AVE				
2048	2471	Subdivsn: Lots:				
2049	2472	Stk Info: STK 50FT RADUS OF BARRICADE IFO ADDR				
2050	2473	Boring : N On-going project: N Working In or Near R/R Easement: N				
2051	2474	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2052	2475	FLINTC 00002 MISDIGb 02/06/14 07:38:14 B40370039-00B EMER NEW GRID	FLINTC	B40370039	02/06/14	FLINT CITY WATER DEPARTMENT
2053	2477	**** Underground ****				
2054	2478	Ticket : B40370039 Rcvd: 02/06/14 07:36 Oper: AMA Rev: 00B				
2055	2479	Org Tkt : B40370039 Rcvd: 02/06/14 07:37 Oper: AMA				
2056	2481	Digstart: 02/06/14 Time: 08:00				
2057	2482	Tkt Life: 02/27/14 Time: 23:59				
2058	2484	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2059	2485	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2060	2486	E-mail : NONE				
2061	2487	FieldCnt: HOWARD SWICKARD /CELL Number: 810-577-8263				
2062	2489	County : GENESEE Place : FLINT /C				
2063	2491	Grids : 4300A8338C 4300A8338D				

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2028	JEFF CHURCH	WMB	Address : 2509	Street : BURNS ST	1st x-st: Dir S of DELAWARE AVE
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2052	HOWARD SWICKARD	REPR WMB	Address :	Street : BURLINGTON DR	1st x-st: Dir of EASTHAMPTON DR
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2064	2492	Polygon : 43.015938/-83.638611 43.015093/-83.636738				
2065	2493	: 43.014648/-83.639193 43.013803/-83.637319				
2066	2494	Lat : Long:				
2067	2495	Work Typ: REPR WMB Done For:				
2068	2496	Address :				
2069	2497	Street : BURLINGTON DR				
2070	2498	1st x-st: Dir of EASTHAMPTON DR				
2071	2499	2nd x-st: Dir W of CENTER RD				
2072	2500	Subdivsn: Lots:				
2073	2501	Stk Info: S OF E COURT ST LOCATE BTH SDS OF BURLINGTON BEG AT EASTHAMPTON &				
2074	2502	: GO E 50 FT CREW EN ROUTE				
2075	2503	Boring : N On-going project: N Working In or Near R/R Easement: N				
2076	2504	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC				
2077	2505	FLINTC 00003 MISDIGb 02/06/14 08:32:42 B40370074-00B EMER NEW GRID	FLINTC	B40370074	02/06/14	FLINT CITY WATER DEPARTMENT
2078	2507	**** Underground ****				
2079	2508	Ticket : B40370074 Rcvd: 02/06/14 08:30 Oper: AMA Rev: 00B				
2080	2509	Org Tkt : B40370074 Rcvd: 02/06/14 08:32 Oper: AMA				
2081	2511	Digstart: 02/06/14 Time: 13:00				
2082	2512	Tkt Life: 02/27/14 Time: 23:59				
2083	2514	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2084	2515	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2085	2516	E-mail : NONE				
2086	2517	FieldCnt: PAUL SIMPSON/CELL Number: 810-397-7247				
2087	2519	County : GENESEE Place : FLINT /C				
2088	2521	Grids : 4303A8343B 4304D8343B				
2089	2522	Polygon : 43.067450/-83.727630 43.067552/-83.725658				
2090	2523	: 43.063594/-83.727431 43.063696/-83.725459				
2091	2524	Lat : Long:				
2092	2525	Work Typ: REPR WMB Done For:				
2093	2526	Address : 5612				
2094	2527	Street : GRIGGS DR				
2095	2528	1st x-st: Dir S of W HOME AVE				
2096	2529	2nd x-st: Dir E of CLOVERLAWN DR				
2097	2530	Subdivsn: Lots:				
2098	2531	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
2099	2532	Boring : N On-going project: N Working In or Near R/R Easement: N				
2100	2533	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2101	2534	FLINTC 00004 MISDIGb 02/06/14 08:34:10 B40370076-00B EMER NEW GRID	FLINTC	B40370076	02/07/14	FLINT CITY WATER DEPARTMENT
2102	2536	**** Underground ****				
2103	2537	Ticket : B40370076 Rcvd: 02/06/14 08:32 Oper: AMA Rev: 00B				
2104	2538	Org Tkt : B40370076 Rcvd: 02/06/14 08:33 Oper: AMA				
2105	2540	Digstart: 02/07/14 Time: 08:00				
2106	2541	Tkt Life: 02/28/14 Time: 23:59				
2107	2543	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2108	2544	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2109	2545	E-mail : NONE				
2110	2546	FieldCnt: PAUL SIMPSON/CELL Number: 810-397-7247				
2111	2548	County : GENESEE Place : FLINT /C				

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2077	PAUL SIMPSON	REPR WMB	Address : 5612	Street : GRIGGS DR	1st x-st: Dir S of W HOME AVE
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2101	PAUL SIMPSON	REPR WMB	Address : 5714	Street : BALDWIN BLVD	1st x-st: Dir S of W HOME AVE
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2112	2550	Grids : 4303A8342A 4303A8343D 4304D8342A 4304D8343D				
2113	2551	Polygon : 43.067763/-83.717257 43.067849/-83.715387				
2114	2552	: 43.063422/-83.717056 43.063509/-83.715185				
2115	2553	Lat : Long:				
2116	2554	Work Typ: REPR WMB Done For:				
2117	2555	Address : 5714				
2118	2556	Street : BALDWIN BLVD				
2119	2557	1st x-st: Dir S of W HOME AVE				
2120	2558	2nd x-st: Dir W of DUPONT ST				
2121	2559	Subdivsn: Lots:				
2122	2560	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
2123	2561	Boring : N On-going project: N Working In or Near R/R Easement: N				
2124	2562	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2125	2563	FLINTC 00005 MISDIGb 02/06/14 08:34:57 B40370077-00B EMER NEW GRID	FLINTC	B40370077	02/07/14	FLINT CITY WATER DEPARTMENT
2126	2565	**** Underground ****				
2127	2566	Ticket : B40370077 Rcvd: 02/06/14 08:34 Oper: AMA Rev: 00B				
2128	2567	Org Tkt : B40370077 Rcvd: 02/06/14 08:34 Oper: AMA				
2129	2569	Digstart: 02/07/14 Time: 08:00				
2130	2570	Tkt Life: 02/28/14 Time: 23:59				
2131	2572	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2132	2573	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2133	2574	E-mail : NONE				
2134	2575	FieldCnt: PAUL SIMPSON/CELL Number: 810-397-7247				
2135	2577	County : GENESEE Place : FLINT /C				
2136	2579	Grids : 4303A8342A 4304D8342A				
2137	2580	Polygon : 43.067759/-83.716204 43.067843/-83.714334				
2138	2581	: 43.063470/-83.716012 43.063553/-83.714141				
2139	2582	Lat : Long:				
2140	2583	Work Typ: REPR WMB Done For:				
2141	2584	Address : 5713				
2142	2585	Street : EDWARDS AVE				
2143	2586	1st x-st: Dir S of W HOME AVE				
2144	2587	2nd x-st: Dir W of DUPONT ST				
2145	2588	Subdivsn: Lots:				
2146	2589	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
2147	2590	Boring : N On-going project: N Working In or Near R/R Easement: N				
2148	2591	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2149	2592	FLINTC 00011 MISDIGb 02/06/14 13:39:43 B40370414-00B EMER NEW GRID	FLINTC	B40370414	02/07/14	FLINT CITY WATER DEPARTMENT
2150	2594	**** Underground ****				
2151	2595	Ticket : B40370414 Rcvd: 02/06/14 13:32 Oper: AMA Rev: 00B				
2152	2596	Org Tkt : B40370414 Rcvd: 02/06/14 13:33 Oper: AMA				
2153	2598	Digstart: 02/07/14 Time: 08:00				
2154	2599	Tkt Life: 02/28/14 Time: 23:59				
2155	2601	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2156	2602	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2157	2603	E-mail : NONE				
2158	2604	FieldCnt: HOWAD SWICKARD /CELL Number: 810-577-8263				
2159	2606	County : GENESEE Place : FLINT /C				

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2125	PAUL SIMPSON	REPR WMB	Address : 5713	Street : EDWARDS AVE	1st x-st: Dir S of W HOME AVE
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2149	HOWARD SWICKARD	REPR WMB	Address :	Street : E FOSS AVE	1st x-st: Dir E of INDUSTRIAL AVE
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2160	2608	Grids : 4304C8341C 4304C8341D				
2161	2609	Polygon : 43.072492/-83.688484 43.072230/-83.684999				
2162	2610	: 43.071157/-83.688584 43.070895/-83.685100				
2163	2611	Lat : Long:				
2164	2612	Work Typ: REPR WMB Done For:				
2165	2613	Address :				
2166	2614	Street : E FOSS AVE				
2167	2615	1st x-st: Dir E of INDUSTRIAL AVE				
2168	2616	2nd x-st: Dir S of CARPENTER RD				
2169	2617	Subdivsn: Lots:				
2170	2618	Stk Info: E OF N SAGINAW ST LOCATE BTH SDS OF E FOSS BEG AT INDUSTRIAL & GO				
2171	2619	: E 200 FT				
2172	2620	Boring : N On-going project: N Working In or Near R/R Easement: N				
2173	2621	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
2174	2622	FLINTC 00012 MISDIGb 02/06/14 14:07:46 B40370481-00B EMER NEW GRID	FLINTC	B40370481	02/06/14	FLINT CITY WATER DEPARTMENT
2175	2624	**** Underground ****				
2176	2625	Ticket : B40370481 Rcvd: 02/06/14 14:05 Oper: SLD Rev: 00B				
2177	2626	Org Tkt : B40370481 Rcvd: 02/06/14 14:07 Oper: SLD				
2178	2628	Digstart: 02/06/14 Time: 14:05				
2179	2629	Tkt Life: 02/27/14 Time: 23:59				
2180	2631	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2181	2632	Phone : 810-577-8261 Ext: Fax :				
2182	2633	E-mail : NONE				
2183	2634	FieldCnt: Number:				
2184	2636	County : GENESEE Place : FLINT /C				
2185	2638	Grids : 4302B8339A 4302B8340D				
2186	2639	Polygon : 43.043654/-83.669147 43.043853/-83.664868				
2187	2640	: 43.042283/-83.669083 43.042482/-83.664804				
2188	2641	Lat : Long:				
2189	2642	Work Typ: WMB Done For:				
2190	2643	Address :				
2191	2644	Street : LEITH ST				
2192	2645	1st x-st: Dir W of FRANKLIN AVE				
2193	2646	2nd x-st: Dir E of MINNESOTA AVE				
2194	2647	Subdivsn: Lots:				
2195	2648	Stk Info: STK FRT OF PROP & BTH SDS OF RD AT ADDRS 1733 & 1737 CREW EN				
2196	2649	: ROUTE				
2197	2650	Boring : N On-going project: N Working In or Near R/R Easement: N				
2198	2651	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2199	2652	FLINTC 00014 MISDIGb 02/06/14 17:51:09 B40370680-00B EMER NEW GRID	FLINTC	B40370680	02/07/14	FLINT CITY WATER DEPARTMENT
2200	2654	**** Underground ****				
2201	2655	Ticket : B40370680 Rcvd: 02/06/14 17:50 Oper: DMS Rev: 00B				
2202	2656	Org Tkt : B40370680 Rcvd: 02/06/14 17:50 Oper: DMS				
2203	2658	Digstart: 02/07/14 Time: 09:00				
2204	2659	Tkt Life: 02/28/14 Time: 23:59				
2205	2661	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2206	2662	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2207	2663	E-mail : NONE				

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2174	JEFF CHURCH	WMB	Address :	Street : LEITH ST	1st x-st: Dir W of FRANKLIN AVE
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2199	HOWARD SWICKARD	REPR WTR SERV/FLOODING	Address : 2426	Street : ZIMMERMAN ST	1st x-st: Dir E of BRADLEY
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2199	2nd x-st: Dir N of CORUNNA RD
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2208	2664	FieldCnt: HOWARD/CELL Number: 810-577-8263				
2209	2666	County : GENESEE Place : FLINT /C				
2210	2668	Grids : 4300C8342A 4300C8343D				
2211	2669	Polygon : 43.006772/-83.720684 43.007098/-83.716185				
2212	2670	: 43.005276/-83.720576 43.005601/-83.716077				
2213	2671	Lat : Long:				
2214	2672	Work Typ: REPR WTR SERV/FLOODING Done For:				
2215	2673	Address : 2426				
2216	2674	Street : ZIMMERMAN ST				
2217	2675	1st x-st: Dir E of BRADLEY				
2218	2676	2nd x-st: Dir N of CORUNNA RD				
2219	2677	Subdivsn: Lots:				
2220	2678	Stk Info: STK ENTIRE FRT OF PROP TO C/L OF RD				
2221	2679	Boring : N On-going project: N Working In or Near R/R Easement: N				
2222	2680	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
2223	2681	FLINTC 00003 MISDIGb 02/07/14 10:28:14 B40380194-00B EMER NEW GRID	FLINTC	B40380194	02/07/14	FLINT CITY WATER DEPARTMENT
2224	2683	**** Underground ****				
2225	2684	Ticket : B40380194 Rcvd: 02/07/14 10:26 Oper: SJG Rev: 00B				
2226	2685	Org Tkt : B40380194 Rcvd: 02/07/14 10:27 Oper: SJG				
2227	2687	Digstart: 02/07/14 Time: 13:00				
2228	2688	Tkt Life: 02/28/14 Time: 23:59				
2229	2690	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2230	2691	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2231	2692	E-mail : NONE				
2232	2693	FieldCnt: HOWARD Number: 810-577-8263				
2233	2695	County : GENESEE Place : FLINT /C				
2234	2697	Grids : 4300B8344C 4300B8344D 4300C8344C 4300C8344D				
2235	2698	Polygon : 43.009011/-83.738380 43.009030/-83.733957				
2236	2699	: 43.007624/-83.738374 43.007643/-83.733951				
2237	2700	Lat : Long:				
2238	2701	Work Typ: WMB Done For:				
2239	2702	Address : 3917				
2240	2703	Street : W KEARSLEY ST				
2241	2704	1st x-st: Dir W of BALLENGER HWY				
2242	2705	2nd x-st: Dir N of COURT ST				
2243	2706	Subdivsn: Lots:				
2244	2707	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD				
2245	2708	Boring : N On-going project: N Working In or Near R/R Easement: N				
2246	2709	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
2247	2710	FLINTC 00008 MISDIGb 02/07/14 13:21:50 B40380335-00B EMER NEW GRID	FLINTC	B40380335	02/07/14	FLINT CITY WATER DEPARTMENT
2248	2712	**** Underground ****				
2249	2713	Ticket : B40380335 Rcvd: 02/07/14 13:20 Oper: HDK Rev: 00B				
2250	2714	Org Tkt : B40380335 Rcvd: 02/07/14 13:21 Oper: HDK				
2251	2716	Digstart: 02/07/14 Time: 13:20				
2252	2717	Tkt Life: 02/28/14 Time: 23:59				
2253	2719	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2254	2720	Phone : 810-577-8261 Ext: Fax :				
2255	2721	E-mail : NONE				

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2223	HOWARD SWICKARD	WMB	Address : 3917	Street : W KEARSLEY ST	1st x-st: Dir W of BALLENGER HWY
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2247	JEFF CHURCH	WMB	Address : 1701	Street : PENNSYLVANIA AVE	1st x-st: Dir E of MINNESOTA
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2247	2nd x-st: Dir S of DAVISON RD
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2256	2722	FieldCnt: Number:				
2257	2724	County : GENESEE Place : FLINT /C				
2258	2726	Grids : 4301A8339A 4301B8339A 4301A8340D 4301B8340D				
2259	2727	Polygon : 43.030057/-83.668583 43.030126/-83.665063				
2260	2728	: 43.028684/-83.668556 43.028754/-83.665036				
2261	2729	Lat : Long:				
2262	2730	Work Typ: WMB Done For:				
2263	2731	Address : 1701				
2264	2732	Street : PENNSYLVANIA AVE				
2265	2733	1st x-st: Dir E of MINNESOTA				
2266	2734	2nd x-st: Dir S of DAVISON RD				
2267	2735	Subdivsn: Lots:				
2268	2736	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
2269	2737	Boring : N On-going project: N Working In or Near R/R Easement: N				
2270	2738	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2271	2739	FLINTC 00001 MISDIGb 02/10/14 07:19:03 B40410043-00B EMER NEW GRID	FLINTC	B40410043	02/10/14	FLINT CITY WATER DEPARTMENT
2272	2741	**** Underground ****				
2273	2742	Ticket : B40410043 Rcvd: 02/10/14 07:16 Oper: DLF Rev: 00B				
2274	2743	Org Tkt : B40410043 Rcvd: 02/10/14 07:18 Oper: DLF				
2275	2745	Digstart: 02/10/14 Time: 08:00				
2276	2746	Tkt Life: 03/03/14 Time: 23:59				
2277	2748	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2278	2749	Phone : 810-577-8261 Ext: Fax :				
2279	2750	E-mail : NONE				
2280	2751	FieldCnt: Number:				
2281	2753	County : GENESEE Place : FLINT /C				
2282	2755	Grids : 4259B8341A 4259B8341B				
2283	2756	Polygon : 42.995311/-83.697216 42.995274/-83.692162				
2284	2757	: 42.993953/-83.697225 42.993917/-83.692172				
2285	2758	Lat : Long:				
2286	2759	Work Typ: WMB Done For:				
2287	2760	Address : 1106				
2288	2761	Street : BARRIE AVE				
2289	2762	1st x-st: Dir W of FENTON RD				
2290	2763	2nd x-st: Dir N of W ATHERTON RD				
2291	2764	Subdivsn: Lots:				
2292	2765	Stk Info: LOCATE ENTIRE FRT OF PROP AND BTH SDS OF RD				
2293	2766	Boring : N On-going project: N Working In or Near R/R Easement: N				
2294	2767	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2295	2768	FLINTC 00002 MISDIGa 02/10/14 09:27:23 A40410067-00A EMER NEW GRID	FLINTC	A40410067	02/10/14	FLINT CITY WATER DEPARTMENT
2296	2770	**** Underground ****				
2297	2771	Ticket : A40410067 Rcvd: 02/10/14 09:25 Oper: BMF Rev: 00A				
2298	2772	Org Tkt : A40410067 Rcvd: 02/10/14 09:27 Oper: BMF				
2299	2774	Digstart: 02/10/14 Time: 09:25				
2300	2775	Tkt Life: 03/03/14 Time: 23:59				
2301	2777	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2302	2778	Phone : 810-577-8261 Ext: Fax :				
2303	2779	E-mail : NONE				

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2271	JEFF CHURCH	WMB	Address : 1106	Street : BARRIE AVE	1st x-st: Dir W of FENTON RD
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2295	JEFF CHURCH	WMB	Address :	Street : PENNSYLVANIA AVE	1st x-st: Dir E of MINNESOTA AVE
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2295	2nd x-st: Dir W of FRANKLIN
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2304	2780	FieldCnt: Number:				
2305	2782	County : GENESEE Place : FLINT /C				
2306	2784	Grids : 4301A8339A 4301B8339A 4301A8340D 4301B8340D				
2307	2785	Polygon : 43.030057/-83.668583 43.030126/-83.665063				
2308	2786	: 43.028684/-83.668556 43.028754/-83.665036				
2309	2787	Lat : Long:				
2310	2788	Work Typ: WMB Done For:				
2311	2789	Address :				
2312	2790	Street : PENNSYLVANIA AVE				
2313	2791	1st x-st: Dir E of MINNESOTA AVE				
2314	2792	2nd x-st: Dir W of FRANKLIN				
2315	2793	Subdivsn: Lots:				
2316	2794	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD AT ADDRS 1717 & 1721 CREW ON				
2317	2795	: SITE				
2318	2796	Boring : N On-going project: N Working In or Near R/R Easement: N				
2319	2797	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2320	2798	FLINTC 00004 MISDIGb 02/10/14 09:47:39 B40410258-00B EMER NEW GRID	FLINTC	B40410258	02/10/14	FLINT CITY WATER DEPARTMENT
2321	2800	**** Underground ****				
2322	2801	Ticket : B40410258 Rcvd: 02/10/14 09:45 Oper: GMH Rev: 00B				
2323	2802	Org Tkt : B40410258 Rcvd: 02/10/14 09:47 Oper: GMH				
2324	2804	Digstart: 02/10/14 Time: 09:45				
2325	2805	Tkt Life: 03/03/14 Time: 23:59				
2326	2807	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2327	2808	Phone : 810-577-8261 Ext: Fax :				
2328	2809	E-mail : NONE				
2329	2810	FieldCnt: Number:				
2330	2812	County : GENESEE Place : FLINT /C				
2331	2814	Grids : 4301A8340C 4301A8340D 4301B8340C 4301B8340D				
2332	2815	Polygon : 43.030005/-83.671068 43.030105/-83.666782				
2333	2816	: 43.028633/-83.671036 43.028733/-83.666750				
2334	2817	Lat : Long:				
2335	2818	Work Typ: WMB Done For:				
2336	2819	Address : 1631				
2337	2820	Street : PENNSYLVANIA AVE				
2338	2821	1st x-st: Dir E of KEARSLEY PARK BLVD				
2339	2822	2nd x-st: Dir W of MINNESOTA AVE				
2340	2823	Subdivsn: Lots:				
2341	2824	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW ON SITE				
2342	2825	Boring : N On-going project: N Working In or Near R/R Easement: N				
2343	2826	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2344	2827	FLINTC 00005 MISDIGb 02/10/14 10:04:35 B40410283-00B EMER NEW GRID	FLINTC	B40410283	02/10/14	FLINT CITY WATER DEPARTMENT
2345	2829	**** Underground ****				
2346	2830	Ticket : B40410283 Rcvd: 02/10/14 10:01 Oper: LCG Rev: 00B				
2347	2831	Org Tkt : B40410283 Rcvd: 02/10/14 10:04 Oper: LCG				
2348	2833	Digstart: 02/10/14 Time: 13:00				
2349	2834	Tkt Life: 03/03/14 Time: 23:59				
2350	2836	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2351	2837	Phone : 810-766-7202 Ext: Fax : 810-742-6283				

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2320	JEFF CHURCH	WMB	Address : 1631	Street : PENNSYLVANIA AVE	1st x-st: Dir E of KEARSLEY PARK BLVD
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2344	HOWARD SWICKARD	WMB	Address :	Street : JOYNER	1st x-st: Dir W of BALLENGER HWY
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2352	2838	E-mail : NONE				
2353	2839	FieldCnt: Number: 810-577-8263				
2354	2841	County : GENESEE Place : FLINT /C				
2355	2843	Grids : 4300C8344C 4300C8344D				
2356	2844	Polygon : 43.008306/-83.738573 43.008319/-83.734187				
2357	2845	: 43.006934/-83.738568 43.006947/-83.734183				
2358	2846	Lat : Long:				
2359	2847	Work Typ: WMB Done For:				
2360	2848	Address :				
2361	2849	Street : JOYNER				
2362	2850	1st x-st: Dir W of BALLENGER HWY				
2363	2851	2nd x-st: Dir W of N COURT ST				
2364	2852	Subdivsn: Lots:				
2365	2853	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD AT ADDR 3906 & 3902 CREW				
2366	2854	: ENROUTE				
2367	2855	Boring : N On-going project: N Working In or Near R/R Easement: N				
2368	2856	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
2369	2857	LINTC 00007 MISDIGb 02/10/14 11:46:41 B40410391-00B EMER NEW PLCE				
2370	2859	**** Underground ****				
2371	2860	Ticket : B40410391 Rcvd: 02/10/14 11:43 Oper: HDK Rev: 00B				
2372	2861	Org Tkt : B40410391 Rcvd: 02/10/14 11:46 Oper: HDK				
2373	2863	Digstart: 02/10/14 Time: 15:00				
2374	2864	Tkt Life: 03/03/14 Time: 23:59				
2375	2866	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2376	2867	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2377	2868	E-mail : NONE				
2378	2869	FieldCnt: PAUL Number: 810-397-7247				
2379	2871	County : GENESEE Place : FLINT /C				
2380	2873	Grids :				
2381	2874	Polygon :				
2382	2875	Lat : Long:				
2383	2876	Work Typ: WMB Done For:				
2384	2877	Address :				
2385	2878	Street : CARTIER ST				
2386	2879	1st x-st: Dir W of PERRY				
2387	2880	2nd x-st: Dir N of UNIVERSITY DR				
2388	2881	Subdivsn: Lots:				
2389	2882	Stk Info: STK FRT OF PROP & BTH SDS OF RD AT ADDR 2110 & 2106				
2390	2883	Boring : N On-going project: N Working In or Near R/R Easement: N				
2391	2884	Members : ARCUS ATT ATTD BUCK01 CCFIBR CEEDIS CEESBM CEETRN CEGD20 CEGDIS				
2392	2885	Members : COMTV2 CTMN FLINTC GENCRC GISD GRTLKC KDL LEVEL3 MCLEO1 MWFN				
2393	2886	Members : SPRNT4 USSIG				
2394	2887	FLINTC 00009 MISDIGb 02/10/14 13:24:17 B40410506-00B EMER NEW GRID	FLINTC	B40410506	02/11/14	FLINT CITY WATER DEPARTMENT
2395	2889	**** Underground ****				
2396	2890	Ticket : B40410506 Rcvd: 02/10/14 13:22 Oper: AMA Rev: 00B				
2397	2891	Org Tkt : B40410506 Rcvd: 02/10/14 13:24 Oper: AMA				
2398	2893	Digstart: 02/11/14 Time: 08:00				
2399	2894	Tkt Life: 03/04/14 Time: 23:59				

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2394	HOWARD SWICKARD	REPR WMB	Address : 3608	Street : DAKOTA AVE	1st x-st: Dir W of DEXTER ST
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2400	2896	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2401	2897	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2402	2898	E-mail : NONE				
2403	2899	FieldCnt: HOWARD SWICKARD Number: 810-577-8263				
2404	2901	County : GENESEE Place : FLINT /C				
2405	2903	Grids : 4302B8338A 4302B8338B 4302B8338C 4302C8338A 4302C8338B				
2406	2904	: 4302C8338C				
2407	2905	Polygon : 43.042250/-83.646397 43.042312/-83.639686				
2408	2906	: 43.040889/-83.646384 43.040952/-83.639673				
2409	2907	Lat : Long:				
2410	2908	Work Typ: REPR WMB Done For:				
2411	2909	Address : 3608				
2412	2910	Street : DAKOTA AVE				
2413	2911	1st x-st: Dir W of DEXTER ST				
2414	2912	2nd x-st: Dir S of LEITH ST				
2415	2913	Subdivsn: Lots:				
2416	2914	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD				
2417	2915	Boring : N On-going project: N Working In or Near R/R Easement: N				
2418	2916	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GISD				
2419	2917	FLINTC 00001 MISDIGb 02/11/14 07:37:20 B40420048-00B EMER NEW GRID	FLINTC	B40420048	02/11/14	FLINT CITY WATER DEPARTMENT
2420	2919	**** Underground ****				
2421	2920	Ticket : B40420048 Rcvd: 02/11/14 07:35 Oper: SLD Rev: 00B				
2422	2921	Org Tkt : B40420048 Rcvd: 02/11/14 07:37 Oper: SLD				
2423	2923	Digstart: 02/11/14 Time: 08:00				
2424	2924	Tkt Life: 03/04/14 Time: 23:59				
2425	2926	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2426	2927	Phone : 810-577-8261 Ext: Fax :				
2427	2928	E-mail : NONE				
2428	2929	FieldCnt: Number:				
2429	2931	County : GENESEE Place : FLINT /C				
2430	2933	Grids : 4301B8343C 4301B8343D				
2431	2934	Polygon : 43.026757/-83.724922 43.028103/-83.724498				
2432	2935	: 43.025247/-83.720122 43.026593/-83.719699				
2433	2936	Lat : Long:				
2434	2937	Work Typ: WMB Done For:				
2435	2938	Address : 2518				
2436	2939	Street : PROSPECT ST				
2437	2940	1st x-st: Dir E of FOREST HILL AVE				
2438	2941	2nd x-st: Dir S of MACKIN RD				
2439	2942	Subdivsn: Lots:				
2440	2943	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
2441	2944	Boring : N On-going project: N Working In or Near R/R Easement: N				
2442	2945	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2443	2946	FLINTC 00002 MISDIGb 02/11/14 07:49:51 B40420058-00B EMER NEW GRID	FLINTC	B40420058	02/11/14	FLINT CITY WATER DEPARTMENT
2444	2948	**** Underground ****				
2445	2949	Ticket : B40420058 Rcvd: 02/11/14 07:47 Oper: LCG Rev: 00B				
2446	2950	Org Tkt : B40420058 Rcvd: 02/11/14 07:49 Oper: LCG				
2447	2952	Digstart: 02/11/14 Time: 08:30				

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2419	JEFF CHURCH	WMB	Address : 2518	Street : PROSPECT ST	1st x-st: Dir E of FOREST HILL AVE
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2443	PAUL SIMPSON	WMB	Address :	Street : MACKIN RD	1st x-st: Dir of DUPONT
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2448	2953	Tkt Life: 03/04/14 Time: 23:59				
2449	2955	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2450	2956	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2451	2957	E-mail : NONE				
2452	2958	FieldCnt: Number: 810-397-7247				
2453	2960	County : GENESEE Place : FLINT /C				
2454	2962	Grids : 4301B8342A 4301B8342B 4301C8342A 4301C8342B				
2455	2963	Polygon : 43.025486/-83.713581 43.024526/-83.710474				
2456	2964	: 43.024145/-83.713995 43.023186/-83.710888				
2457	2965	Lat : Long:				
2458	2966	Work Typ: WMB Done For:				
2459	2967	Address :				
2460	2968	Street : MACKIN RD				
2461	2969	1st x-st: Dir of DUPONT				
2462	2970	2nd x-st: Dir of MCINTOSH ST				
2463	2971	Subdivsn: Lots:				
2464	2972	Stk Info: LOCATE 75 FT RADIUS OF 2 BARRICADES BET X-STS CREW ENROUTE				
2465	2973	Boring : N On-going project: N Working In or Near R/R Easement: N				
2466	2974	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
2467	2975	FLINTC 00003 MISDIGb 02/11/14 07:51:13 B40420062-00B EMER NEW GRID	FLINTC	B40420062	02/11/14	FLINT CITY WATER DEPARTMENT
2468	2977	**** Underground ****				
2469	2978	Ticket : B40420062 Rcvd: 02/11/14 07:49 Oper: LCG Rev: 00B				
2470	2979	Org Tkt : B40420062 Rcvd: 02/11/14 07:50 Oper: LCG				
2471	2981	Digstart: 02/11/14 Time: 12:00				
2472	2982	Tkt Life: 03/04/14 Time: 23:59				
2473	2984	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2474	2985	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2475	2986	E-mail : NONE				
2476	2987	FieldCnt: Number: 810-397-7247				
2477	2989	County : GENESEE Place : FLINT /C				
2478	2991	Grids : 4301A8342B 4301A8342C 4302D8342B 4302D8342C				
2479	2992	Polygon : 43.033846/-83.711507 43.033815/-83.706739				
2480	2993	: 43.032489/-83.711516 43.032457/-83.706748				
2481	2994	Lat : Long:				
2482	2995	Work Typ: WMB Done For:				
2483	2996	Address : 310				
2484	2997	Street : W PATERSON				
2485	2998	1st x-st: Dir W of MASON ST				
2486	2999	2nd x-st: Dir N of WELCH BLVD				
2487	3000	Subdivsn: Lots:				
2488	3001	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
2489	3002	Boring : N On-going project: N Working In or Near R/R Easement: N				
2490	3003	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2491	3004	FLINTC 00012 MISDIGb 02/11/14 11:01:11 B40420436-00B EMER NEW GRID	FLINTC	B40420436	02/11/14	FLINT CITY WATER DEPARTMENT
2492	3006	**** Underground ****				
2493	3007	Ticket : B40420436 Rcvd: 02/11/14 10:59 Oper: LCG Rev: 00B				
2494	3008	Org Tkt : B40420436 Rcvd: 02/11/14 11:01 Oper: LCG				
2495	3010	Digstart: 02/11/14 Time: 13:00				

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2467	PAUL SIMPSON	WMB	Address : 310	Street : W PATERSON	1st x-st: Dir W of MASON ST
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2491	JEFF CHURCH	WMB	Address : 1317	Street : MANN AVE	1st x-st: Dir S of CORUNNA RD
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2496	3011	Tkt Life: 03/04/14 Time: 23:59				
2497	3013	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2498	3014	Phone : 810-577-8261 Ext: Fax :				
2499	3015	E-mail : NONE				
2500	3016	FieldCnt: Number:				
2501	3018	County : GENESEE Place : FLINT /C				
2502	3020	Grids : 4259A8343A 4300D8343A				
2503	3021	Polygon : 43.001443/-83.731194 43.001533/-83.729326				
2504	3022	: 42.998455/-83.731050 42.998545/-83.729182				
2505	3023	Lat : Long:				
2506	3024	Work Typ: WMB Done For:				
2507	3025	Address : 1317				
2508	3026	Street : MANN AVE				
2509	3027	1st x-st: Dir S of CORUNNA RD				
2510	3028	2nd x-st: Dir N of ARLENE				
2511	3029	Subdivsn: Lots:				
2512	3030	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ENROUTE				
2513	3031	Boring : N On-going project: N Working In or Near R/R Easement: N				
2514	3032	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2515	3033	FLINTC 00029 MISDIGb 02/11/14 17:45:54 B40420886-00B EMER NEW GRID	FLINTC	B40420886	02/12/14	FLINT CITY WATER DEPARTMENT
2516	3035	**** Underground ****				
2517	3036	Ticket : B40420886 Rcvd: 02/11/14 17:44 Oper: SMG Rev: 00B				
2518	3037	Org Tkt : B40420886 Rcvd: 02/11/14 17:45 Oper: SMG				
2519	3039	Digstart: 02/12/14 Time: 09:00				
2520	3040	Tkt Life: 03/05/14 Time: 23:59				
2521	3042	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2522	3043	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2523	3044	E-mail : NONE				
2524	3045	FieldCnt: HOWARD - CELL Number: 810-577-8263				
2525	3047	County : GENESEE Place : FLINT /C				
2526	3049	Grids : 4302A8341A 4302A8341B 4302B8341A 4302B8341B				
2527	3050	Polygon : 43.046093/-83.698495 43.046119/-83.692850				
2528	3051	: 43.044721/-83.698488 43.044747/-83.692844				
2529	3052	Lat : Long:				
2530	3053	Work Typ: WMB Done For:				
2531	3054	Address :				
2532	3055	Street : E DEWEY ST				
2533	3056	1st x-st: Dir S of PASADENA AVE				
2534	3057	2nd x-st: Dir W of N SAGINAW ST				
2535	3058	Subdivsn: Lots:				
2536	3059	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD AT ADDRS 601 & 605				
2537	3060	Boring : N On-going project: N Working In or Near R/R Easement: N				
2538	3061	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2539	3062	FLINTC 00002 MISDIGb 02/12/14 07:43:29 B40430065-00B EMER NEW GRID	FLINTC	B40430065	02/12/14	FLINT CITY WATER DEPARTMENT
2540	3064	**** Underground ****				
2541	3065	Ticket : B40430065 Rcvd: 02/12/14 07:41 Oper: GMH Rev: 00B				
2542	3066	Org Tkt : B40430065 Rcvd: 02/12/14 07:43 Oper: GMH				
2543	3068	Digstart: 02/12/14 Time: 13:00				

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2515	HOWARD SWICKARD	WMB	Address :	Street : E DEWEY ST	1st x-st: Dir S of PASADENA AVE
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2539	HOWARD SWICKARD	REPR WTR SERV	Address : 830	Street : ADDISON ST	1st x-st: Dir N of PASADENA AVE
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2544	3069	Tkt Life: 03/05/14 Time: 23:59				
2545	3071	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2546	3072	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2547	3073	E-mail : NONE				
2548	3074	FieldCnt: HOWARD Number: 810-577-8263				
2549	3076	County : GENESEE Place : FLINT /C				
2550	3078	Grids : 4302A8341C 4302A8341D				
2551	3079	Polygon : 43.049877/-83.691404 43.049772/-83.686371				
2552	3080	: 43.048505/-83.691432 43.048400/-83.686399				
2553	3081	Lat : Long:				
2554	3082	Work Typ: REPR WTR SERV/LKG Done For:				
2555	3083	Address : 830				
2556	3084	Street : ADDISON ST				
2557	3085	1st x-st: Dir N of PASADENA AVE				
2558	3086	2nd x-st: Dir E of N SAGINAW ST				
2559	3087	Subdivsn: Lots:				
2560	3088	Stk Info: STK ENTIRE FRT OF PROP TO C/L OF RD				
2561	3089	Boring : N On-going project: N Working In or Near R/R Easement: N				
2562	3090	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2563	3091	FLINTC 00003 MISDIGb 02/12/14 07:44:34 B40430067-00B EMER NEW GRID	FLINTC	B40430067	02/12/14	FLINT CITY WATER DEPARTMENT
2564	3093	**** Underground ****				
2565	3094	Ticket : B40430067 Rcvd: 02/12/14 07:43 Oper: GMH Rev: 00B				
2566	3095	Org Tkt : B40430067 Rcvd: 02/12/14 07:44 Oper: GMH				
2567	3097	Digstart: 02/12/14 Time: 13:00				
2568	3098	Tkt Life: 03/05/14 Time: 23:59				
2569	3100	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2570	3101	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2571	3102	E-mail : NONE				
2572	3103	FieldCnt: HOWARD Number: 810-577-8263				
2573	3105	County : GENESEE Place : FLINT /C				
2574	3107	Grids : 4301A8342A 4302D8342A 4302D8342B				
2575	3108	Polygon : 43.035223/-83.714084 43.035288/-83.712226				
2576	3109	: 43.033166/-83.714011 43.033232/-83.712154				
2577	3110	Lat : Long:				
2578	3111	Work Typ: REPR WTR SERV/LKG Done For:				
2579	3112	Address : 2001				
2580	3113	Street : DUPONT ST				
2581	3114	1st x-st: Dir W of MARTIN LUTHER KING AVE				
2582	3115	2nd x-st: Dir S of HAMILTON AVE				
2583	3116	Subdivsn: Lots:				
2584	3117	Stk Info: STK ENTIRE FRT OF PROP TO C/L OF RD				
2585	3118	Boring : N On-going project: N Working In or Near R/R Easement: N				
2586	3119	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2587	3120	FLINTC 00004 MISDIGb 02/12/14 07:52:33 B40430075-00B EMER NEW GRID	FLINTC	B40430075	02/12/14	FLINT CITY WATER DEPARTMENT
2588	3122	**** Underground ****				
2589	3123	Ticket : B40430075 Rcvd: 02/12/14 07:52 Oper: AMA Rev: 00B				
2590	3124	Org Tkt : B40430075 Rcvd: 02/12/14 07:52 Oper: AMA				
2591	3126	Digstart: 02/12/14 Time: 08:00				

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2563	HOWARD SWICKARD	REPR WTR SERV	Address : 2001	Street : DUPONT ST	1st x-st: Dir W of MARTIN LUTHER KING AVE
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2587	PAUL SIMPSON	REPR WMB	Address : 401	Street : CARTON ST	1st x-st: Dir of BUICK ST
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2592	3127	Tkt Life: 03/05/14 Time: 23:59				
2593	3129	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2594	3130	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2595	3131	E-mail : NONE				
2596	3132	FieldCnt: PAUL SIMPSON /CELL Number: 810-397-7247				
2597	3134	County : GENESEE Place : FLINT /C				
2598	3136	Grids : 4302A8341A 4302A8341B				
2599	3137	Polygon : 43.049354/-83.699767 43.049393/-83.695344				
2600	3138	: 43.047995/-83.699755 43.048034/-83.695332				
2601	3139	Lat : Long:				
2602	3140	Work Typ: REPR WMB Done For:				
2603	3141	Address : 401				
2604	3142	Street : CARTON ST				
2605	3143	1st x-st: Dir of BUICK ST				
2606	3144	2nd x-st: Dir E of MARTIN LUTHER KING				
2607	3145	Subdivsn: Lots:				
2608	3146	Stk Info: N OF PASADENA NE COR LOT W/BUICK LOCATE W SD OF PROP & BTH SDS				
2609	3147	: OF BUICK ST CREW EN ROUTE				
2610	3148	Boring : N On-going project: N Working In or Near R/R Easement: N				
2611	3149	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2612	3150	FLINTC 00010 MISDIGb 02/12/14 12:54:46 B40430493-00B EMER NEW GRID	FLINTC	B40430493	02/12/14	FLINT CITY WATER DEPARTMENT
2613	3152	**** Underground ****				
2614	3153	Ticket : B40430493 Rcvd: 02/12/14 12:53 Oper: SJG Rev: 00B				
2615	3154	Org Tkt : B40430493 Rcvd: 02/12/14 12:54 Oper: SJG				
2616	3156	Digstart: 02/12/14 Time: 12:53				
2617	3157	Tkt Life: 03/05/14 Time: 23:59				
2618	3159	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2619	3160	Phone : 810-577-8261 Ext: Fax :				
2620	3161	E-mail : NONE				
2621	3162	FieldCnt: Number:				
2622	3164	County : GENESEE Place : FLINT /C				
2623	3166	Grids : 4300B8338B 4300C8338B				
2624	3167	Polygon : 43.009050/-83.645226 43.009063/-83.643373				
2625	3168	: 43.006893/-83.645211 43.006906/-83.643358				
2626	3169	Lat : Long:				
2627	3170	Work Typ: WMB Done For:				
2628	3171	Address : 1857				
2629	3172	Street : S AVERILL AVE				
2630	3173	1st x-st: Dir S of LAPEER RD				
2631	3174	2nd x-st: Dir N of KENT ST				
2632	3175	Subdivsn: Lots:				
2633	3176	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD CREW ENROUTE				
2634	3177	Boring : N On-going project: N Working In or Near R/R Easement: N				
2635	3178	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD				
2636	3179	FLINTC 00011 MISDIGb 02/12/14 13:03:56 B40430504-00B EMER NEW GRID	FLINTC	B40430504	02/12/14	FLINT CITY WATER DEPARTMENT
2637	3181	**** Underground ****				
2638	3182	Ticket : B40430504 Rcvd: 02/12/14 13:01 Oper: AMA Rev: 00B				
2639	3183	Org Tkt : B40430504 Rcvd: 02/12/14 13:03 Oper: AMA				

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2612	JEFF CHURCH	WMB	Address : 1857	Street : S AVERILL AVE	1st x-st: Dir S of LAPEER RD
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2636	HOWARD SWICKARD	REPR BRKN WTR SERV	Address : 4606	Street : MAINES ST	1st x-st: Dir N of STEWART AVE
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2636	2nd x-st: Dir E of INDUSTRIAL
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2640	3185	Digstart: 02/12/14 Time: 13:01				
2641	3186	Tkt Life: 03/05/14 Time: 23:59				
2642	3188	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2643	3189	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2644	3190	E-mail : NONE				
2645	3191	FieldCnt: HOWARD SWICKARD /CELL Number: 810-577-8263				
2646	3193	County : GENESEE Place : FLINT /C				
2647	3195	Grids : 4303C8341D				
2648	3196	Polygon : 43.058227/-83.687405 43.058295/-83.685535				
2649	3197	: 43.055211/-83.687296 43.055279/-83.685426				
2650	3198	Lat : Long:				
2651	3199	Work Typ: REPR BRKN WTR SERV Done For:				
2652	3200	Address : 4606				
2653	3201	Street : MAINES ST				
2654	3202	1st x-st: Dir N of STEWART AVE				
2655	3203	2nd x-st: Dir E of INDUSTRIAL				
2656	3204	Subdivsn: Lots:				
2657	3205	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L RD CREW EN ROUTE				
2658	3206	Boring : N On-going project: N Working In or Near R/R Easement: N				
2659	3207	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2660	3208	FLINTC 00002 MISDIGb 02/13/14 07:38:23 B40440055-00B EMER NEW GRID	FLINTC	B40440055	02/13/14	FLINT CITY WATER DEPARTMENT
2661	3210	**** Underground ****				
2662	3211	Ticket : B40440055 Rcvd: 02/13/14 07:35 Oper: SLD Rev: 00B				
2663	3212	Org Tkt : B40440055 Rcvd: 02/13/14 07:38 Oper: SLD				
2664	3214	Digstart: 02/13/14 Time: 09:00				
2665	3215	Tkt Life: 03/06/14 Time: 23:59				
2666	3217	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2667	3218	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2668	3219	E-mail : NONE				
2669	3220	FieldCnt: HOWARD SWICKARD (CELL) Number: 810-577-8263				
2670	3222	County : GENESEE Place : FLINT /C				
2671	3224	Grids : 4301B8342A 4301B8343D 4301C8343D				
2672	3225	Polygon : 43.026915/-83.719684 43.026643/-83.716479				
2673	3226	: 43.024476/-83.719891 43.024204/-83.716686				
2674	3227	Lat : Long:				
2675	3228	Work Typ: WMB Done For:				
2676	3229	Address :				
2677	3230	Street : CHEVROLET AVE				
2678	3231	1st x-st: Dir of PROSPECT ST				
2679	3232	2nd x-st: Dir W of DUPONT ST				
2680	3233	Subdivsn: Lots:				
2681	3234	Stk Info: N OF FLUSHING RD STK 50FT RADIUS OF NE COR OF INTER OF CHEVROLET				
2682	3235	: & PROSPECT LOC MARKED W/BARRICADE CREW EN ROUTE				
2683	3236	Boring : N On-going project: N Working In or Near R/R Easement: N				
2684	3237	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2685	3238	FLINTC 00003 MISDIGb 02/13/14 07:47:29 B40440061-00B EMER NEW GRID	FLINTC	B40440061	02/13/14	FLINT CITY WATER DEPARTMENT
2686	3240	**** Underground ****				
2687	3241	Ticket : B40440061 Rcvd: 02/13/14 07:45 Oper: GMH Rev: 00B				

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2660	HOWARD SWICKARD	WMB	Address :	Street : CHEVROLET AVE	1st x-st: Dir of PROSPECT ST
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2685	PAUL SIMPSON	WMB	Address : 1511	Street : E ATHERTON RD	1st x-st: Dir E of S DORT HWY
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2688	3242	Org Tkt : B40440061 Rcvd: 02/13/14 07:47 Oper: GMH				
2689	3244	Digstart: 02/13/14 Time: 08:00				
2690	3245	Tkt Life: 03/06/14 Time: 23:59				
2691	3247	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2692	3248	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2693	3249	E-mail : NONE				
2694	3250	FieldCnt: PAUL Number: 810-397-7247				
2695	3252	County : GENESEE Place : FLINT /C				
2696	3254	Grids : 4259C8339C 4259C8339D				
2697	3255	Polygon : 42.989830/-83.654340 42.989853/-83.651415				
2698	3256	: 42.988468/-83.654329 42.988491/-83.651404				
2699	3257	Lat : Long:				
2700	3258	Work Typ: WMB Done For:				
2701	3259	Address : 1511				
2702	3260	Street : E ATHERTON RD				
2703	3261	1st x-st: Dir E of S DORT HWY				
2704	3262	2nd x-st: Dir of				
2705	3263	Subdivsn: Lots:				
2706	3264	Stk Info: STK FRT OF PROP TO C/L OF RD CREW EN ROUTE				
2707	3265	Boring : N On-going project: N Working In or Near R/R Easement: N				
2708	3266	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC MWFN				
2709	3267	FLINTC 00007 MISDIGb 02/13/14 08:16:41 B40440088-00B EMER NEW GRID	FLINTC	B40440088	02/13/14	FLINT CITY WATER DEPARTMENT
2710	3269	**** Underground ****				
2711	3270	Ticket : B40440088 Rcvd: 02/13/14 08:14 Oper: HDK Rev: 00B				
2712	3271	Org Tkt : B40440088 Rcvd: 02/13/14 08:16 Oper: HDK				
2713	3273	Digstart: 02/13/14 Time: 08:14				
2714	3274	Tkt Life: 03/06/14 Time: 23:59				
2715	3276	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2716	3277	Phone : 810-577-8261 Ext: Fax :				
2717	3278	E-mail : NONE				
2718	3279	FieldCnt: Number:				
2719	3281	County : GENESEE Place : FLINT /C				
2720	3283	Grids : 4303C8343A 4303D8343A				
2721	3284	Polygon : 43.054456/-83.732615 43.054487/-83.730741				
2722	3285	: 43.051844/-83.732572 43.051875/-83.730698				
2723	3286	Lat : Long:				
2724	3287	Work Typ: WMB Done For:				
2725	3288	Address : 4226				
2726	3289	Street : WISNER				
2727	3290	1st x-st: Dir S of STEWART AVE				
2728	3291	2nd x-st: Dir E of CLIO RD				
2729	3292	Subdivsn: Lots:				
2730	3293	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW ON SITE				
2731	3294	Boring : N On-going project: N Working In or Near R/R Easement: N				
2732	3295	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
2733	3296	FLINTC 00004 MISDIGa 02/13/14 12:04:28 A40440183-00A EMER NEW GRID	FLINTC	A40440183	02/13/14	FLINT CITY WATER DEPARTMENT
2734	3298	**** Underground ****				
2735	3299	Ticket : A40440183 Rcvd: 02/13/14 12:01 Oper: BMF Rev: 00A				

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2709	JEFF CHURCH	WMB	Address : 4226	Street : WISNER	1st x-st: Dir S of STEWART AVE
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2733	PAUL SIMPSON	WMB	Address :	Street : W WITHERBEE ST	1st x-st: Dir W of MARTIN LUTHER KING
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2736	3300	Org Tkt : A40440183 Rcvd: 02/13/14 12:04 Oper: BMF				
2737	3302	Digstart: 02/13/14 Time: 13:00				
2738	3303	Tkt Life: 03/06/14 Time: 23:59				
2739	3305	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2740	3306	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2741	3307	E-mail : NONE				
2742	3308	FieldCnt: PAUL /CELL Number: 810-397-7247				
2743	3310	County : GENESEE Place : FLINT /C				
2744	3312	Grids : 4302D8342A 4302D8342B 4302D8342C 4302D8342D				
2745	3313	Polygon : 43.036019/-83.712565 43.035988/-83.703544				
2746	3314	: 43.034660/-83.712569 43.034629/-83.703548				
2747	3315	Lat : Long:				
2748	3316	Work Typ: WMB Done For:				
2749	3317	Address :				
2750	3318	Street : W WITHERBEE ST				
2751	3319	1st x-st: Dir W of MARTIN LUTHER KING				
2752	3320	2nd x-st: Dir S of HAMILTON				
2753	3321	Subdivsn: Lots:				
2754	3322	Stk Info: LOCATE ENTIRE FRT & BTH SDS OF RD AT ADDRS 230 & 238 INCLUDING VAC LOT				
2755	3323	: BET ADDRS CREW EN ROUTE				
2756	3324	Boring : N On-going project: N Working In or Near R/R Easement: N				
2757	3325	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2758	3326	FLINTC 00011 MISDIGb 02/13/14 13:23:01 B40440474-00B EMER NEW GRID	FLINTC	B40440474	02/13/14	FLINT CITY WATER DEPARTMENT
2759	3328	**** Underground ****				
2760	3329	Ticket : B40440474 Rcvd: 02/13/14 13:20 Oper: SJG Rev: 00B				
2761	3330	Org Tkt : B40440474 Rcvd: 02/13/14 13:22 Oper: SJG				
2762	3332	Digstart: 02/13/14 Time: 17:00				
2763	3333	Tkt Life: 03/06/14 Time: 23:59				
2764	3335	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2765	3336	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2766	3337	E-mail : NONE				
2767	3338	FieldCnt: PAUL Number: 810-397-7247				
2768	3340	County : GENESEE Place : FLINT /C				
2769	3342	Grids : 4259A8339A 4300D8339A				
2770	3343	Polygon : 43.004013/-83.665827 43.003866/-83.663788				
2771	3344	: 42.999797/-83.666132 42.999649/-83.664093				
2772	3345	Lat : Long:				
2773	3346	Work Typ: WMB Done For:				
2774	3347	Address : 2202				
2775	3348	Street : MAYBURY AVE				
2776	3349	1st x-st: Dir W of W DORT HWY				
2777	3350	2nd x-st: Dir S of LIPPINCOTT				
2778	3351	Subdivsn: Lots:				
2779	3352	Stk Info: LOCATE FRT OF PROP & BTH SDS OF ST CREW ENROUTE				
2780	3353	Boring : N On-going project: N Working In or Near R/R Easement: N				
2781	3354	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2782	3355	FLINTC 00005 MISDIGb 02/14/14 08:27:14 B40450084-00B EMER NEW GRID	FLINTC	B40450084	02/14/14	FLINT CITY WATER DEPARTMENT
2783	3357	**** Underground ****				

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2758	PAUL SIMPSON	WMB	Address : 2202	Street : MAYBURY AVE	1st x-st: Dir W of W DORT HWY
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2782	HOWARD SWICKARD	WMB	Address :	Street : PATERSON	1st x-st: Dir of WELCH BLVD
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2782	2nd x-st: Dir N of MACKIN RD
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2784	3358	Ticket : B40450084 Rcvd: 02/14/14 08:24 Oper: DJH Rev: 00B				
2785	3359	Org Tkt : B40450084 Rcvd: 02/14/14 08:27 Oper: DJH				
2786	3361	Digstart: 02/14/14 Time: 08:24				
2787	3362	Tkt Life: 03/07/14 Time: 23:59				
2788	3364	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2789	3365	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2790	3366	E-mail : NONE				
2791	3367	FieldCnt: HOWARD Number: 810-577-8263				
2792	3369	County : GENESEE Place : FLINT /C				
2793	3371	Grids : 4301A8343C 4302D8343B 4302D8343C				
2794	3372	Polygon : 43.034373/-83.725232 43.034609/-83.723388				
2795	3373	: 43.033054/-83.725063 43.033291/-83.723219				
2796	3374	Lat : Long:				
2797	3375	Work Typ: WMB Done For:				
2798	3376	Address :				
2799	3377	Street : PATERSON				
2800	3378	1st x-st: Dir of WELCH BLVD				
2801	3379	2nd x-st: Dir N of MACKIN RD				
2802	3380	Subdivsn: Lots:				
2803	3381	Stk Info: E OF BROWNELL STK ENTIRE INTER W/ WELCH BLVD CREW EN ROUTE				
2804	3382	Boring : N On-going project: N Working In or Near R/R Easement: N				
2805	3383	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2806	3384	FLINTC 00001 MISDIGa 02/14/14 08:31:07 A40450037-00A EMER NEW GRID	FLINTC	A40450037	02/14/14	FLINT CITY WATER DEPARTMENT
2807	3386	**** Underground ****				
2808	3387	Ticket : A40450037 Rcvd: 02/14/14 08:29 Oper: MLD Rev: 00A				
2809	3388	Org Tkt : A40450037 Rcvd: 02/14/14 08:30 Oper: MLD				
2810	3390	Digstart: 02/14/14 Time: 08:29				
2811	3391	Tkt Life: 03/07/14 Time: 23:59				
2812	3393	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2813	3394	Phone : 810-577-8261 Ext: Fax :				
2814	3395	E-mail : NONE				
2815	3396	FieldCnt: Number:				
2816	3398	County : GENESEE Place : FLINT /C				
2817	3400	Grids : 4259A8343A 4259A8343B				
2818	3401	Polygon : 42.997285/-83.731967 42.997462/-83.728229				
2819	3402	: 42.995915/-83.731902 42.996092/-83.728164				
2820	3403	Lat : Long:				
2821	3404	Work Typ: REPR WMB Done For:				
2822	3405	Address : 3202				
2823	3406	Street : LARCHMONT ST				
2824	3407	1st x-st: Dir W of STOCKER				
2825	3408	2nd x-st: Dir E of BALLENGER HWY				
2826	3409	Subdivsn: Lots:				
2827	3410	Stk Info: LOCATE IFO PROP & BTH SDS OF RD CREW ON SITE				
2828	3411	Boring : N On-going project: N Working In or Near R/R Easement: N				
2829	3412	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
2830	3413	FLINTC 00010 MISDIGb 02/14/14 12:37:08 B40450356-00B EMER NEW GRID	FLINTC	B40450356	02/15/14	FLINT CITY WATER DEPARTMENT
2831	3415	**** Underground ****				

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2806	JEFF CHURCH	REPR WMB	Address : 3202	Street : LARCHMONT ST	1st x-st: Dir W of STOCKER
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2830	PAUL SIMPSON	WMB	Address :	Street : N DORT HWY	1st x-st: Dir E of N FRANKLIN AVE
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2832	3416	Ticket : B40450356 Rcvd: 02/14/14 12:33 Oper: JLK Rev: 00B				
2833	3417	Org Tkt : B40450356 Rcvd: 02/14/14 12:36 Oper: JLK				
2834	3419	Digstart: 02/15/14 Time: 06:00				
2835	3420	Tkt Life: 03/08/14 Time: 23:59				
2836	3422	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2837	3423	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2838	3424	E-mail : NONE				
2839	3425	FieldCnt: PAUL SIMPSON CELL Number: 810-397-7247				
2840	3427	County : GENESEE Place : FLINT /C				
2841	3429	Grids : 4303D8339A 4303D8340D				
2842	3430	Polygon : 43.052631/-83.669777 43.053990/-83.669374				
2843	3431	: 43.051079/-83.664543 43.052438/-83.664140				
2844	3432	Lat : Long:				
2845	3433	Work Typ: WMB Done For:				
2846	3434	Address :				
2847	3435	Street : N DORT HWY				
2848	3436	1st x-st: Dir E of N FRANKLIN AVE				
2849	3437	2nd x-st: Dir of				
2850	3438	Subdivsn: Lots:				
2851	3439	Stk Info: STK FRT OF PROP TO C/L OF N DORT HWY AT ADDR 4068 & 50 FT S OF ADDR				
2852	3440	3901:20:00				
2853	3441	Boring : N On-going project: N Working In or Near R/R Easement: N				
2854	3442	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
2855	3443	FLINTC 00013 MISDIGb 02/14/14 14:29:42 B40450477-00B EMER NEW GRID	FLINTC	B40450477	02/15/14	FLINT CITY WATER DEPARTMENT
2856	3445	**** Underground ****				
2857	3446	Ticket : B40450477 Rcvd: 02/14/14 14:27 Oper: SLD Rev: 00B				
2858	3447	Org Tkt : B40450477 Rcvd: 02/14/14 14:29 Oper: SLD				
2859	3449	Digstart: 02/15/14 Time: 06:00				
2860	3450	Tkt Life: 03/08/14 Time: 23:59				
2861	3452	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2862	3453	Phone : 810-577-8261 Ext: Fax :				
2863	3454	E-mail : NONE				
2864	3455	FieldCnt: Number:				
2865	3457	County : GENESEE Place : FLINT /C				
2866	3459	Grids : 4302B8338A 4302B8338B 4302C8338A 4302C8338B				
2867	3460	Polygon : 43.041863/-83.647395 43.041835/-83.643861				
2868	3461	: 43.039426/-83.647414 43.039398/-83.643880				
2869	3462	Lat : Long:				
2870	3463	Work Typ: WMB Done For:				
2871	3464	Address :				
2872	3465	Street : N AVERILL AVE				
2873	3466	1st x-st: Dir of MARYLAND AVE				
2874	3467	2nd x-st: Dir S of LEITH ST				
2875	3468	Subdivsn: Lots:				
2876	3469	Stk Info: STK 75FT RADIUS OF BARRICADE AT INTER OF N AVERILL & MARYLAND				
2877	3470	Boring : N On-going project: N Working In or Near R/R Easement: N				
2878	3471	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2879	3472	FLINTC 00002 MISDIGb 02/15/14 07:44:13 B40460020-00B EMER NEW GRID	FLINTC	B40460020	02/15/14	FLINT CITY WATER DEPARTMENT

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2855	JEFF CHURCH	WMB	Address :	Street : N AVERILL AVE	1st x-st: Dir of MARYLAND AVE
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2879	JEFF CHURCH	REPR WMB	Address :	Street : N AVERILL AVE	1st x-st: Dir S of LEITH ST

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2879	2nd x-st: Dir N of MARYLAND AVE

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2880	3474	**** Underground ****				
2881	3475	Ticket : B40460020 Rcvd: 02/15/14 07:42 Oper: AMA Rev: 00B				
2882	3476	Org Tkt : B40460020 Rcvd: 02/15/14 07:44 Oper: AMA				
2883	3478	Digstart: 02/15/14 Time: 07:42				
2884	3479	Tkt Life: 03/08/14 Time: 23:59				
2885	3481	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2886	3482	Phone : 810-577-8261 Ext: Fax :				
2887	3483	E-mail : NONE				
2888	3484	FieldCnt: Number:				
2889	3486	County : GENESEE Place : FLINT /C				
2890	3488	Grids : 4302B8338A 4302B8338B 4302C8338A 4302C8338B				
2891	3489	Polygon : 43.042917/-83.646416 43.042926/-83.644540				
2892	3490	: 43.039912/-83.646401 43.039921/-83.644526				
2893	3491	Lat : Long:				
2894	3492	Work Typ: REPR WMB Done For:				
2895	3493	Address :				
2896	3494	Street : N AVERILL AVE				
2897	3495	1st x-st: Dir S of LEITH ST				
2898	3496	2nd x-st: Dir N of MARYLAND AVE				
2899	3497	Subdivsn: Lots:				
2900	3498	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD AT ADDRS 2807 & 2811 CREW ON				
2901	3499	: SITE				
2902	3500	Boring : N On-going project: N Working In or Near R/R Easement: N				
2903	3501	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2904	3502	FLINTC 00006 MISDIGb 02/15/14 15:21:29 B40460151-00B EMER NEW GRID	FLINTC	B40460151	02/17/14	FLINT CITY WATER DEPARTMENT
2905	3504	**** Underground ****				
2906	3505	Ticket : B40460151 Rcvd: 02/15/14 15:19 Oper: JAL Rev: 00B				
2907	3506	Org Tkt : B40460151 Rcvd: 02/15/14 15:21 Oper: JAL				
2908	3508	Digstart: 02/17/14 Time: 08:00				
2909	3509	Tkt Life: 03/10/14 Time: 23:59				
2910	3511	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
2911	3512	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2912	3513	E-mail : NONE				
2913	3514	FieldCnt: PAUL - CELL Number: 810-397-7247				
2914	3516	County : GENESEE Place : FLINT /C				
2915	3518	Grids : 4302C8340C 4302C8340D 4302D8340C 4302D8340D				
2916	3519	Polygon : 43.038053/-83.673635 43.038063/-83.669476				
2917	3520	: 43.036681/-83.673632 43.036691/-83.669473				
2918	3521	Lat : Long:				
2919	3522	Work Typ: WMB Done For:				
2920	3523	Address : 1505				
2921	3524	Street : JANE AVE				
2922	3525	1st x-st: Dir W of N FRANKLIN AVE				
2923	3526	2nd x-st: Dir N of DAVIDSON RD				
2924	3527	Subdivsn: Lots:				
2925	3528	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
2926	3529	Boring : N On-going project: N Working In or Near R/R Easement: N				
2927	3530	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				

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2904	PAUL SIMPSON	WMB	Address : 1505	Street : JANE AVE	1st x-st: Dir W of N FRANKLIN AVE
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2928	3531	FLINTC 00002 MISDIGb 02/17/14 07:40:38 B40480049-00B EMER NEW GRID	FLINTC	B40480049	02/17/14	FLINT CITY WATER DEPARTMENT
2929	3533	**** Underground ****				
2930	3534	Ticket : B40480049 Rcvd: 02/17/14 07:38 Oper: LCG Rev: 00B				
2931	3535	Org Tkt : B40480049 Rcvd: 02/17/14 07:40 Oper: LCG				
2932	3537	Digstart: 02/17/14 Time: 09:00				
2933	3538	Tkt Life: 03/10/14 Time: 23:59				
2934	3540	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2935	3541	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2936	3542	E-mail : NONE				
2937	3543	FieldCnt: Number: 810-577-8263				
2938	3545	County : GENESEE Place : FLINT /C				
2939	3547	Grids : 4301C8342A 4301C8342B 4301C8343D				
2940	3548	Polygon : 43.023455/-83.716903 43.024803/-83.716501				
2941	3549	: 43.022047/-83.712193 43.023395/-83.711790				
2942	3550	Lat : Long:				
2943	3551	Work Typ: WMB Done For:				
2944	3552	Address : 1920				
2945	3553	Street : WOLCOTT AVE				
2946	3554	1st x-st: Dir W of DUPONT ST				
2947	3555	2nd x-st: Dir N of FLUSHING RD				
2948	3556	Subdivsn: Lots:				
2949	3557	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW ENROUTE				
2950	3558	Boring : N On-going project: N Working In or Near R/R Easement: N				
2951	3559	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD USSIG				
2952	3560	FLINTC 00003 MISDIGb 02/17/14 07:48:27 B40480062-00B EMER NEW GRID	FLINTC	B40480062	02/17/14	FLINT CITY WATER DEPARTMENT
2953	3562	**** Underground ****				
2954	3563	Ticket : B40480062 Rcvd: 02/17/14 07:46 Oper: GMH Rev: 00B				
2955	3564	Org Tkt : B40480062 Rcvd: 02/17/14 07:48 Oper: GMH				
2956	3566	Digstart: 02/17/14 Time: 08:00				
2957	3567	Tkt Life: 03/10/14 Time: 23:59				
2958	3569	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
2959	3570	Phone : 810-577-8261 Ext: Fax :				
2960	3571	E-mail : NONE				
2961	3572	FieldCnt: Number:				
2962	3574	County : GENESEE Place : FLINT /C				
2963	3576	Grids : 4302A8342C 4302A8342D 4302B8342C 4302B8342D 4303D8342C				
2964	3577	: 4303D8342D				
2965	3578	Polygon : 43.050598/-83.705280 43.049555/-83.700558				
2966	3579	: 43.046009/-83.706294 43.044966/-83.701572				
2967	3580	Lat : Long:				
2968	3581	Work Typ: WMB Done For:				
2969	3582	Address :				
2970	3583	Street : ESTHER ST				
2971	3584	1st x-st: Dir N of PASADENA AVE				
2972	3585	2nd x-st: Dir E of MARTIN LUTHER KING				
2973	3586	Subdivsn: Lots:				
2974	3587	Stk Info: STK BTH SDS OF ESTHER FRM PASADENA GOING N FOR 100FT CREW EN				
2975	3588	: ROUTE				

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2928	HOWARD SWICKARD	WMB	Address : 1920	Street : WOLCOTT AVE	1st x-st: Dir W of DUPONT ST
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2952	JEFF CHURCH	WMB	Address :	Street : ESTHER ST	1st x-st: Dir N of PASADENA AVE
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2976	3589	Boring : N On-going project: N Working In or Near R/R Easement: N				
2977	3590	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
2978	3591	FLINTC 00020 MISDIGb 02/17/14 12:02:10 B40480384-00B EMER NEW GRID	FLINTC	B40480384	02/17/14	FLINT CITY WATER DEPARTMENT
2979	3593	**** Underground ****				
2980	3594	Ticket : B40480384 Rcvd: 02/17/14 12:00 Oper: GMH Rev: 00B				
2981	3595	Org Tkt : B40480384 Rcvd: 02/17/14 12:02 Oper: GMH				
2982	3597	Digstart: 02/17/14 Time: 16:00				
2983	3598	Tkt Life: 03/10/14 Time: 23:59				
2984	3600	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
2985	3601	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
2986	3602	E-mail : NONE				
2987	3603	FieldCnt: HOWARD Number: 810-577-8263				
2988	3605	County : GENESEE Place : FLINT /C				
2989	3607	Grids : 4300A8342B 4300A8342C 4301D8342B 4301D8342C				
2990	3608	Polygon : 43.016426/-83.709304 43.017428/-83.707947				
2991	3609	: 43.014419/-83.707822 43.015421/-83.706465				
2992	3610	Lat : Long:				
2993	3611	Work Typ: REPR WTR SERV/LKG Done For:				
2994	3612	Address : 624				
2995	3613	Street : FROST ST				
2996	3614	1st x-st: Dir E of DUPONT ST				
2997	3615	2nd x-st: Dir N of UNIVERSITY DR				
2998	3616	Subdivsn: Lots:				
2999	3617	Stk Info: STK ENTIRE FRT OF PROP TO C/L OF RD				
3000	3618	Boring : N On-going project: N Working In or Near R/R Easement: N				
3001	3619	Members : ATTD CCFIBR CEEDIS CEESBM CEETRN CEGDIS COMTV2 FLINTC GISD				
3002	3620	FLINTC 00021 MISDIGb 02/17/14 13:44:46 B40480480-00B EMER NEW GRID	FLINTC	B40480480	02/17/14	FLINT CITY WATER DEPARTMENT
3003	3622	**** Underground ****				
3004	3623	Ticket : B40480480 Rcvd: 02/17/14 13:43 Oper: SLD Rev: 00B				
3005	3624	Org Tkt : B40480480 Rcvd: 02/17/14 13:44 Oper: SLD				
3006	3626	Digstart: 02/17/14 Time: 16:00				
3007	3627	Tkt Life: 03/10/14 Time: 23:59				
3008	3629	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3009	3630	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3010	3631	E-mail : NONE				
3011	3632	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247				
3012	3634	County : GENESEE Place : FLINT /C				
3013	3636	Grids : 4301A8342A 4301A8342B				
3014	3637	Polygon : 43.031210/-83.715518 43.031391/-83.712203				
3015	3638	: 43.029840/-83.715444 43.030020/-83.712128				
3016	3639	Lat : Long:				
3017	3640	Work Typ: WMB Done For:				
3018	3641	Address : 711				
3019	3642	Street : WELCH BLVD				
3020	3643	1st x-st: Dir W of DUPONT ST				
3021	3644	2nd x-st: Dir of				
3022	3645	Subdivsn: Lots:				
3023	3646	Stk Info: STK FRT OF PROP & BTH SDS OF RD				

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2978	HOWARD SWICKARD	REPR WTR SERV	Address : 624	Street : FROST ST	1st x-st: Dir E of DUPONT ST
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3002	PAUL SIMPSON	WMB	Address : 711	Street : WELCH BLVD	1st x-st: Dir W of DUPONT ST
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3024	3647	Boring : N On-going project: N Working In or Near R/R Easement: N				
3025	3648	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3026	3649	FLINTC 00027 MISDIGb 02/17/14 16:06:58 B40480634-00B EMER NEW GRID	FLINTC	B40480634	02/17/14	FLINT CITY WATER DEPARTMENT
3027	3651	**** Underground ****				
3028	3652	Ticket : B40480634 Rcvd: 02/17/14 16:04 Oper: MRP Rev: 00B				
3029	3653	Org Tkt : B40480634 Rcvd: 02/17/14 16:06 Oper: MRP				
3030	3655	Digstart: 02/17/14 Time: 16:04				
3031	3656	Tkt Life: 03/10/14 Time: 23:59				
3032	3658	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3033	3659	Phone : 810-577-8261 Ext: Fax :				
3034	3660	E-mail : NONE				
3035	3661	FieldCnt: Number:				
3036	3663	County : GENESEE Place : FLINT /C				
3037	3665	Grids : 4300A8338C 4300A8338D				
3038	3666	Polygon : 43.016557/-83.638325 43.015371/-83.634516				
3039	3667	: 43.015088/-83.638783 43.013902/-83.634973				
3040	3668	Lat : Long:				
3041	3669	Work Typ: WMB Done For:				
3042	3670	Address : 1219				
3043	3671	Street : SOMERSET LN				
3044	3672	1st x-st: Dir W of CENTER RD				
3045	3673	2nd x-st: Dir S of E COURT ST				
3046	3674	Subdivsn: Lots:				
3047	3675	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD CREW ON SITE				
3048	3676	Boring : N On-going project: N Working In or Near R/R Easement: N				
3049	3677	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS CEGTRN CETS COMTV2 FLINTC GENCRC				
3050	3678	FLINTC 00033 MISDIGb 02/17/14 18:05:29 B40480675-00B EMER NEW GRID	FLINTC	B40480675	02/18/14	FLINT CITY WATER DEPARTMENT
3051	3680	**** Underground ****				
3052	3681	Ticket : B40480675 Rcvd: 02/17/14 18:01 Oper: BMF Rev: 00B				
3053	3682	Org Tkt : B40480675 Rcvd: 02/17/14 18:05 Oper: BMF				
3054	3684	Digstart: 02/18/14 Time: 09:00				
3055	3685	Tkt Life: 03/11/14 Time: 23:59				
3056	3687	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3057	3688	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3058	3689	E-mail : NONE				
3059	3690	FieldCnt: HOWARD /CELL Number: 810-577-8263				
3060	3692	County : GENESEE Place : FLINT /C				
3061	3694	Grids : 4301A8338B 4301A8338C				
3062	3695	Polygon : 43.031484/-83.642614 43.031723/-83.640770				
3063	3696	: 43.030165/-83.642443 43.030405/-83.640599				
3064	3697	Lat : Long:				
3065	3698	Work Typ: WMB Done For:				
3066	3699	Address :				
3067	3700	Street : PITKIN AVE				
3068	3701	1st x-st: Dir of NEWCOMBE ST				
3069	3702	2nd x-st: Dir N of DAVISON RD				
3070	3703	Subdivsn: Lots:				
3071	3704	Stk Info: W OF CENTER RD LOCATE 50 FT RADIUS OF INTER OF PITKIN W/ NEWCOMBE				

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3026	JEFF CHURCH	WMB	Address : 1219	Street : SOMERSET LN	1st x-st: Dir W of CENTER RD
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3050	HOWARD SWICKARD	WMB	Address :	Street : PITKIN AVE	1st x-st: Dir of NEWCOMBE ST
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3072	3705	Boring : N On-going project: N Working In or Near R/R Easement: N				
3073	3706	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN CETS COMTV2 FLINTC				
3074	3707	FLINTC 00005 MISDIGb 02/18/14 09:00:08 B40480634-01B EMER RXMT GRID	FLINTC	B40480634	02/18/14	FLINT CITY WATER DEPARTMENT
3075	3709	**** Underground ****				
3076	3710	Ticket : B40480634 Rcvd: 02/18/14 08:59 Oper: DMS Rev: 01B				
3077	3711	Org Tkt : B40480634 Rcvd: 02/17/14 16:06 Oper: MRP				
3078	3713	Digstart: 02/18/14 Time: 08:59				
3079	3714	Tkt Life: 03/10/14 Time: 23:59				
3080	3716	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3081	3717	Phone : 810-577-8261 Ext: Fax :				
3082	3718	E-mail : NONE				
3083	3719	FieldCnt: Number:				
3084	3721	County : GENESEE Place : FLINT /C				
3085	3723	Grids : 4300A8338C 4300A8338D				
3086	3724	Polygon : 43.016557/-83.638325 43.015371/-83.634516				
3087	3725	: 43.015088/-83.638783 43.013902/-83.634973				
3088	3726	Lat : Long:				
3089	3727	Work Typ: WMB Done For:				
3090	3728	Address : 1219				
3091	3729	Street : SOMERSET LN				
3092	3730	1st x-st: Dir W of CENTER RD				
3093	3731	2nd x-st: Dir S of E COURT ST				
3094	3732	Subdivsn: Lots:				
3095	3733	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD CREW ON SITE				
3096	3734	Boring : N On-going project: N Working In or Near R/R Easement: N				
3097	3736	AddlInfo: 2ND CALL-RESTK ALL UTILS DUE TO WEATHER NEEDED PER JEFF CREW ON				
3098	3737	: SITE REFER TO TK TFRM 02/17--[DMS 02/18/2014 08:59AM]				
3099	3739	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS CEGTRN COMTV2 FLINTC GENCRC				
3100	3740	FLINTC 00017 MISDIGb 02/18/14 14:01:21 B40490533-00B EMER NEW GRID	FLINTC	B40490533	02/18/14	FLINT CITY WATER DEPARTMENT
3101	3742	**** Underground ****				
3102	3743	Ticket : B40490533 Rcvd: 02/18/14 13:57 Oper: HDK Rev: 00B				
3103	3744	Org Tkt : B40490533 Rcvd: 02/18/14 14:01 Oper: HDK				
3104	3746	Digstart: 02/18/14 Time: 13:57				
3105	3747	Tkt Life: 03/11/14 Time: 23:59				
3106	3749	Firm : FLINT CITY WATER DEPARTMENT Caller: ROB BINCSIK				
3107	3750	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3108	3751	E-mail : NONE				
3109	3752	FieldCnt: PAUL Number: 810-397-7247				
3110	3754	County : GENESEE Place : FLINT /C				
3111	3756	Grids : 4304B8341C 4304B8341D				
3112	3757	Polygon : 43.076444/-83.689561 43.076384/-83.683502				
3113	3758	: 43.075082/-83.689574 43.075022/-83.683515				
3114	3759	Lat : Long:				
3115	3760	Work Typ: WMB Done For:				
3116	3761	Address :				
3117	3762	Street : CARPENTER RD				
3118	3763	1st x-st: Dir W of ALFRED				
3119	3764	2nd x-st: Dir W of SELBY ST				

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3074	JEFF CHURCH	WMB	Address : 1219	Street : SOMERSET LN	1st x-st: Dir W of CENTER RD
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3100	ROB BINCSIK	WMB	Address :	Street : CARPENTER RD	1st x-st: Dir W of ALFRED
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3120	3765	Subdivsn: Lots:				
3121	3766	Stk Info: STK 100FT RADIUS OF BARRICADE LOC APX 100FT W OF ALFRED ON S SD OF RD				
3122	3767	: CREW EN ROUTE				
3123	3768	Boring : N On-going project: N Working In or Near R/R Easement: N				
3124	3769	Members : ATTD BEECMD BUCK01 CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
3125	3770	FLINTC 00024 MISDIGb 02/18/14 17:24:07 B40490750-00B EMER NEW GRID	FLINTC	B40490750	02/19/14	FLINT CITY WATER DEPARTMENT
3126	3772	**** Underground ****				
3127	3773	Ticket : B40490750 Rcvd: 02/18/14 17:21 Oper: BMF Rev: 00B				
3128	3774	Org Tkt : B40490750 Rcvd: 02/18/14 17:23 Oper: BMF				
3129	3776	Digstart: 02/19/14 Time: 09:00				
3130	3777	Tkt Life: 03/12/14 Time: 23:59				
3131	3779	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3132	3780	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3133	3781	E-mail : NONE				
3134	3782	FieldCnt: BOBBY VAUGHN /CELL Number: 810-577-7180				
3135	3784	County : GENESEE Place : FLINT /C				
3136	3786	Grids : 4303C8343A 4303C8343B				
3137	3787	Polygon : 43.057161/-83.727836 43.055826/-83.726972				
3138	3788	: 43.055142/-83.730955 43.053806/-83.730090				
3139	3789	Lat : Long:				
3140	3790	Work Typ: WMB Done For:				
3141	3791	Address : 2210				
3142	3792	Street : SANTA BARBARA DR				
3143	3793	1st x-st: Dir N of STEWART AVE				
3144	3794	2nd x-st: Dir E of CLIO RD				
3145	3795	Subdivsn: Lots:				
3146	3796	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD AT ADDRS 2210 & 2206				
3147	3797	Boring : N On-going project: N Working In or Near R/R Easement: N				
3148	3798	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
3149	3799	FLINTC 00001 MISDIGb 02/19/14 07:27:35 B40500032-00B EMER NEW GRID	FLINTC	B40500032	02/19/14	FLINT CITY WATER DEPARTMENT
3150	3801	**** Underground ****				
3151	3802	Ticket : B40500032 Rcvd: 02/19/14 07:24 Oper: LCG Rev: 00B				
3152	3803	Org Tkt : B40500032 Rcvd: 02/19/14 07:27 Oper: LCG				
3153	3805	Digstart: 02/19/14 Time: 08:00				
3154	3806	Tkt Life: 03/12/14 Time: 23:59				
3155	3808	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3156	3809	Phone : 810-577-8261 Ext: Fax :				
3157	3810	E-mail : NONE				
3158	3811	FieldCnt: Number:				
3159	3813	County : GENESEE Place : FLINT /C				
3160	3815	Grids : 4301C8341A 4301C8341B				
3161	3816	Polygon : 43.024079/-83.699204 43.023660/-83.695051				
3162	3817	: 43.021183/-83.699496 43.020764/-83.695343				
3163	3818	Lat : Long:				
3164	3819	Work Typ: WMB Done For:				
3165	3820	Address : 728				
3166	3821	Street : GARLAND				
3167	3822	1st x-st: Dir of 5TH AVE				

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3125	HOWARD SWICKARD	WMB	Address : 2210	Street : SANTA BARBARA DR	1st x-st: Dir N of STEWART AVE
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3149	JEFF CHURCH	WMB	Address : 728	Street : GARLAND	1st x-st: Dir of 5TH AVE
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3149	2nd x-st: Dir W of MARTIN LUTHER KING
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3168	3823	2nd x-st: Dir W of MARTIN LUTHER KING				
3169	3824	Subdivsn: Lots:				
3170	3825	Stk Info: SE COR VOGHT'S FLOWERS LOCATE 5TH AVE SD OF PROP & BTH SDS OF				
3171	3826	: 5TH AVE CREW ENROUTE				
3172	3827	Boring : N On-going project: N Working In or Near R/R Easement: N				
3173	3828	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3174	3829	FLINTC 00002 MISDIGb 02/20/14 07:30:12 B40510054-00B EMER NEW GRID	FLINTC	B40510054	02/20/14	FLINT CITY WATER DEPARTMENT
3175	3831	**** Underground ****				
3176	3832	Ticket : B40510054 Rcvd: 02/20/14 07:28 Oper: GMH Rev: 00B				
3177	3833	Org Tkt : B40510054 Rcvd: 02/20/14 07:29 Oper: GMH				
3178	3835	Digstart: 02/20/14 Time: 08:00				
3179	3836	Tkt Life: 03/13/14 Time: 23:59				
3180	3838	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3181	3839	Phone : 810-577-8261 Ext: Fax :				
3182	3840	E-mail : NONE				
3183	3841	FieldCnt: Number:				
3184	3843	County : GENESEE Place : FLINT /C				
3185	3845	Grids : 4258A8341B 4258A8341C				
3186	3846	Polygon : 42.982849/-83.693812 42.982793/-83.689400				
3187	3847	: 42.981492/-83.693829 42.981437/-83.689417				
3188	3848	Lat : Long:				
3189	3849	Work Typ: WMB Done For:				
3190	3850	Address : 901				
3191	3851	Street : MARKHAM ST				
3192	3852	1st x-st: Dir E of FENTON RD				
3193	3853	2nd x-st: Dir N of HEMPHILL RD				
3194	3854	Subdivsn: Lots:				
3195	3855	Stk Info: STK FRT OF PROP & BTH SDS OF RD				
3196	3856	Boring : N On-going project: N Working In or Near R/R Easement: N				
3197	3857	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD				
3198	3858	FLINTC 00001 MISDIGa 02/20/14 07:44:51 A40510011-00A EMER NEW GRID	FLINTC	A40510011	02/20/14	FLINT CITY WATER DEPARTMENT
3199	3860	**** Underground ****				
3200	3861	Ticket : A40510011 Rcvd: 02/20/14 07:42 Oper: MLD Rev: 00A				
3201	3862	Org Tkt : A40510011 Rcvd: 02/20/14 07:44 Oper: MLD				
3202	3864	Digstart: 02/20/14 Time: 09:00				
3203	3865	Tkt Life: 03/13/14 Time: 23:59				
3204	3867	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3205	3868	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3206	3869	E-mail : NONE				
3207	3870	FieldCnt: HOWARD Number: 810-577-8263				
3208	3872	County : GENESEE Place : FLINT /C				
3209	3874	Grids : 4259A8339B 4259A8339C 4259B8339B 4259B8339C				
3210	3875	Polygon : 42.996668/-83.659103 42.996721/-83.657232				
3211	3876	: 42.992502/-83.658985 42.992555/-83.657114				
3212	3877	Lat : Long:				
3213	3878	Work Typ: REPR WMB Done For:				
3214	3879	Address :				
3215	3880	Street : CHEROKEE AVE				

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3174	JEFF CHURCH	WMB	Address : 901	Street : MARKHAM ST	1st x-st: Dir E of FENTON RD
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3198	HOWARD SWICKARD	REPR WMB	Address :	Street : CHEROKEE AVE	1st x-st: Dir W of DORT HWY
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3216	3881	1st x-st: Dir W of DORT HWY				
3217	3882	2nd x-st: Dir N of ATHERTON RD				
3218	3883	Subdivsn: Lots:				
3219	3884	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD IFO ADDRS 3109 & 3105 CREW				
3220	3885	: EN ROUTE				
3221	3886	Boring : N On-going project: N Working In or Near R/R Easement: N				
3222	3887	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3223	3888	FLINTC 00044 MISDIGb 02/20/14 16:24:58 B40510688-00B EMER NEW PLCE	FLINTC	B40510688	02/21/14	FLINT CITY
3224	3890	**** Underground ****				
3225	3891	Ticket : B40510688 Rcvd: 02/20/14 16:24 Oper: DMS Rev: 00B				
3226	3892	Org Tkt : B40510688 Rcvd: 02/20/14 16:24 Oper: DMS				
3227	3894	Digstart: 02/21/14 Time: 09:00				
3228	3895	Tkt Life: 03/14/14 Time: 23:59				
3229	3897	Firm : FLINT CITY Caller: HOWARD SWICKARD				
3230	3898	Phone : 810-766-7202 Ext: 3401 Fax : 810-742-6283				
3231	3899	E-mail : AROBERTS@CITYOFFLINT.COM				
3232	3900	FieldCnt: HOWARD/CELL Number: 810-577-8263				
3233	3902	County : GENESEE Place : FLINT /C				
3234	3904	Grids :				
3235	3905	Polygon :				
3236	3906	Lat : Long:				
3237	3907	Work Typ: WMB Done For:				
3238	3908	Address : 3299				
3239	3909	Street : CHEYENNE AVE				
3240	3910	1st x-st: Dir W of DORT HWY				
3241	3911	2nd x-st: Dir S of HEMPHILL RD				
3242	3912	Subdivsn: Lots:				
3243	3913	Stk Info: DORT AKA M 54 LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD				
3244	3914	Boring : N On-going project: N Working In or Near R/R Easement: N				
3245	3915	Members : ARCUS ATT ATTD BUCK01 CCFIBR CEEDIS CEESBM CEETRN CEGD20 CEGDIS				
3246	3916	Members : COMTV2 CTMN FLINTC GENCRC GISD GRTLKC KDL LEVEL3 MCLEO1 MWFN				
3247	3917	Members : SPRNT4 USSIG				
3248	3918	FLINTC 00045 MISDIGb 02/20/14 17:48:30 B40510716-00B EMER NEW GRID	FLINTC	B40510716	02/21/14	FLINT CITY WATER DEPARTMENT
3249	3920	**** Underground ****				
3250	3921	Ticket : B40510716 Rcvd: 02/20/14 17:46 Oper: BMF Rev: 00B				
3251	3922	Org Tkt : B40510716 Rcvd: 02/20/14 17:48 Oper: BMF				
3252	3924	Digstart: 02/21/14 Time: 09:00				
3253	3925	Tkt Life: 03/14/14 Time: 23:59				
3254	3927	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3255	3928	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3256	3929	E-mail : NONE				
3257	3930	FieldCnt: HOWARD /CELL Number: 810-577-8263				
3258	3932	County : GENESEE Place : FLINT /C				
3259	3934	Grids : 4301C8339B 4301C8339C				
3260	3935	Polygon : 43.023756/-83.658857 43.024930/-83.656599				
3261	3936	: 43.022455/-83.658181 43.023629/-83.655922				
3262	3937	Lat : Long:				
3263	3938	Work Typ: REPR WTR SERV NO FACIL Done For:				

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3223	HOWARD SWICKARD	WMB	Address : 3299	Street : CHEYENNE AVE	1st x-st: Dir W of DORT HWY
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3248	HOWARD SWICKARD	REPR WTR SERV	Address : 202	Street : COMMONWEALTH AVE	1st x-st: Dir W of DORT HWY
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3248	2nd x-st: Dir S of ROBERT T LONGWAY
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3264	3939	Address : 202				
3265	3940	Street : COMMONWEALTH AVE				
3266	3941	1st x-st: Dir W of DORT HWY				
3267	3942	2nd x-st: Dir S of ROBERT T LONGWAY				
3268	3943	Subdivsn: Lots:				
3269	3944	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD				
3270	3945	Boring : N On-going project: N Working In or Near R/R Easement: N				
3271	3946	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3272	3947	FLINTC 00046 MISDIGb 02/20/14 17:50:18 B40510718-00B EMER NEW GRID	FLINTC	B40510718	02/21/14	FLINT CITY WATER DEPARTMENT
3273	3949	**** Underground ****				
3274	3950	Ticket : B40510718 Rcvd: 02/20/14 17:48 Oper: BMF Rev: 00B				
3275	3951	Org Tkt : B40510718 Rcvd: 02/20/14 17:50 Oper: BMF				
3276	3953	Digstart: 02/21/14 Time: 11:00				
3277	3954	Tkt Life: 03/14/14 Time: 23:59				
3278	3956	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3279	3957	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3280	3958	E-mail : NONE				
3281	3959	FieldCnt: HOWARD /CELL Number: 810-577-8263				
3282	3961	County : GENESEE Place : FLINT /C				
3283	3963	Grids : 4300C8342A 4300C8343D				
3284	3964	Polygon : 43.006847/-83.717974 43.006847/-83.713815				
3285	3965	: 43.005487/-83.717974 43.005487/-83.713815				
3286	3966	Lat : Long:				
3287	3967	Work Typ: REPR WTR SERV NO FACIL Done For:				
3288	3968	Address : 2220				
3289	3969	Street : ZIMMERMAN ST				
3290	3970	1st x-st: Dir S of W COURT ST				
3291	3971	2nd x-st: Dir E of BRADLEY				
3292	3972	Subdivsn: Lots:				
3293	3973	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD				
3294	3974	Boring : N On-going project: N Working In or Near R/R Easement: N				
3295	3975	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
3296	3976	FLINTC 00003 MISDIGb 02/21/14 07:37:38 B40520036-00B EMER NEW GRID	FLINTC	B40520036	02/21/14	FLINT CITY WATER DEPARTMENT
3297	3978	**** Underground ****				
3298	3979	Ticket : B40520036 Rcvd: 02/21/14 07:35 Oper: MRP Rev: 00B				
3299	3980	Org Tkt : B40520036 Rcvd: 02/21/14 07:37 Oper: MRP				
3300	3982	Digstart: 02/21/14 Time: 07:35				
3301	3983	Tkt Life: 03/14/14 Time: 23:59				
3302	3985	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3303	3986	Phone : 810-577-8261 Ext: Fax :				
3304	3987	E-mail : NONE				
3305	3988	FieldCnt: Number:				
3306	3990	County : GENESEE Place : FLINT /C				
3307	3992	Grids : 4302C8342B 4302C8342C 4302D8342B 4302D8342C				
3308	3993	Polygon : 43.038687/-83.711604 43.038629/-83.706828				
3309	3994	: 43.037329/-83.711621 43.037271/-83.706844				
3310	3995	Lat : Long:				
3311	3996	Work Typ: WMB Done For:				

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3272	HOWARD SWICKARD	REPR WTR SERV	Address : 2220	Street : ZIMMERMAN ST	1st x-st: Dir S of W COURT ST
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3296	JEFF CHURCH	WMB	Address : 326	Street : WHITE ST	1st x-st: Dir E of IROQUOIS
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3296	2nd x-st: Dir W of MASON
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3312	3997	Address : 326				
3313	3998	Street : WHITE ST				
3314	3999	1st x-st: Dir E of IROQUOIS				
3315	4000	2nd x-st: Dir W of MASON				
3316	4001	Subdivsn: Lots:				
3317	4002	Stk Info: STK FRT OF ADDR & BTH SDS OF RD CREW EN ROUTE				
3318	4003	Boring : N On-going project: N Working In or Near R/R Easement: N				
3319	4004	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
3320	4005	FLINTC 00006 MISDIGb 02/21/14 12:43:51 B40520398-00B EMER NEW GRID	FLINTC	B40520398	02/21/14	FLINT CITY WATER DEPARTMENT
3321	4007	**** Underground ****				
3322	4008	Ticket : B40520398 Rcvd: 02/21/14 12:42 Oper: SJG Rev: 00B				
3323	4009	Org Tkt : B40520398 Rcvd: 02/21/14 12:43 Oper: SJG				
3324	4011	Digstart: 02/21/14 Time: 12:42				
3325	4012	Tkt Life: 03/14/14 Time: 23:59				
3326	4014	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3327	4015	Phone : 810-577-8261 Ext: Fax :				
3328	4016	E-mail : NONE				
3329	4017	FieldCnt: Number:				
3330	4019	County : GENESEE Place : FLINT /C				
3331	4021	Grids : 4259C8341B 4259C8341C				
3332	4022	Polygon : 42.991730/-83.692885 42.991546/-83.688257				
3333	4023	: 42.988818/-83.693001 42.988634/-83.688372				
3334	4024	Lat : Long:				
3335	4025	Work Typ: WMB Done For:				
3336	4026	Address :				
3337	4027	Street : PETTIBONE AVE				
3338	4028	1st x-st: Dir of BRUNSWICK AVE				
3339	4029	2nd x-st: Dir of				
3340	4030	Subdivsn: Lots:				
3341	4031	Stk Info: LOCATE ENTIRE INTER CREW ENROUTE				
3342	4032	Boring : N On-going project: N Working In or Near R/R Easement: N				
3343	4033	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3344	4034	FLINTC 00010 MISDIGb 02/21/14 14:21:01 B40520501-00B EMER NEW GRID	FLINTC	B40520501	02/22/14	FLINT CITY WATER DEPARTMENT
3345	4036	**** Underground ****				
3346	4037	Ticket : B40520501 Rcvd: 02/21/14 14:18 Oper: AMA Rev: 00B				
3347	4038	Org Tkt : B40520501 Rcvd: 02/21/14 14:20 Oper: AMA				
3348	4040	Digstart: 02/22/14 Time: 06:00				
3349	4041	Tkt Life: 03/15/14 Time: 23:59				
3350	4043	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3351	4044	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3352	4045	E-mail : NONE				
3353	4046	FieldCnt: PAUL SIMPSON Number: 810-397-7247				
3354	4048	County : GENESEE Place : FLINT /C				
3355	4050	Grids : 4300A8339A 4301D8339A				
3356	4051	Polygon : 43.018920/-83.666085 43.019068/-83.664222				
3357	4052	: 43.015424/-83.665808 43.015572/-83.663945				
3358	4053	Lat : Long:				
3359	4054	Work Typ: REPR WMB Done For:				

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3320	JEFF CHURCH	WMB	Address :	Street : PETTIBONE AVE	1st x-st: Dir of BRUNSWICK AVE
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3344	PAUL SIMPSON	REPR WMB	Address : 1009	Street : S FRANKLIN AVE	1st x-st: Dir W of S DORT HWY
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3360	4055	Address : 1009				
3361	4056	Street : S FRANKLIN AVE				
3362	4057	1st x-st: Dir W of S DORT HWY				
3363	4058	2nd x-st: Dir S of E COURT ST				
3364	4059	Subdivsn: Lots:				
3365	4060	Stk Info: LOCATE FRT OF PROP & BTH SDS OF ST				
3366	4061	Boring : N On-going project: N Working In or Near R/R Easement: N				
3367	4062	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3368	4063	FLINTC 00011 MISDIGb 02/21/14 14:22:03 B40520503-00B EMER NEW GRID	FLINTC	B40520503	02/24/14	FLINT CITY WATER DEPARTMENT
3369	4065	**** Underground ****				
3370	4066	Ticket : B40520503 Rcvd: 02/21/14 14:21 Oper: AMA Rev: 00B				
3371	4067	Org Tkt : B40520503 Rcvd: 02/21/14 14:22 Oper: AMA				
3372	4069	Digstart: 02/24/14 Time: 08:00				
3373	4070	Tkt Life: 03/17/14 Time: 23:59				
3374	4072	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3375	4073	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3376	4074	E-mail : NONE				
3377	4075	FieldCnt: PAUL SIMPSON Number: 810-397-7247				
3378	4077	County : GENESEE Place : FLINT /C				
3379	4079	Grids : 4302A8343D 4302B8343D				
3380	4080	Polygon : 43.046930/-83.720395 43.046986/-83.718566				
3381	4081	: 43.043099/-83.720278 43.043155/-83.718449				
3382	4082	Lat : Long:				
3383	4083	Work Typ: REPR WMB Done For:				
3384	4084	Address : 3202				
3385	4085	Street : LAWNDALE AVE				
3386	4086	1st x-st: Dir N of MCCLELLAN ST				
3387	4087	2nd x-st: Dir W of CHEVROLET				
3388	4088	Subdivsn: Lots:				
3389	4089	Stk Info: LOCATE FRT OF PROP & BTH SDS OF ST				
3390	4090	Boring : N On-going project: N Working In or Near R/R Easement: N				
3391	4091	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3392	4092	FLINTC 00004 MISDIGb 02/22/14 11:53:50 B40530104-00B EMER NEW GRID	FLINTC	B40530104	02/23/14	FLINT CITY WATER DEPARTMENT
3393	4094	**** Underground ****				
3394	4095	Ticket : B40530104 Rcvd: 02/22/14 11:52 Oper: SJG Rev: 00B				
3395	4096	Org Tkt : B40530104 Rcvd: 02/22/14 11:53 Oper: SJG				
3396	4098	Digstart: 02/23/14 Time: 06:00				
3397	4099	Tkt Life: 03/16/14 Time: 23:59				
3398	4101	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3399	4102	Phone : 810-577-8261 Ext: Fax :				
3400	4103	E-mail : NONE				
3401	4104	FieldCnt: Number:				
3402	4106	County : GENESEE Place : FLINT /C				
3403	4108	Grids : 4300B8342A 4300A8343C 4300A8343D 4300B8343D				
3404	4109	Polygon : 43.014850/-83.722086 43.016216/-83.720755				
3405	4110	: 43.010105/-83.717217 43.011471/-83.715886				
3406	4111	Lat : Long:				
3407	4112	Work Typ: WMB Done For:				

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3368	PAUL SIMPSON	REPR WMB	Address : 3202	Street : LAWNDALE AVE	1st x-st: Dir N of MCCLELLAN ST
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3392	JEFF CHURCH	WMB	Address : 718	Street : FRANK ST	1st x-st: Dir S of PERRY
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3408	4113	Address : 718				
3409	4114	Street : FRANK ST				
3410	4115	1st x-st: Dir S of PERRY				
3411	4116	2nd x-st: Dir N of UNIVERSITY DR				
3412	4117	Subdivsn: Lots:				
3413	4118	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
3414	4119	Boring : N On-going project: N Working In or Near R/R Easement: N				
3415	4120	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3416	4121	FLINTC 00005 MISDIGb 02/22/14 11:55:26 B40530105-00B EMER NEW GRID	FLINTC	B40530105	02/23/14	FLINT CITY WATER DEPARTMENT
3417	4123	**** Underground ****				
3418	4124	Ticket : B40530105 Rcvd: 02/22/14 11:53 Oper: SJG Rev: 00B				
3419	4125	Org Tkt : B40530105 Rcvd: 02/22/14 11:55 Oper: SJG				
3420	4127	Digstart: 02/23/14 Time: 07:00				
3421	4128	Tkt Life: 03/16/14 Time: 23:59				
3422	4130	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3423	4131	Phone : 810-577-8261 Ext: Fax :				
3424	4132	E-mail : NONE				
3425	4133	FieldCnt: Number:				
3426	4135	County : GENESEE Place : FLINT /C				
3427	4137	Grids : 4301A8343A 4301A8343B				
3428	4138	Polygon : 43.031992/-83.731566 43.033340/-83.731158				
3429	4139	: 43.030623/-83.727040 43.031971/-83.726633				
3430	4140	Lat : Long:				
3431	4141	Work Typ: WMB Done For:				
3432	4142	Address :				
3433	4143	Street : CONCORD ST				
3434	4144	1st x-st: Dir W of BALLENGER HWY				
3435	4145	2nd x-st: Dir N of MACKIN RD				
3436	4146	Subdivsn: Lots:				
3437	4147	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD AT ADDR 2948 & 2954				
3438	4148	Boring : N On-going project: N Working In or Near R/R Easement: N				
3439	4149	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3440	4150	FLINTC 00003 MISDIGb 02/24/14 07:31:29 B40550050-00B EMER NEW GRID	FLINTC	B40550050	02/24/14	FLINT CITY WATER DEPARTMENT
3441	4152	**** Underground ****				
3442	4153	Ticket : B40550050 Rcvd: 02/24/14 07:28 Oper: DLF Rev: 00B				
3443	4154	Org Tkt : B40550050 Rcvd: 02/24/14 07:31 Oper: DLF				
3444	4156	Digstart: 02/24/14 Time: 08:00				
3445	4157	Tkt Life: 03/17/14 Time: 23:59				
3446	4159	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3447	4160	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3448	4161	E-mail : NONE				
3449	4162	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247				
3450	4164	County : GENESEE Place : FLINT /C				
3451	4166	Grids : 4303A8342A 4303A8343D 4304D8342A 4304D8343D				
3452	4167	Polygon : 43.067812/-83.718246 43.067854/-83.715327				
3453	4168	: 43.066450/-83.718226 43.066492/-83.715308				
3454	4169	Lat : Long:				
3455	4170	Work Typ: WMB Done For:				

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3416	JEFF CHURCH	WMB	Address :	Street : CONCORD ST	1st x-st: Dir W of BALLENGER HWY
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3440	PAUL SIMPSON	WMB	Address :	Street : HOME AVE	1st x-st: Dir of GLENN AVE
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3456	4171	Address :				
3457	4172	Street : HOME AVE				
3458	4173	1st x-st: Dir of GLENN AVE				
3459	4174	2nd x-st: Dir of BALDWIN BLVD				
3460	4175	Subdivsn: Lots:				
3461	4176	Stk Info: LOCATE 50FT RADIUS OF LOC MARKED W/ BARRICADE BET X STS CREW EN				
3462	4177	: ROUTE				
3463	4178	Boring : N On-going project: N Working In or Near R/R Easement: N				
3464	4179	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
3465	4180	FLINTC 00004 MISDIGb 02/24/14 07:33:34 B40550053-00B EMER NEW GRID	FLINTC	B40550053	02/24/14	FLINT CITY WATER DEPARTMENT
3466	4182	**** Underground ****				
3467	4183	Ticket : B40550053 Rcvd: 02/24/14 07:31 Oper: DLF Rev: 00B				
3468	4184	Org Tkt : B40550053 Rcvd: 02/24/14 07:33 Oper: DLF				
3469	4186	Digstart: 02/24/14 Time: 14:00				
3470	4187	Tkt Life: 03/17/14 Time: 23:59				
3471	4189	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3472	4190	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3473	4191	E-mail : NONE				
3474	4192	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247				
3475	4194	County : GENESEE Place : FLINT /C				
3476	4196	Grids : 4303C8343A 4303C8343B				
3477	4197	Polygon : 43.057644/-83.728094 43.056007/-83.727414				
3478	4198	: 43.055549/-83.733142 43.053911/-83.732462				
3479	4199	Lat : Long:				
3480	4200	Work Typ: WMB Done For:				
3481	4201	Address : 2210				
3482	4202	Street : CANNIFF ST				
3483	4203	1st x-st: Dir E of CLIO RD				
3484	4204	2nd x-st: Dir N of STEWART AVE				
3485	4205	Subdivsn: Lots:				
3486	4206	Stk Info: LOCATE ENTIRE FRT OF PROP AND BTH SDS OF RD				
3487	4207	Boring : N On-going project: N Working In or Near R/R Easement: N				
3488	4208	Members : ATTD CCFIBR CEEDIS CEGD20 CEGDIS COMTV2 FLINTC				
3489	4209	FLINTC 00007 MISDIGb 02/24/14 07:50:04 B40550075-00B EMER NEW GRID	FLINTC	B40550075	02/24/14	FLINT CITY WATER DEPARTMENT
3490	4211	**** Underground ****				
3491	4212	Ticket : B40550075 Rcvd: 02/24/14 07:47 Oper: SLD Rev: 00B				
3492	4213	Org Tkt : B40550075 Rcvd: 02/24/14 07:49 Oper: SLD				
3493	4215	Digstart: 02/24/14 Time: 11:00				
3494	4216	Tkt Life: 03/17/14 Time: 23:59				
3495	4218	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3496	4219	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3497	4220	E-mail : NONE				
3498	4221	FieldCnt: HOWARD SWICKARD (CELL) Number: 810-577-8263				
3499	4223	County : GENESEE Place : FLINT /C				
3500	4225	Grids : 4301C8343A 4301C8343B 4301D8343A 4301D8343B				
3501	4226	Polygon : 43.023819/-83.727361 43.022672/-83.725731				
3502	4227	: 43.019186/-83.730623 43.018039/-83.728993				
3503	4228	Lat : Long:				

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3465	PAUL SIMPSON	WMB	Address : 2210	Street : CANNIFF ST	1st x-st: Dir E of CLIO RD
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3489	HOWARD SWICKARD	REPR WTR SERV	Address : 2744	Street : NORBERT ST	1st x-st: Dir S of FLUSHING RD
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3504	4229	Work Typ: REPR WTR SERV/NO FACIL Done For:				
3505	4230	Address : 2744				
3506	4231	Street : NORBERT ST				
3507	4232	1st x-st: Dir S of FLUSHING RD				
3508	4233	2nd x-st: Dir W of CHEVROLET AVE				
3509	4234	Subdivsn: Lots:				
3510	4235	Stk Info: STK ENTIRE FRT OF PROP TO C/L OF RD				
3511	4236	Boring : N On-going project: N Working In or Near R/R Easement: N				
3512	4237	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
3513	4238	FLINTC 00008 MISDIGb 02/24/14 07:51:03 B40550076-00B EMER NEW GRID	FLINTC	B40550076	02/24/14	FLINT CITY WATER DEPARTMENT
3514	4240	**** Underground ****				
3515	4241	Ticket : B40550076 Rcvd: 02/24/14 07:49 Oper: SLD Rev: 00B				
3516	4242	Org Tkt : B40550076 Rcvd: 02/24/14 07:50 Oper: SLD				
3517	4244	Digstart: 02/24/14 Time: 13:00				
3518	4245	Tkt Life: 03/17/14 Time: 23:59				
3519	4247	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3520	4248	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3521	4249	E-mail : NONE				
3522	4250	FieldCnt: HOWARD SWICKARD (CELL) Number: 810-577-8263				
3523	4252	County : GENESEE Place : FLINT /C				
3524	4254	Grids : 4302B8342C 4302B8342D				
3525	4255	Polygon : 43.043062/-83.705441 43.043084/-83.700253				
3526	4256	: 43.041690/-83.705436 43.041712/-83.700248				
3527	4257	Lat : Long:				
3528	4258	Work Typ: REPR WTR SERV/NO FACIL Done For:				
3529	4259	Address : 226				
3530	4260	Street : E DARTMOUTH ST				
3531	4261	1st x-st: Dir E of MARTIN LUTHER KING AVE				
3532	4262	2nd x-st: Dir S of PASADENA AVE				
3533	4263	Subdivsn: Lots:				
3534	4264	Stk Info: STK ENTIRE FRT OF PROP TO C/L OF RD				
3535	4265	Boring : N On-going project: N Working In or Near R/R Easement: N				
3536	4266	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
3537	4267	FLINTC 00009 MISDIGb 02/24/14 07:52:03 B40550080-00B NORM NEW GRID	FLINTC	B40550080	02/27/14	FLINT CITY WATER DEPARTMENT
3538	4269	**** Underground ****				
3539	4270	Ticket : B40550080 Rcvd: 02/24/14 07:50 Oper: SLD Rev: 00B				
3540	4271	Org Tkt : B40550080 Rcvd: 02/24/14 07:51 Oper: SLD				
3541	4273	Digstart: 02/27/14 Time: 07:50				
3542	4274	Tkt Life: 03/20/14 Time: 23:59				
3543	4276	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3544	4277	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3545	4278	E-mail : NONE				
3546	4279	FieldCnt: HOWARD SWICKARD (CELL) Number: 810-577-8263				
3547	4281	County : GENESEE Place : FLINT /C				
3548	4283	Grids : 4301A8340C 4301A8340D				
3549	4284	Polygon : 43.031482/-83.671091 43.031585/-83.666841				
3550	4285	: 43.030110/-83.671057 43.030213/-83.666808				
3551	4286	Lat : Long:				

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3513	HOWARD SWICKARD	REPR WTR SERV	Address : 226	Street : E DARTMOUTH ST	1st x-st: Dir E of MARTIN LUTHER KING AVE
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3537	HOWARD SWICKARD	REPR WTR SERV	Address : 1617	Street : WISCONSIN AVE	1st x-st: Dir S of DAVISON RD
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3552	4287	Work Typ: REPR WTR SERV Done For:				
3553	4288	Address : 1617				
3554	4289	Street : WISCONSIN AVE				
3555	4290	1st x-st: Dir S of DAVISON RD				
3556	4291	2nd x-st: Dir W of FRANKLIN AVE				
3557	4292	Subdivsn: Lots:				
3558	4293	Stk Info: STK ENTIRE FRT OF PROP TO C/L OF RD				
3559	4294	Boring : N On-going project: N Working In or Near R/R Easement: N				
3560	4295	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3561	4296	FLINTC 00013 MISDIGb 02/24/14 09:27:24 B40550238-00B EMER NEW GRID	FLINTC	B40550238	02/24/14	FLINT CITY WATER DEPARTMENT
3562	4298	**** Underground ****				
3563	4299	Ticket : B40550238 Rcvd: 02/24/14 09:25 Oper: SLD Rev: 00B				
3564	4300	Org Tkt : B40550238 Rcvd: 02/24/14 09:27 Oper: SLD				
3565	4302	Digstart: 02/24/14 Time: 15:00				
3566	4303	Tkt Life: 03/17/14 Time: 23:59				
3567	4305	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3568	4306	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3569	4307	E-mail : NONE				
3570	4308	FieldCnt: HOWARD SWICKARD (CELL) Number: 810-577-8263				
3571	4310	County : GENESEE Place : FLINT /C				
3572	4312	Grids : 4301C8343A 4301C8343B 4301D8343A 4301D8343B				
3573	4313	Polygon : 43.023819/-83.727361 43.022672/-83.725731				
3574	4314	: 43.019186/-83.730623 43.018039/-83.728993				
3575	4315	Lat : Long:				
3576	4316	Work Typ: WMB Done For:				
3577	4317	Address : 2618				
3578	4318	Street : NORBERT ST				
3579	4319	1st x-st: Dir W of CHEVROLET AVE				
3580	4320	2nd x-st: Dir S of FLUSHING RD				
3581	4321	Subdivsn: Lots:				
3582	4322	Stk Info: STK ENTIRE FRT OF PROP & BTH SDS OF RD				
3583	4323	Boring : N On-going project: N Working In or Near R/R Easement: N				
3584	4324	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC USSIG				
3585	4325	FLINTC 00015 MISDIGb 02/24/14 10:32:29 B40550331-00B EMER NEW GRID	FLINTC	B40550331	02/24/14	FLINT CITY WATER DEPARTMENT
3586	4327	**** Underground ****				
3587	4328	Ticket : B40550331 Rcvd: 02/24/14 10:30 Oper: SJG Rev: 00B				
3588	4329	Org Tkt : B40550331 Rcvd: 02/24/14 10:32 Oper: SJG				
3589	4331	Digstart: 02/24/14 Time: 10:30				
3590	4332	Tkt Life: 03/17/14 Time: 23:59				
3591	4334	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3592	4335	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3593	4336	E-mail : NONE				
3594	4337	FieldCnt: PAUL - CELL Number: 810-397-7247				
3595	4339	County : GENESEE Place : FLINT /C				
3596	4341	Grids : 4303A8342A 4303A8343C 4303A8343D 4304D8342A 4304D8343C				
3597	4342	: 4304D8343D				
3598	4343	Polygon : 43.069136/-83.720877 43.068964/-83.714065				
3599	4344	: 43.065345/-83.720973 43.065173/-83.714161				

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3561	HOWARD SWICKARD	WMB	Address : 2618	Street : NORBERT ST	1st x-st: Dir W of CHEVROLET AVE
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3585	PAUL SIMPSON	WMB	Address :	Street : HOME AVE	1st x-st: Dir of GLENN AVE
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3600	4345	Lat : Long:				
3601	4346	Work Typ: WMB Done For:				
3602	4347	Address :				
3603	4348	Street : HOME AVE				
3604	4349	1st x-st: Dir of GLENN AVE				
3605	4350	2nd x-st: Dir of				
3606	4351	Subdivsn: Lots:				
3607	4352	Stk Info: LOCATE 50FT RADIUS OF ENTIRE INTER CREW ON SITE				
3608	4353	Boring : N On-going project: N Working In or Near R/R Easement: N				
3609	4354	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
3610	4355	FLINTC 00031 MISDIGb 02/24/14 20:46:19 B40550828-00B EMER NEW GRID	FLINTC	B40550828	02/25/14	FLINT CITY WATER DEPARTMENT
3611	4357	**** Underground ****				
3612	4358	Ticket : B40550828 Rcvd: 02/24/14 20:44 Oper: HDK Rev: 00B				
3613	4359	Org Tkt : B40550828 Rcvd: 02/24/14 20:46 Oper: HDK				
3614	4361	Digstart: 02/25/14 Time: 08:00				
3615	4362	Tkt Life: 03/18/14 Time: 23:59				
3616	4364	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3617	4365	Phone : 810-577-8261 Ext: Fax :				
3618	4366	E-mail : NONE				
3619	4367	FieldCnt: Number:				
3620	4369	County : GENESEE Place : FLINT /C				
3621	4371	Grids : 4303A8341A 4303A8341B 4303B8341A 4303B8341B				
3622	4372	Polygon : 43.062974/-83.697524 43.063642/-83.695523				
3623	4373	: 43.061665/-83.697087 43.062332/-83.695086				
3624	4374	Lat : Long:				
3625	4375	Work Typ: WMB Done For:				
3626	4376	Address :				
3627	4377	Street : PARKWAY AVE				
3628	4378	1st x-st: Dir of FULTON ST				
3629	4379	2nd x-st: Dir W of SAGINAW				
3630	4380	Subdivsn: Lots:				
3631	4381	Stk Info: N OF PIERSON STK ENTIRE NE & NW CORS OF PARKWAY & FULTON				
3632	4382	Boring : N On-going project: N Working In or Near R/R Easement: N				
3633	4383	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3634	4384	FLINTC 00001 MISDIGb 02/25/14 07:53:20 B40560097-00B EMER NEW GRID	FLINTC	B40560097	02/25/14	FLINT CITY WATER DEPARTMENT
3635	4386	**** Underground ****				
3636	4387	Ticket : B40560097 Rcvd: 02/25/14 07:51 Oper: AMA Rev: 00B				
3637	4388	Org Tkt : B40560097 Rcvd: 02/25/14 07:53 Oper: AMA				
3638	4390	Digstart: 02/25/14 Time: 08:00				
3639	4391	Tkt Life: 03/18/14 Time: 23:59				
3640	4393	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3641	4394	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3642	4395	E-mail : NONE				
3643	4396	FieldCnt: HOWARD SWICKARD Number: 810-577-8263				
3644	4398	County : GENESEE Place : FLINT /C				
3645	4400	Grids : 4300A8340B 4300A8340C				
3646	4401	Polygon : 43.016568/-83.674335 43.015252/-83.673608				
3647	4402	: 43.014960/-83.677248 43.013644/-83.676521				

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3610	JEFF CHURCH	WMB	Address :	Street : PARKWAY AVE	1st x-st: Dir of FULTON ST
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3634	HOWARD SWICKARD	REPR WMB	Address : 965	Street : E 7TH ST	1st x-st: Dir S of COURT ST
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3648	4403	Lat : Long:				
3649	4404	Work Typ: REPR WMB Done For:				
3650	4405	Address : 965				
3651	4406	Street : E 7TH ST				
3652	4407	1st x-st: Dir S of COURT ST				
3653	4408	2nd x-st: Dir E of AVON ST				
3654	4409	Subdivsn: Lots:				
3655	4410	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW ENROUTE				
3656	4411	Boring : N On-going project: N Working In or Near R/R Easement: N				
3657	4412	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3658	4413	FLINTC 00022 MISDIGb 02/25/14 16:35:25 B40560696-00B EMER NEW GRID	FLINTC	B40560696	02/26/14	FLINT CITY WATER DEPARTMENT
3659	4415	**** Underground ****				
3660	4416	Ticket : B40560696 Rcvd: 02/25/14 16:32 Oper: BMF Rev: 00B				
3661	4417	Org Tkt : B40560696 Rcvd: 02/25/14 16:35 Oper: BMF				
3662	4419	Digstart: 02/26/14 Time: 10:00				
3663	4420	Tkt Life: 03/19/14 Time: 23:59				
3664	4422	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3665	4423	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3666	4424	E-mail : NONE				
3667	4425	FieldCnt: HOWARD /CELL Number: 810-577-8263				
3668	4427	County : GENESEE Place : FLINT /C				
3669	4429	Grids : 4302B8342A 4302C8342A 4302B8343D 4302C8343D				
3670	4430	Polygon : 43.042191/-83.717099 43.042240/-83.715227				
3671	4431	: 43.039594/-83.717031 43.039642/-83.715160				
3672	4432	Lat : Long:				
3673	4433	Work Typ: REPR WTR SERV NO FACIL Done For:				
3674	4434	Address :				
3675	4435	Street : N CHEVROLET AVE				
3676	4436	1st x-st: Dir W of DUPONT ST				
3677	4437	2nd x-st: Dir N of HAMILTON				
3678	4438	Subdivsn: Lots:				
3679	4439	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD AT ADDRS 2717 & 2713				
3680	4440	Boring : N On-going project: N Working In or Near R/R Easement: N				
3681	4441	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3682	4442	FLINTC 00023 MISDIGb 02/25/14 16:36:45 B40560697-00B EMER NEW GRID	FLINTC	B40560697	02/26/14	FLINT CITY WATER DEPARTMENT
3683	4444	**** Underground ****				
3684	4445	Ticket : B40560697 Rcvd: 02/25/14 16:35 Oper: BMF Rev: 00B				
3685	4446	Org Tkt : B40560697 Rcvd: 02/25/14 16:36 Oper: BMF				
3686	4448	Digstart: 02/26/14 Time: 12:00				
3687	4449	Tkt Life: 03/19/14 Time: 23:59				
3688	4451	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3689	4452	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3690	4453	E-mail : NONE				
3691	4454	FieldCnt: HOWARD /CELL Number: 810-577-8263				
3692	4456	County : GENESEE Place : FLINT /C				
3693	4458	Grids : 4303A8341B 4303A8341C 4303B8341B 4303B8341C				
3694	4459	Polygon : 43.063280/-83.694781 43.063347/-83.689718				
3695	4460	: 43.061954/-83.694763 43.062021/-83.689700				

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3658	HOWARD SWICKARD	REPR WTR SERV	Address :	Street : N CHEVROLET AVE	1st x-st: Dir W of DUPONT ST
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3682	HOWARD SWICKARD	REPR WTR SERV	Address : 743	Street : E PARKWAY AVE	1st x-st: Dir N of PIERSON RD
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3682	2nd x-st: Dir E of N SAGINAW ST
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3696	4461	Lat : Long:				
3697	4462	Work Typ: REPR WTR SERV NO FACIL Done For:				
3698	4463	Address : 743				
3699	4464	Street : E PARKWAY AVE				
3700	4465	1st x-st: Dir N of PIERSON RD				
3701	4466	2nd x-st: Dir E of N SAGINAW ST				
3702	4467	Subdivsn: Lots:				
3703	4468	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD				
3704	4469	Boring : N On-going project: N Working In or Near R/R Easement: N				
3705	4470	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3706	4471	FLINTC 00024 MISDIGb 02/25/14 18:29:08 B40560759-00B EMER NEW GRID	FLINTC	B40560759	02/26/14	FLINT CITY WATER DEPARTMENT
3707	4473	**** Underground ****				
3708	4474	Ticket : B40560759 Rcvd: 02/25/14 18:27 Oper: HDK Rev: 00B				
3709	4475	Org Tkt : B40560759 Rcvd: 02/25/14 18:29 Oper: HDK				
3710	4477	Digstart: 02/26/14 Time: 08:00				
3711	4478	Tkt Life: 03/19/14 Time: 23:59				
3712	4480	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3713	4481	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3714	4482	E-mail : NONE				
3715	4483	FieldCnt: PAUL Number: 810-397-7247				
3716	4485	County : GENESEE Place : FLINT /C				
3717	4487	Grids : 4300C8338A 4300C8338B 4300D8338A 4300D8338B				
3718	4488	Polygon : 43.004538/-83.648291 43.004564/-83.645204				
3719	4489	: 43.003177/-83.648280 43.003202/-83.645193				
3720	4490	Lat : Long:				
3721	4491	Work Typ: WMB Done For:				
3722	4492	Address : 3113				
3723	4493	Street : LIPPINCOTT BLVD				
3724	4494	1st x-st: Dir W of S AVERILL AVE				
3725	4495	2nd x-st: Dir E of S DORT HWY				
3726	4496	Subdivsn: Lots:				
3727	4497	Stk Info: STK FRT OF PROP & BTH SDS OF RD				
3728	4498	Boring : N On-going project: N Working In or Near R/R Easement: N				
3729	4499	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3730	4500	FLINTC 00017 MISDIGb 02/26/14 13:30:43 B40570505-00B EMER NEW GRID	FLINTC	B40570505	02/26/14	FLINT CITY WATER DEPARTMENT
3731	4502	**** Underground ****				
3732	4503	Ticket : B40570505 Rcvd: 02/26/14 13:28 Oper: MRP Rev: 00B				
3733	4504	Org Tkt : B40570505 Rcvd: 02/26/14 13:30 Oper: MRP				
3734	4506	Digstart: 02/26/14 Time: 13:28				
3735	4507	Tkt Life: 03/19/14 Time: 23:59				
3736	4509	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3737	4510	Phone : 810-577-8261 Ext: Fax :				
3738	4511	E-mail : NONE				
3739	4512	FieldCnt: Number:				
3740	4514	County : GENESEE Place : FLINT /C				
3741	4516	Grids : 4303B8342B 4303B8342C 4303B8342D 4303C8342B 4303C8342C				
3742	4517	: 4303C8342D				
3743	4518	Polygon : 43.058654/-83.710781 43.058701/-83.703870				

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3706	PAUL SIMPSON	WMB	Address : 3113	Street : LIPPINCOTT BLVD	1st x-st: Dir W of S AVERILL AVE
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3730	JEFF CHURCH	WMB	Address : 430	Street : W BALTIMORE	1st x-st: Dir E of DUPONT
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3744	4519	: 43.057294/-83.710772 43.057340/-83.703860				
3745	4520	Lat : Long:				
3746	4521	Work Typ: WMB Done For:				
3747	4522	Address : 430				
3748	4523	Street : W BALTIMORE				
3749	4524	1st x-st: Dir E of DUPONT				
3750	4525	2nd x-st: Dir S of PIERSON RD				
3751	4526	Subdivsn: Lots:				
3752	4527	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD CREW ON SITE				
3753	4528	Boring : N On-going project: N Working In or Near R/R Easement: N				
3754	4529	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3755	4530	FLINTC 00047 MISDIGb 02/26/14 16:07:19 B40570646-00B EMER NEW GRID	FLINTC	B40570646	02/27/14	FLINT CITY WATER DEPARTMENT
3756	4532	**** Underground ****				
3757	4533	Ticket : B40570646 Rcvd: 02/26/14 16:04 Oper: MRP Rev: 00B				
3758	4534	Org Tkt : B40570646 Rcvd: 02/26/14 16:06 Oper: MRP				
3759	4536	Digstart: 02/27/14 Time: 08:00				
3760	4537	Tkt Life: 03/20/14 Time: 23:59				
3761	4539	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3762	4540	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3763	4541	E-mail : NONE				
3764	4542	FieldCnt: CELL Number: 810-397-7247				
3765	4544	County : GENESEE Place : FLINT /C				
3766	4546	Grids : 4304B8340A 4304B8340B 4304C8340A 4304C8340B				
3767	4547	Polygon : 43.076170/-83.682386 43.076643/-83.678246				
3768	4548	: 43.073532/-83.682084 43.074005/-83.677945				
3769	4549	Lat : Long:				
3770	4550	Work Typ: WMB Done For:				
3771	4551	Address :				
3772	4552	Street : PREMIER				
3773	4553	1st x-st: Dir of BUNDY				
3774	4554	2nd x-st: Dir S of E CARPETER RD				
3775	4555	Subdivsn: Lots:				
3776	4556	Stk Info: E OF I -475 LOCATE 75FT RADIUS OF SE COR PREMIER & BUNDY				
3777	4557	Boring : N On-going project: N Working In or Near R/R Easement: N				
3778	4558	Members : ATTD BEECMD BUCK01 CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
3779	4559	FLINTC 00048 MISDIGb 02/26/14 16:09:12 B40570647-00B EMER NEW GRID	FLINTC	B40570647	02/27/14	FLINT CITY WATER DEPARTMENT
3780	4561	**** Underground ****				
3781	4562	Ticket : B40570647 Rcvd: 02/26/14 16:07 Oper: MRP Rev: 00B				
3782	4563	Org Tkt : B40570647 Rcvd: 02/26/14 16:09 Oper: MRP				
3783	4565	Digstart: 02/27/14 Time: 12:00				
3784	4566	Tkt Life: 03/20/14 Time: 23:59				
3785	4568	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3786	4569	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3787	4570	E-mail : NONE				
3788	4571	FieldCnt: CELL Number: 810-397-7247				
3789	4573	County : GENESEE Place : FLINT /C				
3790	4575	Grids : 4301A8343A 4301A8344D 4302D8343A 4302D8344D				
3791	4576	Polygon : 43.035085/-83.733083 43.034215/-83.731565				

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3755	PAUL SIMPSON	WMB	Address :	Street : PREMIER	1st x-st: Dir of BUNDY
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3779	PAUL SIMPSON	WMB	Address : 1813	Street : SENECA ST	1st x-st: Dir S of WELCH BLVD
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3792	4577	: 43.033053/-83.734249 43.032182/-83.732731				
3793	4578	Lat : Long:				
3794	4579	Work Typ: WMB Done For:				
3795	4580	Address : 1813				
3796	4581	Street : SENECA ST				
3797	4582	1st x-st: Dir S of WELCH BLVD				
3798	4583	2nd x-st: Dir W of BALLENGER HWY				
3799	4584	Subdivsn: Lots:				
3800	4585	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD				
3801	4586	Boring : N On-going project: N Working In or Near R/R Easement: N				
3802	4587	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
3803	4588	FLINTC 00049 MISDIGb 02/26/14 19:19:57 B40570690-00B EMER NEW GRID	FLINTC	B40570690	02/27/14	FLINT CITY WATER DEPARTMENT
3804	4590	**** Underground ****				
3805	4591	Ticket : B40570690 Rcvd: 02/26/14 19:18 Oper: HDK Rev: 00B				
3806	4592	Org Tkt : B40570690 Rcvd: 02/26/14 19:19 Oper: HDK				
3807	4594	Digstart: 02/27/14 Time: 08:00				
3808	4595	Tkt Life: 03/20/14 Time: 23:59				
3809	4597	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3810	4598	Phone : 810-577-8261 Ext: Fax :				
3811	4599	E-mail : NONE				
3812	4600	FieldCnt: Number:				
3813	4602	County : GENESEE Place : FLINT /C				
3814	4604	Grids : 4300A8340B 4300B8340B 4300B8340C				
3815	4605	Polygon : 43.012178/-83.677959 43.013493/-83.677229				
3816	4606	: 43.010798/-83.675472 43.012113/-83.674742				
3817	4607	Lat : Long:				
3818	4608	Work Typ: WMB Done For:				
3819	4609	Address :				
3820	4610	Street : LAPEER RD				
3821	4611	1st x-st: Dir N of I 69				
3822	4612	2nd x-st: Dir S of 9TH ST				
3823	4613	Subdivsn: Lots:				
3824	4614	Stk Info: STK FRT OF PROP & BTH SDS OF RD AT ADDRS 1357 & 1359				
3825	4615	Boring : N On-going project: N Working In or Near R/R Easement: N				
3826	4616	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
3827	4617	FLINTC 00004 MISDIGb 02/27/14 07:46:15 B40580049-00B EMER NEW GRID	FLINTC	B40580049	02/27/14	FLINT CITY WATER DEPARTMENT
3828	4619	**** Underground ****				
3829	4620	Ticket : B40580049 Rcvd: 02/27/14 07:43 Oper: MRP Rev: 00B				
3830	4621	Org Tkt : B40580049 Rcvd: 02/27/14 07:45 Oper: MRP				
3831	4623	Digstart: 02/27/14 Time: 08:00				
3832	4624	Tkt Life: 03/20/14 Time: 23:59				
3833	4626	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3834	4627	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3835	4628	E-mail : NONE				
3836	4629	FieldCnt: CELL Number: 810-577-8263				
3837	4631	County : GENESEE Place : FLINT /C				
3838	4633	Grids : 4303A8343D 4303B8343D				
3839	4634	Polygon : 43.064673/-83.719199 43.064752/-83.717329				

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3803	JEFF CHURCH	WMB	Address :	Street : LAPEER RD	1st x-st: Dir N of I 69
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3827	HOWARD SWICKARD	WMB	Address : 5414	Street : WINTHROP BLVD	1st x-st: Dir N of PIERSON RD
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3840	4635	: 43.061054/-83.719047 43.061133/-83.717177				
3841	4636	Lat : Long:				
3842	4637	Work Typ: WMB Done For:				
3843	4638	Address : 5414				
3844	4639	Street : WINTHROP BLVD				
3845	4640	1st x-st: Dir N of PIERSON RD				
3846	4641	2nd x-st: Dir E of FLEMING RD				
3847	4642	Subdivsn: Lots:				
3848	4643	Stk Info: LOCATE ENTIRE FRT OF PROP & BTH SDS OF RD CREW EN ROUTE				
3849	4644	Boring : N On-going project: N Working In or Near R/R Easement: N				
3850	4645	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3851	4646	FLINTC 00005 MISDIGb 02/27/14 08:41:21 B40580093-00B EMER NEW GRID	FLINTC	B40580093	02/27/14	FLINT CITY WATER DEPARTMENT
3852	4648	**** Underground ****				
3853	4649	Ticket : B40580093 Rcvd: 02/27/14 08:39 Oper: GMH Rev: 00B				
3854	4650	Org Tkt : B40580093 Rcvd: 02/27/14 08:41 Oper: GMH				
3855	4652	Digstart: 02/27/14 Time: 08:39				
3856	4653	Tkt Life: 03/20/14 Time: 23:59				
3857	4655	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3858	4656	Phone : 810-577-8261 Ext: Fax :				
3859	4657	E-mail : NONE				
3860	4658	FieldCnt: Number:				
3861	4660	County : GENESEE Place : FLINT /C				
3862	4662	Grids : 4300A8340B 4300A8340C 4300B8340B				
3863	4663	Polygon : 43.014518/-83.674398 43.013196/-83.673709				
3864	4664	: 43.012668/-83.677950 43.011345/-83.677261				
3865	4665	Lat : Long:				
3866	4666	Work Typ: WMB Done For:				
3867	4667	Address : 804				
3868	4668	Street : E 9TH ST				
3869	4669	1st x-st: Dir E of LAPEER RD				
3870	4670	2nd x-st: Dir N of I-69				
3871	4671	Subdivsn: Lots:				
3872	4672	Stk Info: STK W SD OF HSE CREW ON SITE				
3873	4673	Boring : N On-going project: N Working In or Near R/R Easement: N				
3874	4674	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC				
3875	4675	FLINTC 00001 MISDIGa 02/27/14 09:14:36 A40580057-00A EMER NEW GRID	FLINTC	A40580057	02/27/14	FLINT CITY WATER DEPARTMENT
3876	4677	**** Underground ****				
3877	4678	Ticket : A40580057 Rcvd: 02/27/14 09:12 Oper: PXP Rev: 00A				
3878	4679	Org Tkt : A40580057 Rcvd: 02/27/14 09:14 Oper: PXP				
3879	4681	Digstart: 02/27/14 Time: 09:12				
3880	4682	Tkt Life: 03/20/14 Time: 23:59				
3881	4684	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3882	4685	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3883	4686	E-mail : NONE				
3884	4687	FieldCnt: PAUL /CELL Number: 810-397-7247				
3885	4689	County : GENESEE Place : FLINT /C				
3886	4691	Grids : 4300B8339C 4300B8339D				
3887	4692	Polygon : 43.010701/-83.654868 43.010001/-83.653219				

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3851	JEFF CHURCH	WMB	Address : 804	Street : E 9TH ST	1st x-st: Dir E of LAPEER RD
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3875	PAUL SIMPSON	WMB	Address :	Street : S DORT HWY	1st x-st: Dir of LAPEER RD
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3888	4693	: 43.009438/-83.655404 43.008738/-83.653755				
3889	4694	Lat : Long:				
3890	4695	Work Typ: WMB Done For:				
3891	4696	Address :				
3892	4697	Street : S DORT HWY				
3893	4698	1st x-st: Dir of LAPEER RD				
3894	4699	2nd x-st: Dir S of I- 69				
3895	4700	Subdivsn: Lots:				
3896	4701	Stk Info: LOCATE 100FT RADIUS OF NW COR OF INTER CREW EN ROUTE				
3897	4702	Boring : N On-going project: N Working In or Near R/R Easement: N				
3898	4703	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 CTMN FLINTC GENCRC GISD MWFN				
3899	4704	FLINTC 00015 MISDIGb 02/27/14 12:57:49 B40580303-00B EMER NEW GRID	FLINTC	B40580303	02/28/14	FLINT CITY WATER DEPARTMENT
3900	4706	**** Underground ****				
3901	4707	Ticket : B40580303 Rcvd: 02/27/14 12:54 Oper: MRP Rev: 00B				
3902	4708	Org Tkt : B40580303 Rcvd: 02/27/14 12:57 Oper: MRP				
3903	4710	Digstart: 02/28/14 Time: 09:00				
3904	4711	Tkt Life: 03/21/14 Time: 23:59				
3905	4713	Firm : FLINT CITY WATER DEPARTMENT Caller: HOWARD SWICKARD				
3906	4714	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3907	4715	E-mail : NONE				
3908	4716	FieldCnt: BOBBY VAUGHN Number: 810-577-7180				
3909	4718	County : GENESEE Place : FLINT /C				
3910	4720	Grids : 4259B8340A 4259B8341D				
3911	4721	Polygon : 42.994777/-83.684117 42.994346/-83.682344				
3912	4722	: 42.993282/-83.684480 42.992851/-83.682707				
3913	4723	Lat : Long:				
3914	4724	Work Typ: RERP BRKN WTR SERV Done For:				
3915	4725	Address : 3016				
3916	4726	Street : S GRAND TRAVERSE ST				
3917	4727	1st x-st: Dir W of SAGINAW				
3918	4728	2nd x-st: Dir N of ATHERTON RD				
3919	4729	Subdivsn: Lots:				
3920	4730	Stk Info: LOCATE ENTIRE FRT OF PROP TO C/L OF RD				
3921	4731	Boring : N On-going project: N Working In or Near R/R Easement: N				
3922	4732	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC SPRNT4				
3923	4733	FLINTC 00002 MISDIGb 02/28/14 08:04:32 B40590058-00B EMER NEW GRID	FLINTC	B40590058	02/28/14	FLINT CITY WATER DEPARTMENT
3924	4735	**** Underground ****				
3925	4736	Ticket : B40590058 Rcvd: 02/28/14 08:02 Oper: SLD Rev: 00B				
3926	4737	Org Tkt : B40590058 Rcvd: 02/28/14 08:04 Oper: SLD				
3927	4739	Digstart: 02/28/14 Time: 08:02				
3928	4740	Tkt Life: 03/21/14 Time: 23:59				
3929	4742	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3930	4743	Phone : 810-577-8261 Ext: Fax :				
3931	4744	E-mail : NONE				
3932	4745	FieldCnt: Number:				
3933	4747	County : GENESEE Place : FLINT /C				
3934	4749	Grids : 4301B8343A 4301B8343B 4301B8343C 4301C8343A 4301C8343B				
3935	4750	: 4301C8343C				

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3899	HOWARD SWICKARD	RERP BRKN WTR SERV	Address : 3016	Street : S GRAND TRAVERSE ST	1st x-st: Dir W of SAGINAW
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3923	JEFF CHURCH	WMB	Address :	Street : RASKOB ST	1st x-st: Dir E of LAVENDER AVE
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3923	2nd x-st: Dir W of FOREST HILL AVE
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3936	4751	Polygon : 43.025092/-83.729800 43.026440/-83.729391				
3937	4752	: 43.023649/-83.725039 43.024997/-83.724630				
3938	4753	Lat : Long:				
3939	4754	Work Typ: WMB Done For:				
3940	4755	Address :				
3941	4756	Street : RASKOB ST				
3942	4757	1st x-st: Dir E of LAVENDER AVE				
3943	4758	2nd x-st: Dir W of FOREST HILL AVE				
3944	4759	Subdivsn: Lots:				
3945	4760	Stk Info: STK FRT OF PROP & BTH SDS OF RD AT ADDRS 2738, 2742 & 2746				
3946	4761	: CREW ON SITE				
3947	4762	Boring : N On-going project: N Working In or Near R/R Easement: N				
3948	4763	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
3949	4764	FLINTC 00003 MISDIGb 02/28/14 08:21:03 B40590069-00B EMER NEW GRID	FLINTC	B40590069	02/28/14	FLINT CITY WATER DEPARTMENT
3950	4766	**** Underground ****				
3951	4767	Ticket : B40590069 Rcvd: 02/28/14 08:18 Oper: SLD Rev: 00B				
3952	4768	Org Tkt : B40590069 Rcvd: 02/28/14 08:20 Oper: SLD				
3953	4770	Digstart: 02/28/14 Time: 08:18				
3954	4771	Tkt Life: 03/21/14 Time: 23:59				
3955	4773	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
3956	4774	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
3957	4775	E-mail : NONE				
3958	4776	FieldCnt: PAUL SIMPSON (CELL) Number: 810-397-7247				
3959	4778	County : GENESEE Place : BURTON /C				
3960	4780	Grids : 4258A8339C 4258A8339D 4258B8339C 4258B8339D				
3961	4781	Polygon : 42.981028/-83.654584 42.981190/-83.652110				
3962	4782	: 42.975767/-83.654240 42.975929/-83.651767				
3963	4783	Lat : Long:				
3964	4784	Work Typ: WMB Done For:				
3965	4785	Address : G3070				
3966	4786	Street : S DORT HWY				
3967	4787	1st x-st: Dir S of HEMPHILL RD				
3968	4788	2nd x-st: Dir N of BRISTOL RD				
3969	4789	Subdivsn: Lots:				
3970	4790	Stk Info: STK FRT OF PROP TO C/L OF RD CREW ON SITE				
3971	4791	Boring : N On-going project: N Working In or Near R/R Easement: N				
3972	4792	Members : ATTD BURTON CEEDIS CEGD20 CEGDIS COMTV2 FLINTC GISD				
3973	4793	FLINTC 00010 MISDIGb 02/28/14 13:50:36 B40590389-00B EMER NEW GRID	FLINTC	B40590389	03/01/14	FLINT CITY WATER DEPARTMENT
3974	4795	**** Underground ****				
3975	4796	Ticket : B40590389 Rcvd: 02/28/14 13:48 Oper: SJG Rev: 00B				
3976	4797	Org Tkt : B40590389 Rcvd: 02/28/14 13:50 Oper: SJG				
3977	4799	Digstart: 03/01/14 Time: 06:00				
3978	4800	Tkt Life: 03/22/14 Time: 23:59				
3979	4802	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
3980	4803	Phone : 810-577-8261 Ext: Fax :				
3981	4804	E-mail : NONE				
3982	4805	FieldCnt: Number:				
3983	4807	County : GENESEE Place : FLINT /C				

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3949	PAUL SIMPSON	WMB	Address : G3070	Street : S DORT HWY	1st x-st: Dir S of HEMPHILL RD
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3973	JEFF CHURCH	WMB	Address : 1010	Street : VICTORIA AVE	1st x-st: Dir N of W ATHERTON RD
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3984	4809	Grids : 4259B8341A 4259B8341B				
3985	4810	Polygon : 42.993778/-83.697212 42.993817/-83.692131				
3986	4811	: 42.992418/-83.697202 42.992458/-83.692120				
3987	4812	Lat : Long:				
3988	4813	Work Typ: WMB Done For:				
3989	4814	Address : 1010				
3990	4815	Street : VICTORIA AVE				
3991	4816	1st x-st: Dir N of W ATHERTON RD				
3992	4817	2nd x-st: Dir W of FENTON RD				
3993	4818	Subdivsn: Lots:				
3994	4819	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
3995	4820	Boring : N On-going project: N Working In or Near R/R Easement: N				
3996	4821	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
3997	4822	FLINTC 00011 MISDIGb 02/28/14 13:51:32 B40590390-00B EMER NEW GRID	FLINTC	B40590390	03/01/14	FLINT CITY WATER DEPARTMENT
3998	4824	**** Underground ****				
3999	4825	Ticket : B40590390 Rcvd: 02/28/14 13:50 Oper: SJG Rev: 00B				
4000	4826	Org Tkt : B40590390 Rcvd: 02/28/14 13:51 Oper: SJG				
4001	4828	Digstart: 03/01/14 Time: 06:00				
4002	4829	Tkt Life: 03/22/14 Time: 23:59				
4003	4831	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
4004	4832	Phone : 810-577-8261 Ext: Fax :				
4005	4833	E-mail : NONE				
4006	4834	FieldCnt: Number:				
4007	4836	County : GENESEE Place : FLINT /C				
4008	4838	Grids : 4302C8338C 4302C8338D 4302D8338C 4302D8338D				
4009	4839	Polygon : 43.038493/-83.638891 43.038585/-83.634647				
4010	4840	: 43.037121/-83.638861 43.037212/-83.634618				
4011	4841	Lat : Long:				
4012	4842	Work Typ: WMB Done For:				
4013	4843	Address : 3829				
4014	4844	Street : WOODROW AVE				
4015	4845	1st x-st: Dir W of CENTER RD				
4016	4846	2nd x-st: Dir N of DAVISON RD				
4017	4847	Subdivsn: Lots:				
4018	4848	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
4019	4849	Boring : N On-going project: N Working In or Near R/R Easement: N				
4020	4850	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC				
4021	4851	FLINTC 00015 MISDIGb 02/28/14 14:36:21 B40590443-00B EMER NEW GRID	FLINTC	B40590443	03/01/14	FLINT CITY WATER DEPARTMENT
4022	4853	**** Underground ****				
4023	4854	Ticket : B40590443 Rcvd: 02/28/14 14:33 Oper: DMS Rev: 00B				
4024	4855	Org Tkt : B40590443 Rcvd: 02/28/14 14:35 Oper: DMS				
4025	4857	Digstart: 03/01/14 Time: 06:00				
4026	4858	Tkt Life: 03/22/14 Time: 23:59				
4027	4860	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
4028	4861	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
4029	4862	E-mail : NONE				
4030	4863	FieldCnt: PAUL/CELL Number: 810-397-7247				
4031	4865	County : GENESEE Place : FLINT /C				

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3997	JEFF CHURCH	WMB	Address : 3829	Street : WOODROW AVE	1st x-st: Dir W of CENTER RD
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4021	PAUL SIMPSON	WMB	Address : 209	Street : W H SCHWARTZ DR	1st x-st: Dir S of ROBERT T LONGWAY BLVD
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4032	4867	Grids : 4301C8340A 4301C8341D				
4033	4868	Polygon : 43.023613/-83.686803 43.024950/-83.686274				
4034	4869	: 43.022038/-83.682826 43.023375/-83.682297				
4035	4870	Lat : Long:				
4036	4871	Work Typ: WMB Done For:				
4037	4872	Address : 209				
4038	4873	Street : W H SCHWARTZ DR				
4039	4874	1st x-st: Dir S of ROBERT T LONGWAY BLVD				
4040	4875	2nd x-st: Dir W of CHAVEZ				
4041	4876	Subdivsn: Lots:				
4042	4877	Stk Info: W H SCHWARTZ DR AKA N AVON ST LOCATE 50FT RADIUS OF BARRICADE				
4043	4878	: LOC AT FRT OF PROP				
4044	4879	Boring : N On-going project: N Working In or Near R/R Easement: N				
4045	4880	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GENCRC GISD MCLEO1				
4046	4881	FLINTC 00001 MISDIGb 02/26/14 07:23:41 B40570047-00B EMER NEW GRID	FLINTC	B40570047	02/26/14	FLINT CITY WATER DEPARTMENT
4047	4883	**** Underground ****				
4048	4884	Ticket : B40570047 Rcvd: 02/26/14 07:22 Oper: GMH Rev: 00B				
4049	4885	Org Tkt : B40570047 Rcvd: 02/26/14 07:23 Oper: GMH				
4050	4887	Digstart: 02/26/14 Time: 08:00				
4051	4888	Tkt Life: 03/19/14 Time: 23:59				
4052	4890	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
4053	4891	Phone : 810-577-8261 Ext: Fax :				
4054	4892	E-mail : NONE				
4055	4893	FieldCnt: Number:				
4056	4895	County : GENESEE Place : FLINT /C				
4057	4897	Grids : 4300A8339A 4300A8339B 4301D8339A 4301D8339B				
4058	4898	Polygon : 43.016866/-83.664830 43.016908/-83.660931				
4059	4899	: 43.015494/-83.664815 43.015536/-83.660917				
4060	4900	Lat : Long:				
4061	4901	Work Typ: WMB Done For:				
4062	4902	Address : 2113				
4063	4903	Street : CALUMET ST				
4064	4904	1st x-st: Dir W of VERNON DR				
4065	4905	2nd x-st: Dir S of COURT ST				
4066	4906	Subdivsn: Lots:				
4067	4907	Stk Info: STK FRT OF PROP & BTH SDS OF RD				
4068	4908	Boring : N On-going project: N Working In or Near R/R Easement: N				
4069	4909	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
4070	4910	FLINTC 00002 MISDIGb 03/01/14 10:04:51 B40600083-00B EMER NEW GRID	FLINTC	B40600083	03/01/14	FLINT CITY WATER DEPARTMENT
4071	4912	**** Underground ****				
4072	4913	Ticket : B40600083 Rcvd: 03/01/14 10:02 Oper: DJH Rev: 00B				
4073	4914	Org Tkt : B40600083 Rcvd: 03/01/14 10:04 Oper: DJH				
4074	4916	Digstart: 03/01/14 Time: 10:02				
4075	4917	Tkt Life: 03/22/14 Time: 23:59				
4076	4919	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
4077	4920	Phone : 810-577-8261 Ext: Fax :				
4078	4921	E-mail : NONE				
4079	4922	FieldCnt: Number:				

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4046	JEFF CHURCH	WMB	Address : 2113	Street : CALUMET ST	1st x-st: Dir W of VERNON DR
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4070	JEFF CHURCH	WMB	Address : 2213	Street : ILLINOIS AVE	1st x-st: Dir E of VERNON
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4080	4924	County : GENESEE Place : FLINT /C				
4081	4926	Grids : 4301A8339A 4301A8339B				
4082	4927	Polygon : 43.032387/-83.662634 43.032433/-83.659799				
4083	4928	: 43.031026/-83.662612 43.031071/-83.659777				
4084	4929	Lat : Long:				
4085	4930	Work Typ: WMB Done For:				
4086	4931	Address : 2213				
4087	4932	Street : ILLINOIS AVE				
4088	4933	1st x-st: Dir E of VERNON				
4089	4934	2nd x-st: Dir W of DORT HWY				
4090	4935	Subdivsn: Lots:				
4091	4936	Stk Info: STK FRT OF PROP & BTH SDS OF RD CREW ON SITE				
4092	4937	Boring : N On-going project: N Working In or Near R/R Easement: N				
4093	4938	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
4094	4939	FLINTC 00003 MISDIGb 02/26/14 08:26:10 B40570121-00B EMER NEW GRID	FLINTC	B40570121	02/26/14	FLINT CITY WATER DEPARTMENT
4095	4941	**** Underground ****				
4096	4942	Ticket : B40570121 Rcvd: 02/26/14 08:24 Oper: MRP Rev: 00B				
4097	4943	Org Tkt : B40570121 Rcvd: 02/26/14 08:25 Oper: MRP				
4098	4945	Digstart: 02/26/14 Time: 08:24				
4099	4946	Tkt Life: 03/19/14 Time: 23:59				
4100	4948	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
4101	4949	Phone : 810-577-8261 Ext: Fax :				
4102	4950	E-mail : NONE				
4103	4951	FieldCnt: Number:				
4104	4953	County : GENESEE Place : FLINT /C				
4105	4955	Grids : 4300A8339A 4300A8339B 4301D8339A 4301D8339B				
4106	4956	Polygon : 43.016866/-83.664830 43.016908/-83.660931				
4107	4957	: 43.015494/-83.664815 43.015536/-83.660917				
4108	4958	Lat : Long:				
4109	4959	Work Typ: WMB Done For:				
4110	4960	Address : 2107				
4111	4961	Street : CALUMET ST				
4112	4962	1st x-st: Dir W of VERNON AVE				
4113	4963	2nd x-st: Dir S of COURT ST				
4114	4964	Subdivsn: Lots:				
4115	4965	Stk Info: LOCATE FRT OF ADDR & BTH SDS OF RD CREW ON SITE				
4116	4966	Boring : N On-going project: N Working In or Near R/R Easement: N				
4117	4967	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
4118	4968	FLINTC 00002 MISDIGb 03/03/14 07:41:30 B40620042-00B EMER NEW GRID	FLINTC	B40620042	03/03/14	FLINT CITY WATER DEPARTMENT
4119	4970	**** Underground ****				
4120	4971	Ticket : B40620042 Rcvd: 03/03/14 07:39 Oper: LCG Rev: 00B				
4121	4972	Org Tkt : B40620042 Rcvd: 03/03/14 07:41 Oper: LCG				
4122	4974	Digstart: 03/03/14 Time: 14:00				
4123	4975	Tkt Life: 03/24/14 Time: 23:59				
4124	4977	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
4125	4978	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
4126	4979	E-mail : NONE				
4127	4980	FieldCnt: Number: 810-397-7247				

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4094	JEFF CHURCH	WMB	Address : 2107	Street : CALUMET ST	1st x-st: Dir W of VERNON AVE
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4118	PAUL SIMPSON	WMB	Address :	Street : DAKOTA AVE	1st x-st: Dir W of CENTER RD
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4128	4982	County : GENESEE Place : FLINT /C				
4129	4984	Grids : 4302B8338C 4302B8338D 4302C8338C 4302C8338D				
4130	4985	Polygon : 43.042267/-83.641527 43.042362/-83.636950				
4131	4986	: 43.040885/-83.641498 43.040981/-83.636921				
4132	4987	Lat : Long:				
4133	4988	Work Typ: WMB Done For:				
4134	4989	Address :				
4135	4990	Street : DAKOTA AVE				
4136	4991	1st x-st: Dir W of CENTER RD				
4137	4992	2nd x-st: Dir S of LEITH ST				
4138	4993	Subdivsn: Lots:				
4139	4994	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD AT ADDR 3720 & 3724				
4140	4995	Boring : N On-going project: N Working In or Near R/R Easement: N				
4141	4996	Members : ATTD CCFIBR CEEDIS CEGDIS CEGTRN COMTV2 FLINTC GENCRC				
4142	4997	FLINTC 00003 MISDIGb 03/03/14 07:42:37 B40620046-00B EMER NEW GRID	FLINTC	B40620046	03/04/14	FLINT CITY WATER DEPARTMENT
4143	4999	**** Underground ****				
4144	5000	Ticket : B40620046 Rcvd: 03/03/14 07:41 Oper: LCG Rev: 00B				
4145	5001	Org Tkt : B40620046 Rcvd: 03/03/14 07:42 Oper: LCG				
4146	5003	Digstart: 03/04/14 Time: 08:00				
4147	5004	Tkt Life: 03/25/14 Time: 23:59				
4148	5006	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
4149	5007	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
4150	5008	E-mail : NONE				
4151	5009	FieldCnt: Number: 810-397-7247				
4152	5011	County : GENESEE Place : FLINT /C				
4153	5013	Grids : 4300C8343A 4300C8343B				
4154	5014	Polygon : 43.007548/-83.730284 43.007601/-83.727428				
4155	5015	: 43.006187/-83.730259 43.006239/-83.727403				
4156	5016	Lat : Long:				
4157	5017	Work Typ: WMB Done For:				
4158	5018	Address : 3106				
4159	5019	Street : W COURT ST				
4160	5020	1st x-st: Dir W of BEECHER RD				
4161	5021	2nd x-st: Dir E of BALLENGER HWY				
4162	5022	Subdivsn: Lots:				
4163	5023	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
4164	5024	Boring : N On-going project: N Working In or Near R/R Easement: N				
4165	5025	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC GISD				
4166	5026	FLINTC 00004 MISDIGb 03/03/14 07:43:35 B40620047-00B EMER NEW GRID	FLINTC	B40620047	03/04/14	FLINT CITY WATER DEPARTMENT
4167	5028	**** Underground ****				
4168	5029	Ticket : B40620047 Rcvd: 03/03/14 07:42 Oper: LCG Rev: 00B				
4169	5030	Org Tkt : B40620047 Rcvd: 03/03/14 07:43 Oper: LCG				
4170	5032	Digstart: 03/04/14 Time: 08:00				
4171	5033	Tkt Life: 03/25/14 Time: 23:59				
4172	5035	Firm : FLINT CITY WATER DEPARTMENT Caller: PAUL SIMPSON				
4173	5036	Phone : 810-766-7202 Ext: Fax : 810-742-6283				
4174	5037	E-mail : NONE				
4175	5038	FieldCnt: Number: 810-397-7247				

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4142	PAUL SIMPSON	WMB	Address : 3106	Street : W COURT ST	1st x-st: Dir W of BEECHER RD
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4166	PAUL SIMPSON	WMB	Address : 3116	Street : PENCOMBE PL	1st x-st: Dir W of BRADLEY
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4176	5040	County : GENESEE Place : FLINT /C				
4177	5042	Grids : 4300B8343B 4300B8343C				
4178	5043	Polygon : 43.010718/-83.727093 43.012117/-83.726562				
4179	5044	: 43.009217/-83.723135 43.010616/-83.722604				
4180	5045	Lat : Long:				
4181	5046	Work Typ: WMB Done For:				
4182	5047	Address : 3116				
4183	5048	Street : PENCOMBE PL				
4184	5049	1st x-st: Dir W of BRADLEY				
4185	5050	2nd x-st: Dir N of COURT ST				
4186	5051	Subdivsn: Lots:				
4187	5052	Stk Info: LOCATE FRT OF PROP & BTH SDS OF RD				
4188	5053	Boring : N On-going project: N Working In or Near R/R Easement: N				
4189	5054	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				
4190	5055	FLINTC 00005 MISDIGb 03/03/14 07:46:44 B40620051-00B EMER NEW GRID	FLINTC	B40620051	03/03/14	FLINT CITY WATER DEPARTMENT
4191	5057	**** Underground ****				
4192	5058	Ticket : B40620051 Rcvd: 03/03/14 07:43 Oper: MRP Rev: 00B				
4193	5059	Org Tkt : B40620051 Rcvd: 03/03/14 07:46 Oper: MRP				
4194	5061	Digstart: 03/03/14 Time: 08:00				
4195	5062	Tkt Life: 03/24/14 Time: 23:59				
4196	5064	Firm : FLINT CITY WATER DEPARTMENT Caller: JEFF CHURCH				
4197	5065	Phone : 810-577-8261 Ext: Fax :				
4198	5066	E-mail : NONE				
4199	5067	FieldCnt: Number:				
4200	5069	County : GENESEE Place : FLINT /C				
4201	5071	Grids : 4303A8341A 4303A8341B 4303B8341A 4303B8341B				
4202	5072	Polygon : 43.064651/-83.699398 43.064490/-83.694266				
4203	5073	: 43.062104/-83.699478 43.061943/-83.694346				
4204	5074	Lat : Long:				
4205	5075	Work Typ: WMB Done For:				
4206	5076	Address :				
4207	5077	Street : LYNDON AVE				
4208	5078	1st x-st: Dir of FULTON ST				
4209	5079	2nd x-st: Dir W of SAGINAW ST				
4210	5080	Subdivsn: Lots:				
4211	5081	Stk Info: N OF PIERSON RD STK 50FT RADIUS OF NW COR LYNDON & FULTON				
4212	5082	: CREW ON SITE				
4213	5083	Boring : N On-going project: N Working In or Near R/R Easement: N				
4214	5084	Members : ATTD CCFIBR CEEDIS CEGDIS COMTV2 FLINTC				

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4190	JEFF CHURCH	WMB	Address :	Street : LYNDON AVE	1st x-st: Dir of FULTON ST
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1	Date	Location of Leak	Total Address	Leak Description	Pipe Size	Pipe Material	Cause of Leak
2	1/4/2013	1700 N. Averill Ave.	1700 N. Averill Ave.,Flint, MI	Clean break	12" dia.	Cast Iron	Wintertime conditions
3	1/6/2013	2715 N. Averill Ave.	2715 N. Averill Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
4	1/7/2013	2041 N. Averill Ave.	2041 N. Averill Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
5	1/15/2013	2923 Agree Ave.	2923 Agree Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
6	1/31/2013	E. Atherton Rd. & Red Arrow Rd.	E. Atherton Rd. & Red Arrow Rd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
7	3/26/2013	2500 N. Averill Ave.	2500 N. Averill Ave.,Flint, MI	2" dia hole	6" dia.	Cast Iron	pipe failure
8	6/3/2013	737 E. Alma Ave.	737 E. Alma Ave.,Flint, MI	1" dia hole	6" dia.	Cast Iron	pipe failure
9	11/12/2013	3312 Buick St.	3312 Buick St.,Flint, MI	2" dia hole	6" dia.	Cast Iron	Water hammer
10	1/6/2014	2002 E. Court St.	2002 E. Court St.,Flint, MI	Clean break	12" dia.	Cast Iron	Wintertime conditions
11	1/7/2014	N. Averill Ave. & McClure Ave.	N. Averill Ave. & McClure Ave.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
12	1/8/2014	3505 Comanche Ave.	3505 Comanche Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
13	1/8/2014	5610 Glenn Ave.	5610 Glenn Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
14	1/9/2014	2959 Henry St.	2959 Henry St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
15	1/9/2014	3517 Esther St.	3517 Esther St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
16	1/9/2014	6400 Selby St.	6400 Selby St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
17	1/10/2014	1946 S. Averill Ave.	1946 S. Averill Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
18	1/10/2014	Dolphaine Ln. & Huggins St.	Dolphaine Ln. & Huggins St.,Flint, MI	hydrant lead	6" dia.	Cast Iron	Wintertime conditions
19	1/11/2014	2817 Lippincott Blvd.	2817 Lippincott Blvd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
20	1/13/2014	5402 Leslie Dr.	5402 Leslie Dr.,Flint, MI	Service line	6" dia.	Cast Iron	Wintertime conditions
21	1/13/2014	Gibson St. & Gainey Ave.	Gibson St. & Gainey Ave.,Flint, MI	Split tee	6" dia.	Cast Iron	Wintertime conditions
22	1/14/2014	1406 Bent Dr.	1406 Bent Dr.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
23	1/15/2014	5710 Glenn Ave.	5710 Glenn Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
24	1/16/2014	2501 S. Dort Hwy.	2501 S. Dort Hwy.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
25	1/16/2014	410 Grace St.	410 Grace St.,Flint, MI	hole in mechanical bell	6" dia.	Cast Iron	Wintertime conditions
26	1/18/2014	DuPont St. & Copeman Blvd.	DuPont St. & Copeman Blvd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
27	1/18/2014	Lippincott Blvd. & Chelan St.	Lippincott Blvd. & Chelan St.,Flint, MI	Split at pipe bell	8" dia.	Cast Iron	Wintertime conditions
28	1/18/2014	Lippincott Blvd. & Chelan St.	Lippincott Blvd. & Chelan St.,Flint, MI	Split at pipe bell	8" dia.	Cast Iron	Wintertime conditions
29	1/21/2014	Buick St. & E. Gillespie Ave.	Buick St. & E. Gillespie Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
30	1/22/2014	1905 McPhail St.	1905 McPhail St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
31	1/22/2014	3825 Woodrow Ave.	3825 Woodrow Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
32	1/22/2014	402 E. Atherton Rd.	402 E. Atherton Rd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
33	1/23/2014	3514 Winona St.	3514 Winona St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
34	1/23/2014	Harrison St. & E. First St.	Harrison St. & E. First St.,Flint, MI	Clean break	6" dia.	Cast Iron	mechanical damage
35	1/24/2014	1330 DuPont St.	1330 DuPont St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
36	1/24/2014	4214 Winona St.	4214 Winona St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
37	1/25/2014	1601 Crestbrook Ln.	1601 Crestbrook Ln.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
38	1/27/2014	102 W. Flint Park Blvd.	102 W. Flint Park Blvd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
39	1/27/2014	2902 McClure Ave.	2902 McClure Ave.,Flint, MI	Corp break	8" dia.	Cast Iron	Wintertime conditions
40	1/27/2014	Harrison St. & E. First St.	Harrison St. & E. First St.,Flint, MI	Clean break	6" dia.	Cast Iron	mechanical damage
41	1/28/2014	410 E. Newall St.	410 E. Newall St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
42	1/29/2014	Gladwyn St. & Cadillac St.	Gladwyn St. & Cadillac St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
43	1/29/2014	Woodbridge St. & Stevenson St.	Woodbridge St. & Stevenson St.,Flint, MI	Split tee	6" dia.	Cast Iron	pipe failure
44	1/30/2014	2917 Cheyenne Ave.	2917 Cheyenne Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
45	1/30/2014	Bennett Ave. & Bennett Ct.	Bennett Ave. & Bennett Ct.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
46	1/30/2014	Corunna Rd. & Darling St.	Corunna Rd. & Darling St.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
47	1/31/2014	1421 Kearsley Park Blvd.	1421 Kearsley Park Blvd.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
48	1/31/2014	Pitkin Ave. & N. Dexter St.	Pitkin Ave. & N. Dexter St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions

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49	1/31/2014	White St. & Iroquois Ave.	White St. & Iroquois Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
50	2/1/2014	1611 Colorado Ave.	1611 Colorado Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
51	2/3/2014	2952 Clement St.	2952 Clement St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
52	2/3/2014	3808 Dakota Ave.	3808 Dakota Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
53	2/4/2014	1602 Concord St.	1602 Concord St.,Flint, MI	valve face	6" dia.	Cast Iron	Wintertime conditions
54	2/4/2014	2722 Mackin Rd.	2722 Mackin Rd.,Flint, MI	Split at pipe bell	8" dia.	Cast Iron	Wintertime conditions
55	2/4/2014	302 W. Home Ave.	302 W. Home Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
56	2/4/2014	313 E. Home Ave.	313 E. Home Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
57	2/4/2014	975 Johnson Ave.	975 Johnson Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
58	2/4/2014	S. Ballenger Hwy. & Whitney Ave.	S. Ballenger Hwy. & Whitney Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
59	2/5/2014	1705 Montclair Ave.	1705 Montclair Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
60	2/5/2014	1917 Utah Ave.	1917 Utah Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
61	2/5/2014	S. Franklin Ave. & E. Second St.	S. Franklin Ave. & E. Second St.,Flint, MI	partial break	6" dia.	Cast Iron	Wintertime conditions
62	2/6/2014	1201 Burlington Dr.	1201 Burlington Dr.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
63	2/6/2014	2509 Burns St.	2509 Burns St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
64	2/6/2014	Richfield Rd. & N. Franklin Ave.	Richfield Rd. & N. Franklin Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
65	2/7/2014	1737 Leith St.	1737 Leith St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
66	2/8/2014	1701 Pennsylvania Ave.	1701 Pennsylvania Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
67	2/8/2014	5612 Griggs Dr.	5612 Griggs Dr.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
68	2/10/2014	1631 Pennsylvania Ave.	1631 Pennsylvania Ave.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
69	2/10/2014	2106 Cartier St.	2106 Cartier St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
70	2/10/2014	3906 Joyner St.	3906 Joyner St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
71	2/10/2014	3917 W. Kearsley St.	3917 W. Kearsley St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
72	2/10/2014	5713 Edwards St.	5713 Edwards St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
73	2/11/2014	1317 Mann Ave.	1317 Mann Ave.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
74	2/11/2014	2518 Prospect St.	2518 Prospect St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
75	2/11/2014	314 W. Paterson St.	314 W. Paterson St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
76	2/11/2014	3608 Dakota Ave.	3608 Dakota Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
77	2/12/2014	1721 Pennsylvania Ave.	1721 Pennsylvania Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
78	2/12/2014	1857 S. Averill Ave.	1857 S. Averill Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
79	2/12/2014	401 Carton St.	401 Carton St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
80	2/12/2014	601 E. Dewey St.	601 E. Dewey St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
81	2/13/2014	2202 Maybury Ave.	2202 Maybury Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
82	2/13/2014	238 W. Witherbee St.	238 W. Witherbee St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
83	2/13/2014	4226 Wisner St.	4226 Wisner St., Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
84	2/14/2014	3202 Larchmont St.	3202 Larchmont St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
85	2/14/2014	N. Chevrolet Ave. & Prospect St.	N. Chevrolet Ave. & Prospect St.,Flint, MI	Spiral break	6" dia.	Cast Iron	Wintertime conditions
86	2/15/2014	2807 N. Averill Ave.	2807 N. Averill Ave.,Flint, MI	hole in mechanical bell	4" dia.	Cast Iron	Wintertime conditions
87	2/15/2014	4068 N. Dort Hwy.	4068 N. Dort Hwy.,Flint, MI	Lead joint	24" dia.	Cast Iron	pipe failure
88	2/17/2014	1920 Wolcott St.	1920 Wolcott St.,Flint, MI	Pipe bell clean break	6" dia.	Cast Iron	Wintertime conditions
89	2/17/2014	E. Pasadena Ave. & Esther St.	E. Pasadena Ave. & Esther St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
90	2/18/2014	Pitkin Ave. & Newcombe St.	Pitkin Ave. & Newcombe St.,Flint, MI	Split at pipe bell	8" dia.	Cast Iron	Wintertime conditions
91	2/19/2014	W. Fifth Ave. & Garland St.	W. Fifth Ave. & Garland St.,Flint, MI	Tapping saddle	12" dia.	Cast Iron	Wintertime conditions
92	2/20/2014	3105 Cherokee Ave.	3105 Cherokee Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
93	2/20/2014	901 Markham St.	901 Markham St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
94	2/20/2014	E. Carpenter Rd. West of Alfred St.	E. Carpenter Rd. West of Alfred St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
95	2/21/2014	326 White St.	326 White St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
96	2/21/2014	711 Welch Blvd.	711 Welch Blvd.,Flint, MI	4" hole	6" dia.	Cast Iron	Wintertime conditions

	A	B	C	D	E	F	G
97	2/22/2014	1009 S. Franklin Ave.	1009 S. Franklin Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
98	2/22/2014	Pettibone Ave. & Brunswick Ave.	Pettibone Ave. & Brunswick Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
99	2/24/2014	2948 Concord St.	2948 Concord St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
100	2/24/2014	718 Frank St.	718 Frank St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
101	2/24/2014	G-3299 Cheyenne Ave.	G-3299 Cheyenne Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
102	2/24/2014	W. Home Ave. & Baldwin Blvd.	W. Home Ave. & Baldwin Blvd.,Flint, MI	4" hole	6" dia.	Cast Iron	Wintertime conditions
103	2/24/2014	W. Home Ave. & Glenn Ave.	W. Home Ave. & Glenn Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
104	2/25/2014	2210 Canniff St.	2210 Canniff St.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
105	2/25/2014	3202 Lawndale Ave.	3202 Lawndale Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
106	2/26/2014	2113 Calumet St.	2113 Calumet St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
107	2/26/2014	2618 Norbert St.	2618 Norbert St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
108	2/26/2014	3113 Lippincott Blvd.	3113 Lippincott Blvd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
109	2/26/2014	430 W. Baltimore Blvd.	430 W. Baltimore Blvd.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
110	2/26/2014	Fulton St. & E. Parkway Ave.	Fulton St. & E. Parkway Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
111	2/27/2014	1357 Lapeer Rd.	1357 Lapeer Rd.,Flint, MI	Service line	6" dia.	Cast Iron	Wintertime conditions
112	2/27/2014	3315 Mallery St.	3315 Mallery St.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
113	2/28/2014	2742 Raskob St.	2742 Raskob St.,Flint, MI	Service line	6" dia.	Cast Iron	Wintertime conditions
114	2/28/2014	G-3370 S. Dort Hwy.	G-3370 S. Dort Hwy.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
115	3/1/2014	1010 Victoria Ave.	1010 Victoria Ave.,Flint, MI	hole in mechanical bell	6" dia.	Cast Iron	Wintertime conditions
116	3/1/2014	2213 Illinois Ave.	2213 Illinois Ave.,Flint, MI	Service line	6" dia.	Cast Iron	Wintertime conditions
117	3/1/2014	3829 Woodrow Ave.	3829 Woodrow Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
118	3/3/2014	145 E. Foss Ave.	145 E. Foss Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
119	3/3/2014	3723 Dakota Ave.	3723 Dakota Ave.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
120	3/3/2014	413 E. Genesee St.	413 E. Genesee St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
121	3/3/2014	E. Bundy Ave. & Premier St.	E. Bundy Ave. & Premier St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
122	3/3/2014	Fulton St. & E. Lyndon Ave.	Fulton St. & E. Lyndon Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
123	3/3/2014	Rosedale Ave. & Horton Ave.	Rosedale Ave. & Horton Ave.,Flint, MI	hole in mechanical bell	6" dia.	Cast Iron	Wintertime conditions
124	3/4/2014	1518 Avenue B	1518 Avenue B,Flint, MI	Clean break	4" dia.	Cast Iron	Wintertime conditions
125	3/4/2014	1941 Hosler St.	1941 Hosler St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
126	3/4/2014	3106 W. Court St.	3106 W. Court St.,Flint, MI	Split at pipe bell	8" dia.	Cast Iron	Wintertime conditions
127	3/4/2014	3116 Pencombe Pl.	3116 Pencombe Pl.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
128	3/4/2014	3514 Foster St.	3514 Foster St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
129	3/5/2014	2320 Miller Rd.	2320 Miller Rd.,Flint, MI	Split at pipe bell	8" dia.	Cast Iron	Wintertime conditions
130	3/5/2014	2522 Woodrow Ave.	2522 Woodrow Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
131	3/5/2014	932 Markham St.	932 Markham St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	n/a
132	3/5/2014	Irene Ave. & Miller Rd.	Irene Ave. & Miller Rd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
133	3/6/2014	1016 Harmon St.	1016 Harmon St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
134	3/6/2014	2502 Branch Rd.	2502 Branch Rd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
135	3/6/2014	527 E. Genesee St.	527 E. Genesee St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
136	3/6/2014	Meida St. & Mannhall Ave.	Meida St. & Mannhall Ave.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
137	3/7/2014	Iroquois Ave. & W. Dayton St.	Iroquois Ave. & W. Dayton St.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
138	3/8/2014	1723 Dorothy Dr.	1723 Dorothy Dr.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
139	3/8/2014	3415 Western Rd.	3415 Western Rd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
140	3/8/2014	5806 Griggs Dr.	5806 Griggs Dr.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
141	3/10/2014	E. Dewey St. & N. Saginaw St.	E. Dewey St. & N. Saginaw St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
142	3/10/2014	Kelso St. & Robert T. Longway Blvd.	Kelso St. & Robert T. Longway Blvd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
143	3/11/2014	147 E. Home Ave.	147 E. Home Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
144	3/11/2014	2732 Clio Rd.	2732 Clio Rd.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions

	A	B	C	D	E	F	G
145	3/11/2014	3610 Wisner St.	3610 Wisner St.,Flint, MI	Pipe bell clean break	6" dia.	Cast Iron	Wintertime conditions
146	3/11/2014	Baldwin Blvd. & W. Marengo Ave.	Baldwin Blvd. & W. Marengo Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
147	3/12/2014	613 White St.	613 White St.,Flint, MI	Pipe bell clean break	6" dia.	Cast Iron	Wintertime conditions
148	3/13/2014	1919 Clifford St.	1919 Clifford St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
149	3/13/2014	2108 Berkley St.	2108 Berkley St.,Flint, MI	2" dia hole	6" dia.	Cast Iron	Wintertime conditions
150	3/13/2014	2326 Berkley St.	2326 Berkley St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
151	3/13/2014	Cook St. & Oklahoma Ave.	Cook St. & Oklahoma Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
152	3/14/2014	1309 Blanchard Ave.	1309 Blanchard Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
153	3/14/2014	5410 Kermit St.	5410 Kermit St.,Flint, MI	Corp break	6" dia.	Cast Iron	Wintertime conditions
154	3/14/2014	E. Boulevard Dr. & Grandy St.	E. Boulevard Dr. & Grandy St.,Flint, MI	valve failure	6" dia.	Cast Iron	mechanical failure
155	3/15/2014	3509 Comanche Ave.	3509 Comanche Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
156	3/15/2014	Fenton Rd. & Remington Ave.	Fenton Rd. & Remington Ave.,Flint, MI	valve failure	6" dia.	n/a	n/a
157	3/15/2014	Remington Ave. & Fenton Rd.	Remington Ave. & Fenton Rd.,Flint, MI	valve face	6" dia.	Cast Iron	Wintertime conditions
158	3/17/2014	948 Leland St.	948 Leland St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
159	3/17/2014	Iroquois Ave. & W. Taylor St.	Iroquois Ave. & W. Taylor St.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
160	3/17/2014	Massachusetts Ave. & James P. Cole Blvd.	Massachusetts Ave. & James P. Cole Blvd.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
161	3/18/2014	1421 Delaware Ave.	1421 Delaware Ave.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
162	3/18/2014	1922 Maryland Ave.	1922 Maryland Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
163	3/18/2014	Harrison St. & E. First St.	Harrison St. & E. First St.,Flint, MI	Clean break	6" dia.	Cast Iron	mechanical damage
164	3/19/2014	3307 Mason St.	3307 Mason St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
165	3/20/2014	1375 Lavender Ave.	1375 Lavender Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
166	3/20/2014	Prospect St. & Forest Hill Ave.	Prospect St. & Forest Hill Ave.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
167	3/21/2014	2740 Clio Rd.	2740 Clio Rd.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
168	3/21/2014	411 W. Dartmouth St.	411 W. Dartmouth St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
169	3/24/2014	1034 E. Holbrook Ave.	1034 E. Holbrook Ave.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
170	3/24/2014	2603 Lewis St.	2603 Lewis St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
171	3/24/2014	3714 Wisner St.	3714 Wisner St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
172	3/24/2014	902 E. Austin Ave.	902 E. Austin Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
173	3/24/2014	Lewis St. & Maryland Ave.	Lewis St. & Maryland Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
174	3/25/2014	1407 Greenway Ave.	1407 Greenway Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
175	3/25/2014	2718 Begole St.	2718 Begole St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
176	3/25/2014	906 Lomita Ave.	906 Lomita Ave.,Flint, MI	mechanical joint	6" dia.	Cast Iron	Wintertime conditions
177	3/25/2014	E. Hamilton Ave. & E. Boulevard Dr.	E. Hamilton Ave. & E. Boulevard Dr.,Flint, MI	Clean break	12" dia.	Cast Iron	Wintertime conditions
178	3/25/2014	Horton Ave. & E. Pierson Rd.	Horton Ave. & E. Pierson Rd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
179	3/26/2014	1110 Lomita Ave.	1110 Lomita Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
180	3/26/2014	1509 Crestbrook Ln.	1509 Crestbrook Ln.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
181	3/26/2014	2319 Brownell Blvd.	2319 Brownell Blvd.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
182	3/26/2014	2808 Brownell Blvd.	2808 Brownell Blvd.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
183	3/26/2014	Lewis St. & Maryland Ave.	Lewis St. & Maryland Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
184	3/28/2014	145 E. Alma Ave.	145 E. Alma Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
185	3/28/2014	306 W. Pasadena Ave.	306 W. Pasadena Ave.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
186	3/29/2014	2718 Norbert St.	2718 Norbert St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
187	3/31/2014	111 E. Myrtle Ave.	111 E. Myrtle Ave.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
188	3/31/2014	2004 DuPont St.	2004 DuPont St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
189	3/31/2014	Pontiac St. & Copeman Blvd.	Pontiac St. & Copeman Blvd.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
190	4/1/2014	3710 Burgess St.	3710 Burgess St.,Flint, MI	3" dia hole	6" dia.	Cast Iron	Wintertime conditions
191	4/1/2014	Burgess St. & Sonny St.	Burgess St. & Sonny St.,Flint, MI	valve face	6" dia.	Cast Iron	Wintertime conditions
192	4/1/2014	Forest Hill Ave. & Sonny St.	Forest Hill Ave. & Sonny St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions

	A	B	C	D	E	F	G
193	4/1/2014	Harvard St. & E. Russell Ave.	Harvard St. & E. Russell Ave.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
194	4/2/2014	1926 Corunna Rd.	1926 Corunna Rd.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
195	4/2/2014	912 Vosburg St.	912 Vosburg St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
196	4/2/2014	Herrick St. & Stocker Ave.	Herrick St. & Stocker Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
197	4/3/2014	1452 Broadway Blvd.	1452 Broadway Blvd.,Flint, MI	3" split	1.5" dia.	lead	pipe failure
198	4/3/2014	1600 Nebraska Ave.	1600 Nebraska Ave.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	Wintertime conditions
199	4/3/2014	1616 Root St.	1616 Root St.,Flint, MI	Previous repair failure	4" dia.	Cast Iron	Wintertime conditions
200	4/4/2014	1818 Carmanbrook Pkwy.	1818 Carmanbrook Pkwy.,Flint, MI	mechanical joint	8" dia.	Cast Iron	Wintertime conditions
201	4/4/2014	Clifford St.	Clifford St.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
202	4/7/2014	2521 Woodrow Ave.	2521 Woodrow Ave.,Flint, MI	Pipe bell clean break	6" dia.	Cast Iron	Wintertime conditions
203	4/7/2014	3715 Marmion Ave.	3715 Marmion Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
204	4/7/2014	E. Foss Ave. & Industrial Ave.	E. Foss Ave. & Industrial Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
205	4/8/2014	DuPont St. & Bagley St.	DuPont St. & Bagley St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
206	4/8/2014	Mason St. & W. Baker St.	Mason St. & W. Baker St.,Flint, MI	3" split	6" dia.	Cast Iron	n/a
207	4/9/2014	3101 Bryn Mawr Pl.	3101 Bryn Mawr Pl.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
208	4/9/2014	Carton St. & N. Saginaw St.	Carton St. & N. Saginaw St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
209	4/10/2014	3805 Fenton Rd.	3805 Fenton Rd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
210	4/10/2014	5413 Edwards St.	5413 Edwards St.,Flint, MI	Corp break	6" dia.	Cast Iron	Wintertime conditions
211	4/10/2014	944 Pettibone Ave.	944 Pettibone Ave.,Flint, MI	Previous repair failure	6" dia.	Cast Iron	Wintertime conditions
212	4/11/2014	1210 DuPont St.	1210 DuPont St.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
213	4/11/2014	Pitkin Ave. & Bingham St.	Pitkin Ave. & Bingham St.,Flint, MI	Split tee	6" dia.	Cast Iron	Wintertime conditions
214	4/12/2014	3310 Beecher Rd.	3310 Beecher Rd.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
215	4/12/2014	3420 Pitkin Ave.	3420 Pitkin Ave.,Flint, MI	3" dia hole	6" dia.	Cast Iron	Wintertime conditions
216	4/12/2014	3817 W. Court St.	3817 W. Court St.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
217	4/14/2014	1811 M. L. King Ave.	1811 M. L. King Ave.,Flint, MI	Clean break	4" dia.	Cast Iron	Wintertime conditions
218	4/14/2014	Chestnut St. & W. Austin Ave.	Chestnut St. & W. Austin Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
219	4/14/2014	Mackin Rd. & McIntosh Dr.	Mackin Rd. & McIntosh Dr.,Flint, MI	Clean break	8" dia.	Cast Iron	Wintertime conditions
220	4/14/2014	Ninth Ave.	Ninth Ave.,Flint, MI	2" dia hole	4" dia.	Cast Iron	Wintertime conditions
221	4/16/2014	116 Bruce St.	116 Bruce St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
222	4/16/2014	151 E. Hamilton Ave.	151 E. Hamilton Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
223	4/16/2014	2574 Nolen Dr.	2574 Nolen Dr.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
224	4/16/2014	906 W. Ridgeway Ave.	906 W. Ridgeway Ave.,Flint, MI	Service line	6" dia.	Cast Iron	Wintertime conditions
225	4/17/2014	629 E. McClellan St.	629 E. McClellan St.,Flint, MI	Previous repair failure	6" dia.	Cast Iron	Wintertime conditions
226	4/17/2014	Bennett Ave. & Iowa Ave.	Bennett Ave. & Iowa Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
227	4/17/2014	M. L. King Ave. & W. Philadelphia Blvd.	M. L. King Ave. & W. Philadelphia Blvd.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
228	4/18/2014	Chippewa St. & Career Alliance parking lot	Chippewa St. & Career Alliance parking lot,Flint, MI	2" split	4" dia.	Cast Iron	n/a
229	4/19/2014	W. Court St. & Beach St.	W. Court St. & Beach St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
230	4/22/2014	600 Bloor Ave.	600 Bloor Ave.,Flint, MI	Clean break	4" dia.	Cast Iron	pipe failure
231	4/23/2014	Chippewa St. & Mary St.	Chippewa St. & Mary St.,Flint, MI	4" split	4" dia.	Cast Iron	Wintertime conditions
232	4/25/2014	E. Lorado Ave. & Harvard St.	E. Lorado Ave. & Harvard St.,Flint, MI	Clean break	6" dia.	Cast Iron	Wintertime conditions
233	4/28/2014	Gainey Ave. & Cumings Ave.	Gainey Ave. & Cumings Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	ground shift
234	4/29/2014	(bike path) W. Boulevard Dr.	(bike path) W. Boulevard Dr.,Flint, MI	Clean break	8" dia.	Cast Iron	n/a
235	4/30/2014	5100 W. Boulevard Dr.	5100 W. Boulevard Dr.,Flint, MI	Clean break	8" dia.	Cast Iron	n/a
236	5/3/2014	2702 E. Court St.	2702 E. Court St.,Flint, MI	old stub	12" dia.	Cast Iron	pipe failure
237	5/24/2014	Van Slyke Rd. & W. Hemphill Rd.	Van Slyke Rd. & W. Hemphill Rd.,Flint, MI	Tapping saddle	24	Ductile Iron	n/a
238	5/29/2014	123 Bruce St.	123 Bruce St.,Flint, MI	3/4" lead corp	n/a	n/a	pipe failure
239	6/5/2014	5322 Glenn Ave.	5322 Glenn Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	ground shift
240	6/10/2014	Robert T. Longway Blvd. & N. Vernon Ave.	Robert T. Longway Blvd. & N. Vernon Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	pipe failure

	A	B	C	D	E	F	G
241	6/23/2014	2308 Iroquois Ave.	2308 Iroquois Ave.,Flint, MI	1" dia hole	24" dia.	Steel	pipe failure
242	7/7/2014	North St. & E. Gillespie Ave.	North St. & E. Gillespie Ave.,Flint, MI	Split at pipe bell	24" dia.	Cast Iron	Water hammer
243	7/10/2014	Woodbridge St. & Stevenson St.	Woodbridge St. & Stevenson St.,Flint, MI	Clean break	6" dia.	Cast Iron	pipe failure
244	7/11/2014	1713 Leith St.	1713 Leith St.,Flint, MI	Split pipe	6" dia.	Cast Iron	pipe failure
245	7/12/2014	W. Twelfth St. & Fenton Rd.	W. Twelfth St. & Fenton Rd.,Flint, MI	Corp break	8" dia.	Cast Iron	mechanical damage
246	7/14/2014	1037 E. Alma Ave.	1037 E. Alma Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	Pressure fluctuation
247	7/17/2014	3609 DuPont St.	3609 DuPont St.,Flint, MI	hole in pipe	24" dia.	Steel	pipe failure
248	7/18/2014	2400 Hills St.	2400 Hills St.,Flint, MI	hole in pipe	6" dia.	Cast Iron	Water hammer
249	7/18/2014	900 E. Carpenter Rd.	900 E. Carpenter Rd.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	pipe failure
250	7/21/2014	2341 S. Dort Hwy.	2341 S. Dort Hwy.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	pipe failure
251	7/22/2014	N. Franklin Ave. & Illinois Ave.	N. Franklin Ave. & Illinois Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	pipe failure
252	7/22/2014	Pitkin Ave. & Bingham St.	Pitkin Ave. & Bingham St.,Flint, MI	2" dia hole	6" dia.	Cast Iron	pipe failure
253	7/23/2014	Kellar Ave. & W. Dartmouth St.	Kellar Ave. & W. Dartmouth St.,Flint, MI	Clean break	8" dia.	Cast Iron	pipe failure
254	7/29/2014	Cecil Dr. & Hathaway Dr.	Cecil Dr. & Hathaway Dr.,Flint, MI	fire hydrant	n/a	n/a	n/a
255	7/29/2014	Richfield Rd. & Term St.	Richfield Rd. & Term St.,Flint, MI	2" split	8" dia.	Cast Iron	Pressure fluctuation
256	8/8/2014	Fenmore Dr. & Oxley Dr.	Fenmore Dr. & Oxley Dr.,Flint, MI	mechanical joint	6" dia.	Cast Iron	pipe failure
257	8/9/2014	500 Harrison St.	500 Harrison St.,Flint, MI	3/4" corp	6" dia.	Ductile Iron	n/a
258	8/13/2014	900 Beach St.	900 Beach St.,Flint, MI	2" lead corp	6" dia.	Cast Iron	pipe failure
259	8/14/2014	E. Baltimore Blvd. & Horton Ave.	E. Baltimore Blvd. & Horton Ave.,Flint, MI	fire hydrant	n/a	n/a	n/a
260	8/18/2014	2810 Parkside Dr.	2810 Parkside Dr.,Flint, MI	Service line	2" dia.	Cast Iron	pipe failure
261	8/18/2014	513 Mary St.	513 Mary St.,Flint, MI	10" split	6" dia.	Cast Iron	pipe failure
262	8/20/2014	2345 Lapeer Rd.	2345 Lapeer Rd.,Flint, MI	Split pipe	8" dia.	Cast Iron	pipe failure
263	8/20/2014	919 Fremont St.	919 Fremont St.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	pipe failure
264	8/23/2014	1410 Leith St.	1410 Leith St.,Flint, MI	Service line	6" dia.	Cast Iron	pipe failure
265	8/25/2014	600 E. McClellan St.	600 E. McClellan St.,Flint, MI	4" hole	6" dia.	Cast Iron	Water hammer
266	8/29/2014	Flushing Rd. & DuPont St.	Flushing Rd. & DuPont St.,Flint, MI	2" dia hole	24" dia.	Steel	pipe failure
267	9/8/2014	1912 Corunna Rd.	1912 Corunna Rd.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	pipe failure
268	9/9/2014	1776 S. Dort Hwy.	1776 S. Dort Hwy.,Flint, MI	Split at pipe bell	8" dia.	Cast Iron	pipe failure
269	9/13/2014	3902 Coggins Ave.	3902 Coggins Ave.,Flint, MI	Split at pipe bell	6" dia.	Cast Iron	pipe failure
270	9/21/2014	3701 Lorraine Ave.	3701 Lorraine Ave.,Flint, MI	3" dia hole	6" dia.	Cast Iron	pipe failure
271	9/21/2014	Winifred Dr. & Levern St.	Winifred Dr. & Levern St.,Flint, MI	Clean break	6" dia.	Cast Iron	n/a
272	9/26/2014	Marja St. & W. Mott Ave.	Marja St. & W. Mott Ave.,Flint, MI	4" split	6" dia.	Cast Iron	Water hammer
273	10/10/2014	1636 Montana Ave.	1636 Montana Ave.,Flint, MI	3/4" lead corp	6" dia.	Cast Iron	pipe failure
274	10/24/2014	2890 Robert T. Longway Blvd.	2890 Robert T. Longway Blvd.,Flint, MI	mechanical joint	16" dia.	Cast Iron	mechanical failure
275	10/25/2014	1800 Missouri Ave.	1800 Missouri Ave.,Flint, MI	2" dia hole	6" dia.	Cast Iron	Pressure fluctuation
276	11/3/2014	6230 Hathaway Dr.	6230 Hathaway Dr.,Flint, MI	Clean break	6" dia.	Cast Iron	pipe failure
277	11/3/2014	Eldon Baker Dr. & Shawnee Ave.	Eldon Baker Dr. & Shawnee Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	pipe failure
278	11/6/2014	1617 Kensington Ave.	1617 Kensington Ave.,Flint, MI	Split pipe	6" dia.	Cast Iron	Pressure fluctuation
279	11/12/2014	1016 W. Ridgeway Ave.	1016 W. Ridgeway Ave.,Flint, MI	Clean break	6" dia.	Cast Iron	pipe failure
280	11/17/2014	3220 Richfield Rd.	3220 Richfield Rd.,Flint, MI	Split at pipe bell	8" dia.	Cast Iron	Water hammer

From: Michael Taubitz <leanjourney@charter.net>
Sent: Sunday, May 10, 2015 9:44 AM
To: Prysby, Mike (DEQ)
Cc: flynn72@yahoo.com;North, Bill;Kevin Godin
Subject: Chateaux Water
Attachments: scanner@pipermanagement.com_20150508_152811.pdf; Jan - Feb 2014 DEQ & Piper emails.pdf; CDL Pb AL summary - 2015.doc; Elsevier Phosphate search.docx

Importance: High

Hi Michael,
Thanks again for the information in your May 7th email. I've spent several hours yesterday and today trying to digest all the information you sent in addition the 34 pages Larry sent in the attached scan. In a separate email, Larry forwarded the correspondence between you and Piper back in January and February of 2014. (PDF file named Jan - Feb 2014 DEQ & Piper emails) I note that you were always timely in your responses to Larry, including a June,
2012 letter that followed his April 2012 letter to you. We, the Board, thought the matter was over with the April 2012 letter because of our understanding that only one home was involved.

That Board members are seeing the series of letters and emails for the first time has me upset to say the least.

So much for that. Below are several questions:
- Can you forward the communications from DEQ to Piper for the years 2011 to December of 2013 in which you provide information on the specific homes that exceeded the Action Level? Larry says that everything he has is in the files. I'm concerned that we have gaps, particularly with DEQ notices of high lead levels and what the response was from Piper.

- For reference, I've attached your one page summary, "CDL Pb AL summary."
It shows that 59 Chateaux Du Lac had a high lead level in 2012. I find no record of a 59 Chateaux in any of my records. Can you clarify?

- I know that we receive results of our water sample. My home (54) has always been below the limit; hence I never asked any further questions. I am not aware of any homeowners where the limit exceeded 15 ppb raising an issue with the Board or Piper. From a DEQ perspective, what is supposed to be done with those individual homeowners?
- Do you have anything that explains calculation of the Lead 90th Percentile Result for a layman?

- The below from one of the EPA hotlinks states no health effects but I could not find which study among dozens at the Elsevier website that support that claim

The Food and Drug Administration (FDA) has issued a report on the toxicology of inorganic phosphates as food ingredients. The FDA considers phosphates as a food additive to be "generally recognized as safe." This report is available at: www.elsevier.com/locate/foodchemtox.
Also, NSF International maintains recommended maximum dosages of drinking water additives including phosphate products. The typical phosphate levels found in a liter of drinking water are about one hundred times lower than the phosphate levels found in the average American diet. For example, a person would have to drink 10 to 15 liters of water to equal the amount of phosphates in just one can of soda.

When I typed "phosphates food additive" in the Elsevier search function, I found what is shown in the attached Word file named Elsevier Phosphate Search. I would appreciate any guidance on finding the specific study referenced in the EPA report.

- I note that the homes in question were all built in the 80s. Not sure what this means - maybe the kind of solder used in plumbing?

Thanks for your continued assistance. I know this takes time and effort.
We are trying to get our arms around this to do the right thing. The Board meets tomorrow night and this will be a key topic of discussion.
Thanks again,
Mike Taubitz

-----Original Message-----
From: Larry Carter [mailto:Larry@pipermanagement.com]
Sent: Friday, May 08, 2015 4:39 PM
To: Michael Taubitz
Subject: letters from state

Mike:

The Jan 2010 report indicates "satisfactory and the Nov. 2012 report show a continuous high level at only one unit.

Thanks

Larry

-----Original Message-----
From: scanner On Behalf Of scanner@
Sent: Friday, May 08, 2015 4:28 PM
To: Larry Carter
Subject: Scanned image from Piper Realty Company

Reply to: scanner@pipermanagement.com <scanner@pipermanagement.com> Device Name: Piper Realty Company Device Model: MX-5111N
Location: Flint

File Format: PDF (Bk Letter Emphasis)
Resolution: 300dpi x 300dpi

Attached file is scanned image in PDF format.
Use Acrobat(R)Reader(R) or Adobe(R)Reader(R) of Adobe Systems Incorporated to view the document.
Adobe(R)Reader(R) can be downloaded from the following URL:
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http://www.adobe.com/

CHATEAU DU LAC
2009 WATER SYSTEM REVIEW

WSSN 1353 Supply Chateau-Du-Lac Condos County Genesee

Date 12/16/09 Reviewed by MFP District 11

Primary Contact:	Larry Carter	Copy To:	Mike Duncan
Title:		Title:	Caretaker
Telephone:	(810) 767-683	Telephone:	(810) 397-2043
Address:	Piper Realty 5454 Gateway Ctr Flint, MI.	Address:	7279 Ray Road Swartz Creek, MI. 48473

Population: 100 Year: 2009 Basis: MDEQ Est.

Distribution Classification: S-4 Cert. ID #

Operator in charge: Robert Stucker S-2

Treatment Capacity: N.A.

Treatment Classification: N.A.

Comments:

This supply consists of two wells piped into a wellhouse located in the clubhouse basement. The wellhouse is equipped with stand-by chlorination and hydropneumatic storage. Water is then distributed into a small distribution system consisting of 4 and/or 6-inch watermains and several flush hydrants. Mike Duncan continues to be the maintenance person at Chateau Du Lac.

This supply is nearly 100% developed and consists of approximately 38 occupied living units. There is one vacant lot available.

The Association president is:

Mr. Tom Murphy

The Operator in Charge is:

Robert Stucker
P.O. Box 116
Howell, MI 48843
(517) 546-5309

The management contact is:

Larry Carter
Piper Reality
5454 Gateway Center
Flint, MI 48507
(810) 767-4890

WELL INFORMATION

Well Number	1	2
+Well Status	op.	op.
+Treatment?		
P.O.E. I.D.#		
+Treatment?		
Year Installed	E 1980s	L 1980s
Grouted?	Yes	Yes
Rock or Drift	Drift	Drift
Total Depth	126 Ft	134 Ft.
Casing Depth		
Casing Diameter	8 in	8 in
Gravel Pack Dimensions		
Gravel Pack Material		
Screen Length	18 Ft	18 Ft
Screen Diameter	6 in	6 in
Screen Slot Size		
Pump Setting	110 Ft	110 Ft
+Static Water Level	20 Ft	20 Ft
+Pumping Water Level (24 hr)		
Pumping Water Level (100 day)		
+Pump Type	Sub.	Sub.
Permit Capacity		
Permit TDH		
+Current Capacity	100 GPM	100 GPM
+Basis	est.	est.
Current TDH		
HP	7.5	7.5
+Last Pulled For Inspection	2006	L 1980s
Last Efficiency Test	2006	L 1980s
Well Seal	Yes	Yes
Casing 12" Above Grade	Yes	Yes
Pump to Waste Piping	Yes	Yes
- Screened or capped?		
Air/Vac Relief	N.A.	N.A.
- Screened?	N.A.	N.A.
Casing Vent	Yes	Yes
- Screened?	Yes	Yes
Check Valve	N.A.	N.A.
Meter	Yes	Yes
Raw tap	Yes	Yes
Chem tap	Yes	Yes
Plant tap	Yes	Yes
Chem Feed Outlet	Yes	Yes
Heater	Yes	Yes
Water level device	Gauge	Gauge
Pressure gauge	Yes	Yes
Floor drain	Yes	Yes
Doors open out	Up	Up

Well #1 was producing water with high levels of methane gas in 2005-2006. There has been no further problems or complaints associated with the methane gas since 2006. Well #2 is due routine pump and motor maintenance.

WELL INFORMATION

WELL AUXILIARY POWER: Installed in 1999. Both wells are equipped to operate under emergency power. The generator starts automatically every other week.

ISOLATION:

Well Number	1	2
Approved Standard Isolation Radius	100 Ft.	100 Ft.
Available Isolation Radius	100 Ft.	100 Ft.
Type of Isolation Control	Association owns	
Approved WHP Plan?		
GW flows from		
+Basis		
Important Potential Source		
Dist. and Dir. from Well		
Important Major Source		
Dist. and Dir. from Well		
Detects		

Comments:

The wellhouse is located in the clubhouse basement (mechanical room) and the space is shared with the swimming pool piping system, filtration, and heating system (no cross connections were noted). Storage of pool materials remains a problem.

A stand-by chlorinator, feed barrel, and electrical outlet are also provided for an emergency or potential contamination. The chlorine feed system is not in use and no chlorine was being stored. The OIC works at the Fenton WTP and can provide chlorine on an emergency basis.

The metal flanges and fittings have been wrapped with insulation and tape and appear to have inhibited any further corrosion in the wellhouse room; however, dehumidification should be provided.

Vulnerability Assessment

Chateau Du Lac's wells are determined to be "moderately" vulnerable to volatile organics (fuel petroleum compounds), pesticides, and herbicides. Further discussion of this and the associated chemical monitoring guidelines were provided in previous correspondence.

PRODUCTION AND STORAGE REQUIREMENTS

Production History

Water usage data is not available from this supply since the water meter is not functioning. An estimate of 55 GAL/DAY/CAP has been be used for consumption.

Units are in GAL/DAY

YEAR	Max Day	Avg Day	Min Day-Date	Max/Avg	G/C/D	% UnAcct H20
1995-2009	10,000	6,500				±

Five year Max Day app 10,000 G/D Date
Ten year Max Day Date
Five year Avg Day app. 6,500 G/D

Max Day for capacity requirements 10,000 G/D

Comments:

Well Capacity

Total Well Capacity 200 gpm 0.288 mgd

Firm Well Capacity 100 gpm 0.144 mgd

Firm Well Capacity/Max Day >>100 %

Total Auxiliary Power: 200 gpm

+Basis of Auxiliary Power Waiver NA

Comments:
The existing well capacity is adequate for the number of living units obtaining water service.

PRODUCTION AND STORAGE REQUIREMENTS

Storage Capacity
Three hydropneumatic storage tanks (Well X-Trolls WX-456s) are located in the wellhouse. All three tanks have been insulated

Total Gross Volume: 1266 Gallons

Total Usable Storage	app. 380 gal.	_____ mil. gal.
Total Usable Storage/Max Day	<< 100 %	
Total Usable Storage/Avg Day	<< 100 %	

Comments:

The storage facility is not designed to provide fire protection or to supply a day's demand from storage. The size of the storage tanks provides an adequate pump run time and minimizes excessive cycling.

Previous inspections of the wellhouse revealed that the hydropneumatic tank fittings showed corrosion. Insulation installed several years ago appears to have mitigated further corrosion, however, dehumidification should be provided to prevent condensation of moisture and additional corrosion during the summer months.

DISTRIBUTION

Interconnections With Other Supplies

Is water purchased from other supplies? No

Distribution Piping

Identify distribution piping materials - INFO. NOT AVAILABLE, AN UPDATED GENERAL PLAN IS NEEDED

PVC	? %
D.I.	? %
A.C.	? %

Estimated per cent of piping with coal tar linings: ? %

Identify distribution pipe sizes - INFO. NOT AVAILABLE, AN UPDATED GENERAL PLAN IS NEEDED

2-in	? %
4-in	? %
6-in	? %
8-in	? %

Are there areas where water main breaks are frequent? No

Are there areas where customers complain of low pressure? No

Are there areas where aesthetic water quality complaints are frequent? No

Are there areas where fire flows cannot be maintained? Yes

locations: The entire system. This supply is not designed to provide fire protection.

Last ISO report date? N.A. Rating? N.A.

Which, if any, of the above listed areas has the supply prioritized for main replacement, upgrading or looping? Also, if a definite schedule for capital improvement has been established, list the proposed completion date.

There are no capital improvements programs in effect or proposed.

General Distribution Comments:

This supply consists of a small network of 4 and 6-inch distribution mains with several flush hydrants and valves. However, since a general plan of the system is not available, specific details are not available.

Distribution Appurtenances

Hydrants

Number of hydrants	8
Number without auxiliary shut-off valves	None
Number that are self-draining	None
Number of inoperable hydrants	None

Frequency of hydrant inspection: Flushed in spring and fall

Inspection staff: Caretaker - Mike Duncan

Comments:
Hydrants are flushed once sometimes twice a year.

Are there areas where additional hydrants are needed? No

Hydrant location system? Map Accurate? Ok

Are hydrants color coded for capacity? No, hydrants can't provide adequate

flows

Has this information been provided to the fire department? Yes

Frequency and seasons of hydrant flushing? 1-2x/yr Spring/Fall

Purpose of flushing? Clean mains

Is the public notified prior to flushing? No

Does flushing follow a specific format? Yes, from the source outwards

Is the volume water used during flushing estimated? No

Is a record maintained of hydrant activities? No

Comments:

Maintenance and construction records of each hydrant should be established and maintained.

Residents should be notified of upcoming system flushing to minimize complaints, etc.

Valves

Number of valves several
Number of inoperable valves 0

Are there areas where additional valves are needed? No

Valve location system? General Plan Accurate? No

Valve Turning Frequencies:

Distribution system valves are not exercised.

Records maintained? No

Customer and Service Information

Number of service connections 38
Number of metered service connections None

Identify service line materials and estimate percentages:

Copper	most
PVC	few
Cal	none

Pumpage Distribution

% Residential	100 %
% Commercial	None
% Industrial	None
% Other	No other large users
% Large Users - List	

PROGRAMS AND PLANS

Cross Connection Program

The lawn irrigation system obtains its source water from Silver Lake and is not inter-connected to the water system. The OIC and/or caretaker should inspect outside hose-bibs on all residencies for adequate backflow prevention. The janitorial room behind the clubhouse has a filling sink. An atmospheric vacuum needs to be installed on the faucet above the sink. Cross connection activities including correction of the cross connection in the clubhouse and other inspection activities need to be reported on the cross connection annual report form. A copy of the report form was provided to the OIC during the review.

Annual Pumpage Reports

Is Annual Pumpage Report Required? No

Was previous year's annual report received? N.A. Date

Monthly Operation Reports

Are Monthly Operation Reports required? No

Were all previous year MOR's received? N.A. Timely?

Are previous year's MOR's Acceptable? N.A.

Comments:

Emergency Response Plan - None

An emergency response plan needs to be prepared. A format was provided to the OIC.

General Plan

Date of most recent plan 1990s Acceptable? No

Filed where? Clubhouse

Comments:

The existing general plan of the water system is outdated. The general Plan needs to be updated.

Reliability Study Not required

Bacteriological Monitoring

Date of approved sampling site plan: 2007

Are samples still being collected in accordance with the plan? Yes

Number of samples required each month: 1
Basis for setting number of monthly samples: pop.
Certified lab used: In-House Water

MCL, Monitoring, or Reporting Violations in Past 60 months? None

Chemical Monitoring

Date of Monitoring Schedule: Feb 09

Are samples collected in accordance with the schedule? Yes

Were nitrate, nitrite and fluoride (or p chem) samples collected: yes

If nitrate detect, what is concentration? ND
Sample site POE (2009)
If nitrite detect, what is concentration? ND
Sample site POE (2009)

Detects for metals >50% of MCL? Yes
Metals (list) Arsenic @ approx 5 ppb

Detects for VOCs? No
Detects for SOCs? No

Date of approved DBPR monitoring plan? NA
DBP sampling done? NA
If yes, done to sampling site plan? NA

Lead/Copper Monitoring Program

Number of required Samples 5
Semi Annual/Annual/ Triennial Annual
Exceedance of lead or copper action level? Yes
If yes, was public education issued? Yes
Next Monitoring Period 6/10 - 9/10

The lead action level was exceeded in 2008. Two six-month rounds of samples were collected after the exceedence and neither action level were exceeded in both monitoring rounds. All water quality parameter monitoring and public education requirements were met during the exceedence. No further corrosion control measures will need to be taken at this time. The OIC was advised to verify that participating residents are collecting samples properly and in the proper locations.

Radiological Monitoring Program

Date of monitoring schedule: Feb 09

Are samples being collected in accordance with the schedule? Yes

Alpha, beta, radium, uranium	Yes	Date collected: 4/22/02
Radium 226 & 228	Yes	Date collected: 4/22/02
Tritium	No	Date collected:

Detects for Rads >50% of MCL?

Gross Alpha: <3.0 pCi/L
Ra 226: <1.0 pCi/L
Ra 228: <1.0 pCi/L

Consumer Confidence Report

Was the previous year's report received? YES Timely? Yes

Was the previous year's report acceptable? YES

Was the previous year's Cert. Form received? YES Timely? Yes

2009 Monitoring Schedule

CHATEAUX DU LAC CONDOMINIUMS — WSSN[1]: 01353

Collect samples early in the monitoring period. Bacteriological and partial chemistry samples should be collected close to the shipping time and sent overnight delivery so sample holding times are not exceeded. The DEQ laboratory is closed on state holidays.

This table reflects your expected routine monitoring and is subject to change.

Location: Well 1 or 2 - Point Of Entry

Collect these samples at the entry point to the distribution system (after treatment, if applicable.)

Sample Type	# of Samples/ Frequency	Collect Before	Site Code[1]	Test Code[2]	Unit Number[2]	Cost[2]
Partial Chemistry	The DEQ lab's "Partial Chemistry" scan includes nitrate, nitrite, fluoride, and sodium whose monitoring frequency requirements differ from one another. Before requesting analyses from a laboratory other than the DEQ laboratory, check with your DEQ district staff for the specific monitoring requirements.					
	1/12 months	**09/30/2009**	CH001	R	32	$18.00
Volatile Organic Compounds	1/36 months	09/30/2010	CH001	CXVO	36VO	$100.00
Metals	1/108 months	09/30/2010	CH001	CMET2	36ME	$102.00
Arsenic	1/36 months	09/30/2011	CH001	CAS	36ME	$18.00
Cyanide	1/108 months	09/30/2014	CH001	CCN	36CN	$25.00
SOC – Pesticides	1/36 months	09/30/2011	CH001	CXPT	36NV	$125.00
SOC – Herbicides	1/36 months	09/30/2011	CH001	CXHB	36NV	$120.00
SOC – Carbamates	1/36 months	09/30/2011	CH001	CXLP	36LP	$120.00
Gross Alpha (Radiological)	1/108 months	09/30/2015	CH001	Not performed at the DEQ Laboratory. If due this year, a list of certified laboratories is attached.		
Radium 226 & Radium 228	1/108 months	09/30/2015	CH001			

Location: Distribution System

Sample Type	# of Samples/ Frequency	Collect Before	Site Code[1]	Test Code[2]	Sample Unit[2]	Cost[2]
Bacteriological	**1/Monthly**	**Monthly**	DIST	BPTC	30	$16.00
Lead/Copper	5/6 months	Bi-	DIST	CCUB	36CC	$26.00
Water Quality Parameters	Required if Lead/Copper 90th percentile exceeds the Action Level		DIST	Various	Various	Various

[1] To receive credit for monitoring, you must include the **"WSSN"** (Water Supply Serial Number) and the **"Site Code"** when you submit samples for analysis.

[2] Test codes, sample units, and costs are listed to help you complete the laboratory form if you use the Department of Environmental Quality (DEQ) laboratory. The DEQ laboratory costs are subject to change without notice. If you use a certified laboratory other than the DEQ laboratory, please contact your DEQ district staff for a list of all required contaminants and forward a copy of all sample results to your DEQ district office.

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

JIM SYGO
INTERIM DIRECTOR

January 11, 2010

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Reality
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Chateau Du Lac Condominium
2009 Water System Review

This letter confirms my visit on December 15, 2009 with you and Robert Stucker, your operator-in-charge (OIC). The purpose of the visit was to update the Chateau Du Lac 2006 water system evaluation. An updated water system review form has been attached which details water system components.

The findings of the updated evaluation show that Chateau Du Lac's water system continues to maintain a **"Satisfactory"** rating. Specific water system concerns that need attention were noted and these concerns are discussed in more detail below.

1. Our most recent copy of Chateau Du Lac's water system general plan was prepared in 1984, and the plan is clearly outdated. It appears, based upon our discussion, that a more recent water system general plan is not available; thus, an updated general plan needs to be prepared.

   The updated general plan needs to show the location and size of all watermains, hydrants, valves, service lines, etc. The plan also needs to show the location of the wells, discharge piping, wellhouse, and storage facilities. As we discussed, it may be worthwhile to contact the consultant who designed the water distribution system to obtain the approved construction plans and/or an "as-built" copy of the distribution system. An updated water system general plan needs to be prepared and a copy sent to us by no later than May 15, 2010.

2. According to our records, routine pump and motor maintenance for Well #2 has not been performed within the last 10 years. As we discussed, Type-I wells (pump & motor) should be scheduled for routine maintenance once every 5 to 10 years. This type of preventative maintenance is an accepted standard that is practiced in the waterworks industry and is essential in minimizing the chance of an unexpected failure of the well pump/motor and the potential for a loss of water service. Routine pump and motor maintenance should be performed for Well #2 during 2010.

3. Our inspection revealed a cross connection in the rest room immediately behind the club house room. Specifically, a janitorial sink is provided; however, a vacuum breaker is not provided on the faucet outlet. This represents a potential cross connection between the potable water supply and the sanitary sewer in the event that a hose is connected to the faucet and is allowed to extend below the sink's overflow. As we discussed, an approved atmospheric vacuum breaker needs to be installed on the faucet outlet downstream of the hot and cold water shut-off valve.

   Next, enclosed is our Cross Connection Rules Manual that provides additional cross connection control program information and examples of potential cross connections for residential type water systems. You should reference Appendix C (Model Cross Connection Control Programs – Example No. 3 for Privately Owned Water Systems) for further examples of potential cross connections. We encourage your OIC to locate any of the more serious cross connections that may exist within the water system. Any such cross connections should be eliminated upon discovery. Finally, enclosed is an Annual Cross Connection Report form that is used to report the status of any cross connections that were discovered and the results of any corrective action.

   Finally, Chateau Du Lac has a lawn irrigation system that obtains its source water from nearby Silver Lake. The piping system, however, is not interconnected to Chateau's potable water system.

4. The most recent bacteriological sampling site plan was prepared in 2007; however, the plan should be updated to include changes in the monitoring program due to the new Groundwater Rule. An updated sampling site plan template was electronically mailed to your OIC for revision. Please provide us with a copy of the updated plan.

5. A water system emergency response plan needs to be prepared. The plan provides an outline to follow in the event of a water related emergency (loss of pressure, contamination, etc.). Enclosed is a template that can be used for preparing the emergency response plan. We will review the completed emergency response plan during our next routine site visit.

6. Storage of swimming pool equipment in the wellhouse (west half of clubhouse basement) remains a problem. These items continue to make it cumbersome to perform routine wellhouse activities. Again, we must stress the importance of storing these items in an area that is separate from the wellhouse piping and appurtenances.

7. It was noted that much of the wellhouse piping, valving, and appurtenances have been wrapped with insulation to help limit moisture on the metal surfaces and corrosion. Although this measure appears to have curtailed further corrosion, a dehumidifier should be provided to further control moisture and limit corrosion within the wellhouse.

8. The raw water meter inside the wellhouse is not functioning; thus, water usage data cannot be obtained. The raw water meter needs to be repair or replaced such that accurate water usage information can be obtained.

Finally, the lead action level was exceeded during routine lead and copper monitoring in 2008. Two consecutive six-month rounds of monitoring were conducted and the lead action level was not exceeded in either monitoring rounds. Water quality parameter monitoring and public education were also conducted in accordance to our requirements. Since both action levels were met in each of the two 6-month monitoring rounds, additional corrosion control measures will not be required. Also, routine lead/copper monitoring can resume at an annual frequency. More detailed information regarding your compliance status and future monitoring requirements will be discussed in a separate letter

If you have any questions, please call me at the number provided below.

Sincerely,

Michael F. Prysby P.E., District Engineer
Field Operations Section
Lansing District Office
Water Bureau
(517) 335-6122

mfp:smb

Enclosures

cc: Mr. Robert Stucker, Operator, Chateau Du Lac
Mr. Mike Duncan

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT
JENNIFER M. GRANHOLM
GOVERNOR
LANSING DISTRICT OFFICE
REBECCA A. HUMPHRIES
DIRECTOR

February 12, 2010

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, MI 48507

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Carter:

SUBJECT: Drinking Water Monitoring Schedule – 2010
2009 Cross Connection Report
2009 Annual Pumpage Report

2010 Monitoring Schedule

Enclosed is your annual Drinking Water Monitoring Schedule for calendar year 2010 outlining the minimum requirements of the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), and the administrative rules. This schedule reflects your expected routine monitoring and is subject to change should federal or state regulations change.

Please Monitor Early: Collect samples early in the monitoring period (month, quarter, year) of the year indicated on the schedule. Bacteriological and partial chemistry samples should be collected close to the shipping time and sent overnight delivery to assure sample holding times are not exceeded (30 and 48 hour hold times respectively). We also recommend avoiding mailing bacteriological samples immediately preceding or following a holiday because samples tend to exceed the 30 hour hold time. When this occurs, a repeat sample must be collected as soon as possible upon notification.

If you use a private laboratory please report the results to us within the first ten days of the month following the month that you received the analysis. A list of certified laboratories is available on request. If samples are not collected on or before the dates listed on your monitoring schedule, you will incur a monitoring violation and may also be subject to a fine. For information on the fines policy, visit www.michigan.gov/deq, click on Water, Drinking Water, Community Water Supply. Scroll down to Laws & Rules and click on Administrative Fines.

To receive credit for monitoring, you must include the **"WSSN"** (water supply serial number) and the **"Site Code"** when you submit samples for analysis.
Site codes are listed on your monitoring schedule.

Site Codes: Your site codes are listed on the enclosed monitoring schedule. To receive credit for monitoring, you must include the proper Site Code when you submit samples for analysis. If you have any questions on site codes, please contact us.

Special Instructions If You Use The DEQ Laboratory: You must order your own bottles via phone, fax, or mail; *bottles will not be mailed automatically*. You can download the order form EQP 2301 by visiting www.michigan.gov/deq, click on Key Topics, Laboratory Services, Drinking Water, Drinking Water Test Fees. Please note that the DEQ laboratory is closed on most state holidays. The DEQ laboratory prices are subject to change without notice.

Special Instructions For Partial Chemistry, VOC and TTHM Samples: Please remember that these sample bottles must be cooled and properly preserved during shipment to the laboratory. If you use the DEQ laboratory, you will receive the ice pack, acid dropper (if necessary) and small cooler when you request the bottles. Please note that if you do not properly preserve your samples, they may not be used for compliance purposes and you may have to resample. If you would like more information or instructions on how to properly preserve your samples during shipment, please contact the DEQ lab, at 517-335-8184, or contact us.

Lead and Copper Monitoring: If you are due for lead and copper monitoring this year, download the Lead and Copper Report and Consumer Notice of Lead Result Certificate from http://michigan.gov/deq. Please note that there are new requirements to notify customers of lead results.

Groundwater Rule (GWR): The GWR went into effect in December, 2009. All groundwater supplies were recently sent a letter detailing their responsibilities. If you have any questions regarding the GWR, please contact us.

Consumer Confidence Report (CCR) Reminder: Your CCR showing contaminants found in your water during 2009 must be distributed to your customers, your local health department, and the DEQ by July 1, 2010.

2009 Cross Connection Report

In accordance with Act 399, an annual report on the status of the local water supply cross connection control program must be filed with the DEQ. To fulfill this requirement, please complete and return the 2009 Cross Connection Report to this office no later than March 31, 2010. The narrative portion of the report should be as extensive as necessary to accurately describe the status of the local program. Every water supply, except manufactured housing communities, must submit a report covering 2009 regardless of whether a formal program has been implemented. If you do not have any known cross connections in your water system, return the report and indicate as such. Instructions for filling out this form are on the form.

Annual Pumpage/Usage Report

In accordance with Act 399, an annual summary of water pumpage and water use must be submitted by each Type 1 water supply that does not submit monthly operation reports. To manage our natural resources, pumpage data are compiled to determine water use demands in Michigan. Please complete and return the Annual Pumpage/Usage Report to this office no later than March 31, 2010.

Forms: The report forms mentioned in this letter can be downloaded in both Microsoft Word and in PDF from: http://www.michigan.gov/deq, click on Water, Drinking Water, Community Water Supply. Scroll down to Manuals, Forms & Brochures. Click on Reporting Forms. Forms are also enclosed.

Additional Requirements That May Apply to Your Water System

You may have monitoring requirements in 2010 that are not listed on the attached schedule. The United States Environmental Protection Agency contacted you previously about these requirements under the federal Stage 2 Disinfectants and Disinfection Byproducts Rule or the Long Term 2 Enhanced Surface Water Treatment Rule.

If you have any questions about the requirements or filling out the forms, please call me at the number below.

Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB
Enclosure
cc/encl: Mr. Robert Stucker, Contract Operator

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

REBECCA A. HUMPHRIES
DIRECTOR

May 24, 2010

TO: Water Supply Superintendent or Operator In Charge

FROM: Water Bureau, Lansing District Office

SUBJECT: 2010 Consumer Confidence Report Reminder

As you prepare your Consumer Confidence Report (CCR) summarizing information about the drinking water quality served during calendar year 2010, we want to remind you of some of the requirements. Refer to last year's report and your most recent sample results when putting this year's report together. **The CCR must be delivered to your customers, the local health department, and our office by July 1st.** If you are a wholesaler, you should have provided monitoring results to the systems that retail your water by April 1st or by the date you and your customers have agreed to, if earlier.

In addition to delivering your CCR to your consumers by July 1st, remember to:

- Send a copy to our office when you deliver it to your consumers, and
- Send a copy to your local health department when you deliver it to your consumers, and
- Post the CCR on the Internet if your water system serves 100,000 or more people, and
- Send us documentation certifying how you delivered the CCR. For example, enclose copies of newspaper articles, or lists of where you posted the CCR, or other documentation showing how it was delivered.

Certification of delivery is due to us by October 1st, but we encourage you to send it to us when you deliver the CCR by July 1st. To download the *CCR Certificate of Distribution Form*, visit http://michigan.gov/dnre. Under Environmental Services, click on Water, Drinking Water, Community Water Supply, and Consumer Confidence Report Rule. We also encourage you to read *Preparing Your CCR* found on the same Web page.

Disinfection Byproduct and *Cryptosporidium* Monitoring: If you monitored in 2009 for the disinfection byproducts, total trihalomethanes and haloacetic acids, or *Cryptosporidium* under the new federal regulations, you must include detections of this monitoring with an explanation.

New Language for Lead: Beginning this year (the CCR covering 2009), every CCR must include information about lead, *even if monitoring for lead was not conducted.* Delete any lead language you have used in the past and include the following new language:

> *New lead language*: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Reminder if Lead and Copper Monitoring Due This Year: Recent changes to the Lead and Copper Rule requires you to provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected, within 30 days of learning of results. You must also send us a certification that you met all the delivery requirements along with a sample copy of your customer notice within 3 months after the end of the monitoring period. To download the *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Microsoft Word or PDF format, visit http://michigan.gov/gnfa. Under Environmental Services, click on Water, Drinking Water, Community Water Supply, and Reporting Forms.

Please contact us with your questions. We would like to be available to answer all your questions as you draft your CCR, but we have found that our office is inundated with questions as the deadline nears. You might be best served if you contact us before the end of May.

Public water system monitoring and reporting violations, including failure to post public notices, are covered in our fines policy. Failure to deliver the CCR by July 1st is a reporting violation and may result in a fine. Contact our office if you would like a summary of our fines policy.

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

August 26, 2011

TO: Water Supply Superintendent or Operator In Charge

SUBJECT: 2011 Drinking Water System Monitoring – Reminder

This is just a friendly reminder that drinking water monitoring is due by September 30, 2011. This is not a notice of violation. Contacting water systems provides the Department of Environmental Quality (DEQ) a chance to remind supplies of upcoming deadlines, and allows supplies the chance to verify that their records for submitted sample results match what the DEQ has received.

According to our records, not all drinking water monitoring has been performed as outlined in the 2011 Monitoring Schedule sent to you earlier this year. Please refer to the enclosed monitoring schedule to view the sampling for which we have not yet received laboratory results. If you have results for monitoring listed in the schedule, please provide a copy to this office.

If monitoring has not yet been completed, please collect the required sample(s) no later than **September 30, 2011**, unless otherwise noted, to avoid monitoring violations, public notice requirements, and administrative fines of at least $200.00. If you use a private laboratory to analyze your samples, you must provide this office with copies of the results by October 10, 2011.

To receive credit for monitoring, you must include the **"WSSN"** (water supply serial number) and the **"Site Code"** when you submit samples for analysis. These codes are listed on your monitoring schedule.

Reminder if Lead and Copper Monitoring Due This Year: Recent changes to the Lead and Copper Rule requires you to provide individual lead tap results, within 30 days of learning of results, to people who receive water from sites that were sampled, even if lead was not detected. You must also send us a certification that you met all the delivery requirements along with a sample copy of your customer notice within 3 months after the end of the monitoring period. To download the *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Microsoft Word or PDF format, visit http://michigan.gov/DEQ. Under Environmental Services, click on Water, Drinking Water, Community Water Supply, and Reporting Forms.

If you have any questions or believe that the enclosed monitoring schedule is not accurate, please contact Adam Rosenthal at 517-335-6131 or rosenthala@michigan.gov., or you may contact your district engineer:

Michael Prysby at 517-335-6122 or prysbym@michigan.gov – Genesee & Lapeer Co.
Bethel Skinker at 517-335-6127 or skinkerb@michigan.gov – Eaton, Ingham & Shiawassee Co.
Mark Joseph at 517-335-6349 or josephm@michigan.gov – Clinton, Gratiot & Livingston Co.

2011 Monitoring Schedule

CHATEAUX DU LAC CONDOMINIUMS — WSSN: 01353

Collect samples early in the monitoring period. This schedule reflects your expected routine monitoring and is subject to change. To receive credit for monitoring, include the **WSSN** and the **Site Code** on your request for analysis form. Collect Bacteriological and Automated Partial Chemistry samples close to the shipping time and send overnight delivery. Send all sample results to your Department of Natural Resources and Environment (DNRE) district office unless you use the DNRE laboratory. Test codes, sample units, and costs are listed to help you complete the DNRE laboratory form. Prices are subject to change without notice. The DNRE laboratory is closed on state holidays.

Location: Well 1 or 2 - Point Of Entry

Collect these samples at the entry point to the distribution system (after treatment, if applicable.)

Sample Type	# Samples/ Frequency	Collect Before	Site Code	Fee	Unit Number	Test Code
Automated Partial Chemistry	This DNRE lab scan includes nitrate, nitrite, fluoride, and sodium whose monitoring frequency requirements differ from one another. Before requesting analyses from a laboratory other than the DNRE laboratory, check with your DNRE district staff for the specific monitoring requirements.					
	1/12 months	09/30/2011	CH001	$18.00	32	R
Volatile Organic Compounds	1/36 months	09/30/2013	CH001	$100.00	36VO	CXVO
Complete Metals	1/108 months	09/30/2019	CH001	$102.00	36ME	CMET2
Arsenic	1/36 months	09/30/2013	CH001	$18.00	36ME	CAS
Cyanide (unchlorinated)	1/108 months	09/30/2014	CH001	$25.00	36CN	CCN
SOC – Pesticides	1/36 months	09/30/2011	CH001	$125.00	36PT	CXPT
SOC – Herbicides	1/36 months	09/30/2011	CH001	$120.00	36HB	CXHB
SOC – Carbamates	1/36 months	09/30/2011	CH001	$120.00	36LP	CXLP
Gross Alpha (Radiological)	1/108 months	09/30/2015	CH001	Not performed at the DNRE Laboratory. A list of certified labs is at www.michigan.gov/dnre. Select Water, Drinking Water, Community Water Supply, then Certified Labs under Programs and Activities.		
Radium 226 & Radium 228	1/108 months	09/30/2015	CH001			

Location: Distribution System

Sample Type	Collect Samples According to the ...	# Samples/ Frequency	Collect	Site Code	Fee	Unit Number	Test Code
Bacteriological – coliforms	TCR Sampling Site Plan	1/Monthly	Monthly	DIST	$16.00	30	BPTC
Chlorine Residual	DBP Monitoring Plan	Measure the residual disinfectant level at the same point and at the same time as the bacteriological sample and report the average to the DNRE.					
Lead Copper for corrosion control	Lead and Copper Sampling Pool	5/12 months	Between 06/01 and 09/30/2011	DIST	$26.00	36CC	CCUB

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

November 1, 2011

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Reality
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Water System, Chateau Du Lac Condominium

This letter confirms my visit on October 21, 2011, with Mr. Robert Stucker, your operator-in-charge (OIC). The purpose of the visit was to conduct routine water system surveillance at Chateau Du Lac condominiums. We are somewhat disappointed in the lack of progress made towards correcting the water related concerns that were noted in the Chateau Du Lac 2009 Water System Review. These concerns are discussed in more detail below.

1. Chateau Du Lac's most recent water system general plan is clearly outdated and the plan has not been updated as we requested. As we discussed, an "as-built" copy of the general plan needs to be obtained and may be available from the consultant who designed the water distribution system. An updated water system general plan needs to be prepared and a copy sent to us by no later than January 31, 2012.

2. A water system Emergency Response Plan (ERP) has not been prepared as we requested. The ERP provides an outline to follow in the event of a water related emergency (loss of pressure, contamination, etc.). A template that can be used for preparing the ERP was provided to your OIC. We will review the completed ERP during our next routine site visit.

3. Dehumidification has not been provided as a means to control moisture and limit corrosion within the wellhouse.

4. The raw water meter inside the wellhouse is not functioning and has not been replaced as we requested. The raw water meter needs to be repaired or replaced such that accurate water usage information can be obtained by no later than January 31, 2012.

5. Chateau Du Lac's lead action level was exceeded during routine lead and copper monitoring in 2011. Two consecutive six-month rounds of lead and copper monitoring will be required, along with water quality parameter monitoring and public education. Specific monitoring & reporting details will be covered in a separate letter. Finally, the 2011 exceedance represents the 4th exceedance in the lead and copper action level since the start of the lead and copper monitoring program. We will be reviewing the history of Chateau Du Lac's lead and copper monitoring program to determine whether a corrosion control study needs to be conducted and/or treatment needs to be provided.

Finally, according to our records, routine pump and motor maintenance for Well #2 has not been performed within the last 12 years. As we discussed, Type-I wells (pump & motor) should be scheduled for routine maintenance once every 5 to 10 years. This type of preventative maintenance is an accepted standard that is practiced in the waterworks industry and is essential in minimizing the chance of an unexpected failure of the well pump/motor and the potential for a loss of water service. Routine pump and motor maintenance should be performed for Well #2 during 2012

We look forward to working with you on these and on any other water related matters. Should you require further information, please contact me at the telephone number below, via e-mail at prysbym@michigan.gov; or Department of Environmental Quality P.O. Box 30242, Lansing, Michigan 48909.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Resource Management Division
Lansing District Office
(517) 335-6122

cc: Mr. Robert Stucker, Operator, Chateau Du Lac
Mr. Mike Duncan

DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

June 19, 2012

Mr. Larry Carter
5454 Gateway Boulevard
Flint, Michigan 48507

Dear Mr. Carter:

Subject: Chateau Du Lac Condominiums WSSN 01353
Lead and Copper Monitoring - Action Level (AL) Exceedance

The Chateau Du Lac Condominiums exceeded the AL(s) for lead during the most recent round of lead and copper monitoring of drinking water taps from June 1 to September 30, 2011, as summarized below.

Contaminant	AL	90% of samples at or below this level	Number of samples above the AL
Lead	15 parts per billion (ppb)	26 ppb	1
Copper	1.3 parts per million (ppm)	0.085 ppm	0

An AL exceedance is not a violation, but triggers other requirements under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended. Requirements include water quality parameter (WQP) monitoring, source water monitoring, corrosion control treatment, and public education.

Deliver Customer Notice of Lead Result
Recent changes to the Lead and Copper Rule require you to provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected, within 30 days of learning of results. You must also send us a certification that you met all the delivery requirements along with a sample copy of your customer notice. These items were received October 26, 2011.

Distribute Public Education (PE)
A certificate that the PE materials were distributed to all consumers was received. Repeat each year until the lead AL is no longer exceeded. This material is intended to educate consumers about lead health effects, sources, and steps to minimize exposure. Note that the PE material must include information about the exceedance in your water supply, information about what you are doing to reduce lead levels, information about lead service lines in your distribution system, and information about the history of lead levels in your water supply.

Consumer Confidence Report (CCR)
Include this AL exceedance in your CCR, which is due to our office, your customers, and the local health department, by July 1, 2012. Also include the following statement in the CCR, regardless of the lead and copper levels:

> *If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Chateau Du Lac Condominiums is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://water.epa.gov/drink/info/lead.*

What's Next?
If you can show that both lead and copper ALs are met in two consecutive six month periods, then many of the requirements outlined in this letter will no longer apply. However, in the meantime, you must propose a corrosion control treatment plan or propose to perform a corrosion control study. If treatment is found to be necessary, it must be installed. We will work with you to complete these corrosion control steps to optimize your corrosion control treatment.

Timetable of Requirements

Complete By	Requirement	Comments
Right away	Deliver *Customer Notice Of Lead Result* to persons served at each site tested within 30 days of knowing the result.	Download *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Word or PDF format from http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms.
November 30, 2011	Collect WQP samples.	Collect 2 samples at least 24 hours apart from each entry point to the distribution system. Collect 2 samples at least 24 hours apart from the distribution system. Repeat each lead and copper monitoring period until both ALs are met.
November 30, 2011	Perform PE activities including delivering PE materials to all consumers.	PE required activities are listed in enclosed template and checklist. Repeat every year until the lead AL is met in the most recent round of sampling.
December 10, 2011	Send us certification of PE compliance along with a sample copy of the materials delivered.	Sample certification enclosed. Required whenever PE required.
December 31, 2011	Send us certification of customer notice of lead result compliance along with a sample copy of the notice delivered.	Download *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Word or PDF format from http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms.
March 31, 2012	Collect one lead and copper sample from each entry point to the distribution system.	Repeat every third year until both ALs are met for the whole 3 year period.

Conduct WQP Monitoring

Water Quality Parameter monitoring was completed December 2011, in which two WQP samples were collected 24 hours apart from the entry point to the distribution system and two samples 24 hours apart from 57 Chateau Du Lac Drive in the distribution system. The WQP samples were analyzed for pH, alkalinity, calcium, conductivity, and temperature. Continue sampling for WQP during each lead and copper monitoring period until at least 90% of lead and copper tap results meet both ALs.

To order bottles, call the Department of Environmental Quality (DEQ) laboratory at 517-335-8184, or download the form EQP 2301 *Requisition for Water Sample Units* from http://michigan.gov/deq. Click on Key Topics, Laboratory Services, Drinking Water, Obtaining the Necessary Sampling Units, and test list. The tests are analyzed from one sample bottle per location. Request the analyses using the following test codes:

Test Code	Cost (as of 06/15/2007)	Bottle Number	Test Description
CORR	$51.00	33	Conductivity, Alkalinity, Phosphate, and Calcium
CPH	$13.00	33	pH Determination

Conduct Source Water Monitoring

Source water monitoring was conducted in December 2011. Repeat every third year until both lead and copper ALs are met during the entire three year period.

Correct the Problem

Minimize lead and copper in drinking water by reducing corrosion of water pipes and household plumbing that contain lead and copper. To accomplish this, you must propose a corrosion control treatment plan or propose to perform a corrosion control study by July 31, 2012. If treatment is found to be necessary, it must be installed and samples collected to ensure the lead and copper ALs are consistently met. Contact us for guidance on corrosion control options.

Lead and Copper Monitoring

You are not required to conduct lead and copper tap monitoring until after you install corrosion control treatment. However, at your option, you may conduct additional rounds of monitoring. If the action levels are met during future rounds of monitoring, you may discontinue the corrosion control study and installation of treatment. If the lead action level is met in two consecutive six month monitoring periods, you may discontinue your public education activities. It is recommended that you collect another round of lead and copper tap samples during the January 1-June 30, 2012, monitoring period. Select the same sites used in previous monitoring periods, giving Tier 1 sites first priority. Within 30 days of learning of results, provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected. All monitoring, reporting, customer notification and DEQ certification requirements remain in effect.

Complete By	Requirement	Comments
July 31, 2012	Submit a proposal for optimal corrosion control treatment or a corrosion control study.	Contact us for guidance on corrosion control options. Corrosion control study and treatment installation may cease if both ALs are met during 2 consecutive 6 month monitoring periods.
Between January 1 and June 30, 2012	Collect 10 samples from the distribution system and have them analyzed for lead and copper.	Report the results to the DEQ and deliver the customer notice of individual lead results using the downloadable *Lead and Copper Report and Consumer Notice of Lead Result Certificate*.
July 1, 2012	Report the 2011 AL exceedance in the Consumer Confidence Report.	Specific lead health effects language must be included.

We recognize that the Lead and Copper Rule is complex and may be confusing. We will continue to offer assistance in implementing these regulations.

Michael F. Prysby, P.E., District Engineer
Resource Management Division
prysbym@michigan.gov
517-335-6122

Adam Rosenthal, EQA
Resource Management Division
rosenthala@michigan.gov
517-335-6131

cc: Mr. Robert Stucker, Contract Operator

002707

Office Address 1
Office Address 2
Phone:
Fax:

WSSN: 1353

Office of Drinking Water and Municipal Assistance

Lansing District Office

Water System Sanitary Survey

Chateau-Du-Lac Condominium Water System

15-Nov-12

MONITORING

Bacteriological

Date of Approved Site Sampling Plan:	10/11/2011		
Number of samples required each month:	1	Basis:	pop
Certified Lab Used:	In House Water Lab		
MCL, Monitoring or Reporting Violation(s) in past 3 years? (Y/N)	none	Date:	
Number & Type of Violations	NA		
Public Notice Issued according to regulations? (Y/N)	NA	Date:	

Comments:

Chemical

Date of Monitoring Schedule:	Feb-12		
Were nitrate, nitrite and fluoride (or partial chemical) samples collected? (Y/N)	yes		
If nitrate detect, what is concentration?		Date:	
If nitrite detect, what is concentration?		Date:	
Detects for metals > 50% of MCL? (Y/N)	no		
Metals (list)		Date:	
		Date:	
Detects for VOCs (Y/N)	none	Date:	
Detects for SOCs (Y/N)	none	Date:	
Date of Approved Disinfection Byproduct Monitoring Plan:	NA		

Comments:

Lead and Copper Monitoring

No. of Samples Required:	5		
Frequency (Semi Annual/Annual/Triennial)	annual		
Exceedance of lead or copper action level (Y/N)	yes		
If yes, was public education issued? (Y/N)		Date:	
Next Monitoring Period:	2012		
Corrosion Control Program Status, if applicable	see comment		
Lead service line replacement status, if applicable	NA		

Comments:

The lead action level was exceeded in 2011 with one single location continuously producing a high lead result. All other locations are below the action level. The second 6-month round of samples will be collected at the end of 2012. The association will meet to decide how many additional samples should be collected in an attempt to meet the action level for lead and to demonstrate good public relations.

Radiological Monitoring

Date of Monitoring Schedule	Feb-12		
Alpha, beta, radium, uranium		Date:	4/22/2002
Radon		Date:	
Tritium		Date:	
Detects for Rads > 50% of MCL? (Y/N)	no		
If yes, list		Date:	

Comments:

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

February 22, 2013

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, MI 48507

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Carter:

SUBJECT: Drinking Water Monitoring Schedule – 2013
Annual Reports

Enclosed is your Drinking Water Monitoring Schedule for calendar year 2013 outlining the minimum requirements for your public water supply. Collect samples early in the monitoring period of the year indicated on the schedule. If you use a private laboratory you are required to report the results to us within the first ten days of the month following the month that you received the results. To receive credit for monitoring, the **"WSSN"** (water supply serial number), the **"Site Code,"** and **"County"** must appear on the sample result. Bottles will NOT be mailed automatically. To order bottles, call the DEQ Laboratory at 517-335-8184. Be certain of the EPA sampling and analysis method requirements for hold times.

The Michigan Safe Drinking Water Act requires certain reports to be submitted to this office each year. Please remember that cross connection reports and annual pumpage reports are due by March 31, and the **Consumer Confidence Report** is due by July 1.

Also enclosed is the document "2013 Monitoring and Reporting Requirements." This provides additional details about monitoring and reporting requirements. If you have any questions, please contact us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Field Operation Section
Office of Drinking Water and
Municipal Assistance
517-335-6122

Adam Rosenthal, EQA
Field Operation Section
Office of Drinking Water and
Municipal Assistance
517-335-6131

MFP:AR:JR

Enclosure
cc/encl: Mr. Robert Stucker, Contract Operator

2013 Monitoring and Reporting Requirements

Please Monitor Early: Collect samples early in the monitoring period (month, quarter, year) of the year indicated on the schedule. Bacteriological and partial chemistry samples should be collected close to the shipping time and sent overnight delivery to assure sample holding times are not exceeded (30 and 48 hour hold times respectively). We also recommend avoiding mailing bacteriological samples immediately preceding or following a holiday because samples tend to exceed the 30 hour hold time. When this occurs, a repeat sample must be collected as soon as possible upon notification.

If you use a private laboratory please report the results to us within the first ten days of the month following the month that you received the results. A list of certified laboratories is available on request. If samples are not collected as indicated on your monitoring schedule, you will incur a monitoring violation and may also be subject to a fine. For information on the fines policy, visit http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Administrative Fines.

To receive credit for monitoring, you must include the **"WSSN"** (water supply serial number), the **"Site Code,"** and the **"County"** when you submit samples for analysis. Site codes are listed on your monitoring schedule.

Special Instructions If You Use The DEQ Laboratory: Bottles will NOT be mailed automatically. To order bottles, call the DEQ Laboratory at 517-335-8184 or download the form EQP 2301 *Requisition for Water Sample Units* from www.michigan.gov/deq. Click on Key Topics, Laboratory Services, Drinking Water, Obtaining The Necessary Sampling Units, and 'test list'. Please note that the DEQ laboratory is closed on most state holidays. The DEQ laboratory prices are subject to change without notice.

Special Instructions For Automated Partial Chemistry, VOC and TTHM Samples: These sample bottles must be cooled and preserved during shipment to the laboratory. If you use the DEQ laboratory, you will receive the ice pack, acid dropper (if necessary) and small cooler when you request the bottles. Samples must be preserved correctly to be used for compliance purposes. To avoid resampling follow instructions contained with the sample bottle. If you would like more information, contact the DEQ lab, at 517-335-8184, or contact this office.

Groundwater Rule (GWR): The GWR went into effect in December, 2009. All groundwater supplies were sent a letter in 2010 detailing their responsibilities. If you have any questions regarding the GWR, please contact this office.

Reminder if Lead and Copper Monitoring Due This Year: You must provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected, within 30 days of learning of results. You must also send us a certification that you met all the delivery requirements along with a sample copy of the customer notice within 3 months after the end of the monitoring period. Water supplies that failed to distribute the Consumer Notice of Lead Results must include the following statement in their CCR, "During the year, we failed to provide lead results to persons served at the sites that were tested as required by the Lead and Copper Rule." To download the *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Microsoft Word or PDF format, visit www.michigan.gov/deq. Click on Water, Drinking

2013 Monitoring Schedule

CHATEAUX DU LAC CONDOMINIUMS

WSSN: 01353

Collect samples early in the monitoring period. This schedule reflects your expected routine monitoring and is subject to change. To receive credit for monitoring, include the **WSSN**, **Site Code**, and **County** on your request for analysis form. Collect Bacteriological and Automated Partial Chemistry samples close to the shipping time and send overnight delivery. Send all sample results to your Department of Environmental Quality (DEQ) district office unless you use the DEQ laboratory. Test codes, sample units, and costs are listed to help you complete the DEQ laboratory form. Prices are subject to change without notice. The DEQ laboratory is closed on state holidays.

Location: Well 1 or 2 - Point Of Entry

Collect these samples at the entry point to the distribution system (after treatment, if applicable.)

Sample Type	# Samples/ Frequency	Collect Before	Site Code	Fee	Unit Number	Test Code
Automated Partial Chemistry	This DEQ lab scan includes nitrate, nitrite, fluoride, and sodium whose monitoring frequency requirements differ from one another. Before requesting analyses from a laboratory other than the DEQ laboratory, check with your DEQ district staff for the specific monitoring requirements.					
	1/12 months	09/30/2013	CH001	$18.00	32	R
Volatile Organic Compounds	1/36 months	09/30/2013	CH001	$100.00	36VO	CXVO
Complete Metals	1/108 months	09/30/2019	CH001	$102.00	36ME	CMET2
Arsenic	1/36 months	09/30/2013	CH001	$18.00	36ME	CAS
Cyanide (unchlorinated)	1/108 months	09/30/2014	CH001	$25.00	36CN	CCN
SOC – Pesticides	1/36 months	09/30/2014	CH001	$125.00	36PT	CXPT
SOC – Herbicides	1/36 months	09/30/2014	CH001	$120.00	36HB	CXHB
SOC – Carbamates	1/36 months	09/30/2014	CH001	$120.00	36LP	CXLP
Gross Alpha (Radiological)	1/108 months	09/30/2015	CH001	Not performed at the DEQ Laboratory. A list of certified labs is at www.michigan.gov/DEQ. Select Water, Drinking Water, Community Water Supply, then Certified Labs under Programs and Activities.		
Radium 226 & Radium 228	1/108 months	09/30/2015	CH001			

Location: Distribution System

Sample Type	Collect Samples According to the ...	# Samples/ Frequency	Collect	Site Code	Fee	Unit Number	Test Code
Bacteriological – coliforms	TCR Sampling Site Plan	1/Monthly	Monthly	DIST	$16.00	30	BPTC
Lead Copper for corrosion control	Lead and Copper Sampling Pool	5/6 months	06/30/2013 and 12/31/2013	DIST	$26.00	36CC	CCUB

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

February 24, 2009

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, Michigan 48507

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Carter:

SUBJECT: Drinking Water Monitoring Schedule – 2009
2008 Cross Connection Report
2008 Annual Pumpage Report

2009 Monitoring Schedule

Enclosed is your annual Drinking Water Monitoring Schedule for calendar year 2009 outlining the minimum requirements of the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), and the administrative rules. This schedule reflects your expected routine monitoring and is subject to change should federal or state regulations change.

Please Monitor Early: Collect samples early in the monitoring period (month, quarter, year) of the year indicated on the schedule. Bacteriological and partial chemistry samples should be collected close to the shipping time and sent overnight delivery to assure sample holding times are not exceeded (30 and 48 hour hold times respectively). We also recommend avoiding mailing bacteriological samples immediately preceding or following a holiday because samples tend to exceed the 30 hour hold time. When this occurs, a repeat sample must be collected as soon as possible upon notification.

If you use a private laboratory please report the results to us within the first ten days of the month following the month that you received the analysis. A list of certified laboratories is available on request. If samples are not collected on or before the dates listed on your monitoring schedule, you will incur a monitoring violation and may also be subject to a fine. A summary of the fines policy can be downloaded from www.michigan.gov/deq, click on Water, Drinking Water, Community Water Supply. Scroll down to Laws & Rules and click on Administrative Fines.

To receive credit for monitoring, you must include the **"WSSN"** (water supply serial number) and the **"Site Code"** when you submit samples for analysis. Site codes have changed. These codes are listed on your monitoring schedule.

Special Instructions If You Use The DEQ Laboratory: You must order your own bottles using the enclosed "Requisition for Sample Units" via phone, fax, or mail; *bottles will not be mailed automatically*. You can download the form from www.michigan.gov/deq, click on Key Topics, Laboratory Services, Drinking Water, Drinking Water Test Fees. Please note that the DEQ laboratory is closed on most state holidays. The DEQ laboratory prices are subject to change without notice.

Special Instructions For Partial Chemistry, VOC and TTHM Samples: Please remember that these sample bottles must be cooled and properly preserved during shipment to the laboratory. If you use the DEQ laboratory, you will receive the ice pack, acid dropper (if necessary) and small cooler when you request the bottles. Please note that if you do not properly preserve your samples, they may not be used for compliance purposes. If you would like more information or instructions on how to properly preserve your samples during shipment, please contact the DEQ lab, at 517-335-8184, or your DEQ compliance person.

Lead and Copper Monitoring: If you are due for lead and copper monitoring this year, monitoring is not complete until you fill out the Lead and Copper Report Form.

Consumer Confidence Report (CCR) Reminder: Your CCR showing contaminants found in your water during 2008 must be distributed to your customers, your local health department, and the DEQ by July 1, 2009.

2008 Cross Connection Report

In accordance with Act 399, an annual report on the status of the local water supply cross connection control program must be filed with the DEQ. To fulfill this requirement, please complete and return the enclosed 2008 report form to this office no later than March 31, 2009. The narrative portion of the report should be as extensive as necessary to accurately describe the status of the local program. Every water supply, except manufactured housing communities, must submit a report regardless of whether a formal program has been implemented. Manufactured housing communities are encouraged to develop a cross connection control program. If you do not have any known cross connections in your water system, return the report and indicate as such. Instructions for filling out this form are included.

2008 Pumpage Report

In accordance with Act 399, an annual report of water pumpage and/or water use must be submitted by each Type 1 water supply that does not submit monthly operation reports. To manage our natural resources, pumpage data are compiled to determine water use demands in Michigan. If you do not submit a monthly operation report, complete and return the enclosed report form to this office no later than March 31, 2009.

For your convenience, the report forms mentioned in this letter can be downloaded from: http://www.michigan.gov/deq, click on Water, Drinking Water, Community Water Supply. Scroll down to Manuals, Forms & Brochures. Click on Reporting Forms.

Additional Requirements That May Apply to Your Water System

You may have monitoring requirements in 2009 under the federal Stage 2 Disinfectants and Disinfection Byproducts Rule, the Long Term 2 Enhanced Surface Water Treatment Rule, or the Unregulated Contaminant Monitoring Rule. The United States Environmental Protection Agency will contact you directly if your system is required to monitor in 2009.

If you have any questions about the requirements or filling out the forms, please call me at the number below.

Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB
Enclosure
cc/encl: Mr. Robert Stucker, In-House Water Lab

2 Samples

Subject: Chateau Du Lac Lead Copper Plan

From: Prysby, Mike (DEQ) (PRYSBYM@michigan.gov)

To: larrycarter42@yahoo.com;

Cc: bstucker@ci.howell.mi.us; BUSCHS@michigan.gov; ROSENTHALA@michigan.gov;

Date: Thursday, January 30, 2014 4:34 PM

Larry,

Chateau Du Lac Condominiums was informed by the MDEQ on December 17, 2013 of the Lead & Copper Action Level Exceedance. Chateau Du Lac was given a Jan 31, 2014 deadline to propose a corrosion control treatment plan. We have not received a response or proposal from Chateau Du Lac concerning this matter. Please contact me at your earliest convenience to discuss this matter further.

Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

Larry Carter

From: Prysby, Mike (DEQ) <PRYSBYM@michigan.gov>
Sent: Monday, February 10, 2014 3:04 PM
To: Larry Carter
Subject: RE: Chateaux control treatment plan

Larry,

Thanks for your response regarding this matter. To help expedite the process of selecting an optimal corrosion control treatment plan you will need to contact a consultant who specializes in water treatment and corrosion control. Listed below are a few, but not limited to, local area engineering firms that can provide assistance in water treatment....

Rowe Incorporated : 810 341-7500
Wade-Trim: 810 235-2555
Fleis & Vandenbrink 810 743-9120

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Larry Carter [mailto:Larry@pipermanagement.com]
Sent: Friday, February 07, 2014 10:11 AM
To: Prysby, Mike (DEQ)
Subject: Chateaux control treatment plan

Mike:

Sorry about the delay. I thought that was something that Bob Stucker could handle but not the case. Birkmeier Well Drilling is attempting to put me in touch with a firm that can help provide the type of plan requested. I will keep you posted as I learn more details.

Thanks

Larry Carter

BIRKMEIER

ED BIRKMEIER WELL DRILLING, LTD.

February 17, 2014

Larry Carter
Piper Reality
C/O Chateau Du Lac Condominiums
5454 Gateway Center
Flint MI 48507

Dear Mr. Carter,

Since 2011, Chateau Du Lac Condominiums (CDLC) has exceeded the Action Level (AL) for lead established by the 1993 Lead and Copper Monitoring Program. In order to minimize the occurrence of lead and copper, a corrosion control program should be implemented.

To reduce the lead below the AL, it is recommended that a Phosphate Injection System be installed. With the introduction of phosphate, the possibility of micro-organism growth (bio-film) increases. To counter-act these effects, the addition of a Chlorine Injection System should be installed.

To establish a baseline, the system will inject phosphate at a rate of 2 parts per million (ppm) and chlorine at a rate of 0.5 ppm.

With the addition of a treatment system, the lead levels should reduce significantly below the lead AL.

Please contact me if you have any further questions or concerns.

Sincerely,

Marty Zuber
Manager

PO BOX 324 NEW LOTHROP, MI 48460 800-638-5104 810-638-5353 FAX
EBWD@CENTURYTEL.NET

02/17/2014 11:03 8106385353 BIRKMEIER WELL DRLNG PAGE 01/01

Prysby, Mike (DEQ)

From: Prysby, Mike (DEQ)
Sent: Wednesday, March 05, 2014 4:22 PM
To: 'ebwd@centurytel.net'
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: Chateau Du Lac Condominiums Lead Action Level Exceedance

Marty,

We received a copy of your letter dated February 17, 2014 to Mr. Larry Carter of Piper Reality recommending installation of a phosphate injection system and a chlorine feed system at Chateau-Du Lac condominium to help this supply re-achieve compliance with the Lead action level. Prior to installing the chemical feed system, an Act 399 construction permit is required from our office. A completed permit application needs submitted to the MDEQ and include a drawing of the proposed chemical feed system (depict locations of injection points, feed barrel, metering pumps, etc.). The proposal also needs to include a basis of design, metering pump specs, means to monitor chem feed - scales, chemical product (meets ANSI-NSF Standard 60), etc. Following our review and approval, a construction permit will be issued. If you have any questions, please don't hesitate to call me at the number provided below.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Correct original for corrosion control

Proposal by end of month

Impose Iron Levels

Lead 90th Exceedances at Chateau Du-Lac

Year	Lead 90th Percentile Result (used for compliance for lead action level)
1994:	49 ppb
2004:	20 ppb
2008:	59 ppb
2011:	26 ppb
2012 (R1)*	25 ppb
2012 (R2)*	39.5 ppb
2013 (R1)*	33 ppb
2014:	79 ppb

Locations at or above the lead Action Level:
* R1 - First monitoring period of calendar year
* R2 - Second monitoring period of calendar year

Year:	Location:	Result:
1994	2 sites	> 15 ppb
1995	22 Chateau Du Lac Drive	18 ppb
1998	23 Chateau Du Lac Drive	1155 ppb
1998	23 Chateau Du Lac Drive	168 ppb
2004	64 Chateau Du Lac Drive	33 ppb
2005	1 Chateau Du Lac Drive	19 ppb
2006	23 Chateau Du Lac Drive	21 ppb
2007	23 Chateau Du Lac Drive	225 ppb
2007	64 Chateau Du Lac Drive	15 ppb
2008	23 Chateau Du Lac Drive	115 ppb
2011	23 Chateau Du Lac Drive	43 ppb
2012 (R1)	59 Chateau Du Lac Drive	25 ppb
2012 (R1)	71 Chateau Du Lac Drive	122 ppb
2012 (R2)	23 Chateau Du Lac Drive	74 ppb
2013 (R1)	13 Chateau Du Lac Drive	85 ppb
2013 (R1)	21 Chateau Du Lac Drive	15 ppb
2013 (R1)	11 Chateau Du Lac Drive	51 ppb
2014 (R2)	14 Chateau Du Lac Drive	188 ppb
2014 (R2)	14 Chateau Du Lac Drive	95 ppb

The individual sample results/locations listed immediately above may or may not necessarily caused an exceedance in the lead 90th percentile calculation in all monitoring periods; however they show significantly high concentrations of lead in the drinking water at multiple (9)locations.

From: Busch, Stephen (DEQ)
Sent: Tuesday, May 26, 2015 12:42 PM
To: Prysby, Mike (DEQ)
Subject: RE: McLaren letter
Attachments: McClaren Visit Ltr - May 2015-revised.doc

See attached revisions.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Tuesday, May 26, 2015 10:10 AM
To: Busch, Stephen (DEQ)
Subject: McLaren letter

Steve,

Attached is a draft letter to McLaren Flint concerning the chemical feed system for your review and comment.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

May 25, 2015

Mr. Russell Hudson, Director of Engineering Services
McLaren Flint
401 South Ballenger Highway
Flint, MI 48532

Dear Mr. Hudson:

SUBJECT: McLaren Flint – Potable Water System – Supplemental Treatment

This letter confirms my meeting on April 29, 2015, with you and other representatives of McLaren Flint. Mr. Stephen Busch from our office was also present. The purpose of the meeting was to discuss risk management for McLaren's potable water plumbing system and to provide guidance towards achieving a more comprehensive risk management program. A tour of the hospital water system included a sodium hypochlorite chemical feed system installed at a confluence of water service lines into the building. Our examination of this chemical feed system discovered that it was not constructed in accordance with the Recommended Standards for Water Works and requirements of the Michigan Safe Drinking Water Act, and must be modified as follows to ensure proper operation and protection of public health.

- Currently the chlorine feed pump operates at a constant feed rate, adjusted manually, while the water supply booster pumps vary flow using variable frequency drives to maintain a constant water pressure. This does not allow for a uniform chemical dosage concentration, and can lead to both under and overfeeding of the chemical as well as disinfectant byproduct formation. To address this situation, a flow pacing chemical feed pump must be installed. This type of pump will automatically adjust the chemical feed rate based on the flow rate of the water supply pumps to provide a consistent dosage concentration. This will also allow chlorine disinfectant to be fed at all times.

- Operation of a chemical treatment system requires routine observation. However, the current configuration does not allow dosage determinations to be made. This is necessary to identify changes in chlorine demand. To accomplish this, a scale must be provided that allows for the amount of sodium hypochlorite solution by weight from the drum to be measured and recorded on a daily basis. A scale with digital readout is recommended. The volume of water used over the same time must also be determined and recorded in order to calculate the dosage of chlorine using the following calculation.

  $$\text{Chlorine Dosage (mg/L)} = \frac{HypochloriteSolution(lbs) \times 0.125}{Water(gallons) \times 8.34 \times 10^{-6}}$$

- Samples for chlorine residual measurement are being taken at various locations within the hospital using a Hach Model CN-66 test kit. This kit uses a color comparator disc for basic measurement, which can cause readings to vary depending on light conditions and operator vision. A test kit that provides digital

measurement is recommended. A model can be obtained that is also suitable for measuring residual during both normal chemical feed operation and hyperchlorination events. The hospital may also want to consider the use of a continuous chlorine residual analyzer at select locations, which have alarm capabilities for low and/or high chlorine levels.

  - Only chemical reagents specifically designed for the make and model of your test kit unit should be used for sample analysis.
  - Chlorine residual measurements should be made each day at locations within the building and at a location slightly downstream of the chemical feed point

- Chemical feed dosage determinations and chlorine residual measurements must be recorded. An operations form template is enclosed for your use.

- The existing chlorine feed tap appeared to have excessive buildup at the injection location. A tap with a removable injection quill that can be placed with the feed tip at the center of the pipeline will allow for maintenance and better chemical distribution.

Prior to alteration of the chlorine feed system, an Act 399 construction permit for the proposed work must be obtained from our office. A copy of the permit application is enclosed and may also be obtained from the DEQ website.

Should you require further information, please contact me at the telephone number below; via e-mail at prysbym@michigan.gov; or Department of Environmental Quality, P.O. Box 30242, Lansing, Michigan 48909.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Office of Drinking Water and
Municipal Assistance
Lansing District Office
(517) 290-8817

mfp/jlr
cc Mr. Glen Thomas
Mr. Stephen Busch, P.E.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Rennaker, Joanne (DEQ)
Sent: Tuesday, June 02, 2015 11:01 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: Chateaux Du Lac scanned documents
Attachments: Chateaux Du Lac Correspondence file documents.pdf; Chateaux Du Lac Lead and Copper documents.pdf; Chateaux Du Lac Lead and Copper file documents.pdf

Jo Anne Rennaker
Secretary
Department of Environmental Quality - Lansing District Office
Office of Drinking Water & Municipal Assistance
Office of Waste Management & Radiological Protection
517-284-6643

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

December 17, 2013

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Realty
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Chateau Du Lac Condominium – Lead & Copper Action Level Exceedance

This letter will confirm my visit with Mr. Robert Stucker, your operator-in-charge (OIC), on December 5, 2013, at Chateau Du Lac Condominiums (CDLC). The purpose of the site visit was to confirm installation of the raw water meter and elimination of the cross connection on the pool fill line.

Based upon our site inspection and your February 21, 2013, response letter, raw water metering has been provided and an approved reduced pressure zone backflow preventer device was installed on the pool fill line. Since raw water metering has been provided, water usage will need to be monitored and reported on a yearly basis (annual pumpage report). Your OIC can assist you in completing the annual pumpage report each year.

Next, the insulation around each hydropneumatic storage tank should be removed in order to perform a visual inspection of each tank and to complete any necessary maintenance and/or repairs. We also question the need to insulate the tanks since the wellhouse room temperature does not fall below freezing. We recommend that the insulation be permanently removed.

Next, the CDLC exceeded the Action Level (AL) for lead in 2011 and has continued to exceed the lead AL in all subsequent 6-month monitoring periods. Our records show that the CDLC has failed to meet the lead AL for seven routine monitoring periods since establishment of the lead and copper monitoring program in1993.

Given the number of lead AL exceedances, the CDLC no longer has the option to conduct additional rounds of lead and copper monitoring in an attempt to meet future ALs. The CDLC must minimize lead and copper in the drinking water by reducing the corrosion of water pipes and household plumbing that contain lead and copper. The CDLC must propose a corrosion control treatment plan by January 31, 2014. Potential

types of corrosion control treatment may include; addition of phosphate or silica based-based corrosion inhibitor, pH and alkalinity adjustment, or calcium adjustment. We encourage you to retain a consultant who specializes in water treatment for further assistance in selecting the optimal type of corrosion control treatment. After treatment is installed, monitoring for lead and copper will resume to ensure the lead and copper ALs are consistently met. Finally, prior to installing corrosion control treatment, an Act 399 construction permit must be issued by our office authorizing the proposed work.

Finally, the CDLC must provide customer notice of the most recent lead sample results and continue to distribute public education materials in accordance to the guidelines provided in our June 19, 2012, letter (copy enclosed).

If you have any questions, feel free to contact me at the number listed below, at prysbym@michigan.gov; or Department of Environmental Quality, Office of Drinking Water and Municipal Assistance, Lansing District Office, 525 West Allegan Street, 1st Floor South, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael Prysby

Michael F. Prysby, P.E.
District Engineer
Field Operations Section
Office of Drinking Water and
Municipal Assistance
517-290-8817

mfp/jlr
enclosure

cc: Mr. Robert Stucker, OIC, Chateau Du Lac
Mr. Mike Duncan, Caretaker, Chateau Du Lac

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

December 3, 2012

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Reality
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Chateau Du Lac Condominium - Water System Sanitary Survey

This letter will confirm my visit with Mr. Robert Stucker, your operator-in-charge (OIC), on November 15, 2012, and summarize the subsequent review and discussion of the water supply facilities serving Chateau Du Lac Condominium. The purpose of this meeting was to evaluate the water system with respect to the requirements of the Michigan Safe Drinking Water Act 1976 PA 399, as amended (Act 399). In addition, the enclosed Water System Review form was updated to gather information on the Chateau Du Lac Condominium water supply system.

This most recent evaluation confirms that the water system Emergency Response Plan (ERP) was completed. Aside from a few minor revisions that will be completed by your OIC, the ERP meets our requirements. A copy of the ERP should be kept in the wellhouse for use in the event of a water related emergency. The ERP should also be updated every two to three years or if there are any water related changes. Also, dehumidification was provided inside the wellhouse as a means to reduce moisture and the rate of corrosion.

Next, the following table summarizes our findings from our survey of the water system:

Survey Element	Findings
Source	**Deficiencies Identified**
Treatment	No deficiencies/recommendations
Distribution System	**Deficiencies Identified**
Finished Water Storage	Recommendations made
Pumps	Recommendations made
Monitoring & Reporting	**Deficiencies Identified**
Management & Operations	No deficiencies/recommendations
Operator Compliance	No deficiencies/recommendations
Security	No deficiencies/recommendations
Financial	No deficiencies/recommendations
Other	Not evaluated

The following deficiencies are violations of the Act 399, and must be resolved in order to return the water system to compliance.

1. The raw water meter inside the wellhouse is not functioning and has not been repaired or replaced as we requested in our previous correspondence. This is a violation of Act 399, Rule 325.10829(a).

2. Annual pumpage reports are not being prepared and submitted to the Department of Environmental Quality (DEQ) by March 30th of the following year as required in Act 33, Rule 325.11504(1)(2). The lack of a functioning raw water meter contributes to this violation.

3. A cross connection exists between the clubhouse domestic plumbing and the swimming pool fill line. Although the connection is physically disconnected during the winter months, an acceptable backflow prevention device needs to be installed in the vicinity of the connection since this line is re-connected during the summer months. An approved vacuum breaker is the type of device that will be required for this application. Enclosed is a list of approved vacuum breakers.

Next, it is hoped that the following recommendations will prove useful in enhancing the operation and maintenance of your water supply.

4. Establish accurate hydrant and valve records. Accurate records are essential for effective operation and maintenance of the distribution system and they also play an important role in mitigating water system emergencies.

5. Remove the insulation (temporarily) from each hydro-pneumatic tank and inspect their external surface for corrosion. If the tanks are showing signs of corrosion, their surface should be re-coated with an epoxy coating system suitable for potable water storage tanks. The surface of each tank should be adequately prepared (abrasive removal of old paint system and corrosion) prior to applying the new epoxy coating system.

Please submit a letter by January 15, 2013, that outlines Chateau Du Lac's plans and schedule to address the above items.

Additionally, there were a number of changes made to Act 399 in 2009 that place new or modified requirements on water systems as of January 1, 2016. These changes are summarized below:

- General Plans: Now required for manufactured housing communities, health care facilities, and community water system serving less than 50 living units or 200 people. Chateau Du Lac has been reminded of the need to provide an accurate water system general plan. An "as-built" copy of the general plan needs to be compiled and may be available from the consultant who designed the water system.

Please ensure that *Chateau Du Lac Condominium* is in compliance with the requirement listed above.

Finally, additional lead and copper monitoring is being conducted to address the lead action level exceedance in 2011. Both the lead and copper action levels must be met for two consecutive six month periods in order to forgo the public education requirement and the need to pursue corrosion control treatment. Please reference the June 19, 2012, letter (copy enclosed) that provides guidance concerning the most recent lead action level exceedance.

Based upon the monitoring conducted in 2012 thus far, the lead action level has not been met. Lead and copper monitoring will need to continue through June 30, 2013, in order to determine compliance with the lead and copper action level. The specific lead and copper monitoring requirement will be discussed in Chateau Du Lac's 2013 monitoring schedule.

If you have any questions, feel free to contact me at the number listed below, at prysbym@michigan.gov, or Department of Environmental Quality, Office of Drinking Water and Municipal Assistance, Lansing District Office, 525 West Allegan Street, 4th Floor North, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E.
Acting District Supervisor
Field Operations Section
Office of Drinking Water and
Municipal Assistance
517-335-6122

mfp/jlr
enclosures

cc: Mr. Robert Stucker, OIC, Chateau Du Lac
Mr. Mike Duncan, Caretaker, Chateau Du Lac

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

November 1, 2011

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Reality
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Water System, Chateau Du Lac Condominium

This letter confirms my visit on October 21, 2011, with Mr. Robert Stucker, your operator-in-charge (OIC). The purpose of the visit was to conduct routine water system surveillance at Chateau Du Lac condominiums. We are somewhat disappointed in the lack of progress made towards correcting the water related concerns that were noted in the Chateau Du Lac 2009 Water System Review. These concerns are discussed in more detail below.

1. Chateau Du Lac's most recent water system general plan is clearly outdated and the plan has not been updated as we requested. As we discussed, an "as-built" copy of the general plan needs to be obtained and may be available from the consultant who designed the water distribution system. An updated water system general plan needs to be prepared and a copy sent to us by no later than January 31, 2012.

2. A water system Emergency Response Plan (ERP) has not been prepared as we requested. The ERP provides an outline to follow in the event of a water related emergency (loss of pressure, contamination, etc.). A template that can be used for preparing the ERP was provided to your OIC. We will review the completed ERP during our next routine site visit.

3. Dehumidification has not been provided as a means to control moisture and limit corrosion within the wellhouse.

4. The raw water meter inside the wellhouse is not functioning and has not been replaced as we requested. The raw water meter needs to be repaired or replaced such that accurate water usage information can be obtained by no later than January 31, 2012.

5. Chateau Du Lac's lead action level was exceeded during routine lead and copper monitoring in 2011. Two consecutive six-month rounds of lead and copper monitoring will be required, along with water quality parameter monitoring and public education. Specific monitoring & reporting details will be covered in a separate letter. Finally, the 2011 exceedance represents the 4th exceedance in the lead and copper action level since the start of the lead and copper monitoring program. We will be reviewing the history of Chateau Du Lac's lead and copper monitoring program to determine whether a corrosion control study needs to be conducted and/or treatment needs to be provided.

Finally, according to our records, routine pump and motor maintenance for Well #2 has not been performed within the last 12 years. As we discussed, Type-I wells (pump & motor) should be scheduled for routine maintenance once every 5 to 10 years. This type of preventative maintenance is an accepted standard that is practiced in the waterworks industry and is essential in minimizing the chance of an unexpected failure of the well pump/motor and the potential for a loss of water service. Routine pump and motor maintenance should be performed for Well #2 during 2012

We look forward to working with you on these and on any other water related matters. Should you require further information, please contact me at the telephone number below; via e-mail at prysbym@michigan.gov; or Department of Environmental Quality P.O. Box 30242, Lansing, Michigan 48909.

Sincerely,

Michael Prysby

Michael F. Prysby, P.E.
District Engineer
Resource Management Division
Lansing District Office
(517) 335-6122

cc: Mr. Robert Stucker, Operator, Chateau Du Lac
Mr. Mike Duncan

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

November 25, 2008

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Reality
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Water System, Chateau Du Lac Condominium

This letter confirms my visit on November 6, 2008 with your contract operator, Robert Stucker. The purpose of the visit was to conduct routine water system surveillance. Specific water system concerns that need attention are discussed below in more detail.

1. Our most recent copy of Chateau Du Lac's water system general plan was prepared in 1984, and the plan is clearly outdated. An updated water system general plan was not available at the time of the site visit. Also, it does not appear that an updated plan was prepared as we requested in our previous visits and correspondence (copy of our January 8, 2007 letter enclosed).

   An updated water system general plan needs to be prepared and a copy of the plan sent to our office by no later that January 31, 2009. As we discussed, the updated general plan needs to show the location and size of all watermains, hydrants, valves, service lines, etc. The plan should also show the location of the wells, discharge piping, wellhouse, and storage facilities.

2. Chateau Du Lac's bacteriological sample site plan was updated as we requested. As we discussed, a third repeat sampling location needs to be added to the plan since one distribution system sample is collected each month. The updated sample site plan is approved with the condition that a third repeat sampling location is added to the plan.

3. Our inspection of the wellhouse (west half of the clubhouse basement) revealed that this area is being used to store much of the swimming pool equipment. These items make it cumbersome to perform routine wellhouse activities.

   The purpose of a Type-I wellhouse is to allow for flexibility of operation of the water system. The west half of the basement is dedicated for the wellhouse piping and appurtenances and is not intended to be used as a storage area for typical outdoor maintenance equipment including pool supplies and parts. This area must also be accessible only to the water system operator. These miscellaneous items need to be stored in an area that is separate from the wellhouse piping and appurtenances.

4. The lead action level was exceeded during routine lead and copper monitoring in 2008. Exceedence of the lead action level will require Chateau Du Lac to perform water quality parameter monitoring and to revert to full-scale monitoring for at least two consecutive six-month rounds in 2009. Also, public education information will need to be provided to your customers. More detailed information regarding this exceedence and subsequent action that will be required will be provided to you in a separate letter.

If you have any questions, please call me at the number provided below.

Sincerely,

Michael F. Prysby P.E., District Engineer
Field Operations Section
Lansing District Office
Water Bureau
(517) 335-6122

enclosure

cc: Mr. Robert Stucker, Operator, Chateau Du Lac

[redacted] [redacted] File # 1353

From: Adam Rosenthal
To: Mike Prysby; Robert Stucker
Date: 9/16/2008 2:15:41 PM
Subject: Re: Chateaux Du Lac lead and copper report form

Hi Bob, I just saw the results - 115 ppb for lead is a bit high, any major issue, outside hose bib, basement slop sink, vacant home, etc? Since this is an annual round of monitoring which ends 9/30/08, there is still time to collect more samples and possibly bump this one out - I would suggest a minimum of 5 more samples. Since compliance is based on the 90th percentile, the 9th highest sample would count, 20 samples total would be the 18th highest for the 90th, and so on. Otherwise we're back to water quality parameters and lead public notice. Let me know if you have any questions.

thanks,

Adam Rosenthal, EQA
MDEQ-Drinking Water
Lansing District Office
4th Floor North
PO Box 30242
Lansing, MI 48909
517-335-6131
Fax 517-241-3571
rosenthala@michigan.gov

>>> Robert Stucker <inhousewaterlab@sbcglobal.net> 9/16/2008 1:45 PM >>>
9-16-08
13:45

Adam

I have attached the lead and copper report form for Chateaux Du Lac, WSSN: 1353.

Thanks

Bob

Robert H. Stucker
Laboratory Director
In-House Water Lab
210 N. Center St
Howell MI 48843
Ph/Fax: 517-548-7363
e-mail: inhousewaterlab@sbcglobal.net

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399, MCL 325.1001 *et al.*, and Administrative Rules, as amended.
Failure to submit this information is a violation of Act 399 and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Locations.

1. Water Supply Name: Chateaux Du Lac Condominiums
2. County: Genesee 3. WSSN: **01353**
4. Population: 50 5. Monitoring Period: From: 7-1-14 To: 12-31-14
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 12
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☒	☐	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	

Comments: 14 Chateaux Du Lac Dr was retested on 12-29-14

DEQ
RESOURCE MANAGEMENT DIVISION
FEB 05 2015
LANSING DISTRICT

10. NAME:

Name: Robert H. Stucker

Title: Operator-in Charge Phone: 517-548-7363 Date: 1-29-14

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac WSSN 01353

RESULTS:

Sample Location	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
6 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
14 Chateaux Du Lac Dr	10-23-14	Other	C	C	188	170	MI00003
14 Chateaux Du Lac Dr	12-29-14	Other	C	C	95	740	MI00003
23 Chateaux Du Lac Dr	10-21-14	Other	C	C	13	60	MI00003
45 Chateaux Du Lac Dr	12-29-14	Other	C	C	6	80	MI00003
54 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
59 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
60 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
71 Chateaux Du Lac Dr	10-23-14	Other	C	C	2	ND	MI00003
72 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
72 Chateaux Du Lac Dr	12-29-14	Other	C	C	2	ND	MI00003
82 Chateaux Du Lac Dr	10-23-14	Other	C	C	1	ND	MI00003

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	78.6			2
Cu	152			0

002737

Chateaux Du Lac

WSSN: 1353

Water Quality Parameters for February 2014

2/4/2015

5:00 PM

POE

pH	7.20	
Alkalinity	340	as $CaCO_3$
Calcium	122	as $CaCO_3$
Conductivity	617	µS
Temp °C	13.1	

2/4/2015

5:00 PM

57 Chateaux Du Lac Dr

pH	7.37	
Alkalinity	312	as $CaCO_3$
Calcium	2	as $CaCO_3$
Conductivity	694	µS
Temp °C	16.3	

DEQ
RESOURCE MANAGEMENT DIVISION
FEB 10 2015
LANSING DISTRICT

2/5/2015

5:00 PM

POE

pH	7.17	
Alkalinity	342	as $CaCO_3$
Calcium	126	as $CaCO_3$
Conductivity	622	µS
Temp °C	13.2	

2/5/2015

5:00 PM

57 Chateaux Du Lac Dr

pH	7.32	
Alkalinity	316	as $CaCO_3$
Calcium	4	as $CaCO_3$
Conductivity	690	µS
Temp °C	16.2	

Robert H. Stucker

Robert H. Stucker

In-House Water Lab

P.O. Box 116

Blissfield MI 49228

517-548-7363

inhousewaterlab@sbcglobal.net

002738

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
RESOURCE MANAGEMENT DIVISION

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.
Failure to submit this information is a violation of the Act and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts.

1. Water Supply Name: Chateaux Du Lac
2. County: Genesee 3. WSSN: **1353**
4. Population: 50 5. Monitoring Period: From: 7-1-13 To: 12-31-13
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 18 22
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☐	☒	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	
Comments: Original 5 sample sites plus extra samples due to testing all lots for lead and copper			

10. NAME:

Name: Robert H. Stucker

Title: Operator-in-Charge Phone: 517-548-7363 Date: 10-8-13

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac WSSN 1353

RESULTS:

Sample Location 3 Chateau	Sample Date 11-15-13	Sample Category[1]	Service Lines[2]	Bldg Plumbing[2]	Lead (ppb) 6	Copper (ppb) 60	Lab #
23 Chateaux Du Lac Dr	7-19-13	Other	C	C	66	180	MI00003
45 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
51 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
53 Chateaux Du Lac Dr	7-11-13	Other	C	C	1	ND	MI00003
54 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
55 Chateaux Du Lac Dr	7-11-13	Other	C	C	4	ND	MI00003
62 Chateaux Du Lac Dr	7-5-13	Other	C	C	ND	ND	MI00003
63 Chateaux Du Lac Dr	7-11-13	Other	C	C	2	ND	MI00003
64 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
65 Chateaux Du Lac Dr	7-5-13	Other	C	C	ND	140	MI00003
71 Chateaux Du Lac Dr	7-11-13	Other	C	C	2	ND	MI00003
72 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
73 Chateaux Du Lac Dr	7-11-13	Other	C	C	9	ND	MI00003
76 Chateaux Du Lac Dr	7-11-13	Other	C	C	1	60	MI00003
81 Chateaux Du Lac Dr	7-11-13	Other	C	C	6	60	MI00003
84 Chateaux Du Lac Dr	7-11-13	Other	C	C	4	320	MI00003
82 Chateaux Du Lac Dr	7-11-13	Other	C	C	1	ND	MI00003
13 Chateaux Du Lac Dr	8-8-13	Other	C	C	1	ND	MI00003
14 Chateau	9-24-13				3	0	
43 Chateau	11-15-13				1	60	
22 Chateau	11-15-13				?	60	

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	8.4			1
Cu	124			0

90th = 19.8

002740

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
RESOURCE MANAGEMENT DIVISION

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.
Failure to submit this information is a violation of the Act and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts.

1. Water Supply Name: Chateaux Du Lac
2. County: Genesee 3. WSSN: **1353**
4. Population: 50 5. Monitoring Period: From: 1-1-13 To: 6-30-13
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 15
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☐	☒	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☒	e. Is the minimum number of lead service line samples taken (when applicable)?	

Comments:
NOTE: Lot 13 was sampled on 5-29-13, lead was 85 ppb.
Lot 13 was re-sampled on8-8-13, lead result was1 ppb

10. NAME:

Name: Robert H. Stucker

Title: Operator-in-Charge Phone: 517-548-7363 Date: 12-17-13

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac WSSN 1353

RESULTS:

Sample Location	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
1 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	1350	MI00003
4 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
5 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	100	MI00003
6 Chateaux Du Lac Dr	5-29-13	Other	C	C	4	310	MI00003
13 Chateaux Du Lac Dr	5-29-13	Other	C	C	85	1500	MI00003
14 Chateaux Du Lac Dr	5-29-13	Other	C	C	4	ND	MI00003
15 Chateaux Du Lac Dr	5-29-13	Other	C	C	14	ND	MI00003
21 Chateaux Du Lac Dr	5-29-13	Other	C	C	15	ND	MI00003
24 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
41 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
44 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
46 Chateaux Du Lac Dr	5-29-13	Other	C	C	10	270	MI00003
60 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
11 Chateaux Du Lac Dr	6-15-13	Other	C	C	51	260	MI00003
42 Chateaux Du Lac Dr	6-15-13	Other	C	C	ND	60	MI00003

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	33			2
Cu	830			1

002742

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
RESOURCE MANAGEMENT DIVISION

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.
Failure to submit this information is a violation of the Act and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts.

1. Water Supply Name: Chateaux Du Lac Condominiums
2. County: Genesee 3. WSSN: **1353**
4. Population: 50 5. Monitoring Period: From: 7-1-12 To: 12-31-12
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 5
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☒	☐	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	
Comments:			

10. NAME:

Name: Robert H. Stucker

Title: Operator-in-Charge Phone: 517-548-7363 Date: 11-9-12

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac Condominiums Genesee WSSN 1353

RESULTS:

Sample Location	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
14 Chateaux Du Lac Dr	9-26-12	Other	C	C	5	ND	MI00003
23 Chateaux Du Lac Dr	9-25-12	Other	C	C	74	240	MI00003
54 Chateaux Du Lac Dr	9-25-12	Other	C	C	2	ND	MI00003
71 Chateaux Du Lac Dr	9-26-12	Other	C	C	2	ND	MI00003
72 Chateaux Du Lac Dr	9-26-12	Other	C	C	ND	ND	MI00003

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	39.5			1
Cu	120			0

Chateaux Du Lac

WSSN: 1353

Water Quality Parameters for October 2012

10/19/2012

8:00 AM

Well 1

pH	7.53	
Alkalinity	316	as $CaCO_3$
Calcium	250	as $CaCO_3$
Conductivity	380	µS
Temp °C	13.1	

10/19/2012

8:00 AM

Well 2

pH	7.46	
Alkalinity	330	as $CaCO_3$
Calcium	248	as $CaCO_3$
Conductivity	386	µS
Temp °C	13.4	

10/20/2012

9:00 AM

Well 1

pH	7.50	
Alkalinity	312	as $CaCO_3$
Calcium	244	as $CaCO_3$
Conductivity	388	µS
Temp °C	13.1	

10/20/2012

9:00 AM

Well 2

pH	7.44	
Alkalinity	322	as $CaCO_3$
Calcium	246	as $CaCO_3$
Conductivity	398	µS
Temp °C	13.3	

Robert H. Stucker

Robert H Stucker

In-House Water Lab

P.O. Box 116

Blissfield MI 49228

517-548-7363

inhousewaterlab@sbcglobal.net

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
RESOURCE MANAGEMENT DIVISION

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.
Failure to submit this information is a violation of the Act and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts.

1. Water Supply Name: Chateaux Du Lac Condominiums
2. County: Genesee 3. WSSN: **1353**
4. Population: 50 5. Monitoring Period: From: 1-1-12 To: 6-30-12
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 10
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☒	☐	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	
Comments:			

10. NAME:

Name: Robert H. Stucker Robert H. Stucker

Title: : Operator in charge Phone: 517-548-7363 Date: 7-25-12

DEQ
RESOURCE MANAGEMENT DIVISION
JUL 27 2012
LANSING DISTRICT

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac Condominiums Genesee WSSN 1353

RESULTS:

Sample Location	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
6 Chateaux Du Lac Dr	6-29-12	Other	C	C	1	ND	MI00003
14 Chateaux Du Lac Dr	6-29-12	Other	C	C	6	ND	MI00003
23 Chateaux Du Lac Dr	6-29-12	Other	C	C	9	70	MI00003
45 Chateaux Du Lac Dr	6-29-12	Other	C	C	2	120	MI00003
54 Chateaux Du Lac Dr	6-29-12	Other	C	C	ND	ND	MI00003
59 Chateaux Du Lac Dr	6-29-12	Other	C	C	25	240	MI00003
60 Chateaux Du Lac Dr	6-29-12	Other	C	C	ND	ND	MI00003
71 Chateaux Du Lac Dr	6-29-12	Other	C	C	122	620	MI00003
72 Chateaux Du Lac Dr	6-29-12	Other	C	C	ND	ND	MI00003
82 Chateaux Du Lac Dr	6-29-12	Other	C	C	1	ND	MI00003
59 Chateaux Du Lac Dr	6-29-12	POE	C	C	ND	ND	MI00003
59 Chateaux Du Lac Dr	6-29-12	WELL 1	C	C	ND	ND	MI00003
59 Chateaux Du Lac Dr	6-29-12	WELL 2	C	C	ND	ND	MI00003

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	25			2
Cu	240			0

Chateaux Du Lac

WSSN: 1353

Water Quality Parameters for July 2012

6/29/2012		
6:00 AM		
Well 1		
Lead	ND	**ppb**
Copper	ND	**ppb**

6/29/2012		
6:00 AM		
Well 2		
Lead	ND	**ppb**
Copper	ND	**ppb**

Robert H. Stucker

In-House Water Lab
P.O. Box 116
Blissfield MI 49228
517-548-7363
inhousewaterlab@sbcglobal.net

Drinking Water
Lead & Copper Report Form

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: **Genesee**

3. Population: **50** 4. Monitoring Period: From: **7-1-11** **To: 12-31-11**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
X		a. **Are the same sampling points used as in the previous monitoring period?**	
☐	**X**	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

9. SIGNATURE:

Signature	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **10-26-11**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
14 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**3**	**ND**	**MI00003**
23 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**43**	**170**	**MI00003**
54 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**ND**	**ND**	**MI00003**
71 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**2**	**ND**	**MI00003**
72 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**ND**	**ND**	**MI00003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	26				1
Cu	85				0

13. WATER QUALITY PARAMETER DATA (when applicable):

System Name/County Chateau Du Lac Condominiums WSSN 01353

Distribution System

Sample Location	Date	pH	Alk. (mg/l)	Ca as CaCO3 (mg/l)	Cond. (mmhos)	Temp. (°F)	PO4/Si
57 Chateau Du Lac Dr	12-20-11	7.50	94	4	548	11.3	
57 Chateau Du Lac Dr	12-21-11	7.52	90	4	542	11.3	

Entry Point to the Dist System

Location	Site Code	Date	pH	Alk. (mg/l)	Ca as CaCO3 (mg/l)	Cond. (mmhos)	Temp. (°F)	PO4/Si
POE	DIST	12-20-11	7.36	320	260	449	10.7	
POE	DIST	12-21-11	7.41	310	268	400	10.7	

14. SOURCE WATER QUALITY DATA (when applicable):

Sample Location	Site Code	Date	Lead (ppb)	Copper (ppb)	Lab #
Well 1		12-20-11	1	ND	MI00003
Well 2		12-20-11	ND	ND	MI00003

13. WATER QUALTIY PARAMETER MONTORING (if applicable): Enter the water supply name, WSSN and corresponding related information from the water quality parameter monitoring carried out, if applicable. Indicate the street address of the sampling point (and the site code for entry point sampling points), date of sample collection and the results of chemical analyses. Note: alkalinity and calcium analyses should be reported as mg/l as CaCO3; conductivity should be reported in mmhos; temperature in degrees Fahrenheit; and where applicable, phosphate as PO4 and silicates a Si.

14. SOURCE WATER QUALITY DATA (if applicable): Enter the water supply name, WSSN and corresponding related information from source water quality monitoring carried out, if applicable. Indicate the location of the sampling point (i.e. well number, name of the entry point [aka, plant tap], etc.), site code, date of sample, lead concentration in ppb, copper concentration in ppb and lab number or sample number.

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

June 19, 2012

Mr. Larry Carter
5454 Gateway Boulevard
Flint, Michigan 48507

Dear Mr. Carter:

Subject: Chateau Du Lac Condominiums WSSN 01353
Lead and Copper Monitoring - Action Level (AL) Exceedance

The Chateau Du Lac Condominiums exceeded the AL(s) for lead during the most recent round of lead and copper monitoring of drinking water taps from June 1 to September 30, 2011, as summarized below.

Contaminant	AL	90% of samples at or below this level	Number of samples above the AL
Lead	15 parts per billion (ppb)	26 ppb	1
Copper	1.3 parts per million (ppm)	0.085 ppm	0

An AL exceedance is not a violation, but triggers other requirements under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended. Requirements include water quality parameter (WQP) monitoring, source water monitoring, corrosion control treatment, and public education.

Deliver Customer Notice of Lead Result

Recent changes to the Lead and Copper Rule require you to provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected, within 30 days of learning of results. You must also send us a certification that you met all the delivery requirements along with a sample copy of your customer notice. These items were received October 26, 2011.

Distribute Public Education (PE)

A certificate that the PE materials were distributed to all consumers was received. Repeat each year until the lead AL is no longer exceeded. This material is intended to educate consumers about lead health effects, sources, and steps to minimize exposure. Note that the PE material must include information about the exceedance in your water supply, information about what you are doing to reduce lead levels, information about lead service lines in your distribution system, and information about the history of lead levels in your water supply.

Conduct WQP Monitoring
Water Quality Parameter monitoring was completed December 2011, in which two WQP samples were collected 24 hours apart from the entry point to the distribution system and two samples 24 hours apart from 57 Chateau Du Lac Drive in the distribution system. The WQP samples were analyzed for pH, alkalinity, calcium, conductivity, and temperature. Continue sampling for WQP during each lead and copper monitoring period until at least 90% of lead and copper tap results meet both ALs.

To order bottles, call the Department of Environmental Quality (DEQ) laboratory at 517-335-8184, or download the form EQP 2301 *Requisition for Water Sample Units* from http://michigan.gov/deq. Click on Key Topics, Laboratory Services, Drinking Water, Obtaining the Necessary Sampling Units, and test list. The tests are analyzed from one sample bottle per location. Request the analyses using the following test codes:

Test Code	Cost (as of 06/15/2007)	Bottle Number	Test Description
CORR	$51.00	33	Conductivity, Alkalinity, Phosphate, and Calcium
CPH	$13.00	33	pH Determination

Conduct Source Water Monitoring
Source water monitoring was conducted in December 2011. Repeat every third year until both lead and copper ALs are met during the entire three year period.

Correct the Problem
Minimize lead and copper in drinking water by reducing corrosion of water pipes and household plumbing that contain lead and copper. To accomplish this, you must propose a corrosion control treatment plan or propose to perform a corrosion control study by July 31, 2012. If treatment is found to be necessary, it must be installed and samples collected to ensure the lead and copper ALs are consistently met. Contact us for guidance on corrosion control options.

Lead and Copper Monitoring
You are not required to conduct lead and copper tap monitoring until after you install corrosion control treatment. However, at your option, you may conduct additional rounds of monitoring. If the action levels are met during future rounds of monitoring, you may discontinue the corrosion control study and installation of treatment. If the lead action level is met in two consecutive six month monitoring periods, you may discontinue your public education activities. It is recommended that you collect another round of lead and copper tap samples during the January 1-June 30, 2012, monitoring period. Select the same sites used in previous monitoring periods, giving Tier 1 sites first priority. Within 30 days of learning of results, provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected. All monitoring, reporting, customer notification and DEQ certification requirements remain in effect.

Consumer Confidence Report (CCR)
Include this AL exceedance in your CCR, which is due to our office, your customers, and the local health department, by July 1, 2012. Also include the following statement in the CCR, regardless of the lead and copper levels:

> *If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Chateau Du Lac Condominiums is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://water.epa.gov/drink/info/lead.*

What's Next?
If you can show that both lead and copper ALs are met in two consecutive six month periods, then many of the requirements outlined in this letter will no longer apply. However, in the meantime, you must propose a corrosion control treatment plan or propose to perform a corrosion control study. If treatment is found to be necessary, it must be installed. We will work with you to complete these corrosion control steps to optimize your corrosion control treatment.

Timetable of Requirements

Complete By	Requirement	Comments
Right away	Deliver *Customer Notice Of Lead Result* to persons served at each site tested within 30 days of knowing the result.	Download *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Word or PDF format from http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms.
November 30, 2011	Collect WQP samples.	Collect 2 samples at least 24 hours apart from each entry point to the distribution system. Collect 2 samples at least 24 hours apart from the distribution system. Repeat each lead and copper monitoring period until both ALs are met.
November 30, 2011	Perform PE activities including delivering PE materials to all consumers.	PE required activities are listed in enclosed template and checklist. Repeat every year until the lead AL is met in the most recent round of sampling.
December 10, 2011	Send us certification of PE compliance along with a sample copy of the materials delivered.	Sample certification enclosed. Required whenever PE required.
December 31, 2011	Send us certification of customer notice of lead result compliance along with a sample copy of the notice delivered.	Download *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Word or PDF format from http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms.
March 31, 2012	Collect one lead and copper sample from each entry point to the distribution system.	Repeat every third year until both ALs are met for the whole 3 year period.

Complete By	Requirement	Comments
July 31, 2012	Submit a proposal for optimal corrosion control treatment or a corrosion control study.	Contact us for guidance on corrosion control options. Corrosion control study and treatment installation may cease if both ALs are met during 2 consecutive 6 month monitoring periods.
Between January 1 and June 30, 2012	Collect 10 samples from the distribution system and have them analyzed for lead and copper.	Report the results to the DEQ and deliver the customer notice of individual lead results using the downloadable *Lead and Copper Report and Consumer Notice of Lead Result Certificate*.
July 1, 2012	Report the 2011 AL exceedance in the Consumer Confidence Report.	Specific lead health effects language must be included.

We recognize that the Lead and Copper Rule is complex and may be confusing. We will continue to offer assistance in implementing these regulations.

Michael F. Prysby, P.E., District Engineer
Resource Management Division
prysbym@michigan.gov
517-335-6122

Adam Rosenthal, EQA
Resource Management Division
rosenthala@michigan.gov
517-335-6131

cc: Mr. Robert Stucker, Contract Operator

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

June 9, 2011

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, Michigan 48507

Dear Mr. Carter:

Subject: Chateaux Du Lac Condominiums; WSSN: 01353
Lead and Copper Monitoring of Drinking Water Taps

We received your report for the monitoring period June 1, 2010, through September 30, 2010.

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	# of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 parts per billion (ppb)	14 ppb	1	5	6/1 and 9/30/2011 Submit results to this office by October 10, 2011
Copper 1.3 parts per million (ppm)	0.080 ppm	0		

Ninety percent of the sites you tested are within action levels under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended. These results must be reported on your 2010 Consumer Confidence Report (CCR) due to our office, your customers and the local health department by July 1, 2011. Also include the following statement in the CCR, regardless of the lead and copper levels:

> *If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Chateaux Du Lac Condominiums is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.*

You must also provide individual lead tap results to the people who receive water from sites that were sampled, even if lead was not detected. This is a new requirement under United States Environmental Protection Agency revisions to the Lead and Copper Rule of October 10, 2007.

The new rule requires you to deliver notices of lead results to customers within 30 days of learning of each individual result and to deliver a certification that delivery requirements were met along with a sample copy of your customer notice to this office within 3 months of the end of the monitoring period. A template and certificate is downloadable in Microsoft Word and PDF formats from www.michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, Reporting Forms, and *Lead and Copper Report and Consumer Notice of Lead Result Certificate*.

Samples due the next monitoring period mark your second annual round of monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria. We strongly encourage you to sample early in the monitoring period.

Bottles will NOT be mailed automatically. To order bottles, call the Department of Environmental Quality laboratory at 517-335-8184 or download the form EQP 2301 *Requisition for Water Sample Units* from www.michigan.gov/deq. Click on Key Topics, Laboratory Services, Drinking Water, Obtaining the Necessary Sampling Units, and test list.

Sincerely,

Adam Rosenthal, EQA
Resource Management Division
Field Operations
517-335-6131
rosenthala@michigan.gov

ar/jlr
Enclosures

cc: Mr. Robert Stucker, Contract Operator

002758

1353

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: **Genesee**

3. Population: **50** 4. Monitoring Period: From: **7-1-09** / **10** To: **12-31-09** / **10**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
X		a. **Are the same sampling points used as in the previous monitoring period?**	
☐	X	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	X	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	NA	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

9. SIGNATURE:

Signature Robert H. Stucker	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **11-12-10**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
14 Chateaux Du Lac	**I925**	9/25/10	**Other**	**C**	**C**	**ND**	**ND**	**MI00003**
23 Chateaux Du Lac	**I925**	9/25/10	**Other**	**C**	**C**	**24**	**110**	**MI00003**
54 Chateaux Du Lac	**I925**	9/26/10	**Other**	**C**	**C**	**4**	**50**	**MI00003**
71 Chateaux Du Lac	**I925**	9/26/10	**Other**	**C**	**C**	**2**	**ND**	**MI00003**
72 Chateaux Du Lac	**I925**	9/25/10	**Other**	**C**	**C**	**ND**	**ND**	**MI00003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	14				1
Cu	80				0

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **7-1-09** **To: 12-31-09**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	**X**	a. **Are the same sampling points used as in the previous monitoring period?**	
☐	**X**	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

One different site was used due to a resident unable to participate in this round.

9. SIGNATURE:

Signature	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **10-31-09**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
14 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**9**	**ND**	**0003**
23 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**16**	**90**	**0003**
54 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**1**	**50**	**0003**
71 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**3**	**ND**	**0003**
72 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**ND**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	13				1
Cu	70				0

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **1-1-09** **To: 6-30-09**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	**X**	a. **Are the same sampling points used as in the previous monitoring period?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	b. **Are all samples from Tier 1 sites?**	
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Two different sites were used due to residents unable to participate in this round.

9. SIGNATURE:

Signature	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **7-27-09**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
23 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**9**	**ND**	**0003**
54 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**ND**	**ND**	**0003**
64 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**3**	**210**	**0003**
71 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**5**	**ND**	**0003**
72 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**ND**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	7				0
Cu	105				0

002764

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **7-1-08** **To: 12-31-08**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	**X**	a. **Are the same sampling points used as in the previous monitoring period?**	
☐	**X**	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Two different sites were used due to residents unable to participate in this round.

9. SIGNATURE:

Signature	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **9-16-08**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
23 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**115**	**150**	**0003**
54 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**1**	**ND**	**0003**
64 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**2**	**ND**	**0003**
71 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**2**	**ND**	**0003**
72 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**ND**	**ND**	**0003**

1 Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

2 Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb					
Cu					

PUBLIC SERVICE ANNOUNCEMENT

Recent tests of distribution system tap water show that some homes in Chateaux Du Lac, exceed the federal government's limit for lead. Therefore, the Chateaux Du Lac Water System has begun a program to reduce lead in drinking water. Since much of the lead contamination of drinking water comes from individual home plumbing systems, there is action you can take in your home.

Please call your water utility operator in charge at 517-548-7363 for information on how to reduce exposure to lead in drinking water and how to have your home's water tested for lead.

Your lead and copper test results for 23 Chateaux Du Lac Dr are:

Copper	150 ppb	Maximum Contaminant Level is 1,300 ppb
Lead	115 ppb	Maximum Contaminant Level is 15 ppb

Thank you

Robert H. Stucker
Operator in Charge
In-House Water Lab
210 N. Center St
Howell MI 48843
517-548-7363

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

June 2, 2009

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, MI 48507

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Carter:

SUBJECT: Lead and Copper Action Level Exceeded for Chateaux Du Lac Condominiums

The United States Environmental Protection Agency (USEPA) has established action levels of 15 parts per billion (ppb) for lead and 1300 ppb for copper. Chateaux Du Lac Condominiums has exceeded the action level for lead during the monitoring period from June 1, 2008 to September 30, 2008. Lead and copper sampling was conducted on September 2, 2008. The results are outlined in the table below:

Samples: 5 required / 5 collected, for the Monitoring Period of: June 1, 2008 – September 30, 2008

Results:	Lead		Copper	
Action levels	15	ppb	1300	ppb
90th percentile	**59**	**ppb**	**75**	**ppb**
Average	24	ppb	30	ppb
Maximum	115	ppb	150	ppb
Minimum	0	ppb	0	ppb
Action Level Exceeded	**1**	**Sites**	**0**	**Sites**

The Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the Administrative Rules promulgated there under (Act 399) requires the following steps to be taken in response to the lead exceedance:

Distribute Public Education Notice / Public Service Announcement

Rule 325.10410 (1) of Act 399 requires that public education with specific educational language on the health effects of lead, must be mailed or delivered to all residents of Chateaux Du Lac Condominiums within 60 days of the exceedance. **Therefore, Chateaux Du Lac Condominiums was required to deliver the public education to every customer no later than November 2, 2008.**

Our records show that the Public Education Notice/Public Service Announcement was completed as required and the Certificate of Distribution was received December 12, 2008. As a reminder, this information must be redistributed by June 30, 2009. Please submit the Certificate of Distribution to this office by July 10, 2009

Enclosed is mandatory language for a Public Service Announcement / Public Education Notice with information regarding the health effects of lead. Also, enclosed is a Certificate of Distribution. Please indicate the method of delivery, sign, and date the Certificate of Distribution (retain a copy for your records) and return a copy as noted above.

The Public Service Announcement / Public Education Notice must be repeated every 6 months, as long as action levels are still being exceeded. Please note that new customers must receive a copy of the public education when water service is established.

Report the Lead and Copper Exceedances in the 2008 Consumer Confidence Report (CCR)

In addition to distributing the public education notice described above, the exceedance for lead must be included in the Water Quality Data section of your 2008 CCR which is due to our office, your customers, and the local health department by July 1, 2009.

You must include the following informational statement regarding lead:
"Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline at 800-426-4791."

Conduct Water Quality Parameter (WQP) Monitoring

Sampling for several water quality parameters (WQP) is required every six months. This includes two samples (collected at least 24 hours apart) from the point of entry to the distribution system after treatment, and two samples (collected at least 24 hours apart) from one location in the distribution system. This location must be representative of water quality throughout the distribution system.

WQP samples were collected on November 29, 2008 and November 30, 2008 in response to the Lead exceedance as discussed with your contract operator, Mr. Robert Stucker. **The next set of WQP samples must be collected by June 30, 2009.**

WQP monitoring includes measurements for pH, alkalinity, calcium, conductivity, and temperature. The pH and temperature must be measured at the time of sample collection for the most accurate results. However, you may have the pH measured at a nearby laboratory or the State lab. To order bottles from the State lab, call 517-335-8184. If using the State lab in Lansing, use the following test codes for requesting the required sampling:

Test Code	Cost (as of 1/1/05)	Bottle Number	Test Description
CORR	$51.00	33	Conductivity, Alkalinity, Phosphate, and Calcium
CPH	$13.00	33	pH Determination

The above tests are analyzed from one sample (or from one bottle, number 33).

The results of Lead and Copper monitoring, and WQP monitoring, are to be reported on the attached reporting form.

Conduct Source Water Monitoring

The requirement for sampling lead and copper in the source water was also completed on November 29, 2008 and November 30, 2008 in response to the Lead exceedance.

Correct the Problem

The presence of lead and/or copper is an indicator of corrosive water. If two consecutive six month rounds of sampling results are below the action levels for both lead and copper, your system will be considered to have optimized corrosion control and not be required to take the steps below. However, Act 399 requires that when a water system exceeds either the lead or copper action level, an optimal corrosion control program must be developed to correct the problem.

In response to the previous lead exceedance noted in a letter dated April 26, 2005, Chateaux Du Lac Condominiums sampled into compliance, however the 1st annual round of monitoring exceeded the action level for lead. Therefore, based on the 2005 and 2008 exceedances, an optimal corrosion control program must be developed under one of the options below.

A.) Make a proposal to this office by September 30, 2009 for an optimal corrosion control treatment program. By December 31, 2009 we will either approve the plan, require you to do a study, or designate some other corrosion control plan. If we require a study, it must be completed within 18 months after we request it.

B.) You can propose that you do a study to determine the best method of optimal corrosion control for your system. The proposal to do a study must be made by September 30, 2008. Once the proposal is accepted by this office, you will then have one year to complete the study and recommend a treatment option to us.

Once a treatment plan has been approved by our office, you will have one year to install the treatment equipment and an additional year to collect follow-up samples. Using that data, our office will designate optimal water quality control parameters under which your system must operate. At that time, you will continue with regular lead and copper sampling.

Please note that although continued lead and copper sampling is not required by Act 399 until after corrosion control treatment has been installed, we recommend that you continue to sample every six months in conjunction with your WQP monitoring. With proper sampling techniques and site selection, Chateaux Du Lac Condominiums may find that lead and copper levels will be below action levels in the future. Remember that if Chateaux Du Lac Condominiums can show that lead and copper levels are below the action levels during two consecutive six month monitoring periods, then many of the requirements outlined in the this letter will no longer be applicable. If Chateaux Du Lac Condominiums plans to continue lead and copper sampling, the next round of five samples must be collected by June 30, 2009.

Following is a table which outlines your requirements for the next year.

Time Period	Requirement	Comments
By June 30, 2009	Issue Public Service Announcement and Public Education Notices	Notices must be mailed/delivered to every customer
By July 10, 2009	Forward a signed copy of the Public Education Notice and Certificate of Distribution to this office	
By June 30, 2009	Collect Water Quality Parameter (WQP) samples	Collect 2 samples (collected 24 hours apart) from the point of entry to the distribution system. And collect 2 samples (collected 24 hours apart) from one location in the distribution system.
By July 1, 2009	Report the lead exceedance in the 2008 Consumer Confidence Report	
By September 30, 2009	A.) Propose an Optimal Corrosion Control Program or B.) Propose to do a study to determine the best method of corrosion control	
Every 6 Months	Collect Water Quality Parameter (WQP) samples	Collect 2 samples (collected 24 hours apart) from the point of entry to the distribution system. And collect 2 samples (collected 24 hours apart) from one location in the distribution system.
Every 6 Months	Public Service Announcement	The Public Service Announcement must be repeated every 6 months.
Every 6 Months	Forward a signed copy of the Public Education Notice to this office	Signed copies of the public education notice are due to our office 10 days after you deliver the annual notices

We recognize that the Lead and Copper Rule is complex and may be confusing. We propose a conference call with you and your operator before the end of June 2009 to discuss further. We will continue to offer assistance in implementing these regulations.

If you have any questions, call us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Field Operations, Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations, Water Bureau
517-335-6131

Enclosures

cc: Mr. Robert Stucker, Contract Operator

002771

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

October 8, 2007

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, MI 48507

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Carter:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **January 1, 2007 through June 30, 2007**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	15 ppb	1	5	**June 1 and September 30, 2008** Submit results and reporting form by October 10, 2008
Copper 1.3 ppm	0.14 ppm	0		

ppm = parts per million ppb = parts per billion

Your results are less than the action levels stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended. If your 90th Percentile is greater than zero and/or you have one or more samples Above the Action Level, these results must be reported on your *2007 Consumer Confidence Report* due by July 1, 2008.

Samples due during the next period mark your first round of annual monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Enclosed are report and bottle ordering forms for your next round of monitoring. Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

FOR Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB

Enclosures

cc: Mr. Robert H. Stucker, In-House Water Lab

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **1-1-07** To: **6-30-07**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	X	a. **Are the same sampling points used as in the previous monitoring period?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	X	b. **Are all samples from Tier 1 sites?**	
☐	X	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	NA	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Repeated lead and copper testing per Mike Prysby due to a high lead result in March.
23 Chateau Du Lac 225 ppb lead.

9. SIGNATURE:

Signature Robert H. Stucker	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **7-24-07**

MP

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
23 Chateaux Du Lac	**E925**	**3-2-07**	**Other**	**C**	**C**	**225**	**480**	**0003**
59 Chateaux Du Lac	**E925**	**3-2-07**	**Other**	**C**	**C**	**2**	**ND**	**0003**
64 Chateaux Du Lac	**E925**	**3-1-07**	**Other**	**C**	**C**	**15**	**100**	**0003**
71 Chateaux Du Lac	**E925**	**3-1-07**	**Other**	**C**	**C**	**2**	**ND**	**0003**
73 Chateaux Du Lac	**E925**	**3-2-07**	**Other**	**C**	**C**	**2**	**ND**	**0003**

1 Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

2 Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb					
Cu					

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
12 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**14**	**ND**	**0003**
14 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**2**	**ND**	**0003**
15 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**4**	**ND**	**0003**
63 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**13**	**140**	**0003**
74 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**ND**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	15	27.9	225	0	1
Cu	140	72	480	0	0

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40134

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353	
Collection Address:	73 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II	
Collected By:	HOMEOWNER	Site Code:	DIST	
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	03/02/2007	07:30
Sample Point:	KITCHEN	Date Received:	03/07/2007	13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring	

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	Not detected	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.002	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

002776

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40131

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353	
Collection Address:	59 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II	
Collected By:	HOMEOWNER	Site Code:	DIST	
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	03/02/2007	07:00
Sample Point:	KITCHEN	Date Received:	03/07/2007	13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring	

TEST INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	Not detected	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.002	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

002777

PB & Cu, File # 1353

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY

USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40133

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353
Collection Address:	23 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II
Collected By:	HOMEOWNER	Site Code:	DIST
Township/Well#/Section:	//	Collector:	Private Citizen
County:	Genesee	Date Collected:	03/02/2007 07:00
Sample Point:	KITCHEN	Date Received:	03/07/2007 13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	0.48	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.225	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

Bob Stuckers #
(517) 548-7363
6

248-613-7147
(517) 267-7328

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40132

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353	
Collection Address:	64 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II	
Collected By:	HOMEOWNER	Site Code:	DIST	
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	03/01/2007	06:00
Sample Point:	KITCHEN	Date Received:	03/07/2007	13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring	

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	0.10	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.015	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40135

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353	
Collection Address:	71 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II	
Collected By:	HOMEOWNER	Site Code:	DIST	
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	03/01/2007	07:00
Sample Point:	KITCHEN	Date Received:	03/07/2007	13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring	

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	Not detected	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.002	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

002780

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

February 21, 2007

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, MI 48507

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Carter:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **July 1, 2006 through December 31, 2006**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	12 ppb	1	5	**January 1 and June 30, 2007** Submit results and reporting form by July 10, 2007
Copper 1.3 ppm	0 ppm	0		

ppm = parts per million ppb = parts per billion

Your results are less than the action levels stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended. If your 90th Percentile is greater than zero and/or you have one or more samples Above the Action Level, these results must be reported on your *2006 Consumer Confidence Report* due by July 1, 2007.

Samples due during the next period mark your **second consecutive 6 month** round of monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Enclosed are report and bottle ordering forms for your next round of monitoring. Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

FOF Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB

Enclosures

cc: Mr. Robert H. Stucker, In-House Water Lab

002781

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **7-1-06** **To: 12-31-06**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	**X**	a. **Are the same sampling points used as in the previous monitoring period?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	b. **Are all samples from Tier 1 sites?**	
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Two different sites were used due to residents unable to participate this round.

9. SIGNATURE:

Signature Robert H. Stucker	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date:

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumbing[2]	Lead (ppb)	Copper (ppb)	Lab #
23 Chateaux Du Lac	**D925**	**12-30-06**	**Other**	**C**	**C**	**21**	**ND**	**0003**
59 Chateaux Du Lac	**D925**	**12-29-06**	**Other**	**C**	**C**	**3**	**ND**	**0003**
63 Chateaux Du Lac	**D925**	**12-29-06**	**Other**	**C**	**C**	**3**	**ND**	**0003**
64 Chateaux Du Lac	**D925**	**12-29-06**	**Other**	**C**	**C**	**2**	**ND**	**0003**
73 Chateaux Du Lac	**D925**	**12-29-06**	**Other**	**C**	**C**	**2**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	12	6.2	21	2	1
Cu	0	0	0	0	0

Lead – Lead & Copper Report Form CDL July 2006.doc
Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: **Genesee**

3. Population: **50** 4. Monitoring Period: From: **1-1-06** To: **6-30-06**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **Brighton Analytical 9404**

8. SAMPLE CRITERIA:

Yes	No		
☐	X	a. **Are the same sampling points used as in the previous monitoring period?**	
☐	X	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	X	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	NA	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Robert H. Stucker
Laboratory Director
In-House Water Lab
210 N. Center St
Howell MI 48843
Ph & Fax: 517-548-7363
e-mail: inhousewaterlab@sbcglobal.net

9. SIGNATURE:

Signature Robert H. Stucker	Phone: 517-548-7363
Title: Operator in charge	Date: 8-11-06

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County Chateaux Du Lac Condominiums WSSN 01353

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
Well 1		6-30-06	Other	C	C	ND	ND	9404
Well 2		6-30-06	Other	C	C	ND	ND	9404
63 Chateaux		6-30-06	Other	C	C	10	50	9404
64 Chateaux		6-30-06	Other	C	C	1	ND	9404
73 Chateaux		6-30-06	Other	C	C	8	ND	9404

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	9	3.8	10	0	9
Cu	0.025	0.01	0.05	0	0

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

December 15, 2005

Mr. Robert Stucker
In-House Water Lab
210 North Center Street
Howell, MI 48843

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Stucker:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **January 1, 2005 through June 30, 2005**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	12 ppb	1	5	**6/1 and 12/31/2005** Submit results and reporting form by January 10, 2006
Copper 1.3 ppm	0.13 ppm	0		

ppm = parts per million ppb = parts per billion

Your results are less than the action levels stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended. If your 90th Percentile is greater than zero and/or you have one or more samples Above the Action Level, these results must be reported on your *2005 Consumer Confidence Report* due by July 1, 2006.

Samples due during the next period mark your second 6 month round of monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Enclosed are report and bottle ordering forms for your next round of monitoring. Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB

Enclosures

cc: Genesee County Health Department

002786

#1353
PB/CY

RECEIVED
OCT 04 2005
MDEQ-Water Bureau
Lansing District Office

DEQ

Drinking Water
Lead & Copper Report Form

1. System Name: **Chateaux Du-Lac/Genesee** 2. WSSN: **1353**

1a. County: **Genesee**

3. Population: **?** 4. Monitoring Period: From: **9-30-04** To: **9-30-05**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **MDEQ**

8. SAMPLE CRITERIA:

Yes	No		
Y		a. **Are the same sampling points used as in the previous monitoring period?**	
	N	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
	N	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
Y		d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
NA		e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

9. SIGNATURE:

Signature Robert H. Stuart	Phone:**517-548-7363**
Title: **Operator in Charge**	Date: **9-28-05**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du-Lac/Genesee** WSSN **1353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category [1]	Service Lines [2]	Bldg Plumb-ing [2]	Lead (ppb)	Copper (ppb)	Lab #
1 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	1.0	1300	MDEQ
1 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	19	1300	MDEQ
64 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	ND	ND	MDEQ
59 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	4	ND	MDEQ
73 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	ND	ND	MDEQ

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	11.5 → 12	4.8	19	0	1
Cu	0.13	0.052	0.13	0	0

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

April 26, 2005

Mr. Robert Stucker
In-House Water Lab
210 North Center Street
Howell, MI 48843

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Stucker:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **June 1, 2004 through September 30, 2004**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	20 ppb	1	**5**	**1/1 and 6/30/2005** Submit results and reporting form by July 10, 2005
Copper 1.3 ppm	0.035 ppm	0		
Raw Water Monitoring (one sample from each well)			**2**	**Same as above**
Water Quality Parameters - 2 sets (only required if an AL is exceeded)			**4 (2 distribution and 2 POE)**	**Same as above**

ppm = parts per million ppb = parts per billion

Your results for lead is greater than the action level stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended. Since your 90th Percentile for lead is above the Action Level, these results must be reported on your *2004 Consumer Confidence Report* due by July 1, 2005.

The federal Lead and Copper Rule requires that water quality parameter (WQP's) samples must be collected when the action level is exceeded. Two sets of WQP's were collected from the distribution system and the well house as required on January 17th and 18th, 2005. The WQP samples should have been collected within the same monitoring period as the lead/copper samples, however Chateau Du-Lac was not notified until after the monitoring period ended, thus there will be no penalty assessed for the system.

You will have to collect a lead and copper sample from each well along with the distribution monitoring this sampling period.

Public Education material must be distributed to all residents of the facility within 60 days of the date of this letter. A sample public education brochure with the mandatory language was

E-mailed and is enclosed for your use. This public education material must be distributed to your residents every 12 months, as long as the lead action level is exceeded. Also enclosed is a copy of an affidavit to be included in your federal tracking file at this office. Please indicate method of delivery, sign, and date the form (retain a copy for your records) and return a copy to this office.

We encourage you to continue attempting to sample back into compliance. Compliance is achieved after 2 *consecutive* full rounds are below the action levels. The next round of sampling is between January 1 and June 30, 2005. You will have to collect 5 samples and have them analyzed for lead and copper during that time frame.

Enclosed are report and bottle ordering forms for your next round of monitoring. Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB

Enclosures

cc: Mr. George Rasch
Genesee County Health Department

Drinking Water
Lead & Copper Report Form

DEQ

Please return completed form to the DEQ Water Division district office. Addresses on last page.

1. System Name: Chateaux Du Lac

1a. County: Genesee 2. WSSN: 01353

3. Population: 4. Monitoring Period: From: To: 9-30-04

5. Minimum # of Samples Required: 5 6. # of Samples Taken: 5

7. Name of Certified Laboratory: State of MI

8. SAMPLE CRITERIA:

Yes	No		
☐	☒	a. **Are the same sampling points used as in the previous monitoring period?**	
☐	☒	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	☒	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
☒	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	☐ NA	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

9. SIGNATURE:

Robert H. Stucker

Signature Robert H. Stucker	Phone: 517-548-7363
Title: Operator in Charge	Date: ~~9-20-04~~ 10-6-04

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County Chateaux Du Lac WSSN 01353

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
59 Chateaux Dr	1	9-20-04	other	C	C	ND	ND	
64 Chateaux Dr	2	↓	↓	↓	↓	33	ND	
23 Chateaux Dr	3					2	70	
63 Chateaux Dr	4					ND	ND	
1 Chateaux Dr	5					6	ND	

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY DEQ

		90th %ile	Ave	Max	# > AL
ppb	Pb	20	8.2	33	1
ppb	Cu	35	14	70	0

From: Adam Rosenthal
To: Bob Stucker
Date: 1/12/2005 2:59PM
Subject: Chateau Du Lac

Hello Bob, I finally had a chance to write some lead/copper result letters and realized that Chateau Du Lac exceeded the Action Level for Lead. The 90th percentile calculated to be 20 ppb and the AL is 15 ppb. I do not recall whether we spoke about this situation before or not, at any rate I need to find out if you tested for any water quality parameters, and if so please send me copies. These parameters should have been tested in the same monitoring period as the original samples were collected.

If samples were not collected, please perform the following ASAP.

Collect Water Quality Parameters, (WQPs) in the distribution system, at the Point of Entry, (POE) and distribute Public Education about Lead.

You will need to order 4 unit 33 bottles, then collect 2 samples from your POE collected 24hrs apart, and 2 samples in the distribution system collected 24hrs apart. These samples will be tested for pH, alkalinity, calcium, conductivity, orthophosphate, and temperature. Temp is taken at the time of the sample, and if you have meters for any other parameters you can test those yourself also.

Enclosed is our lead/copper reporting form with instructions and the public education you will need. Please fill out the WQP page and send a copy to us when you get your results.

Let Mike or me know if you have any questions,

Adam Rosenthal, EQA
MDEQ-Drinking Water
Lansing District Office
4th Floor North
PO Box 30242
Lansing, MI 48909
517-335-6131
Fax 517-241-3571
rosentha@michigan.gov

CC: Mike Prysby

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SHIAWASSEE DISTRICT OFFICE

JOHN ENGLER
GOVERNOR

RUSSELL J. HARDING
DIRECTOR

July 8, 2002

Mr. Robert Yarbrough Caretaker
Chateaux Du Lac Condominiums
611 Mill Street
Fenton, MI 48430

WSSN: 01353

Dear Mr.Yarbrough:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **June 1, 2002 through September 30, 2002**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	5.0 ppb	0	5	**6/1 and 9/30/2004** Submit results by October 10, 2004
Copper 1.3 ppm	0.055 ppm	0		

ppm = parts per million ppb = parts per billion

Your results are within the action levels stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended, and the rules promulgated there under. If your 90th percentile is greater than zero and/or you have one or more samples Above the Action Level, these results must be reported on your *2002 Consumer Confidence Report* due by July 1, 2003.

Samples due during the next period continue your **triennial** monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Enclosed are report forms and bottle ordering forms (bottles will NOT be mailed automatically). Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Field Operations Section
Drinking Water and Radiological
Protection Division
517-625-4670

Adam Rosenthal, Resource Analyst
Field Operations Section
Drinking Water and Radiological
Protection Division
517-625-4625

MFP:AR:LW
Enclosures
cc: Mr. George Rasch
Genesee County Health Department

Drinking Water
Lead & Copper Report Form

DEQ

Please return completed form to:
Michigan Department of Environmental Quality
Drinking Water and Radiological Protection Division
10660 S. Bennett Dr., Morrice, MI 48857-9782
Fax: 517-625-5000

1. System Name: CHATEAUX DU LAC

1a. County: GENESEE 2. WSSN: 1353

3. Population: 90 4. Monitoring Period: From: 1-1-01 To: 12-31-01

5. Minimum # of Samples Required: 5 6. # of Samples Taken: 5

7. Name of Certified Laboratory: DEQ

8. SAMPLE CRITERIA:

Yes	No		
☒	☐	a. Are the same sampling points used as in the previous monitoring period?	
☒	☐	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	☐	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☐	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	

Comments:

9. SIGNATURE:

Signature: George B. Rasch	Phone: (810) 733-2808
Title: George B. RAsch	Date: 6/11/02

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County CHATEAUX DU LAC/ GENESEE WSSN 1353

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumbing[2]	Lead (ppb)	Copper (ppb)	Lab #
Unit 1	F-1	8/20/01	—	C	C	0.001	ND	DEQ
Club House	F-2	Same		C	C	0.001	ND	DEQ
Unit 23	F-3	Same		C	C	0.003	0.11	DEQ
Unit 21	F-4	Same		C	C	0.005	ND	DEQ
Unit 13	F-5	Same		C	C	0.005	ND	DEQ

1 Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

2 Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
ppb Pb	5	3	5	1	0
ppb Cu	55	22	110	0	0

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
Drinking Water and Radiological Protection Division
10650 Bennett Drive
Morrice, Michigan 48857-9792

Atlas Investments
Chateaux Du Lac
3918 Fenton Road
Flint, Michigan 48507

November 23, 1998
WSSN # 1353

LEAD AND COPPER MONITORING
for compliance with U.S. EPA lead and copper regulations

We have received your report for the June 1, 1997, to September 30, 1997, monitoring period.

RESULTS:

90th percentile for lead:	8.5	ppb
90th percentile for copper:	90.0	ppb

These results do not exceed the action levels of 15 ppb for lead or 1300 ppb for copper.

We have received your report for the June 1, 1998, to September 30, 1998, monitoring period.

RESULTS:

90th percentile for lead:	0.0	ppb
90th percentile for copper:	75.0	ppb

These results do not exceed the action levels of 15 ppb for lead or 1300 ppb for copper.

NEXT MONITORING PERIOD: October 1, 1998 to September 30, 2001

Samples required: Lead/Copper Monitoring: 5 distribution sites sampled analyzed for lead and copper.

Comments: Samples must be collected during June, July, August, or September of the same calendar year. Samples due by 2001 mark your first round of reduced triennial monitoring.

Enclosed are report forms and bottle ordering forms (bottles will NOT be mailed automatically). Please sample early to avoid last minute problems. If you should have any questions, please feel free to contact William Smith.

Michael F. Prysby, P.E.
District Engineer
517-625-4670

William K. Smith
Resource Analyst
517-625-4625

MFP:WKS:lw
Enclosures
cc: Mr. Brian McKenzie, Genesee County Health Department
Mr. Robert Yarbrough, Caretaker

10. Tap Sampling Data (use additional sheets as needed)

Chateau Du Lac Condos
WSSN: 1353
11/5/98

Round: 3
From: 6/1/97
To: 9/30/97

Lab Used: MDEQ

	Sample Location	Site Code	Collect Date:	Sample Category *	Piping Materials Serv. Line **	Bldg. Plumb. **	LEAD ppb	COPPER ppb	Lab Number
1	15 Chateaux Du Lac		9/24/97		C	C	0	130	C1997044390
2	13 Chateaux Du Lac		9/24/97		C	C	0	0	C1997044391
3	22 Chateaux Du Lac		9/24/97		C	C	6	0	C1997044392
4	23 Chateaux Du Lac		9/24/97		C	C	11	50	C1997044393
5	12 Chateaux Du Lac		9/24/97		C	C	0	0	C1997044394
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

90TH% LEAD:	8.5
90TH%COPPER:	90.0
Ave. LEAD:	3.4
Ave. COPPER:	12.5
Max. LEAD:	11.0
Max. COPPER:	130.0
Low LEAD:	0.0
Low COPPER:	0.0

* Sample Category: Enter a number 1 through 6 to designate the category of tap sample site (see instructions for definitions).
** Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or, P = plastic

002798

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investments
3918 Fenton Road
Flint MI 48507

Sample Number: C1998043763
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353 7/26/98
Collection Address:	1-chateaux Drive, Fenton 48430	Sampled:	~~09/26/~~1998 0:00:00AM
Collected By:	WEISS	Received:	07/30/1998 02:41PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
0.09 mg/L	COPPER (RECOVERABLE)	08/10/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	08/10/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

~~Note~~ 1
none

1 upstream
3 downstream

5 aw Problems

✓

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investments
3918 Fenton Road
Flint MI 48507

Sample Number: C1998043766
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353
Collection Address:	22 Chateaux Drive, Fenton 48430	Sampled:	07/26/1998 0:00:00AM
Collected By:	SANDSTROM	Received:	07/30/1998 02:41PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
Not Detected	COPPER (RECOVERABLE)	08/10/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	08/10/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

√

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investments
3918 Fenton Road
Flint MI 48507

Sample Number: C1998043765
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353
Collection Address:	15 Chateaux Drive, Fenton 48430	Sampled:	07/26/1998 0:00:00AM
Collected By:	FAUGHT	Received:	07/30/1998 02:41PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
Not Detected	COPPER (RECOVERABLE)	08/10/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	08/10/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

Michig[redacted] Department of Environmental C[redacted]ity

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investments
3918 Fenton Road
Flint MI 48507

Sample Number: C1998043764
Customer Number: 70682000

System Name/Owner:	CHATEAU DU LAC.	WSSN / Pool ID:	1353
Collection Address:	23 Chateaux Drive, Fenton 48430	Sampled:	09/26/1998 0:00:00AM
Collected By:	SUMMONS	Received:	07/30/1998 02:41PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
Not Detected	COPPER (RECOVERABLE)	08/10/1998		0.05 mg/L	CCU 19970416
0.168 mg/L	LEAD (TOTAL)	08/10/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

① downstream of water softener.
② was this from an active tap?

9/14 → Bob said water was held for 7 days
→ will ② put it in writing and send us replacement
→ Spoke with Tim. He said it was ok.
WKS

By authority of PA 368 1978 as amended.

Process Batch #: 8082762 | 96 | 08/27/1998 11:45:20AM

002802

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investment
3918 Fenton Road
P O Box 7403
Flint MI 48507

Sample Number: C1998054492
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353
Collection Address:	5 Chateaux Drive, Fenton 48430	Sampled:	09/29/1998 7:30:00AM
Collected By:	HU	Received:	09/30/1998 02:49PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
Not Detected	COPPER (RECOVERABLE)	10/05/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	10/27/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

002803

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investment
3918 Fenton Road
Flint MI 48507

Sample Number: C1998052077
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353
Collection Address:	23 Chateaux Drive. Fenton 48430	Sampled:	09/15/1998 8:00:00AM
Collected By:	SOMMERS	Received:	09/16/1998 10:39AM
Twp/Sec/Well #:	? / ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

Test Result	Analyte Name	Tested	Supplemental Information Related To Reported Result: Health Limit MCL	Minimum Rpt. Limit	Test Code
0.50 mg/L	COPPER (RECOVERABLE)	09/21/1998		0.05 mg/L	CCU 19970416
1.155 mg/L	LEAD (TOTAL)	09/23/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

Spoke with MP about it:

By authority of PA 368 1978 as amended. Process Batch #: 8093046 | 71 | 09/30/1998 11:55:52AM

002804

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investment
3918 Fenton Road
Flint MI 48507

Sample Number: C1998052078
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353 9/16/98
Collection Address:	13 Chateaux Drive, Fenton 48430	Sampled:	~~10/15/1998~~ 8:00:00AM
Collected By:	EH/LEN	Received:	09/16/1998 10:39AM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

Supplemental Information Related To Reported Result

Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
0.06 mg/L	COPPER (RECOVERABLE)	09/21/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	09/23/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

/

002805

LEAD AND COPPER REPORTING

1. System Name: Chateaux Du Lac 2. WSSN: 1353

2. Population: 50 Living Units 4. Monitoring Period From: 6/1/98 To : 9/30/98

5. Minimum Number of Samples Required: 5 6. Number Of Samples Taken: 5

7. Name of Certified Laboratory: Michigan Department of Environmental Quality

8. Sample Criteria:

a. Tier 2 or 3 Sites used? Yes ___X___ No _____
(If Yes, explain below)

b. Same sampling points used as in previous monitoring period (for 2nd and all subsequent monitoring periods)? Yes _____ No _____
(If No, explain below)

c. Minimum required number of lead service line samples taken (when applicable)?
Yes _____ No _____ (If No, explain why below)

Explanations:

9. Certification:

I hereby certify that to the best of my knowledge, all tap samples were collected in the manner specified by EPA lead/copper regulations (i. e., one liter first draw samples following at least six hours of stagnation and that where necessary, proper instructions were given for homeowner collection).

Signature: Robert Yarbrough

Title: Case Taker Chateaux Dulac

Date: 11-10-98

10. Tap Sampling Data (use additional sheets as needed)

Chateau Du Lac Condos
WSSN: 1353
11/5/98

Round: 3
From: 6/1/98
To: 9/30/98

Lab Used: MDEQ

	Sample Location	Site Code	Collect Date:	Sample Category *	Piping Materials Serv. Line **	Bldg. Plumb. **	LEAD ppb	COPPER ppb	Lab Number
1	15 Chateaux Du Lac		7/26/98		C	C	0	0	C1998043765
2	13 Chateaux Du Lac		9/15/98		C	C	0	60	C1998052078
3	22 Chateaux Du Lac		7/26/98		C	C	0	0	C1998043766
4	1 Chateaux Du Lac		7/26/98		C	C	0	90	C1998043763
5	5 Chateaux Du Lac		9/29/98		C	C	0	0	C1998054492
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

90TH% LEAD:	0.0
90TH%COPPER:	75.0
Ave. LEAD:	0.0
Ave. COPPER:	37.5
Max. LEAD:	0.0
Max. COPPER:	90.0
Low LEAD:	0.0
Low COPPER:	0.0

* Sample Category: Enter a number 1 through 6 to designate the category of tap sample site (see instructions for definitions).
** Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or, P = plastic

MICHIGAN DEPARTMENT OF PUBLIC HEALTH - Division of Laboratory Services
Water Analysis Section - Lansing Laboratory
3500 N.L. King Jr. Lansing MI 48909

Laboratory report for sample : C95017542
System name/owner: CHATEAUX DU LAC
Collection address: 22 CHATEAUX DU LAC DR
City: FENTON MI 48430
TWP-SEC/Key#: FENTON
County: GENESEE

CUMMINGS PROPERTY MGMT
1119 RANFIELD LANE
FLINT MI 48532

WSSN/Pool# : 1353 Approved: SGK
Collected: 04/20/95 8:00
Entered: 04/21/95
Chlorinated: NO
Sample unit: 36CC
Collector: SANDSTROM (22)
Who collected: (3) PRIVATE CITIZEN
Source: (1) TYPE I
Purpose: (0) ROUTINE MONITORING
Point code: (3) UNTREATED PUBLIC DISTRIBUTION
Point description: KITCHEN WELL#:
Site:

ANALYTE	RESULT	DATE TESTED	MAXIMUM CONTAMINANT LEVEL	TEST	DETECTION LIMIT
COPPER (RECOVERABLE)	NOT DETECTED	04/25/95 15:16		CCU	0.05 mg/L
LEAD (TOTAL)	0.018 mg/L	04/28/95 15:52		CPB	0.001 mg/L

By authority of PA 368 1978 as amended

Printed : 05/12/95 02:06:49 PAGE 01 (END OF REPORT)

002808

Prysby

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN / MARTIN L. KING JR. BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909

VERNICE DAVIS ANTHONY, MPH, Director

March 2, 1995

Ms. Kay Cummings
Cummings Management Company
1119 Ranfield Lane
Flint, Michigan 48532

WSSN: 2273

Subject: Lead/Copper Monitoring
Chatuau-Du-Lac Condominiums

Dear Ms. Cummings:

This letter is a reminder of your monitoring requirements for the Lead & Copper Regulation for the fourth monitoring period (1/01/95-6/30/95). As we discussed during our September 15, 1994 meeting and in our September 26, 1994 letter, a second series of "Water Quality Parameter" (WQP) sampling must be conducted. This will consist of collecting samples twice from one distribution system location and twice from your point-of-entry location (clubhouse basement) prior to June 30, 1995. The specific WQP samples were discussed in our previous letter.

Next, we have not heard from you or the condominium association as to which direction this supply will proceed towards achieving optimal corrosion control. The owner of this supply, however, is responsible for achieving optimal corrosion control. To be in compliance with this regulation, our department must be informed as to what course of action will be taken towards completing this objective. Several alternatives were discussed in our previous letter.

Finally, the results of your third round samples showed that both action levels were not exceeded. Thus, you will be eligible to forgo the public education program and the corrosion control study if a second acceptable round can be obtained. If either action level is exceeded, steps towards optimal corrosion control must continue as detailed in our previous letter.

Specifically, you will need to collect five samples for lead and copper from your participating residents. This sampling round must be completed by June 30, 1995.

PRINTED ON RECYCLED PAPER

Arrangements have been made for the lead and copper sampling units to be sent to you. You should receive these bottles in several weeks.

If you have any questions about this regulation, please call me immediately at (517) 335-8605.

Sincerely,

Michael Prysby

Michael F. Prysby, P.E.
District Engineer
Division of Water Supply
Bureau of Environmental and
Occupational Health

MFP:im
cc: Mr. Bill Freas
cc: Genesee County Health Department
Attention: Mr. Brian McKenzie

CUMMINGS PROPERTY MANAGEMENT, INC.
1119 RANFIELD LANE
FLINT, MICHIGAN 48532
733-5690

December 18, 1994

Michael Presby
Michigan Department of Public Health
3423 North Martin Luther King Jr. Blvd.
P.O. Box 30195
Lansing, MI 48908

Dear Mr. Presby,

I am writing on behalf of the Chateaux Du Lac Condominium Association, in reference to the corrosion control study that you and I discussed at our meeting of September 15, 1994. At this date in 1994, it is difficult to make any binding statements reference what a future management company and or condominium Association Board of Directors will do in the future regarding a possible study. The study, as I understand it from our September meeting would be necessary for the Association to initiate based upon the results of our water quality parameter tests that are currently being taken and the last round of lead and copper samples obtained from Mr. Bill Freas.

My assumption is that the Board of Directors will be cooperative regarding restrictions that may be placed on them by the EPA, but I am not in a position currently to make any binding statements for a Board that may or may not be in office in 1996.

To date we have provided cooperative efforts in the sampling as we have been required, and at the point we are notified of our need to conduct a study I will certainly provide that information to the Board of Directors.

Thank you for your on-going diligence in this matter, and we will wait to hear from you regarding the latest sampling.

Sincerely,

Kay Cummings Bushey
Cummings Property Management

KCB/hp

Copy

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF PUBLIC HEALTH

3423 N. MARTIN L. KING JR. BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909
VERNICE DAVIS ANTHONY, MPH, Director

September 26, 1994

Mrs. Kay Cummings
Chateau Du Lac Condominiums
c/o Cummings Management Company
1119 Ranfield Lane
Flint, Michigan 48532

WSSN: 1353

Dear Mrs. Cummings:

This letter confirms my visit on September 15, 1994, with you and Bill Freas. The purpose of the visit was to discuss Chateau Du Lac's second round of lead and copper monitoring.

Specifically, the calculated 90th percentile for Chateau Du Lac was 49.0 parts per billion (ppb) for lead and 105.2 ppb for copper. Although your supply met the copper action level of 1300 ppb, the 15 ppb action level for lead was exceeded.

Since your supply exceeded the lead action level, "Water Quality Parameter" (WQP) monitoring needs to be conducted. The first round of WQP monitoring will need to be completed prior to December 31, 1994. WQP monitoring shall consist of collecting samples twice from one distribution system location and twice from your point-of-entry location (clubhouse basement) during each six month monitoring period. Each set of WQP samples must be done on separate dates.

WQP monitoring shall include measurements for pH, temperature, calcium, alkalinity, and conductivity. In addition, an analysis for orthophosphate and silica must be conducted if these are utilized as part of your current treatment technique. pH and temperature must be measured at the time of sample collection for the most accurate result. pH may be measured at a nearby laboratory provided that the temperature of the sample can be held constant and the analysis can be completed within 30 minutes of sample collection. WQP monitoring shall be repeated in the next six month monitoring period (January 1, 1995 - June 30, 1995). Finally, one sample for a lead and copper analysis will need to be collected from each well prior to December 31, 1994. The appropriate sampling containers were sent to you several days prior to this letter, please call me if you do not receive them.

Next, the supplier of water must provide public education materials to each customer. A sample public education brochure with the mandatory language that must be mailed to each water user was sent to you prior to our meeting. This brochure was then distributed to each resident prior to the September 10, 1994, or 60 day deadline following the end of the round in which the lead action level was exceeded. This public education brochure must be mailed to your water users every 12 months as long as the lead action level is exceeded.

Next, enclosed is a timeline that outlines future responsibilities under this regulation. Specifically, this supply will be required to evaluate and identify "optimal corrosion control treatment" (OCCT). We would recommend that you retain a consultant who specializes in corrosion control for assistance. You may also choose to repeat the lead and copper monitoring in the next period (July 1 -December 31, 1994) to see if the results confirm the need to pursue OCCT. If, however, two consecutive six month monitoring periods comply with the action levels for lead and copper, you may forego installing any treatment. However, you may not delay the implementation of treatment beyond the times that are indicated on the schedule if subsequent monitoring confirms the corrosivity of the water. In addition, the two rounds of WQP monitoring are still required if you choose to repeat the lead and copper monitoring in the subsequent monitoring periods. Any subsequent monitoring shall include both lead and copper.

Next, the regulation will require you to make a recommendation to us as to your course of action towards achieving optimal corrosion control. Several alternatives are discussed below:

1. Recommend to our department by December 31, 1994, as to what corrosion control treatment plan you intend to follow. Our department will either approve the plan, will require you to do a study, or designate some other type of corrosion control.

2. You can indicate to us by December 31, 1994, that you intend to conduct a corrosion control study. Our department can then accept the proposal and you then have until December 31, 1996, to complete the study and make a recommendation to us for corrosion control.

3. You may also choose to begin treatment prior to actually completing a study or making a proposal for OCCT. This treatment would likely be a trial and error method but should utilize the facts obtained from your WQP monitoring, available equipment and chemical manufacturers, and the assistance from your consultant. As always, a construction permit is required prior to making any additions or changes in your treatment process. Also, any chemical that is used must be approved for use under ANSI/NSF Standard 60.

The lead and copper regulation is extremely complex and confusing. Hopefully, this letter provides you with some guidance. We look forward to assisting you further in meeting the requirements of this regulation. If you have any additional questions regarding this or any other water related matter, feel free to call me at (517) 335-8605.

Very truly yours,

Michael Prysby

Michael F. Prysby, P.E.
District Engineer
Division of Water Supply
Bureau of Environmental and
Occupational Health

MFP:im
cc: Mr. Bill Freas
cc: Genesee County Health Department
Attention: Mr. Brian McKenzie

002814

LEAD/COPPER REPORTING

1. SYSTEM NAME: Chateaux Du Lac 2. WSSN: 1353

3. Population: 36 4. MONITORING PERIOD: From: 7/93 To: 12/93

5. Minimum # of Samples Required: 8 6. # of Samples Taken: 8

7. NAME OF CERTIFIED LABORATORY: State Lab + Price Newhouse

8. SAMPLE CRITERIA:

a. Tier 2 or 3 Sites Used? Yes _____ No X
(If yes, explain why below)

b. Same sampling points used as in previous monitoring period (for 2nd and all subsequent monitoring periods)? Yes ✓ No _____
(If no, explain why below)

c. Minimum required number of lead service line samples taken (when applicable)? Yes N/A No _____ (If no, explain why below)

Explanations:

9. CERTIFICATION:

I hereby certify that to the best of my knowledge, all tap samples were collected in the manner specified by EPA lead/copper regulations (i.e., one liter first draw samples following at least six hours of stagnation and that where necessary, proper instructions were given for homeowner collection).

Signature: Kay Cunningham Buckley

Title: Manager Date: 1/28/94

002815

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name: Chateau Du Lac WSSN: 1353

Results:

Sample Location	Site Code	Date	Sample Category *	Piping Materials Serv. Line **	Piping Materials Bldg. plmb. **	PB (ppb)	CU (ppb)	LAB #
15 Chateau Du Lac	A1	7/2/93	1	C	C	ND	ND	State Lab
23 Chateau Du Lac	A1	7/2/93	1	C	C	ND	ND	State Lab
						0.034 mg/L	ND	MFP
11 Chateau Du Lac	A1	7/8/93	1	C	C	~~ND~~	~~.034~~ mg/L	State Lab
60 Chateau Du Lac	A2	7/8/93	1	C	C	mg/L .009	ND	State Lab
13 Chateau Du Lac	A1	7/1/93	1	C	C	ND	ND	State Lab
retests								
12 Chateau Du Lac	A1	10/28/93	1	C	C	0	0	Prior Rem house
22 Chateau Du Lac	A1	10/28/93	1	C	C	0	.077	Prior Rem house
24 Chateau Du Lac	A1	10/28/93	1	C	C	.009 mg/L	.274 mg/L	Prior Rem house

TO BE DETERMINED BY MDPH

90th % tile PB: 14.0 ppb

90th % tile CU: 116.4 ppb

TAB

5/25/94

* Sample Category: Enter a number 1 through 6 to designate the category of tap sample site (see instructions for definitions)

** Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or, P = plastic

From: John O'Brien <jfobrien@gcdcwws.com>
Sent: Monday, June 08, 2015 3:08 PM
To: Prysby, Mike (DEQ)
Subject: FW: Coalition for Clean Water v COF
Attachments: Complaint.PDF; ATT00001.htm; Motion for Injunctive Relief.PDF; ATT00002.htm

From: Kevin Kilby [mailto:kkilby@mcgrawmorris.com]
Sent: Monday, June 08, 2015 11:23 AM
To: John O'Brien; David Jansen; Kevin Kilby
Subject: Fwd: Coalition for Clean Water v COF

Sincerely,

Kevin Kilby
Partner
McGraw Morris P.C.
2075 West Big Beaver Road
Suite 750
Troy, Michigan 48084
Phone: (810) 569-0352
Fax: (248) 502-4001
kkilby@mcgrawmorris.com
www.mcgrawmorris.com

Begin forwarded message:

> **From:** Anthony Chubb <achubb@cityofflint.com>
> **Date:** June 8, 2015 at 10:59:59 AM EDT
> **To:** "Kevin K. Kilby" <kkilby@mcgrawmorris.com>
> **Subject: Fwd: Coalition for Clean Water v COF**
>
> See below… really shoddy, but we pulled Hayman so I'll definitely be removing it to Federal Court.
>
> Anthony Chubb
> Interim Director of Human Resources and Labor Relations
> Deputy City Attorney
> City of Flint
> 1101 S. Saginaw Street, 3rd Floor
> Flint, MI 48502

(810) 237-2078

This communication, along with any documents, files or attachments, is intended only for the use of the addressee and may contain legally privileged and confidential information. If you are not the intended recipient, you are hereby notified that any dissemination, distribution or copying of any information contained in or attached to this communication is strictly prohibited.

---------- Forwarded message ----------
From: **Erika Michel** <emichel@cityofflint.com>
Date: Mon, Jun 8, 2015 at 10:14 AM
Subject: Re: Coalition for Clean Water v COF
To: Peter Bade <pbade@cityofflint.com>
Cc: William Kim <wkim@cityofflint.com>, Anthony Chubb <achubb@cityofflint.com>

Attached is the Complaint and Motion for Injunctive Relief. I have created a new file under both your file lists and you will find these docs saved in the appropriate folder. I will draft the removal docs and send along to you for review.

E.

Erika E. Michel
Senior Litigation Assistant
Direct: (810) 237-2071

City of Flint
Department of Law
1101 S. Saginaw Street
Flint, MI 48502
Main: (810) 766-7146

On Mon, Jun 8, 2015 at 9:56 AM, Peter Bade <pbade@cityofflint.com> wrote:

> I've assigned the defense of this matter to both of you.
>
> Bill - you can take the COF.
>
> Tony - you can take Natasha Henderson.
>
> I've asked Erika to scan and email the complaint and motion to all of us asap. I've also asked her to prepare the removal to federal court. The state court judge is Hayman.
>
> We can discuss later today.
>
> Thanks
>
> --
> Peter A. Bade
> Chief Legal Officer
> City of Flint
> p: 810.766.7146
> f: 810.232.2114

STATE OF MICHIGAN
IN THE 7TH CIRCUIT COURT
COUNTY OF GENESEE

COALITION FOR CLEAN WATER, a
Non-profit organization,

Plaintiffs,

V.

CITY OF FLINT, a municipal entity, and
CITY OF FLINT ADMINISTRATOR NATASHA
HENDERSON, In her official capacity

Defendants.

CASE NO.: 15-101900-CZ

HON. ARCHIE L. HAYMAN
P-37516

A TRUE COPY
Genesee County Clerk

TRACHELLE C. YOUNG (P63330)
Attorney for Plaintiffs
2501 N. Saginaw Street
Flint, MI 48505
(810) 239-6302
(810) 234-7357 Fax
trachelleyoung@gmail.com

There is no other civil action between these parties arising out of the same transaction or occurrence as alleged in this complaint pending in this court, nor has any such action been previously filed and dismissed or transferred after having been assigned to a judge. I do not know of any other civil action, not between these parties, arising out of the same transaction or occurrence as alleged in this complaint that is either pending or was previously filed and dismissed, transferred, or otherwise disposed of after having been assigned to a judge in this court.

COMPLAINT FOR INJUNCTIVE RELIEF, DECLARATORY RELIEF AND VIOLATION OF PLAINTIFFS FOURTEENTH AMENDMENT RIGHT TO DUE PROCESS

NOW COMES Plaintiffs, COALITION FOR CLEAN WATER, by and through their attorney, Trachelle C. Young, & Assoc., P.L.L.C., by attorney Trachelle C. Young, and for their Complaint, states as follows:

Parties, Jurisdiction and Venue

1. Plaintiffs, Coalition for Clean Water (Coalition), is a Michigan nonprofit organization, based in Genesee county, Michigan and organized for the purpose of

promoting and ensuring safe, contaminate free drinking water through education, social actions and legal actions designed to eliminate unlawful and illegal actions by all governmental officials, representatives and entities at all levels of government. Coalition for Clean Water is comprised of multiple civic groups, including but not limited to, Concerned Pastors for Social Action, Water You Fighting For, Democracy Defense League Water Task Force, Flint Water Class Action Group, Dr. Laura Sullivan, Phd, 1st Ward City Councilman Eric Mays.

2. Defendant, City of Flint (hereinafter "Flint"), is a city organized under the constitution and laws of the State of Michigan and is a political subdivision of the State of Michigan.
3. Defendant, City of Flint Administrator Natasha Henderson, (hereinafter "City Administrator"), is the City's Chief Administrative Officer operating under expanded powers that give her ultimate day to day control over the City.
4. This matter concerns the City's failure to pass the Environmental Protection Agency's (EPA) locational running annual average (LRAA) of the most recent four quarters water quality tests, thereby subjecting the citizens of Flint to unhealthy, contaminated drinking water.
5. Venue and jurisdiction are proper in this Court because plaintiffs seeks declaratory and injunctive relief to cease the City of Flint's current methods, acts, and/or practices of utilizing the Flint River as the primary source for drinking water as unlawful due to the proven deleterious health effects on the residents of the City and to require the City to return to using water from the Detroit system, at least

temporarily, before the offer from the Detroit Water and Sewerage System Department (DWSD) expires.

6. Jurisdiction is also proper pursuant to Title XIV of the Public Health Service Act a/k/a The Safe Drinking Water Act (Act), Section 1449, which allows citizens to bring suit against any person or agency allegedly in violation of provisions of the Act.

General Allegations

7. That the Coalition incorporates by reference allegations 1 through 6 as though fully set forth herein.
8. That the City of Flint had purchased its drinking water from DWSD for the past thirty plus (30+) years under an original thirty (30) year contract executed in 1964, which continued on a year to year basis.
9. That Genesee County purchased its water from the City to get the Lake source water from DWSD.
10. That the City of Flint River has not been used as a primary source for drinking water in fifty (50) years.
11. That the Flint River hadn't been used as a primary source for drinking water due to a number of threats, including but not limited to improperly disposed of chemicals; animal wastes; pesticides; human wastes; wastes injected deep underground; and naturally-occurring substances affecting surface water.
12. That the source of the water purchased from Detroit was Lake Huron.
13. That Lake water has lower levels of total organic carbon than river water.
14. That Lake water requires a different treatment process than River water.

15. That the City of Flint paid approximately 1 million dollars per month to DWSD for its delivery of the water.
16. That in 2010, the City began disclosing its interest in joining the Karegnondi Water Authority (KWA), which sought to build new pipelines from Lake Huron to the County of Genesee and the City of Flint.
17. That the overall cost of building this pipeline is approximately 600 million dollars and it is not estimated to be completed until sometime towards the end of 2016.
18. That on April 26, 2010, the Flint City Council voted to join the KWA.
19. That on October 26, 2010, the KWA Board of Trustees met for the first time with representatives from the incorporating Cities of Flint (**Mayor Dayne Walling**), Lapeer (City Manager Dale Kerbyson), and County Drain Commissioners of Genesee (Jeff Wright), Lapeer (John Cosens) and Sanilac (Gregory L. Alexander). Walling was elected chair.
20. That on April 16, 2013, Flint's Emergency Manager, Ed Kurtz, ended the City's contract with Detroit by signing a contract with the KWA.
21. That in response to Kurt's actions, on April 17, 2013, the DWSD gave the City of Flint a one (1) year notice based on the termination of its contract to supply water to the City of Flint, effective April 17, 2014.
22. That on October 16, 2013, ten additional trustees were added to the board of trustees: former state House Minority Leader Richard Hammel; **Johsua Freeman**, Flint City Council; Larry Green, Mt. Morris Township supervisor; Ted Henry, Genesee County commissioner; Micki Hoffman, Grand Blanc Township supervisor; Steve Landaal, president of Landaal Packaging; Sheldon Neeley, Flint City Council; Thomas Svcek,

Swartz Creek Department of Public Works director; Tracey Tucker, Flint Township building administrator; and Paula Zelenko, mayor of Burton.

23. That on April 25, 2014, the City of Flint began utilizing the Flint River as its primary source of drinking water.

24. That upon switching to the Flint River water, the City of Flint failed the EPA's LRAA water quality tests on May 21, 2014, August 21, 2014 and November 20, 2014.

25. That as a result of these failed tests, the City of Flint was required to send out Violation Notices to all the residents that stated their water system recently violated a drinking water standard and people who have a severely compromised immune sytem, have an infant, or are elderly may be at increased risk and should seek advice about drinking water from their health providers. See *Exhibit A*

26. This required Notice further stated that the violation was based on elevated levels of total trihalomethanes (TTHM), and that people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer. See *Exhibit A*

27. That TTHM is an odorless, colorless disinfection byproduct, the fallout of chlorinating water.

28. That in June 2014, Flint emergency manager Darnell Earley finalized the sale of an Eastern Genesee County 9-mile section of water pipeline to Genesee County for $3.9 million.

29. That Genesee County Drain Commissioner Jeff Wright has stated he would allow the City to utilize that 9-mile section of water pipeline if the City goes back to water usage from DSWD.
30. That upon information and belief, that 3.9 million was given directly to the KWA as part of the City's investment in that pipeline.
31. That compliance with EPA standards is calculated using a LRAA of the most recent four (4) quarters.
32. That the City of Flint Mayor admitted the City underestimated the challenges of treating River water.
33. That the City of Flint failed to properly prepare for the transition to River water as a primary drinking source and recklessly endangered the health, safety and welfare of its residents as a result thereof.
34. That in attempting to treat the River water, the City of Flint over chlorinated the water, which directly caused the elevated levels of TTHM.
35. That because the City failed the November 20, 2014 LRAA test, it *cannot* be in compliance with the EPA standards until it passes the February 2015, May 2015, August 2015 and November 2015 tests.
36. That upon information and belief, the City passed the February 2015 tests, was out of compliance at two of the eights sites in March 2015 and passed the May 2015 LRAA tests, but they still required to send out the EPA Violation Notices.
37. That the Notices sent out by the City of Flint appear deceptive and contradicting in that it contains two pages: the first is a colorful, attention grabbing sheet that starts with "**We are pleased to report that the City of Flint water is safe and meets U.S.**

Environmental Protection Agency guidelines..." in bold print (See *Exhibit B*); the second sheet is in black and white and is the actual Violation Notice stating that the City is still out of compliance with the maximum contaminant levels for its drinking water, which is not in bold print and the same health warnings and cautions apply. See *Exhibit C*

38. That due to a major community concern, all of the local major grocery stores lowered the cost of bottled water, there have been and continue to be community giveaways of bottled water for low income residents that can't afford to purchase their water, the Flint hospitals began using and offering bottled water, the Department of Human Service's Bureau of Child and Adult Licensing recommended to the Genesee Intermediate School District, which runs a Head Start program in Flint, to use bottled water and said children have since been given bottled, The Flint Children's Museum has stopped the flow of Flint water at its fountains and the list goes on.
39. That there were three boil water advisories in a 22-day span in the summer of 2014 after positive tests for total coliform and fecal coliform bacteria in the Flint River.
40. That in October 2013, General Motors (GM) shut off its usage of Flint River water at its Flint Engine Operations on West Bristol Road because the water was causing corrosion of its engines and the agreement states GM is not required to return to the usage with the City of Flint until it is back to using water from Lake Huron through the KWA.
41. That members of the Coalition, including those with severely compromised immune systems, infants and elderly, have suffered severe health problems that have been

directly connected to the unhealthy, contaminated River water, including but not limited to mysterious rashes on local children, unexplained illnesses and sick pets.

42. That many other residents have complained of health issues as a result of lead, odor, discoloration, turbidity, particles and sediments in the system.
43. That in February 2015, several concerned citizens contacted activist Erin Brockovich seeking assistance with the growing major health impacts of the Flint River usage.
44. That Erin Brockovich did send an expert from Integrated Resource Management, Inc., Bob Bowcock – free of charge – to review the operations at the Flint Water Plant and the quality of the water being distributed.
45. That Mr. Bowcock prepared and submitted to Mayor Walling and the Flint City Council a report dated February 17, 2015, which made several recommendations on the source supply evaluation, the Water Treatment Plant, the Distribution System Operations and Budget & Rate Concerns. See *Exhibit D*
46. That the City of Flint then paid a consulting company, Veolia, $40 thousand dollars (at $900/hr) in March 2015 to conduct a short term assessment of the operation of the water plant, distribution system and customer communications programs and make recommendations.
47. That the Veolia report made numerous long term and costly recommendations, including but not limited to operational changes and improvements, changes in water treatment, procedures and chemical dosing, adjustments in how current technologies are being used, increased maintenance and capital spending, increased training and improved customer communications. See *Exhibit E*

48. That the City of Flint's Capital Improvement Plan states the City needs to invest $50 million dollars to improve its water plant, properly train its plant personnel and to replace pipes.

49. That the City has disclosed its plans to date to invest $5 million dollars in the following manner:

    a. $900,000 in water main leak protection;
    b. $1.6 million fro a Granular Activated Carbon (GAC) Filter at the plant meant to treat the River water;
    c. $2.1 million to replace pipes along Dupont Street (@ $1 million per mile);
    d. $400,000 in water treatment improvements.

50. That likewise, drinking water that is not properly treated or disinfected, or which travels through an improperly maintained distribution system, may also pose a health risk.

51. That the City of Flint received a $2 million dollar grant and Emergency Manager Jerry Ambrose was allowed to restructure $2 million dollars in water loan debts that would have gone to the EPA.

52. That as a result, $4 million of the $5 million being invested did not come from the excessive water rates the City of Flint charges.

53. That upon information and belief, the City has collected approximately $30 million dollars from its water rates to its customers since it began using the Flint River as the primary source.

54. That upon information and belief, the City has a net $10 million in the water fund from the excessive water rates.

55. That this initial $5 million investment doesn't begin to touch the major investment needed to bring the City of Flint Plant to the point it needs to be.

56. That the KWA line will be bringing untreated Lake water to the Flint Water Plant where it will need to be treated.

57. That whether it's River water, Lake water or a combination of both, the City of Flint's Plant needs the necessary and recommended investments made before it is allowed to continue as the treatment plant for the City of Flint's primary source of drinking water.

58. That the City of Flint charges the highest water rates in the county of Genesee and the rates are almost eight times higher than the national average.

59. That MCL 141.121 requires a municipality to base its water rates at the reasonable cost of delivering the service.

60. That the City's water rates have not declined since it began using the Flint River as a primary source of drinking water, but have increased in spite of the fact that the City is not only saving the $1 million dollars it paid Detroit monthly, but also continues to collect from Plaintiffs and its residents.

61. That the unhealthy quality of the water combined with the excessive rates charged by the city have caused residents to move out of the City of Flint or simply go without water consumption.

62. That the human body is 60% water, water is needed for proper circulation respiration and converting food to energy and every human needs water to live.

63. That the residents of the City of Flint have converged to Flint City Council Meetings demanding something be done about the unhealthy River water.

64. That many residents have held protests and marches to protest the poor quality of the expensive Flint River water.

65. That in response to the cry of the people, the Flint City Council voted and passed a Resolution "to do all things necessary" to reconnect Flint to DWSD, which passed 7-1.
66. That the President of the Flint City Council, Josh Freeman, (who sits on the KWA Board) was the lone vote against the Resolution.
67. That Mayor Dayne Walling (Chair of the KWA Board) is also against reconnecting to DWSD.
68. That both Councilman Freeman and Mayor Walling have positions on the KWA Board that have placed them in a conflict of interest of being either unable or unwilling to represent the interests of the constituents they were elected to represent.
69. That the previous Emergency Manager Gerald Ambrose, pursuant to PA 436, gave the City Administrator the authority and ability to implement executive and legislative directives and policies of the Mayor and City Council subject only to a Receivership Advisory Transition Board (Board).
70. That the City Administrator has chosen not to acknowledge, respect or follow the duly adopted resolution by the City Council.
71. That the City of Flint residents and citizens are the only people in the entire County of Genesee that are being forcibly subjected to Flint River water against their will.
72. That Sue McCormick, Director of DWSD, made a personal appearance to the Flint City Council in addition to stating in a letter to Flint that Detroit would sell treated lake water to Flint for a fixed monthly rate of $846,700 and $14.92 per 1,000 cubic feet without a long term deal and with no strings attached.

73. That the offer from DWSD has an expiration of **June 30, 2015** and time is of the essence. See *Exhibit F*

COUNT 1-CLAIM FOR DECLARATORY RELIEF

74. That the Coalition incorporates by reference allegations 1 through 73 as though fully set forth herein.

75. That a dispute has arisen between the Plaintiffs and Defendants regarding the condition of the City of Flint's water, the City's ability to properly and effectively run the City of Flint Water Plant, whether the water plant operators and personnel are properly trained and certified, the City's ability to treat River water and/or Lake water and whether the City has violated the Safe Drinking Water Act.

76. That Plaintiffs maintain the City of Flint's usage of the Flint River as a primary source of drinking water has and continues to pose a major and serious threat to the health, safety and welfare of the residents of the City of Flint, that the City has not made the necessary investment in the water plant that has been recommended by two experts, that the water plant operators and personnel have not received the recommended and necessary training and certifications to run the plant effectively, that until the City satisfies the EPA standard of passing the four quarterly LRAA tests, it has not proven its ability to effectively treat River and/or Lake water, and that the City has violated the Safe Drinking Water Act.

77. That the Safe Drinking Water Act mandates that states have programs to certify water system operators and make sure that new water systems have the technical, financial, and managerial capacity to provide safe drinking water.

78. That by underestimating the challenges of treating River water, the City of Flint misled the State and failed to have the technical, financial and managerial capacity to provide safe drinking water when they switched from DWSD's lake treated water.
79. That the City of Flint has also failed to demonstrate their ability to properly treat lake water once the transition is made to the KWA.
80. That the decision to switch to the KWA, which led to the termination of the contract with DWSD was never subject to input from the citizens of Flint and they were effectively disenfranchised from any input in such a major decision.
81. That Plaintiffs and the residents of the City of Flint have suffered at the hands of the City of Flint and the City Administrator, both of whom are not acting in the best interest of the residents and citizens of Flint.
82. That the residents and citizens of Flint have a basic and human right to clean drinking water – free of contamination.
83. That an actual and existing controversy exists between the Plaintiffs and the Defendants as to their legal relations in respect to the above identified matters and a declaratory judgment is necessary to guide the Plaintiffs and Defendant's future conduct and in order to preserve and protect the Plaintiffs legal rights.
84. For the reasons set forth above, Plaintiffs seek a declaratory judgment that the City of Flint's usage of the Flint River as a primary source of drinking water has and continues to pose a major and serious threat to the health, safety and welfare of the residents of the City of Flint, that the City has not made the necessary investment in the water plant that has been recommended by two experts, that the water plant operators and personnel have not received the recommended and necessary training and certifications to run the plant effectively, that until the City satisfies the EPA standard of passing the four quarterly

LRAA tests, it has not proven its ability to effectively treat River and/or Lake water, and that the City has violated the Safe Drinking Water Act and such other relief as the Court deems just and appropriate.

COUNT II. INJUNCTIVE RELIEF

85. That the Coalition incorporates by reference allegations 1 through 84 as though fully set forth herein.

86. Should the Court grant plaintiff declaratory relief, and to the extent that it may be necessary, Plaintiffs seek an Temporary and/or Permanent Injunction restraining the Defendants from continuing to utilize the City of Flint Water Plant to treat the Flint River as the City's primary source of drinking water until it can satisfactorily show compliance with either of the expert recommendations by Veolia or Bob Bowcock and from taking or continuing any action contrary to the declaration of rights sought by Plaintiffs and to appoint a Receiver to run and operate the City water plant until further Order of the Court.

87. That Plaintiffs further seek a Temporary Injunction requiring the City of Flint to utilize the DWSD as its primary source of drinking water until such time as it can demonstrate total compliance with the EPA's quarterly LRAA tests.

88. That if the Court finds that the City can continue run the water plant without the necessary and proper training and personnel and attempt to treat the River water at the expense and against the will of the residents and elected officials, Plaintiffs will suffer immediate and irreparable harm to their health, safety and welfare, particularly the most vulnerable individuals (those with compromised immune systems, the elderly and the infants).

89. That in order to ensure that complete and effective relief is afforded to the Plaintiffs, and should the Court grant Plaintiffs request for declaratory judgment, the public interest would be best served by issuance of a temporary and/or permanent injunction granting such relief as the Court deems just and necessary to effectuate the declaratory relief granted.

WHEREFORE, Plaintiff pray that this Honorable Court will declare the rights and responsibilities of the parties hereto, issue a declaratory judgment and Order Temporary and/or Permanent Injunctive Relief as requested.

COUNT III – VIOLATION OF PLAINTIFF'S FOURTEENTH AMENDMENT TO THE UNITED STATES CONSTITUTION

90. That the Coalition incorporates by reference allegations 1 through 89 as though fully set forth herein.
91. That the City of Flint has a legal obligation to provide municipal water service to its residents.
92. That the Safe Drinking Water Act requires that the water provided meet certain safety standards.
93. That safe drinking water is a necessity to live.
94. That Plaintiffs have a liberty or property interest in receiving safe drinking water to which procedural due process rights apply.
95. That the 14th Amendment to the US Constitution prohibits states from depriving citizens of "life, liberty, or property" without "due process of law.
96. That Plaintiffs were disenfranchised from the decision to terminate the contract with DWSD by the City's Emergency Manager Ed Kurtz and there was no procedure that accompanied that unilateral decision that allowed input, protests, hearings, concerns or questions by the people that were directly impacted.

97. Said decision resulted in Plaintiffs, residents and citizens of the City being deprived of safe drinking water for a substantial period of time and notice was not reasonably calculated, under all the circumstances, to apprise Plaintiffs and residents of the pendency of the action and afford them an opportunity to present their objections.

98. That no "Notices" were sent to the Plaintiffs or residents of Flint explaining the different type of water source, any preparation for the transition, the proposed treatment process or the capability of the plant and the personnel to treat any water, let alone River water.

99. That if the

100. Defendant Equity did attempt to collect monies that Plaintiffs did not owe and created confusion or misunderstanding with respect to the authority of a salesperson, representative or agent to negotiate the final terms of a transaction, in violation of MCL 445.903(1)(m).

101. Defendant Equity has caused a probability of confusion or misunderstanding as to the legal rights, obligations or remedies of a party to a transaction, in violation of MCL 445.903(1)(n).

102. Defendant Equity has engaged in the practice of making liens against real property of homeowners for association dues, assessments, costs and attorney fees associated with the collection of those fees that are grossly excessive, and unless restrained by this court, will continue to engage in such practice.

WHEREFORE , Plaintiffs, by and through their attorney, respectfully requests that this Honorable Court find that Plaintiffs have a liberty or property interest in safe drinking water, that Defendants have violated that right without due process of law and enter judgment in Plaintiffs favor and against Defendants in an amount greater than Twenty-Five Thousand ($25,000.00) Dollars, in accordance with MCL 445.911(3), plus costs, including reasonable attorney fees and grant them such other relief as the Court deems warranted under the circumstances.

COUNT IV - 42. U.S.C. § 1981 & 1983

UNCONSTITUTIONAL DEPRIVATION OF PROPERTWITHOUT DUE PROCESS

103. That the Coalition incorporates and realleges each and every allegation set forth in paragraphs 1 through 102 and incorporate them herein by reference.

104. That Section 1983 states, "Every person who, under color of any statute, ordinance, regulation, custom, or usage, of any State or Territory or the District of Columbia, subjects, or causes to be subjected, any citizen of the United States or other person within the jurisdiction thereof to the deprivation of any rights, privileges, or immunities secured by the Constitution and laws, shall be liable to the party injured in an action at law, suit in equity, or other proper proceeding for redress, except that in any action brought against a judicial officer for an act or omission taken in such officer's judicial capacity, injunctive relief shall not be granted unless a declaratory decree was violated or declaratory relief was unavailable."

105. That Plaintiffs have a liberty or property interest in clean, safe water.

106. That the City has engaged in a practice that has deprived Plaintiffs of safe, clean water without due process, including notice, input, or public hearings before, during or after said deprivation.

107. That the City has deliberately disenfranchised Plaintiffs and deprived them of their liberty or property interest in clean, safe water without due process of law, or just compensation, in violation of the Fourteenth Amendment of the United States Constitution and Article I § 17 of the Michigan Constitution.

108. § 1981. Equal rights under the law , states "All persons within the jurisdiction of the United States shall have the same right in every State and Territory to make and enforce contracts, to sue, be parties, give evidence, and to the full and equal benefit of all laws and proceedings for the security of persons and property as is enjoyed by white citizens, and shall be subject to like punishment, pains, penalties, taxes, licenses, and exactions of every kind, and to no other."

109. That Plaintiffs are the victims of discriminatory conduct by the City by virtue of the contract between Plaintiffs and the City whereby the City agrees to provide clean, safe water in exchange for Plaintiffs payment of a monthly usage fee.

110. That the City has breached this contract by failing to provide safe, clean water following their unilateral decision to terminate the contract with DWSD.

111. That as a result of the City's breach, Plaintiffs have been damaged and deprived of their property interests in safe, clean water without due process of law or just compensation, in violation of the Fourteenth Amendment of the United States Constitution and Article I § 17 of the Michigan Constitution.

WHEREFORE , Plaintiffs, by and through their attorney, respectfully requests that this Honorable Court find that Plaintiffs have a liberty or property interest in safe drinking water, that Defendants have violated that right without due process of law and enter judgment in Plaintiffs favor and against Defendants in an amount greater than Twenty-Five Thousand ($25,000.00) Dollars, in accordance with MCL 445.911(3), plus costs, including reasonable attorney fees and grant them such other relief as the Court deems warranted under the circumstances.

I have read the foregoing complaint and I declare that statements contained therein are true to the best of my knowledge, information and belief. MCR 2.114(B)(2)(B).

Dated: June 5, 2015

Pastor Allen C. Overton Sr., Coalition For Clean Water, Plaintiff

Dated: June 5, 2015

Pastor Alfred L. Harris, Concerned Pastors For Social Action, Plaintiff

Dated: June 4, 2015

Melissa Mays, Water You Fighting For

Dated: June 5, 2015

Clair McClinton, Democracy Defense League Water Task Force

Dated: June 5, 2015

Florlisa Fowler, Flint Water Class Action Group

Dated: June 5, 2015

Laura Sullivan, PHD

Dated: June 5, 2015

Eric Mays, 1st Ward Flint City Councilman

Respectfully Submitted,

TRACHELLE C. YOUNG & Assoc., PLLC

Dated: June 5, 2015

By: Trachelle C. Young (P63330)
Attorney for Plaintiffs
2501 N. Saginaw Street
Flint, MI 48505

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, November 20 of 2014, and February 17, 2015). The average of the results at ANY of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the MCL. The standard for TTHM is 80 micro grams per liter (ug/L). The location reporting the highest TTHM level was 105 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem in 2015. Our most recent individual sample results were all less than half the 80 ug/L standard, however since compliance is calculated using a locational running annual average (LRAA) of the most recent four quarters, we are still out of compliance with the MCL at two of eight locations.

For more information, please contact Mr. Brent Wright at 810-787-6537, or the Flint Water Plant at 4500 North Dart Highway, Flint, Michigan 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

Water Quality Update

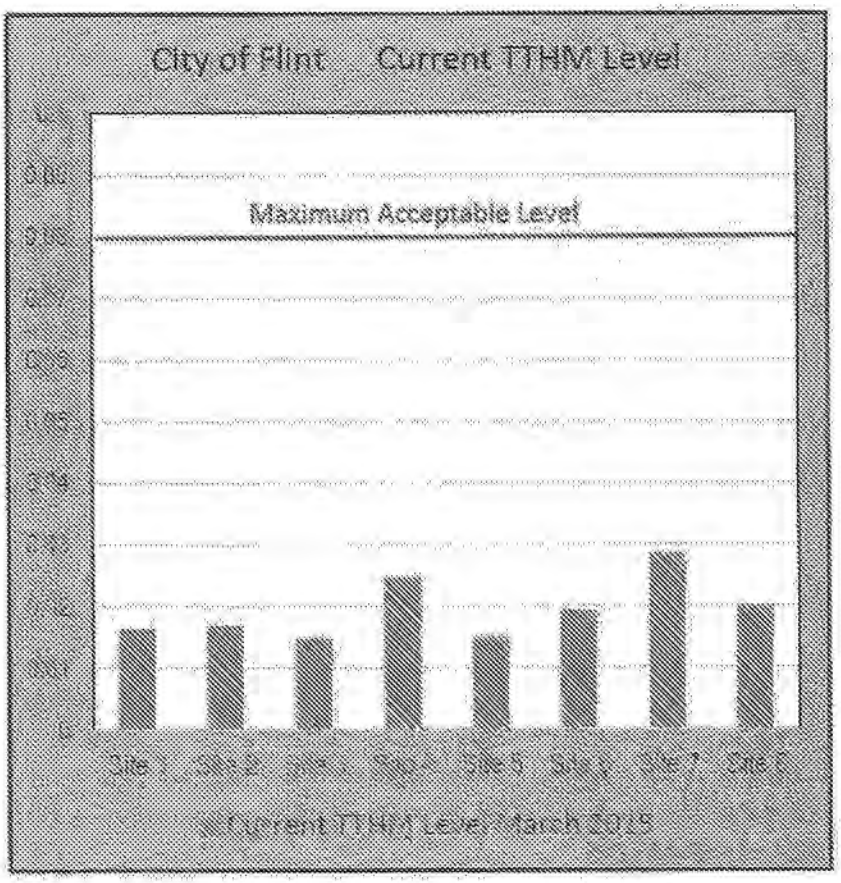
City of Flint Resident:

We are pleased to report that City of Flint water is safe and meets U.S. Environmental Protection Agency guidelines. While we continue to work on improving aesthetic qualities, such as discoloration or odor, you can be confident that the water provided to you today meets all safety standards. Maintaining safety and quality in our water is a top priority of the City.

We accomplished this by:

- Upgrading the ozone treatment process at the Water Treatment Plant
- Increasing water main/hydrant flushing to reduce stagnation
- Conducting additional testing of treatment to identify areas of improvement
- Improving water circulation by repairing valves and adjusting reservoir levels

Our most recent testing in February showed that every testing site was well below allowable levels, as shown below:



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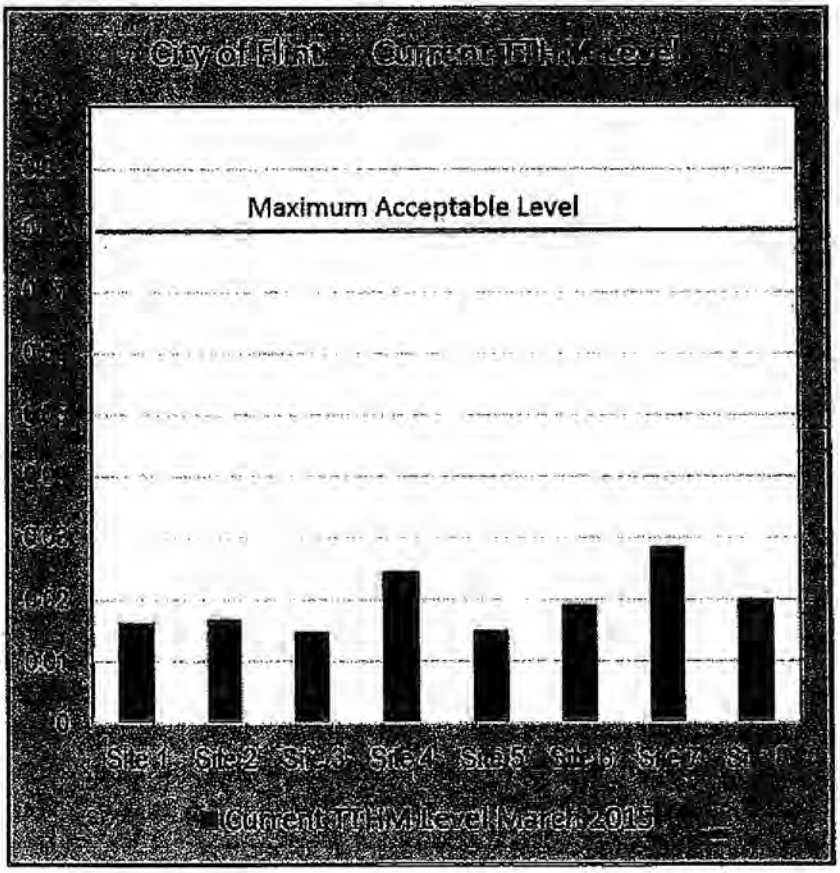
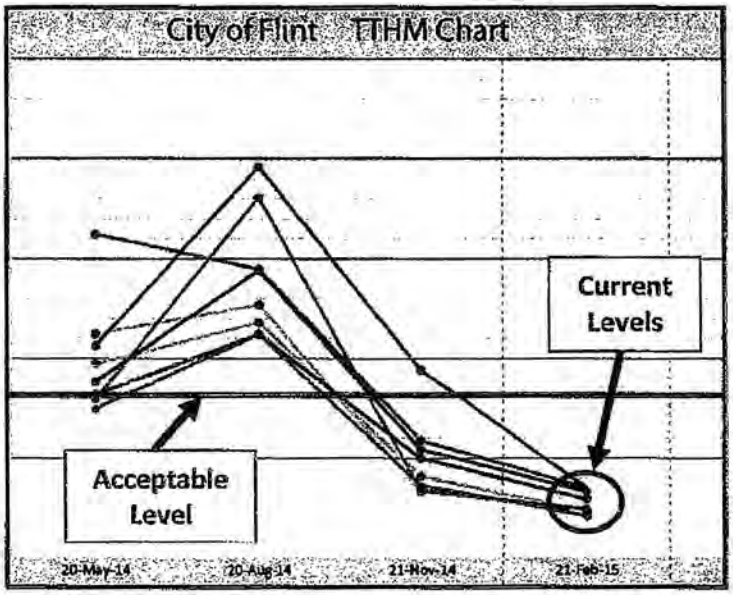


The Michigan Department of Environmental Quality (MDEQ)has acknowledged our progress:

"We are encouraged by the results from the most recent round of compliance samples collected on February 17, 2015, which now show individual TTHM levels at less than half of the 0.080 mg/L standard at all locations throughout the City's system. Operational Evaluation Reports from December 2014, and February 2015, have identified possible causes and corrective measures for the previous elevated TTHM levels, which we encourage the City to continue implementing." -MDEQ

Notification is based on four quarters of test results. Because of last year's test results, the City's *annual* quarterly testing average is not yet below the state's allowable average and the City is required to issue the attached notice ***("Important Information about Your Drinking Water")***.



If you have any questions about this report or would like a test done at your home, free of charge, please call us at 810-787-6537.

Maintaining safe water and improving its quality is a top priority for all of us at the City of Flint, and we apologize for the concerns these notices have raised. We have taken many steps to improve the safety and quality of our water supply and will be taking more. As you may know, we have recently received a series of recommendations from several sources, including a report from international urban water system consultant, Veolia North America. We will be taking further action steps to assure that water remains safe and that water quality is improved, and we will be working with our recently created Citizen Advisory Committee and our Technical Advisory Committee as we progress. Please track our progress on our website **cityofflint.com**.

002841

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For more information, please contact Mr. Brent Wright at 810-785-6537, or the Flint Water Plant at 4500 North Dart Highway, Flint, Michigan 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CITY OF FLINT, MICHIGAN 1855

Integrated Resource Management, Inc.

February 17, 2015

Honorable Mayor Dayne Walling
& Members of the City Council
1101 South Saginaw Street
Flint, Michigan 48502

RE: City of Flint Municipal Drinking Water System
Initial Water Quality Investigation and Water Rate Issues

Ladies and Gentlemen:

I would like to thank the Office of the Mayor and City Council Members for extending such a warm welcome to me on my recent visit to the City of Flint this past weekend. Flint, Michigan enjoys a wonderful history and is part of what has made America strong. Clearly, the City of Flint is a community in transition.

While my initial visit focused on the water supply and immediate concerns for the health and safety of the community water supply, the following recommendations are broader in scope and are meant to be purely constructive.

Source Supply Evaluation

- Update and implement the Source Water Protection Plan.
- Define and identify groundwater quality and quantity inflow variables to the Flint River, specifically from the contaminated sources identified adjacent to the river.
- Define and identify reservoir release surface water quality and quantity variables to the Flint River, specifically from the Holloway Reservoir.
- Thoroughly evaluate the Detroit Water Supply quality characteristics.
- Conduct a detailed "cost of treatment assessment" of the Flint River Water Treatment Plant and compare it directly to the cost per unit of water purchased from Detroit. Publish said results and allow for public input as to the choice of water supplied based upon actual costs versus quality.

405 North Indian Hill Boulevard
Claremont, CA 91711-4600

(909) 621-1266
(909) 621-1196 Fax

Water Treatment Plant

In order to achieve immediate improvement to the water quality in the City of Flint, the following recommendations should be considered for implementation. Said recommendations are made with the intent of being migratory toward ultimate treatment of Lake Huron water from the Karegnondi Water Authority.

- Optimize the ozone disinfection system.
- Discontinue the use of sodium bisulfate to reduce pH in the ozone contact chamber.
- Trust the Plant Operator to use the optimum amount of ferric chloride required for coagulation.
- Investigate the use (jar tests) of ferric chloride and various water treatment polymers to reduce the use of corrosive ferric chloride.
- Discontinue the practice of lime softening. Continue the flow through the softener facility and consider adding a low dose of filter aid (additional polymer) as necessary during seasonal high turbidity.
- Discontinue the practice of fluoridation.
- Discontinue the practice of recarbonation.
- Discontinue the use of pre-filtration chlorine.
- Remove the anthracite coal media from the filter beds and replace it with a granular activated carbon (GAC) material. There are specifically engineered products for use in dual media filters. The use of GAC for organic Trihalomethanes (THM) precursor removal will immediately reduce THM formation in the drinking water supply.
- Post chlorinate disinfect based on residual demand requirements. Post chlorination will not be as intensive as the organic material will be dramatically reduced. The GAC will also serve as a barrier to other types of contamination events (petroleum, chemical, and algae blooms).

Distribution System Operations

- Complete development of the water distribution hydraulic flow model.
- Immediately increase distribution system velocities.
- Re-engineer the distribution system to encourage directional sediment transport for evacuation of system contaminates (sludge, biofilm, sediment, and other debris). This will further aid in chlorine demand management.

- Take at least one of the water system storage reservoirs out of service. Thoroughly clean the storage reservoir, perhaps a program of alternative years of service. With the 2 MG elevated tank, perhaps both reservoirs could be removed from service this year.

Budget & Rate Concerns

I have extremely limited information on the rate-setting program. My recommendations here are more about a process that aids communities with transparency. I have been advised to look at a recent study by one of the local colleges; further, I would need access to a detailed budget and expenditure accounting to provide more specific recommendations.

- Prepare a budget that accounts for all fixed/variable debts: loans, capital depreciation of infrastructure, retirement system obligations; etcetera. This will allow the community to understand exactly where it stands in relation to its debt obligations... before one drop of water is produced. The total of the compilation can then be divided among the consumers based on number and class size of services. It is simple, straightforward, and easily understood.

- Prepare a budget that accounts for all commodity/variable costs: salaries, chemicals, energy, contract services, etcetera. This will allow the community to understand exactly where it stands as it relates to the cost of water. Using historic production and sales numbers, project a water sales figure and divide the commodity costs among the units; this is the true cost of water.

Again, this recommendation letter is very limited in scope. I will continue to make myself available to you and members of the community to answer questions.

The City of Flint, while consulting with the Michigan Department of Environmental Quality, must begin to set its own parameters for compliance with the Safe Drinking Water Act. You have a very well qualified staff at the Flint River Surface Water Treatment Plant and they need to be given the latitude and flexibility to get the job done. I am not in anyway advocating violation of the Safe Drinking Water Act... indeed the recommendations I have made should help bring the City of Flint closer to the actual spirit of compliance as opposed to just meeting the statutory requirements.

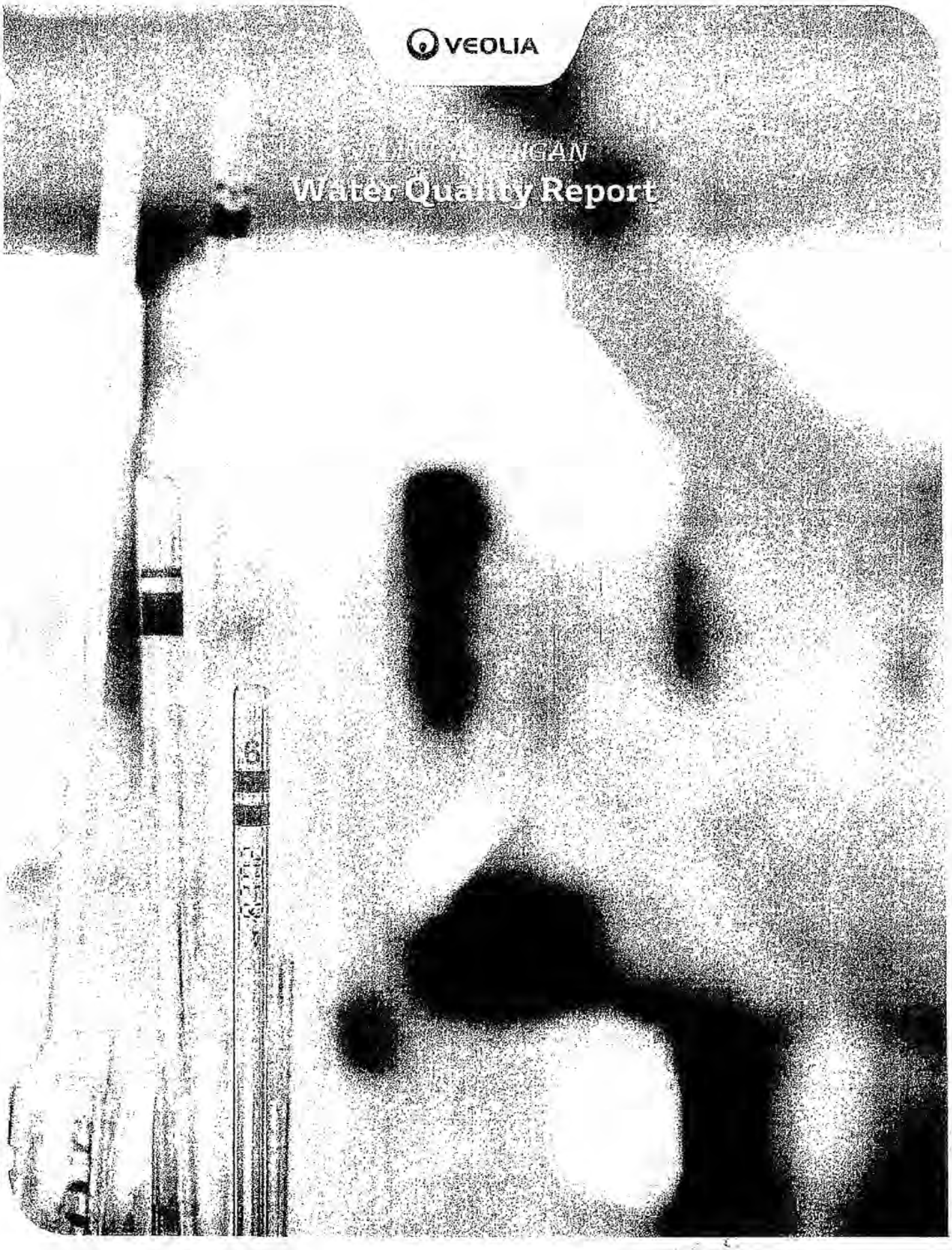
Respectfully,

Bob Bowcock
Integrated Resource Management, Inc.

cc: Erin Brockovich
Melissa Mays
Pastor Alfred Harris
Howard Croft

VEOLIA

Water Quality Report



002845

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002846

VEOLIA

Water Quality Report
March 12, 2015

FROM
Veolia North America

TO
Emergency Manager Gerald Ambrose

Executive Summary

The City of Flint changed water sources, transitioning from Detroit's system to the Flint River. This change created water treatment challenges that have resulted in water quality violations. Aging cast-iron pipe has compounded the situation, leading to aesthetic issues including taste, odor and discoloration. Public interest and scrutiny of the drinking water system intensified following the distribution of required public notices of violation.

The City of Flint has made a number of good decisions regarding treatment changes that have improved water quality. However, this is a very complex water quality issue and the City is seeking additional advice on what to do to ensure healthful drinking water for the community.

Veolia appreciates the City's decision to seek independent third parties to review current treatment processes, maintenance procedures and actions taken to date, and provide ideas for improvement. We are pleased to present this final report to the City of Flint following our experts' 160-hour assessment of the water treatment plant, distribution system, customer service and communications programs, and capital plans and annual budget.

This report provides recommendations and a roadmap for improvement, though our engagement was limited in scope. Our assessment included reviewing actions taken by the City to date, validating the City's plans going forward, and making recommendations for ideas not being considered.

Although a review of water quality records for the time period under our study indicates compliance with State and Federal water quality regulations, Veolia, as an operator and manager of comparable utilities, recommends a variety of actions to address improvements in water quality and related aesthetics including: operational changes and improvements; changes in water treatment processes, procedures and chemical dosing; adjustments in how current technologies are being used; increased maintenance and capital program activities; increased training; and, an enhanced customer communications program.

We are also providing a recommended schedule and estimated costs for implementing changes. It is our desire to help Flint residents and public officials better understand the current situation so that informed decisions can be made to ensure safe drinking water for the city's customers.

Review of Actions Taken to Date

To address water quality issues, the city has made operational changes, sought help from the State, hired engineering firm Lockwood, Andrews & Newnam, Inc. (LAN) to provide additional advice, and hired Veolia for an assessment from a utility operator's perspective. The City has also reached out to different specialty vendors (chemical suppliers, filter companies and tank aeration companies) for information about products to help with the TTHM issues. These are logical steps to take.

Flint is not alone in dealing with TTHM problems, as many utilities across the country are facing this challenge. The City appears to be following standard steps that many of those communities are taking to successfully correct the problem.

Although the primary focus of this review was based on solving the TTHM problem, the public has also expressed its frustration over discolored and hard water. Those aesthetic issues have understandably increased the level of concern about the safety of the water.

The review of the water quality records during the time of Veolia's study shows the water to be in compliance with State and Federal regulations, and, based on those standards, the water is considered to meet drinking water requirements.

The City has been proactive in its efforts to reach out to the medical community, to set up a phone number and email address to receive complaints, to post State Water Quality reports, to provide the list of EPA required water tests, and offer to test the water at customers' homes.

From our review, these numerous efforts demonstrate how the city is trying to be transparent and responsive beyond what many other communities might do in similar circumstances.

Review of Actions Taken to Date

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State Report

The Michigan Department of Environmental Quality (MDEQ) has requested specific actions be taken related to the total trihalomethane (TTHM) issues. The February 2015 report from LAN (*Operational Evaluation Report TTHM Formation Concern*) indicated apparent reasons for the elevated levels of TTHM in the distribution system. These generally relate to high Total Organic Carbon (TOC) in the water source, improperly operating equipment both in the plant and the distribution system, less-than-optimal plant TOC removal and old cast-iron pipe in the distribution system. **Our assessment confirms that these reasons are likely given our on-site laboratory testing and analysis, as well as our first-hand observations.**

Due to time constraints, LAN's report to the State was submitted prior to Veolia's final analysis and recommendations, and contained a number of key initial and contingent steps the City should consider, including:

Initial Actions

- Hire a Third Party Water Quality Expert to Complete Independent Audit
- Obtain a THM Analyzer
- Carry Out Jar Testing
- Water Plant Optimization Softening
- Water Plant Optimization Disinfection of Filter Beds (Pre-Chlorination)
- Water Plant Optimization Polymer Aid to Coagulation and Flocculation
- Increase Water Main Flushing
- Water Modeling Cedar Street Pump Recirculation
- Water Modeling West Side Pump Recirculation
- Broken Valve Locations
- Increase Flushing

Contingent Actions

- Fix Ozone System
- Start Feeding Coagulant and Flocculation Polymer
- Convert to Lime and Soda Ash Softening
- Change Disinfection to Chloramine or Chlorine Dioxide Temporarily
- Install Pre-Oxidant at Intake
- Replace Filter Media Implement Advanced Treatment
- Increase Main Flushing
- Continue Valve Replacement
- Emphasize Cast Iron Pipe Replacement

Veolia's Recommendations

While many of Veolia's recommendations match the initial assessment provided by LAN, our approach, as an operator and manager of comparable utilities, considers a more comprehensive solution. These improvements include operational changes, differences in water treatment regimes and chemical dosing, increased maintenance, and increased training.

- **Addition of Permanganate** – The addition of a permanganate chemical will help reduce ozone demand as well as chlorine demand. The reduction of ozone is needed to help eliminate the possibility of violating the bromate limit. The addition of the chemical will require state approval, submission of design documents for approval, procurement of the equipment and installation. The State has indicated they will work with the City on expediting review and approval of any requested changes. The required dosage of permanganate is estimated to range from 0.5 mg/L to 1.2 mg/L with a corresponding price of $160,000 to $320,000 per year. (Please note – The water in the river is dynamic which means it will change with weather, seasons and other factors. The estimates provided are based on bench testing at a given time and as such require the operators to test water and to verify chemical dosages on a frequent basis.)
- **Reduction of Ozone Feed** – Treating water is a delicate balance - increasing ozone to fix the TTHM problem can raise bromate levels to a point of violation. The introduction of permanganate is being recommended to reduce the demand for ozone so that feed rates will not exceed 5 mg/L. The current ozone dosing has been as high as 8 mg/L and, as such, if allowed to continue, will increase the risk of violating the bromate levels.
- **Increase of Ferric Chloride** – Four coagulants were tested by Veolia -ferric chloride, ferric sulfate, polyaluminum chloride (PACl) and aluminum chlorohydrate (ACH). Ferric chloride and ACH were found to be the best choice of product for effectiveness in removing TOC, a precursor to TTHM formation. Current ferric chloride dosages are too low and dosages of 100 mg/L or more are recommended. Again, please note, that the amount of chemical needed changes with the nature of the river and as such, water must be tested multiple times a day with corresponding changes in chemical dosages. This increase to 100 mg/L is twice what is currently being fed and much higher than what had previously been fed last year. The increase in chemical costs could be up to $1,000,000 per year. This change in dosage (using ferric chloride) can be made immediately without state permit review.
- **Reduction of Lime** – Lime is currently being overfed. A higher dosage of lime does not necessarily mean better treatment. A review of different dosages with jar testing indicates that the current dosage of 280 mg/L can be reduced to 230 mg/L. This represents a potential range of savings of up to $270,000 per year. This change can be made immediately. It should be noted that the current softening equipment is in poor condition, which does complicate the treatment process with a poor balance of flow between the two basins, weirs that are not level causing bypassing with the softener basins, and simply old mechanical equipment that periodically breaks down. This equipment is not going to be needed when a change to lake water occurs. Addition of soda ash to help further reduce hardness in cold weather might require dosages up to 40 mg/L with an annual chemical cost up to $320,000. There have also been some questions or complaints from the public regarding hard water. The water entering the plant is currently 360 mg/L and the plant is reducing that level of hardness to about 210 mg/L. Optimization of the dosage can reduce the hardness

further to about 180 mg/L. This reduction however has been sporadic as equipment breakdowns and high flows have caused problems keeping the softening process on-line. As we have noted before, the dosage needs to be adjusted daily or more often based on process control monitoring. The raw water hardness in the summer is much less than in the winter. For illustration purposes, the difference could be 360 mg/L in raw water in winter compared with 220 mg/Lin the summer.

- **Eliminate Pre-Chlorination on the Filters** – The reduction of pre-chlorination on the filters during the summer months can help reduce TTHM formation. This action has to be considered carefully with procedures documented and reviewed for engineering principles. As such, it will take time for the design engineer to determine what could be done to assure the proper chlorine contact time and document that other safety protocols in water are met. This requires state approval. Any submission should be considered along with a possible change in filter media. If Granulated Activated Carbon (GAC) is installed then the pre-chlorination would be stopped or drastically reduced because of the chlorine impact on the GAC filter media. Veolia's initial investigation into changes in chlorine feed point indicate that the recommended action can be accomplished while maintaining the required regulatory contact time for disinfection.
- **Change Filters to Granulated Activated Carbon (GAC)** – The object of the other changes being made is to reduce the TOC before chlorine is added into the process. The plant by design is limited on the amount of TOC removal possible. A maximum removal of only 60% is likely if the plant is properly optimized. The change of filter media to GAC would provide the best reduction possible and provide better than 90% removal dramatically reducing the potential for TTHM formation and thus ensuring compliance with that parameter for the water system. The change in filter media; however, is complicated requiring approval by the state, design of the changes, procurement of the media and a contractor to install it. That will take time and is likely in a range of $1.5 million (more or less) in cost. The use of GAC also requires more testing and monitoring of the media and the TOC than with the current media. GAC will accumulate TOC and begin to become in effective after a period of time. Depending upon the level of TOC reaching the filters this could be as short as 3 months and as long as 9 months. The amount of TOC is dependent upon the river water quality and operation of the other plant processes. Once the ability of the filters to remove TOC is diminished, the GAC media has to be replaced if river water continues as a source. The change to lake water will not require TOC removal and the media could continue to be used as filter media for that new water source.
- **Corrosion Control** – The primary focus of this study was to assure compliance with the TTHM limits. That is not the only problem facing the city and its customers though. Many people are frustrated and naturally concerned by the discoloration of the water with what primarily appears to be iron from the old unlined cast iron pipes. The water system could add a polyphosphate to the water as a way to minimize the amount of discolored water. Polyphosphate addition will not make discolored water issues go away. The system has been experiencing a tremendous number of water line breaks the last two winters. Just last week there were more than 14 in one day. Any break, work on broken valves or hydrant flushing will change the flow of water and potentially cause temporary discoloration.
- **Eliminate a Storage Tank** - The water system has more storage than it requires, due to excess capacity in the water lines in combination with the storage tanks. The City has already employed LAN to update the hydraulic model. The hydraulic model should be used to help determine if water levels can be lowered further and even to remove some storage tanks from service. That decision may need to be made

seasonally. For example demand during water main breaks last week required extensive amounts of water. The excess storage is more a problem with TTHM formation for the system in summer than winter.

- **Prioritize Valve Replacement** - The hydraulic model shows long water age in portions of the system that appear to be contributing to the TTHM problems. LAN has updated the model to include the location of broken valves and that added information is being used to identify other system problems. The City has a contract for valve turning and repair work that should be focused on known broken valves, particularly in sections of the distribution system with old water age. This activity however must wait until warmer weather in fear of causing problems in the water system with lines freezing.
- **Target and Increase Flushing** – Flushing the fire hydrants can be useful in cleaning out lines to minimize discolored water complaints and also helping reduce the age of water. This DOES NOT mean just opening hydrants. The hydraulic model needs to be used to determine which hydrants should be opened and for how long to ensure the lines are properly cleaned. For example, this might require 15 minutes or even several hours of flushing depending on location. The flushing of hydrants also needs to include records of hydrant condition, color of water initially and after periodic increments plus chlorine residual testing. All of that information will help provide information to the engineers on the effectiveness of the procedure. Each crew doing the work should be trained to help explain the process to the public and also warn neighborhoods about flushing so that staining of laundry can be avoided.
- **Change to Lake Water** – The changes being made now to the water plant will not be the same changes required to treat lake water once it becomes available. A thorough analysis and plan needs to be made in preparation of that switch. This is going to need to include changes in how the plant is operated, like eliminating lime softening and reducing the dosages of many chemicals. Consideration will also have to be given to algae treatment when lake water is being used.
- **Operating Programs** – All of the changes discussed above are based on testing and techniques proposed by engineers and skilled operators of both LAN and Veolia. The staff will need further training and implementation of detailed protocols to successfully implement the changes and to ensure long-term success at the plant. This means the City needs to implement a series of programs to ensure success in these changes.
    - **Process Control Management Plan** (PCMP) – The amount of testing and resulting changes in chemical dosages, along with monitoring the impact on the water, will require a well-documented process that all operators follow. An example of this is jar testing, which is used by the operators to identify the most effective chemicals and dosages to optimize treatment. The staff understands the basic treatment process but needs further practice and training to become proficient in the use of routine process control to adjust for water quality. This is commonly referred to as a PCMP and is used as a standard operating procedure so that the operators on the day shift can communicate with the night shift, that operators are following the same treatment plan for water, that the adjustments are unified between different shifts and different people, that a desired water treatment quality is defined and variations from it signal alarms and that the staff knows what to do when the water quality setpoints begin to drift away from its desired quality levels.
    - **Lab QA/QC** – The operation of the water plant is dependent upon accurate lab results. Standard operating procedure needs to be set and lab technicians trained in that process. EPA and the State

set procedures and standards to be met and the staff should strive to meet those standards. The City has already purchased a TTHM analyzer but should also consider a TOC analyzer that can be an online continuous device to provide immediate information on influent and effluent levels of TOC. Part of the lab records should be historical review of data to help operators better understand the changes they make in the plant.

- **Maintenance Management** – The key to water equipment is having all the equipment effectively maintained and functioning properly. The current capital program is fixing many broken pieces of equipment and updating the plant to current standards. This however must be followed with a rigorous maintenance program that ensures the proper preventive maintenance; is able to predict when maintenance is needed to keep equipment functioning properly and responsive to changes in flows and source water quality.
- **Training** – The changes being suggested are new to the staff and as such training needs to be provided in what the changes involve, why they are being made, the impact on the water quality, and how best to run the plant. A good demonstration of skill level is for the staff to become certified by the State as a licensed water plant operator. Many utilities now require all operators to hold at least the minimum certification level as a starting point and offer incentives to increase their certification level.

- **Communication Program** – The city should lay out an immediate, written strategy for communicating with the public in the short-term, as well as a 6-to-12 month strategy that contemplates known, future events like the KWA pipeline and switch to lake water. A wide range of activities are underway to work with the public but a comprehensive and coordinated effort, with a strategic focus, will help the utility and its customers.
  - **Dedicated Communications Personnel** – The City has a single, dedicated public information officer, tasked with providing service to all of city government. The current focus on communications support for Public Works, and the anticipated needs over the next several years, indicate the city would benefit from the hiring of a staff person in Public Works who could establish a communications program designed to provide clear and concise information to a broad audience though a number of different channels. In the interim, the city could hire a communications intern, local communications firm, or somebody with experience who is able to provide reduced or no-cost services for the immediate future.
  - **Communications Planning – Public Notification** – The City should be congratulated on its efforts to keep the public informed. It is posting its monthly reports on the web page to provide transparency, though these reports are highly technical – and may be too technical for the customer base at large. They are valuable to those customers who do want this level of detail. The city should create a single-page dashboard of information that outlines the water utility's performance for the previous month, post the dashboard on the website, print copies for distribution at customer service or other reception areas, and be provided during speaking engagements or other events. This dashboard should be easy to understand, and include:
    - The number of water quality tests conducted the previous month
    - The number of violations reported

- Whether these results are in or out of compliance
- Information about other proactive measures such as main and hydrant replacements, or other programs to improve performance of the water utility
- Benchmarking information so the reader has a greater understanding of how Flint compares with other similar utilities in the region and across the country

- **Public Meetings** –There should be additional, proactive coordination with neighborhood, community and civic groups to provide speakers on timely topics. Given the list of numerous responsibilities, the Public Works director cannot do it alone – the city should identify three or four other staff members, knowledgeable about the water utility who can also speak to various groups, provide information and answer questions. The development of an outreach strategy to target key neighborhood, community and civic groups also will advance the communications effort and the dissemination of information in both the short and long term.
- **Standard tools** – Work crews in the field are often the faces of the utility – the city should create standardized tools for communicating with the public that can be easily and quickly delivered to the community in the event of main breaks, flushing or pre-planned capital improvements. Tools should include:
  - Door hangers for individual distribution
  - Yard signs with simple messaging to be placed near work-sites
  - A simple tri-fold brochure with useful information about the utility and appropriate contact information
  - Specific flyers about a range of topics
  - Infographics about how the water system works, from the intake to the customer's site
- **Change in Billing Format** – The City currently has no real way to reach all customers on a regular basis and provide information. The city should consider changing from a billing postcard to using an envelope and bill stuffer. Monthly or bi-monthly bill inserts are typically used to provide educational material for customers and are standard ways to provide information. Understandably, budget considerations must be taken into account.
- **Use Public Affairs Programming and Opportunities** – The news media has been covering this topic quite extensively – there are other media-related opportunities that may reach a wider audience. Taking advantage of these opportunities will help the city relay information to its customers and the community.
  - Participate in regular editorial-board meetings to provide background information and updates on key milestones or events.
  - Identify a local weekly television program and offer to provide guests to speak about key milestones or upcoming events.

Conclusions and Next Steps

The focus of this report is to help assure TTHM compliance and then improve general water quality. The City had good results in its most recent TTHM tests, although that is to be expected with the changes made to date and the cooler weather which contributes to low TTHM formation. Warm weather will be a different situation both in the nature of the Flint River water quality and in the formation of TTHM. With those changes coming, the City needs to act quickly to make improvements before additional testing takes place this spring and summer. The summary below provides the recommended actions, a priority for their implementation and projected costs either operational or capital. The costs are rough orders of magnitude and will vary with changes in water quality, operational decisions, and engineering choices being made and in some cases require State approval. Although a priority is assigned many of these actions can take place simultaneously.

Priority	Action	Annual Operational Cost	One Time Capital Cost
1	Implement operating programs for process control, lab QA/QC, maintenance, and training. These programs are needed regardless of the TTHM issue and will help with transition to lake water. The City has decided upon a central maintenance software and the water system should be the first to utilize this program since costs are already budgeted. These programs should be initiated immediately.	$ 25,000	$ 250,000 - $ 350,000
2	Contract with your engineer and initiate discussions with the State on the reduction of chlorine prior to the filters and changing the filter media to GAC. This activity has the longest time frame for design and approval, but also is extremely critical to assuring reduced TTHM production. The current filter cleaning and maintenance project needs to be adjusted to take into consideration the change in filter media both to dispose of the anthracite instead of cleaning and to install the GAC. This entire project needs to be done by early July to assure a flow of water throughout the system. Several months are required for the engineering design, State approval, bidding of work and installation of GAC and as such needs to begin now.	$ 0	$1,500,000
	Contract with your engineer and initiate discussions with the State on the addition of 0.5 to 1.2 mg/L of either potassium permanganate (dry) or sodium permanganate (liquid). This will take time to get approved and to implement. The use of liquid tanks at the raw water pump station may be the quickest and least expensive alternative for a temporary measure.	$ 160,000 - $ 320,000	$ 50,000

	Contract with your engineer and initiate discussions with the State on the addition of a corrosion control chemical. This action can be submitted and discussed with the state at the same time as the other chemical and filter changes saving time and effort. A target dosage of 0.5 mg/L phosphate is suggested for improved corrosion control.	$ 50,000	$ 50,000
3	Increase the ferric chloride dosage to 100 mg/L depending on river water TOC levels. (Lower TOC levels can be treated with less ferric chloride.) This change can be made now and is allowed by the State.	$ 1,000,000	$ 0
	Reduce the ozone feed rate to 5 mg/. This change can be done now and does not require State approval.	($50,000 – $100,000	$ 0
	Reduce the lime dosage to minimize hardness levels after softening. This will eliminate magnesium removal during treatment, but will also reduce total hardness. A reduction in carbon dioxide dosing for recarbonation treatment also is expected due to the reduction in lime feed. This change can be made now and does not require State approval.	($270,000)	$ 0
4	Confirm with the engineer when the revised hydraulic model will be completed and if necessary for time to focus on areas of longest water age if that would speed up the effort. Identify impact of reducing tank levels or eliminating a tank seasonally to improve water age. Include with this effort a list of hydrants to flush along with time required to assure drawing fresh water through the system. The engineer has been assigned this task already and confirmation of the timing of a delivery is needed.	$ 0	Already Contracted
	Ask the engineer to identify closed valves on a map that are impacting water age and that can be bid for replacement as soon as weather permits. Have the engineer identify areas of the system where the valve contractor should be focused on finding and fixing closed valves.	$ 0	Already Budgeted
5	Implement the recommendations in the communications program including a person assigned to public works education, using envelopes instead of cards along with bill stuffers for education and provide training for staff. Envelopes and bill stuffers are expensive and might be done periodically and not every month. The cost of TTHM notices, Annual Water Quality Reports and City notices should be figured into if any additional costs would exist. Many of these changes are underway now by the City.	Position Being Budgeted	

Notes

- The costs provided are rough order of magnitude which final engineering will firm up but will fluctuate with final decisions on engineering, operating technique and water quality.
- The change from river to lake water will dramatically cut the chemical costs as less is needed once the change occurs. This means that potassium permanganate will likely not be needed, ferric will drop as much as it went up, ozone levels will be lower and little lime will be needed.

Results Expected

The real question is what changes can be expected from these results in lowering the TTHM, improving the aesthetics and preparing for the change to lake water.

- **TTHM** – The City has already made great strides in reducing the TTHM levels with the changes already made. The additional suggestions by Veolia will further reduce TTHM in the water and help get the city released from the notices being provided to customers.
- **Hardness** – The hardness entering the plant this winter is 360 mg/L with the current system reducing it to 210 mg/L and optimization will reduce to about 180 mg/L. During the summer the levels will be lower probably in the 140 mg/L to 150 mg/L range. The target set by the current best operating practices is 120 mg/L to 150 mg/L.
- **Discolored Water** – The discolored water is caused by the old unlined cast iron pipe. The water from the plant can have an impact on discolored water, but a greater concern is the breaks and construction work that disrupt the flow of water causing discoloration. A polyphosphate is suggested to help bind the old cast iron pipe reducing instances of discolored water. This along with improve flow of water and programmed hydrant flushing will help, BUT WILL NOT eliminate discolored water occurrences.
- **Change to Lake Water** – The recommendations include the suggestion of programs to help the staff better manage the treatment process, additional testing to adjust the plant and additional lab monitoring, a maintenance program focused on keeping equipment properly functioning and more training for staff to improve their skill level. Those actions will prepare the staff for the change of water sources when it comes next year in addition to developing a thorough plan for the switch.

Resourcing the world

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City of Flint, Michigan

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Meeting Agenda - Final

Wednesday, June 3, 2015

4:30 PM

AMENDED to include Resolution #150448

Committee Room

FINANCE & ADMINISTRATION COMMITTEE

Monica Galloway, Chairperson, Ward 7
Kerry Nelson, Ward 3
Scott Kincaid, Ward 9

Inez M. Brown, City Clerk

	A	B	C	D	E
228					
229					
230	**Fund 590 - Sewer Fund**				
231	REVENUES				
232	Drawings from fund balance	-445,071			0%
233	Charges for service rendered	30,352,249	24,081,126		79%
234	Other revenues	93,646	89,614		96%
235	Transfers in	800,000	800,000		100%
236	Total Revenues	30,800,825	24,970,739		
237					
238	General government	3,765,455	3,462,144		92%
239	Public works	1,990,000	187,000		9%
240	Debt services - interest	695			0%
241	Debt services - principal	6,016	4,996		83%
242	Transfers out	1,860,000	2,195,000		118%
243	Utilities	23,178,658	12,811,432		55%
244	Total Appropropriations	30,800,825	18,660,572		
245					
246	NET OF REVENUES/APPROPRIATIONS	0	6,310,168		
247					
248					
249	**Fund 591 - Water Fund**				
250	REVENUES				
251	Drawings from fund balance	2,528,798			0%
252	Charges for service rendered	36,096,500	27,051,431		75%
253	Other revenues	37,000	30,656		83%
254	Gain on sale of fixed assets	200,000	225,646		113%
255	Total Revenues	38,862,298	27,307,733		
256					
257	General government	4,255,508	3,785,890		89%
258	Public works	2,760,000	49,245		2%
259	Transfers out	1,660,571	753,333		45%
260	Utilities	26,803,749	13,808,917		52%
261	Total Appropropriations	35,479,828	18,397,385		
262					
263	NET OF REVENUES/APPROPRIATIONS	3,382,470	8,910,348		

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
OFFICE OF THE DIRECTOR

735 RANDOLPH STREET
DETROIT, MICHIGAN 48226-2830
WWW.DETROITMI.GOV

January 12, 2015

Mr. Darnell Earley, Emergency Manager
Mr. Dayne Walling, Mayor
City of Flint
1101 S. Saginaw Street
Flint, Michigan 48502

Regarding: Reestablishing Detroit Water and Sewerage Department Water Service

Dear Messrs. Earley and Walling:

I was recently referred to a report in MLive in which there was reference to the City of Flint (City) potentially re-visiting its decision to utilize Flint River water as a water source prior to the completion of the KWA pipeline. Within that report, there appeared to be some incorrect assumptions about the cost of water service from the Detroit Water and Sewerage Department (DWSD). I write to you today to express the willingness of DWSD to resume delivery of drinking water to the City and its residents. We have monitored the water quality issues that have troubled the City since May, 2014, and understand that many of the difficulties stem from the limited access to source water. Please know that DWSD is ready, willing and able to resume service to the City if you so desire.

If the City is interested in a long term arrangement with DWSD, with this goal in mind, we offer that the City can immediately reconnect to the DWSD system at no additional charge to the City and at the same "expired contract" rate that the City was paying in April, 2014, modified to reflect the 4% increase experienced by all other wholesale customers in July, 2014. The resulting rate structure is a fixed monthly rate of $846,700 and a commodity rate of $14.92/Mcf. In order to facilitate contract negotiations, DWSD is willing to extend this rate to the City (and to Genesee County as the City's partner and former customer) until June 30, 2015.

We at DWSD take very seriously the matter of drinking water quality, and we are as concerned as you must be by the continued quality issues faced by the City and the concerns expressed by your citizens. We are confident that DWSD can provide you with a solution for reliable, safe, high quality water on an expeditious timeline. Please contact me directly at (313) 224-4701 if you wish to discuss this offer further.

Sincerely yours,

Sue F. McCormick
Director

cc: Governor Rick Snyder
Flint City Council
Jeff Wright, GCDC
Mayor Mike Duggan
James Fausone, BOWC
Robert Daddow, GLWA

From: Busch, Stephen (DEQ)
Sent: Monday, July 06, 2015 2:28 PM
To: Prysby, Mike (DEQ)
Subject: FW: FYI - EPA staff assistance
Attachments: Lytle Resume 2015.pdf; Michael Schock 6-17-15.pdf

FYI.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Busch, Stephen (DEQ)
Sent: Monday, July 06, 2015 12:47 PM
To: Howard Croft (hcroft@cityofflint.com); mglasgow@cityofflint.com
Subject: FYI - EPA staff assistance

Mike and Howard,

Hope you had a nice holiday.

EPA Region 5 wanted us to forward you the following EPA contacts for technical assistance as you see fit. I know you already had one individual from EPA participating on your Technical Advisory group.

- Darren Lytle is with the EPA Office of Research and Development (resume attached)
- Michael Schock also with the EPA ORD (info attached)

My understanding from Region 5 is that Mike Schock is more of an expert on lead.

If you have questions, I would suggest contacting them directly as they will be able to better describe what resources they are capable of providing.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

DARREN A. LYTLE
U.S. Environmental Protection Agency
Cincinnati, OH 45268
(513) 569-7432 Phone (513) 487-2543 FAX
lytle.darren@epa.gov

Education

Ph.D., Environmental Engineering
University of Illinois at Champaign-Urbana, Champaign, Illinois, December 19, 2005
Advisor: Prof. Vernon Snoeyink
Dissertation: "The Effect of Water Chemistry on Iron Particles and Suspensions"

Master of Science, MS, Environmental Engineering
University of Cincinnati, Cincinnati, Ohio, 1991
Advisor: Prof. R. Scott Summers
Thesis: "Removal of Beryllium from Drinking Water by Chemical Coagulation and Lime Softening"

B.S., Civil Engineering
University of Akron, Akron, Ohio, 1990

Registration

Professional Engineer, Ohio, No. E-61725

Experience

U.S. Environmental Protection Agency (EPA)
Office of Research and Development (WSWRD)
Treatment Technology Evaluation Branch (TTEB)
Water Supply and Water Resources Division
26 W. Martin Luther King Dr.
Cincinnati, Ohio 45268

Supervisory Environmental Engineer (Branch Chief, Acting) (May 2012 to present). See below for duties.

Environmental Engineer (GS-14 National Expert) (March 2012 to May 2012). See below for duties.

Supervisory Environmental Engineer (Branch Chief, Acting) (March 2010 to March 2012). Oversees and manages Branch within WSWRD's Treatment, Technology and Evaluation Branch (TTEB). Branch consists as many as twenty-four federally-employed engineers, chemists, and technicians. The Branch conducts drinking research in support of the development of new and previously promulgated Federal drinking water standards. Serves as first line supervisor for a staff of engineers, scientist and technicians. Provides direction, guidance, advice and assistance to Branch staffing all administrative matters and in technical matters, as appropriate; sets priorities for Branch products within research plans; assigns staff, evaluated performance; resolves complaints and disputes within the Branch; handles appropriate personnel actions and issues, including recommending promotions, approving leave and interviewing and recommending candidates for positions within the Branch.

Environmental Engineer (GS-14 National Expert) (June 2009 to March 2010). See below for duties.

Supervisory Environmental Engineer (Branch Chief, Detail) (February 2009 to June 2009). Oversees and manages Branch within WSWRD's Treatment, Technology and Evaluation Branch (TTEB). Branch consists of twenty-four federally-employed engineers, chemists, and technicians, and a number of contractors. The Branch conducts drinking research in support of the development of new and previously promulgated Federal drinking water standards.

Environmental Engineer, National Expert (GS-14) (January 2005 to February 2009). Serves as a nationally and Agency recognized researcher on water treatment and distribution system issues including corrosion control, inorganic contaminant and pathogen control, and biological water treatment. Provides extensive research and technical assistance to EPA for the development and implementation of drinking water rules and regulations. Activities include addressing scientific peer panels like the Science Advisory Board with the results of my research, and participating on EPA workgroups and committees that develop guidelines and policies that the Agency issues to the water treatment utilities for achieving safe drinking water. Plans, directs, and participates in an in-house and extramural (grants/contracts) research program focused on corrosion control, inorganic contaminant and pathogen control, and biological water treatment. Research efforts are integrated into WSWRD, Regional and Program goals and needs. As the nationally recognized researcher, author authoritative scientific papers on research results in peer reviewed professional journals and writes chapters in technical manuals and books. Presents results of research at National Conferences, workshops, symposia and meetings. Organizes and moderates sessions at national

conferences, etc., sponsored by various groups on topics of his special expertise. Called upon by other EPA programs, and organizations such as the Office of Water, various Regional Offices to participate in seminars and workshops.

Environmental Engineer (1990 to November 7, 2008). Plan, design, and conduct in-house and field research on the removal and control of inorganic contaminants such as turbidity, metals and radionuclides, and microorganisms from drinking water using treatment strategies such as conventional coagulation and filtration, slow sand filtration, ion exchange, membrane filtration, and lime softening. Also, address residuals management concerns related to water treatment processes. Plan, design, and conduct in-house and field research on corrosion control of drinking water distribution system materials including lead, copper, brass, and iron. Develop and utilize computer programs related to water chemistry modeling, and statistical and graphical analysis of research data collected from corrosion control and water treatment studies. Present and publish research findings in peer reviewed literature, at conferences, and other outlets. Provide technical assistance to other EPA offices, Federal, State, and Local agencies, consultants, and utilities in the water supply industry. Manage Co-operative Agreements and other mechanisms of extramural funding.

Affiliations

Member of American Water Works Association (AWWA), 1991 to present

Member of Sigma Xi Scientific Research Society, 1997 to present

Committees (Outside of EPA)

Journal of the American Water Works Association (Jour. AWWA), member of the Journal's Editorial Board, April 2015 to present.

American Water Works Association Biological Treatment Symposium Planning Committee, 2012.

American Water Works Association Biological Water Treatment Water Quality Committee, Nov. 2008-present.

American Water Works Association Drinking Water Research Division, June 2007-2013.

American Water Works Association Drinking Water Distribution System Research Committee, 2006-present.

American Water Works Association Small Systems Research Committee, 2007 to present.

American Water Works Research Foundation (AWWARF) Project Advisory Committee member on project#4103: Comparison of Zinc vs. Non-zinc Corrosion Control for Lead and Copper, 2007-present

American Water Works Research Foundation (AWWARF) Project Advisory Committee member on project #3109: Copper Pitting Monitoring Techniques, 2005-present

American Water Works Research Foundation (AWWARF) Project Advisory Committee member on project titled: "Long-term Effects of Disinfection Changes on Water Quality", March 2003-2007.

American Water Works Research Foundation (AWWARF) Project Advisory Committee member on project titled: "Optimizing the Generation and Capacity of Adsorptive Sites on Oxide Surfaces for Manganese Control", March 2003-2007.

Chairman of AWWA Research Foundation Distribution System Technical Advisory Workgroup, 2000.

American Water Works Research Foundation (AWWARF) Project Advisory Committee member on project titled: "Post-Optimization of Lead and Copper Control Monitoring Strategies", 2000-2004.

American Water Works Research Foundation (AWWARF) Project Advisory Committee member on project titled: "Process Performance Indicators for Arsenic Removal", 2000-2004.

American Water Works Research Foundation (AWWARF) invited participant on Manganese Research Needs Workshop, Voorhees, New Jersey, January 9-10, 2001.

Standard Methods Committee on revisions to method Section 2120 Color, 1999.Taught graduate level course on drinking water treatment at the University of Cincinnati, 2000.

Peer Reviewer

Journal of Hazardous Waste
Journal of Environmental Engineering
Environmental Science and Technology
Journal of Water Supply: Research and Technology: AQUA
Journal AWWA

Environmental Monitoring and Assessment

Honors and Awards

2013 U.S. EPA/ORD Scientific and Technological Achievement Award, Honorable Mention, for the paper "Lead Pipe Scale Analysis Using Broad-Beam Argon Milling to Elucidate Drinking Water Corroson".

2013 U.S. EPA/ORD Scientific and Technological Achievement Award, Honorable Mention, for the paper "Multifunctional Silver Coated E-33/Iron Oxide Water Filters: Inhibition of Biofilm Growth and Arsenic Removal".

2011 U.S. EPA achievement award, the Bronze Medal Award for acting as a Project Lead Safe and Sustainable Water Resources (SSWR) under ORD's Strategic Research Action Plans and Research Action Plan Teams

2011 U.S.EPA/ORD Scientific and Technological Achievement Award, Level III, for the book chapter: "Chapter 20: Internal Corrosion and Deposition Control Peer-reviewed book. Water Quality and Treatment: A Handbook of Community Water Supplies. Sixth ed. J.K. Edzwald, editor, (2010)"

2008 U.S.EPA NRMRL Honor Award "Arsenic Removal Technology Demonstration Project"

2000 U.S. EPA achievement award, the Bronze Medal Award, as part of Low Flow Drinking Water Pilot Plant Team.

1999 U.S. EPA achievement award, the Bronze Medal Award, for "A method for assaying a microbial surrogate for evaluating drinking water performance".

1998 U.S. EPA/ORD Scientific and Technological Achievement Award, Level III, for the paper "Application of Aeration to Reduce Lead and Copper in Waters with Suitable pH and Carbon Dioxide".

1997 Awarded an Internal Grant an Investigation, "The Surface Properties of Microbiological Pathogens in Drinking Water".

1997 U.S. EPA's highest achievement award, the Gold Medal Award, as part of the "District of Columbia Drinking Water Core Team". Provided technical assistance to the District of Columbia during a bacterial problem within their distribution system.

1994 U.S. EPA's highest achievement award, the Gold Medal Award, for investigative work and technical assistance to the City of Milwaukee, WI., during their Waterborne Cryptosporidiosis Outbreak in 1993.

1993 U.S. EPA/ORD Scientific and Technological Achievement Award, Level 1, for the paper "Beryllium Determination in Drinking Water by Graphite Furnace Atomic Absorption Spectroscopy (GFAAS)", *Jour. AWWA.*

1993 U.S. EPA/RREL STAR program publication award for the paper, "Removal of Beryllium by Chemical Coagulation and Lime Softening", *J Water SRT-Aqua.*

1993 U.S. EPA/RREL STAR program publication award for the paper, "Preferential Dissolution of Lead from Solder Particulate Material", *Jour. AWWA.*

Bibliography: Darren A. Lytle

updated: May 2015

PEER-REVIEWED PUBLICATIONS
(* denotes corresponding author)

Lytle, D.A.*, Williams, D., Muhlen, M., Pham, M., Kelty, K., Wildman, M., Lang, G., Wilcox, M., and M. Kohne. **An Innovative Biological Ammonia Treatment Process: Pilot to Full-Scale.** Submitted to *Jour AWWA* (May 2015).

Minning, T., **Lytle. D.A.***, Pham, M., and K. Kelty. **Systematic Evaluation of Dissolved Lead Sorption Losses to Particulate Syringe Filter Materials.** Accepted for publication in *Environ. Monitor. Assess.* (May 2015).

(70) White, C.P., Desai, V., Riddick, E., Popovici, J. and **D.A. Lytle. Identification of Arsenic-Oxidizing Bacteria Isolated from Biologically-Active Rapid Sand Filter.** Accepted for publication in: *Systematic and Applied Microbiology*. 2014.

Lytle, D.A., Fox, K., Miltner, R., Speth, T., Schock, M., Kropp, K., Shukairy, H., Fichter, L., Dugan, N., and C. Muhlen. **Water Treatment Pilot Plant Design Manual: The Design of a Low Flow Conventional/Direct Filtration Water Treatment Plant for Drinking Water Treatment Studies.** EPA/600/R-15/045, Office of Research and Development, Cincinnati, Ohio (2015).

Popovici, J., White, C.P., Hoelle, L., and **D.A. Lytle*. Characterization of the Cell Surface Properties of Drinking Water Pathogens by Microbial Adhesion to Hydrocarbon and Electrophoretic Mobility Measurements.** *Colloids and Surfaces B: Biointerfaces,* 118:126-132 (2014).

White, C., J. Popovici, **D.A. Lytle**, and E. Rice. **Endospore surface properties of commonly used Bacillus anthracis surrogates vary in aqueous solution**. *Antonie van Leeuwenhoek,* 106:243-251 (2014).

Lytle, D.A.* and C. White. **The Effect of Phosphate on the Properties of Copper Drinking Water Pipes Experiencing Localized Corrosion.** *J Fail. Anal. and Preven.,* DOI 10.1007/s11668-014-9786-6 (2014).

Copeland, A. and **D.A. Lytle*. Oxidation-Reduction Potential Measurements of Important Oxidants In Drinking Water.** *Jour. AWWA,* 106:1:E10-E20 (http://dx.doi.org/10.5942/jawwa.2014.106.0002) (2014).

Sun, H. S., Shi, B., **Lytle, D.A.**, Bai, Y., Wang, D., and M. Ying. **Formation and Release Behavior of Iron Corrosion Products under the Influence of Bacterial Communities in a Simulated Water Distribution System.** *Environ Sci Process Impacts,* 26:16 (3):576-85 (2014).

Lytle, D.A.*, Sorg, T., Wang, L., and A. Chen**. The Accumulation of Radioactive Contaminants in Drinking Water Distribution Systems.** *Water Research,* 50:1:396-407 (2014).

Daniels, S. L., Sprunger, P. A., Kizilkaya, O., **Lytle D. A**., and J.C. Garno. **Nanoscale Surface Characterization of Aqueous Copper Corrosion: Effects of Immersion Interval and Orthophosphate Concentration**. *Applied Surface Science,* 285:823-831 (2013).

Lytle, D.A.*, White, C., Williams, D., Koch, L., and E. Nauman. **Innovative Biological Water Treatment for the Removal of Elevated Ammonia.** *Jour. AWWA,* 105:9:E524-E359 (http://dx.doi.org/10.5942/jawwa.2013.105.0109) (2013).

Haas, C., Koch, L., Kelty, K., Triantafyllidou, S., and **D.A. Lytle*. Effectiveness of the Preservation Protocol within EPA Method 200.8 for Soluble and Particulate Lead Recovery in Drinking Water.** U.S. EPA, Office of Research and Development, Cincinnati, Ohio, EPA/600/R-13/222 (2013)

Lytle, D.A.*, White, Williams, D., Koch, L., and E. Nauman. **Innovative Biological Water Treatment for the Removal of Elevated Ammonia.** *Jour. AWWA,* 105:9:E524-E359 (http://dx.doi.org/10.5942/jawwa.2013.105.0109) (2013).

Yeuell, H.D., Dvorak, B.I., P.L. Gurian, and **D.A. Lytle. Committee Report: Getting**

Information to Small Systems: Information Dissemination Survey of Engineers and Regulators. *Jour. AWWA*, 105(1):51-59 (2013).

Henrie, T., Rezania, L.W., Nagy, D, and **D.A. Lytle. Got Ammonia?** *AWWA OPFLOW* (2012).

White, C., Popovici, J., **Lytle, D.A.**, Adcock, N., and E.W. Rice. **Effect of pH on the Electrophoretic Mobility of Surrogate Spores of Bacillus anthracis in Aqueous Solutions.** *Appl. Environ. Microbiol.*, 78(23):8470 (2012).

Lytle, D.A.*, White C., Williams, D., Koch, L., and E. Nauman. **Summary Report: Results from the Pilot Study of an Innovative Biological Treatment Process for the Removal of Ammonia from a Small Drinking Water System in Iowa.** U.S. EPA, Office of Research and Development, Cincinnati, Ohio, EPA/600/R-12/655 (2012).

White, C.P., DeBry, R.W., and **D.A. Lytle. Microbial Ecology of a Full-Scale Biologically Active Filter for Drinking Water Treatment.** *Appl. Environ. Microbiol.*, 78(17):6390 (2012).

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Blute, N, Ghosh, A., and **D.A. Lytle. Assessing Ammonia Treatment Options.** *Opflow Online,* American Water Works Association, Denver, CO, 38(5):14-17 (2012).

Lytle, D.A.*, Williams, D., and C. White. **A Simple Approach to Assessing Copper Pitting Corrosion Tendencies and Developing Control Strategies.** *Jour. Wat. Supply: Res. and Tech.:AQUA,* 61(3):164-175 (2012).

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White, C., Tancos, M., and **D.A. Lytle. Microbial Community Profile of a Lead Pipe Removed from a Drinking Water Distribution System.** *Appl. Environ. Microbiol.*, 77:15:5557-5561 (2011).

Nadagouda, M.N., Cruz, C., and **D.A. Lytle. Microwave-Assisted Combustion Synthesis of Nano Iron Oxide/Iron-Coated Activated Carbon, Anthracite, Cellulose Fiber and Silica, with Arsenic Adsorption Studies.** *Journal of Nanotechnology*, vol. 2011, Article ID 972486, 8 pages, 2011. doi:10.1155/2011/972486 (2011).

Lewendowski, B.R., Lusker, K.L., LeJeune, Z.M., **Lytle, D.A.**, Zhou, P., Sprunger, P.T., and J.C. Garno. **Impact of pH, Dissolved Inorganic Carbon, and Polyphosphates for the Initial Stages of Water Corrosion of Copper Surfaces**. *CheM.*, 1:1:16-26 (2011).

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Nadagouda, M. N., White, C., and **D.A. Lytle. Lead Pipe Scale Analysis Using Broad-Beam Argon Ion Milling to Elucidate Drinking Water Corrosion.** *Micro. and Microanal.*,17, 284–291, (Feb. 2011).

Turek, N.F., Kasten, L., **Lytle, D.A.*,** and M.N. Goltz. **Impact of Plumbing Age on Copper Levels in Tap Water.** *Jour. Wat. Supply: Res. and Tech.:AQUA*, 60:1:1–15 (2011).

Lewandowski, B**., Lytle, D.A**., and J.C. Garno. **Nanoscale Investigation of the Impact of pH and Orthophosphate on the Corrosion of Copper Surface in Water.** *Langmuir,* 26:18:14671-14679 (2010).

Lytle, D.A.*, White, C., and M.N. Nadagouda. **A Comprehnsive Investigation of Copper Pitting Corrosion in Drinking Water Distribution System.** *Corrosion Science*, 52:6:1927-1938 (2010).

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Lytle, D.A.*, M.R. Schock and K. Scheckel. **The Inhibition of Pb(IV) Oxide Formation in Chlorinated Water by Orthophosphate**. *Env.Sci.&Tech,* 43:17:6624-6631 (July, 2009).

Nadagouda, M., Schock, M., Metz, D. H., Desantis, M., **Lytle, D.A.** and M.M. Welch. **Effect of Phosphate Inhibitors on the Formation of Lead Phosphate/Carbonate Nanorods, Microrods and Dendritic Structures.** *Crystal Growth & Design*, 9:4:1798-1805 (2009).

Lytle, D.A.*, White, C., M. N. Nadagouda, and A. Worrall. **Crystal and Morphological Phase Transformation of Pb(II) to Pb(IV) in Chlorinated Drinking Water.** *Journal of Hazardous Materials*, 165:1:1234-1238 (2009).

Lytle, D.A.*, White, C., and M.R. Schock. **The Synthesis of Lead Pyrophosphate, $P_2P_2O_7$, in Water.** *Micro. and Microanal.,* 14:4:335-341 (2008).

Lytle, D.A.* and M.R. Schock. **Pitting Corrosion of Copper in High pH and Low Alkalinity Waters.** *Jour. AWWA*, 100:3:115-128 (2008).

Lytle, D.A.*, Chen, A.S., Sorg, T.J., Phillips, S. and K. French. **Biological As(III) Oxidation in Water Treatment Plant Filters.** *Jour. AWWA*, 99:12:72-86 (2007).

Lytle, D.A.*, Sorg, T.J., Wang, L., Muhlen, C., Rahrig, M., and K. French. **Biological Nitrification in Full-Scale and Pilot-Scale Iron Removal Drinking Water Treatment Plant Filters.** *Jour. Wat. Supply: Res.and Tech.:AQUA*, 56:2:125-136 (2007).

Copeland, R.C., **Lytle, D.A.***, and D.D. Dionysiou. **Desorption of Arsenic from Drinking Water Distribution System Solids.** *Environ. Monit. Assess.*, 127:523-535 (On-line Issn. 0167-6369, Oct. 11, 2006) (2007).

Creed, P.A., Gallawa, C.M., Young, A.R., Schwegel, C.A., **Lytle, D.A.**, Sorg, T.J., and J.T. Creed. **Investigation of Sequential and Enzymatic Extraction of Arsenic from Drinking Water Distribution System Solids using ICP-MS**. *J. Environ. Monit.*, 8:968-972 (2006).

Burlingame, G.A., **Lytle, D.A.**, and V.L. Snoeyink. **Red Water: Understanding Iron Release**. *Opflow,* 32:12 (2006).

Hoffman, G.L. **Lytle, D.A.**, Sorg, T.J., Chen, A.S.C., and L. Wang. **Design Manual: Removal of Arsenic from Drinking Water Supplies by Iron Removal Process.** U.S. EPA, Office of Research and Development, Cincinnati, Ohio, EPA/600.R-06/030 (2006).

Lytle, D.A.* and M.R. Schock. **Formation of Pb(IV) Oxides in Chlorinated Water**. *Jour. AWWA,* 97:11:102-114 (2005).

Schock, M.R., **Lytle, D.A.**, Sandvig, A.M., Clement, J., and S.H. Harmon. **Replacing Polyphosphates with Silicate to Solve Lead, Copper, and Source Water Iron Problems**. *Jour. AWWA*, 97(11):84 (2005).

Lytle, D.A.*, Gerke, T.L., and J.B. Maynard. **Effect of Bacterial Sulfate Reduction on Iron-corrosion Scales**. *Jour. AWWA* 97:10:109-120 (2005).

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Lytle, D.A.*, Frietch, C., and T. Covert. **The Electrophoretic Mobility of Mycobacterium avium Complex (MAC) Organisms in Water**. *Appl. Environ. Microbiol.*, 70:9:5667-5671 (2004).

Lytle, D.A.* and V.L. Snoeyink. **The Effect of Oxidant on the Properties of Fe(III) Particles and Suspensions Formed from the Oxidation of Fe(II)**. *Jour. AWWA*, 96:8:112-124 (2004).

Lytle, D.A.*, Sarin, P. and V.L. Snoeyink. **The Effect of Chloride and Orthophosphate on the Release of Iron from a Drinking Water Distribution System Cast Iron Pipe**. *Jour. Wat. Supply: Res.and Tech.:AQUA*, 54:5:267-281 (2004).

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Lytle, D.A.* and V.L. Snoeyink. **The Effect of Dissolved Inorganic Carbon on the Properties of Iron Colloidal Suspensions.** *Jour. Wat. Supply: Res.and Tech.:AQUA*, 52:3:165-180 (2003).

Lytle, D.A.* and V.L. Snoeyink. **Effect of Ortho- and Polyphosphates on the Properties of Iron Particles and Suspensions.** *Jour. AWWA*, 94:10:87-99 (2002).

Lytle, D.A.*, Johnson, C.H., and E.W. Rice. **A Systematic Comparison of the Electrokinetic Properties of Environmentally Important Microorganisms in Water.** *Colloids and Surfaces B:Biointerfaces*, 24:91-101 (2002).

Magnuson, M.L., **Lytle, D.A.**, Frietch, C.M., and C.A. Kelty. **Characterization of Submicrometer Aqueous Iron(III) Colloids Formed in the Presence of Phosphate by Sedimentation Field Flow Fractionation with Multiangle Laser Light Scattering Detection**. *Anal. Chem.*, 2001, 73, 4815-4820.

Sarin, P., Bebee, J., Beckett, M.A., Jim, K.K., **Lytle, D.A.**, Clement, J.A., Kriven W.M., and V. L. Snoeyink. **Mechanism of Release of Iron from Corroded Iron/Steel Pipes in Water Distribution Systems,** *Corrosion & Materials*, 26:3 (2001).

Lytle, D.A.* and M.R. Schock. **Impact of Stagnation Time on Metal Dissolution from Plumbing Materials in Drinking Water.** *Jour. Wat. Supply: Res.and Tech.:AQUA*, 49:10:243-257 (2000).

Lytle, D.A.*, Rice, E.W., Johnson, C.H., and K.R. Fox. **Electrophoretic Mobility of *Escherichia coli* 0157:H7 and Wild-Type *Escherichia coli* Strains.** *Appl. Environ. Microbiol.*, 65:7:3222-3225 (1999).

Sorg, T.J., Schock, M.R., and **D.A. Lytle**. **Ion Exchange Softening: Effects on Metal Concentrations.** *Jour. AWWA*, 91:8:85-97 (1999).

Lytle, D.A.* and M.R. Schock. **The Use of Aeration for Corrosion Control.** *Jour. AWWA*, 90:3:74-88 (March, 1998). Erratum, *Jour. AWWA*, 90:5:4 (1998).

Lytle, D.A.* and M.R. Schock. **An Investigation of the Impact of Alloy Composition and pH**

on the Corrosion of Brass in Drinking Water. *Advance in Environmental Research*, 1:2:213 (1997).

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Lytle, D.A. "Copper Corrosion Update." Ohio AWWA SDWA Seminar. Columbus, OH. Nov. 9, 2006.

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***Lytle, D.A. "Adsorption Technologies."** U.S. EPA OGWDW Arsenic Workshop. Austin, TX. May 23-24, 2005.

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***Lytle, D.A. "Reducing Arsenic Levels in Drinking Water During Iron Removal Processes."** Ohio AWWA Manufacturers Exposition. Wilmington, OH. April 19, 2005.

***Lytle, D.A.** (T. Sorg filled-in to give presentation) **"The Accumulation of Arsenic in Drinking Water Distribution Systems."** WQA Annual Conference. Las Vegas, NV. Mar. 29-Apr. 2, 2005.

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***Lytle, D.A. "Arsenic Removal During Iron Removal."** Webcast Presentation. U.S. EPA Arsenic Rule Webcast. Oct. 20, 2004.

***Lytle, D.A. "Lead and Copper Research Update: Recent Findings and Future Areas of Research."** Ohio AWWA Annual Meeting. Toledo, OH. Sept. 15-17, 2004.

***Lytle, D.A. "Non-uniform Copper Corrosion: Research Update."** AWWARF Project 2927 Expert Meeting: Installation, Condition Assessment and Reliability of Service Lines,

Connections and Fittings. Aug. 24, 2004, Cincinnati, OH.

Lytle, D.A. "Iron Removal for Arsenic Removal." U.S. EPA Workshop on the Design and Operation of Adsorptive Media Processes for the Removal of Arsenic from Drinking Water. Cincinnati, OH. Aug. 10-11, 2004.

***Lytle, D.A. "Studying Distribution System Solids: Approach and Application."** AWWA Annual Conference and Exposition. Orlando, FL. June 13-17, 2004.

***Lytle, D.A. "Arsenic Treatment: Considerations and Case Studies."** Michigan DEQ: Emerging Issues in Water Treatment Meeting. Lansing, MI. May 18, 2004.

Lytle, D.A. and T.J. Sorg. **"Optimizing Arsenic Removal During Iron Removal Processes."** Inorganic Contaminants Workshop. Reno, NV. Feb. 1-3, 2004.

Copeland, R.C. Dionysiou, D.D. and **D.A. Lytle. "Arsenic Desorption from Distribution System Solids."** Poster Presentation at the 2004 Graduate Student Research/ Scholarship Forum of the University of Cincinnati, Cincinnati, OH., 2004.

Copeland, R.C. **Lytle, D.A.** and D.D. Dionysiou. **"Arsenic Desorption from Distribution System Solids."** Poster Presentation. Student Poster Competition. The 2004 Annual Conference of Ohio American Water Works Association (OAWWA), Toledo, OH, 2004.

Copeland, R.C. **Lytle, D.A.** and D.D. Dionysiou. **"Arsenic Desorption from Drinking Water Distribution System Solids."** Oral Presentation at The 1st International Conference on Environmental Science and Technology, New Orleans, LA., 2005.

Copeland, R.C. **Lytle, D.A.** and D.D. Dionysiou. **"Arsenic Desorption from Drinking Water Distribution Systems and Iron-Based Column Media."** Oral Presentation at the 67th AWWA Ohio Section Annual Conference, Columbus, OH., 2005.

***Lytle, D.A. "Drinking Water Quality Deterioration in Distribution Systems: Colored Water Formation and Its Control."** AWWA Distribution Systems Symposium. Portland, OR. September 28-30, 2003.

***Lytle, D.A. "Arsenic in OH: Considerations and Case Studies."** Ohio AWWA Annual Meeting. Cincinnati, OH. Sept. 21-26, 2003.

***Lytle, D.A. "Application of Models to Drinking Water Distribution System Processes and Their Limitations."** AWWARF Workshop on Distribution System Modeling Research Needs. Voorhees, NJ. Apr. 2-3, 2003.

***Lytle, D.A. "The Effect of Water Chemistry on the Properties of Iron Particles and**

Suspensions." University of Illinois Student Symposium. Champaign, IL. Dec. 11, 2002.

***Lytle, D.A. "The Presence of Arsenic in Drinking Water Distribution Solids."** Ohio EPA Arsenic Training Seminar. Columbus, OH. Oct. 16, 2002.

***Lytle, D.A.** and V.L. Snoeyink. **"Drinking Water Quality Deterioration in the Distribution System: Colored Water Formation and Its Control."** Florida AWWA Region IV Symposium. Palm Harbor, FL. Sept. 20, 2001.

***Lytle, D.A.** and M.R. Schock. **"The LCR: What Have We Learned in the Last 10 Years."** Florida AWWA Region IV Symposium. Palm Harbor, FL. Sept. 20, 2001.

***Lytle, D.A.** and M.R. Schock. **"Silicates for Corrosion Control."** NACE Corrosion Conference/2001 Technical Information Exchange ISCX - *Supplemental Treatment of Potable Water in Building Systems.* Houston, TX. March 13, 2001.

Lytle, D.A. "The Effect of Water Chemistry on the Properties of Iron Particles and Iron Suspensions." AWWA Water Quality Technology Conference. Salt Lake City, UT. Nov. 6-9, 2000.

Lytle, D.A. "The Effect of Fluoride on Conventional Drinking Water Treatment Using Aluminum Sulfate." Ohio AWWA Annual Conference. Dayton, OH. Sept. 21-22, 2000.

Lytle, D.A. "The Effect of Water Chemistry on the Physical Properties of Iron Colloids and Aqueous Iron Suspensions." AWWA Distribution Systems Symposium. Denver, CO. June 9-10, 2000.

Lytle, D.A. "The Effect of pH and Bicarbonate Concentration on the Oxygenation of Ferrous Iron in Aqueous Solutions." AWWA Annual Conference and Exposition. Denver, CO. June 11-15, 2000.

Lytle, D.A. "A Systematic Study on the Surface Charge of Microorganisms in Drinking Water." AWWA Water Quality Technology Conference. Tampa, FL. Nov. 1-4, 1999.

Lytle, D.A. "The Design of a Mini-scale Conventional/filtration Water Treatment Plant for *Cryptosporidium* Research." AWWA Annual Conference and Exposition. Dallas, TX. June 21-25, 1998.

Lytle, D.A. "The Use and Reporting of Particle Surface Characteristics Measurements in Drinking Water." AWWA Water Quality Technology Conference. Denver, CO. Nov. 9-12, 1997.

Lytle, D.A. "The Use of Aerobic Spore-Forming Bacteria for the Evaluation of Water

Treatment Performance." AWWA Annual Conference and Exposition. Toronto, ON. June 23-27, 1996.

Lytle, D.A. "An Evaluation of the Secondary Effects of Enhanced Coagulation, With Emphasis on Corrosion Control." U.S. EPA/NEWWA National Conference on Integrating Corrosion Control and Other Water Quality Goals. Cambridge, MA. May 19-21, 1996.

Lytle, D.A. "Evaluation of Corrosion Issues for Nanofiltration Treated Water." AWWA/U.S. EPA GAC and Membrane Workshop. Cincinnati, OH. March 3-5, 1996.

Lytle, D.A. "A Microbiological Surrogate for Evaluating Treatment Efficiency." Indiana AWWA Section Conference. Indianapolis, IN. Feb. 19-21, 1996.

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Lytle, D.A. "Investigation on Techniques and Control of Building Lead and Copper Corrosion by Orthophosphate and Silicate." NACE Corrosion Conference. Orlando, FL. Mar. 26-31, 1995.

Lytle, D.A. "The Effect of Composition, pH, and Orthophosphate on the Corrosion of Brass." Ohio AWWA Annual Conference. Toledo, OH. Sept. 21-23, 1994.

Lytle, D.A. "Experiences with Sodium Silicate in Corrosion Control Studies." PQ Corp. International Silicate Conference. Valley Forge, PA. July 19-21, 1994.

Lytle, D.A. "Silicates for Simultaneous Fe/Mn Stabilization and Corrosion Control." PQ Corp. International Silicate Conference. Valley Forge, PA. July 19-21, 1994.

Lytle, D.A. "A Systematic Study on the Control of Lead in a New Building." ASCE National Conference on Environmental Engineering. Boulder, CO. July 11-13, 1994.

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Lytle, D.A. "Controlling Copper, Lead and Iron in Small Systems." 20th Annual U.S. EPA RREL Research Symposium. Cincinnati, OH. Mar. 15-17, 1994.

Lytle, D.A. "Sampling and Design Considerations for Corrosion Control Studies." NEWWA/U.S. EPA Solutions to Controlling Lead and Copper Corrosion II. Nashua, NH. Nov. 2-3, 1993.

Lytle, D.A. "Impact of pH and Lead Composition on Metal Leaching from Brass

Coupons." AWWA Annual Conference and Exposition. San Antonio, TX. June 6-10, 1993.

Lytle, D.A. "Metal Corrosion Coupon Study Contamination, Design, and Interpretation Problems." AWWA Water Quality Technology Conference. Toronto, ON. Nov. 15-19, 1992.

Lytle, D.A. "Application of a Modified Aluminon Method in a Drinking Water Beryllium Removal Study." AWWA Water Quality Technology Conference. Orlando, FL. Nov. 10-14, 1991.

Lytle, D.A. "Characterization of Wastes (Brines) from a Uranium Removal Plant." AWWA/Water Pollution Control Joint Residuals Management Conference. Research Triangle Park, NC. Aug. 11-14, 1991.

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Lytle, D.A., Williams, D. and C. White, **"Engineering Design Configurations for Biological Ammonia Removal"**. Presentation at AWWA Biological Treatment Symposium, Denver CO., March 28-29, 2013.

Lytle, D.A., White, C. P., Williams, D. and C. Muhlen, **"Biological Oxidation of As(III) in a Full-Scale Iron Removal Plant"**. Presentation at AWWA Biological Treatment Symposium, Denver CO., March 28-29, 2013.

White, C. P., D**. A. Lytle,** D. Williams, and C. Muhlen. "**Oxidation of Ammonia in Source Water Using Biological Filtration"** (slides). In Proceedings, Water Quality Technology Conference and Exposition, Phoenix, AZ, November 13 - 17, 2011. American Water Works Association, Denver, CO, #1747, (2011).

Yeuell, H.D.; Dvorak, B.; Gurian, P.; and **D.A. Lytle**. "**Improving Information Dissementation to Consulting Engineers Serving Small Systems: Suggestions Based on National Survey."** AWWA Annual Conference and Exposition. Chicago, IL. June 20-24, 2010.

Williams, D. and **D.A. Lytle. "A Simple Approach to Assessing Copper Pitting Corrosion Tendencies and Developing Control Strategies."** AWWA Water Quality Technology Conference. Cincinnati, OH. Nov. 16-20, 2008.

Turek, N.F.; Kasten, L.; **Lytle, D.A.**; and M.N. Goltz, 2006. **"Investigation of Copper Contamination and Corrosion Scale Mineralogy in Aging Drinking Water Distribution Systems."** AWWA Annual Conference and Exposition. San Antonio, TX. June 11-15, 2006.

Lytle, D.A.; Gerke, T.L.; and J.B. Maynard. **"Geochemistry of Sulfur in Iron Corrosion Scales Found in Drinking Water Distribution Systems."** AWWA Water Quality Technology Conference. San Antonio, TX. Nov. 11-14, 2004.

James, C.N.; Copeland, R.C.; and **D.A. Lytle**. **"Relationships between Oxidation-Reduction Potential, Oxidant, and pH in Drinking Water."** AWWA Water Quality Technology Conference. San Antonio, TX. Nov. 11-14, 2004.

Sarin, P.; Snoeyink, V.L.; and **D.A. Lytle**. **"Controlling Red Water and Iron Release."** Abstract. 1st IWA Leading-Edge Conference on Water and Wastewater Technologies. Czech Republic, Prague. May 31-June 3, 2004.

Gutierrez, S.C.; Haught, R.C.; **Lytle, D.A.;** and E.W. Rice. **"Advances in Drinking Water Treatment in the United States."** NATO Advanced Research Workshop. Dnepropetrovsk, Ukraine. Nov. 19-22, 2003.

Lytle, D.A.; Snoeyink, V.L.; and P. Sarin. **"The Effect of Chloride and Orthophosphate on the Release of Iron from a Drinking Water Distribution System Cast Iron Pipe."** AWWA Water Quality Technology Conference. Philadelphia, PA. Nov. 2-6, 2003.

Frietch, C.M. and **D.A. Lytle**. **"The Effect of pH, Phosphate and Oxidant Type on the Removal of Arsenic from Drinking Water During Iron Removal."** AWWA Water Quality Technology Conference. Philadelphia, PA. Nov. 2-6, 2003.

Snoeyink, V.L.; Sarin, P.; and **D.A. Lytle**. **"Iron Release and Colored Water Formation from Iron Scales."** AWWA Annual Conference and Exposition. Anaheim, CA. June 15-19, 2003.

Lytle, D.A. and V.L. Snoeyink. **"The Influence of Oxidant Type on the Properties of Iron Colloids and Suspensions Formed from Ferrous Iron."** AWWA Water Quality Technology Conference. Seattle, WA. Nov. 10-13, 2002.

Lytle, D.A.; Sorg, T.J.; and C. Frietch. **"The Significance of Arsenic-Bound Solids in Drinking Water Distribution Systems."** AWWA Water Quality Technology Conference. Seattle, WA. Nov. 10-13, 2002.

Stonesifer, K.; **Lytle, D.A.;** and M.R. Schock. **"Oxidant and Redox Potential Effects on the Corrosion of Distribution System Materials."** AWWA Water Quality Technology Conference. Seattle, WA. Nov. 10-13, 2002.

Lytle, D.A. and V.L. Snoeyink. **"The Effect of Ortho- and Poly-Phosphates on the Properties of Iron Particles and Suspensions Formed from the Oxygenation of Ferrous Iron."** AWWA Annual Conference and Exposition. New Orleans, LA. June 16-20, 2002.

Lytle, D.A. and V.L. Snoeyink. **"The Effect of Water Chemistry on the Properties of Iron Particles and Iron Suspensions."** AWWA Water Quality Technology Conference. Salt Lake City, UT. Nov. 6-9, 2000.

Feld, C.M.; **Lytle, D.A.;** and M.R. Schock. **"The Effect of Fluoride on Conventional Drinking Water Treatment Using Aluminum Sulfate."** AWWA Water Quality Technology Conference. Salt Lake City, UT. Nov. 6-9, 2000.

Lytle, D.A. and V.L. Snoeyink. **"The Effect of Water Chemistry on the Physical Properties of Iron Colloids and Aqueous Iron Suspensions."** AWWA Distribution Systems Symposium. Denver, CO. June 9-10, 2000.

Lytle, D.A.; Snoeyink, V.L.; and M.R. Schock. **"The Effect of pH and Bicarbonate Concentration on the Oxygenation of Ferrous Iron in Aqueous Solutions."** AWWA Annual Conference and Exposition. Denver, CO. June 11-15, 2000.

Sarin, P.; Bebee, J.; Beckett, M.A.; Jim, K.K.; **Lytle, D.A.;** Clement, J.A.; Kriven, W.M.; and V.L. Snoeyink. **"Mechanism of Release of Iron from Corroded Iron/Steel Pipes in Water Distribution Systems."** AWWA Annual Conference and Exposition. Denver, CO. June 11-15, 2000.

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Lytle, D.A.; Rice, E.W.; Johnson, C.H.; Owens, J.H.; and M.M. Marshall. **"A Systematic Study on the Surface Charge of Microorganisms in Drinking Water."** AWWA Water Quality Technology Conference. Tampa, FL. Nov. 1-4, 1999.

Lytle, D.A. and M.R. Schock. **"The Significance of "Stagnation Curves" for Lead and Copper, and Water Quality Factors Affecting Them."** 118th NEWWA Annual Conference. Burlington, VT. Sept. 19-22, 1999.

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Water and Wastewater Treatment Technology Transfer Workshop. Kansas City, MO. Aug. 2-4, 1999.

Dugan, N.R.; Fox, K.R.; Miltner, R.J.; and **D.A. Lytle. "Control of *Cryptosporidium* Oocysts by Steady State Conventional Treatment."** AWWA Annual Conference and Exposition. Chicago, IL. June 20-24, 1999.

Sarin, P.; Jim, K.; **Lytle, D.A.**; Beckett, M.A.; Kriven, W.M.; Snoeyink, V.L.; and J.A. Clement. **"Systematic Study of Corrosion Scales and Their Release of Iron Particles in Drinking Water."** AWWA/U.S. EPA Particle Measurement and Characterization in Drinking Water Treatment Symposium. Nashville, TN. March 28-30, 1999.

Beckett, M.; Snoeyink, V.L.; Jim, K.; Sarin, P.; **Lytle, D.A.**; Kriven, W., and J. Clement. **"A Pipe Loop System for Evaluating Iron Uptake in Distribution Systems."** AWWA Water Quality Technology Conference. San Diego, CA. Nov. 1-5, 1998.

Fox, K.R.; Dugan, N.R.; Miltner, R.J.; **Lytle, D.A.;** Williams, D.J.; Parrett, C.J.; Feld, C.M.; Owens, J.H.; Rice, E.W.; and C.H. Johnson. **"Comparative Removal of *Cryptosporidium parvum* and Surrogates in a Low-Flow Pilot Plant System."** AWWA Water Quality Technology Conference. San Diego, CA. Nov. 1-5, 1998.

Schock, M.R.; Clement, J.; **Lytle, D.A.;** Sandvig, A.M.; and S.M. Harmon. **"Replacing Polyphosphate with Silicate to Solve Problems with Lead, Copper, and Source Water Iron."** AWWA Water Quality Technology Conference. San Diego, CA. Nov. 1-5, 1998.

Lytle, D.A.; Fox, K.R.; Miltner, R.J.; Speth, T.F.; Schock, M.R.; Kropp, K.L.; Shukairy, H.; Fichter, L.; and N. Dugan. **"The Design of a "Mini-scale" Conventional/Filtration Water Treatment Plant for *Cryptosporidium* Research."** AWWA Annual Conference and Exposition. Dallas, TX. June 21-25, 1998.

Schock, M.R.; Hidmi, L.; Edwards, M.A.; and **D.A. Lytle. "The Importance of Metastable Solids in Copper Release."** Inorganic Contaminants Workshop. San Antonio, TX. Feb. 23-24, 1998.

Lytle, D.A.; Rice, E.W.; Fox, K.R.; Johnson, C.H.; Owens, J.; and J.O. Gerkin. **"The Use and Reporting of Particle Surface Characteristics Measurements in Drinking Water."** AWWA Water Quality Technology Conference. Denver, CO. Nov. 9-12, 1997.

Larosa-Thompson, J.L.; Scheetz, B.E.; Schock, M.R.; **Lytle, D.A.;** and P.J. Delaney. **"Sodium Silicate Corrosion Inhibitors: Issues of Effectiveness and Mechanism."** AWWA Water Quality Technology Conference. Denver, CO. Nov. 9-12, 1997.

Lytle, D.A. and M.R. Schock. **"The Impact of Stagnation Time on the Dissolution of Metal**

from Plumbing Materials." AWWA Annual Conference. Atlanta, GA. June 12-19, 1997.

Lytle, D.A.; Fox, K.R.; Rice, E.W.; Owens, J.; and C.H. Johnson. **"The Use of Aerobic Spore-Forming Bacteria for the Evaluation of Water Treatment Performance."** AWWA Annual Conference. Toronto, ON. June 23-27, 1996.

Fox, K.R. and **D.A. Lytle**. **"Zeta Potential and Particle Counting for Optimizing Pathogen Removal."** AWWA Annual Conference and Exposition. Toronto, ON. June 23-27, 1996.

Lytle, D.A.; Schock, M.R.; and R.J. Miltner. **"An Evaluation of the Secondary Effects of Enhanced Coagulation, with Emphasis on Corrosion Control."** U.S. EPA/NEWWA National Conference on Integrating Corrosion Control and Other Water Quality Goals. Cambridge, MA. May 19-21, 1996.

Lytle, D.A.; Schock, M.R.; Speth, T.; and J. Swertfegger. **"Evaluation of Corrosion Issues for Nanofiltration Treated Water."** U.S. EPA/AWWA GAC and Membrane Workshop. Cincinnati, OH. Mar. 3-5, 1996.

Lytle, D.A. "How Do I Run a Proper Jar Test?" AWWA Water Quality Technology Conference. New Orleans, LA. Nov. 12-16, 1995.

Lytle, D.A.; Schock, M.R.; and J.A. Clement. **"Application and Considerations of Aeration for Corrosion Control."** AWWA Water Quality Technology Conference. New Orleans, LA. Nov. 12-16, 1995.

Miller, N.T.; Delaney, P.; Schock, M.R.; and **D.A. Lytle**. **"Analytical Issues in Corrosion and Deposition Studies."** AWWA Water Quality Technology Conference. New Orleans, LA. Nov. 12-16, 1995.

Sorg, T.J.; Schock, M.R.; and **D.A. Lytle**. **"An Evaluation of Ion Exchange Softening on the Leaching of Metals from Household Plumbing Materials."** AWWA Annual Conference and Exposition. Anaheim, CA. June 18-22, 1995.

Schock, M.R. and **D.A. Lytle.** **"Control of Copper Corrosion of Household Plumbing Materials."** 21st Annual U.S. EPA RREL Research Symposium. Cincinnati, OH. April 4-6, 1995.

Schock, M.R.; **Lytle, D.A.;** and J.A. Clement. **"Effects of pH, Carbonate, Orthophosphate, and Redox Potential on Cuprosolvency."** NACE Corrosion Conference. Orlando, FL. March 26-31, 1995.

Lytle, D.A.; Schock, M.R.; and T.J. Sorg. **"Investigation on Techniques and Control of Building Lead and Copper Corrosion by Orthophosphate and Silicate."** NACE Corrosion

Conference. Orlando, FL. March 26-31, 1995.

Rice, E.W.; Fox, K.R.; Miltner, R.J.; **Lytle, D.A.;** and C.H. Johnson. **"A Microbiological Surrogate for Evaluating Treatment Efficiency."** AWWA Water Quality Technology Conference. San Francisco, CA. Nov. 7-10, 1994.

Schock, M.R. and **D.A. Lytle**. **"The Importance of Stringent Control of DIC and pH in Laboratory Corrosion Studies."** AWWA Water Quality Technology Conference. San Francisco, CA. Nov. 7-10, 1994.

Lytle, D.A. and K.R. Fox. **"Particle Counting and Zeta Potential Measurements for Optimizing Filtration Treatment Performance."** AWWA Water Quality Technology Conference. San Francisco, CA. Nov. 7-10, 1994.

Lytle, D.A.; Miltner, R.J.; Dryfuse, M.J.; Schock, M.R.; and R.S. Summers. **"An Evaluation of the Secondary Effects of Enhanced Coagulation."** AWWA Enhanced Coagulation Research Specialty Workshop. Charleston, SC. Dec. 4-6, 1994.

Fox, K.R. and **Lytle, D.A. "*Cryptosporidium* and the Milwaukee Incident."** ASCE National Conference on Environmental Engineering. Boulder, CO. July, 1994.

Schock, M.R.; **Lytle, D.A.;** and J.A. Clement. **"Modeling Issues of Copper Solubility in Drinking Water."** ASCE National Conference on Environmental Engineering. Boulder, CO. July, 1994.

Clement, J.A.; Schock, M.R.; and **D.A. Lytle. "Controlling Lead and Copper Corrosion and Sequestering of Iron and Manganese."** ASCE National Conference on Environmental Engineering. Boulder, CO. July, 1994.

Fox, K.R. and **D.A. Lytle. "*Cryptosporidium*: The Milwaukee Experience and Relevant Research."** AWWA Annual Conference and Exposition. New York, NY. June 19-23, 1994.

Lytle, D.A.; Schock, M.R.; and T.J. Sorg. **"A Systematic Study on the Control of Lead in a New Building."** AWWA Annual Conference and Exposition. New York, NY. June 19-23, 1994.

Lytle, D.A. and J.A. Clement. **"Controlling Copper, Lead and Iron in Small Systems."** 20th Annual U.S. EPA RREL Research Symposium. Cincinnati, OH. March 15-17, 1994.

Fox, K.R. and **D.A. Lytle. "The Milwaukee Cryptosporidiosis Outbreak: Investigation and Recommendations."** AWWA Water Quality Technology Conference. Miami, FL. Nov. 7-11, 1993.

Lytle, D.A. and M.R. Schock. **"Impact of pH and Lead Composition on Metal Leaching from Brass Coupons."** AWWA Annual Conference and Exposition. San Antonio, TX. June 6-10, 1993.

Clement, J. and **D.A. Lytle. "Considerations for the Use of Polyphosphates and Silicates to Control Lead and Copper Based Corrosion."** AWWA Annual Conference and Exposition. San Antonio, TX. June 6-10, 1993.

Sorg, T.J.; **Lytle, D.A.;** and M.R. Schock. **"Evaluation of Corrosion Inhibitors to Reduce Lead in the Drinking Water in Buildings."** 19th Annual U.S. EPA RREL Research Symposium. Washington, D.C. April, 1993.

Lytle, D.A.; Schock, M.R.; and S. Tackett. **"Metal Corrosion Coupon Study Contamination, Design, and Interpretation Problems."** AWWA Water Quality Technology Conference. Toronto, ON. Nov. 15-19, 1992.

Schock, M.R. and **D.A. Lytle. "Corrosion Control Principles and Strategies for Reducing Lead and Copper in Drinking Water Systems."** WQA Annual Convention. Orlando, FL. March 11-15, 1992.

Lytle, D.A.; George, G.K.; and J.U. Doerger. **"Application of a Modified Aluminon Method in a Drinking Water Beryllium Removal Study."** AWWA Water Quality Technology Conference. Orlando, FL. Nov. 10-14, 1991.

Sorg, T.J.; Schock, M.R.; and **D.A. Lytle. "Evaluating Chemical Treatment to Reduce Lead in a Building: A Case Study."** AWWA/U.S. EPA National Workshop on Control of Lead and

Copper in Drinking Water. Chicago, IL. Sept. 23-25, 1991.

Sorg, T.J.; **Lytle, D.A.;** Egan, J.; and Z. Zhang. **"Characterization of Wastes (Brines) from a Uranium Removal Plant."** AWWA/Water Pollution Control Joint Residuals Management Conference. Research Triangle Park, NC. Aug. 11-1

From: Busch, Stephen (DEQ)
Sent: Tuesday, July 07, 2015 1:45 PM
To: mglasgow@cityofflint.com
Cc: Howard Croft (hcroft@cityofflint.com);Brent Wright (bwright@cityofflint.com);nhenderson@cityofflint.com;Prysby, Mike (DEQ)
Subject: EPA Drinking Water Needs Survey - City of Flint Water System
Attachments: 2015 DWINSA Lists of Codes.pdf; Documentation Policy Table (2-page).pdf; EPA Cover Ltr for 2015 DWINSA.PDF; Updating 2011 Survey Instructions Part 1.docx; Updating 2011 Survey Instructions Part 2.xlsm; MI0002310.xlsm; 2015 DWINSA Instructions for Systems.doc; Package Contents and Return Instructions.docx

Importance: High

Mike,

I am sending this out in Mike Prysby's absence. I believe he may have mentioned it to you previously.

The City of Flint community water system has been selected by EPA to participate in the 2015 Drinking Water Needs Survey. This survey documents the 20 year needs regarding all aspects of the City's public water supply system, including source, treatment, storage, distribution, customer metering, etc. The results of the Needs Survey are used to determine state allocation of federal revolving loan funds.

Attached you will find the following related documents:

- EPA Cover Letter
- City of Flint Needs Survey Spreadsheet form (MI0002310.xlsm)
- Package Contents and Return Instructions document
- Instructions for completing the Needs Survey
- Instruction for updating the 2011 Needs Survey form (Part 1, word and Part 2, spreadsheet)
- Needs Survey Code Listing
- Need Code Documentation Table

As the City of Flint participated in the previous Needs Survey conducted in 2011, we are asking the City of Flint to complete the 2015 Needs Survey and return it to our office by August 21, 2015. You will find that information from the 2011 survey has already been entered into the survey form, requiring you to just remove completed projects and add new projects.

To assist you in properly completing the 2015 Needs Survey, Mike Prysby will be available to meet at the City with staff and you may contact him to schedule a meeting.

In the interim, until Mike is back, you may contact me directly with any questions you may have.

We understand the work needed to complete this Needs Survey will utilize valuable staff time, and appreciate your cooperation in its completion.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance

MDEQ
517-643-2314

	B	C
1	**2015 Drinking Water Infrastructure**	
2	**Needs Survey And Assessment**	
3	*MI0002310*	
4	Washington, DC 20460	
5		
6	**Please verify or correct the following information:**	
7		
8		
9	Name of System (Community):	FLINT, CITY OF
10	Name of Contact:	WRIGHT, BRENT
11	Street Address:	Flint Water Plant, 4500 North Dort Highway
12	City, State, and Zip:	FLINT, MI, 48505
13	Population Served (if wholesaler, include consecutive population as appropriate):	102,434
14	Number of Connections (not including consecutive systems):	35,132
15	Total System Design Capacity (in MGD):	
16	Total Length of Pipe in System (in Feet):	2,927,860
17	Source Water Type	Surface/GWUDI
18	(Ground, Surface/GWUDI, etc.):	
19	Ownership Type:	Public
20		
21	Public reporting burden for this collection of information is estimated to average 5.53 hours per response. This estimate includes time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collected. Burden means the total time, effort, or financial resources expended by person(s) to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information; adjust the existing ways to comply with any previously applicable instructions; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.	
22	Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, OPPI, Regulatory Information Division, U.S. Environmental Protection Agency (1804A), Ariel Rios Building, 1200 Pennsylvania Ave., NW, Washington, DC 20460; and Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, N.W., Washington, DC 20503.	
23	**State Use Only**	
24	**State Reviewer:**	
25		
26	Information provided for this survey can be requested by the public. It is our experience that this information is rarely requested.	

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3		U.S. Environmental Protection Agency					
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7		**Check if Correct**		**Corrected Information**			
8		**as Printed**		*(Fill in only if preprinted information is missing or incorrect)*			
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16			☐				
17		Check All That Apply:			☐	Ground	☐
18					☐	Purchased Ground	☐
19		Check All That Apply:			☐	Public	☐
20					☐	Federal Government	
21							
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24						**Telephone Number:**	
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1	OMB Control No.: 2040-0274
2	Approval Expires: 06/30/2018
3	Federal PWSID No.: MI0002310
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18	Purchased Surface/GWUDI
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20	Private Non-Profit
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	A	B	C	D	E	F	G	H	I	J	K	L	M
1								**Project Table**					Federal PWSID No.:
2	*Project Number*	*Project Name*	*Type of Need*	*Reason for Need*	*N,E,R,H (New Expand Replace ReHab)*	*C or F (Current Future)*	*Regulation*	*Design Capacity (MG, MGD, or kW)*	*Diameter (inches)*	*Length (feet)*	*Number Needed*	*Cost Estimate*	*Cost Date (mm/yyyy)*
3	*Ex. 1*	*Replace wells 5 and 8 at 0.5 MGD each*	*R1*	*A1*	*R*	*C*	*4A*	*0.5*			*2*		
4	*Ex. 2*	*Replace Deteriorated Transmission Main*	*X2*	*A1*	*R*	*C*	*4A*		*24*	*20,000*		*$4,200,000*	*06/2015*
5	1000	TREATMENT PLANT PROCESS SCADA	W2	A1	R	F	4A					$978,000	09/2011
6	1001	WTP EXP	T10	A1	E	F	4A					$40,258,000	09/2011
7	1002	PS3 PUMP #1 REPLACE	M99, P1	A1, A4	R	F	4A	8			1		
8	1003	PS3 PUMP #2 REPLACE	M99, P1	A1, A4	R	F	4A	12			1		
9	1004	PS3 PUMP #3 REPLACE	M99, P1	A1, A4	R	F	4A	16			1		
10	1005	PS3 STAND-BY POWER	M99, W4	A11	N	F	4A	20			1		
11	1006	PS5 STAND-BY POWER	M99, W4	A11	N	F	4A	20			1		
12	1007	REPLACE SWITCHGEAR @ PS3	P2	A1									
13	1008	REHAB TORREY RD BOOSTER STA.	P2	A1	H	C	4A				1	$241,000	07/2011
14	1009	CEDAR ST. RESERVOIR REHAB	S2	A1	H	F	4A	20			1		
15	1010	WEST-SIDE RESERVOIR REHAB	S2	A1	H	F	4A	12			1		
16	1011	PUMP STATION 5 RE-HAB	P2	A1	H	F	4A	24			1		
17	2000	UPGRADE 3-FOOT & 4-INCH MAINS WITH 8-INCH	M1	A1	R	C	4A					$12,000,000	02/2007
18	2001	REPLACE CRITICAL 6-INCH MAINS WITH 8-INCH	M1	A1	R	C	4A					$1,000,000	02/2007
19	2002	LOOP EXSISTING 6-INCH MAINS WITH 8-INCH	M1	A1	N	C	4A		8	3025			
20	2003	LOOP EXSISTING 12-INCH MAINS	M1	A1	N	C	4A		12	800			
21	2004	REPLACE EXISTING 6-INCH MAIONS WITH 8-INCH	M1	A1	R	C	4A		8	91000			
22	2005	REPLACE 8-INCH MAINS	M1	A1	R	C	4A		8	45500			
23	2006	REPLACE 10-INCH & 12-INCH MAINS WITH 12-INCH	M1	A1	R	F	4A		12	15600			
24	2007	REPLACE 14-INCH AND 16-INCH MAINS WITH 16-INCH	M1	A1	R	F	4A		16	10400			
25	2008	REPLACE 18-INCH MAINS	M1	A1	R	F	4A		18	4160			

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1	MI0002310														
2	***Documen-tation***	***Remove Modify or Validate***		***Comment Codes***											
3	*6, 10*														
4	*1*														
5	2, 10			328, 336											
6	2, 10	*		252, 336, 348											
7	20			100											
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9	20			100											
10	10, 20	*		216, 400											
11	10, 20	*		216, 400											
12				262											
13	2, 3, 10			324, 338											
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22	20	*		328											
23	20	*		328											
24	20	*		328											
25	1, 2, 20	*		340											

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26	2009	REPLACE 24-INCH MAINS	X2	A1	R	C			24	7800			
27	2010	REPLACE 30-INCH MAINS	X2	A1	R	C			30	1040			
28	2011	REPLACE 36-INCH MAINS	X2	A1	R	C	4A		36	715			
29	2012	LOOP EXSISTING 8-INCH MAINS	M1	A1	N	C	4A		8	400			
30	2013	REPLACE 42-INCH MAINS	X2	A1	R	F	4A		42	95			
31	2014	REPLACE 72-INCH MAINS	X2	A1	R	C	4A		72	3744			
32	3000	REPLACE RESIDENTIAL METERS	M8	A1	R	C	4A		0.625		32931		
33	3001	REPLACE RESIDENTIAL METERS	M8	A1	R	C	4A		1		471		
34	3002	REPLACE RESIDENTIAL METERS	M8	A1	R	C	4A		1.5		393		
35	3003	REPLACE RESIDENTIAL METERS	M8	A1	R	C	4A		2		20		
36	3004	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		0.625		439		
37	3005	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		1		281		
38	3006	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		1.5		350		
39	3007	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		2		368		
40	3008	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		3		107		
41	3009	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		4		71		
42	3010	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		6		47		
43	3011	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		8		3		
44	3012	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		10		6		
45	3013	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		16		1		
46	3014	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		24		1		
47	3015	LEAD SERVICE REPLACEMENT	M2	A1, A6	R	C	1D		1		18000		
48	3017	OTHER SERVICE LINE REPLACEMENT	M2	A1	R	F	4A		1		3238		
49	3018	REPLACE SERVICE LINES > 1-INCH	M2	A1	R	F	4A				275		
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27	20	*		340											
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29	10	*		216, 400											
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47	10	*		324, 332, 334											
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49	10	*		218, 324, 328											
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	A	B
1	**Source, Treatment, Storage, and Pumping Inventory**	
2		
3		To ensure all potential source, treatment, and storage projects are considered, it may be helpful to complete some or all of this inventory table.
4		However, completion of this table is not required.
5		▪ **Source Projects** are all projects related to collecting and pumping raw water. This includes wells, surface water intakes, springs, off-stream raw
6		water storage, and pumps.
7		▪ **Treatment Projects** are all projects related to disinfection, filtration, or other treatment processes for ground or surface water sources, or for
8		treatment applied in the distribution system.
9		▪ **Storage and Pumping Projects** are related to finished or treated water storage, and booster pump stations.
10		
11		**Source Water**
12		**Inventory**
13		Total Number and Capacity of Existing Wells or Springs:
14		
15		
16		Total Number and Capacity of Existing Surface Water Sources:
17		
18		Total Number and Capacity of Existing Pumps (excluding booster pump stations):
19		
20		
21		
22		
23		**Treatment**
24		**Inventory**
25		For the sources identified above, enter the number of locations where the following treatment is applied:
26		Disinfection (including booster disinfection):
27		
28		Filtration:
29		
30		Chemical removal or addition:
31		
32		**Storage and Pump Stations**
33		**Inventory**
34		Total Number and Capacity of Existing Storage Tanks:
35		
36		
37		Total Number and Capacity of Existing Booster Pump Stations:
38		

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11								
12			**Needing Replacement**			**Needing Rehabilitation**		
13			Wells (pumps included) or Springs:			Wells (pumps included) or Springs:		
14								
15								
16			Existing Surface Water Intakes (excluding pumps):			Existing Surface Water Intakes (excluding pumps):		
17								
18			Existing Groundwater Pumps (if wells not listed):			Existing Groundwater Pumps (if wells not listed):		
19								
20								
21			Existing Raw Surface Water Pumps:			Existing Raw Surface Water Pumps:		
22								
23								
24			**Needing Replacement**			**Needing Expansion/Upgrading or Rehabilitation**		
25								
26			Disinfection:			Disinfection:		
27								
28			Filtration:			Filtration:		
29								
30			Chemical treatment:			Chemical treatment:		
31								
32								
33			**Needing Replacement**			**Needing Rehabilitation**		
34			Number of Existing Elevated or Ground- Level Storage Tanks:			Number of Existing Elevated or Ground-Level Storage Tanks:		
35								
36								
37			Number of Existing Booster Pump Stations:			Number of Existing Booster Pump Stations:		
38								

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12	**New Infrastructure Needs**
13	Does your system have additional source water capacity needs to meet the needs of current users?
14	
15	☐ Yes
16	
17	If yes, how many additional sources are necessary?
18	
19	
20	
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23	
24	**New Infrastructure Needs**
25	Does your system have additional treatment needs for provisions of additional public health protection or for aesthetic concerns?
26	
27	
28	☐ Yes
29	
30	If yes, how much additional treatment is necessary?
31	
32	
33	**New Infrastructure Needs**
34	Does your system have additional storage capacity and/or booster pumping needs to meet the needs of current users?
35	
36	☐ Yes
37	
38	If yes, how much additional finished water storage or booster pumping capacity is necessary?

	B
1	**Transmission and Distribution Inventory**
2	**Transmission and distribution projects** are the piping needs of a water system. Projects for **valves, backflow prevention devices and assemblies, and meters** that are not part of a transmission or distribution project listed in this table should be recorded in the table under the tab titled "Inventory Table 3".
3	
4	
5	**Note: The total feet or miles of pipe in your system is required information if any pipe projects are**
6	**submitted based solely on survey-generated documentation (documentation codes 10 or 11).**
7	
8	Total Pipe in System
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3	On the table below, please provide an estimate of the total feet or miles of pipe in your system, if possible. Completion of this table is not required, but it may be helpful to			
4	ensure all potential transmission and distribution pipe projects are considered.			
5				
6				
7				
8				
9		*(Check feet or miles)*		
10			☐ feet	
11	Plastic		☐ miles	
12			% of total pipe	
13				
14			☐ feet	
15	Ductile Iron		☐ miles	
16			% of total pipe	
17				
18			☐ feet	
19	Cast Iron		☐ miles	
20			% of total pipe	
21				
22			☐ feet	
23	Asbestos Cement		☐ miles	
24			% of total pipe	
25				
26			☐ feet	
27	Other		☐ miles	
28			% of total pipe	

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5						☐	**feet**	**Total Pipe**	
6						☐	**miles**	**in System**	
7							*(Check feet or miles)*		
8									
9		<=6 inch		8-12 inch		15-42 inch		>=48 inch	
10			☐ feet		☐ feet		☐ feet		☐ feet
11	Amount of PVC by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
12	% of this category/size pipe currently in poor condition or beyond useful life		%		%		%		%
13									
14			☐ feet		☐ feet		☐ feet		☐ feet
15	Amount of ductile iron by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
16	% of this category/size pipe currently in poor condition or beyond useful life		%		%		%		%
17									
18			☐ feet		☐ feet		☐ feet		☐ feet
19	Amount of cast iron by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
20	% of this category/size pipe currently in poor condition or beyond useful life		%		%		%		%
21									
22			☐ feet		☐ feet		☐ feet		☐ feet
23	Amount of asbestos cement by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
24	% of this category/size pipe currently in poor condition or beyond useful life		%		%		%		%
25									
26			☐ feet		☐ feet		☐ feet		☐ feet
27	Amount of other by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
28	% of other currently in poor condition or beyond useful life		%		%		%		%

	B
1	**Meters, Service Lines, Backflow Prevention Devices/Assemblies, Valves, etc.**
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8	To ensure all potential projects are considered, it may be helpful to complete some or all of this inventory table. However, completion of this table is not required.
9	**Inventory**
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1			
2	Projects for meters, service lines, backflow prevention devices and assemblies, valves, and other miscellaneous projects		
3	are recorded in this section to accommodate entries of multiple identical items on one line in the project table.		
4			
5	**Record only projects that are not a part of another project (e.g., water main replacement projects will already include valves and other appurtenances).**		
6	EPA requires documentation of all projects provided. Applicable types of documentation are presented in List 4 of the Lists of Codes. Use only existing documentation of cost. We do not expect you to develop new cost estimates.		
7			
8			
9			**Needing Replacement**
10	Total Number of Existing Water Meters:		
11			
12	Total Number of Existing Backflow Prevention Devices/Assemblies:		
13			
14	Total Number of Valves:		
15			
16	Total Number of Lead Service Lines:		

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8				
9			**New Infrastructure Needs**	
10	Number of Water Meters:			Number of Water Meters:
11				
12	Number of Backflow Prevention Devices/Assemblies:			Number of Backflow Prevention Devices/Assemblies:
13				
14	Number of Valves:			Number of Valves:
15				
16				

	B
1	**Respondent Information**
2	
3	Please provide the following information in case we need to contact you for clarification or additional explanation of any of your responses.
4	
5	Contact Person (Person who completed this questionnaire):
6	
7	Signature:
8	Name (please print):
9	Title:
10	Mailing Address:
11	(Street Address)
12	
13	
14	
15	**If you have any questions, contact your state coordinator.**
16	
17	
18	**CLOSING: Thank you for your help. Did you remember to?**
19	
20	☐
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22	☐

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5				
6				
7				Telephone Number:
8				Fax Number:
9				E-mail Address:
10				Best Time to Reach You:
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19				
20	Identify, by project number, available documentation for all needs and costs reported?			
21				
22	Email the questionnaire and email or mail the documentation to your state?			

	A	B	C	D	E	F
1				**Summary of Survey-Generated and Independent Documentation for Each Project**	**Federal PWSID No.:**	MI0002310
2	***Project Number***	***Project Name***	***Documen-tation Code(s)***	***State/System Survey-Generated Statement***	***Independent Document Name***	***Independent Documentation Page Number(s)***
3	1000	TREATMENT PLANT PROCESS SCADA	2, 10			
4	1001	WTP EXP	2, 10			
5	1002	PS3 PUMP #1 REPLACE	20			
6	1003	PS3 PUMP #2 REPLACE	20			
7	1004	PS3 PUMP #3 REPLACE	20			
8	1005	PS3 STAND-BY POWER	10, 20			
9	1006	PS5 STAND-BY POWER	10, 20			
10	1007	REPLACE SWITCHGEAR @ PS3				
11	1008	REHAB TORREY RD BOOSTER STA.	2, 3, 10			
12	1009	CEDAR ST. RESERVOIR REHAB	20			
13	1010	WEST-SIDE RESERVOIR REHAB	20			
14	1011	PUMP STATION 5 RE-HAB	20			
15	2000	UPGRADE 3-FOOT & 4-INCH MAINS WITH 8-INCH	20			
16	2001	REPLACE CRITICAL 6-INCH MAINS WITH 8-INCH	20			
17	2002	LOOP EXSISTING 6-INCH MAINS WITH 8-INCH	10			
18	2003	LOOP EXSISTING 12-INCH MAINS	10			
19	2004	REPLACE EXISTING 6-INCH MAIONS WITH 8-INCH	20			
20	2005	REPLACE 8-INCH MAINS	20			
21	2006	REPLACE 10-INCH & 12-INCH MAINS WITH 12-INCH	20			
22	2007	REPLACE 14-INCH AND 16-INCH MAINS WITH 16-INCH	20			

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23	2008	REPLACE 18-INCH MAINS	1, 2, 20			
24	2009	REPLACE 24-INCH MAINS	20			
25	2010	REPLACE 30-INCH MAINS	20			
26	2011	REPLACE 36-INCH MAINS	20			
27	2012	LOOP EXSISTING 8-INCH MAINS	10			
28	2013	REPLACE 42-INCH MAINS	20			
29	2014	REPLACE 72-INCH MAINS	20			
30	3000	REPLACE RESIDENTIAL METERS	10			
31	3001	REPLACE RESIDENTIAL METERS	10			
32	3002	REPLACE RESIDENTIAL METERS	10			
33	3003	REPLACE RESIDENTIAL METERS	10			
34	3004	REPLACE COMMERCIAL METERS	10			
35	3005	REPLACE COMMERCIAL METERS	10			
36	3006	REPLACE COMMERCIAL METERS	10			
37	3007	REPLACE COMMERCIAL METERS	10			
38	3008	REPLACE COMMERCIAL METERS	10			
39	3009	REPLACE COMMERCIAL METERS	10			
40	3010	REPLACE COMMERCIAL METERS	10			
41	3011	REPLACE COMMERCIAL METERS	10			
42	3012	REPLACE COMMERCIAL METERS	10			
43	3013	REPLACE COMMERCIAL METERS	10			
44	3014	REPLACE COMMERCIAL METERS	10			
45	3015	LEAD SERVICE REPLACEMENT	10			
46	3017	OTHER SERVICE LINE REPLACEMENT	10			

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47	3018	REPLACE SERVICE LINES > 1-INCH	10			
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1								***Project Table (Compare 2011 to 2015)***				
2	*Project Number*	*Project Name*	*Type of Need*	*Reason for Need*	*N,E,R,H (New Expand Replace ReHab)*	*C or F (Current Future)*	*Regula-tion*	*Design Capacity (MG, MGD, or kW)*	*Diameter (inches)*	*Length (feet)*	*Number Needed*	*Cost Estimate*

	M	N	O
1	Federal PWSID No.:	MI0002310	
2	*Cost Date (mm/yyyy)*	*Documen-tation*	*Remove Modify or Validate*

002980

	A	B	C
1		**2015 Drinking Water Infrastructure Needs Survey and Assessment**	
2		**Comment Code Sheet**	
3			
4		PWSID:	MI0002310
5		System Name:	FLINT, CITY OF
6		Batch Number:	
7		Water System Status Code:	
8			
9	**PWSID**	**Project Number**	**State Comment Code(s)**
10	MI0002310		
11	MI0002310		
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15	MI0002310		
16	MI0002310		
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1								
2								
3	Data Entry -- Do not record data in cross-hatched cells							
4								
5	Total Pipe in System (ft):							
6	Total R/H:	0	0					
7	Percentage R/H:							
8								
9	**Internal Code(s)**	**Pipe R/H Length (in ft.)** ***Original***	**Pipe R/H Length (in ft.)** ***Amended***					
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1		**2015 DRINKING WATER INFRASTRUCTURE NEEDS SURVEY AND ASSESSMENT**		
2		**SURVEY REVIEW LOG**		
3		Additional costs for modeling? (Y/N)		
4		PWSID:	MI0002310	
5		System Name:	FLINT, CITY OF	
6		Cadmus Analyst:		
7		Cadmus QA Reviewer:		
8				
9	**PWSID**	**Project Number**	**Comments**	
10	MI0002310			
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1								**Project Table**					Federal PWSID No.:
2	*Project Number*	*Project Name*	*Type of Need*	*Reason for Need*	*N,E,R,H (New Expand Replace ReHab)*	*C or F (Current Future)*	*Regulation*	*Design Capacity (MG, MGD, or kW)*	*Diameter (inches)*	*Length (feet)*	*Number Needed*	*Cost Estimate*	*Cost Date (mm/yyyy)*
3	1000	TREATMENT PLANT PROCESS SCADA	W2	A1	R	F	4A					$978,000	09/2011
4	1001	WTP EXP	T10	A1	E	F	4A					$40,258,000	09/2011
5	1002	PS3 PUMP #1 REPLACE	M99, P1	A1, A4	R	F	4A	8			1		
6	1003	PS3 PUMP #2 REPLACE	M99, P1	A1, A4	R	F	4A	12			1		
7	1004	PS3 PUMP #3 REPLACE	M99, P1	A1, A4	R	F	4A	16			1		
8	1005	PS3 STAND-BY POWER	M99, W4	A11	N	F	4A	20			1		
9	1006	PS5 STAND-BY POWER	M99, W4	A11	N	F	4A	20			1		
10	1007	REPLACE SWITCHGEAR @ PS3	P2	A1									
11	1008	REHAB TORREY RD BOOSTER STA.	P2	A1	H	C	4A				1	$241,000	07/2011
12	1009	CEDAR ST. RESERVOIR REHAB	S2	A1	H	F	4A	20			1		
13	1010	WEST-SIDE RESERVOIR REHAB	S2	A1	H	F	4A	12			1		
14	1011	PUMP STATION 5 RE-HAB	P2	A1	H	F	4A	24			1		
15	2000	UPGRADE 3-FOOT & 4-INCH MAINS WITH 8-INCH	M1	A1	R	C	4A					$12,000,000	02/2007
16	2001	REPLACE CRITICAL 6-INCH MAINS WITH 8-INCH	M1	A1	R	C	4A					$1,000,000	02/2007
17	2002	LOOP EXSISTING 6-INCH MAINS WITH 8-INCH	M1	A1	N	C	4A		8	3025			
18	2003	LOOP EXSISTING 12-INCH MAINS	M1	A1	N	C	4A		12	800			
19	2004	REPLACE EXISTING 6-INCH MAIONS WITH 8-INCH	M1	A1	R	C	4A		8	91000			
20	2005	REPLACE 8-INCH MAINS	M1	A1	R	C	4A		8	45500			
21	2006	REPLACE 10-INCH & 12-INCH MAINS WITH 12-INCH	M1	A1	R	F	4A		12	15600			
22	2007	REPLACE 14-INCH AND 16-INCH MAINS WITH 16-INCH	M1	A1	R	F	4A		16	10400			
23	2008	REPLACE 18-INCH MAINS	M1	A1	R	F	4A		18	4160			
24	2009	REPLACE 24-INCH MAINS	X2	A1	R	C			24	7800			
25	2010	REPLACE 30-INCH MAINS	X2	A1	R	C			30	1040			

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2	***Documen-tation***	***Remove Modify or Validate***		***Comment Codes***						2011 ProjectKey						
3	2, 10			328, 336						289436						
4	2, 10	*		252, 336, 348						289437						
5	20			100						289438						
6	20			100						289439						
7	20			100						289440						
8	10, 20	*		216, 400						289441						
9	10, 20	*		216, 400						289442						
10				262						289443						
11	2, 3, 10			324, 338						289444						
12	20			100						289445						
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15	20	*		100						289530						
16	20	*		100						289531						
17	10	*		216, 400						289532						
18	10	*		216, 400						289533						
19	20	*		328						289534						
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21	20	*		328						289536						
22	20	*		328						289537						
23	1, 2, 20	*		340						289538						
24	20	*		340						289539						
25	20	*		340						289540						

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26	2011	REPLACE 36-INCH MAINS	X2	A1	R	C	4A		36	715			
27	2012	LOOP EXSISTING 8-INCH MAINS	M1	A1	N	C	4A		8	400			
28	2013	REPLACE 42-INCH MAINS	X2	A1	R	F	4A		42	95			
29	2014	REPLACE 72-INCH MAINS	X2	A1	R	C	4A		72	3744			
30	3000	REPLACE RESIDENTIAL METERS	M8	A1	R	C	4A		0.625		32931		
31	3001	REPLACE RESIDENTIAL METERS	M8	A1	R	C	4A		1		471		
32	3002	REPLACE RESIDENTIAL METERS	M8	A1	R	C	4A		1.5		393		
33	3003	REPLACE RESIDENTIAL METERS	M8	A1	R	C	4A		2		20		
34	3004	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		0.625		439		
35	3005	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		1		281		
36	3006	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		1.5		350		
37	3007	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		2		368		
38	3008	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		3		107		
39	3009	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		4		71		
40	3010	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		6		47		
41	3011	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		8		3		
42	3012	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		10		6		
43	3013	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		16		1		
44	3014	REPLACE COMMERCIAL METERS	M8	A1	R	F	4A		24		1		
45	3015	LEAD SERVICE REPLACEMENT	M2	A1, A6	R	C	1D		1		18000		
46	3017	OTHER SERVICE LINE REPLACEMENT	M2	A1	R	F	4A		1		3238		
47	3018	REPLACE SERVICE LINES > 1-INCH	M2	A1	R	F	4A				275		
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27	10	*		216, 400						289542						
28	20	*		100						289543						
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From: Busch, Stephen (DEQ)
Sent: Tuesday, July 07, 2015 2:51 PM
To: John O'Brien P.E., BCE (jfobrien@gcdcwws.com)
Cc: Prysby, Mike (DEQ);David Jansen (djansen@gcdcwws.com);Matthew Raysin P.E. (mraysin@gcdcwws.com)
Subject: EPA Drinking Water Needs Survey - Karegnondi Water Authority
Attachments: MI0003563.xlsm; 2015 DWINSA Lists of Codes.pdf; EPA Cover Ltr for 2015 DWINSA.PDF; Documentation Policy Table (2-page).pdf; 2015 DWINSA Instructions for Systems.doc; Package Contents and Return Instructions.docx

Importance: High

John,

I am sending this out in Mike Prysby's absence. I believe he may have mentioned it to you previously.

The Karegnondi Water Authority community water system has been selected by EPA to participate in the 2015 Drinking Water Needs Survey. This survey documents the 20 year needs regarding all aspects of the KWA public water supply. The results of the Needs Survey are used to determine state allocation of federal revolving loan funds.

Attached you will find the following related documents:

- EPA Cover Letter
- Karegnondi Water Authority Needs Survey Spreadsheet form (MI0003563.xlsm)
- Package Contents and Return Instructions document
- Instructions for completing the Needs Survey
- Needs Survey Code Listing
- Need Code Documentation Table

PLEASE NOTE a Needs Survey for Genesee County Water System is being requested separately.

As the KWA was not requested to participate in the previous Needs Survey conducted in 2011, we are asking the KWA to complete the 2015 Needs Survey and return it to our office by October 1, 2015.

To assist you in properly completing the 2015 Needs Survey, Mike Prysby will be available to meet at the City with staff and you may contact him to schedule a meeting.

In the interim, until Mike is back, you may contact me directly with any questions you may have.

We understand the work needed to complete this Needs Survey will utilize valuable staff time, and appreciate your cooperation in its completion.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

	B	C
1	**2015 Drinking Water Infrastructure**	
2	**Needs Survey And Assessment**	
3	*MI0003563*	
4	Washington, DC 20460	
5		
6	**Please verify or correct the following information:**	
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8		
9	Name of System (Community):	KAREGNONDI WATER AUTHORITY
10	Name of Contact:	
11	Street Address:	
12	City, State, and Zip:	
13	Population Served (if wholesaler, include consecutive population as appropriate):	254,245
14	Number of Connections (not including consecutive systems):	0
15	Total System Design Capacity (in MGD):	
16	Total Length of Pipe in System (in Feet):	
17	Source Water Type	Surface/GWUDI
18	(Ground, Surface/GWUDI, etc.):	
19	Ownership Type:	Public
20		
21	Public reporting burden for this collection of information is estimated to average 5.53 hours per response. This estimate includes time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collected. Burden means the total time, effort, or financial resources expended by person(s) to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information; adjust the existing ways to comply with any previously applicable instructions; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.	
22	Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, OPPI, Regulatory Information Division, U.S. Environmental Protection Agency (1804A), Ariel Rios Building, 1200 Pennsylvania Ave., NW, Washington, DC 20460; and Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, N.W., Washington, DC 20503.	
23	**State Use Only**	
24	**State Reviewer:**	
25		
26	Information provided for this survey can be requested by the public. It is our experience that this information is rarely requested.	

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3		U.S. Environmental Protection Agency					
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7		**Check if Correct**		**Corrected Information**			
8		**as Printed**		*(Fill in only if preprinted information is missing or incorrect)*			
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17		Check All That Apply:	☐		☐	Ground	☐
18					☐	Purchased Ground	☐
19		Check All That Apply:			☐	Public	☐
20					☐	Federal Government	
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1	OMB Control No.: 2040-0274
2	Approval Expires: 06/30/2018
3	Federal PWSID No.: MI0003563
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1								**Project Table**					Federal PWSID No.:
2	*Project Number*	*Project Name*	*Type of Need*	*Reason for Need*	*N,E,R,H (New Expand Replace ReHab)*	*C or F (Current Future)*	*Regulation*	*Design Capacity (MG, MGD, or kW)*	*Diameter (inches)*	*Length (feet)*	*Number Needed*	*Cost Estimate*	*Cost Date (mm/yyyy)*
3	*Ex. 1*	*Replace wells 5 and 8 at 0.5 MGD each*	*R1*	*A1*	*R*	*C*	*4A*	*0.5*			*2*		
4	*Ex. 2*	*Replace Deteriorated Transmission Main*	*X2*	*A1*	*R*	*C*	*4A*		*24*	*20,000*		*$4,200,000*	*06/2015*
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1	**Source, Treatment, Storage, and Pumping Inventory**	
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3		To ensure all potential source, treatment, and storage projects are considered, it may be helpful to complete some or all of this inventory table.
4		However, completion of this table is not required.
5		▪ **Source Projects** are all projects related to collecting and pumping raw water. This includes wells, surface water intakes, springs, off-stream raw
6		water storage, and pumps.
7		▪ **Treatment Projects** are all projects related to disinfection, filtration, or other treatment processes for ground or surface water sources, or for
8		treatment applied in the distribution system.
9		▪ **Storage and Pumping Projects** are related to finished or treated water storage, and booster pump stations.
10		
11		**Source Water**
12		**Inventory**
13		Total Number and Capacity of Existing Wells or Springs:
14		
15		
16		Total Number and Capacity of Existing Surface Water Sources:
17		
18		Total Number and Capacity of Existing Pumps (excluding booster pump stations):
19		
20		
21		
22		
23		**Treatment**
24		**Inventory**
25		For the sources identified above, enter the number of locations where the following treatment is applied:
26		Disinfection (including booster disinfection):
27		
28		Filtration:
29		
30		Chemical removal or addition:
31		
32		**Storage and Pump Stations**
33		**Inventory**
34		Total Number and Capacity of Existing Storage Tanks:
35		
36		
37		Total Number and Capacity of Existing Booster Pump Stations:
38		

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12			**Needing Replacement**			**Needing Rehabilitation**		
13			Wells (pumps included) or Springs:			Wells (pumps included) or Springs:		
14								
15								
16			Existing Surface Water Intakes (excluding pumps):			Existing Surface Water Intakes (excluding pumps):		
17								
18			Existing Groundwater Pumps (if wells not listed):			Existing Groundwater Pumps (if wells not listed):		
19								
20								
21			Existing Raw Surface Water Pumps:			Existing Raw Surface Water Pumps:		
22								
23								
24			**Needing Replacement**			**Needing Expansion/Upgrading or Rehabilitation**		
25								
26			Disinfection:			Disinfection:		
27								
28			Filtration:			Filtration:		
29								
30			Chemical treatment:			Chemical treatment:		
31								
32								
33			**Needing Replacement**			**Needing Rehabilitation**		
34			Number of Existing Elevated or Ground- Level Storage Tanks:			Number of Existing Elevated or Ground-Level Storage Tanks:		
35								
36								
37			Number of Existing Booster Pump Stations:			Number of Existing Booster Pump Stations:		
38								

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12	**New Infrastructure Needs**
13	Does your system have additional source water capacity needs to meet the needs of current users?
14	
15	☐ Yes
16	
17	If yes, how many additional sources are necessary?
18	
19	
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23	
24	**New Infrastructure Needs**
25	Does your system have additional treatment needs for provisions of additional public health protection or for aesthetic concerns?
26	
27	
28	☐ Yes
29	
30	If yes, how much additional treatment is necessary?
31	
32	
33	**New Infrastructure Needs**
34	Does your system have additional storage capacity and/or booster pumping needs to meet the needs of current users?
35	
36	☐ Yes
37	
38	If yes, how much additional finished water storage or booster pumping capacity is necessary?

	B
1	**Transmission and Distribution Inventory**
2	**Transmission and distribution projects** are the piping needs of a water system. Projects for **valves, backflow prevention devices and assemblies, and meters** that are not part of a transmission or distribution project listed in this table should be recorded in the table under the tab titled "Inventory Table 3".
3	
4	
5	**Note: The total feet or miles of pipe in your system is required information if any pipe projects are**
6	**submitted based solely on survey-generated documentation (documentation codes 10 or 11).**
7	
8	Total Pipe in System
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3	On the table below, please provide an estimate of the total feet or miles of pipe in your system, if possible. Completion of this table is not required, but it may be helpful to			
4	ensure all potential transmission and distribution pipe projects are considered.			
5				
6				
7				
8				
9		*(Check feet or miles)*		
10			☐ feet	
11	Plastic		☐ miles	
12			% of total pipe	
13				
14			☐ feet	
15	Ductile Iron		☐ miles	
16			% of total pipe	
17				
18			☐ feet	
19	Cast Iron		☐ miles	
20			% of total pipe	
21				
22			☐ feet	
23	Asbestos Cement		☐ miles	
24			% of total pipe	
25				
26			☐ feet	
27	Other		☐ miles	
28			% of total pipe	

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5						☐	**feet**	**Total Pipe**	
6						☐	**miles**	**in System**	
7							*(Check feet or miles)*		
8									
9		<=6 inch		8-12 inch		15-42 inch		>=48 inch	
10			☐ feet		☐ feet		☐ feet		☐ feet
11	Amount of PVC by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
12	% of this category/size pipe currently in poor condition or beyond useful life		%		%		%		%
13									
14			☐ feet		☐ feet		☐ feet		☐ feet
15	Amount of ductile iron by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
16	% of this category/size pipe currently in poor condition or beyond useful life		%		%		%		%
17									
18			☐ feet		☐ feet		☐ feet		☐ feet
19	Amount of cast iron by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
20	% of this category/size pipe currently in poor condition or beyond useful life		%		%		%		%
21									
22			☐ feet		☐ feet		☐ feet		☐ feet
23	Amount of asbestos cement by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
24	% of this category/size pipe currently in poor condition or beyond useful life		%		%		%		%
25									
26			☐ feet		☐ feet		☐ feet		☐ feet
27	Amount of other by pipe size		☐ miles		☐ miles		☐ miles		☐ miles
28	% of other currently in poor condition or beyond useful life		%		%		%		%

	B
1	**Meters, Service Lines, Backflow Prevention Devices/Assemblies, Valves, etc.**
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8	To ensure all potential projects are considered, it may be helpful to complete some or all of this inventory table. However, completion of this table is not required.
9	**Inventory**
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2	Projects for meters, service lines, backflow prevention devices and assemblies, valves, and other miscellaneous projects		
3	are recorded in this section to accommodate entries of multiple identical items on one line in the project table.		
4			
5	**Record only projects that are not a part of another project (e.g., water main replacement projects will already include valves and other appurtenances).**		
6	EPA requires documentation of all projects provided. Applicable types of documentation are presented in List 4 of the Lists of Codes. Use only existing documentation of cost. We do not expect you to develop new cost estimates.		
7			
8			
9			**Needing Replacement**
10	Total Number of Existing Water Meters:		
11			
12	Total Number of Existing Backflow Prevention Devices/Assemblies:		
13			
14	Total Number of Valves:		
15			
16	Total Number of Lead Service Lines:		

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9			**New Infrastructure Needs**	
10	Number of Water Meters:			Number of Water Meters:
11				
12	Number of Backflow Prevention Devices/Assemblies:			Number of Backflow Prevention Devices/Assemblies:
13				
14	Number of Valves:			Number of Valves:
15				
16				

	B
1	**Respondent Information**
2	
3	Please provide the following information in case we need to contact you for clarification or additional explanation of any of your responses.
4	
5	Contact Person (Person who completed this questionnaire):
6	
7	Signature:
8	Name (please print):
9	Title:
10	Mailing Address:
11	(Street Address)
12	
13	
14	
15	**If you have any questions, contact your state coordinator.**
16	
17	
18	**CLOSING: Thank you for your help. Did you remember to?**
19	
20	☐
21	
22	☐

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7				Telephone Number:
8				Fax Number:
9				E-mail Address:
10				Best Time to Reach You:
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20	Identify, by project number, available documentation for all needs and costs reported?			
21				
22	Email the questionnaire and email or mail the documentation to your state?			

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1				**Summary of Survey-Generated and Independent Documentation for Each Project**	**Federal PWSID No.:**	MI0003563
2	***Project Number***	***Project Name***	***Documen-tation Code(s)***	***State/System Survey-Generated Statement***	***Independent Document Name***	***Independent Documentation Page Number(s)***
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1								***Project Table (Compare 2011 to 2015)***				
2	*Project Number*	*Project Name*	*Type of Need*	*Reason for Need*	*N,E,R,H (New Expand Replace ReHab)*	*C or F (Current Future)*	*Regula-tion*	*Design Capacity (MG, MGD, or kW)*	*Diameter (inches)*	*Length (feet)*	*Number Needed*	*Cost Estimate*

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1	Federal PWSID No.:	MI0003563	
2	*Cost Date (mm/yyyy)*	*Documen-tation*	*Remove Modify or Validate*

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	A	B	C
1		**2015 Drinking Water Infrastructure Needs Survey and Assessment**	
2		**Comment Code Sheet**	
3			
4		PWSID:	MI0003563
5		System Name:	KAREGNONDI WATER AUTHORITY
6		Batch Number:	
7		Water System Status Code:	
8			
9	**PWSID**	**Project Number**	**State Comment Code(s)**
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3	Data Entry -- Do not record data in cross-hatched cells							
4								
5	Total Pipe in System (ft):							
6	Total R/H:	0	0					
7	Percentage R/H:							
8								
9	**Internal Code(s)**	**Pipe R/H Length (in ft.)** ***Original***	**Pipe R/H Length (in ft.)** ***Amended***					
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1		**2015 DRINKING WATER INFRASTRUCTURE NEEDS SURVEY AND ASSESSMENT**		
2		**SURVEY REVIEW LOG**		
3		Additional costs for modeling? (Y/N)		
4		PWSID:	MI0003563	
5		System Name:	KAREGNONDI WATER AUTHORITY	
6		Cadmus Analyst:		
7		Cadmus QA Reviewer:		
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9	**PWSID**	**Project Number**	**Comments**	
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1								**Project Table**					Federal PWSID No.:	MI0003563
2	*Project Number*	*Project Name*	*Type of Need*	*Reason for Need*	*N,E,R,H (New Expand Replace ReHab)*	*C or F (Current Future)*	*Regulation*	*Design Capacity (MG, MGD, or kW)*	*Diameter (inches)*	*Length (feet)*	*Number Needed*	*Cost Estimate*	*Cost Date (mm/yyyy)*	*Documen-tation*
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2	***Remove Modify or Validate***		***Comment Codes***						2011 ProjectKey							
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 10 2015

OFFICE OF WATER

Dear Water System Professional:

In partnership with the states, Puerto Rico, the District of Columbia and the U.S. territories (Guam, U.S. Virgin Islands, Northern Mariana Islands and American Samoa), we are conducting the sixth nationwide survey of drinking water systems' capital investment needs.

Your water system is one of approximately 2,800 systems across the country that we have selected to participate in the 2015 Drinking Water Infrastructure Needs Survey and Assessment. Although participation is voluntary, **your response will determine the amount of money your state or EPA Region receives under the Drinking Water State Revolving Fund (DWSRF)**, which enables states and EPA Regions to provide low interest loans and other forms of financial assistance to water systems. Your participation is critical to the success of the drinking water program in your state and EPA Region.

Please work with your state or, if a US Territory, EPA Regional Office to fill out the enclosed questionnaire and provide the needed supporting documentation. You can also contact the Needs Survey contractor at 1-406-443-9194 if you have questions.

Thank you in advance for your help with the 2015 Assessment.

Sincerely Yours,

R. W. Barles

Robert Barles, National Project Manager
2015 Drinking Water Infrastructure Needs Survey

From: Spielberg, John (DEQ)
Sent: Tuesday, July 07, 2015 3:21 PM
To: Graham, Lois (DEQ)
Cc: Thomas, Chuck (DEQ);Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Subject: RE: res well sampling planned in Flint Township this Sept. or Oct.
Attachments: Parcels_near_dry_cleaner-noPubSupplConnection (Autosaved).xlsx; RE: Flint Twp 3261 Flushing Rd; 2015 05 04 map Flint Twp 3261 Flushing Rd pub water supply connections near site.pdf

Hi, Lois. The attached list is supposed to be addresses with no public water connections, according to a map from Tim Davidek with the Genesee County Drain Commissioner, Division of Water & Waste Services. The map is also attached. I do need to make sure the analysis has low enough detection limits to detect potential contaminants that exceed drinking water standards. Our site assessment work is funded by the EPA and therefore we have to use their CLP labs, which can do trace level analysis.

From: Graham, Lois (DEQ)
Sent: Tuesday, July 07, 2015 2:47 PM
To: Spielberg, John (DEQ)
Cc: Thomas, Chuck (DEQ); Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: FW: res well sampling planned in Flint Township this Sept. or Oct.

Hi John:

You and I talked a few weeks ago about historical drinking water sampling in the vicinity of Container Specialties in Flint.

I only knew of a couple of possible drinking water well locations there because nearly everyone else on our list had connected to community water.

Which drinking water well locations are planned to be included in your September/October 2015 round?

Do you want to have me coordinate the sampling with Genesee County Health Department as part of our annual contract?

If not, which lab are you using? I need to make sure that drinking water samples are analyzed (assuming voc analyses) using the 524.2 method and not the Environmental Lab's 8360 method.

Lois Elliott Graham, R.S., M.S.A.
Office of Drinking Water & Municipal Assistance
Field Operations Section
Contamination Investigation Program
P.O. Box 30241
Lansing, Michigan 48909-7741
Office: 517-284-6530
Fax: 517-241-1328

grahaml@michigan.gov
4-South, Pillar N8

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From: Busch, Stephen (DEQ)
Sent: Tuesday, July 07, 2015 12:07 PM
To: Graham, Lois (DEQ); Thomas, Chuck (DEQ)
Subject: FW: res well sampling planned in Flint Township this Sept. or Oct.

FYI. Planned RRD sampling.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Spielberg, John (DEQ)
Sent: Tuesday, July 07, 2015 12:04 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Devantier, Daria W. (DEQ); Walczak, Joe (DEQ); Skinker, Bethel (DEQ)
Subject: res well sampling planned in Flint Township this Sept. or Oct.

Hi, Mike. Just a heads up that we are planning some res well sampling in September or October (November if needed) this year and need to coordinate with you during the planning and execution of the sampling as well as communicating with well owners once we have results. We will be conducting a site inspection of the Container Specialties Inc. site at 3261 Flushing Road, Flint, which will include soil, waste, and groundwater sampling. FYI

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
1	OBJECTID_1	OBJECTID	ParIDShort	PropComb	ParcelID	ParIDPack	LotLabel	ParcelType	PropClass
2	43783	43797	07-10-552-074	BALTWOOD CT	25-07-10-552-074	0710552074	136	Lot	400-RESIDENTIAL VACANT
3	43880	43894	07-10-552-076	RIVER OAK DR	25-07-10-552-076	0710552076	138	Lot	400-RESIDENTIAL VACANT
4	43883	43897	07-10-552-071	BALTWOOD CT	25-07-10-552-071	0710552071	133	Lot	400-RESIDENTIAL VACANT
5	43893	43907	07-10-552-075	BALTWOOD CT	25-07-10-552-075	0710552075	137	Lot	400-RESIDENTIAL VACANT
6	44002	44016	07-10-552-078	GREENWOOD CT	25-07-10-552-078	0710552078	140	Lot	400-RESIDENTIAL VACANT
7	44007	44021	07-10-552-079	GREENWOOD CT	25-07-10-552-079	0710552079	141	Lot	400-RESIDENTIAL VACANT
8	44109	44123	07-10-501-003	3551 FLUSHING RD	25-07-10-501-003	0710501003	3	Lot	401-RESIDENTIAL
9	44121	44135	07-10-552-070	BALTWOOD CT	25-07-10-552-070	0710552070	132	Lot	400-RESIDENTIAL VACANT
10	44130	44144	07-10-552-068	BALTWOOD CT	25-07-10-552-068	0710552068	130	Lot	400-RESIDENTIAL VACANT
11	44141	44155	07-10-552-077	RIVER OAK DR	25-07-10-552-077	0710552077	139	Lot	400-RESIDENTIAL VACANT
12	44169	44183	07-10-552-080	GREENWOOD CT	25-07-10-552-080	0710552080	142	Lot	400-RESIDENTIAL VACANT
13	44188	44202	07-10-552-094	RIVERFOREST DR	25-07-10-552-094	0710552094	156	Lot	400-RESIDENTIAL VACANT
14	44203	44217	07-10-552-069	BALTWOOD CT	25-07-10-552-069	0710552069	131	Lot	400-RESIDENTIAL VACANT
15	44213	44227	07-10-552-095	RIVERFOREST DR	25-07-10-552-095	0710552095	157	Lot	400-RESIDENTIAL VACANT
16	44232	44246	07-10-501-004	3543 FLUSHING RD	25-07-10-501-004	0710501004	4	Lot	401-RESIDENTIAL
17	44337	44351	07-10-551-030	RIVERFOREST CT	25-07-10-551-030	0710551030	30	Lot	400-RESIDENTIAL VACANT
18	44342	44356	07-10-551-029	RIVERFOREST CT	25-07-10-551-029	0710551029	29	Lot	400-RESIDENTIAL VACANT
19	44346	44360	07-10-552-093	RIVERFOREST DR	25-07-10-552-093	0710552093	155	Lot	400-RESIDENTIAL VACANT
20	44348	44362	07-10-552-081	GREENWOOD CT	25-07-10-552-081	0710552081	143	Lot	400-RESIDENTIAL VACANT
21	44353	44367	07-10-552-067	RIVERFOREST DR	25-07-10-552-067	0710552067	129	Lot	400-RESIDENTIAL VACANT
22	44367	44381	07-10-501-005	3533 FLUSHING RD	25-07-10-501-005	0710501005	5	Lot	401-RESIDENTIAL
23	44424	44438	07-10-552-082	GREENWOOD CT	25-07-10-552-082	0710552082	144	Lot	400-RESIDENTIAL VACANT
24	44428	44442	07-10-551-031	1299 RIVERFOREST DR	25-07-10-551-031	0710551031	31	Lot	401-RESIDENTIAL
25	44434	44448	07-10-552-096	RIVER OAK DR	25-07-10-552-096	0710552096	158	Lot	400-RESIDENTIAL VACANT
26	44441	44455	07-10-552-092	RIVERFOREST DR	25-07-10-552-092	0710552092	154	Lot	400-RESIDENTIAL VACANT
27	44471	44485	07-10-552-066	RIVERFOREST DR	25-07-10-552-066	0710552066	128	Lot	400-RESIDENTIAL VACANT
28	44477	44491	07-10-551-028	1293 RIVERFOREST DR	25-07-10-551-028	0710551028	28	Lot	401-RESIDENTIAL
29	44480	44494	07-10-501-006	3523 FLUSHING RD	25-07-10-501-006	0710501006	6	Lot	700-EXEMPT VACANT
30	44491	44505	07-10-551-027	1285 RIVERFOREST DR	25-07-10-551-027	0710551027	27	Lot	401-RESIDENTIAL
31	44517	44531	07-10-552-091	RIVERFOREST DR	25-07-10-552-091	0710552091	153	Lot	400-RESIDENTIAL VACANT
32	44524	44538	07-10-552-083	RIVER OAK DR	25-07-10-552-083	0710552083	145	Lot	400-RESIDENTIAL VACANT
33	44556	44570	07-10-552-097	RIVER OAK DR	25-07-10-552-097	0710552097	159	Lot	400-RESIDENTIAL VACANT
34	44595	44609	07-10-551-026	RIVERFOREST DR	25-07-10-551-026	0710551026	26	Lot	400-RESIDENTIAL VACANT
35	44603	44617	07-10-552-065	RIVERFOREST DR	25-07-10-552-065	0710552065	127	Lot	400-RESIDENTIAL VACANT
36	44616	44630	07-10-551-032	1301 RIVERFOREST DR	25-07-10-551-032	0710551032	32	Lot	401-RESIDENTIAL
37	44661	44675	07-10-501-026	3550 FLUSHING RD	25-07-10-501-026	0710501026	24S	Lot	201-COMMERCIAL IMPROVED
38	44679	44693	07-10-552-090	RIVERFOREST DR	25-07-10-552-090	0710552090	152	Lot	400-RESIDENTIAL VACANT
39	44686	44700	07-10-552-084	RIVER OAK DR	25-07-10-552-084	0710552084	146	Lot	400-RESIDENTIAL VACANT
40	44703	44717	07-10-501-007	3503 FLUSHING RD	25-07-10-501-007	0710501007	8/7S	Lot	201-COMMERCIAL IMPROVED
41	44708	44722	07-10-551-025	RIVERFOREST DR	25-07-10-551-025	0710551025	25	Lot	700-EXEMPT VACANT
42	44726	44740	07-10-552-098	RIVER OAK DR	25-07-10-552-098	0710552098	160	Lot	400-RESIDENTIAL VACANT

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
1	ClassType	AcreCalcNM	AcreCalcTx	SchoolDist	SchoolID	PropDir	PropNum	PropStreet	PropCity	PropZip
2	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080			BALTWOOD CT	FLINT	48532
3	Residential	0.80000001	0.8	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
4	Residential	0.77999997	0.78	CARMAN-AINSWORTH SCHOOLS	25080			BALTWOOD CT	FLINT	48532
5	Residential	0.46000001	0.46	CARMAN-AINSWORTH SCHOOLS	25080			BALTWOOD CT	FLINT	48532
6	Residential	0.43000001	0.43	CARMAN-AINSWORTH SCHOOLS	25080			GREENWOOD CT	FLINT	48532
7	Residential	0.50000000	0.5	CARMAN-AINSWORTH SCHOOLS	25080			GREENWOOD CT	FLINT	48532
8	Residential	1.89999998	1.9	CARMAN-AINSWORTH SCHOOLS	25080		3551	FLUSHING RD	FLINT	48504
9	Residential	0.75000000	0.75	CARMAN-AINSWORTH SCHOOLS	25080			BALTWOOD CT	FLINT	48532
10	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080			BALTWOOD CT	FLINT	48532
11	Residential	0.38999999	0.39	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
12	Residential	0.60000002	0.6	CARMAN-AINSWORTH SCHOOLS	25080			GREENWOOD CT	FLINT	48532
13	Residential	0.47999999	0.48	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
14	Residential	0.54000002	0.54	CARMAN-AINSWORTH SCHOOLS	25080			BALTWOOD CT	FLINT	48532
15	Residential	0.63000000	0.63	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
16	Residential	1.91999996	1.92	CARMAN-AINSWORTH SCHOOLS	25080		3543	FLUSHING RD	FLINT	48504
17	Residential	0.47000000	0.47	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST CT	FLINT	48532
18	Residential	0.44000000	0.44	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST CT	FLINT	48532
19	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
20	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080			GREENWOOD CT	FLINT	48532
21	Residential	0.80000001	0.8	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
22	Residential	1.97000003	1.97	CARMAN-AINSWORTH SCHOOLS	25080		3533	FLUSHING RD	FLINT	48504
23	Residential	0.38000000	0.38	CARMAN-AINSWORTH SCHOOLS	25080			GREENWOOD CT	FLINT	48532
24	Residential	0.69999999	0.7	CARMAN-AINSWORTH SCHOOLS	25080		1299	RIVERFOREST DR	FLINT	48532
25	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
26	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
27	Residential	0.82999998	0.83	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
28	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080		1293	RIVERFOREST DR	FLINT	48532
29	Exempt	1.94000006	1.94	CARMAN-AINSWORTH SCHOOLS	25080		3523	FLUSHING RD	FLINT	48504
30	Residential	0.38999999	0.39	CARMAN-AINSWORTH SCHOOLS	25080		1285	RIVERFOREST DR	FLINT	48532
31	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
32	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
33	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
34	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
35	Residential	0.62000000	0.62	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
36	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080		1301	RIVERFOREST DR	FLINT	48532
37	Commercial	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080		3550	FLUSHING RD	FLINT	48504
38	Residential	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
39	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
40	Commercial	3.24000001	3.24	CARMAN-AINSWORTH SCHOOLS	25080		3503	FLUSHING RD	FLINT	48504
41	Exempt	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
42	Residential	0.41000000	0.41	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
1	OwnName	OwnStreet	OwnCity	OwnState	OwnZip	TaxName
2	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
3	NEUFFER, ALFRED E	16550 HI LAND TR	LINDEN	MI	48451	NEUFFER, GREG
4	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
5	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
6	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
7	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
8	WOODBURY, TIM	2081 KENNETH ST	BURTON	MI	48529	
9	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
10	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
11	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
12	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
13	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
14	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
15	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
16	ROUGH, LEWIS S	3543 FLUSHING RD	FLINT	MI	48504	
17	BOWLING, ANTHONY G	1299 RIVERFOREST	FLINT	MI	48532	
18	BOWLING, ANTHONY G ETAL	1299 RIVERFOREST DR	FLINT	MI	48532	
19	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
20	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
21	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
22	STERLING MORTGAGE & INVESTMENT CO	31333 W THIRTEEN MILE RD	FARMINGTON HILLS	MI	48334	
23	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
24	BOWLING, ANTHONY G	1299 RIVERFOREST DR	FLINT	MI	48532	
25	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
26	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
27	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
28	CROWDER, ALTRICA	1293 RIVERFOREST DR	FLINT	MI	48532	
29	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502	
30	ROUSE, JAMES D	1285 RIVERFOREST DR	FLINT	MI	48532	
31	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
32	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
33	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
34	ROUSE, JAMES D	1285 RIVERFOREST DR	FLINT	MI	48532	
35	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
36	RICHARDSON, RECCO & RENE	1301 RIVERFOREST DR	FLINT	MI	48532	
37	CLARK, MARK W DDS	G-3550 FLUSHING RD	FLINT	MI	48504	
38	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
39	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
40	PATTERSON, DAVID M	3503 FLUSHING RD	FLINT	MI	48504	HENRY, LORI
41	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
42	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	TaxStreet	TaxCity	TaxState	TaxZip	Homestead	IsExempt	Assessment	Cap	SEV	Xcoord
2	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287602.34790000
3	12132 INDIAN OAK DR	FENTON	MI	48430	0	No	500	500	500	13287651.66580000
4	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287653.37980000
5	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287661.88320000
6	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287729.07780000
7	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287730.78630000
8					0	No	10900	10970	10900	13287798.24050000
9	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287807.56880000
10	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287811.76380000
11	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287819.30970000
12	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287841.09790000
13	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287853.14770000
14	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287861.07350000
15	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287873.00370000
16					0	No	17700	17670	17700	13287883.01370000
17					0	No	5900	5990	5900	13287940.03110000
18					0	No	5000	5080	5000	13287947.98080000
19	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287951.07210000
20	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287953.04540000
21	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13287957.26850000
22					0	No	31900	31510	31900	13287973.33590000
23	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288008.61840000
24					100	No	59100	58520	59100	13288011.17300000
25	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288016.09710000
26	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288021.73140000
27	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288056.74440000
28					100	No	31800	31590	31800	13288060.16310000
29					0	Yes	0	0	0	13288063.09760000
30					100	No	35000	34640	35000	13288070.63060000
31	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288092.07610000
32	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288096.16670000
33	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288108.99070000
34					100	No	4100	4160	4100	13288125.48080000
35	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288130.81890000
36					100	No	36000	35660	36000	13288140.97490000
37					0	No	37800	38910	37800	13288157.46040000
38	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288162.87040000
39	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288168.05220000
40	7061 NICHOLS RD	FLUSHING	MI	48433	0	No	31900	32510	31900	13288178.80350000
41					0	Yes	0	0	0	13288182.28970000
42	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288194.25830000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
1	Ycoord	Shape_Leng	Shape_STAr	Shape_STLe	mark	Densmore	NoPubConn
2	557115.35629700	509.99812037	14659.15673830000	509.99808939600			
3	556637.62850200	782.84173576	34880.46923830000	782.84174510500			
4	557438.44438300	746.00674887	34124.60449220000	746.00671384500			
5	557027.61561200	577.75189751	19888.27880860000	577.75195603600			
6	556518.03042200	583.51268164	18642.52880860000	583.51276466500			
7	556401.93229100	635.89016597	21827.29199220000	635.89019602200			
8	558111.50228100	1883.31505986	82925.25927730000	1883.31513410000			
9	557400.53047100	799.18920039	32648.37695310000	799.18918220700			
10	557145.63293800	539.10482049	17508.02050780000	539.10485337000			
11	556591.33648900	538.99452317	17089.34814450000	538.99452409600			
12	556296.74888000	671.41091265	26331.32226560000	671.41086803000			
13	556932.63270400	572.00608707	20950.72656250000	572.00611711000			
14	557294.22422300	723.77012004	23556.33251950000	723.77025874400			
15	556780.99513200	758.52232045	27243.03417970000	758.52231999900			
16	558059.23135600	1891.01211792	83795.72998050000	1891.01216408000			
17	556051.78880100	618.71062203	20500.15673830000	618.71067449500			
18	555917.79419300	561.21399632	19084.00097660000	561.21394472800			
19	556893.81103900	509.55734843	13975.44677730000	509.55734317000			
20	556334.01687800	568.63374236	17322.34423830000	568.63374373500			
21	557235.14349300	890.39350595	34692.56835940000	890.39344336600			
22	558012.02217500	1901.05590618	85724.51806640000	1901.05584855000			
23	556430.71223500	539.47874261	16765.99707030000	539.47874229800			
24	556174.94779900	695.10344041	30498.32080080000	695.10349367000			
25	556674.68001700	477.24352564	13626.48583980000	477.24352992200			
26	556857.33790700	517.56099541	14179.04785160000	517.56097523900			
27	557218.92478400	922.05757097	36108.10742190000	922.05754676500			
28	555873.77492500	574.04038712	17282.00146480000	574.04035065600			
29	557963.53667200	1895.58233490	84483.37451170000	1895.58236403000			
30	555783.26444000	567.72068921	17084.09863280000	567.72062388900			
31	556821.54068800	530.85338917	14708.85937500000	530.85324700300			
32	556325.23765700	470.33676002	13211.97949220000	470.33673915100			
33	556622.93893700	540.71088026	17477.62011720000	540.71093929500			
34	555705.34983500	497.53160618	13951.78613280000	497.53168137400			
35	557170.56200700	873.65097629	26929.81494140000	873.65103559800			
36	556127.55542700	544.89898222	15770.90185550000	544.89905613000			
37	558536.52943700	437.45042149	11856.04882810000	437.45039667500			
38	556785.63328700	543.44922958	15335.59521480000	543.44919879900			
39	556265.28063600	471.74633876	13310.64306640000	471.74630645400			
40	557860.37870700	2062.75241717	140995.49169900000	2062.75233701000			
41	555641.63621400	470.09926179	12424.07666020000	470.09932267900			
42	556559.31282500	559.90642263	17935.15527340000	559.90657936900			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
43	44732	44746	07-10-552-064	RIVERFOREST DR	25-07-10-552-064	0710552064	126	Lot	400-RESIDENTIAL VACANT
44	44793	44807	07-10-551-024	RIVERFOREST DR	25-07-10-551-024	0710551024	24	Lot	400-RESIDENTIAL VACANT
45	44794	44808	07-10-552-089	RIVERFOREST DR	25-07-10-552-089	0710552089	151	Lot	400-RESIDENTIAL VACANT
46	44801	44815	07-10-551-033	1315 RIVERFOREST DR	25-07-10-551-033	0710551033	33	Lot	401-RESIDENTIAL
47	44838	44852	07-10-552-063	RIVERFOREST DR	25-07-10-552-063	0710552063	125	Lot	400-RESIDENTIAL VACANT
48	44846	44860	07-10-552-099	RIVER OAK DR	25-07-10-552-099	0710552099	161	Lot	400-RESIDENTIAL VACANT
49	44849	44863	07-10-551-036	1288 RIVERFOREST DR	25-07-10-551-036	0710551036	36	Lot	401-RESIDENTIAL
50	44860	44874	07-03-551-011	3560 FLUSHING RD	25-07-03-551-011	0703551011	23	Lot	201-COMMERCIAL IMPROVED
51	44864	44878	07-10-501-009	3497 FLUSHING RD	25-07-10-501-009	0710501009	9S	Lot	201-COMMERCIAL IMPROVED
52	44865	44879	07-10-551-035	1300 RIVERFOREST DR	25-07-10-551-035	0710551035	35	Lot	401-RESIDENTIAL
53	44891	44905	07-10-551-037	RIVERFOREST DR	25-07-10-551-037	0710551037	37	Lot	400-RESIDENTIAL VACANT
54	44892	44906	07-10-552-088	RIVERFOREST DR	25-07-10-552-088	0710552088	150	Lot	400-RESIDENTIAL VACANT
55	44894	44908	07-10-501-027	3538 FLUSHING RD	25-07-10-501-027	0710501027	25S	Lot	201-COMMERCIAL IMPROVED
56	44913	44927	07-10-552-062	RIVERFOREST DR	25-07-10-552-062	0710552062	124	Lot	400-RESIDENTIAL VACANT
57	44947	44961	07-10-552-100	RIVER OAK DR	25-07-10-552-100	0710552100	162	Lot	400-RESIDENTIAL VACANT
58	44967	44981	07-10-551-034	1314 RIVERFOREST DR	25-07-10-551-034	0710551034	34	Lot	401-RESIDENTIAL
59	44969	44983	07-10-501-008	3511 FLUSHING RD	25-07-10-501-008	0710501008	7/8W	Lot	200-COMMERCIAL VACANT
60	44987	45001	07-10-551-038	1270 RIVERFOREST DR	25-07-10-551-038	0710551038	38	Lot	401-RESIDENTIAL
61	45007	45021	07-10-552-087	RIVERFOREST DR	25-07-10-552-087	0710552087	149	Lot	400-RESIDENTIAL VACANT
62	45041	45055	07-10-552-061	RIVERFOREST DR	25-07-10-552-061	0710552061	123	Lot	400-RESIDENTIAL VACANT
63	45050	45064	07-10-552-085	RIVERFOREST DR	25-07-10-552-085	0710552085	147	Lot	400-RESIDENTIAL VACANT
64	45057	45071	07-03-551-012	3548 FLUSHING RD	25-07-03-551-012	0703551012	24N	Lot	201-COMMERCIAL IMPROVED
65	45086	45100	07-10-551-039	RIVERFOREST DR	25-07-10-551-039	0710551039	39	Lot	400-RESIDENTIAL VACANT
66	45109	45123	07-10-552-101	RIVER OAK DR	25-07-10-552-101	0710552101	163	Lot	400-RESIDENTIAL VACANT
67	45117	45131	07-10-501-011	3483 FLUSHING RD	25-07-10-501-011	0710501011	10	Lot	201-COMMERCIAL IMPROVED
68	45190	45204	07-10-552-060	RIVERFOREST DR	25-07-10-552-060	0710552060	122	Lot	400-RESIDENTIAL VACANT
69	45192	45206	07-10-551-040	1254 RIVERFOREST DR	25-07-10-551-040	0710551040	40	Lot	401-RESIDENTIAL
70	45196	45210	07-10-552-086	RIVERFOREST DR	25-07-10-552-086	0710552086	148	Lot	400-RESIDENTIAL VACANT
71	45228	45242	07-10-552-102	RIVER OAK DR	25-07-10-552-102	0710552102	164	Lot	400-RESIDENTIAL VACANT
72	45274	45288	07-10-551-041	1246 RIVERFOREST DR	25-07-10-551-041	0710551041	41	Lot	401-RESIDENTIAL
73	45281	45295	07-10-552-048	RIVER OAK DR	25-07-10-552-048	0710552048	110	Lot	400-RESIDENTIAL VACANT
74	45310	45324	07-10-501-010	3497 FLUSHING RD	25-07-10-501-010	0710501010	9N	Lot	201-COMMERCIAL IMPROVED
75	45322	45336	07-10-552-103	RIVER OAK DR	25-07-10-552-103	0710552103	165	Lot	400-RESIDENTIAL VACANT
76	45330	45344	07-10-552-059	RIVERFOREST DR	25-07-10-552-059	0710552059	121	Lot	400-RESIDENTIAL VACANT
77	45336	45350	07-03-551-014	3530 FLUSHING RD	25-07-03-551-014	0703551014	26	Lot	201-COMMERCIAL IMPROVED
78	45344	45358	07-03-551-013	FLUSHING RD	25-07-03-551-013	0703551013	25N	Lot	400-RESIDENTIAL VACANT
79	45360	45374	07-10-551-042	1238 RIVERFOREST DR	25-07-10-551-042	0710551042	42	Lot	401-RESIDENTIAL
80	45361	45375	07-10-501-012	3467 FLUSHING RD	25-07-10-501-012	0710501012	11/12	Lot	201-COMMERCIAL IMPROVED
81	45372	45386	07-10-552-049	RIVERFOREST DR	25-07-10-552-049	0710552049	111	Lot	400-RESIDENTIAL VACANT
82	45393	45407	07-03-551-051	2100 LAVELLE RD	25-07-03-551-051	0703551051	76W	Lot	401-RESIDENTIAL
83	45395	45409	07-10-552-047	RIVER OAK DR	25-07-10-552-047	0710552047	109	Lot	400-RESIDENTIAL VACANT
84	45424	45438	07-10-552-104	RIVER OAK DR	25-07-10-552-104	0710552104	166	Lot	700-EXEMPT VACANT

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
43	Residential	0.61000001	0.61	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
44	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
45	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
46	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		1315	RIVERFOREST DR	FLINT	48532
47	Residential	0.61000001	0.61	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
48	Residential	0.38999999	0.39	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
49	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		1288	RIVERFOREST DR	FLINT	48532
50	Commercial	1.86000001	1.86	CARMAN-AINSWORTH SCHOOLS	25080		3560	FLUSHING RD	FLINT	48504
51	Commercial	1.42999995	1.43	CARMAN-AINSWORTH SCHOOLS	25080		3497	FLUSHING RD	FLINT	48504
52	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		1300	RIVERFOREST DR	FLINT	48532
53	Residential	0.25999999	0.26	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
54	Residential	0.38000000	0.38	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
55	Commercial	0.68000001	0.68	CARMAN-AINSWORTH SCHOOLS	25080		3538	FLUSHING RD	FLINT	48504
56	Residential	0.60000002	0.6	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
57	Residential	0.41000000	0.41	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
58	Residential	0.56999999	0.57	CARMAN-AINSWORTH SCHOOLS	25080		1314	RIVERFOREST DR	FLINT	48532
59	Commercial	0.49000001	0.49	CARMAN-AINSWORTH SCHOOLS	25080		3511	FLUSHING RD	FLINT	48504
60	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080		1270	RIVERFOREST DR	FLINT	48532
61	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
62	Residential	0.61000001	0.61	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
63	Residential	0.46000001	0.46	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
64	Commercial	1.59000003	1.59	CARMAN-AINSWORTH SCHOOLS	25080		3548	FLUSHING RD	FLINT	48504
65	Residential	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
66	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
67	Commercial	1.79999995	1.8	CARMAN-AINSWORTH SCHOOLS	25080		3483	FLUSHING RD	FLINT	48504
68	Residential	0.60000002	0.6	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
69	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080		1254	RIVERFOREST DR	FLINT	48532
70	Residential	0.56000000	0.56	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
71	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
72	Residential	0.25999999	0.26	CARMAN-AINSWORTH SCHOOLS	25080		1246	RIVERFOREST DR	FLINT	48532
73	Residential	0.44000000	0.44	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
74	Commercial	0.47999999	0.48	CARMAN-AINSWORTH SCHOOLS	25080		3497	FLUSHING RD	FLINT	48504
75	Residential	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
76	Residential	0.72000003	0.72	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
77	Commercial	1.82000005	1.82	CARMAN-AINSWORTH SCHOOLS	25080		3530	FLUSHING RD	FLINT	48504
78	Residential	1.11000001	1.11	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
79	Residential	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080		1238	RIVERFOREST DR	FLINT	48532
80	Commercial	3.73000002	3.73	CARMAN-AINSWORTH SCHOOLS	25080		3467	FLUSHING RD	FLINT	48504
81	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
82	Residential	1.25999999	1.26	CARMAN-AINSWORTH SCHOOLS	25080		2100	LAVELLE RD	FLINT	48504
83	Residential	0.60000002	0.6	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
84	Exempt	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
43	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
44	THREE RIVERS ASSOC	115 W BROWN	BIRMINGHAM	MI	48009	
45	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
46	SPEIGHTS, YUWONIA	1315 RIVERFOREST DR	FLINT	MI	48532	
47	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
48	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
49	TYLER, BEVERLY	1288 RIVERFOREST DR	FLINT	MI	48532	
50	WITHEY, SHARON	8259 ROOSEVELT	MOUNT MORRIS	MI	48458	
51	CRANNIE, JAMES	3497 FLUSHING RD	FLINT	MI	48504	CRANNIE, BARBARA R
52	PRITCHETT, KETHA S	1300 RIVERFOREST DR	FLINT	MI	48532	
53	MOSS, GEORGE W & GWENDOLYN A	1270 RIVERFOREST DR	FLINT	MI	48532	
54	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
55	CRANNIE, DANIEL C JR	4160 COMMERCE DR	FLUSHING	MI	48433	
56	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
57	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
58	JAMES, TERRY D & SHERRY L	1314 RIVERFOREST DR	FLINT	MI	48532	
59	PATTERSON, DAVID M	3503 FLUSHING RD	FLINT	MI	48504	HENRY, LORI
60	MOSS, GEORGE	1270 RIVERFOREST DR	FLINT	MI	48532	
61	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
62	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
63	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
64	HALL, CHRIS E & KIMBERLY S	G-3548 FLUSHING RD	FLINT	MI	48504	
65	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
66	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
67	WHITTHORNE, CORNELIUS W	3483 FLUSHING RD	FLINT	MI	48504	
68	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
69	SMITH, CARNELL	1254 RIVERFOREST DR	FLINT	MI	48532	
70	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
71	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
72	BOYLAND, JAMES E	1246 RIVERFOREST DR	FLINT	MI	48532	
73	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
74	MCFADDEN, CHARLYNTA D ETAL	3497 FLUSHING RD	FLINT	MI	48504	
75	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
76	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
77	KENRICK, FAY T REVOCABLE TRUST	G-3530 FLUSHING RD	FLINT	MI	48504	
78	CRANNIE, DAN JR	4160 COMMERCE DR	FLUSHING	MI	48433	
79	CANNON, URIEL	8260 COYOTE TRL	TEXARKANA	TX	75503	CANNON, OTHELLA
80	WHITTHORNE, CORNELIUS	3483 FLUSHING RD	FLINT	MI	48504	
81	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
82	WARLICK, BREANN	2100 LAVELLE RD	FLINT	MI	48504	
83	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
84	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
43	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288197.89780000
44					0	No	4000	4060	4000	13288232.80010000
45	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288233.82130000
46					100	No	27600	27330	27600	13288237.63730000
47	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288264.53060000
48	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288269.82670000
49					100	No	27500	27330	27500	13288270.41030000
50					0	No	70000	72030	70000	13288276.08190000
51	2838 RASKOB ST	FLINT	MI	48504	0	No	20700	13500	20700	13288279.39240000
52					100	No	31000	30680	31000	13288280.74660000
53					0	No	4200	4260	4200	13288304.62210000
54	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288304.97310000
55					0	No	77800	80260	77800	13288305.48350000
56	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288330.04790000
57	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288345.28600000
58					100	No	41600	41350	41600	13288356.66120000
59	7061 NICHOLS RD	FLUSHING	MI	48433	0	No	6200	6290	6200	13288357.63280000
60					100	No	33200	32810	33200	13288365.63360000
61	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288376.10870000
62	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288397.68910000
63	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288401.60430000
64					0	No	48600	49880	48600	13288404.08280000
65	PO BOX 3066	FLINT	MI	48502	0	No	3500	2460	3500	13288417.57630000
66	PO BOX 3066	FLINT	MI	48502	0	No	5500	2910	5500	13288428.60580000
67					0	No	55900	57090	55900	13288430.97880000
68	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288463.57180000
69					100	No	31700	31390	31700	13288464.33540000
70	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288465.25330000
71	PO BOX 3066	FLINT	MI	48502	0	No	4000	2220	4000	13288483.90390000
72					100	No	30100	29870	30100	13288513.18200000
73	PO BOX 3066	FLINT	MI	48502	0	No	4900	2650	4900	13288515.90170000
74					0	No	12600	12900	12600	13288529.85510000
75	PO BOX 3066	FLINT	MI	48502	0	No	4000	2220	4000	13288534.07790000
76	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288540.38060000
77					0	No	117000	120900	117000	13288545.14590000
78					0	No	1500	1520	1500	13288550.86320000
79	8260 COYOTE TRL	TEXARKANA	TX	75503	0	No	33000	32610	33000	13288563.65530000
80					0	No	78400	80670	78400	13288564.41050000
81	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288569.47710000
82					100	No	25500	25270	25500	13288573.89610000
83	PO BOX 3066	FLINT	MI	48502	0	No	3900	2650	3900	13288574.24960000
84					0	Yes	0	0	0	13288583.96120000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
43	557139.36478800	870.89053343	26659.38330080000	870.89065691400			
44	555579.17727000	468.60981665	12359.80078130000	468.60972287900			
45	556749.11534900	552.02775242	15594.29833980000	552.02773812600			
46	556204.06515800	472.28984993	13228.30029300000	472.28981925700			
47	557108.28496500	865.39007759	26377.30566410000	865.39010275500			
48	556504.05345100	569.97504789	17201.29443360000	569.97501355300			
49	555889.84774900	482.93539818	13169.67089840000	482.93535477600			
50	558848.14266500	1782.46204922	80909.70117190000	1782.46193308000			
51	557753.80890000	1414.35120123	62331.85644530000	1414.35131220000			
52	555974.88171700	484.00138639	12738.98974610000	484.00137991600			
53	555813.63247600	450.77019725	11529.70361330000	450.77025599100			
54	556712.57884100	567.86282408	16381.15771480000	567.86279513300			
55	558557.90925300	800.38389952	29647.00292970000	800.38394992300			
56	557074.49471900	860.69738299	26335.06103520000	860.69731602200			
57	556382.27088100	545.37892350	17687.05371090000	545.37897151000			
58	556061.76896500	644.21079904	24651.53417970000	644.21091787100			
59	558166.66656300	629.35370125	21130.12744140000	629.35366487400			
60	555751.17713800	475.72488340	13403.00927730000	475.72489630600			
61	556679.14232100	564.14534834	15820.68750000000	564.14531255700			
62	557043.64620100	859.17029578	26529.34423830000	859.17035831600			
63	556484.31396800	568.99483636	19971.70751950000	568.99478552800			
64	558843.46447700	1554.80762421	69265.33056640000	1554.80771776000			
65	555687.60750400	435.53490122	10455.39599610000	435.53489730400			
66	555914.55274500	496.58092625	15721.31982420000	496.58083736900			
67	557781.99976900	1802.56617072	78597.72167970000	1802.56612160000			
68	557008.64553000	851.53711788	26183.90429690000	851.53713060000			
69	555631.06289400	444.08566914	11070.81689450000	444.08579749600			
70	556625.67808500	627.15543942	24569.34521480000	627.15538395000			
71	555841.17677800	463.74615550	12088.27539060000	463.74616305200			
72	555571.27899000	449.40554643	11504.42675780000	449.40550523700			
73	556238.48389400	556.03016887	19267.84521480000	556.03016242800			
74	558066.96668500	610.26095680	20717.18066410000	610.26090117400			
75	555781.03918400	460.67734818	11884.76757810000	460.67728478000			
76	556978.14190200	875.17503998	31185.20507810000	875.17507801400			
77	558699.63547200	1783.66898504	79288.85351560000	1783.66896877000			
78	558866.71843400	1176.89653819	48150.86718750000	1176.89649925000			
79	555509.38701600	454.06043037	11855.05029300000	454.06051419400			
80	557708.17125300	2013.25985772	162439.96972700000	2013.25982943000			
81	556325.27204600	499.47778267	14111.64404300000	499.47787865100			
82	559232.30131500	973.93324294	54828.58496090000	973.93313960000			
83	556097.50771900	629.03055953	26052.78955080000	629.03050996500			
84	555720.71583700	461.42513430	11948.05664060000	461.42503537400			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
85	45453	45467	07-10-552-050	RIVERBEND CT	25-07-10-552-050	0710552050	112	Lot	400-RESIDENTIAL VACANT
86	45468	45482	07-10-551-043	1230 RIVERFOREST DR	25-07-10-551-043	0710551043	43	Lot	401-RESIDENTIAL
87	45470	45484	07-10-551-008	3571 RUE FORET	25-07-10-551-008	0710551008	8-23+B	Lot	201-COMMERCIAL IMPROVED
88	45489	45503	07-10-552-105	RIVER OAK DR	25-07-10-552-105	0710552105	167	Lot	400-RESIDENTIAL VACANT
89	45491	45505	07-10-501-028	3522 FLUSHING RD	25-07-10-501-028	0710501028	27	Lot	401-RESIDENTIAL
90	45503	45517	07-10-552-058	RIVERFOREST DR	25-07-10-552-058	0710552058	120	Lot	400-RESIDENTIAL VACANT
91	45525	45539	07-10-552-055	RIVERBEND CT	25-07-10-552-055	0710552055	117	Lot	400-RESIDENTIAL VACANT
92	45537	45551	07-10-551-044	1222 RIVERFOREST DR	25-07-10-551-044	0710551044	44	Lot	401-RESIDENTIAL
93	45538	45552	07-03-551-050	2110 LAVELLE RD	25-07-03-551-050	0703551050	75W	Lot	401-RESIDENTIAL
94	45544	45558	07-10-552-046	BIRCHDALE CT	25-07-10-552-046	0710552046	108	Lot	400-RESIDENTIAL VACANT
95	45571	45585	07-10-552-106	RIVER OAK DR	25-07-10-552-106	0710552106	168	Lot	400-RESIDENTIAL VACANT
96	45602	45616	07-10-501-013	FLUSHING RD	25-07-10-501-013	0710501013	13	Lot	200-COMMERCIAL VACANT
97	45613	45627	07-10-552-042	RIVER OAK DR	25-07-10-552-042	0710552042	104	Lot	400-RESIDENTIAL VACANT
98	45614	45628	07-10-501-030	3500 FLUSHING RD	25-07-10-501-030	0710501030	28-31S	Lot	201-COMMERCIAL IMPROVED
99	45618	45632	07-10-552-051	RIVERBEND CT	25-07-10-552-051	0710552051	113	Lot	400-RESIDENTIAL VACANT
100	45636	45650	07-10-551-045	1214 RIVERFOREST DR	25-07-10-551-045	0710551045	45	Lot	401-RESIDENTIAL
101	45656	45670	07-10-552-107	1325 RIVER OAK DR	25-07-10-552-107	0710552107	169	Lot	401-RESIDENTIAL
102	45664	45678	07-10-552-057	RIVERFOREST DR	25-07-10-552-057	0710552057	119	Lot	400-RESIDENTIAL VACANT
103	45777	45791	07-10-551-046	1206 RIVERFOREST DR	25-07-10-551-046	0710551046	46	Lot	401-RESIDENTIAL
104	45781	45795	07-10-552-045	BIRCHDALE CT	25-07-10-552-045	0710552045	107	Lot	400-RESIDENTIAL VACANT
105	45782	45796	07-10-552-041	RIVER OAK DR	25-07-10-552-041	0710552041	103	Lot	400-RESIDENTIAL VACANT
106	45784	45798	07-10-501-014	3441 FLUSHING RD	25-07-10-501-014	0710501014	14	Lot	401-RESIDENTIAL
107	45791	45805	07-10-552-108	1317 RIVER OAK DR	25-07-10-552-108	0710552108	170	Lot	401-RESIDENTIAL
108	45815	45829	07-10-551-047	1202 RIVERFOREST DR	25-07-10-551-047	0710551047	47	Lot	401-RESIDENTIAL
109	45820	45834	07-10-552-056	RIVERFOREST DR	25-07-10-552-056	0710552056	118	Lot	400-RESIDENTIAL VACANT
110	45835	45849	07-10-501-029	FLUSHING RD	25-07-10-501-029	0710501029	28N	Lot	700-EXEMPT VACANT
111	45849	45863	07-10-551-048	1192 RIVERFOREST DR	25-07-10-551-048	0710551048	48	Lot	401-RESIDENTIAL
112	45868	45882	07-10-551-049	1182 RIVERFOREST DR	25-07-10-551-049	0710551049	49	Lot	401-RESIDENTIAL
113	45877	45891	07-10-552-109	RIVER OAK DR	25-07-10-552-109	0710552109	171	Lot	400-RESIDENTIAL VACANT
114	45878	45892	07-10-552-054	RIVERBEND CT	25-07-10-552-054	0710552054	116	Lot	400-RESIDENTIAL VACANT
115	45886	45900	07-10-552-040	RIVER OAK DR	25-07-10-552-040	0710552040	102	Lot	400-RESIDENTIAL VACANT
116	45914	45928	07-10-551-050	1172 RIVERFOREST DR	25-07-10-551-050	0710551050	50	Lot	401-RESIDENTIAL
117	45922	45936	07-10-501-015	FLUSHING RD	25-07-10-501-015	0710501015	15	Lot	700-EXEMPT VACANT
118	45926	45940	07-10-552-039	RIVER OAK DR	25-07-10-552-039	0710552039	101	Lot	400-RESIDENTIAL VACANT
119	45940	45954	07-10-552-043	BIRCHDALE CT	25-07-10-552-043	0710552043	105	Lot	400-RESIDENTIAL VACANT
120	45950	45964	07-10-552-110	1301 RIVER OAK DR	25-07-10-552-110	0710552110	172	Lot	401-RESIDENTIAL
121	45951	45965	07-10-552-052	RIVERBEND CT	25-07-10-552-052	0710552052	114	Lot	400-RESIDENTIAL VACANT
122	45970	45984	07-10-552-044	BIRCHDALE CT	25-07-10-552-044	0710552044	106	Lot	400-RESIDENTIAL VACANT
123	45996	46010	07-10-552-038	RIVER OAK DR	25-07-10-552-038	0710552038	100	Lot	400-RESIDENTIAL VACANT
124	46016	46030	07-10-552-053	RIVERBEND CT	25-07-10-552-053	0710552053	115	Lot	400-RESIDENTIAL VACANT
125	46034	46048	07-10-552-111	1293 RIVER OAK DR	25-07-10-552-111	0710552111	173	Lot	401-RESIDENTIAL
126	46061	46075	07-10-501-031	FLUSHING RD	25-07-10-501-031	0710501031	32/33S	Lot	200-COMMERCIAL VACANT

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
85	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080			RIVERBEND CT	FLINT	48532
86	Residential	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080		1230	RIVERFOREST DR	FLINT	48532
87	Commercial	4.73000002	4.73	CARMAN-AINSWORTH SCHOOLS	25080		3571	RUE FORET	FLINT	48532
88	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
89	Residential	1.87000000	1.87	CARMAN-AINSWORTH SCHOOLS	25080		3522	FLUSHING RD	FLINT	48504
90	Residential	0.97000003	0.97	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
91	Residential	0.44999999	0.45	CARMAN-AINSWORTH SCHOOLS	25080			RIVERBEND CT	FLINT	48532
92	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		1222	RIVERFOREST DR	FLINT	48532
93	Residential	0.70999998	0.71	CARMAN-AINSWORTH SCHOOLS	25080		2110	LAVELLE RD	FLINT	48504
94	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080			BIRCHDALE CT	FLINT	48532
95	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
96	Commercial	1.78999996	1.79	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
97	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
98	Commercial	2.81999993	2.82	CARMAN-AINSWORTH SCHOOLS	25080		3500	FLUSHING RD	FLINT	48504
99	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080			RIVERBEND CT	FLINT	48532
100	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		1214	RIVERFOREST DR	FLINT	48532
101	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		1325	RIVER OAK DR	FLINT	48532
102	Residential	1.03999996	1.04	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
103	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		1206	RIVERFOREST DR	FLINT	48532
104	Residential	0.38000000	0.38	CARMAN-AINSWORTH SCHOOLS	25080			BIRCHDALE CT	FLINT	48532
105	Residential	0.38000000	0.38	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
106	Residential	1.75999999	1.76	CARMAN-AINSWORTH SCHOOLS	25080		3441	FLUSHING RD	FLINT	48504
107	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080		1317	RIVER OAK DR	FLINT	48532
108	Residential	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080		1202	RIVERFOREST DR	FLINT	48532
109	Residential	1.16999996	1.17	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
110	Exempt	1.14999998	1.15	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
111	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		1192	RIVERFOREST DR	FLINT	48532
112	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		1182	RIVERFOREST DR	FLINT	48532
113	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
114	Residential	0.77999997	0.78	CARMAN-AINSWORTH SCHOOLS	25080			RIVERBEND CT	FLINT	48532
115	Residential	0.44000000	0.44	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
116	Residential	0.46000001	0.46	CARMAN-AINSWORTH SCHOOLS	25080		1172	RIVERFOREST DR	FLINT	48532
117	Exempt	1.84000003	1.84	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
118	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
119	Residential	0.50999999	0.51	CARMAN-AINSWORTH SCHOOLS	25080			BIRCHDALE CT	FLINT	48532
120	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080		1301	RIVER OAK DR	FLINT	48532
121	Residential	0.92000002	0.92	CARMAN-AINSWORTH SCHOOLS	25080			RIVERBEND CT	FLINT	48532
122	Residential	0.73000002	0.73	CARMAN-AINSWORTH SCHOOLS	25080			BIRCHDALE CT	FLINT	48532
123	Residential	0.37000000	0.37	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
124	Residential	0.98000002	0.98	CARMAN-AINSWORTH SCHOOLS	25080			RIVERBEND CT	FLINT	48532
125	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		1293	RIVER OAK DR	FLINT	48532
126	Commercial	1.00999999	1.01	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
85	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
86	HEMPHILL, WILLETTA J & HEMPHILL B	5436 OLD POND WAY	WEST BLOOMFIELD	MI	48323	
87	THREE RIVERS ASSOC	115 W BROWN	BIRMINGHAM	MI	48009	
88	MIESKE, RONALD J & RUTH A TR	13317 WASHBURN RD	OTTER LAKE	MI	48464	
89	KENRICK, FAY TRUST	3530 FLUSHING RD	FLINT	MI	48504	
90	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
91	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
92	RUTHERFORD, DEMILLIOS	1222 RIVERFOREST DR	FLINT	MI	48532	
93	MONTGOMERY, LORINE G & KIMMIE R	2110 LAVELLE RD	FLINT	MI	48504	
94	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
95	MIESKE, RONALD J & RUTH A TR	13317 WASHBURN RD	OTTER LAKE	MI	48464	
96	WHITTHORNE, CORNELIUS	9222 MORRISH RD	MONTROSE	MI	48457	
97	VOMVOLAKIS, EMANUEL	2020 HAMPDEN	FLINT	MI	48503	
98	YOUNG, EDWARD & CATHERINE	6294 TANBARK	FLINT	MI	48532	
99	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
100	LITTLE, ANNIE	3483 TAMARACK TRL	MOUNT MORRIS	MI	48458	
101	MANN, PAUL & WILLIAMS, CHRISTI	1325 RIVER OAK DR	FLINT	MI	48532	WIENERT, JOHN & CAROL J
102	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
103	HOUSE, HAROLD D	3605 PINGREE AVE	FLINT	MI	48503	
104	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
105	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
106	JOHNSON, MARY	3441 FLUSHING RD	FLINT	MI	48504	NAVARRE, CHERYL
107	ROBINSON, ERIC	1317 RIVER OAK DR	FLINT	MI	48532	
108	SHAMLY, AKILAH & MICAH	1202 RIVERFOREST DR	FLINT	MI	48532	
109	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
110	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502	
111	BAZEMORE, HENRY E	1192 RIVERFOREST DR	FLINT	MI	48532	
112	HORNE, ROSHANDA & HORNE, PATRICIA	1182 RIVERFOREST DR	FLINT	MI	48532	
113	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
114	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
115	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
116	ROBBS, HAROLD M SR	1172 RIVERFOREST DR	FLINT	MI	48532	
117	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
118	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
119	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
120	DISTRESSED ASSET OPPORTUNITY FUND	1114 S CRESCENT HEIGHTS B	LOS ANGELES	CA	90035	
121	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
122	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
123	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48532	KLOSS, ALFRED
124	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
125	RAGLAND, JOEL & MARLENE J	1293 RIVER OAK DR	FLINT	MI	48532	
126	CASSANDRA VILLAGE, LLC	PO BOX 252451	WEST BLOOMFIELD	MI	48325	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
85	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288606.70230000
86					100	No	25700	25500	25700	13288615.11460000
87					0	No	598600	568520	598600	13288618.11030000
88					0	No	500	500	500	13288633.82240000
89					0	No	18800	18720	18800	13288634.73980000
90	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288645.71410000
91	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288660.48830000
92					100	No	31700	31390	31700	13288669.75330000
93					0	No	13400	13410	13400	13288669.89300000
94	PO BOX 3066	FLINT	MI	48502	0	No	3300	1630	3300	13288671.70030000
95					0	No	500	500	500	13288683.43710000
96					0	No	5400	5480	5400	13288700.20330000
97					0	No	5600	5680	5600	13288709.22680000
98					0	No	425000	438090	425000	13288709.48010000
99	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288714.47740000
100					0	No	29400	29150	29400	13288727.02270000
101	1890 W MAIN	OWOSSO	MI	48867	100	No	20900	20720	20900	13288737.88530000
102	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288742.44820000
103					0	No	33900	33520	33900	13288780.40610000
104	PO BOX 3066	FLINT	MI	48502	0	No	4700	1780	4700	13288785.57810000
105	PO BOX 3066	FLINT	MI	48502	0	No	5500	2910	5500	13288785.89820000
106	3441 FLUSHING RD	FLINT	MI	48504	0	No	16600	16560	16600	13288786.22750000
107					100	No	44500	43990	44500	13288792.81810000
108					100	No	32700	32410	32700	13288807.71960000
109	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288810.75310000
110					0	Yes	0	0	0	13288819.10600000
111					100	No	31800	31490	31800	13288825.63740000
112					100	No	35000	34640	35000	13288838.89540000
113	PO BOX 3066	FLINT	MI	48502	0	No	4000	2220	4000	13288844.03390000
114	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288844.47050000
115	PO BOX 3066	FLINT	MI	48502	0	No	5300	2910	5300	13288848.44070000
116					0	No	34400	34130	34400	13288871.81620000
117					0	Yes	0	0	0	13288874.93540000
118	PO BOX 3066	FLINT	MI	48502	0	No	5200	2910	5200	13288877.70390000
119	PO BOX 3066	FLINT	MI	48502	0	No	4600	1780	4600	13288884.52210000
120					0	No	23700	23460	23700	13288893.14270000
121	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288894.86150000
122	PO BOX 3066	FLINT	MI	48502	0	No	4300	3070	4300	13288908.95920000
123	PO BOX 3066	FLINT	MI	48502	0	No	4900	2650	4900	13288925.02650000
124	PO BOX 3066	FLINT	MI	48502	0	No	500	500	500	13288931.86420000
125					100	No	27600	27430	27600	13288938.61700000
126					0	No	4800	4870	4800	13288955.99090000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
85	556404.46340600	494.16934737	13945.17626950000	494.16938506400			
86	555447.02787600	453.72034985	11774.36914060000	453.72029667500			
87	554980.35248800	3027.72137821	206224.44775400000	3027.72134797000			
88	555660.31858900	462.12490885	11988.24804690000	462.12488102400			
89	558648.97373000	1791.88207858	81548.26855470000	1791.88201749000			
90	556942.57870500	946.37225486	42205.82080080000	946.37216570200			
91	556580.50552700	558.80571534	19477.45507810000	558.80569976600			
92	555381.52283100	472.25043170	13049.32910160000	472.25049741100			
93	559336.66123600	814.24668842	31065.84619140000	814.24655754900			
94	556197.75513800	486.47703272	14659.49658200000	486.47706679800			
95	555599.30144800	464.43497812	12088.91796880000	464.43500408600			
96	557637.35737100	1791.99512984	77892.86230470000	1791.99510890000			
97	555946.60024500	555.22334246	18354.00000000000	555.22336919000			
98	558329.28652300	1430.20248621	122999.76220700000	1430.20256228000			
99	556323.69312400	578.13892246	15619.59179690000	578.13890302900			
100	555308.40799100	492.64514187	14286.11962890000	492.64519029200			
101	555533.04778100	491.69695024	14186.40625000000	491.69689368200			
102	556856.32705700	988.72207611	45128.00341800000	988.72206300400			
103	555235.42186700	501.96034139	14182.79443360000	501.96030969900			
104	556205.32551600	548.61289082	16434.12402340000	548.61296124800			
105	555888.10041100	602.83861160	16636.06103520000	602.83854877000			
106	557588.87157500	1779.70218449	76751.61718750000	1779.70219290000			
107	555465.64782400	466.95694437	12344.79638670000	466.95706614200			
108	555153.13424500	519.18015026	15205.36865230000	519.18013327700			
109	556740.55477800	1051.12846278	50974.26171880000	1051.12840501000			
110	558717.77792100	1191.87956108	49980.08496090000	1191.87959055000			
111	555067.65332100	486.97045568	13206.70312500000	486.97044983500			
112	554987.64767700	476.09722532	12626.34863280000	476.09710198300			
113	555403.62981400	465.92371166	12249.53564450000	465.92376844100			
114	556611.46907600	811.85985562	33812.25488280000	811.85978021900			
115	555841.55597500	649.66187370	19325.28027340000	649.66190134000			
116	554884.26641000	572.86697219	20151.62451170000	572.86698748000			
117	557540.81499100	1782.32995502	80045.95654300000	1782.32986593000			
118	555763.72981200	567.99164244	15784.68408200000	567.99168282400			
119	556012.29698400	614.65279932	22081.00927730000	614.65276481900			
120	555341.33177700	462.84027867	12046.75683590000	462.84021537300			
121	556322.37008800	829.95677293	39898.52148440000	829.95688876400			
122	556140.65718600	712.19861518	31662.77148440000	712.19863308900			
123	555688.76019800	536.40767140	16169.32226560000	536.40762113600			
124	556487.78201100	903.82655910	42804.05175780000	903.82656144400			
125	555274.91641400	503.16048052	13051.28710940000	503.16039523300			
126	558192.09176600	897.85966072	44009.92138670000	897.85963681300			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
127	46093	46107	07-10-501-016	FLUSHING RD	25-07-10-501-016	0710501016	16	Lot	700-EXEMPT VACANT
128	46095	46109	07-10-552-112	1285 RIVER OAK DR	25-07-10-552-112	0710552112	174	Lot	401-RESIDENTIAL
129	46108	46122	07-10-552-209	RIVER POINT DR	25-07-10-552-209	0710552209	271	Lot	400-RESIDENTIAL VACANT
130	46124	46138	07-10-552-037	RIVER OAK DR	25-07-10-552-037	0710552037	99	Lot	400-RESIDENTIAL VACANT
131	46226	46240	07-10-552-036	RIVER OAK DR	25-07-10-552-036	0710552036	98	Lot	400-RESIDENTIAL VACANT
132	46234	46248	07-10-551-051	1140 RIVERFOREST DR	25-07-10-551-051	0710551051	51-53	Lot	401-RESIDENTIAL
133	46253	46267	07-10-552-113	1277 RIVER OAK DR	25-07-10-552-113	0710552113	175	Lot	401-RESIDENTIAL
134	46280	46294	07-10-552-210	RIVER POINT DR	25-07-10-552-210	0710552210	272	Lot	400-RESIDENTIAL VACANT
135	46328	46342	07-10-552-035	RIVER OAK DR	25-07-10-552-035	0710552035	97	Lot	400-RESIDENTIAL VACANT
136	46350	46364	07-10-501-017	FLUSHING RD	25-07-10-501-017	0710501017	17/18/19	Lot	700-EXEMPT VACANT
137	46404	46418	07-10-552-211	RIVER POINT DR	25-07-10-552-211	0710552211	273	Lot	400-RESIDENTIAL VACANT
138	46408	46422	07-10-552-208	RIVER POINT DR	25-07-10-552-208	0710552208	270	Lot	400-RESIDENTIAL VACANT
139	46412	46426	07-10-552-034	RIVER OAK DR	25-07-10-552-034	0710552034	96	Lot	400-RESIDENTIAL VACANT
140	46439	46453	07-10-552-114	1269 RIVER OAK DR	25-07-10-552-114	0710552114	176	Lot	401-RESIDENTIAL
141	46449	46463	07-10-551-054	1118 RIVERFOREST DR	25-07-10-551-054	0710551054	54	Lot	401-RESIDENTIAL
142	46516	46530	07-10-552-033	RIVER OAK DR	25-07-10-552-033	0710552033	95	Lot	400-RESIDENTIAL VACANT
143	46558	46572	07-10-552-212	RIVER POINT DR	25-07-10-552-212	0710552212	274	Lot	400-RESIDENTIAL VACANT
144	46559	46573	07-10-551-055	RIVERFOREST DR	25-07-10-551-055	0710551055	55	Lot	400-RESIDENTIAL VACANT
145	46578	46592	07-10-552-115	1261 RIVER OAK DR	25-07-10-552-115	0710552115	177	Lot	401-RESIDENTIAL
146	46588	46602	07-10-552-207	RIVER POINT DR	25-07-10-552-207	0710552207	269	Lot	400-RESIDENTIAL VACANT
147	46628	46642	07-10-552-032	RIVER OAK DR	25-07-10-552-032	0710552032	94	Lot	400-RESIDENTIAL VACANT
148	46683	46697	07-10-551-056	1102 RIVERFOREST DR	25-07-10-551-056	0710551056	56	Lot	401-RESIDENTIAL
149	46697	46711	07-10-501-032	3448 FLUSHING RD	25-07-10-501-032	0710501032	34-37	Lot	201-COMMERCIAL IMPROVED
150	46715	46729	07-10-552-213	RIVER POINT DR	25-07-10-552-213	0710552213	275	Lot	400-RESIDENTIAL VACANT
151	46721	46735	07-10-552-116	1253 RIVER OAK DR	25-07-10-552-116	0710552116	178	Lot	401-RESIDENTIAL
152	46727	46741	07-10-552-206	RIVER POINT DR	25-07-10-552-206	0710552206	268	Lot	400-RESIDENTIAL VACANT
153	46739	46753	07-10-551-057	1094 RIVERFOREST DR	25-07-10-551-057	0710551057	57	Lot	401-RESIDENTIAL
154	46754	46768	07-10-552-031	RIVER OAK DR	25-07-10-552-031	0710552031	93	Lot	400-RESIDENTIAL VACANT
155	46777	46791	07-03-551-039	3437 MACKIN RD	25-07-03-551-039	0703551039	69-C	Lot	401-RESIDENTIAL
156	46780	46794	07-10-501-018	FLUSHING RD	25-07-10-501-018	0710501018	18N	Lot	700-EXEMPT VACANT
157	46821	46835	07-10-501-020	FLUSHING RD	25-07-10-501-020	0710501020	20	Lot	700-EXEMPT VACANT
158	46831	46845	07-10-501-024	3329 BURNELL AVE	25-07-10-501-024	0710501024	21	Lot	700-EXEMPT VACANT
159	46834	46848	07-10-552-205	RIVER POINT DR	25-07-10-552-205	0710552205	267	Lot	400-RESIDENTIAL VACANT
160	46854	46868	07-10-552-117	1245 RIVER OAK DR	25-07-10-552-117	0710552117	179	Lot	401-RESIDENTIAL
161	46871	46885	07-10-501-033	3456 FLUSHING RD	25-07-10-501-033	0710501033	501-033	Lot	700-EXEMPT VACANT
162	46881	46895	07-10-552-202	RIVER BIRCH DR	25-07-10-552-202	0710552202	264	Lot	400-RESIDENTIAL VACANT
163	46882	46896	07-10-552-030	RIVER OAK DR	25-07-10-552-030	0710552030	92	Lot	400-RESIDENTIAL VACANT
164	46918	46932	07-03-551-042	3429 MACKIN RD	25-07-03-551-042	0703551042	69-D	Lot	401-RESIDENTIAL
165	46927	46941	07-10-501-019	3391 FLUSHING RD	25-07-10-501-019	0710501019	19N	Lot	700-EXEMPT VACANT
166	46932	46946	07-10-552-214	RIVER POINT DR	25-07-10-552-214	0710552214	276	Lot	400-RESIDENTIAL VACANT
167	46941	46955	07-10-552-204	RIVER POINT DR	25-07-10-552-204	0710552204	266	Lot	400-RESIDENTIAL VACANT
168	46955	46969	07-10-526-168	GRAY AVE	25-07-10-526-168	0710526168	109-131/+	Lot	700-EXEMPT VACANT

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
127	Exempt	1.84000003	1.84	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
128	Residential	0.49000001	0.49	CARMAN-AINSWORTH SCHOOLS	25080		1285	RIVER OAK DR	FLINT	48532
129	Residential	0.38999999	0.39	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
130	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
131	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
132	Residential	1.01999998	1.02	CARMAN-AINSWORTH SCHOOLS	25080		1140	RIVERFOREST DR	FLINT	48532
133	Residential	0.56000000	0.56	CARMAN-AINSWORTH SCHOOLS	25080		1277	RIVER OAK DR	FLINT	48532
134	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
135	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
136	Exempt	4.57000017	4.57	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
137	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
138	Residential	0.38999999	0.39	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
139	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
140	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		1269	RIVER OAK DR	FLINT	48532
141	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080		1118	RIVERFOREST DR	FLINT	48532
142	Residential	0.41000000	0.41	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
143	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
144	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080			RIVERFOREST DR	FLINT	48532
145	Residential	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080		1261	RIVER OAK DR	FLINT	48532
146	Residential	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
147	Residential	0.44999999	0.45	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
148	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080		1102	RIVERFOREST DR	FLINT	48532
149	Commercial	3.08999991	3.09	CARMAN-AINSWORTH SCHOOLS	25080		3448	FLUSHING RD	FLINT	48504
150	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
151	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		1253	RIVER OAK DR	FLINT	48532
152	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
153	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		1094	RIVERFOREST DR	FLINT	48532
154	Residential	0.44000000	0.44	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
155	Residential	0.68000001	0.68	CARMAN-AINSWORTH SCHOOLS	25080		3437	MACKIN RD	FLINT	48504
156	Exempt	0.44999999	0.45	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
157	Exempt	5.71000004	5.71	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
158	Exempt	8.98999977	8.99	CARMAN-AINSWORTH SCHOOLS	25080		3329	BURNELL AVE	FLINT	48504
159	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
160	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080		1245	RIVER OAK DR	FLINT	48532
161	Exempt	14.50000000	14.5	CARMAN-AINSWORTH SCHOOLS	25080		3456	FLUSHING RD	FLINT	48504
162	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080			RIVER BIRCH DR	FLINT	48532
163	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
164	Residential	0.75999999	0.76	CARMAN-AINSWORTH SCHOOLS	25080		3429	MACKIN RD	FLINT	48504
165	Exempt	0.47000000	0.47	CARMAN-AINSWORTH SCHOOLS	25080		3391	FLUSHING RD	FLINT	48504
166	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
167	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
168	Exempt	3.38000011	3.38	CARMAN-AINSWORTH SCHOOLS	25080			GRAY AVE	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
127	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	
128	JAMES, BARBARA	1285 RIVER OAK DR	FLINT	MI	48532	
129	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
130	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
131	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
132	VEMULAPALLI, V KUMAR	1140 RIVERFOREST DR	FLINT	MI	48532	
133	MANUEL, JOHNNY & SHEENA	1277 RIVER OAK DR	FLINT	MI	48532	
134	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
135	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
136	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
137	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
138	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
139	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
140	JACKSON, DAVID & SANDRA	1269 RIVER OAK DR	FLINT	MI	48532	
141	JONES, MARGARET	1118 RIVERFOREST DR	FLINT	MI	48532	
142	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
143	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
144	CHAMMAS, ELIAS A & HANAN	9262 WARWICK WOODS CT	GRAND BLANC	MI	48439	
145	ELSALEH, AHMAD	1726 E POTTER RD	PHOENIX	AZ	85024	
146	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
147	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
148	CHAMMAS, ELIAS & HANAN	9262 WARWICK WOODS CT	GRAND BLANC	MI	48439	
149	CASSANDRA VILLAGE LLC	PO BOX 252451	WEST BLOOMFIELD	MI	48325	
150	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
151	JOHNSON, JIMMY	1253 RIVER OAK DR	FLINT	MI	48532	
152	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
153	PITTS, LIZZIE O	1094 RIVERFOREST DR	FLINT	MI	48532	
154	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
155	FULLER, LASENETTE	PO BOX 320391	FLINT	MI	48532	
156	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
157	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
158	CARMAN AINSWORTH SCHOOL DISTRICT	G-3475 W COURT ST	FLINT	MI	48532	
159	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
160	JAMES, BONNIE J	1245 RIVER OAK DR	FLINT	MI	48532	
161	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502	
162	PITTS, EDGAR	1094 RIVERFOREST DR	FLINT	MI	48532	
163	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
164	WRIGHT, RANDALL & THERESA	G3429 MACKIN RD	FLINT	MI	48504	
165	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
166	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
167	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
168	CHARTER TOWNSHIP OF FLINT	1490 S DYE RD	FLINT	MI	48532	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
127					0	Yes	0	0	0	13288969.12530000
128					100	No	27700	27530	27700	13288969.55970000
129	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13288973.83130000
130	PO BOX 3066	FLINT	MI	48502	0	No	4600	2460	4600	13288980.82980000
131	PO BOX 3066	FLINT	MI	48502	0	No	4600	2460	4600	13289032.56610000
132					100	No	64300	64000	64300	13289036.44560000
133					100	No	29900	29660	29900	13289048.58660000
134	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289058.59450000
135	PO BOX 3066	FLINT	MI	48502	0	No	4800	2650	4800	13289085.95670000
136					0	Yes	0	0	0	13289099.05960000
137	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289139.30630000
138	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289140.53650000
139	PO BOX 3066	FLINT	MI	48502	0	No	5000	2650	5000	13289141.52190000
140					100	No	30000	29760	30000	13289154.32990000
141					100	No	34800	34440	34800	13289158.67530000
142	PO BOX 3066	FLINT	MI	48502	0	No	5100	2780	5100	13289195.78430000
143	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289216.44060000
144					0	No	4000	4060	4000	13289217.01070000
145					0	No	26500	26310	26500	13289226.28530000
146	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289233.20420000
147	PO BOX 3066	FLINT	MI	48502	0	No	6400	3500	6400	13289247.79690000
148					0	No	40000	39620	40000	13289271.49390000
149					0	No	378500	390550	378500	13289276.74250000
150	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289290.97210000
151					100	No	30400	30070	30400	13289294.40460000
152	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289300.11180000
153					100	No	39600	39210	39600	13289306.36490000
154	PO BOX 3066	FLINT	MI	48502	0	No	5600	3070	5600	13289316.32680000
155					100	No	36400	35760	36400	13289328.46300000
156					0	Yes	0	0	0	13289329.64910000
157					0	Yes	0	0	0	13289351.20090000
158					0	Yes	0	0	0	13289360.47420000
159	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289363.29340000
160					100	No	26300	26000	26300	13289372.01190000
161					0	Yes	0	0	0	13289381.36050000
162					100	No	4500	4570	4500	13289390.38720000
163	PO BOX 3066	FLINT	MI	48502	0	No	5000	2650	5000	13289390.91640000
164					100	No	23800	23510	23800	13289414.35200000
165					0	Yes	0	0	0	13289418.30800000
166	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289421.90520000
167	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289429.59670000
168					0	Yes	0	0	0	13289438.32380000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
127	557495.43586200	1774.95109523	80204.44531250000	1774.95105341000			
128	555180.13951000	660.38733907	21461.45361330000	660.38725513200			
129	554947.46314000	571.71720607	16839.28662110000	571.71721811300			
130	555619.87406600	501.62579717	13774.80273440000	501.62577607300			
131	555559.38624500	505.28164194	13452.01318360000	505.28165560800			
132	554643.58774900	941.10495473	44353.95458980000	941.10496726200			
133	555115.77730500	680.53103025	24306.61718750000	680.53099356300			
134	554943.76436600	537.36670326	15586.99560550000	537.36668888600			
135	555502.07589700	532.95201983	14832.69140630000	532.95198187400			
136	557347.52747700	2225.71870934	199246.70703100000	2225.71877619000			
137	554915.47279000	502.98671463	13960.89355470000	502.98670910800			
138	554698.29424800	520.56089499	16770.70849610000	520.56080163900			
139	555445.72981400	558.88667337	15597.05712890000	558.88669013800			
140	555077.28695600	478.86104970	12943.36914060000	478.86109159500			
141	554490.89418800	497.92073850	13989.03320310000	497.92084121200			
142	555387.49679800	601.16352944	17769.58691410000	601.16341977500			
143	554876.91818400	469.75357891	12410.01464840000	469.75363147900			
144	554433.89137300	497.72002973	13316.54492190000	497.72001585500			
145	555042.12683600	465.37044477	11890.70263670000	465.37041953100			
146	554625.57310500	447.27432026	11858.80810550000	447.27430647000			
147	555322.11346500	633.00907611	19803.11376950000	633.00919860000			
148	554373.18717000	507.63583360	14983.55419920000	507.63586951400			
149	557991.63548500	1567.55827996	134730.52441400000	1567.55822947000			
150	554829.44744300	496.98104341	14460.36181640000	496.98095153000			
151	555004.76376500	472.73861733	12494.93798830000	472.73852234400			
152	554573.88081600	465.99228967	12229.93457030000	465.99221454400			
153	554270.15438300	492.28687730	14280.79345700000	492.28694834700			
154	555270.41052100	625.95420187	19093.15136720000	625.95417480500			
155	559713.47364800	801.56583453	29691.96240230000	801.56587626000			
156	557622.46041000	599.29840141	19653.11767580000	599.29839975100			
157	557157.57588300	2557.14193848	248686.45507800000	2557.14196452000			
158	556548.68923500	3268.57044686	391646.01660200000	3268.57043614000			
159	554525.36186800	494.71661259	13164.99951170000	494.71652623900			
160	554963.23283600	502.76958312	14913.64599610000	502.76966066100			
161	558446.11001300	4338.45132383	631830.81445300000	4338.45109288000			
162	554314.90473100	527.46960735	14370.58544920000	527.46957124000			
163	555238.29093500	606.55558612	17476.76855470000	606.55562906600			
164	559661.25317700	866.72685537	32949.07617190000	866.72679159800			
165	557572.97757600	606.32595107	20330.18359380000	606.32593954200			
166	554749.60258700	489.49578548	13987.02197270000	489.49580706400			
167	554479.04393400	519.05196284	14919.81054690000	519.05193442200			
168	555858.46682500	2090.26348157	147121.44091800000	2090.26367744000			

Container Specialties Inc
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	A	B	C	D	E	F	G	H	I
169	46975	46989	07-10-526-169	KISSNER AVE	25-07-10-526-169	0710526169	132-134	Lot	700-EXEMPT VACANT
170	46991	47005	07-10-552-029	RIVER OAK DR	25-07-10-552-029	0710552029	91	Lot	400-RESIDENTIAL VACANT
171	47033	47047	07-10-526-170	GRAY AVE	25-07-10-526-170	0710526170	526-170	Lot	700-EXEMPT VACANT
172	47041	47055	07-10-552-215	RIVER POINT DR	25-07-10-552-215	0710552215	277	Lot	400-RESIDENTIAL VACANT
173	47052	47066	07-03-551-044	3419 MACKIN RD	25-07-03-551-044	0703551044	69-E	Lot	401-RESIDENTIAL
174	47054	47068	07-10-526-172	3373 WALTON AVE	25-07-10-526-172	0710526172	154/153	Lot	401-RESIDENTIAL
175	47056	47070	07-10-552-118	1229 RIVER OAK DR	25-07-10-552-118	0710552118	180	Lot	401-RESIDENTIAL
176	47062	47076	07-10-552-203	RIVER POINT DR	25-07-10-552-203	0710552203	265	Lot	400-RESIDENTIAL VACANT
177	47063	47077	07-10-501-022	FLUSHING RD	25-07-10-501-022	0710501022	20N	Lot	700-EXEMPT VACANT
178	47078	47092	07-03-300-001	MACKIN RD	25-07-03-300-001	0703300001	300-001	Tract	400-RESIDENTIAL VACANT
179	47090	47104	07-10-552-028	RIVER OAK DR	25-07-10-552-028	0710552028	90	Lot	400-RESIDENTIAL VACANT
180	47108	47122	07-10-501-034	3394 FLUSHING RD	25-07-10-501-034	0710501034	38S	Lot	700-EXEMPT VACANT
181	47120	47134	07-10-552-200	RIVER BIRCH DR	25-07-10-552-200	0710552200	261-3	Lot	400-RESIDENTIAL VACANT
182	47122	47136	07-10-526-102	3374 KISSNER AVE	25-07-10-526-102	0710526102	135	Lot	401-RESIDENTIAL
183	47141	47155	07-10-552-216	RIVER POINT DR	25-07-10-552-216	0710552216	278	Lot	400-RESIDENTIAL VACANT
184	47171	47185	07-10-552-119	1221 RIVER OAK DR	25-07-10-552-119	0710552119	181	Lot	401-RESIDENTIAL
185	47186	47200	07-03-551-043	3409 MACKIN RD	25-07-03-551-043	0703551043	69-F	Lot	401-RESIDENTIAL
186	47204	47218	07-10-552-027	RIVER OAK DR	25-07-10-552-027	0710552027	89	Lot	400-RESIDENTIAL VACANT
187	47205	47219	07-10-526-171	3355 WALTON AVE	25-07-10-526-171	0710526171	152/151	Lot	401-RESIDENTIAL
188	47211	47225	07-10-526-103	3370 KISSNER AVE	25-07-10-526-103	0710526103	136	Lot	401-RESIDENTIAL
189	47216	47230	07-10-526-116	3370 WALTON AVE	25-07-10-526-116	0710526116	155	Lot	401-RESIDENTIAL
190	47240	47254	07-10-501-036	3388 FLUSHING RD	25-07-10-501-036	0710501036	39S	Lot	201-COMMERCIAL IMPROVED
191	47251	47265	07-10-552-217	RIVER POINT DR	25-07-10-552-217	0710552217	279	Lot	400-RESIDENTIAL VACANT
192	47257	47271	07-03-576-229	MACKIN RD	25-07-03-576-229	0703576229	378/7	Lot	400-RESIDENTIAL VACANT
193	47276	47290	07-10-552-120	RIVER OAK DR	25-07-10-552-120	0710552120	182	Lot	400-RESIDENTIAL VACANT
194	47308	47322	07-10-526-095	3351 KISSNER AVE	25-07-10-526-095	0710526095	123-5	Lot	401-RESIDENTIAL
195	47312	47326	07-10-526-104	3366 KISSNER AVE	25-07-10-526-104	0710526104	137	Lot	401-RESIDENTIAL
196	47329	47343	07-03-577-001	3397 MACKIN RD	25-07-03-577-001	0703577001	1	Lot	401-RESIDENTIAL
197	47331	47345	07-10-552-026	RIVER OAK DR	25-07-10-552-026	0710552026	88	Lot	400-RESIDENTIAL VACANT
198	47358	47372	07-10-526-079	MITSON BLVD	25-07-10-526-079	0710526079	STREET	Lot	700-EXEMPT VACANT
199	47373	47387	07-10-526-117	3360 WALTON AVE	25-07-10-526-117	0710526117	156	Lot	401-RESIDENTIAL
200	47385	47399	07-10-552-218	RIVER POINT DR	25-07-10-552-218	0710552218	280	Lot	400-RESIDENTIAL VACANT
201	47413	47427	07-10-526-113	3343 WALTON AVE	25-07-10-526-113	0710526113	150/149	Lot	401-RESIDENTIAL
202	47414	47428	07-10-501-037	FLUSHING RD	25-07-10-501-037	0710501037	40S	Lot	200-COMMERCIAL VACANT
203	47421	47435	07-10-526-105	3358 KISSNER AVE	25-07-10-526-105	0710526105	138	Lot	401-RESIDENTIAL
204	47427	47441	07-10-526-132	3321 BURNELL AVE	25-07-10-526-132	0710526132	174/5	Lot	401-RESIDENTIAL
205	47430	47444	07-03-576-226	3412 MACKIN RD	25-07-03-576-226	0703576226	376/373	Lot	401-RESIDENTIAL
206	47456	47470	07-10-552-121	RIVER OAK DR	25-07-10-552-121	0710552121	183	Lot	400-RESIDENTIAL VACANT
207	47466	47480	07-10-501-021	FLUSHING RD	25-07-10-501-021	0710501021	21NW	Lot	200-COMMERCIAL VACANT
208	47468	47482	07-10-552-025	RIVER OAK DR	25-07-10-552-025	0710552025	87	Lot	400-RESIDENTIAL VACANT
209	47475	47489	07-10-526-118	3352 WALTON AVE	25-07-10-526-118	0710526118	157	Lot	401-RESIDENTIAL
210	47489	47503	07-03-577-002	3387 MACKIN RD	25-07-03-577-002	0703577002	2	Lot	401-RESIDENTIAL

Container Specialties Inc
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	J	K	L	M	N	O	P	Q	R	S
169	Exempt	0.51999998	0.52	CARMAN-AINSWORTH SCHOOLS	25080			KISSNER AVE	FLINT	48504
170	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
171	Exempt	1.03999996	1.04	CARMAN-AINSWORTH SCHOOLS	25080			GRAY AVE	FLINT	48504
172	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
173	Residential	0.82999998	0.83	CARMAN-AINSWORTH SCHOOLS	25080		3419	MACKIN RD	FLINT	48504
174	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080		3373	WALTON AVE	FLINT	48504
175	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		1229	RIVER OAK DR	FLINT	48532
176	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
177	Exempt	0.46000001	0.46	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
178	Residential	21.27000046	21.27	CARMAN-AINSWORTH SCHOOLS	25080			MACKIN RD	FLINT	48504
179	Residential	0.41000000	0.41	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
180	Exempt	0.55000001	0.55	CARMAN-AINSWORTH SCHOOLS	25080		3394	FLUSHING RD	FLINT	48504
181	Residential	0.82999998	0.83	CARMAN-AINSWORTH SCHOOLS	25080			RIVER BIRCH DR	FLINT	48532
182	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3374	KISSNER AVE	FLINT	48504
183	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
184	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080		1221	RIVER OAK DR	FLINT	48532
185	Residential	0.91000003	0.91	CARMAN-AINSWORTH SCHOOLS	25080		3409	MACKIN RD	FLINT	48504
186	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
187	Residential	0.38999999	0.39	CARMAN-AINSWORTH SCHOOLS	25080		3355	WALTON AVE	FLINT	48504
188	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3370	KISSNER AVE	FLINT	48504
189	Residential	0.43000001	0.43	CARMAN-AINSWORTH SCHOOLS	25080		3370	WALTON AVE	FLINT	48504
190	Commercial	0.47999999	0.48	CARMAN-AINSWORTH SCHOOLS	25080		3388	FLUSHING RD	FLINT	48504
191	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
192	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080			MACKIN RD	FLINT	48504
193	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
194	Residential	0.63999999	0.64	CARMAN-AINSWORTH SCHOOLS	25080		3351	KISSNER AVE	FLINT	48504
195	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3366	KISSNER AVE	FLINT	48504
196	Residential	1.03999996	1.04	CARMAN-AINSWORTH SCHOOLS	25080		3397	MACKIN RD	FLINT	48504
197	Residential	0.46000001	0.46	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
198	Exempt	0.41000000	0.41	CARMAN-AINSWORTH SCHOOLS	25080			MITSON BLVD	FLINT	48504
199	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3360	WALTON AVE	FLINT	48504
200	Residential	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080			RIVER POINT DR	FLINT	48532
201	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080		3343	WALTON AVE	FLINT	48504
202	Commercial	0.46000001	0.46	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
203	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3358	KISSNER AVE	FLINT	48504
204	Residential	0.57999998	0.58	CARMAN-AINSWORTH SCHOOLS	25080		3321	BURNELL AVE	FLINT	48504
205	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		3412	MACKIN RD	FLINT	48504
206	Residential	0.57999998	0.58	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
207	Commercial	3.60999990	3.61	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
208	Residential	0.51999998	0.52	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
209	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3352	WALTON AVE	FLINT	48504
210	Residential	1.00999999	1.01	CARMAN-AINSWORTH SCHOOLS	25080		3387	MACKIN RD	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
169	CHARTER TOWNSHIP OF FLINT	1490 S DYE RD	FLINT	MI	48532	
170	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
171	CHARTER TOWNSHIP OF FLINT	1490 S DYE RD	FLINT	MI	48532	
172	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
173	MCCOLLUM, SUSAN E	G-3419 MACKIN RD	FLINT	MI	48504	AMERICAN MUTUAL LLC
174	EVITTS, JEREMY	3373 WALTON AVE	FLINT	MI	48504	
175	EDGCOMBE, KIM L	1229 RIVER OAK DR	FLINT	MI	48532	
176	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
177	GENESEE COUNTY LAND BANK AUTHORITY	452 S. SAGINAW ST, 2ND FL	FLINT	MI	48502	
178	WALKER, BELINDA A	3303 MACKIN RD	FLINT	MI	48504	
179	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
180	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502	
181	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
182	MALIS, STEVE P	3374 KISSNER AVE	FLINT	MI	48504	
183	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
184	KNUCKLES, REGINA D	1221 RIVER OAK DR	FLINT	MI	48532	
185	KENDALL, BENNIE F	G3409 MACKIN RD	FLINT	MI	48504	
186	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
187	KERBY, THOMAS & CAROLE L	7128 N CENTER RD	MOUNT MORRIS	MI	48458	
188	POWERS, MARK & TRINETTE M	3370 KISSNER AVE	FLINT	MI	48504	POWERS, MARK EDMOND
189	MYERS, TAMMY	1320 CLAIRWOOD DR	BURTON	MI	48509-1508	
190	CHAMMAS, ELIAS & HANAN	9262 WARWICK WOODS CT	GRAND BLANC	MI	48439	
191	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
192	HELMS, JOHN E	G-3412 MACKIN RD	FLINT	MI	48504	
193	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
194	MOLPUS, PAUL E	3351 KISSNER AVE	FLINT	MI	48504	
195	SAXTON, HERMAN II, JOYCE A	3366 KISSNER AVE	FLINT	MI	48504	
196	MILLER, HELEN	G-3397 MACKIN RD	FLINT	MI	48504	
197	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
198	STREET		FLINT	MI	48532	
199	ROBINSON, DOROTHY	12300 LAKE VALLEY CT	FENTON	MI	48430	
200	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
201	MJ PROPERTIES OF FLINT	17971 BISCAYNE BLVD STE 2	AVENTURA	FL	33160	HANNA, LILIAN
202	CHAMMAS, INC	9262 WARWICK WOODS CT	GRAND BLANC	MI	48439	
203	DOLLINGER, JENNIFER	3358 KISSNER AVE	FLINT	MI	48504	
204	BURROWS, BARBARA ANN	3321 BURNELL AVE	FLINT	MI	48504	
205	HELMS, JOHN E	G-3412 MACKIN RD	FLINT	MI	48504	L & S HOMES
206	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
207	BARRES, RICHARD W ETAL	3627 CONCORD ST	FLINT	MI	48504	BARRES, RICHARD
208	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
209	HOUTALING, ALAN H	439 WINDMILL POINT DR	FLUSHING	MI	48433	
210	US BANK NATIONAL ASSOC	1160 CENTRE POINTE DR STE	MENDOTA HEIGHTS	MN	55120	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
169					0	Yes	0	0	0	13289447.59160000
170	PO BOX 3066	FLINT	MI	48502	0	No	4800	4870	4800	13289459.12910000
171					0	Yes	0	0	0	13289490.41300000
172	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289493.77200000
173	12601 132ND NE, SUITE D	KIRKLAND	WA	98034	100	No	25200	24860	25200	13289500.25510000
174					100	No	17600	17470	17600	13289502.96040000
175					100	No	24200	24070	24200	13289504.24440000
176	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289507.24090000
177					0	Yes	0	0	0	13289507.37360000
178					100	No	10900	11070	10900	13289523.20510000
179	PO BOX 3066	FLINT	MI	48502	0	No	4700	2460	4700	13289528.42350000
180					0	Yes	0	0	0	13289538.90320000
181	PO BOX 3066	FLINT	MI	48502	0	No	9200	5240	9200	13289546.35650000
182					100	No	16800	16660	16800	13289548.72490000
183	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289563.84610000
184					100	No	28200	27940	28200	13289576.64330000
185					100	No	34600	34010	34600	13289586.16820000
186	PO BOX 3066	FLINT	MI	48502	0	No	4900	2650	4900	13289600.59240000
187					0	No	17300	17170	17300	13289602.17510000
188	3370 KISSNER AVE	FLINT	MI	48504	0	No	3800	3860	3800	13289605.65700000
189					0	No	18700	18590	18700	13289611.80200000
190					0	No	29100	29870	29100	13289626.90710000
191	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289631.79240000
192					100	No	3700	3750	3700	13289633.30460000
193	PO BOX 3066	FLINT	MI	48502	0	No	4500	2340	4500	13289641.04280000
194					100	No	17000	16960	17000	13289660.10940000
195					100	No	13000	12900	13000	13289663.38100000
196					100	No	28900	28650	28900	13289673.30170000
197	PO BOX 3066	FLINT	MI	48502	0	No	5900	3200	5900	13289674.33670000
198					0	Yes	0	0	0	13289687.11360000
199					0	No	15800	15640	15800	13289694.01540000
200	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289700.72960000
201	5400 GATEWAY CENTER STE D	FLINT	MI	48507	0	No	19100	18990	19100	13289716.51760000
202					0	No	7700	7820	7700	13289717.69390000
203					100	No	13000	12900	13000	13289720.75190000
204					100	No	24000	23770	24000	13289724.12090000
205	5046 DAVISON RD	BURTON	MI	48509	100	No	11000	10970	11000	13289727.25220000
206	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289742.86420000
207	3627 CONCORD ST	FLINT	MI	48504	0	No	5600	5680	5600	13289747.57480000
208	PO BOX 3066	FLINT	MI	48502	0	No	6800	3500	6800	13289748.11360000
209					0	No	17200	17060	17200	13289750.29280000
210					0	No	39800	39310	39800	13289761.17230000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
169	556182.47759500	613.02503696	22787.79199220000	613.02508754700			
170	555200.42028600	603.15847343	17515.53125000000	603.15846567600			
171	555591.29455800	1281.44497474	45380.14013670000	1281.44495223000			
172	554704.17733100	466.16129951	12167.08935550000	466.16133114600			
173	559609.02465600	931.89975963	36206.56591800000	931.89974286300			
174	556314.36727700	462.69855280	12290.39306640000	462.69852681000			
175	554883.11836500	500.13798672	14161.13281250000	500.13800151000			
176	554449.01076400	463.06028473	10927.39990230000	463.06033314900			
177	557522.32366400	603.56490467	20116.17431640000	603.56489359100			
178	559068.42768300	5546.92246814	926579.43505900000	5546.92225683000			
179	555159.69772700	606.63462408	18068.99658200000	606.63463553700			
180	557820.14548400	659.75861467	23772.05126950000	659.75858800200			
181	554337.48138300	781.18659217	36365.67236330000	781.18663846600			
182	556145.20861100	428.57364219	9182.81542969000	428.57353992700			
183	554662.53413200	480.07410134	13002.71777340000	480.07416390900			
184	554842.38694700	494.15835189	13297.54443360000	494.15842420100			
185	559556.78926800	997.07669426	39463.72460940000	997.07672869600			
186	555124.86967400	611.81636837	17486.93945310000	611.81636678500			
187	556278.52711700	527.20528393	16878.64306640000	527.20535088200			
188	556122.62924200	426.68495252	9086.98291016000	426.68499485700			
189	556500.42330500	534.45253536	18529.21875000000	534.45262398900			
190	557759.88184800	610.84655126	20833.18750000000	610.84652006700			
191	554615.72722600	489.33778884	13098.71875000000	489.33778180200			
192	559872.32650600	441.08849719	12098.39794920000	441.08842673000			
193	554798.02518700	486.05871437	12830.54199220000	486.05881797200			
194	555883.58557300	678.68203529	27664.06494140000	678.68195798100			
195	556100.83294800	427.21882085	9178.71337891000	427.21879599000			
196	559501.77093000	1075.56580318	45118.12158200000	1075.56575296000			
197	555094.99998800	661.48973049	20050.91455080000	661.48980965800			
198	555452.32666100	622.77871901	17737.86767580000	622.77856814700			
199	556466.41764100	443.34481039	9621.80224609000	443.34466927300			
200	554567.62816600	535.05663121	15364.53759770000	535.05651483800			
201	556234.95783200	532.67813677	17296.69873050000	532.67822711600			
202	557709.01538200	600.94357099	19925.50390630000	600.94357408100			
203	556078.03101600	426.63536273	9143.36523438000	426.63540377000			
204	556614.32276300	638.99647353	25316.66845700000	638.99650363100			x
205	559892.95533000	563.58633978	12492.61572270000	563.58637022900			
206	554718.47526400	652.29508819	25081.12792970000	652.29515011000			
207	557201.65668800	1650.72480220	157442.85644500000	1650.72475666000			
208	555057.06915600	698.01914668	22664.00341800000	698.01905752500			
209	556443.36711800	439.35538837	9433.88769531000	439.35532223000			x
210	559452.01871000	1119.71597366	43849.03808590000	1119.71602798000			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
211	47520	47534	07-10-526-106	3354 KISSNER AVE	25-07-10-526-106	0710526106	139	Lot	401-RESIDENTIAL
212	47529	47543	07-10-526-093	1343 MITSON BLVD	25-07-10-526-093	0710526093	120/21	Lot	401-RESIDENTIAL
213	47590	47604	07-10-526-133	3326 BURNELL AVE	25-07-10-526-133	0710526133	176	Lot	401-RESIDENTIAL
214	47596	47610	07-10-526-112	3337 WALTON AVE	25-07-10-526-112	0710526112	148/147	Lot	401-RESIDENTIAL
215	47599	47613	07-10-526-131	3315 BURNELL AVE	25-07-10-526-131	0710526131	173	Lot	401-RESIDENTIAL
216	47601	47615	07-10-526-119	3342 WALTON AVE	25-07-10-526-119	0710526119	158/9	Lot	401-RESIDENTIAL
217	47603	47617	07-10-526-094	MITSON BLVD	25-07-10-526-094	0710526094	122	Lot	400-RESIDENTIAL VACANT
218	47611	47625	07-10-501-038	3352 FLUSHING RD	25-07-10-501-038	0710501038	41S	Lot	201-COMMERCIAL IMPROVED
219	47614	47628	07-03-577-003	3377 MACKIN RD	25-07-03-577-003	0703577003	3	Lot	401-RESIDENTIAL
220	47620	47634	07-10-552-122	RIVER OAK DR	25-07-10-552-122	0710552122	184	Lot	400-RESIDENTIAL VACANT
221	47653	47667	07-03-576-241	2212 HIGHFIELD ST	25-07-03-576-241	0703576241	374	Lot	401-RESIDENTIAL
222	47659	47673	07-10-526-166	3323 WALTON AVE	25-07-10-526-166	0710526166	140/146	Lot	401-RESIDENTIAL
223	47661	47675	07-10-552-024	SUGARWOOD CT	25-07-10-552-024	0710552024	86	Lot	400-RESIDENTIAL VACANT
224	47668	47682	07-10-526-134	3320 BURNELL AVE	25-07-10-526-134	0710526134	177	Lot	401-RESIDENTIAL
225	47671	47685	07-10-526-130	3307 BURNELL AVE	25-07-10-526-130	0710526130	172	Lot	401-RESIDENTIAL
226	47703	47717	07-10-552-123	RIVER OAK DR	25-07-10-552-123	0710552123	185	Lot	400-RESIDENTIAL VACANT
227	47712	47726	07-10-526-108	1361 MITSON BLVD	25-07-10-526-108	0710526108	141	Lot	401-RESIDENTIAL
228	47716	47730	07-10-526-149	3321 HATHERLY AVE	25-07-10-526-149	0710526149	196	Lot	401-RESIDENTIAL
229	47721	47735	07-03-576-240	2222 HIGHFIELD ST	25-07-03-576-240	0703576240	349/350	Lot	401-RESIDENTIAL
230	47727	47741	07-10-526-120	3332 WALTON AVE	25-07-10-526-120	0710526120	160	Lot	401-RESIDENTIAL
231	47735	47749	07-03-577-004	3367 MACKIN RD	25-07-03-577-004	0703577004	4	Lot	401-RESIDENTIAL
232	47746	47760	07-10-526-067	1336 MITSON BLVD	25-07-10-526-067	0710526067	86-88	Lot	401-RESIDENTIAL
233	47753	47767	07-10-501-023	3327 FLUSHING RD	25-07-10-501-023	0710501023	21NE	Lot	700-EXEMPT VACANT
234	47764	47778	07-10-526-129	3303 BURNELL AVE	25-07-10-526-129	0710526129	171	Lot	401-RESIDENTIAL
235	47770	47784	07-03-576-228	3390 MACKIN RD	25-07-03-576-228	0703576228	375	Lot	401-RESIDENTIAL
236	47788	47802	07-10-526-167	GRAY AVE	25-07-10-526-167	0710526167	103-96	Lot	700-EXEMPT VACANT
237	47795	47809	07-10-526-109	1373 MITSON BLVD	25-07-10-526-109	0710526109	143	Lot	401-RESIDENTIAL
238	47808	47822	07-10-526-148	3315 HATHERLY AVE	25-07-10-526-148	0710526148	195	Lot	700-EXEMPT VACANT
239	47820	47834	07-10-526-135	BURNELL AVE	25-07-10-526-135	0710526135	178/9	Lot	400-RESIDENTIAL VACANT
240	47821	47835	07-10-526-121	3328 WALTON AVE	25-07-10-526-121	0710526121	161	Lot	401-RESIDENTIAL
241	47873	47887	07-10-526-128	3297 BURNELL AVE	25-07-10-526-128	0710526128	170	Lot	401-RESIDENTIAL
242	47876	47890	07-10-501-039	FLUSHING RD	25-07-10-501-039	0710501039	42/43S	Lot	200-COMMERCIAL VACANT
243	47887	47901	07-03-577-005	3355 MACKIN RD	25-07-03-577-005	0703577005	5	Lot	401-RESIDENTIAL
244	47898	47912	07-10-526-066	1350 MITSON BLVD	25-07-10-526-066	0710526066	84/85	Lot	401-RESIDENTIAL
245	47899	47913	07-10-526-068	GRAY AVE	25-07-10-526-068	0710526068	89	Lot	400-RESIDENTIAL VACANT
246	47908	47922	07-10-526-110	1383 MITSON BLVD	25-07-10-526-110	0710526110	144/145	Lot	401-RESIDENTIAL
247	47914	47928	07-10-552-225	RIVER BIRCH DR	25-07-10-552-225	0710552225	84-5/186-7+	Lot	400-RESIDENTIAL VACANT
248	47935	47949	07-10-526-147	3307 HATHERLY AVE	25-07-10-526-147	0710526147	194	Lot	401-RESIDENTIAL
249	47939	47953	07-10-526-150	3320 HATHERLY AVE	25-07-10-526-150	0710526150	197	Lot	401-RESIDENTIAL
250	47949	47963	07-10-526-122	3324 WALTON AVE	25-07-10-526-122	0710526122	162	Lot	401-RESIDENTIAL
251	47952	47966	07-10-552-219	RIVER BIRCH DR	25-07-10-552-219	0710552219	188/195-98+	Lot	200-COMMERCIAL VACANT
252	47989	48003	07-10-526-127	3291 BURNELL AVE	25-07-10-526-127	0710526127	169	Lot	400-RESIDENTIAL VACANT

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
211	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3354	KISSNER AVE	FLINT	48504
212	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080		1343	MITSON BLVD	FLINT	48504
213	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3326	BURNELL AVE	FLINT	48504
214	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080		3337	WALTON AVE	FLINT	48504
215	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		3315	BURNELL AVE	FLINT	48504
216	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080		3342	WALTON AVE	FLINT	48504
217	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080			MITSON BLVD	FLINT	48504
218	Commercial	0.83999997	0.84	CARMAN-AINSWORTH SCHOOLS	25080		3352	FLUSHING RD	FLINT	48504
219	Residential	1.11000001	1.11	CARMAN-AINSWORTH SCHOOLS	25080		3377	MACKIN RD	FLINT	48504
220	Residential	0.49000001	0.49	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
221	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		2212	HIGHFIELD ST	FLINT	48504
222	Residential	0.43000001	0.43	CARMAN-AINSWORTH SCHOOLS	25080		3323	WALTON AVE	FLINT	48504
223	Residential	0.98000002	0.98	CARMAN-AINSWORTH SCHOOLS	25080			SUGARWOOD CT	FLINT	48532
224	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3320	BURNELL AVE	FLINT	48504
225	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3307	BURNELL AVE	FLINT	48504
226	Residential	0.55000001	0.55	CARMAN-AINSWORTH SCHOOLS	25080			RIVER OAK DR	FLINT	48532
227	Residential	0.25999999	0.26	CARMAN-AINSWORTH SCHOOLS	25080		1361	MITSON BLVD	FLINT	48504
228	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3321	HATHERLY AVE	FLINT	48504
229	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080		2222	HIGHFIELD ST	FLINT	48504
230	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3332	WALTON AVE	FLINT	48504
231	Residential	1.13000000	1.13	CARMAN-AINSWORTH SCHOOLS	25080		3367	MACKIN RD	FLINT	48504
232	Residential	0.52999997	0.53	CARMAN-AINSWORTH SCHOOLS	25080		1336	MITSON BLVD	FLINT	48504
233	Exempt	1.38999999	1.39	CARMAN-AINSWORTH SCHOOLS	25080		3327	FLUSHING RD	FLINT	48504
234	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3303	BURNELL AVE	FLINT	48504
235	Residential	1.33000004	1.33	CARMAN-AINSWORTH SCHOOLS	25080		3390	MACKIN RD	FLINT	48504
236	Exempt	2.11999989	2.12	CARMAN-AINSWORTH SCHOOLS	25080			GRAY AVE	FLINT	48504
237	Residential	0.25999999	0.26	CARMAN-AINSWORTH SCHOOLS	25080		1373	MITSON BLVD	FLINT	48504
238	Exempt	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3315	HATHERLY AVE	FLINT	48504
239	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080			BURNELL AVE	FLINT	48504
240	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3328	WALTON AVE	FLINT	48504
241	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3297	BURNELL AVE	FLINT	48504
242	Commercial	0.37000000	0.37	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
243	Residential	1.21000004	1.21	CARMAN-AINSWORTH SCHOOLS	25080		3355	MACKIN RD	FLINT	48504
244	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080		1350	MITSON BLVD	FLINT	48504
245	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080			GRAY AVE	FLINT	48504
246	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080		1383	MITSON BLVD	FLINT	48504
247	Residential	4.11999989	4.12	CARMAN-AINSWORTH SCHOOLS	25080			RIVER BIRCH DR	FLINT	48532
248	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3307	HATHERLY AVE	FLINT	48504
249	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		3320	HATHERLY AVE	FLINT	48504
250	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3324	WALTON AVE	FLINT	48504
251	Commercial	14.36999989	14.37	CARMAN-AINSWORTH SCHOOLS	25080			RIVER BIRCH DR	FLINT	48532
252	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3291	BURNELL AVE	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
211	STROBLE, DASHONE & KIRSTIE	2802 CRESTWOOD DR	FLINT	MI	48503	
212	PEPITONE, JERRY & NORMA	1343 MITSON BLVD	FLINT	MI	48504	
213	WINDFALL HOMES, LLC	5760 N HAWKEYE CT	GRAND RAPIDS	MI	49509	
214	HALE, MICHAEL	3337 WALTON AVE	FLINT	MI	48504	GENESEE COUNTY LAND BANK AUTHORITY
215	BURROWS, BARBARA ANN	3321 BURNELL AVE	FLINT	MI	48504	
216	MUNGER, MICHAEL	3342 WALTON AVE	FLINT	MI	48504	
217	PEPITONE, JERRY & NORMA	1343 MITSON	FLINT	MI	48504	
218	CHAMMAS, INC	9262 WARWICK WOODS CT	GRAND BLANC	MI	48439	
219	CHERRY, JEWEL F ETAL	G-3377 MACKIN RD	FLINT	MI	48504	
220	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
221	ADKISSON, DAVID L	1033 MORRISH RD	FLINT	MI	48532	
222	DICKERSON, RONALD D	3323 WALTON AVE	FLINT	MI	48504	
223	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
224	HUDGINS, RONDA J	3320 BURNELL AVE	FLINT	MI	48504	
225	WERTZ, REBECCA L	1368 WEBBER AVE	BURTON	MI	48529	MCGRAIL, HARRY P & CARLA
226	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
227	STROBLE, DASHONE T & KIRSTIE J	2802 CRESTWOOD DR	FLINT	MI	48503	
228	CARTER, MARGARET TRUST	1405 E GRAND BLANC RD	GRAND BLANC	MI	48439	
229	ADKISSON, MICHAEL L	2222 HIGHFIELD ST	FLINT	MI	48504	
230	CAIN, JAMES D	3332 WALTON AVE	FLINT	MI	48504	CAIN, EDWIN G
231	MARSH, SAMUEL	3367 MACKIN RD	FLINT	MI	48504	
232	TEAM, ROBIN	1336 MITSON BLVD	FLINT	MI	48504	
233	CHARTER TOWNSHIP OF FLINT	1490 S DYE RD	FLINT	MI	48532	
234	SMITH, ANNA	3303 BURNELL AVE	FLINT	MI	48504	
235	SMITH, ELMER	3390 MACKIN RD	FLINT	MI	48504	
236	CHARTER TOWNSHIP OF FLINT	1490 S DYE ROAD	FLINT	MI	48532	
237	ROBINSON, MELVIN R	1373 MITSON BLVD	FLINT	MI	48504	ROBINSON, MELVIN R
238	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
239	BADGEROW, CLIFFORD L & KATHY	3292 BURNELL AVE	FLINT	MI	48504	
240	YOUNG, MICHELLE	3328 WALTON AVE	FLINT	MI	48504	
241	KUS, SANDRA L	3297 BURNELL AVE	FLINT	MI	48504	
242	SUNRIDGE APARTMENTS	5454 GATEWAY CENTRE STE B	FLINT	MI	48507	
243	HARBOUR PORTFOLIO VII, LP	8214 WESTCHESTER STE 635	DALLAS	TX	75225	
244	PEPITONE, JERRY & NORMA	1343 MITSON BLVD	FLINT	MI	48504	
245	PATTERSON, SHIRLEY	3301 KISSNER	FLINT	MI	48532	
246	ROBERTS, TAMMY	1383 MITSON BLVD	FLINT	MI	48504	
247	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
248	CARTER, MARGARET TR	1405 E GRAND BLANC RD	GRAND BLANC	MI	48439	
249	CARTER, MARGARET TRUST	1405 E GRAND BLANC RD	GRAND BLANC	MI	48439	
250	LABARGE, PHILIP	605 MCKEIGHAN AVE	FLINT	MI	48507	
251	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
252	HALL, HAROLD E & JANET E	3278 WALTON	FLINT	MI	48504	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
211					0	No	17100	16960	17100	13289778.99770000
212					100	No	20300	20210	20300	13289784.43890000
213					0	No	15700	15540	15700	13289828.16080000
214	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	No	22700	22550	22700	13289831.71360000
215					0	No	7900	7920	7900	13289833.97050000
216					0	No	16400	16350	16400	13289834.85640000
217					0	No	2300	2330	2300	13289835.86550000
218					0	No	90100	92550	90100	13289842.52470000
219					100	No	34100	33830	34100	13289844.17660000
220	PO BOX 3066	FLINT	MI	48502	0	No	200	190	200	13289852.52600000
221					0	No	16100	15950	16100	13289868.42770000
222					100	No	16500	16350	16500	13289878.09150000
223	PO BOX 3066	FLINT	MI	48502	0	No	6700	3500	6700	13289882.81950000
224					100	No	10000	9950	10000	13289889.44840000
225	7063 N ELMS RD	FLUSHING	MI	48433	100	No	9800	9750	9800	13289891.05570000
226	PO BOX 3066	FLINT	MI	48502	0	No	5000	2650	5000	13289905.07390000
227					0	No	16100	15950	16100	13289912.86450000
228					0	No	13400	13300	13400	13289913.60420000
229					100	No	9200	9240	9200	13289917.93930000
230	2139 W MAPLE AVE	FLINT	MI	48507	100	No	9600	9550	9600	13289919.96990000
231					0	No	39800	39420	39800	13289925.69910000
232					100	No	20100	20010	20100	13289932.98040000
233					0	Yes	0	0	0	13289938.02390000
234					100	No	23700	23460	23700	13289948.10040000
235					100	No	25800	25800	25800	13289951.65940000
236					0	Yes	0	0	0	13289961.19540000
237	7136 SE REDBIRD CIRCLE	HOBE SOUND	FL	33455	0	No	19200	19100	19200	13289962.84110000
238					0	Yes	0	0	0	13289971.61220000
239					100	No	5200	5280	5200	13289978.34090000
240					100	No	24600	24380	24600	13289979.55640000
241					100	No	10500	10460	10500	13290004.69090000
242					0	No	8200	8330	8200	13290005.56660000
243					0	No	26000	25800	26000	13290008.59220000
244					0	No	13200	13200	13200	13290015.84910000
245					100	No	2600	2640	2600	13290016.06100000
246					100	No	18000	18000	18000	13290019.49270000
247	PO BOX 3066	FLINT	MI	48502	0	No	13500	13710	13500	13290022.90270000
248					0	No	14500	14420	14500	13290031.26600000
249					0	No	16500	16350	16500	13290032.67370000
250					0	No	24600	24280	24600	13290039.24730000
251	PO BOX 3066	FLINT	MI	48502	0	No	210000	115290	210000	13290041.97320000
252					0	No	2600	2640	2600	13290063.30090000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
211	556056.67495600	426.71153847	9104.40917969000	426.71146479800			
212	555786.27438100	508.52872575	15713.04785160000	508.52870605800			
213	556791.84081800	427.53793428	9398.52734375000	427.53785536900			x
214	556190.99902900	536.61579051	17516.68945310000	536.61576857700			
215	556571.73033500	410.28941460	8350.54736328000	410.28945956300			x
216	556412.69179500	551.68314917	18239.77197270000	551.68312532700			
217	555862.58577300	396.49919975	8377.10546875000	396.49912708000			
218	557637.99645200	770.65133459	36515.58203130000	770.65139343900			
219	559401.42372800	1186.90807681	48358.79052730000	1186.90809804000			
220	554768.74415800	625.30665673	21184.08398440000	625.30656531300			
221	559901.48902100	373.92900377	8226.97460938000	373.92890388300			
222	556094.35351500	723.29648876	18849.81103520000	723.29643637200			x
223	555059.92327200	854.42672144	42891.55468750000	854.42669105700			
224	556770.96776800	422.39792393	9113.97314453000	422.39780238300			
225	556551.13901300	421.09236162	9055.38427734000	421.09237552600			
226	554885.23907500	639.40784869	24058.58740230000	639.40782048700			
227	555974.91551700	436.12112817	11209.55566410000	436.12115703600			
228	556916.97954000	423.87408687	8801.64453125000	423.87410958600			x
229	559997.27365200	432.86473220	11005.21582030000	432.86473408500			
230	556379.33494300	439.80500247	9750.78808594000	439.80492913600			
231	559349.58657200	1240.32069305	49293.68164060000	1240.32078375000			
232	555640.23264000	621.98356944	23054.29003910000	621.98351826800			x
233	557103.32298200	1272.22375799	60586.56201170000	1272.22381730000			
234	556528.89011400	417.78398902	8698.54150391000	417.78407904500			
235	559821.26692800	1050.97452807	58074.36914060000	1050.97457366000			
236	555377.60259800	1497.87277854	92266.73535160000	1497.87286163000			
237	556050.51872200	439.42771605	11526.13427730000	439.42769949800			
238	556895.74070000	432.59888577	9511.60205078000	432.59888086900			
239	556736.91652100	551.50823943	18407.62207030000	551.50819367900			
240	556356.00963700	437.48608191	9688.73486328000	437.48611707800			
241	556506.36828800	424.34578178	9110.73486328000	424.34569613000			
242	557510.42227700	507.70237755	15947.28271480000	507.70233120600			
243	559301.78802100	1302.96791584	52670.52148440000	1302.96793360000			
244	555766.59893500	494.57313547	14874.38671880000	494.57311007900			
245	555594.03526600	429.93458180	9411.56542969000	429.93469607900			
246	556136.93960000	491.27369092	14619.85791020000	491.27361170900			
247	554818.13726400	2321.29209229	179430.93261700000	2321.29202030000			
248	556873.65041400	429.46300657	9315.95703125000	429.46301145400			
249	557091.75959000	400.52519555	7503.05126953000	400.52520384200			
250	556333.08145800	434.06260599	9589.31689453000	434.06265696100			
251	554225.63752800	4655.37808392	625756.33056600000	4655.37817017000			
252	556483.91563600	426.97541505	9296.26904297000	426.97543085100			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
253	47991	48005	07-10-501-040	FLUSHING RD	25-07-10-501-040	0710501040	42	Lot	700-EXEMPT VACANT
254	48010	48024	07-10-526-069	GRAY AVE	25-07-10-526-069	0710526069	90	Lot	400-RESIDENTIAL VACANT
255	48039	48053	07-10-526-146	HATHERLY AVE	25-07-10-526-146	0710526146	193	Lot	401-RESIDENTIAL
256	48046	48060	07-03-577-006	3349 MACKIN RD	25-07-03-577-006	0703577006	6	Lot	401-RESIDENTIAL
257	48048	48062	07-10-526-136	3292 BURNELL AVE	25-07-10-526-136	0710526136	180/1	Lot	401-RESIDENTIAL
258	48056	48070	07-10-526-065	3307 KISSNER AVE	25-07-10-526-065	0710526065	83	Lot	401-RESIDENTIAL
259	48064	48078	07-10-526-123	1397 MITSON BLVD	25-07-10-526-123	0710526123	163	Lot	401-RESIDENTIAL
260	48085	48099	07-10-501-041	FLUSHING RD	25-07-10-501-041	0710501041	43S	Lot	700-EXEMPT VACANT
261	48091	48105	07-10-526-151	HATHERLY AVE	25-07-10-526-151	0710526151	198/199	Lot	400-RESIDENTIAL VACANT
262	48102	48116	07-10-526-126	3283 BURNELL AVE	25-07-10-526-126	0710526126	168	Lot	401-RESIDENTIAL
263	48119	48133	07-03-400-006	3366 MACKIN RD	25-07-03-400-006	0703400006	400-006	Tract	401-RESIDENTIAL
264	48160	48174	07-10-526-145	3297 HATHERLY AVE	25-07-10-526-145	0710526145	192	Lot	401-RESIDENTIAL
265	48172	48186	07-10-526-052	1362 MITSON BLVD	25-07-10-526-052	0710526052	68-70	Lot	401-RESIDENTIAL
266	48177	48191	07-10-526-165	3307 FLUSHING RD	25-07-10-526-165	0710526165	215/216	Lot	401-RESIDENTIAL
267	48186	48200	07-03-576-209	3381 CLEMENT ST	25-07-03-576-209	0703576209	341/342	Lot	700-EXEMPT VACANT
268	48192	48206	07-10-526-070	3312 GRAY AVE	25-07-10-526-070	0710526070	91/92	Lot	401-RESIDENTIAL
269	48196	48210	07-10-526-051	1374 MITSON BLVD	25-07-10-526-051	0710526051	67	Lot	401-RESIDENTIAL
270	48204	48218	07-10-526-124	1407 MITSON BLVD	25-07-10-526-124	0710526124	164-6	Lot	401-RESIDENTIAL
271	48211	48225	07-10-526-064	3301 KISSNER AVE	25-07-10-526-064	0710526064	82	Lot	401-RESIDENTIAL
272	48227	48241	07-10-526-137	3288 BURNELL AVE	25-07-10-526-137	0710526137	182	Lot	401-RESIDENTIAL
273	48271	48285	07-10-526-152	3300 HATHERLY AVE	25-07-10-526-152	0710526152	200	Lot	401-RESIDENTIAL
274	48285	48299	07-10-526-050	3301 WALTON AVE	25-07-10-526-050	0710526050	65/66	Lot	401-RESIDENTIAL
275	48329	48343	07-10-526-125	1419 MITSON BLVD	25-07-10-526-125	0710526125	167	Lot	700-EXEMPT VACANT
276	48330	48344	07-10-526-144	3289 HATHERLY AVE	25-07-10-526-144	0710526144	190/1	Lot	401-RESIDENTIAL
277	48331	48345	07-10-526-164	3301 FLUSHING RD	25-07-10-526-164	0710526164	214	Lot	401-RESIDENTIAL
278	48332	48346	40-10-203-013	FLUSHING RD	25-40-10-203-013	4010203013	013	Lot	400-RESIDENTIAL VACANT
279	48338	48352	07-10-526-138	3282 BURNELL AVE	25-07-10-526-138	0710526138	183	Lot	400-RESIDENTIAL VACANT
280	48355	48369	07-10-526-071	3306 GRAY AVE	25-07-10-526-071	0710526071	93	Lot	401-RESIDENTIAL
281	48358	48372	07-10-501-042	3320 FLUSHING RD	25-07-10-501-042	0710501042	44	Lot	200-COMMERCIAL VACANT
282	48370	48384	07-10-526-063	3291 KISSNER AVE	25-07-10-526-063	0710526063	80	Lot	401-RESIDENTIAL
283	48378	48392	07-10-526-053	3300 KISSNER AVE	25-07-10-526-053	0710526053	71	Lot	401-RESIDENTIAL
284	48381	48395	07-10-526-153	3290 HATHERLY AVE	25-07-10-526-153	0710526153	201	Lot	401-RESIDENTIAL
285	48390	48404	07-03-576-210	3367 CLEMENT ST	25-07-03-576-210	0703576210	343/344	Lot	401-RESIDENTIAL
286	48414	48428	07-10-526-163	3297 FLUSHING RD	25-07-10-526-163	0710526163	213	Lot	700-EXEMPT VACANT
287	48424	48438	07-10-552-224	1213 RIVER BIRCH DR	25-07-10-552-224	0710552224	83	Lot	401-RESIDENTIAL
288	48435	48449	07-10-526-139	1431 MITSON BLVD	25-07-10-526-139	0710526139	184	Lot	401-RESIDENTIAL
289	48446	48460	07-10-526-072	3298 GRAY AVE	25-07-10-526-072	0710526072	94	Lot	401-RESIDENTIAL
290	48447	48461	07-10-526-054	3296 KISSNER AVE	25-07-10-526-054	0710526054	72	Lot	401-RESIDENTIAL
291	48457	48471	07-10-526-040	1398 MITSON BLVD	25-07-10-526-040	0710526040	49/50	Lot	401-RESIDENTIAL
292	48471	48485	07-10-526-049	3287 WALTON AVE	25-07-10-526-049	0710526049	63/64	Lot	401-RESIDENTIAL
293	48472	48486	07-10-526-143	3279 HATHERLY AVE	25-07-10-526-143	0710526143	189	Lot	401-RESIDENTIAL
294	48475	48489	07-10-552-141	1091 RIVER VALLEY DR	25-07-10-552-141	0710552141	202/3	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
253	Exempt	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
254	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080			GRAY AVE	FLINT	48504
255	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080			HATHERLY AVE	FLINT	48504
256	Residential	1.33000004	1.33	CARMAN-AINSWORTH SCHOOLS	25080		3349	MACKIN RD	FLINT	48504
257	Residential	0.41000000	0.41	CARMAN-AINSWORTH SCHOOLS	25080		3292	BURNELL AVE	FLINT	48504
258	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3307	KISSNER AVE	FLINT	48504
259	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		1397	MITSON BLVD	FLINT	48504
260	Exempt	0.37000000	0.37	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
261	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080			HATHERLY AVE	FLINT	48504
262	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3283	BURNELL AVE	FLINT	48504
263	Residential	1.02999997	1.03	CARMAN-AINSWORTH SCHOOLS	25080		3366	MACKIN RD	FLINT	48504
264	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3297	HATHERLY AVE	FLINT	48504
265	Residential	0.56000000	0.56	CARMAN-AINSWORTH SCHOOLS	25080		1362	MITSON BLVD	FLINT	48504
266	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080		3307	FLUSHING RD	FLINT	48504
267	Exempt	0.70999998	0.71	CARMAN-AINSWORTH SCHOOLS	25080		3381	CLEMENT ST	FLINT	48504
268	Residential	0.44000000	0.44	CARMAN-AINSWORTH SCHOOLS	25080		3312	GRAY AVE	FLINT	48504
269	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		1374	MITSON BLVD	FLINT	48504
270	Residential	0.50000000	0.5	CARMAN-AINSWORTH SCHOOLS	25080		1407	MITSON BLVD	FLINT	48504
271	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		3301	KISSNER AVE	FLINT	48504
272	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3288	BURNELL AVE	FLINT	48504
273	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3300	HATHERLY AVE	FLINT	48504
274	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		3301	WALTON AVE	FLINT	48504
275	Exempt	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		1419	MITSON BLVD	FLINT	48504
276	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080		3289	HATHERLY AVE	FLINT	48504
277	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		3301	FLUSHING RD	FLINT	48504
278	Residential	0.02000000	0.02	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
279	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3282	BURNELL AVE	FLINT	48504
280	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3306	GRAY AVE	FLINT	48504
281	Commercial	0.92000002	0.92	CARMAN-AINSWORTH SCHOOLS	25080		3320	FLUSHING RD	FLINT	48504
282	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080		3291	KISSNER AVE	FLINT	48504
283	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		3300	KISSNER AVE	FLINT	48504
284	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3290	HATHERLY AVE	FLINT	48504
285	Residential	0.51999998	0.52	CARMAN-AINSWORTH SCHOOLS	25080		3367	CLEMENT ST	FLINT	48504
286	Exempt	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080		3297	FLUSHING RD	FLINT	48504
287	Residential	0.51999998	0.52	CARMAN-AINSWORTH SCHOOLS	25080		1213	RIVER BIRCH DR	FLINT	48532
288	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		1431	MITSON BLVD	FLINT	48504
289	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3298	GRAY AVE	FLINT	48504
290	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3296	KISSNER AVE	FLINT	48504
291	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		1398	MITSON BLVD	FLINT	48504
292	Residential	0.38999999	0.39	CARMAN-AINSWORTH SCHOOLS	25080		3287	WALTON AVE	FLINT	48504
293	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3279	HATHERLY AVE	FLINT	48504
294	Residential	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080		1091	RIVER VALLEY DR	FLINT	48532

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
253	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502-1832	
254	PATTERSON, SHIRLEY	3301 KISSNER AVE	FLINT	MI	48504	
255	GOODMAN, JOHN & ROSE	12458 SAINT ANDREWS WAY	FENTON	MI	48430	
256	RISKE, MICHELLE	G3349 MACKIN RD	FLINT	MI	48504	BARFIELD, JOHN T & HOLLY
257	BADGEROW, CLIFFORD & KATHY	3292 BURNELL AVE	FLINT	MI	48504	
258	PATTERSON, SHIRLEY	3301 KISSNER AVE	FLINT	MI	48504	
259	OAKES, ROBERT L III	1397 MITSON BLVD	FLINT	MI	48504	
260	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST, 2ND FLR	FLINT	MI	48502	
261	CARTER, MARGARET TRUST	1405 E GRAND BLANC RD	GRAND BLANC	MI	48439	
262	HALL, HAROLD E & JANET E TR	3278 WALTON AVE	FLINT	MI	48504	
263	HARRISON, DENISE ETAL	G3366 MACKIN RD	FLINT	MI	48504	
264	LEE, DIANNE G ETAL	PO BOX 321274	FLINT	MI	48532	
265	FERNANDES, JULIET A TR	6295 SUMMERHILL CT	FLINT	MI	48532	
266	CARTER, MARGARET TRUST	1405 E GRAND BLANC RD	GRAND BLANC	MI	48439	
267	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	
268	ANDERSON, KEN & BILLIE	3312 GRAY AVE	FLINT	MI	48504	
269	HERRICK, LORI J	1374 MITSON BLVD	FLINT	MI	48504	
270	OAKES, ROBERT L	1407 MITSON BLVD	FLINT	MI	48504	
271	PATTERSON, SHIRLEY	3301 KISSNER AVE	FLINT	MI	48504	
272	RANDALL, KEITH & MELISSA	3288 BURNELL AVE	FLINT	MI	48504	QUEEN'S PARK OVAL ASSET HOLDING TR
273	SEAY, RENEE L & HAMMER, CARLENE	3300 HATHERLY AVE	FLINT	MI	48504	
274	GREEN, MEICHEL E	3301 WALTON AVE	FLINT	MI	48504	
275	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
276	DENSMORE, CHRISTOPHER J	3289 HATHERLY AVE	FLINT	MI	48504	GENESEE COUNTY LAND BANK
277	BELTRAN, ANTONIO & ELINE	15236 SUNSET CT	GULFPORT	MS	39503	
278	CITY OF FLINT	FLUSHING RD	FLINT	MI	48504	CITY OF FLINT
279	DENSMORE, CHRIS	3289 HATHERLY AVE	FLINT	MI	48504	
280	ADKISSON, DAVID L	1033 S MORRISH RD	FLINT	MI	48532	
281	CLEMENTS, MARILYN	67 GRAY FOX CT	GRAND BLANC	MI	48439	CLEMENTS, MARILYN
282	THE BANK OF NEW YORK MELLON TRUST	1661 WORTHINGTON RD STE 1	WEST PALM BEACH	FL	33409	
283	ATKINSON, JACK	3300 KISSNER AVE	FLINT	MI	48504	
284	BOYD, TIMOTHY	3290 HATHERLY AVE	FLINT	MI	48504	MCCLURE, MATTHEW
285	CAMPBELL, JEFFREY D	3367 CLEMENT ST	FLINT	MI	48504	
286	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
287	BURRELL, KATHLEEN K	1213 RIVER BIRCH DR	FLINT	MI	48532	
288	VAUGHN, VICTORIA LYNNE	1431 MITSON BLVD	FLINT	MI	48504	
289	ADKISSON, RONALD L	3298 GRAY AVE	FLINT	MI	48504	
290	LUNA, ISABEL	3296 KISSNER AVE	FLINT	MI	48504	
291	DINGWELL, WILLIAM M	1398 MITSON BLVD	FLINT	MI	48504	
292	GOREY, JOSEPH & DEBORA	3431 REID RD	SWARTZ CREEK	MI	48473	
293	MALONE, TANESHA	PO BOX 321003	FLINT	MI	48532	
294	HAACK, ROGER II	1091 RIVER VALLEY DR APT	FLINT	MI	48532	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
253					0	Yes	0	0	0	13290063.53240000
254					100	No	2600	2640	2600	13290073.74730000
255					0	No	4800	4870	4800	13290089.55730000
256	2406 LINDA DR	ENNIS	TX	75119	0	No	23700	23570	23700	13290092.57560000
257					100	No	20700	20620	20700	13290094.93020000
258					0	No	10800	10660	10800	13290097.15390000
259					100	No	10300	10260	10300	13290100.63960000
260					0	Yes	0	0	0	13290111.62650000
261					0	No	5200	5280	5200	13290117.30170000
262					0	No	13100	13000	13100	13290121.84410000
263					100	No	31300	31080	31300	13290130.91300000
264					100	No	12500	12390	12500	13290147.63700000
265					0	No	21200	21030	21200	13290151.40340000
266					0	No	18400	18280	18400	13290152.86380000
267					0	Yes	0	0	0	13290157.96580000
268					100	No	15700	15640	15700	13290161.10300000
269					100	No	17900	17670	17900	13290164.31710000
270					100	No	29300	29150	29300	13290166.79720000
271					100	No	19800	19600	19800	13290170.11920000
272	5032 PARKWAY PLAZA BLVD	CHARLOTTE	NC	28217	0	No	11400	11370	11400	13290180.82910000
273					100	No	14100	14020	14100	13290206.21550000
274					100	No	22600	22450	22600	13290212.17870000
275					0	Yes	0	0	0	13290233.56370000
276	452 S SAGINAW ST	FLINT	MI	48502	100	No	18900	18900	18900	13290233.68220000
277					0	No	11900	11780	11900	13290233.74560000
278	FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13290234.29770000
279					0	No	2600	2600	2600	13290237.76590000
280					0	No	9500	9440	9500	13290249.01730000
281	3320 FLUSHING RD	FLINT	MI	48504-4237	0	No	8800	8940	8800	13290249.43720000
282					0	No	26400	26210	26400	13290257.28930000
283					0	No	11300	11170	11300	13290262.86520000
284	PO BOX 239	FLUSHING	MI	48433	100	No	13600	13510	13600	13290264.23690000
285					100	No	11500	11480	11500	13290270.66890000
286					0	Yes	0	0	0	13290289.28450000
287					100	No	33300	33120	33300	13290294.76980000
288					0	No	18500	18280	18500	13290300.93840000
289					100	No	9000	8940	9000	13290304.31840000
290					100	No	15200	15130	15200	13290304.38420000
291					100	No	25000	24790	25000	13290309.86040000
292					0	No	20500	20420	20500	13290319.26530000
293					0	No	13500	13410	13500	13290320.08560000
294					33	No	45200	44700	45200	13290321.15050000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
253	557591.84409600	367.90963072	7690.41699219000	367.90964471600			
254	555573.12459200	419.10992559	8633.75537109000	419.10993648200			
255	556851.17437200	427.47911192	9231.68115234000	427.47903766200			
256	559251.61246500	1372.66325596	57793.18164060000	1372.66318979000			
257	556692.37233600	542.90271776	17864.79101560000	542.90276975500			x
258	555720.41370900	426.20192694	9392.25634766000	426.20199543300			
259	556261.95873000	362.32870512	7026.81152344000	362.32865649100			
260	557487.67347500	562.66046709	16182.26611330000	562.66046026000			
261	557060.68334900	551.63327145	18429.11425780000	551.63325975700			
262	556460.54424500	428.58907413	9331.15283203000	428.58909575500			
263	559757.10881900	890.27289867	44747.06835940000	890.27283858700			
264	556829.45463800	424.18536001	9058.84619141000	424.18544354500			
265	555908.58704000	686.14243249	24535.18652340000	686.14242478900			
266	557201.25080400	551.85589080	18482.48046880000	551.85594116200			
267	560007.81402300	712.69055116	30855.75634770000	712.69058052700			
268	555539.98649300	559.53248043	19015.23535160000	559.53248453900			x
269	555992.08546900	369.37049295	7250.56689453000	369.37052806900			
270	556361.36901000	604.20533276	21623.00781250000	604.20537919300			
271	555693.83526200	480.76185479	13258.34423830000	480.76182828800			
272	556660.07470500	418.90756660	8803.89746094000	418.90755602000			
273	557027.13576100	422.68071953	9053.01416016000	422.68063685600			
274	556065.62399100	485.16239871	14366.65380860000	485.16234323900			
275	556463.15421400	380.25498208	7959.65478516000	380.25494110700			
276	556795.86128900	548.84418666	18122.23193360000	548.84420020100		x	
277	557174.46763400	394.94503541	7047.79443359000	394.94498608200			
278	557323.63271000	261.39193170	1002.92187500000	261.39197336900			
279	556638.90553800	417.69437606	8758.78564453000	417.69443937900		x	
280	555507.29085500	419.70596416	8709.46093750000	419.70600373900			
281	557525.21038000	999.16726859	40045.52929690000	999.16722354300			
282	555661.21141700	491.10980296	13976.21923830000	491.10976853200			x
283	555876.51522400	394.20159430	6805.91699219000	394.20164650800			
284	557005.68254300	420.66946382	8899.72656250000	420.66947798500			
285	559956.74196500	643.08655379	22787.76367190000	643.08650601500			
286	557158.91350700	437.12327344	9997.25390625000	437.12318477800			x
287	554982.34051600	733.18724455	22478.65917970000	733.18725948500			
288	556567.00985200	371.68508615	7252.10009766000	371.68513231200			
289	555486.27688400	421.60720507	8765.25732422000	421.60710301800			
290	555861.12231400	388.41283975	6326.46093750000	388.41286704600			
291	556216.63393000	483.13969755	14262.83789060000	483.13968321200			
292	556010.93419700	528.45824668	17051.57177730000	528.45817457100			
293	556763.15639700	420.44758723	8918.88232422000	420.44763659500			
294	554000.88834400	503.18767923	15067.13085940000	503.18763117900			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
295	48476	48490	07-10-526-154	3288 HATHERLY AVE	25-07-10-526-154	0710526154	202	Lot	401-RESIDENTIAL
296	48492	48506	07-10-526-062	3285 KISSNER AVE	25-07-10-526-062	0710526062	79	Lot	401-RESIDENTIAL
297	48496	48510	40-10-203-011	ELDORADO DR	25-40-10-203-011	4010203011	011	Lot	200-COMMERCIAL VACANT
298	48497	48511	07-10-526-140	1435 MITSON BLVD	25-07-10-526-140	0710526140	185	Lot	401-RESIDENTIAL
299	48537	48551	07-10-526-055	3292 KISSNER AVE	25-07-10-526-055	0710526055	73	Lot	401-RESIDENTIAL
300	48538	48552	07-10-526-162	3289 FLUSHING RD	25-07-10-526-162	0710526162	211/212	Lot	401-RESIDENTIAL
301	48547	48561	07-10-552-127	1206 RIVER BIRCH DR	25-07-10-552-127	0710552127	189	Lot	401-RESIDENTIAL
302	48564	48578	07-10-526-039	1412 MITSON BLVD	25-07-10-526-039	0710526039	48	Lot	401-RESIDENTIAL
303	48570	48584	07-10-526-073	3294 GRAY AVE	25-07-10-526-073	0710526073	95	Lot	401-RESIDENTIAL
304	48585	48599	07-03-576-211	3361 CLEMENT ST	25-07-03-576-211	0703576211	345-347	Lot	401-RESIDENTIAL
305	48594	48608	07-10-552-223	RIVER BIRCH DR	25-07-10-552-223	0710552223	82	Lot	400-RESIDENTIAL VACANT
306	48597	48611	07-10-526-155	3282 HATHERLY AVE	25-07-10-526-155	0710526155	203	Lot	700-EXEMPT VACANT
307	48603	48617	07-10-526-141	1451 MITSON BLVD	25-07-10-526-141	0710526141	186/7	Lot	401-RESIDENTIAL
308	48616	48630	07-10-526-038	1416 MITSON BLVD	25-07-10-526-038	0710526038	47	Lot	401-RESIDENTIAL
309	48623	48637	07-10-526-056	3288 KISSNER AVE	25-07-10-526-056	0710526056	73	Lot	401-RESIDENTIAL
310	48627	48641	07-10-552-140	1099 RIVER VALLEY DR	25-07-10-552-140	0710552140	201/2	Lot	401-RESIDENTIAL
311	48635	48649	07-10-501-035	3348 FLUSHING RD	25-07-10-501-035	0710501035	38-44+	Lot	201-COMMERCIAL IMPROVED
312	48678	48692	07-10-526-048	3275 WALTON AVE	25-07-10-526-048	0710526048	62	Lot	401-RESIDENTIAL
313	48679	48693	07-10-526-037	1422 MITSON BLVD	25-07-10-526-037	0710526037	46	Lot	401-RESIDENTIAL
314	48683	48697	07-10-552-128	1216 RIVER BIRCH DR	25-07-10-552-128	0710552128	190	Lot	401-RESIDENTIAL
315	48685	48699	07-10-526-161	3283 FLUSHING RD	25-07-10-526-161	0710526161	210/211	Lot	201-COMMERCIAL IMPROVED
316	48692	48706	07-10-526-142	1457 MITSON BLVD	25-07-10-526-142	0710526142	188	Lot	401-RESIDENTIAL
317	48693	48707	07-10-526-041	3278 WALTON AVE	25-07-10-526-041	0710526041	51/52	Lot	401-RESIDENTIAL
318	48694	48708	07-10-526-057	KISSNER AVE	25-07-10-526-057	0710526057	74	Lot	700-EXEMPT VACANT
319	48704	48718	07-10-526-156	HATHERLY AVE	25-07-10-526-156	0710526156	204	Lot	400-RESIDENTIAL VACANT
320	48725	48739	07-03-400-005	3303 MACKIN RD	25-07-03-400-005	0703400005	400-005	Tract	401-RESIDENTIAL
321	48730	48744	40-10-203-010	1161 ELDORADO DR	25-40-10-203-010	4010203010	010	Lot	401-RESIDENTIAL
322	48752	48766	07-10-676-020	3766 RIVER BIRCH DR	25-07-10-676-020	0710676020	10	Condo	401-RESIDENTIAL
323	48773	48787	07-10-552-222	1105 RIVER VALLEY DR	25-07-10-552-222	0710552222	200/1	Lot	401-RESIDENTIAL
324	48779	48793	40-10-204-057	3422 FLUSHING RD	25-40-10-204-057	4010204057	057	Lot	201-COMMERCIAL IMPROVED
325	48780	48794	07-10-676-019	3766 RIVER BIRCH DR	25-07-10-676-019	0710676019	9	Condo	401-RESIDENTIAL
326	48791	48805	40-10-203-008	1165 ELDORADO DR	25-40-10-203-008	4010203008	008	Lot	401-RESIDENTIAL
327	48794	48808	07-10-526-025	1434 MITSON BLVD	25-07-10-526-025	0710526025	31	Lot	401-RESIDENTIAL
328	48795	48809	07-10-526-058	3280 KISSNER AVE	25-07-10-526-058	0710526058	75	Lot	401-RESIDENTIAL
329	48814	48828	07-10-676-018	3766 RIVER BIRCH DR	25-07-10-676-018	0710676018	8	Condo	401-RESIDENTIAL
330	48822	48836	07-10-526-047	3265 WALTON AVE	25-07-10-526-047	0710526047	60	Lot	401-RESIDENTIAL
331	48829	48843	07-10-526-160	3261 FLUSHING RD	25-07-10-526-160	0710526160	209+	Lot	201-COMMERCIAL IMPROVED
332	48832	48846	07-10-526-036	3239 BURNELL AVE	25-07-10-526-036	0710526036	44/45	Lot	401-RESIDENTIAL
333	48839	48853	07-10-526-042	3270 WALTON AVE	25-07-10-526-042	0710526042	53	Lot	401-RESIDENTIAL
334	48848	48862	07-10-526-157	MITSON BLVD	25-07-10-526-157	0710526157	205/206	Lot	400-RESIDENTIAL VACANT
335	48852	48866	07-10-526-024	1442 MITSON BLVD	25-07-10-526-024	0710526024	30	Lot	401-RESIDENTIAL
336	48854	48868	07-10-676-017	3766 RIVER BIRCH DR	25-07-10-676-017	0710676017	7	Condo	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
295	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3288	HATHERLY AVE	FLINT	48504
296	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3285	KISSNER AVE	FLINT	48504
297	Commercial	0.88000000	0.88	FLINT SCHOOLS	25010			ELDORADO DR	FLINT	48504
298	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		1435	MITSON BLVD	FLINT	48504
299	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3292	KISSNER AVE	FLINT	48504
300	Residential	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080		3289	FLUSHING RD	FLINT	48504
301	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080		1206	RIVER BIRCH DR	FLINT	48532
302	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		1412	MITSON BLVD	FLINT	48504
303	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3294	GRAY AVE	FLINT	48504
304	Residential	0.47000000	0.47	CARMAN-AINSWORTH SCHOOLS	25080		3361	CLEMENT ST	FLINT	48504
305	Residential	0.56999999	0.57	CARMAN-AINSWORTH SCHOOLS	25080			RIVER BIRCH DR	FLINT	48532
306	Exempt	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3282	HATHERLY AVE	FLINT	48504
307	Residential	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080		1451	MITSON BLVD	FLINT	48504
308	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		1416	MITSON BLVD	FLINT	48504
309	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3288	KISSNER AVE	FLINT	48504
310	Residential	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080		1099	RIVER VALLEY DR	FLINT	48532
311	Commercial	28.06999969	28.07	CARMAN-AINSWORTH SCHOOLS	25080		3348	FLUSHING RD	FLINT	48504
312	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080		3275	WALTON AVE	FLINT	48504
313	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		1422	MITSON BLVD	FLINT	48504
314	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		1216	RIVER BIRCH DR	FLINT	48532
315	Commercial	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		3283	FLUSHING RD	FLINT	48504
316	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		1457	MITSON BLVD	FLINT	48504
317	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080		3278	WALTON AVE	FLINT	48504
318	Exempt	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080			KISSNER AVE	FLINT	48504
319	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080			HATHERLY AVE	FLINT	48504
320	Residential	4.57999992	4.58	CARMAN-AINSWORTH SCHOOLS	25080		3303	MACKIN RD	FLINT	48504
321	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		1161	ELDORADO DR	FLINT	48504
322	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3766	RIVER BIRCH DR	FLINT	48532
323	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080		1105	RIVER VALLEY DR	FLINT	48532
324	Commercial	0.76999998	0.77	FLINT SCHOOLS	25010		3422	FLUSHING RD	FLINT	48504
325	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3766	RIVER BIRCH DR	FLINT	48532
326	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		1165	ELDORADO DR	FLINT	48504
327	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		1434	MITSON BLVD	FLINT	48504
328	Residential	0.28000000	0.28	CARMAN-AINSWORTH SCHOOLS	25080		3280	KISSNER AVE	FLINT	48504
329	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3766	RIVER BIRCH DR	FLINT	48532
330	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		3265	WALTON AVE	FLINT	48504
331	Commercial	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		3261	FLUSHING RD	FLINT	48504
332	Residential	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080		3239	BURNELL AVE	FLINT	48504
333	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3270	WALTON AVE	FLINT	48504
334	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080			MITSON BLVD	FLINT	48504
335	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		1442	MITSON BLVD	FLINT	48504
336	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3766	RIVER BIRCH DR	FLINT	48532

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
295	LOPEZ, JOSHUA & MARY	3288 HATHERLY AVE	FLINT	MI	48504	CONRAD, CLEATUS G
296	ZANG CORP	7220 ANDREA CT	GRAND BLANC	MI	48439	
297	CLEMENTS, MARILYN	3833 WHITTIER AVE	FLINT	MI	48506	CLEMENTS, MARILYN
298	VAUGHN, VICTORIA LYNNE	1431 MITSON AVE	FLINT	MI	48504	
299	HELTON, RITA L & HELTON DAVID	3292 KISSNER AVE	FLINT	MI	48504	
300	CARTER, MARGARET	1405 E GRAND BLANC RD	GRAND BLANC	MI	48439	
301	MITCHNER, CATHERINE	1206 RIVER BIRCH DR	FLINT	MI	48532	TANNENBAUM, HENRY R TR
302	POPE, GARY W JR & MELINDA A	1412 MITSON BLVD	FLINT	MI	48504	
303	GOLOWKA, MICHAEL	8052 TORREY RD	GRAND BLANC	MI	48439	
304	JOHNSON, ROBERT L & JANICE A	3361 CLEMENT ST	FLINT	MI	48504	
305	WROXTON CONDOMINIUM ASSOCIATION	PO BOX 320266	FLINT	MI	48532	
306	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	
307	PEPITONE, JERRY & NORMA	1343 MITSON BLVD	FLINT	MI	48504	
308	BURCHETT, GEORGE	1416 MITSON BLVD	FLINT	MI	48504	
309	ZANG CORP	7220 ANDREA CT	GRAND BLANC	MI	48439	
310	KATTOLA, JONATHAN	206 W PIERSON RD	FLINT	MI	48505	
311	SUNRIDGE APARTMENTS	5454 GATEWAY CENTRE STE B	FLINT	MI	48507	
312	GOREY, JOE & DEBORA	3431 REID RD	SWARTZ CREEK	MI	48473	
313	LANE, ALLEN R	1422 MITSON BLVD	FLINT	MI	48504	
314	STEWART, MARY M	1216 RIVER BIRCH DR	FLINT	MI	48532	
315	SHELTON, NANCY L	1312 MAXSON	FLINT	MI	48504	
316	JOHNSON, DAVID W	G 4052 E PIERSON RD	FLINT	MI	48506	
317	HALL, HAROLD E & JANET E	3278 WALTON AVE	FLINT	MI	48504	
318	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
319	DENSMORE, CHRIS	3289 HATHERLY AVE	FLINT	MI	48504	
320	WALKER, HASKEL & BELINDA A	3303 MACKIN RD	FLINT	MI	48504	
321	BROWN, RODNEY & WF EARLENE	PO BOX 320330	FLINT	MI	48532	BROWN, RODNEY & WF EARLENE
322	FERRIS, JOHN C & DEBORAH	3766 RIVER BIRCH DR	FLINT	MI	48532	
323	HAACK, ROGER II	1091 RIVER VALLEY DR APT	FLINT	MI	48532-2992	
324	TRI SILVER GROUP	3422 FLUSHING RD	FLINT	MI	48504	TRI SILVER GROUP
325	STAFFORD, ROBERT & CHRISTINE	PO BOX 715	LINDEN	MI	48451	
326	WINSTON, BARBARA J	1165 ELDORADO DR	FLINT	MI	48504	WINSTON, BARBARA J
327	HUGHES, DEBORAH	PO BOX 311002	FLINT	MI	48531	
328	NICHOL, KATHLEEN D	3280 KISSNER AVE	FLINT	MI	48504	
329	BONET, MARGARET H TR	2200 MARKET ST APT 231	DENVER	CO	80205	
330	GOREY, JOSEPH & DEBORA	3431 REID RD	SWARTZ CREEK	MI	48473	
331	DARLINGTON-SNIDER, LEE	1106 HEATHERWOOD RD	FLINT	MI	48532	
332	GIST, CHRISTOPHER	3239 BURNELL AVE	FLINT	MI	48504	
333	GOREY, DEBORA & JOSEPH	3431 REID RD	SWARTZ CREEK	MI	48473	
334	DENSMORE, CHRIS	3289 HATHERLY AVE	FLINT	MI	48504	
335	VAN HOUTEN, KATHLEEN SUE & JACK E	PO BOX 310582	FLINT	MI	48531	
336	FERRIS, JOHN-CLAIR & DEBORAH K	3766 RIVER BIRCH DR	FLINT	MI	48532	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
295	3320 HATHERLY AVE	FLINT	MI	48504	100	No	12800	12700	12800	13290322.02210000
296					0	No	20000	19810	20000	13290330.50510000
297	3833 WHITTIER AVE	FLINT	MI	48506	0	No	23100	13208	23100	13290331.96920000
298					0	No	9800	9750	9800	13290332.38950000
299					100	No	11100	10970	11100	13290348.15860000
300					0	No	18900	18790	18900	13290348.55480000
301	521 W COURT ST	FLINT	MI	48503	100	No	32300	32100	32300	13290353.63920000
302					100	No	15400	15340	15400	13290358.88930000
303					0	No	15500	15340	15500	13290361.82040000
304					100	No	13200	13100	13200	13290371.12990000
305					0	No	4500	4570	4500	13290376.88560000
306					0	Yes	0	0	0	13290381.29610000
307					0	No	14900	14830	14900	13290383.38990000
308					100	No	19200	18990	19200	13290390.79480000
309					0	No	11300	11170	11300	13290393.50050000
310					0	No	50600	49980	50600	13290395.67900000
311					0	No	2718000	2680790	2718000	13290399.30770000
312					0	No	15700	15640	15700	13290420.87160000
313					100	No	16100	15950	16100	13290423.72200000
314					100	No	30000	29760	30000	13290426.12810000
315					0	No	13200	13510	13200	13290426.48250000
316					0	No	13500	13410	13500	13290432.56490000
317					100	No	23600	23460	23600	13290434.41570000
318					0	Yes	0	0	0	13290434.77050000
319					0	No	2800	2800	2800	13290440.45740000
320					100	No	45300	45000	45300	13290443.24500000
321	PO BOX 320330	FLINT	MI	48532	0	No	15800	16052	15800	13290448.25820000
322					100	No	29600	29260	29600	13290462.00270000
323					0	No	45200	44700	45200	13290477.10770000
324	3422 FLUSHING RD	FLINT	MI	48504	0	No	106000	105562	106000	13290484.25540000
325					100	No	29600	29260	29600	13290484.50220000
326	1165 ELDORADO DR	FLINT	MI	48504	100	No	17200	17475	17200	13290490.13670000
327					100	No	12700	12590	12700	13290493.17970000
328					100	No	22200	22040	22200	13290493.44280000
329					100	No	29300	28950	29300	13290507.00160000
330					0	No	15600	15540	15600	13290510.19040000
331					0	No	7400	7620	7400	13290512.89300000
332					100	No	23500	23360	23500	13290514.52830000
333					0	No	19800	19600	19800	13290520.41580000
334					0	No	4600	4600	4600	13290525.41350000
335					100	No	12800	12700	12800	13290527.50690000
336					0	No	29300	28950	29300	13290529.50110000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
295	556983.32443000	424.89806379	9206.57714844000	424.89799108000			
296	555633.96374000	422.14492756	8946.46191406000	422.14496378500			
297	557462.75316200	897.59696181	37483.52050780000	897.59702269500			
298	556616.03385400	372.23329308	7304.35937500000	372.23326090300			x
299	555844.08142300	406.47413175	7663.46093750000	406.47397539800			
300	557128.35137500	439.41379072	10150.19140630000	439.41376507200			
301	554727.58961500	547.62119105	15543.57812500000	547.62113089900			
302	556291.71809500	361.91384456	7091.01953125000	361.91383883400			x
303	555465.05406500	429.22076932	9311.45507813000	429.22082746500			
304	559929.92006800	629.90004507	20674.67041020000	629.90002324000			
305	555037.20406400	718.50060037	24680.99316410000	718.50062268800			
306	556961.12948700	427.03949696	9278.40332031000	427.03944512600	x		
307	556691.41228500	502.28595126	15368.74121090000	502.28594509300			
308	556340.82038000	355.32167755	6730.20898438000	355.32168287000			
309	555827.99389700	391.95204960	6559.40429688000	391.95214848300			
310	554066.15819700	506.50152437	15315.43798830000	506.50155196200			
311	558338.82817300	5613.21339850	1222862.66943000000	5613.21328788000			
312	555973.21508700	487.73886693	13996.57763670000	487.73877536800			
313	556391.58925400	366.35156903	7439.76318359000	366.35160632000			
314	554765.49779800	486.85374237	12720.43310550000	486.85376672400			
315	557101.92031800	491.75712932	14319.93505860000	491.75717031500			
316	556767.52075100	371.13129815	7245.98388672000	371.13120995300			x
317	556188.51273200	552.06964281	18476.52832030000	552.06964769600			
318	555812.49056700	391.74190224	6536.82763672000	391.74195795100			
319	556937.76522200	430.03891491	9469.83886719000	430.03886912400	x	x	
320	559036.14513800	2002.16491783	199535.96875000000	2002.16489770000			
321	557627.98040100	342.02723035	6826.94042969000	342.02719329900			
322	555012.03106700	136.12073490	1025.09277344000	136.12075266200			
323	554138.25298900	546.86638887	18296.16943360000	546.86623646700			
324	557377.41027700	830.89680831	33406.09277340000	830.89684413000			
325	555012.03106700	136.12139109	1025.10839844000	136.12136149400			
326	557687.92121900	377.13240921	8765.53955078000	377.13237073100			
327	556495.02847200	363.97765704	7209.59521484000	363.97764769000			
328	555790.45342200	467.22817216	12100.68115230000	467.22812837200			x
329	555012.03106700	136.12073490	1025.09082031000	136.12060046200			
330	555940.59132600	479.67568583	13281.19824220000	479.67572974100			
331	557071.83710800	475.54496740	12899.02490230000	475.54483540900	x		
332	556314.86061500	533.42251460	17294.98095700000	533.42257032300			
333	556157.57327800	420.40622859	8703.81396484000	420.40624130100			
334	556891.19574700	509.14261536	15815.27001950000	509.14258260400	x	x	
335	556545.92252400	364.34237802	7281.25927734000	364.34238698400			
336	555012.03106700	136.12139109	1025.10839844000	136.12136149400			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
337	48856	48870	07-10-552-130	1195 RIVER VALLEY DR	25-07-10-552-130	0710552130	192/193N	Lot	401-RESIDENTIAL
338	48858	48872	07-10-552-129	RIVER BIRCH DR	25-07-10-552-129	0710552129	191	Lot	200-COMMERCIAL VACANT
339	48862	48876	40-10-203-007	1201 ELDORADO DR	25-40-10-203-007	4010203007	007	Lot	401-RESIDENTIAL
340	48878	48892	07-10-552-221	1119 RIVER VALLEY DR	25-07-10-552-221	0710552221	199	Lot	401-RESIDENTIAL
341	48902	48916	07-10-526-059	3272 KISSNER AVE	25-07-10-526-059	0710526059	76	Lot	401-RESIDENTIAL
342	48912	48926	07-10-526-023	1444 MITSON BLVD	25-07-10-526-023	0710526023	29	Lot	401-RESIDENTIAL
343	48927	48941	40-10-203-006	1205 ELDORADO DR	25-40-10-203-006	4010203006	006	Lot	401-RESIDENTIAL
344	48929	48943	07-10-526-159	3267 FLUSHING RD	25-07-10-526-159	0710526159	208	Lot	201-COMMERCIAL IMPROVED
345	48939	48953	07-10-552-220	1121 RIVER VALLEY DR	25-07-10-552-220	0710552220	198/9	Lot	401-RESIDENTIAL
346	48955	48969	07-10-526-046	3257 WALTON AVE	25-07-10-526-046	0710526046	59	Lot	401-RESIDENTIAL
347	48981	48995	07-10-526-022	1454 MITSON BLVD	25-07-10-526-022	0710526022	28	Lot	401-RESIDENTIAL
348	48997	49011	07-10-526-026	3242 BURNELL AVE	25-07-10-526-026	0710526026	32	Lot	401-RESIDENTIAL
349	49000	49014	40-10-204-018	3427 SANTA CLARA CT	25-40-10-204-018	4010204018	018	Lot	401-RESIDENTIAL
350	49013	49027	07-10-552-131	1179 RIVER VALLEY DR	25-07-10-552-131	0710552131	193S/194	Lot	401-RESIDENTIAL
351	49016	49030	40-10-203-005	1209 ELDORADO DR	25-40-10-203-005	4010203005	005	Lot	401-RESIDENTIAL
352	49046	49060	07-10-526-043	3260 WALTON AVE	25-07-10-526-043	0710526043	54-56	Lot	401-RESIDENTIAL
353	49063	49077	07-10-526-021	1458 MITSON BLVD	25-07-10-526-021	0710526021	27	Lot	700-EXEMPT VACANT
354	49065	49079	07-10-526-035	3227 BURNELL AVE	25-07-10-526-035	0710526035	42/43	Lot	401-RESIDENTIAL
355	49077	49091	07-10-526-158	3261 FLUSHING RD	25-07-10-526-158	0710526158	207	Lot	201-COMMERCIAL IMPROVED
356	49085	49099	07-10-526-045	3251 WALTON AVE	25-07-10-526-045	0710526045	58	Lot	401-RESIDENTIAL
357	49106	49120	07-10-527-116	WALTON ST	25-07-10-527-116	0710527116	248-251	Lot	700-EXEMPT VACANT
358	49108	49122	07-03-400-009	3324 MACKIN RD	25-07-03-400-009	0703400009	400-009	Tract	401-RESIDENTIAL
359	49109	49123	07-10-526-027	BURNELL AVE	25-07-10-526-027	0710526027	33	Lot	400-RESIDENTIAL VACANT
360	49110	49124	07-10-526-174	3277 KISSNER AVE	25-07-10-526-174	0710526174	77/78+	Lot	401-RESIDENTIAL
361	49112	49126	07-10-676-016	3802 WROXTON DR	25-07-10-676-016	0710676016	6	Condo	401-RESIDENTIAL
362	49114	49128	40-10-203-004	1213 ELDORADO DR	25-40-10-203-004	4010203004	004	Lot	401-RESIDENTIAL
363	49127	49141			25-07-10-676-COM			Common Area	
364	49141	49155	40-10-204-017	3421 SANTA CLARA CT	25-40-10-204-017	4010204017	017	Lot	401-RESIDENTIAL
365	49148	49162	07-10-676-021	3803 RIVER VALLEY DR	25-07-10-676-021	0710676021	11	Condo	401-RESIDENTIAL
366	49153	49167	07-10-676-015	3806 WROXTON DR	25-07-10-676-015	0710676015	5	Condo	401-RESIDENTIAL
367	49158	49172	07-10-526-020	3239 HATHERLY AVE	25-07-10-526-020	0710526020	26	Lot	401-RESIDENTIAL
368	49171	49185	40-10-204-007	3422 SANTA CLARA CT	25-40-10-204-007	4010204007	007	Lot	401-RESIDENTIAL
369	49175	49189	07-10-526-009	1466 MITSON BLVD	25-07-10-526-009	0710526009	12	Lot	401-RESIDENTIAL
370	49210	49224	07-10-676-014	3806 WROXTON DR	25-07-10-676-014	0710676014	4	Condo	401-RESIDENTIAL
371	49211	49225	40-10-203-003	1217 ELDORADO DR	25-40-10-203-003	4010203003	003	Lot	401-RESIDENTIAL
372	49216	49230	07-10-527-107	3241 WALTON ST	25-07-10-527-107	0710527107	245-247	Lot	401-RESIDENTIAL
373	49229	49243	07-10-526-028	3232 BURNELL AVE	25-07-10-526-028	0710526028	34	Lot	401-RESIDENTIAL
374	49234	49248	07-10-526-034	3221 BURNELL AVE	25-07-10-526-034	0710526034	41	Lot	401-RESIDENTIAL
375	49248	49262	07-10-526-008	1474 MITSON BLVD	25-07-10-526-008	0710526008	11	Lot	401-RESIDENTIAL
376	49250	49264	07-10-676-013	3806 WROXTON DR	25-07-10-676-013	0710676013	3	Condo	401-RESIDENTIAL
377	49274	49288	07-10-526-044	3250 WALTON AVE	25-07-10-526-044	0710526044	56/57	Lot	401-RESIDENTIAL
378	49281	49295	40-10-204-065	3316 FLUSHING RD	25-40-10-204-065	4010204065	065	Lot	201-COMMERCIAL IMPROVED

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
337	Residential	0.60000002	0.6	CARMAN-AINSWORTH SCHOOLS	25080		1195	RIVER VALLEY DR	FLINT	48532
338	Commercial	0.40000001	0.4	CARMAN-AINSWORTH SCHOOLS	25080			RIVER BIRCH DR	FLINT	48532
339	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		1201	ELDORADO DR	FLINT	48504
340	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		1119	RIVER VALLEY DR	FLINT	48532
341	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		3272	KISSNER AVE	FLINT	48504
342	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		1444	MITSON BLVD	FLINT	48504
343	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		1205	ELDORADO DR	FLINT	48504
344	Commercial	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080		3267	FLUSHING RD	FLINT	48504
345	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		1121	RIVER VALLEY DR	FLINT	48532
346	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3257	WALTON AVE	FLINT	48504
347	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		1454	MITSON BLVD	FLINT	48504
348	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3242	BURNELL AVE	FLINT	48504
349	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3427	SANTA CLARA CT	FLINT	48504
350	Residential	0.51999998	0.52	CARMAN-AINSWORTH SCHOOLS	25080		1179	RIVER VALLEY DR	FLINT	48532
351	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1209	ELDORADO DR	FLINT	48504
352	Residential	0.52999997	0.53	CARMAN-AINSWORTH SCHOOLS	25080		3260	WALTON AVE	FLINT	48504
353	Exempt	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		1458	MITSON BLVD	FLINT	48504
354	Residential	0.41000000	0.41	CARMAN-AINSWORTH SCHOOLS	25080		3227	BURNELL AVE	FLINT	48504
355	Commercial	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080		3261	FLUSHING RD	FLINT	48504
356	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3251	WALTON AVE	FLINT	48504
357	Exempt	0.47000000	0.47	CARMAN-AINSWORTH SCHOOLS	25080			WALTON ST	FLINT	48504
358	Residential	1.32000005	1.32	CARMAN-AINSWORTH SCHOOLS	25080		3324	MACKIN RD	FLINT	48504
359	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080			BURNELL AVE	FLINT	48504
360	Residential	5.94000006	5.94	CARMAN-AINSWORTH SCHOOLS	25080		3277	KISSNER AVE	FLINT	48504
361	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3802	WROXTON DR	FLINT	48532
362	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		1213	ELDORADO DR	FLINT	48504
363		2.25000000	2.25							
364	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3421	SANTA CLARA CT	FLINT	48504
365	Residential	0.01000000	0.01	CARMAN-AINSWORTH SCHOOLS	25080		3803	RIVER VALLEY DR	FLINT	48532
366	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3806	WROXTON DR	FLINT	48532
367	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		3239	HATHERLY AVE	FLINT	48504
368	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3422	SANTA CLARA CT	FLINT	48504
369	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		1466	MITSON BLVD	FLINT	48504
370	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3806	WROXTON DR	FLINT	48532
371	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		1217	ELDORADO DR	FLINT	48504
372	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		3241	WALTON ST	FLINT	48504
373	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3232	BURNELL AVE	FLINT	48504
374	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3221	BURNELL AVE	FLINT	48504
375	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		1474	MITSON BLVD	FLINT	48504
376	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3806	WROXTON DR	FLINT	48532
377	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		3250	WALTON AVE	FLINT	48504
378	Commercial	2.82999992	2.83	FLINT SCHOOLS	25010		3316	FLUSHING RD	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
337	VANDERSON, EDWARD & ESTHER	1195 RIVER VALLEY DR	FLINT	MI	48532	
338	KLOSS, ALFRED R & DIANA C	601 S SAGINAW ST STE 204	FLINT	MI	48502	KLOSS, ALFRED
339	DOWNING, MATTHEW & LENA	1201 ELDORADO DR	FLINT	MI	48504	DOWNING, MATTHEW & LENA
340	RUTTER, JEFFREY B & DIANA K	3205 MISTY MORNING DR	FLUSHING	MI	48433	
341	FRAZIER, ARLENE	3272 KISSNER AVE	FLINT	MI	48504	
342	MILLER, MATTHEW & TONYA	1444 MITSON BLVD	FLINT	MI	48504	
343	COLE, EUGENE A JR	1205 ELDORADO DR	FLINT	MI	48504	COLE, EUGENE A JR
344	DARLINGTON-SNIDER, LEE	1106 HEATHERWOOD RD	FLINT	MI	48532	
345	RUTTER, JEFFREY B & DIANA K	3205 MISTY MORNING DR	FLUSHING	MI	48433	
346	SIGULINSKY, AUTUMN	G3257 WALTON AVE	FLINT	MI	48504	
347	MI STATE HOUSING DEVELOPMENT	16900 W CAPITOL DR	BROOKFIELD	WI	53005	
348	HIBBARD, TIM	325 FIELD RD	CLIO	MI	48420	
349	MILLER, DOROTHY	3427 SANTA CLARA CT	FLINT	MI	48504	MILLER, DOROTHY
350	FOUSE, WILLIE E & DESIREE A	1179 RIVER VALLEY DR	FLINT	MI	48532	
351	CARSON, L JR & BARBRA	1209 ELDORADO DR	FLINT	MI	48504	CARSON, L JR & BARBRA
352	LATTING, SCOTT A & LUCINDA A	3260 WALTON AVE	FLINT	MI	48504	
353	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
354	FISHER, DALLAS G	3227 BURNELL AVE	FLINT	MI	48504	LATTING, SCOTT & LUCINDA
355	DARLINGTON-SNIDER, LEE	1106 HEATHERWOOD RD	FLINT	MI	48532	
356	NELSON, SHARON L	4453 CENTENNIAL FARMS DR	SWARTZ CREEK	MI	48473	
357	GENESEE COUNTY COMMUNITY ACTION	601 N SAGINAW ST STE 1B	FLINT	MI	48502-2009	
358	HOLLON, MERLE R & STAPLETON, RACHEL	3324 MACKIN RD	FLINT	MI	48504	
359	GORTON, FRANKLIN H & SNADRA R	3232 BURNELL AVE	FLINT	MI	48504	
360	KNACK, THOMAS JR & DEAN, ANGELIA	3277 KISSNER AVE	FLINT	MI	48504	GENESEE COUNTY LAND BANK
361	CHAPMAN, SANDRA K	5402 SYCAMORE	FLINT	MI	48532	
362	ANDREWS, HELEN	1213 ELDORADO DR	FLINT	MI	48504	ANDREWS, HELEN
363						
364	FORTE, JAMES & ANNIE	3421 SANTA CLARA CT	FLINT	MI	48504	FORTE, JAMES & ANNIE
365	TREPANIER, STEVEN & TREPANIER, GARY	4448 N CENTER RD	FLINT	MI	48506	
366	SIEGEL, NANCY J TRUST	3806 WROXTON DR #5	FLINT	MI	48532	
367	CENTRAL INVESTING LLC	PO BOX 236	SWARTZ CREEK	MI	48473	
368	LENEAR, ALEX & WF WHITE, JENELLE	3422 SANTA CLARA CT	FLINT	MI	48504	LENEAR, ALEX & WF WHITE, JENELLE
369	SANDER, SHANNON K	1466 MITSON BLVD	FLINT	MI	48504	
370	MELET, MICHAEL D & KAY L TR	3806 WROXTON DR #4	FLINT	MI	48532	
371	PEAK, MARIAN F	1217 ELDORADO DR	FLINT	MI	48504	PEAK, MARIAN F
372	BOWLING, RYAN J	3241 WALTON ST	FLINT	MI	48504	
373	GORTON, FRANKLIN H & SANDRA	3232 BURNELL AVE	FLINT	MI	48504	
374	BENTLEY, MATTHEW F & MANDY S	3221 BURNELL AVE	FLINT	MI	48504	
375	ASSAF, MANAL	6472 MARBLE LN	FLUSHING	MI	48433	
376	CORBIN, LINDA M	3806 WROXTON DR #3	FLINT	MI	48532	
377	STANDISH, CLARENCE G III	3250 WALTON AVE	FLINT	MI	48504	
378	CHRIST THE ROCK APOSTOLIC CHURCH	3316 FLUSHING RD	FLINT	MI	48504	CHRIST THE ROCK APOSTOLIC CHURCH

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
337					100	No	34800	34440	34800	13290530.61460000
338	PO BOX 3066	FLINT	MI	48502	0	No	7500	2780	7500	13290530.76430000
339	1201 ELDORADO DR	FLINT	MI	48504	100	No	17700	17983	17700	13290531.53360000
340					0	No	21400	21130	21400	13290538.90370000
341					100	No	14000	13810	14000	13290557.23080000
342					100	No	14200	14120	14200	13290561.26710000
343	1205 ELDORADO DR	FLINT	MI	48504	100	No	21000	21336	21000	13290570.38330000
344					0	No	19300	19400	19300	13290570.79130000
345					0	No	21400	21130	21400	13290573.91620000
346					100	No	12800	12700	12800	13290582.44610000
347					0	No	10200	10050	10200	13290594.13720000
348					0	No	11700	11680	11700	13290602.56650000
349	3427 SANTA CLARA CT	FLINT	MI	48504	100	No	18500	18796	18500	13290603.74440000
350					100	No	32900	32610	32900	13290613.45080000
351	1209 ELDORADO DR	FLINT	MI	48504	100	No	20100	20421	20100	13290616.02000000
352					100	No	21600	21530	21600	13290620.68920000
353					0	Yes	0	0	0	13290626.83500000
354	3260 WALTON AVE	FLINT	MI	48504	100	No	17100	17060	17100	13290629.74920000
355					0	No	45900	47440	45900	13290634.52630000
356					0	No	20700	20520	20700	13290638.17260000
357					0	Yes	0	0	0	13290655.70010000
358					100	No	20500	20420	20500	13290656.85760000
359					100	No	2600	2640	2600	13290657.93770000
360	452 S SAGINAW ST	FLINT	MI	48502	0	No	31800	31800	31800	13290658.93200000
361					0	No	43500	42970	43500	13290659.43440000
362	1213 ELDORADO DR	FLINT	MI	48504	100	No	20100	20421	20100	13290660.29300000
363					0		0	0	0	13290664.72540000
364	3421 SANTA CLARA CT	FLINT	MI	48504	100	No	20300	20624	20300	13290676.57780000
365					0	No	8700	8630	8700	13290679.40280000
366					100	No	31900	31490	31900	13290681.93380000
367					0	No	9200	9140	9200	13290683.90330000
368	3422 SANTA CLARA CT	FLINT	MI	48504	100	No	18300	18592	18300	13290689.19100000
369					100	No	22600	22450	22600	13290690.13840000
370					100	No	31900	31490	31900	13290704.43350000
371	1217 ELDORADO DR	FLINT	MI	48504	100	No	18400	18694	18400	13290704.89550000
372					0	No	18300	18180	18300	13290707.32040000
373					100	No	23600	23360	23600	13290715.20080000
374					100	No	19600	19400	19600	13290716.66410000
375					0	No	19900	19710	19900	13290723.40540000
376					100	No	31600	31290	31600	13290726.93290000
377					100	No	22600	22450	22600	13290736.34190000
378	3316 FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13290739.66300000

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	AJ	AK	AL	AM	AN	AO	AP
337	554643.74404900	657.28081049	26220.10791020000	657.28072881300			
338	554783.62310300	545.70481127	17585.84375000000	545.70487998000			
339	557745.67839500	328.28134689	6230.24755859000	328.28135457000			
340	554192.80120400	416.14857016	7749.23925781000	416.14859863200			
341	555766.49012500	414.18389376	8220.82617188000	414.18382964400			
342	556597.36282200	364.11143207	7251.01367188000	364.11144130400			
343	557801.72928100	359.04681749	7882.92578125000	359.04680331200			
344	557031.51768400	479.97478285	10262.05224610000	479.97477242500	x		
345	554226.54784300	416.47405752	7758.93603516000	416.47402798000			
346	555913.15739600	420.38796100	9026.17626953000	420.38803170200			
347	556648.10845600	359.87777212	6999.71533203000	359.87780871400			
348	556500.45780700	418.06893079	8633.29492188000	418.06907259200			
349	557576.44646800	373.51918886	8643.21142578000	373.51916616100			
350	554546.05841400	628.88482171	22501.64794920000	628.88489073700			
351	557865.00200300	363.24635467	8114.18017578000	363.24638891500			
352	556118.11621000	615.90936306	23178.64843750000	615.90933643200			
353	556695.39612900	351.55514037	6505.01123047000	351.55521240900			
354	556271.37890000	544.23094339	18010.08789060000	544.23093042400			
355	557009.40024400	513.70338000	13474.82373050000	513.70341298600	x		
356	555893.08370200	406.08586104	8022.69628906000	406.08591183700			
357	555714.54671000	583.08632101	20311.52392580000	583.08627273200			
358	559636.44152300	1244.62133915	57713.35449220000	1244.62141141000			
359	556478.90128600	416.18120395	8681.62939453000	416.18114438100			
360	555394.75276600	2288.96658437	258891.59619100000	2288.96667244000			
361	554961.68878100	136.12139106	1025.10058594000	136.12136149400			
362	557926.83128600	350.32812586	7452.52734375000	350.32807590700			
363	554992.00765900	2232.49713150	98126.61425780000	2232.49706962000			
364	557533.75674100	375.80229449	8672.76123047000	375.80237895400			
365	554825.00517100	91.12204725	518.87304687500	91.12200576070			
366	554961.68878100	136.12204725	1025.11425781000	136.12197032600			
367	556624.68233700	413.09035088	8438.73779297000	413.09028605500			
368	557706.87197500	363.53026938	8107.70898438000	363.53033008700			
369	556796.06560400	356.12514042	6860.72753906000	356.12519186300			
370	554961.68878100	136.12204722	1025.11523438000	136.12197035600			
371	557987.95641600	361.80983770	8018.03466797000	361.80982408600			
372	555805.49743600	502.35627993	14482.08935550000	502.35623218900			
373	556456.35754000	421.65201963	9127.40478516000	421.65202973600			
374	556237.84127700	419.79374951	8965.74414063000	419.79375931600			
375	556845.99521200	359.40787089	7029.77880859000	359.40786799400			
376	554961.68878100	136.12139109	1025.09765625000	136.12120926400			
377	556074.34950600	474.52431852	12864.33544920000	474.52439106200			
378	557293.37771900	1613.77085150	123059.69824200000	1613.77089373000			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
379	49283	49297	40-10-204-033	FLUSHING RD	25-40-10-204-033	4010204033	033	Lot	400-RESIDENTIAL VACANT
380	49286	49300	40-10-204-016	3415 SANTA CLARA CT	25-40-10-204-016	4010204016	016	Lot	401-RESIDENTIAL
381	49295	49309	40-10-204-008	3418 SANTA CLARA CT	25-40-10-204-008	4010204008	008	Lot	401-RESIDENTIAL
382	49296	49310	40-10-203-002	1221 ELDORADO DR	25-40-10-203-002	4010203002	002	Lot	401-RESIDENTIAL
383	49297	49311	07-10-676-012	3806 WROXTON DR	25-07-10-676-012	0710676012	2	Condo	401-RESIDENTIAL
384	49306	49320	07-10-526-007	1482 MITSON BLVD	25-07-10-526-007	0710526007	10	Lot	401-RESIDENTIAL
385	49323	49337	40-10-204-006	1210 ELDORADO DR	25-40-10-204-006	4010204006	006	Lot	401-RESIDENTIAL
386	49328	49342	07-10-526-175	3235 HATHERLY AVE	25-07-10-526-175	0710526175	25/24	Lot	401-RESIDENTIAL
387	49334	49348	07-10-676-011	3810 WROXTON DR	25-07-10-676-011	0710676011	1	Condo	401-RESIDENTIAL
388	49338	49352	07-10-526-029	3224 BURNELL AVE	25-07-10-526-029	0710526029	35	Lot	401-RESIDENTIAL
389	49339	49353	07-10-526-033	3215 BURNELL AVE	25-07-10-526-033	0710526033	40	Lot	401-RESIDENTIAL
390	49349	49363	07-03-400-008	MACKIN RD	25-07-03-400-008	0703400008	400-008	Tract	401-RESIDENTIAL
391	49361	49375	07-10-526-006	MITSON BLVD	25-07-10-526-006	0710526006	9S	Lot	700-EXEMPT VACANT
392	49380	49394	07-10-526-010	HATHERLY AVE	25-07-10-526-010	0710526010	13	Lot	700-EXEMPT VACANT
393	49387	49401	07-10-527-118	3229 WALTON ST	25-07-10-527-118	0710527118	243-252	Lot	401-RESIDENTIAL
394	49389	49403	40-10-203-001	1225 ELDORADO DR	25-40-10-203-001	4010203001	001	Lot	401-RESIDENTIAL
395	49407	49421	40-10-204-009	3410 SANTA CLARA CT	25-40-10-204-009	4010204009	009	Lot	401-RESIDENTIAL
396	49409	49423	40-10-204-005	1214 ELDORADO DR	25-40-10-204-005	4010204005	005	Lot	401-RESIDENTIAL
397	49421	49435	40-10-204-014	3409 SANTA CLARA CT	25-40-10-204-014	4010204014	014	Lot	401-RESIDENTIAL
398	49443	49457	07-10-526-005	1492 MITSON BLVD	25-07-10-526-005	0710526005	8/9	Lot	401-RESIDENTIAL
399	49465	49479	07-10-527-082	3236 WALTON ST	25-07-10-527-082	0710527082	196/7	Lot	401-RESIDENTIAL
400	49466	49480	07-10-526-032	1419 JOY ST	25-07-10-526-032	0710526032	39	Lot	401-RESIDENTIAL
401	49470	49484	07-10-526-030	3220 BURNELL AVE	25-07-10-526-030	0710526030	36	Lot	401-RESIDENTIAL
402	49496	49510	40-10-204-004	1218 ELDORADO DR	25-40-10-204-004	4010204004	004	Lot	401-RESIDENTIAL
403	49516	49530	07-10-526-017	3219 HATHERLY AVE	25-07-10-526-017	0710526017	23	Lot	401-RESIDENTIAL
404	49520	49534	07-10-527-083	3230 WALTON ST	25-07-10-527-083	0710527083	198	Lot	401-RESIDENTIAL
405	49525	49539	40-10-201-033	1301 ELDORADO DR	25-40-10-201-033	4010201033	033	Lot	401-RESIDENTIAL
406	49562	49576	40-10-204-003	1222 ELDORADO DR	25-40-10-204-003	4010204003	003	Lot	401-RESIDENTIAL
407	49564	49578	07-10-526-011	HATHERLY AVE	25-07-10-526-011	0710526011	14/15	Lot	700-EXEMPT VACANT
408	49569	49583	40-10-204-010	3406 SANTA CLARA CT	25-40-10-204-010	4010204010	010	Lot	401-RESIDENTIAL
409	49585	49599	07-10-527-117	WALTON ST	25-07-10-527-117	0710527117	253-257	Lot	700-EXEMPT VACANT
410	49607	49621	07-10-526-004	FLUSHING RD	25-07-10-526-004	0710526004	6/7	Lot	200-COMMERCIAL VACANT
411	49619	49633	07-10-527-105	3219 WALTON ST	25-07-10-527-105	0710527105	241/2	Lot	401-RESIDENTIAL
412	49622	49636	40-10-201-027	1305 ELDORADO DR	25-40-10-201-027	4010201027	027	Lot	401-RESIDENTIAL
413	49624	49638	40-10-204-013	SANTA CLARA CT	25-40-10-204-013	4010204013	013	Lot	400-RESIDENTIAL VACANT
414	49633	49647	07-10-526-016	3213 HATHERLY AVE	25-07-10-526-016	0710526016	22	Lot	401-RESIDENTIAL
415	49637	49651	07-10-526-031	3212 BURNELL AVE	25-07-10-526-031	0710526031	37/38	Lot	401-RESIDENTIAL
416	49652	49666	40-10-204-002	3415 SANTA CRUZ DR	25-40-10-204-002	4010204002	002	Lot	401-RESIDENTIAL
417	49654	49668	07-10-527-084	3226 WALTON ST	25-07-10-527-084	0710527084	199/200	Lot	401-RESIDENTIAL
418	49662	49676	07-03-400-007	3300 MACKIN RD	25-07-03-400-007	0703400007	400-007	Tract	401-RESIDENTIAL
419	49675	49689	07-10-527-054	3220 STRATFORD ST	25-07-10-527-054	0710527054	148	Lot	401-RESIDENTIAL
420	49686	49700	40-10-204-043	1229 SAN JUAN DR	25-40-10-204-043	4010204043	043	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
379	Residential	0.23000000	0.23	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
380	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3415	SANTA CLARA CT	FLINT	48504
381	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3418	SANTA CLARA CT	FLINT	48504
382	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1221	ELDORADO DR	FLINT	48504
383	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3806	WROXTON DR	FLINT	48532
384	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		1482	MITSON BLVD	FLINT	48504
385	Residential	0.22000000	0.22	FLINT SCHOOLS	25010		1210	ELDORADO DR	FLINT	48504
386	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080		3235	HATHERLY AVE	FLINT	48504
387	Residential	0.02000000	0.02	CARMAN-AINSWORTH SCHOOLS	25080		3810	WROXTON DR	FLINT	48532
388	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3224	BURNELL AVE	FLINT	48504
389	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3215	BURNELL AVE	FLINT	48504
390	Residential	1.42999995	1.43	CARMAN-AINSWORTH SCHOOLS	25080			MACKIN RD	FLINT	48504
391	Exempt	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080			MITSON BLVD	FLINT	48504
392	Exempt	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080			HATHERLY AVE	FLINT	48504
393	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080		3229	WALTON ST	FLINT	48504
394	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		1225	ELDORADO DR	FLINT	48504
395	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3410	SANTA CLARA CT	FLINT	48504
396	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		1214	ELDORADO DR	FLINT	48504
397	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3409	SANTA CLARA CT	FLINT	48504
398	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		1492	MITSON BLVD	FLINT	48504
399	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080		3236	WALTON ST	FLINT	48504
400	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		1419	JOY ST	FLINT	48504
401	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3220	BURNELL AVE	FLINT	48504
402	Residential	0.23999999	0.24	FLINT SCHOOLS	25010		1218	ELDORADO DR	FLINT	48504
403	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3219	HATHERLY AVE	FLINT	48504
404	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3230	WALTON ST	FLINT	48504
405	Residential	0.25999999	0.26	FLINT SCHOOLS	25010		1301	ELDORADO DR	FLINT	48504
406	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		1222	ELDORADO DR	FLINT	48504
407	Exempt	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080			HATHERLY AVE	FLINT	48504
408	Residential	0.22000000	0.22	FLINT SCHOOLS	25010		3406	SANTA CLARA CT	FLINT	48504
409	Exempt	0.51999998	0.52	CARMAN-AINSWORTH SCHOOLS	25080			WALTON ST	FLINT	48504
410	Commercial	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
411	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		3219	WALTON ST	FLINT	48504
412	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		1305	ELDORADO DR	FLINT	48504
413	Residential	0.36000001	0.36	FLINT SCHOOLS	25010			SANTA CLARA CT	FLINT	48504
414	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3213	HATHERLY AVE	FLINT	48504
415	Residential	0.38000000	0.38	CARMAN-AINSWORTH SCHOOLS	25080		3212	BURNELL AVE	FLINT	48504
416	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3415	SANTA CRUZ DR	FLINT	48504
417	Residential	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080		3226	WALTON ST	FLINT	48504
418	Residential	1.67999995	1.68	CARMAN-AINSWORTH SCHOOLS	25080		3300	MACKIN RD	FLINT	48504
419	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		3220	STRATFORD ST	FLINT	48504
420	Residential	0.56000000	0.56	FLINT SCHOOLS	25010		1229	SAN JUAN DR	FLINT	48504

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	T	U	V	W	X	Y
379	CITY OF FLINT	FLUSHING RD	FLINT	MI	48504	CITY OF FLINT
380	PACE, OWEN B	3415 SANTA CLARA CT	FLINT	MI	48504	PACE, OWEN B
381	SMITH, LESTER JR & LUCY	3418 SANTA CLARA CT	FLINT	MI	48504	SMITH, LESTER JR & LUCY
382	ANGEL, MELANIE	1221 ELDORADO DR	FLINT	MI	48504	ANGEL, MELANIE
383	DAVIS, GREGORY GUY	3806 WROXTON DR #2	FLINT	MI	48532	
384	CASTLE, SHANNON	1482 MITSON BLVD	FLINT	MI	48504	
385	PEA, RALPH & WF BILLIE F	1210 ELDORADO DR	FLINT	MI	48504	PEA, RALPH & WF BILLIE F
386	BRADLEY, WILLIAM C Z II ETAL	3235 HATHERLY AVE	FLINT	MI	48504	
387	ALLEN, VELMA P	615 W BROAD ST	EUFAULA	AL	36027-1911	
388	HEMGESBERG, GREGORY	3224 BURNELL AVE	FLINT	MI	48504	
389	BOWE, RANDALL S & GRIFFUS, TAMMY	3215 BURNELL AVE	FLINT	MI	48504	BOWE, ANTHONY
390	LATHON, CHRIS	3312 MACKIN RD	FLINT	MI	48504	
391	MICHIGAN LAND BK FAST TRK AUTH	PO BOX 30004	LANSING	MI	48909	
392	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
393	SPARKS, REX C JR & SPRAGUE, EVA A	3229 WALTON ST	FLINT	MI	48504	
394	HUDDLESTON, JAMES & WF G	1225 ELDORADO DR	FLINT	MI	48504	HUDDLESTON, JAMES & WF G
395	THOMAS, MARY TRUST	3410 SANTA CLARA CT	FLINT	MI	48504	THOMAS, MARY TRUST
396	BOOTH, EDDIE & LINDA	1214 ELDORADO DR	FLINT	MI	48504	BOOTH, EDDIE & LINDA
397	COYNE, MARY	3409 SANTA CLARA CT	FLINT	MI	48504	COYNE, MARY
398	ELROD, RONALD A	PO BOX 7150	FLINT	MI	48507	
399	SEAY, BRANDY M	3236 WALTON ST	FLINT	MI	48504	
400	DAVIS, YOLANDA	1419 JOY ST	FLINT	MI	48504	MANYAM, BHASKARA
401	GREEN, RONALD M & PATRICIA	3220 BURNELL AVE	FLINT	MI	48504	
402	STINNETT, ROBERT & WF T	1218 ELDORADO DR	FLINT	MI	48504	STINNETT, ROBERT & WF T
403	WESTBROOK, RALPH E	G3219 HATHERLY AVE	FLINT	MI	48504	
404	SEELEY, LINDA M & BRUCE	3230 WALTON ST	FLINT	MI	48504	
405	IVORY, MARGARET	5292 MILWOOD DR	FLINT	MI	48504	IVORY, MARGARET
406	MILLER, FRANK & HAZEL	1222 ELDORADO DR	FLINT	MI	48504	MILLER, FRANK & HAZEL
407	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST, 2ND FLR	FLINT	MI	48502	
408	JACKSON, LAELONNI	3406 SANTA CLARA CT	FLINT	MI	48504	JACKSON, LAELONNI
409	GENESEE COUNTY COMMUNITY ACTION	601 N SAGINAW ST STE 1B	FLINT	MI	48502-2009	
410	AJAMI, MAHMOUD	6451 WILLIAMSON	DEARBORN	MI	48122	
411	BRAND, JEFFERY	3219 WALTON ST	FLINT	MI	48504	
412	SCOTT, GABRIELLE A	1305 ELDORADO DR	FLINT	MI	48504	SCOTT, GABRIELLE A
413	COYNE, MARY	3409 SANTA CLARA CT	FLINT	MI	48504	COYNE, MARY
414	MI SEVEN LLC	1125 PIERCE AVE	COLUMBIA	SC	29201	
415	ASSAF, MANAL	3212 BURNELL AVE	FLINT	MI	48504	
416	SCOTT, SHIRLEY A TRUST	3415 SANTA CRUZ DR	FLINT	MI	48504	SCOTT, SHIRLEY A TRUST
417	DRIESEN, KOEN	PO BOX 320982	FLINT	MI	48532	
418	ELMORE, REGINA K	G3300 MACKIN RD	FLINT	MI	48504	
419	MILLER, SHERRI	3220 STRATFORD ST	FLINT	MI	48504	
420	GARNER, KAREN	3109 BARTH ST	FLINT	MI	48504	GARNER, KAREN

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
379	FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13290741.76880000
380	3415 SANTA CLARA CT	FLINT	MI	48504	100	No	19400	19710	19400	13290742.76640000
381	3418 SANTA CLARA CT	FLINT	MI	48504	100	No	19400	19710	19400	13290748.76820000
382	1221 ELDORADO DR	FLINT	MI	48504	100	No	16100	16357	16100	13290748.99850000
383					100	No	31600	31290	31600	13290749.43240000
384					100	No	13000	12900	13000	13290756.72700000
385	1210 ELDORADO DR	FLINT	MI	48504	100	No	21600	21945	21600	13290765.46020000
386					100	No	16500	16450	16500	13290768.96470000
387					0	No	43700	43180	43700	13290771.93180000
388					100	No	16200	16050	16200	13290773.60910000
389	3215 BURNELL AVE	FLINT	MI	48504	0	No	14800	14730	14800	13290774.73630000
390					0	No	6800	6900	6800	13290780.83640000
391					0	Yes	0	0	0	13290787.46980000
392					0	Yes	0	0	0	13290798.61260000
393					100	No	17100	16960	17100	13290800.96980000
394	1225 ELDORADO DR	FLINT	MI	48504	100	No	19800	20116	19800	13290801.50450000
395	3410 SANTA CLARA CT	FLINT	MI	48504	100	No	20400	20726	20400	13290806.22140000
396	1214 ELDORADO DR	FLINT	MI	48504	100	No	19600	19913	19600	13290806.83270000
397	3409 SANTA CLARA CT	FLINT	MI	48504	100	No	22000	22352	22000	13290810.48920000
398					100	No	20000	20010	20000	13290820.65070000
399					100	No	19400	19180	19400	13290830.37830000
400	PO BOX 320588	FLINT	MI	48532	0	No	14200	14020	14200	13290830.86290000
401					0	No	12300	12290	12300	13290831.70180000
402	1218 ELDORADO DR	FLINT	MI	48504	100	No	20400	20726	20400	13290846.76540000
403					100	No	14000	13910	14000	13290856.09030000
404					100	No	11800	11680	11800	13290857.44420000
405	5292 MILWOOD DR	FLINT	MI	48504	0	No	17500	17780	17500	13290860.30980000
406	1222 ELDORADO DR	FLINT	MI	48504	100	No	18200	18491	18200	13290883.94280000
407					0	Yes	0	0	0	13290884.77720000
408	3406 SANTA CLARA CT	FLINT	MI	48504	100	No	19100	19405	19100	13290886.23120000
409					0	Yes	0	0	0	13290893.62470000
410					0	No	7300	7410	7300	13290901.68880000
411					0	No	18500	18380	18500	13290909.19410000
412	1305 ELDORADO DR	FLINT	MI	48504	0	No	16200	16459	16200	13290909.73730000
413	3409 SANTA CLARA CT	FLINT	MI	48504	100	No	4300	2883	4300	13290909.86550000
414					0	No	11400	11270	11400	13290913.92860000
415					0	No	24200	24070	24200	13290915.38580000
416	3415 SANTA CRUZ DR	FLINT	MI	48504	100	No	20300	20624	20300	13290922.15770000
417					0	No	17000	16860	17000	13290922.29770000
418					100	No	29300	29150	29300	13290930.25900000
419					0	No	18300	18180	18300	13290939.20210000
420	3109 BARTH ST	FLINT	MI	48504	0	No	22700	23063	22700	13290942.85220000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
379	557133.81928900	1711.00060271	9838.11181641000	1711.00068760000			
380	557496.86942700	357.63219348	7708.32177734000	357.63215959600			
381	557672.85722800	321.52867791	5733.66162109000	321.52869015700			
382	558052.90928700	364.85241357	8155.67578125000	364.85241245400			
383	554961.68878100	136.12204722	1025.11425781000	136.12197035600			
384	556896.46738100	355.82779633	6918.22460938000	355.82774027500			
385	557763.83074500	421.88737908	9401.96289063000	421.88743704000			
386	556591.86931900	546.22262156	18154.91357420000	546.22253419200			
387	554961.68878100	136.12139109	1025.10058594000	136.12136149400			
388	556434.40772000	416.20550662	8769.89941406000	416.20552855500			
389	556215.37167000	424.16421997	9200.35156250000	424.16422448000			
390	559610.20250000	1243.79863216	62263.67382810000	1243.79865270000			
391	556942.15120300	337.46984919	5803.19677734000	337.46986647400			
392	556802.68138800	419.57897354	8714.40527344000	419.57893242700			
393	555728.18920500	591.84210423	13685.90332030000	591.84204799700			
394	558126.85271700	416.62121925	10872.26464840000	416.62113423700			
395	557656.04292000	352.16191910	7272.47167969000	352.16190064300			
396	557818.87427900	436.85515104	10744.91748050000	436.85518726300			
397	557465.98040000	379.66426324	8562.53906250000	379.66420681900			
398	556994.20325400	384.30221342	8487.35839844000	384.30215267600			x
399	555980.09747000	584.13190219	15023.33251950000	584.13193435900			
400	556193.48062600	414.70011674	8468.28125000000	414.70002492700			
401	556412.48604200	418.18246811	8969.14746094000	418.18254301500			
402	557887.01258000	422.67720705	10480.38476560000	422.67722897000			
403	556558.76335100	427.25745227	9208.85937500000	427.25741155600			
404	555921.50759100	310.17096192	5136.37402344000	310.17100150400			
405	558214.40093700	429.04377693	11408.70166020000	429.04387642300			
406	557952.18081300	361.68639512	7561.02587891000	361.68639063100			
407	556770.63889000	548.35418284	18165.31445310000	548.35414763400			
408	557645.81726300	412.32909009	9480.58642578000	412.32908950200			
409	555630.02805700	657.55905372	22693.06494140000	657.55897656000			
410	556921.73017300	505.98412919	15081.74414060000	505.98403252900			
411	555727.71858500	366.01287391	8382.70996094000	366.01288530100			
412	558287.76374600	356.60429495	7571.45849609000	356.60425730900			
413	557429.92919300	518.47144811	15817.44384770000	518.47144531600			
414	556536.19345000	426.61777065	9136.68017578000	426.61779548800			
415	556379.98703800	522.64932716	16560.25000000000	522.64927034800			
416	558014.97977400	356.82034810	7801.72070313000	356.82046807500			
417	555895.11783800	397.96712516	9875.79492188000	397.96714647200			
418	559598.62149500	1310.12900858	73220.89941410000	1310.12905439000			
419	556160.67573900	342.59969203	6787.56689453000	342.59966387100			x
420	557760.53865000	621.27513958	24509.64160160000	621.27519791600			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
421	49698	49712	40-10-201-026	1309 ELDORADO DR	25-40-10-201-026	4010201026	026	Lot	401-RESIDENTIAL
422	49700	49714	07-10-527-081	3217 STRATFORD ST	25-07-10-527-081	0710527081	194/5	Lot	401-RESIDENTIAL
423	49731	49745	40-10-204-011	3402 SANTA CLARA CT	25-40-10-204-011	4010204011	011	Lot	401-RESIDENTIAL
424	49742	49756	40-10-204-012	3401 SANTA CLARA CT	25-40-10-204-012	4010204012	012	Lot	401-RESIDENTIAL
425	49748	49762	40-10-204-048	SAN JUAN DR	25-40-10-204-048	4010204048	048	Lot	400-RESIDENTIAL VACANT
426	49776	49790	07-10-527-104	3211 WALTON ST	25-07-10-527-104	0710527104	239/40	Lot	401-RESIDENTIAL
427	49778	49792	40-10-201-025	1313 ELDORADO DR	25-40-10-201-025	4010201025	025	Lot	401-RESIDENTIAL
428	49783	49797	07-10-526-015	3207 HATHERLY AVE	25-07-10-526-015	0710526015	20/21	Lot	401-RESIDENTIAL
429	49786	49800	07-10-527-085	3216 WALTON ST	25-07-10-527-085	0710527085	201/2	Lot	401-RESIDENTIAL
430	49797	49811	07-10-526-012	3220 HATHERLY AVE	25-07-10-526-012	0710526012	16/17	Lot	401-RESIDENTIAL
431	49799	49813	40-10-204-037	3306 FLUSHING RD	25-40-10-204-037	4010204037	037	Lot	201-COMMERCIAL IMPROVED
432	49808	49822	07-10-527-053	3195 DEVONSHIRE ST	25-07-10-527-053	0710527053	147	Lot	700-EXEMPT VACANT
433	49811	49825	40-10-204-047	3401 SANTA CRUZ DR	25-40-10-204-047	4010204047	047	Lot	401-RESIDENTIAL
434	49813	49827	40-10-202-027	ELDORADO DR	25-40-10-202-027	4010202027	027	Lot	400-RESIDENTIAL VACANT
435	49823	49837	07-03-400-004	3263 MACKIN RD	25-07-03-400-004	0703400004	400-004	Tract	401-RESIDENTIAL
436	49847	49861	40-10-204-023	1223 SAN JUAN DR	25-40-10-204-023	4010204023	023	Lot	401-RESIDENTIAL
437	49853	49867	07-10-527-109	WALTON ST	25-07-10-527-109	0710527109	258	Lot	400-RESIDENTIAL VACANT
438	49877	49891	07-10-527-055	3216 STRATFORD ST	25-07-10-527-055	0710527055	149-51	Lot	401-RESIDENTIAL
439	49884	49898	07-10-527-028	3200 DEVONSHIRE ST	25-07-10-527-028	0710527028	98	Lot	401-RESIDENTIAL
440	49898	49912	07-10-527-080	3203 STRATFORD ST	25-07-10-527-080	0710527080	192/3	Lot	401-RESIDENTIAL
441	49903	49917	07-10-526-003	3215 FLUSHING RD	25-07-10-526-003	0710526003	3-6	Lot	201-COMMERCIAL IMPROVED
442	49923	49937	40-10-201-024	1317 ELDORADO DR	25-40-10-201-024	4010201024	024	Lot	401-RESIDENTIAL
443	49955	49969	07-10-527-103	WALTON ST	25-07-10-527-103	0710527103	238	Lot	400-RESIDENTIAL VACANT
444	49958	49972	40-10-204-024	1217 SAN JUAN DR	25-40-10-204-024	4010204024	024	Lot	401-RESIDENTIAL
445	49961	49975	40-10-202-011	1306 ELDORADO DR	25-40-10-202-011	4010202011	011	Lot	401-RESIDENTIAL
446	49969	49983	07-10-527-086	3208 WALTON ST	25-07-10-527-086	0710527086	202/3	Lot	401-RESIDENTIAL
447	49986	50000	40-10-204-026	1201 SAN JUAN DR	25-40-10-204-026	4010204026	026	Lot	401-RESIDENTIAL
448	49995	50009	40-10-204-044	3237 SLOAN ST	25-40-10-204-044	4010204044	044	Lot	401-RESIDENTIAL
449	50001	50015	07-10-527-029	3194 DEVONSHIRE ST	25-07-10-527-029	0710527029	99	Lot	401-RESIDENTIAL
450	50005	50019	07-03-400-003	3255 MACKIN RD	25-07-03-400-003	0703400003	400-003	Tract	401-RESIDENTIAL
451	50015	50029	07-10-527-052	3191 DEVONSHIRE ST	25-07-10-527-052	0710527052	145/6	Lot	401-RESIDENTIAL
452	50017	50031	40-10-204-025	SAN JUAN DR	25-40-10-204-025	4010204025	025	Lot	400-RESIDENTIAL VACANT
453	50019	50033	07-10-526-013	HATHERLY AVE	25-07-10-526-013	0710526013	18	Lot	201-COMMERCIAL IMPROVED
454	50022	50036	40-10-202-026	3402 SANTA CRUZ DR	25-40-10-202-026	4010202026	026	Lot	401-RESIDENTIAL
455	50034	50048	40-10-201-023	1321 ELDORADO DR	25-40-10-201-023	4010201023	023	Lot	401-RESIDENTIAL
456	50039	50053	07-10-527-027	3193 HATHERLY AVE	25-07-10-527-027	0710527027	97	Lot	401-RESIDENTIAL
457	50052	50066	07-10-527-110	WALTON ST	25-07-10-527-110	0710527110	259-61	Lot	400-RESIDENTIAL VACANT
458	50072	50086	07-10-527-056	3202 STRATFORD ST	25-07-10-527-056	0710527056	152	Lot	401-RESIDENTIAL
459	50080	50094	40-10-202-010	1314 ELDORADO DR	25-40-10-202-010	4010202010	010	Lot	401-RESIDENTIAL
460	50096	50110	07-10-527-079	3195 STRATFORD ST	25-07-10-527-079	0710527079	190/1	Lot	401-RESIDENTIAL
461	50097	50111	40-10-204-035	3214 FLUSHING RD	25-40-10-204-035	4010204035	035	Lot	201-COMMERCIAL IMPROVED
462	50107	50121	07-10-527-087	3200 WALTON ST	25-07-10-527-087	0710527087	204/5	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
421	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		1309	ELDORADO DR	FLINT	48504
422	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3217	STRATFORD ST	FLINT	48504
423	Residential	0.20999999	0.21	FLINT SCHOOLS	25010		3402	SANTA CLARA CT	FLINT	48504
424	Residential	0.25999999	0.26	FLINT SCHOOLS	25010		3401	SANTA CLARA CT	FLINT	48504
425	Residential	0.23000000	0.23	FLINT SCHOOLS	25010			SAN JUAN DR	FLINT	48504
426	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3211	WALTON ST	FLINT	48504
427	Residential	0.23000000	0.23	FLINT SCHOOLS	25010		1313	ELDORADO DR	FLINT	48504
428	Residential	0.38999999	0.39	CARMAN-AINSWORTH SCHOOLS	25080		3207	HATHERLY AVE	FLINT	48504
429	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		3216	WALTON ST	FLINT	48504
430	Residential	0.41999999	0.42	CARMAN-AINSWORTH SCHOOLS	25080		3220	HATHERLY AVE	FLINT	48504
431	Commercial	0.75000000	0.75	FLINT SCHOOLS	25010		3306	FLUSHING RD	FLINT	48504
432	Exempt	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3195	DEVONSHIRE ST	FLINT	48504
433	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3401	SANTA CRUZ DR	FLINT	48504
434	Residential	0.19000000	0.19	FLINT SCHOOLS	25010			ELDORADO DR	FLINT	48504
435	Residential	0.46000001	0.46	CARMAN-AINSWORTH SCHOOLS	25080		3263	MACKIN RD	FLINT	48504
436	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		1223	SAN JUAN DR	FLINT	48504
437	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080			WALTON ST	FLINT	48504
438	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080		3216	STRATFORD ST	FLINT	48504
439	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3200	DEVONSHIRE ST	FLINT	48504
440	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		3203	STRATFORD ST	FLINT	48504
441	Commercial	0.67000002	0.67	CARMAN-AINSWORTH SCHOOLS	25080		3215	FLUSHING RD	FLINT	48504
442	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		1317	ELDORADO DR	FLINT	48504
443	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080			WALTON ST	FLINT	48504
444	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		1217	SAN JUAN DR	FLINT	48504
445	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		1306	ELDORADO DR	FLINT	48504
446	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		3208	WALTON ST	FLINT	48504
447	Residential	0.25999999	0.26	FLINT SCHOOLS	25010		1201	SAN JUAN DR	FLINT	48504
448	Residential	0.31000000	0.31	FLINT SCHOOLS	25010		3237	SLOAN ST	FLINT	48504
449	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3194	DEVONSHIRE ST	FLINT	48504
450	Residential	0.51999998	0.52	CARMAN-AINSWORTH SCHOOLS	25080		3255	MACKIN RD	FLINT	48504
451	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3191	DEVONSHIRE ST	FLINT	48504
452	Residential	0.19000000	0.19	FLINT SCHOOLS	25010			SAN JUAN DR	FLINT	48504
453	Commercial	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080			HATHERLY AVE	FLINT	48504
454	Residential	0.23000000	0.23	FLINT SCHOOLS	25010		3402	SANTA CRUZ DR	FLINT	48504
455	Residential	0.31000000	0.31	FLINT SCHOOLS	25010		1321	ELDORADO DR	FLINT	48504
456	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		3193	HATHERLY AVE	FLINT	48504
457	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080			WALTON ST	FLINT	48504
458	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3202	STRATFORD ST	FLINT	48504
459	Residential	0.23999999	0.24	FLINT SCHOOLS	25010		1314	ELDORADO DR	FLINT	48504
460	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3195	STRATFORD ST	FLINT	48504
461	Commercial	0.88999999	0.89	FLINT SCHOOLS	25010		3214	FLUSHING RD	FLINT	48504
462	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3200	WALTON ST	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
421	COBB, LEROY JR & MARY	1309 ELDORADO DR	FLINT	MI	48504	COBB, LEROY JR & MARY
422	HODGSON, ERIC	3217 STRATFORD ST	FLINT	MI	48504-4227	
423	ANTELL, RICHARD & WF M	3402 SANTA CLARA CT	FLINT	MI	48504	ANTELL, RICHARD & WF M
424	HILDRETH, LEVELL & EARLENE	3401 SANTA CLARA CT	FLINT	MI	48504	HILDRETH, LEVELL & EARLENE
425	RASAK HOMES INC	3401 SANTA CRUZ DR	FLINT	MI	48504	RASAK HOMES INC
426	VANKUREN, MICHAEL R & KELLY A	3211 WALTON ST	FLINT	MI	48504	WILSON, THOMAS W
427	HORTON, LARUNDA P	1313 ELDORADO DR	FLINT	MI	48504	HORTON, LARUNDA P
428	LOCHER, MARK F	8385 N WATER ST	WHEELER	MI	48662-2500	
429	JC GEMINI III-C LLC	2025 W BALBOA BLVD STE C	NEWPORT BEACH	CA	92663	
430	IRWIN, HELEN	3060 RIDGELAWN	CLIO	MI	48420	
431	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
432	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502	
433	WILBURN, LARRY E	3401 SANTA CRUZ DR	FLINT	MI	48504	WILBURN, LARRY E
434	PATTERSON, GENE & JANNIE	3402 SANTA CRUZ DR	FLINT	MI	48504	PATTERSON, GENE & JANNIE
435	WILSON, WILLIE M	3263 MACKIN RD	FLINT	MI	48504	
436	CONERLY, MOSES P	1223 SAN JUAN DR	FLINT	MI	48504	CONERLY, MOSES P
437	YEAGER, ROSE MARIE	3193 WALTON	FLINT	MI	48504	
438	BROWN, KAY & CARON, JOSEPH	3216 STRATFORD ST	FLINT	MI	48504	THOMAS, TIMOTHY M TR
439	KATZUR, JOHN T	3200 DEVONSHIRE ST	FLINT	MI	48504	
440	SLACK, LESEL	1351 FLUSHING RD	FLUSHING	MI	48433	
441	AJAMI, MAHMOUD	6451 WILLIAMSON	DEARBORN	MI	48122	
442	MARTIN, ALBERT & MARIAN	1317 ELDORADO DR	FLINT	MI	48504	MARTIN, ALBERT & MARIAN
443	YEAGER, ROSE MARIE	3193 WALTON ST	FLINT	MI	48504	
444	BROWN, BERNARD	1217 SAN JUAN DR	FLINT	MI	48504	BROWN, BERNARD
445	HASAN, STONNIE & ANTONIA	1306 ELDORADO DR	FLINT	MI	48504	HASAN, STONNIE & ANTONIA
446	FOLEY, CHARLES C	1297 MAXSON AVE	FLINT	MI	48504	
447	SPRUIELL, DAYLE	1201 SAN JUAN DR	FLINT	MI	48504	SPRUIELL, DAYLE
448	COLLIER, BRADLEY & CAROLYN	3237 SLOAN ST	FLINT	MI	48504	COLLIER, BRADLEY & CAROLYN
449	FAULKNER, DAVID A & DEBORAH H	4764 W HIBBARD RD	OWOSSO	MI	48867	
450	JONES, GARLAND T	3255 MACKIN RD	FLINT	MI	48504-5076	
451	GRAFF, JASON P	3245 W MYRTLE AVE	FLINT	MI	48504	
452	ROBB FAMILY TRUST	1210 SAN JUAN DR	FLINT	MI	48504	ROBB FAMILY TRUST
453	SUTTON, E R	3201 FLUSHING RD	FLINT	MI	48504	
454	PATTERSON, GENE & JANNIE	3402 SANTA CRUZ DR	FLINT	MI	48504	PATTERSON, GENE & JANNIE
455	JONES, WILLIAM & DELOIS	1321 ELDORADO DR	FLINT	MI	48504	JONES, WILLIAM & DELOIS
456	URCHYK, SANDRA M	3193 HATHERLY AVE	FLINT	MI	48504	
457	YEAGER, ROSE MARIE	3193 WALTON	FLINT	MI	48504	
458	LYNN, ANNA M	3202 STRATFORD ST	FLINT	MI	48504	PETIPRIN, JAMES E & AMY S
459	MCDANIEL, DENICE L	1314 ELDORADO DR	FLINT	MI	48504	MCDANIEL, DENICE L
460	COOPER, GREGORY & JANE	2428 S DUFFIELD RD	LENNON	MI	48449	
461	AYRE, JOHN JR & WF K M	3214 FLUSHING RD	FLINT	MI	48504	AYRE, JOHN JR & WF K M
462	ALLEN, KENDA M	3200 WALTON ST	FLINT	MI	48504	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
421	1309 ELDORADO DR	FLINT	MI	48504	100	No	19000	19304	19000	13290947.88020000
422					100	No	13000	12900	13000	13290948.90120000
423	3402 SANTA CLARA CT	FLINT	MI	48504	100	No	20200	20523	20200	13290962.89200000
424	3401 SANTA CLARA CT	FLINT	MI	48504	100	No	20500	20828	20500	13290968.54870000
425	3401 SANTA CRUZ DR	FLINT	MI	48504	0	No	3000	2777	3000	13290972.28980000
426	9025 BEECHER RD	FLUSHING	MI	48433	100	No	14900	14830	14900	13290993.01100000
427	1313 ELDORADO DR	FLINT	MI	48504	100	No	18600	18897	18600	13290993.82870000
428					0	No	23300	23060	23300	13290996.37260000
429					0	No	24900	17780	24900	13290997.48870000
430					0	No	15900	15840	15900	13291000.95450000
431	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13291001.88900000
432					0	Yes	0	0	0	13291003.48740000
433	3401 SANTA CRUZ DR	FLINT	MI	48504	100	No	17400	17678	17400	13291003.71440000
434	3402 SANTA CRUZ DR	FLINT	MI	48504	0	No	3200	2777	3200	13291004.69850000
435					100	No	40900	40430	40900	13291007.79450000
436	1223 SAN JUAN DR	FLINT	MI	48504	100	No	18900	19202	18900	13291018.07250000
437					0	No	1500	580	1500	13291021.13980000
438	12385 E RICHFIELD RD	DAVISON	MI	48423	100	No	16300	16250	16300	13291030.90200000
439					100	No	10300	10260	10300	13291032.49060000
440					0	No	24100	23870	24100	13291039.05110000
441					0	No	137300	141120	137300	13291040.83160000
442	1317 ELDORADO DR	FLINT	MI	48504	100	No	19800	20116	19800	13291045.56560000
443					0	No	1500	1520	1500	13291056.13750000
444	1217 SAN JUAN DR	FLINT	MI	48504	0	No	18300	18592	18300	13291056.85230000
445	1306 ELDORADO DR	FLINT	MI	48504	100	No	21800	22148	21800	13291057.98690000
446					0	No	14700	14630	14700	13291060.41410000
447	1201 SAN JUAN DR	FLINT	MI	48504	100	No	12700	12656	12700	13291067.88510000
448	3237 SLOAN ST	FLINT	MI	48504	100	No	20900	21234	20900	13291074.01260000
449					0	No	11100	10970	11100	13291078.64600000
450					100	No	37700	37280	37700	13291079.30990000
451					0	No	20000	19810	20000	13291085.54930000
452	1210 SAN JUAN DR	FLINT	MI	48504	0	No	2700	1922	2700	13291086.35100000
453					0	No	5600	5680	5600	13291087.55950000
454	3402 SANTA CRUZ DR	FLINT	MI	48504	100	No	21800	22148	21800	13291089.61460000
455	1321 ELDORADO DR	FLINT	MI	48504	100	No	21800	22148	21800	13291097.15900000
456					100	No	9200	9140	9200	13291100.98570000
457					0	No	5000	4620	5000	13291106.41830000
458	8107 S JENNINGS RD	SWARTZ CREEK	MI	48473	100	No	12000	11880	12000	13291114.82000000
459	1314 ELDORADO DR	FLINT	MI	48504	100	No	21800	22148	21800	13291116.00800000
460					0	No	15800	6580	15800	13291124.90230000
461	3214 FLUSHING RD	FLINT	MI	48504	0	No	115400	115112	115400	13291125.96240000
462					100	No	25900	25600	25900	13291131.11570000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
421	558346.38708100	359.69484711	7647.98730469000	359.69485236200			
422	555988.95022400	374.04781981	8678.69726563000	374.04779424500			
423	557587.74559500	439.43732022	8979.65039063000	439.43738756500			
424	557495.90719100	466.60616116	11441.61914060000	466.60619745700			
425	557877.52423300	429.47595625	10167.07421880000	429.47599210400			
426	555695.46595100	371.02020764	8589.75683594000	371.02022331200			
427	558408.78739000	405.17340553	9830.04833984000	405.17333205700			
428	556504.18675100	533.02077314	17074.75048830000	533.02081167000			
429	555865.62729700	350.50311613	7325.05566406000	350.50311485000			
430	556726.13525700	552.68049101	18508.48388670000	552.68052758400			
431	557186.41285200	785.93973542	32828.35498050000	785.93963897700			
432	556245.22635700	352.31769638	7627.50976563000	352.31762430900			
433	557953.46549500	375.53387171	8789.45117188000	375.53386476400			
434	558128.47396800	363.49621253	8171.24462891000	363.49624027200			
435	559059.23488400	668.48543024	20005.15820310000	668.48528816500			
436	557666.57029400	408.37127857	8825.09863281000	408.37135122800			
437	555580.86813400	288.04609812	4464.36669922000	288.04608675700			
438	556127.64633000	471.60336132	13792.63769530000	471.60346275200			x
439	556408.20290500	323.09287956	5674.06103516000	323.09293829200			
440	555953.70154300	363.13198850	8305.13281250000	363.13193644600			
441	556869.22029400	695.49419193	29026.49707030000	695.49430881000			
442	558472.27944600	436.22306223	10866.63232420000	436.22304667200			
443	555670.56457700	279.10064040	4252.41601563000	279.10070998400			
444	557593.25319000	346.98385972	7361.38867188000	346.98381646300			
445	558191.85164400	381.54565814	8719.31103516000	381.54572348000			
446	555841.22236200	342.29205941	6960.54052734000	342.29209991900			
447	557441.83072300	468.38792150	11413.77148440000	468.38789359800			
448	557360.81858400	504.58875802	13286.26660160000	504.58855554000			
449	556392.21429100	301.43840168	4717.85791016000	301.43844001700			
450	559013.97609100	691.35329115	22456.78173830000	691.35325572500			
451	556214.63074700	382.99109333	9157.50732422000	382.99111246200			
452	557523.89243900	382.73139843	8158.42773438000	382.73143498500			
453	556693.89233100	421.41346114	8763.88378906000	421.41341597100			
454	558072.69173100	394.83863088	9901.66894531000	394.83857027500			
455	558536.94750200	498.92584263	13328.09228520000	498.92582399800			
456	556491.13194600	351.11065053	7476.61572266000	351.11070147700			
457	555547.07866800	472.20411934	13425.26269530000	472.20397460600			
458	556094.58237800	309.53696154	5207.92431641000	309.53692910800			
459	558248.17455000	424.34071284	10465.91210940000	424.34069806500			
460	555920.34754300	356.95497522	7969.44580078000	356.95502372800			
461	557141.69420800	828.99133907	38833.26416020000	828.99134546900			
462	555814.64343600	376.16442367	8810.00488281000	376.16451387900			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
463	50128	50142	07-10-527-102	3193 WALTON ST	25-07-10-527-102	0710527102	235-7	Lot	401-RESIDENTIAL
464	50132	50146	40-10-205-043	SAN JUAN DR	25-40-10-205-043	4010205043	043	Lot	400-RESIDENTIAL VACANT
465	50145	50159	07-10-400-003	3800 RIVER VALLEY DR	25-07-10-400-003	0710400003	400-003	Tract	201-COMMERCIAL IMPROVED
466	50147	50161	07-10-526-014	3198 HATHERLY AVE	25-07-10-526-014	0710526014	19	Lot	700-EXEMPT VACANT
467	50165	50179	40-10-202-025	1309 SAN JUAN DR	25-40-10-202-025	4010202025	025	Lot	401-RESIDENTIAL
468	50174	50188	40-10-205-044	SAN JUAN DR	25-40-10-205-044	4010205044	044	Lot	400-RESIDENTIAL VACANT
469	50177	50191	07-03-400-002	3247 MACKIN RD	25-07-03-400-002	0703400002	400-002	Tract	401-RESIDENTIAL
470	50185	50199	40-10-201-022	1325 ELDORADO DR	25-40-10-201-022	4010201022	022	Lot	401-RESIDENTIAL
471	50191	50205	40-10-205-042	SAN JUAN DR	25-40-10-205-042	4010205042	042	Lot	400-RESIDENTIAL VACANT
472	50193	50207	40-10-204-045	SLOAN ST	25-40-10-204-045	4010204045	045	Lot	400-RESIDENTIAL VACANT
473	50196	50210	07-10-526-002	3201 FLUSHING RD	25-07-10-526-002	0710526002	2	Lot	201-COMMERCIAL IMPROVED
474	50200	50214	07-10-527-030	3186 DEVONSHIRE ST	25-07-10-527-030	0710527030	100-2	Lot	401-RESIDENTIAL
475	50206	50220	07-10-527-114	NORTH SHORE BLVD	25-07-10-527-114	0710527114	299-304	Lot	700-EXEMPT VACANT
476	50213	50227	07-10-527-051	3181 DEVONSHIRE ST	25-07-10-527-051	0710527051	143/4	Lot	401-RESIDENTIAL
477	50220	50234	40-10-202-009	1320 ELDORADO DR	25-40-10-202-009	4010202009	009	Lot	401-RESIDENTIAL
478	50247	50261	07-10-527-026	3185 HATHERLY AVE	25-07-10-527-026	0710527026	95/6	Lot	401-RESIDENTIAL
479	50263	50277	40-10-201-030	3409 LAS PALMAS CT	25-40-10-201-030	4010201030	030	Lot	401-RESIDENTIAL
480	50264	50278	40-10-205-032	1242 SAN JUAN DR	25-40-10-205-032	4010205032	032	Lot	401-RESIDENTIAL
481	50267	50281	40-10-205-041	SAN JUAN DR	25-40-10-205-041	4010205041	041	Lot	400-RESIDENTIAL VACANT
482	50270	50284	07-10-527-057	3192 STRATFORD ST	25-07-10-527-057	0710527057	153-5	Lot	401-RESIDENTIAL
483	50316	50330	40-10-202-017	1315 SAN JUAN DR	25-40-10-202-017	4010202017	017	Lot	401-RESIDENTIAL
484	50320	50334	07-10-527-077	1287 MAXSON AVE	25-07-10-527-077	0710527077	187/206/7	Lot	401-RESIDENTIAL
485	50321	50335	07-10-527-078	1297 MAXSON AVE	25-07-10-527-078	0710527078	188/9	Lot	401-RESIDENTIAL
486	50324	50338	07-03-400-001	3233 MACKIN RD	25-07-03-400-001	0703400001	400-001	Tract	401-RESIDENTIAL
487	50332	50346	07-10-526-001	FLUSHING RD	25-07-10-526-001	0710526001	1	Lot	400-RESIDENTIAL VACANT
488	50336	50350	40-10-204-031	3227 SLOAN ST	25-40-10-204-031	4010204031	031	Lot	401-RESIDENTIAL
489	50343	50357	40-10-205-033	1302 SAN JUAN DR	25-40-10-205-033	4010205033	033	Lot	401-RESIDENTIAL
490	50344	50358	40-10-201-016	3413 LAS PALMAS CT	25-40-10-201-016	4010201016	016	Lot	401-RESIDENTIAL
491	50350	50364	40-10-202-008	1326 ELDORADO DR	25-40-10-202-008	4010202008	008	Lot	401-RESIDENTIAL
492	50352	50366	07-10-527-010	3184 HATHERLY AVE	25-07-10-527-010	0710527010	43-5	Lot	401-RESIDENTIAL
493	50369	50383	40-10-205-047	1210 SAN JUAN DR	25-40-10-205-047	4010205047	047	Lot	401-RESIDENTIAL
494	50389	50403	07-10-527-050	3173 DEVONSHIRE ST	25-07-10-527-050	0710527050	141/2	Lot	401-RESIDENTIAL
495	50396	50410	40-10-201-021	1329 ELDORADO DR	25-40-10-201-021	4010201021	021	Lot	401-RESIDENTIAL
496	50432	50446	07-10-527-031	3174 DEVONSHIRE ST	25-07-10-527-031	0710527031	103/4	Lot	401-RESIDENTIAL
497	50461	50475	07-10-527-025	HATHERLY AVE	25-07-10-527-025	0710527025	93/4	Lot	400-RESIDENTIAL VACANT
498	50464	50478	07-10-400-002	RIVER VALLEY DR	25-07-10-400-002	0710400002	400-002	Tract	700-EXEMPT VACANT
499	50492	50506	40-10-205-030	1310 SAN JUAN DR	25-40-10-205-030	4010205030	030	Lot	401-RESIDENTIAL
500	50511	50525	07-10-527-101	3179 WALTON ST	25-07-10-527-101	0710527101	233-4/262-3	Lot	401-RESIDENTIAL
501	50520	50534	40-10-202-018	1321 SAN JUAN DR	25-40-10-202-018	4010202018	018	Lot	401-RESIDENTIAL
502	50524	50538						ROW	
503	50530	50544	07-10-527-058	1313 MAXSON AVE	25-07-10-527-058	0710527058	156/7	Lot	401-RESIDENTIAL
504	50538	50552	40-10-202-007	1330 ELDORADO DR	25-40-10-202-007	4010202007	007	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
463	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080		3193	WALTON ST	FLINT	48504
464	Residential	0.18000001	0.18	FLINT SCHOOLS	25010			SAN JUAN DR	FLINT	48504
465	Commercial	13.01000023	13.01	CARMAN-AINSWORTH SCHOOLS	25080		3800	RIVER VALLEY DR	FLINT	48532
466	Exempt	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3198	HATHERLY AVE	FLINT	48504
467	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		1309	SAN JUAN DR	FLINT	48504
468	Residential	0.17000000	0.17	FLINT SCHOOLS	25010			SAN JUAN DR	FLINT	48504
469	Residential	0.44999999	0.45	CARMAN-AINSWORTH SCHOOLS	25080		3247	MACKIN RD	FLINT	48504
470	Residential	0.25999999	0.26	FLINT SCHOOLS	25010		1325	ELDORADO DR	FLINT	48504
471	Residential	0.19000000	0.19	FLINT SCHOOLS	25010			SAN JUAN DR	FLINT	48504
472	Residential	0.19000000	0.19	FLINT SCHOOLS	25010			SLOAN ST	FLINT	48504
473	Commercial	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080		3201	FLUSHING RD	FLINT	48504
474	Residential	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080		3186	DEVONSHIRE ST	FLINT	48504
475	Exempt	1.03999996	1.04	CARMAN-AINSWORTH SCHOOLS	25080			NORTH SHORE BLVD	FLINT	48504
476	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3181	DEVONSHIRE ST	FLINT	48504
477	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		1320	ELDORADO DR	FLINT	48504
478	Residential	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080		3185	HATHERLY AVE	FLINT	48504
479	Residential	0.38999999	0.39	FLINT SCHOOLS	25010		3409	LAS PALMAS CT	FLINT	48504
480	Residential	0.22000000	0.22	FLINT SCHOOLS	25010		1242	SAN JUAN DR	FLINT	48504
481	Residential	0.18000001	0.18	FLINT SCHOOLS	25010			SAN JUAN DR	FLINT	48504
482	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		3192	STRATFORD ST	FLINT	48504
483	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1315	SAN JUAN DR	FLINT	48504
484	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080		1287	MAXSON AVE	FLINT	48504
485	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		1297	MAXSON AVE	FLINT	48504
486	Residential	0.51999998	0.52	CARMAN-AINSWORTH SCHOOLS	25080		3233	MACKIN RD	FLINT	48504
487	Residential	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
488	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3227	SLOAN ST	FLINT	48504
489	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1302	SAN JUAN DR	FLINT	48504
490	Residential	0.38000000	0.38	FLINT SCHOOLS	25010		3413	LAS PALMAS CT	FLINT	48504
491	Residential	0.30000001	0.3	FLINT SCHOOLS	25010		1326	ELDORADO DR	FLINT	48504
492	Residential	0.44999999	0.45	CARMAN-AINSWORTH SCHOOLS	25080		3184	HATHERLY AVE	FLINT	48504
493	Residential	0.38000000	0.38	FLINT SCHOOLS	25010		1210	SAN JUAN DR	FLINT	48504
494	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3173	DEVONSHIRE ST	FLINT	48504
495	Residential	0.23000000	0.23	FLINT SCHOOLS	25010		1329	ELDORADO DR	FLINT	48504
496	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080		3174	DEVONSHIRE ST	FLINT	48504
497	Residential	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080			HATHERLY AVE	FLINT	48504
498	Exempt	2.06999993	2.07	CARMAN-AINSWORTH SCHOOLS	25080			RIVER VALLEY DR	FLINT	48532
499	Residential	0.20999999	0.21	FLINT SCHOOLS	25010		1310	SAN JUAN DR	FLINT	48504
500	Residential	0.46000001	0.46	CARMAN-AINSWORTH SCHOOLS	25080		3179	WALTON ST	FLINT	48504
501	Residential	0.28999999	0.29	FLINT SCHOOLS	25010		1321	SAN JUAN DR	FLINT	48504
502		0.06000000	0.06							
503	Residential	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080		1313	MAXSON AVE	FLINT	48504
504	Residential	0.30000001	0.3	FLINT SCHOOLS	25010		1330	ELDORADO DR	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
463	YEAGER, ROSE MARIE	3193 WALTON ST	FLINT	MI	48504	
464	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
465	STILLWATER ONE LLC	955 W ST CLAIR AVE STE 22	CLEVELAND	OH	44113	STILLWATER ONE LLC
466	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	
467	WHITE, JOHN & WF RUBY C	1309 SAN JUAN DR	FLINT	MI	48504	WHITE, JOHN & WF RUBY C
468	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
469	LEE, JOHN R	3247 MACKIN RD	FLINT	MI	48504	
470	MULDREW, CHARLES & JESSIE	1325 ELDORADO DR	FLINT	MI	48504	MULDREW, CHARLES & JESSIE
471	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
472	BURRELL, WELTON	3227 SLOAN ST	FLINT	MI	48504	BURRELL, WELTON
473	SUTTON, E R ETAL	3201 FLUSHING RD	FLINT	MI	48504	
474	SHEREN, DENNIS D	3186 DEVONSHIRE ST	FLINT	MI	48504	
475	CHARTER TOWNSHIP OF FLINT	1490 S DYE RD	FLINT	MI	48532	
476	BURROUGHS, BETTY	3181 DEVONSHIRE ST	FLINT	MI	48504	
477	LOCKHART, ISAAC F	1320 ELDORADO DR	FLINT	MI	48504	LOCKHART, ISAAC F
478	CARD, NEWELL N II	3185 HATHERLY AVE	FLINT	MI	48504	
479	RHYMES, JOHN & LESSIE	3409 LAS PALMAS CT	FLINT	MI	48504	RHYMES, JOHN & LESSIE
480	DYKEWICZ, EVELYN TRUST	1242 SAN JUAN DR	FLINT	MI	48504	DYKEWICZ, EVELYN TRUST
481	ROBB FAMILY TRUST	1210 SAN JUAN DR	FLINT	MI	48504	ROBB FAMILY TRUST
482	HARTMAN, ELEANOR TR	3091 HATHERLY AVE	FLINT	MI	48504	
483	HYMAN, RANDY & LINDA	1315 SAN JUAN DR	FLINT	MI	48504	HYMAN, RANDY & LINDA
484	BECKMAN, MARVIN D & KAREN L	1287 MAXSON AVE	FLINT	MI	48504	
485	FOLEY, CHARLES C	1297 MAXSON AVE	FLINT	MI	48504	
486	HARRISON, VANCE & ROSALIND	3233 MACKIN RD	FLINT	MI	48504	
487	SUTTON, E	3201 N FLUSHING RD	FLINT	MI	48504	
488	BURRELL, WELTON & SHERIE	3227 SLOAN ST	FLINT	MI	48504	BURRELL, WELTON & SHERIE
489	JOHNSON, IDA B	1302 SAN JUAN DR	FLINT	MI	48504	JOHNSON, IDA B
490	WHITE, FRED S TRUST	3413 LAS PALMAS CT	FLINT	MI	48504	WHITE, FRED S TRUST
491	HODGES, F & ADKINS, CHERYL D	1326 ELDORADO DR	FLINT	MI	48504	HODGES, F & ADKINS, CHERYL D
492	DENSMORE, CHRISTOPHER J	3184 HATHERLY AVE	FLINT	MI	48504	GENESEE COUNTY LAND BANK
493	ROBB FAMILY TRUST	1210 SAN JUAN DR	FLINT	MI	48504	ROBB FAMILY TRUST
494	MAWHINNEY, DAWN C	3173 DEVONSHIRE ST	FLINT	MI	48504	
495	RUTHERFORD, IRA A	1329 ELDORADO DR	FLINT	MI	48504	RUTHERFORD, IRA A
496	JEFFERSON, VICHALON	3174 DEVONSHIRE ST	FLINT	MI	48504	
497	BARRES, RICHARD W	3627 CONCORD ST	FLINT	MI	48504	
498	GENESEE COUNTY DRAIN COMMISSIONER	4608 BEECHER RD	FLINT	MI	48532	
499	RASPBERRY, FREDRICK & TIAJUANA	1310 SAN JUAN DR	FLINT	MI	48504	RASPBERRY, FREDRICK & TIAJUANA
500	COOK, JOHN C	10436 RAY RD	GAINES	MI	48436	
501	JENKINS, SCOTT & PRISCILLA	1321 SAN JUAN DR	FLINT	MI	48504	JENKINS, SCOTT & PRISCILLA
502						
503	HOUSER, TINA	1313 MAXSON AVE	FLINT	MI	48504	
504	TOWNSEND, SARAH	1330 ELDORADO DR	FLINT	MI	48504	TOWNSEND, SARAH

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
463					100	No	20600	20420	20600	13291141.66290000
464	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13291142.20010000
465	3800 RIVER VALLEY DR	FLINT	MI	48532	0	No	1893200	1881840	1893200	13291144.46170000
466					0	Yes	0	0	0	13291145.57340000
467	1309 SAN JUAN DR	FLINT	MI	48504	100	No	19900	20218	19900	13291152.80750000
468	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13291155.35920000
469					100	No	37800	37380	37800	13291155.88410000
470	1325 ELDORADO DR	FLINT	MI	48504	100	No	19100	19405	19100	13291160.44620000
471	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13291163.68480000
472	3227 SLOAN ST	FLINT	MI	48504	0	No	2800	2350	2800	13291164.29490000
473					0	No	48000	49470	48000	13291164.91090000
474					0	No	15800	15740	15800	13291166.12650000
475					0	Yes	0	0	0	13291168.80160000
476					100	No	20200	20010	20200	13291171.23680000
477	1320 ELDORADO DR	FLINT	MI	48504	0	No	15700	15951	15700	13291174.99870000
478					100	No	24200	23970	24200	13291184.74860000
479	3409 LAS PALMAS CT	FLINT	MI	48504	100	No	25200	25603	25200	13291194.52880000
480	1242 SAN JUAN DR	FLINT	MI	48504	100	No	26500	26924	26500	13291194.54580000
481	1210 SAN JUAN DR	FLINT	MI	48504	100	No	2800	1922	2800	13291195.15840000
482					0	No	13000	13000	13000	13291196.89170000
483	1315 SAN JUAN DR	FLINT	MI	48504	100	No	20100	20421	20100	13291220.12860000
484					100	No	19900	19810	19900	13291225.10510000
485					100	No	24200	23970	24200	13291226.75830000
486					100	No	29000	28750	29000	13291227.55780000
487					0	No	2600	2640	2600	13291229.78570000
488	3227 SLOAN ST	FLINT	MI	48504	100	No	17800	18084	17800	13291231.79930000
489	1302 SAN JUAN DR	FLINT	MI	48504	100	No	0	0	0	13291235.46680000
490	3413 LAS PALMAS CT	FLINT	MI	48504	100	No	26900	27330	26900	13291236.14950000
491	1326 ELDORADO DR	FLINT	MI	48504	100	No	25400	25806	25400	13291238.77780000
492	452 S SAGINAW ST	FLINT	MI	48502	100	No	28500	28500	28500	13291239.15210000
493	1210 SAN JUAN DR	FLINT	MI	48504	100	No	19800	20116	19800	13291246.90050000
494					100	No	23600	23360	23600	13291254.25250000
495	1329 ELDORADO DR	FLINT	MI	48504	100	No	20900	21234	20900	13291256.05450000
496					100	No	31200	30880	31200	13291269.76090000
497					0	No	5100	5080	5100	13291274.85100000
498					0	Yes	0	0	0	13291275.87990000
499	1310 SAN JUAN DR	FLINT	MI	48504	100	No	18800	19100	18800	13291288.72990000
500					0	No	31600	31290	31600	13291293.84810000
501	1321 SAN JUAN DR	FLINT	MI	48504	100	No	29900	30378	29900	13291300.92180000
502					0		0	0	0	13291302.61360000
503					100	No	17800	17670	17800	13291304.87970000
504	1330 ELDORADO DR	FLINT	MI	48504	100	No	24800	25196	24800	13291307.02410000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
463	555636.83102600	468.46818449	13290.84277340000	468.46813370600			
464	557803.67726500	380.29217094	7715.11181641000	380.29210238000			
465	554709.27679700	3083.16871488	566760.56591800000	3083.16867111000			
466	556672.55437000	431.91732895	9493.67578125000	431.91722460200			
467	558131.69529700	385.57094127	8879.01611328000	385.57081632600			
468	557863.44108500	385.22979203	7519.77880859000	385.22969520300			
469	558981.78490100	670.20882604	19538.69970700000	670.20882116600			
470	558572.99616300	471.99551030	11240.00781250000	471.99550538900			
471	557739.53128200	372.49729573	8169.62500000000	372.49739945200			
472	557325.77441600	378.58822189	8258.83740234000	378.58823281500			
473	556821.90028100	439.22189534	10134.36035160000	439.22197593100			
474	556361.94019000	524.97006537	15079.59667970000	524.97008354000			
475	555317.84383100	906.87173793	45434.97412110000	906.87172318300			
476	556181.15833200	373.71783473	8715.72705078000	373.71774049300			
477	558299.53304300	443.42514271	10960.23876950000	443.42518839100			
478	556467.88165300	420.79682323	10335.88183590000	420.79676922200			
479	558673.70190900	546.51526298	16872.54687500000	546.51522943700			
480	557914.74995700	415.11011407	9627.93847656000	415.11013863300			
481	557676.98786400	361.55127539	7673.26367188000	361.55120606200			
482	556062.69125200	462.75411840	13260.36474610000	462.75415393600			
483	558177.13462200	375.48935773	8465.81884766000	375.48934325300			
484	555802.56296200	497.02552146	14732.63281250000	497.02542296400			
485	555894.28860500	463.52941000	8160.03710938000	463.52939459600			
486	558944.17075300	718.45663267	22849.94238280000	718.45654123500			
487	556799.31578600	438.14476710	9991.98339844000	438.14482453600			
488	557304.03050100	355.59075934	7418.45947266000	355.59075177100			
489	557967.93591400	387.11265301	8081.94384766000	387.11274846700			
490	558774.19881300	533.47012339	16613.42236330000	533.47006790300			
491	558345.77707700	482.98653340	13173.28320310000	482.98656104900			
492	556654.78073100	573.80293601	19666.79638670000	573.80289209000		x	
493	557578.62395900	533.27664023	16747.11328130000	533.27664719900			
494	556148.62441800	372.88489642	8688.46484375000	372.88488698400			
495	558586.33820500	405.48618341	9869.70019531000	405.48608823400			
496	556328.58669700	422.55479602	10830.34765630000	422.55469507800			
497	556457.97942500	408.09134032	10444.55712890000	408.09132549100			
498	554296.17258200	1868.97497179	90002.87402340000	1868.97493317000			
499	558009.26689500	399.71057468	9093.16894531000	399.71065944100			
500	555526.39216700	595.80520310	20113.67724610000	595.80517570100			
501	558220.11854500	457.61114221	12508.56591800000	457.61115768100			
502	556734.29617900	340.88870987	2566.27978516000	340.88867070100			
503	556020.17449200	412.03011746	10523.23339840000	412.03012180600			
504	558389.43084700	488.17572280	13176.94726560000	488.17567644500			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
505	50542	50556	40-10-201-035	3419 LAS PALMAS CT	25-40-10-201-035	4010201035	035	Lot	401-RESIDENTIAL
506	50546	50560	40-10-204-062	SLOAN ST	25-40-10-204-062	4010204062	062	Lot	400-RESIDENTIAL VACANT
507	50567	50581	40-10-205-051	1202 SAN JUAN DR	25-40-10-205-051	4010205051	051	Lot	401-RESIDENTIAL
508	50571	50585	07-10-527-032	3170 DEVONSHIRE ST	25-07-10-527-032	0710527032	105	Lot	401-RESIDENTIAL
509	50580	50594	07-10-527-009	3189 FLUSHING RD	25-07-10-527-009	0710527009	36-42	Lot	201-COMMERCIAL IMPROVED
510	50590	50604	07-10-527-049	3161 DEVONSHIRE ST	25-07-10-527-049	0710527049	139/40	Lot	401-RESIDENTIAL
511	50601	50615	40-10-205-031	1318 SAN JUAN DR	25-40-10-205-031	4010205031	031	Lot	401-RESIDENTIAL
512	50615	50629	07-10-527-024	3169 HATHERLY AVE	25-07-10-527-024	0710527024	91/2	Lot	401-RESIDENTIAL
513	50632	50646	40-10-201-001	3521 MACKIN RD	25-40-10-201-001	4010201001	001	Lot	401-RESIDENTIAL
514	50641	50655	40-10-202-001	3325 WOLCOTT ST	25-40-10-202-001	4010202001	001	Lot	401-RESIDENTIAL
515	50642	50656	07-10-527-088	MAXSON AVE	25-07-10-527-088	0710527088	208/9	Lot	400-RESIDENTIAL VACANT
516	50644	50658	40-10-204-059	3202 FLUSHING RD	25-40-10-204-059	4010204059	059	Lot	201-COMMERCIAL IMPROVED
517	50670	50684	40-10-202-019	1327 SAN JUAN DR	25-40-10-202-019	4010202019	019	Lot	401-RESIDENTIAL
518	50697	50711	07-10-527-076	MAXSON AVE	25-07-10-527-076	0710527076	185/6	Lot	400-RESIDENTIAL VACANT
519	50699	50713	07-10-527-033	1339 MAXSON AVE	25-07-10-527-033	0710527033	106/7	Lot	401-RESIDENTIAL
520	50700	50714	07-10-527-100	3169 WALTON ST	25-07-10-527-100	0710527100	231/2	Lot	401-RESIDENTIAL
521	50705	50719	40-10-201-012	1401 ELDORADO DR	25-40-10-201-012	4010201012	012	Lot	401-RESIDENTIAL
522	50721	50735	40-10-204-061	3217 SLOAN ST	25-40-10-204-061	4010204061	061	Lot	401-RESIDENTIAL
523	50780	50794	40-10-205-053	1326 SAN JUAN DR	25-40-10-205-053	4010205053	053	Lot	401-RESIDENTIAL
524	50783	50797	07-10-527-023	1345 MAXSON AVE	25-07-10-527-023	0710527023	88-90	Lot	401-RESIDENTIAL
525	50791	50805	40-10-280-053	3162 FLUSHING RD	25-40-10-280-053	4010280053	053	Lot	201-COMMERCIAL IMPROVED
526	50798	50812	40-10-202-002	3319 WOLCOTT ST	25-40-10-202-002	4010202002	002	Lot	401-RESIDENTIAL
527	50807	50821	40-03-484-011	3514 MACKIN RD	25-40-03-484-011	4003484011	011	Lot	401-RESIDENTIAL
528	50812	50826	40-10-201-014	3418 LAS PALMAS CT	25-40-10-201-014	4010201014	014	Lot	401-RESIDENTIAL
529	50817	50831	40-10-205-037	3218 RASKOB ST	25-40-10-205-037	4010205037	037	Lot	401-RESIDENTIAL
530	50829	50843	40-10-201-013	3410 LAS PALMAS CT	25-40-10-201-013	4010201013	013	Lot	401-RESIDENTIAL
531	50830	50844	07-10-527-008	3163 FLUSHING RD	25-07-10-527-008	0710527008	25-35/46 52	Lot	201-COMMERCIAL IMPROVED
532	50837	50851	40-10-201-002	3507 MACKIN RD	25-40-10-201-002	4010201002	002	Lot	401-RESIDENTIAL
533	50852	50866	40-10-202-020	1333 SAN JUAN DR	25-40-10-202-020	4010202020	020	Lot	401-RESIDENTIAL
534	50856	50870	07-10-527-059	1312 MAXSON AVE	25-07-10-527-059	0710527059	158-60	Lot	401-RESIDENTIAL
535	50858	50872	07-10-527-075	STRATFORD ST	25-07-10-527-075	0710527075	184	Lot	700-EXEMPT VACANT
536	50873	50887	07-10-527-089	3166 WALTON ST	25-07-10-527-089	0710527089	210-2	Lot	401-RESIDENTIAL
537	50882	50896	07-10-527-099	3159 WALTON ST	25-07-10-527-099	0710527099	229/30	Lot	401-RESIDENTIAL
538	50897	50911	40-10-227-047	3322 WOLCOTT ST	25-40-10-227-047	4010227047	047	Lot	401-RESIDENTIAL
539	50899	50913	40-10-278-041	3227 RASKOB ST	25-40-10-278-041	4010278041	041	Lot	401-RESIDENTIAL
540	50903	50917	40-10-201-011	1409 ELDORADO DR	25-40-10-201-011	4010201011	011	Lot	401-RESIDENTIAL
541	50910	50924	07-10-527-048	1320 MAXSON AVE	25-07-10-527-048	0710527048	136-8	Lot	401-RESIDENTIAL
542	50911	50925	07-10-527-115	NORTH SHORE BLVD	25-07-10-527-115	0710527115	305-12	Lot	700-EXEMPT VACANT
543	50930	50944	40-03-484-002	3447 BARTH ST	25-40-03-484-002	4003484002	002	Lot	401-RESIDENTIAL
544	50963	50977	40-10-205-036	RASKOB ST	25-40-10-205-036	4010205036	036	Lot	400-RESIDENTIAL VACANT
545	50965	50979	40-10-204-064	SLOAN ST	25-40-10-204-064	4010204064	064	Lot	400-RESIDENTIAL VACANT
546	50967	50981	07-10-527-074	3151 STRATFORD ST	25-07-10-527-074	0710527074	183	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
505	Residential	0.31000000	0.31	FLINT SCHOOLS	25010		3419	LAS PALMAS CT	FLINT	48504
506	Residential	0.23999999	0.24	FLINT SCHOOLS	25010			SLOAN ST	FLINT	48504
507	Residential	0.60000002	0.6	FLINT SCHOOLS	25010		1202	SAN JUAN DR	FLINT	48504
508	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3170	DEVONSHIRE ST	FLINT	48504
509	Commercial	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080		3189	FLUSHING RD	FLINT	48504
510	Residential	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080		3161	DEVONSHIRE ST	FLINT	48504
511	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		1318	SAN JUAN DR	FLINT	48504
512	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080		3169	HATHERLY AVE	FLINT	48504
513	Residential	0.28999999	0.29	FLINT SCHOOLS	25010		3521	MACKIN RD	FLINT	48504
514	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		3325	WOLCOTT ST	FLINT	48504
515	Residential	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080			MAXSON AVE	FLINT	48504
516	Commercial	2.04999995	2.05	FLINT SCHOOLS	25010		3202	FLUSHING RD	FLINT	48504
517	Residential	0.31000000	0.31	FLINT SCHOOLS	25010		1327	SAN JUAN DR	FLINT	48504
518	Residential	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080			MAXSON AVE	FLINT	48504
519	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		1339	MAXSON AVE	FLINT	48504
520	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		3169	WALTON ST	FLINT	48504
521	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		1401	ELDORADO DR	FLINT	48504
522	Residential	0.31000000	0.31	FLINT SCHOOLS	25010		3217	SLOAN ST	FLINT	48504
523	Residential	0.38000000	0.38	FLINT SCHOOLS	25010		1326	SAN JUAN DR	FLINT	48504
524	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080		1345	MAXSON AVE	FLINT	48504
525	Commercial	0.67000002	0.67	FLINT SCHOOLS	25010		3162	FLUSHING RD	FLINT	48504
526	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3319	WOLCOTT ST	FLINT	48504
527	Residential	0.23000000	0.23	FLINT SCHOOLS	25010		3514	MACKIN RD	FLINT	48504
528	Residential	0.37000000	0.37	FLINT SCHOOLS	25010		3418	LAS PALMAS CT	FLINT	48504
529	Residential	0.20999999	0.21	FLINT SCHOOLS	25010		3218	RASKOB ST	FLINT	48504
530	Residential	0.36000001	0.36	FLINT SCHOOLS	25010		3410	LAS PALMAS CT	FLINT	48504
531	Commercial	1.38999999	1.39	CARMAN-AINSWORTH SCHOOLS	25080		3163	FLUSHING RD	FLINT	48504
532	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3507	MACKIN RD	FLINT	48504
533	Residential	0.25999999	0.26	FLINT SCHOOLS	25010		1333	SAN JUAN DR	FLINT	48504
534	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		1312	MAXSON AVE	FLINT	48504
535	Exempt	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080			STRATFORD ST	FLINT	48504
536	Residential	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080		3166	WALTON ST	FLINT	48504
537	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		3159	WALTON ST	FLINT	48504
538	Residential	0.22000000	0.22	FLINT SCHOOLS	25010		3322	WOLCOTT ST	FLINT	48504
539	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3227	RASKOB ST	FLINT	48504
540	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		1409	ELDORADO DR	FLINT	48504
541	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080		1320	MAXSON AVE	FLINT	48504
542	Exempt	0.98000002	0.98	CARMAN-AINSWORTH SCHOOLS	25080			NORTH SHORE BLVD	FLINT	48504
543	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3447	BARTH ST	FLINT	48504
544	Residential	0.16000000	0.16	FLINT SCHOOLS	25010			RASKOB ST	FLINT	48504
545	Residential	0.20000000	0.2	FLINT SCHOOLS	25010			SLOAN ST	FLINT	48504
546	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3151	STRATFORD ST	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
505	GILLIAM, MARVIN & CORA LIV TRUST	3419 LAS PALMAS CT	FLINT	MI	48504	GILLIAM, MARVIN & CORA LIV TRUST
506	CHRISTIAN LOVE FAITH CENTER	3202 FLUSHING RD	FLINT	MI	48504	CHRISTIAN LOVE FAITH CENTER
507	FORTE, DONALD H	1202 SAN JUAN DR	FLINT	MI	48504	FORTE, DONALD H
508	DEWEY, MARK & TINA M	3170 DEVONSHIRE ST	FLINT	MI	48504	
509	STECO, JACK W	3120 ROANOKE ST	FLINT	MI	48504	
510	BURROWS, BARBARA ANN	3321 BURNELL AVE	FLINT	MI	48504-4303	
511	JACKSON, PATRICIA M	1318 SAN JUAN DR	FLINT	MI	48504	JACKSON, PATRICIA M
512	HUDAIS, FAIZA	3169 HATHERLY AVE	FLINT	MI	48504	
513	COLLINS, S JR & WF D	3521 MACKIN RD	FLINT	MI	48504	COLLINS, S JR & WF D
514	TIMMS, CEDELL & ALEXIS	3325 WOLCOTT ST	FLINT	MI	48504	TIMMS, CEDELL & ALEXIS
515	RIVERVIEW LAND DEVELOPMENT LLC	1103 BORGSTROM	YPSILANTI	MI	48198	
516	CHRISTIAN LOVE FAITH CENTER	3202 FLUSHING RD	FLINT	MI	48504	CHRISTIAN LOVE FAITH CENTER
517	SCOTT, CAROLYN	1327 SAN JUAN DR	FLINT	MI	48504	SCOTT, CAROLYN
518	RIVERVIEW LAND DEVELOPMENT LLC	1103 BORGSTROM	YPSILANTI	MI	48198	
519	TIERNEY, ROBERT	1339 MAXSON AVE	FLINT	MI	48504	URLACHER, VALERIE D
520	KELTNER, RANDY M	4354 MAPLE AVE	FLINT	MI	48507	
521	JOHNSON, CHARLES	2811 SLOAN ST	FLINT	MI	48504	JOHNSON, CHARLES
522	SMITH, RAY & WF LINDA	3217 SLOAN ST	FLINT	MI	48504	SMITH, RAY & WF LINDA
523	WADE, BEVERLA & WADE, JARRETT	1326 SAN JUAN DR	FLINT	MI	48504	WADE, BEVERLA & WADE, JARRETT
524	GARFIELD, VICKI	6479 WEBB DR	FLINT	MI	48506	
525	CHEFF, JOSHUA	2048 BELFORD	HOLLY	MI	48442	CHEFF, JOSHUA
526	RICHARDSON, ROBERT & YVWANIA	3319 WOLCOTT ST	FLINT	MI	48504	RICHARDSON, ROBERT & YVWANIA
527	MILLER, ARNET & VIVIAN	1053 TAHOE TRL	FLINT	MI	48532	MILLER, ARNET & VIVIAN
528	TUCKER, DEOTIS & SARAH	3418 LAS PALMAS CT	FLINT	MI	48504	TUCKER, DEOTIS & SARAH
529	ADAMS, JANICE F	3218 RASKOB ST	FLINT	MI	48504	ADAMS, JANICE F
530	RUSSELL, LAVERN & CYNTHIA	3410 LAS PALMAS CT	FLINT	MI	48504	RUSSELL, LAVERN & CYNTHIA
531	TREASURE ENTERPRISE, LLC	1161 N BALLENGER HWY STE	FLINT	MI	48504	
532	ANGEL, CHARLES	1221 ELDORADO DR	FLINT	MI	48504	ANGEL, CHARLES
533	MILES, L D	1333 SAN JUAN DR	FLINT	MI	48504	MILES, L D
534	BYTHER, LAMARR J	1312 MAXSON AVE	FLINT	MI	48504	
535	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502-1832	
536	ALLEN, JOSEPH T	3166 WALTON ST	FLINT	MI	48504	
537	SKAGGS, ANDREW	3159 WALTON ST	FLINT	MI	48504	
538	HOLLAND-AUGUST, SANDRA L	3322 WOLCOTT ST	FLINT	MI	48504	HOLLAND-AUGUST, SANDRA L
539	FOSTER PARK, LLC	1106 S WASHINGTON	OWOSSO	MI	48867	FOSTER PARK, LLC
540	BARKSDALE, BRADFORD W	1409 ELDORADO DR	FLINT	MI	48504	BARKSDALE, BRADFORD W
541	PARSONS, WALTER E II ETAL	5150 DANIA ST	FLINT	MI	48532	
542	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
543	COCHRAN, JOSEPH & WF MAE	3447 BARTH ST	FLINT	MI	48504	COCHRAN, JOSEPH & WF MAE
544	AGGY BUILDERS INC	7721 DEERHILL DR	CLARKSTON	MI	48346	AGGY BUILDERS INC
545	CHRISTIAN LOVE FAITH CENTER	3202 FLUSHING RD	FLINT	MI	48504	CHRISTIAN LOVE FAITH CENTER
546	MATTESON, TIMOTHY	3151 STRATFORD ST	FLINT	MI	48504	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
505	3419 LAS PALMAS CT	FLINT	MI	48504	100	No	26000	26416	26000	13291311.01420000
506	3202 FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13291311.99100000
507	1202 SAN JUAN DR	FLINT	MI	48504	100	No	21500	21844	21500	13291327.87860000
508					100	No	15300	15130	15300	13291331.36390000
509					0	No	16600	16960	16600	13291338.19930000
510					0	No	24700	24480	24700	13291342.79060000
511	1318 SAN JUAN DR	FLINT	MI	48504	100	No	22300	22656	22300	13291349.83880000
512					100	No	26900	26610	26900	13291356.45600000
513	3521 MACKIN RD	FLINT	MI	48504	100	No	18900	19202	18900	13291362.92170000
514	3325 WOLCOTT ST	FLINT	MI	48504	100	No	19600	19913	19600	13291367.57440000
515					0	No	3400	3450	3400	13291367.62570000
516	3202 FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13291369.22860000
517	1327 SAN JUAN DR	FLINT	MI	48504	100	No	21500	21844	21500	13291386.85790000
518					0	No	3400	3450	3400	13291401.35440000
519	2173 S CENTER RD #408	BURTON	MI	48509	100	No	26000	25800	26000	13291401.83490000
520					0	No	19600	19400	19600	13291402.21900000
521	2811 SLOAN ST	FLINT	MI	48504	0	No	26000	26416	26000	13291405.66160000
522	3217 SLOAN ST	FLINT	MI	48504	100	No	22300	22656	22300	13291421.01320000
523	1326 SAN JUAN DR	FLINT	MI	48504	100	No	20600	20929	20600	13291444.07870000
524					0	No	13600	13510	13600	13291445.94200000
525	2048 BELFORD	HOLLY	MI	48442	0	No	146200	145288	146200	13291448.48720000
526	3319 WOLCOTT ST	FLINT	MI	48504	100	No	22000	22352	22000	13291449.22960000
527	1053 TAHOE TRL	FLINT	MI	48532	0	No	17000	17272	17000	13291450.61550000
528	3418 LAS PALMAS CT	FLINT	MI	48504	100	No	25200	25603	25200	13291451.99130000
529	3218 RASKOB ST	FLINT	MI	48504	100	No	18900	19202	18900	13291453.26670000
530	3410 LAS PALMAS CT	FLINT	MI	48504	100	No	23300	23672	23300	13291458.28780000
531					0	No	121200	93210	121200	13291458.69580000
532	1221 ELDORADO DR	FLINT	MI	48504	0	No	18400	18694	18400	13291460.67640000
533	1333 SAN JUAN DR	FLINT	MI	48504	100	No	18900	19202	18900	13291468.60120000
534					100	No	32000	31690	32000	13291469.51420000
535					0	Yes	0	0	0	13291470.32450000
536					100	No	19100	18990	19100	13291478.59430000
537					100	No	17100	17100	17100	13291486.17880000
538	3322 WOLCOTT ST	FLINT	MI	48504	100	No	19400	19710	19400	13291495.76390000
539	1106 S WASHINGTON	OWOSSO	MI	48867	0	No	14200	14427	14200	13291496.05400000
540	1409 ELDORADO DR	FLINT	MI	48504	100	No	20000	20320	20000	13291498.48060000
541					0	No	33700	33420	33700	13291500.27120000
542					0	Yes	0	0	0	13291500.31330000
543	3447 BARTH ST	FLINT	MI	48504	100	No	17400	17678	17400	13291505.91630000
544	7721 DEERHILL DR	CLARKSTON	MI	48346	0	No	2800	2350	2800	13291521.78560000
545	3202 FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13291523.06020000
546					100	No	20600	20420	20600	13291523.20940000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
505	558872.23262100	463.19501738	13411.56640630000	463.19496671400			
506	557276.24223900	405.83699723	10290.58349610000	405.83700035900			
507	557461.14383100	708.15165488	25949.92578130000	708.15149702900			
508	556304.96804000	332.96779283	5437.72265625000	332.96790231300			
509	556772.96227400	458.92983937	11899.35546880000	458.92980401100			
510	556113.46513000	406.18318090	10270.66699220000	406.18329101100			
511	558036.91805200	404.51198064	8851.93847656000	404.51210569200			
512	556426.93662200	420.19557013	10716.90380860000	420.19556174300			
513	558968.79198600	451.23683022	12753.20019530000	451.23684870500			
514	558437.67389800	443.16322406	10861.87744140000	443.16325025400			
515	555720.69481100	399.99331812	10019.63378910000	399.99341280500			
516	557071.89315200	1542.36414113	89255.28417970000	1542.36406833000			
517	558256.58737400	480.89909180	13678.73486330000	480.89916364500			
518	555811.93610700	396.98818759	9864.33007813000	396.98819965100			
519	556276.73499600	455.56197266	12898.50537110000	455.56193270200			
520	555539.51811200	364.96928332	8324.36425781000	364.96918851600			
521	558646.47602000	374.56444423	8700.81787109000	374.56436400200			
522	557230.77867500	468.79444401	13466.67919920000	468.79440009000			
523	558055.22023900	511.97544421	16361.22509770000	511.97548211200			
524	556390.27696300	459.65866778	13079.42089840000	459.65859026300			
525	556956.75175700	685.16605967	29231.63037110000	685.16599825500			
526	558377.18837600	368.41173399	8358.01171875000	368.41173493900			
527	559122.83149700	409.89885132	10111.58691410000	409.89887136100			
528	558839.51232700	602.17278816	16077.67724610000	602.17287368000			
529	557540.38710600	387.75135776	9079.48193359000	387.75136237900			
530	558751.94334900	634.26032152	15520.55615230000	634.26042049300			
531	556635.78229600	1015.18762769	60403.13232420000	1015.18752925000			
532	558938.46109000	372.12674399	8610.90869141000	372.12669439300			
533	558248.62103900	452.03933130	11293.15429690000	452.03929715900			
534	555958.25426100	449.45057912	12572.57031250000	449.45055625600			
535	555785.68323200	282.41339489	4340.18505859000	282.41332383100			
536	555678.37515600	468.13795474	13290.26318360000	468.13777710500			
537	555506.72710000	362.32191632	8199.31054688000	362.32187260700			
538	558528.08608900	435.33211163	9716.18847656000	435.33208892400			
539	557369.67522400	374.69342967	8864.52685547000	374.69348598300			
540	558680.34330800	342.50821082	7117.96679688000	342.50818827600			
541	556055.01536200	420.85760236	11034.91796880000	420.85760744000			
542	555192.15831000	1048.58453409	42784.11572270000	1048.58463272000			
543	559218.75403900	335.64849503	6443.57031250000	335.64849921800			
544	557574.30235600	338.88819909	6867.72558594000	338.88822268200			
545	557188.44463600	377.81736442	8873.46777344000	377.81750436500			
546	555765.00532000	328.59124020	6555.97021484000	328.59119939100			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
547	50968	50982	40-03-484-012	3510 MACKIN RD	25-40-03-484-012	4003484012	012	Lot	401-RESIDENTIAL
548	50971	50985	40-10-202-003	3313 WOLCOTT ST	25-40-10-202-003	4010202003	003	Lot	401-RESIDENTIAL
549	51034	51048	40-10-201-004	3501 MACKIN RD	25-40-10-201-004	4010201004	004	Lot	401-RESIDENTIAL
550	51046	51060	40-10-202-021	1339 SAN JUAN DR	25-40-10-202-021	4010202021	021	Lot	401-RESIDENTIAL
551	51064	51078	40-03-484-003	3441 BARTH ST	25-40-03-484-003	4003484003	003	Lot	401-RESIDENTIAL
552	51078	51092	40-10-280-052	FLUSHING RD	25-40-10-280-052	4010280052	052	Lot	200-COMMERCIAL VACANT
553	51081	51095	07-10-527-090	WALTON ST	25-07-10-527-090	0710527090	213	Lot	400-RESIDENTIAL VACANT
554	51087	51101	40-10-201-010	1417 ELDORADO DR	25-40-10-201-010	4010201010	010	Lot	401-RESIDENTIAL
555	51096	51110	40-10-205-001	N STEVENSON ST	25-40-10-205-001	4010205001	001	Lot	200-COMMERCIAL VACANT
556	51098	51112	40-10-278-039	3215 RASKOB ST	25-40-10-278-039	4010278039	039	Lot	401-RESIDENTIAL
557	51099	51113	07-10-527-111	WALTON AVE	25-07-10-527-111	0710527111	264-73	Lot	700-EXEMPT VACANT
558	51116	51130	40-10-278-040	SLOAN ST	25-40-10-278-040	4010278040	040	Lot	400-RESIDENTIAL VACANT
559	51120	51134	07-10-527-060	3152 STRATFORD ST	25-07-10-527-060	0710527060	160-2	Lot	401-RESIDENTIAL
560	51122	51136	07-10-527-022	1336 MAXSON AVE	25-07-10-527-022	0710527022	87/108-10	Lot	401-RESIDENTIAL
561	51124	51138	40-03-484-013	3506 MACKIN RD	25-40-03-484-013	4003484013	013	Lot	401-RESIDENTIAL
562	51131	51145	40-10-280-002	3155 SLOAN ST	25-40-10-280-002	4010280002	002	Lot	401-RESIDENTIAL
563	51138	51152	07-10-527-073	3145 STRATFORD ST	25-07-10-527-073	0710527073	181	Lot	401-RESIDENTIAL
564	51146	51160	07-10-527-098	3149 WALTON ST	25-07-10-527-098	0710527098	226-8	Lot	401-RESIDENTIAL
565	51151	51165	40-10-205-034	RASKOB ST	25-40-10-205-034	4010205034	034	Lot	400-RESIDENTIAL VACANT
566	51155	51169	40-10-202-004	3307 WOLCOTT ST	25-40-10-202-004	4010202004	004	Lot	401-RESIDENTIAL
567	51156	51170	40-10-227-023	1410 ELDORADO DR	25-40-10-227-023	4010227023	023	Lot	401-RESIDENTIAL
568	51164	51178	07-10-527-047	3131 DEVONSHIRE ST	25-07-10-527-047	0710527047	134-6	Lot	401-RESIDENTIAL
569	51172	51186	40-03-482-007	3446 BARTH ST	25-40-03-482-007	4003482007	007	Lot	401-RESIDENTIAL
570	51178	51192	07-10-527-021	1348 MAXSON AVE	25-07-10-527-021	0710527021	85/6	Lot	401-RESIDENTIAL
571	51179	51193	40-10-227-027	3312 WOLCOTT ST	25-40-10-227-027	4010227027	027	Lot	401-RESIDENTIAL
572	51192	51206	40-03-484-004	3429 BARTH ST	25-40-03-484-004	4003484004	004	Lot	401-RESIDENTIAL
573	51195	51209	07-10-527-091	3148 WALTON ST	25-07-10-527-091	0710527091	214	Lot	401-RESIDENTIAL
574	51208	51222	40-10-202-022	1345 SAN JUAN DR	25-40-10-202-022	4010202022	022	Lot	401-RESIDENTIAL
575	51215	51229	40-10-280-003	3151 SLOAN ST	25-40-10-280-003	4010280003	003	Lot	401-RESIDENTIAL
576	51226	51240	40-03-484-014	3430 MACKIN RD	25-40-03-484-014	4003484014	014	Lot	401-RESIDENTIAL
577	51229	51243	40-10-201-009	1421 ELDORADO DR	25-40-10-201-009	4010201009	009	Lot	401-RESIDENTIAL
578	51239	51253	40-10-201-005	3421 MACKIN RD	25-40-10-201-005	4010201005	005	Lot	401-RESIDENTIAL
579	51245	51259	40-10-278-019	3156 SLOAN ST	25-40-10-278-019	4010278019	019	Lot	401-RESIDENTIAL
580	51247	51261	40-10-280-037	3142 FLUSHING RD	25-40-10-280-037	4010280037	037	Lot	201-COMMERCIAL IMPROVED
581	51265	51279	40-10-278-038	RASKOB ST	25-40-10-278-038	4010278038	038	Lot	400-RESIDENTIAL VACANT
582	51287	51301	07-10-527-072	STRATFORD ST	25-07-10-527-072	0710527072	179/80	Lot	400-RESIDENTIAL VACANT
583	51288	51302	40-03-482-008	3440 BARTH ST	25-40-03-482-008	4003482008	008	Lot	401-RESIDENTIAL
584	51289	51303	40-10-280-004	3147 SLOAN ST	25-40-10-280-004	4010280004	004	Lot	401-RESIDENTIAL
585	51292	51306	40-10-202-005	3301 WOLCOTT ST	25-40-10-202-005	4010202005	005	Lot	401-RESIDENTIAL
586	51314	51328	07-10-527-034	3134 DEVONSHIRE ST	25-07-10-527-034	0710527034	111	Lot	401-RESIDENTIAL
587	51329	51343	40-10-205-029	RASKOB ST	25-40-10-205-029	4010205029	029	Lot	400-RESIDENTIAL VACANT
588	51330	51344	40-03-484-005	3427 BARTH ST	25-40-03-484-005	4003484005	005	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
547	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3510	MACKIN RD	FLINT	48504
548	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3313	WOLCOTT ST	FLINT	48504
549	Residential	0.22000000	0.22	FLINT SCHOOLS	25010		3501	MACKIN RD	FLINT	48504
550	Residential	0.20999999	0.21	FLINT SCHOOLS	25010		1339	SAN JUAN DR	FLINT	48504
551	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3441	BARTH ST	FLINT	48504
552	Commercial	0.33000001	0.33	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
553	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080			WALTON ST	FLINT	48504
554	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		1417	ELDORADO DR	FLINT	48504
555	Commercial	5.88000011	5.88	FLINT SCHOOLS	25010	N		STEVENSON ST	FLINT	48504
556	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3215	RASKOB ST	FLINT	48504
557	Exempt	1.33000004	1.33	CARMAN-AINSWORTH SCHOOLS	25080			WALTON AVE	FLINT	48504
558	Residential	0.17000000	0.17	FLINT SCHOOLS	25010			SLOAN ST	FLINT	48504
559	Residential	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080		3152	STRATFORD ST	FLINT	48504
560	Residential	0.47999999	0.48	CARMAN-AINSWORTH SCHOOLS	25080		1336	MAXSON AVE	FLINT	48504
561	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3506	MACKIN RD	FLINT	48504
562	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3155	SLOAN ST	FLINT	48504
563	Residential	0.14000000	0.14	CARMAN-AINSWORTH SCHOOLS	25080		3145	STRATFORD ST	FLINT	48504
564	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		3149	WALTON ST	FLINT	48504
565	Residential	0.18000001	0.18	FLINT SCHOOLS	25010			RASKOB ST	FLINT	48504
566	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3307	WOLCOTT ST	FLINT	48504
567	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1410	ELDORADO DR	FLINT	48504
568	Residential	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080		3131	DEVONSHIRE ST	FLINT	48504
569	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3446	BARTH ST	FLINT	48504
570	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		1348	MAXSON AVE	FLINT	48504
571	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		3312	WOLCOTT ST	FLINT	48504
572	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3429	BARTH ST	FLINT	48504
573	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		3148	WALTON ST	FLINT	48504
574	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		1345	SAN JUAN DR	FLINT	48504
575	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3151	SLOAN ST	FLINT	48504
576	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3430	MACKIN RD	FLINT	48504
577	Residential	0.20999999	0.21	FLINT SCHOOLS	25010		1421	ELDORADO DR	FLINT	48504
578	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3421	MACKIN RD	FLINT	48504
579	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3156	SLOAN ST	FLINT	48504
580	Commercial	0.31999999	0.32	FLINT SCHOOLS	25010		3142	FLUSHING RD	FLINT	48504
581	Residential	0.14000000	0.14	FLINT SCHOOLS	25010			RASKOB ST	FLINT	48504
582	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080			STRATFORD ST	FLINT	48504
583	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3440	BARTH ST	FLINT	48504
584	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3147	SLOAN ST	FLINT	48504
585	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3301	WOLCOTT ST	FLINT	48504
586	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3134	DEVONSHIRE ST	FLINT	48504
587	Residential	0.18000001	0.18	FLINT SCHOOLS	25010			RASKOB ST	FLINT	48504
588	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3427	BARTH ST	FLINT	48504

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	T	U	V	W	X	Y
547	OVERTON, JACQUETTA L	3510 MACKIN RD	FLINT	MI	48504	OVERTON, JACQUETTA L
548	GATHING, E & BLACK, K & WF C	3313 WOLCOTT ST	FLINT	MI	48504	GATHING, E & BLACK, K & WF C
549	CAMPBELL, ALICE & JENNIFER	3501 MACKIN RD	FLINT	MI	48504	CAMPBELL, ALICE & JENNIFER
550	MAYES, LLOYD JR & PAMELA	1339 SAN JUAN DR	FLINT	MI	48504	MAYES, LLOYD JR & PAMELA
551	GRACE, FRANK & MARY	4344 CAYUGA TR	FLINT	MI	48532	GRACE, FRANK & MARY
552	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
553	MCBEAN, DONNA E	3148 WALTON ST	FLINT	MI	48504	
554	JONES, MARY	1417 ELDORADO DR	FLINT	MI	48504	JONES, MARY
555	CITY OF FLINT	N STEVENSON ST	FLINT	MI	48504	CITY OF FLINT
556	HAMILTON, EVA E	3215 RASKOB ST	FLINT	MI	48504	HAMILTON, EVA E
557	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST, 2ND FLR	FLINT	MI	48502	
558	MORRIS, KAREN A	3193 N LINDEN RD	FLINT	MI	48504	MORRIS, KAREN A
559	BRADY, JOETTA L	3152 STRATFORD ST	FLINT	MI	48504	
560	FANNIE MAE	14221 DALLAS PKWY STE 100	DALLAS	TX	75254	
561	POOLE, ROBERT & BETTY	3506 MACKIN RD	FLINT	MI	48504	POOLE, ROBERT & BETTY
562	STANDOKES, ERNEST	2706 CLEMENT ST	FLINT	MI	48504	STANDOKES, ERNEST
563	BAILEY, WAYNE & SARA	3145 STRATFORD ST	FLINT	MI	48504	
564	RUSHING, RAY	5475 WEBSTER RD	FLINT	MI	48504	
565	AGGY BUILDERS INC	7721 DEERHILL DR	CLARKSTON	MI	48346	AGGY BUILDERS INC
566	SYKES, CARRIE A	3307 WOLCOTT ST	FLINT	MI	48504	SYKES, CARRIE A
567	FED HOME LOAN MTG CORP	31440 NORTHWESTERN HWY ST	FARMINGTON	MI	48334-5422	FED HOME LOAN MTG CORP
568	ADKISSON, JERRY	3131 DEVONSHIRE ST	FLINT	MI	48504	
569	DZ PROPERTY INVESTMENTS, LLC	G-4084 CORUNNA RD STE A	FLINT	MI	48532	DZ PROPERTY INVESTMENTS, LLC
570	HANNERS, DANIEL F	1348 MAXSON AVE	FLINT	MI	48504	
571	DELOACH, CAROLYN ET AL	3312 WOLCOTT ST	FLINT	MI	48504	DELOACH, CAROLYN ET AL
572	WASHINGTON, MERTHREE	5859 HALF MOON LN	GALLOWAY	OH	43119	WASHINGTON, MERTHREE
573	MCBEAN, ROY W & DONNA E	3148 WALTON ST	FLINT	MI	48504	
574	DABNEY, LASHANDA S	1345 SAN JUAN DR	FLINT	MI	48504	DABNEY, LASHANDA S
575	BURTON, PATRICIA L	3151 SLOAN ST	FLINT	MI	48504	BURTON, PATRICIA L
576	WELLS FARGO BANK, NA	3476 STATEVIEW BLVD	FORT MILL	SC	29715-7200	WELLS FARGO BANK, NA
577	PICKENS, PATRICIA	1421 ELDORADO DR	FLINT	MI	48504	PICKENS, PATRICIA
578	JOHNSON, DARLENE & LEILIA	3421 MACKIN RD	FLINT	MI	48504	JOHNSON, DARLENE & LEILIA
579	SCOTT, BLAKE	3249 PROSPECT ST	FLINT	MI	48504	SCOTT, BLAKE
580	LAKES, JANARD	3142 FLUSHING RD	FLINT	MI	48504	LAKES, JANARD
581	AGGY BUILDERS INC	7721 DEERHILL DR	CLARKSTON	MI	48346	AGGY BUILDERS INC
582	RODGERS, DENNIS E & TERESA R	3129 STRATFORD	FLINT	MI	48504	
583	LEWIS, CAROLYN	3440 BARTH ST	FLINT	MI	48504	LEWIS, CAROLYN
584	SANDUSKY, WALTER	4072 CRYSTAL CREEK	LAPEER	MI	48446	SANDUSKY, WALTER
585	URQUHART, ROBERT ET AL	3301 WOLCOTT ST	FLINT	MI	48504	URQUHART, ROBERT ET AL
586	DELLINGER, RICHARD A	3134 DEVONSHIRE ST	FLINT	MI	48504	
587	AGGY BUILDERS INC	7721 DEERHILL DR	CLARKSTON	MI	48346	AGGY BUILDERS INC
588	SMITH, RASHAWNDA	3427 BARTH ST	FLINT	MI	48504	SMITH, RASHAWNDA

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
547	3510 MACKIN RD	FLINT	MI	48504	100	No	14600	14833	14600	13291523.32100000
548	3313 WOLCOTT ST	FLINT	MI	48504	100	No	20200	20523	20200	13291525.08430000
549	3501 MACKIN RD	FLINT	MI	48504	100	No	20300	20624	20300	13291545.33900000
550	1339 SAN JUAN DR	FLINT	MI	48504	100	No	19400	19710	19400	13291548.84170000
551	4344 CAYUGA TR	FLINT	MI	48532	0	No	9500	9652	9500	13291555.00510000
552	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13291560.61690000
553					100	No	1500	1520	1500	13291561.24780000
554	1417 ELDORADO DR	FLINT	MI	48504	100	No	16700	16967	16700	13291565.39980000
555	N STEVENSON ST	FLINT	MI	48504	0	Yes	0	0	0	13291570.08480000
556	3215 RASKOB ST	FLINT	MI	48504	100	No	17800	18084	17800	13291570.37820000
557					0	Yes	0	0	0	13291570.64600000
558	3193 N LINDEN RD	FLINT	MI	48504	0	No	2900	2350	2900	13291579.05900000
559					100	No	15900	15840	15900	13291580.21900000
560					0	No	37400	37080	37400	13291580.34450000
561	3506 MACKIN RD	FLINT	MI	48504	100	No	13400	13614	13400	13291580.91260000
562	2706 CLEMENT ST	FLINT	MI	48504	0	No	12200	12395	12200	13291583.19450000
563					100	No	20100	19910	20100	13291585.41820000
564					0	No	16200	16050	16200	13291589.17580000
565	7721 DEERHILL DR	CLARKSTON	MI	48346	0	No	2700	2350	2700	13291593.63790000
566	3307 WOLCOTT ST	FLINT	MI	48504	100	No	20200	20523	20200	13291595.47050000
567	31440 NORTHWESTERN HWY ST	FARMINGTON	MI	48334-5422	100	No	22800	23164	22800	13291596.28110000
568					100	No	15300	15130	15300	13291599.29760000
569	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	10800	10972	10800	13291604.87670000
570					100	No	23700	23460	23700	13291606.53270000
571	3312 WOLCOTT ST	FLINT	MI	48504	100	No	21200	21539	21200	13291606.57050000
572	5859 HALF MOON LN	GALLOWAY	OH	43119	0	No	15300	15544	15300	13291611.72950000
573					100	No	20000	19810	20000	13291612.91080000
574	1345 SAN JUAN DR	FLINT	MI	48504	100	No	17200	17475	17200	13291618.44050000
575	3151 SLOAN ST	FLINT	MI	48504	100	No	13400	13614	13400	13291620.89540000
576	3476 STATEVIEW BLVD	FORT MILL	SC	29715-7200	0	No	12500	12700	12500	13291625.49310000
577	1421 ELDORADO DR	FLINT	MI	48504	100	No	17000	17272	17000	13291626.86800000
578	3421 MACKIN RD	FLINT	MI	48504	100	No	17100	17373	17100	13291629.56810000
579	3249 PROSPECT ST	FLINT	MI	48504	0	No	10500	10668	10500	13291633.80400000
580	3142 FLUSHING RD	FLINT	MI	48504	0	No	52400	52400	52400	13291634.76750000
581	7721 DEERHILL DR	CLARKSTON	MI	48346	0	No	2700	2350	2700	13291645.14520000
582					100	No	3100	3140	3100	13291657.24720000
583	3440 BARTH ST	FLINT	MI	48504	100	No	10000	10160	10000	13291657.32280000
584	4072 CRYSTAL CREEK	LAPEER	MI	48446	0	No	10900	11074	10900	13291657.44520000
585	3301 WOLCOTT ST	FLINT	MI	48504	100	No	18100	18389	18100	13291658.03610000
586					100	No	15800	15640	15800	13291669.97490000
587	7721 DEERHILL DR	CLARKSTON	MI	48346	0	No	2800	2350	2800	13291674.02590000
588	3427 BARTH ST	FLINT	MI	48504	0	No	15400	15646	15400	13291674.04820000

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	AJ	AK	AL	AM	AN	AO	AP
547	559095.69638100	366.78537410	7811.98583984000	366.78533548600			
548	558346.98063700	370.47985537	8459.44140625000	370.47984843300			
549	558903.21056200	395.77443572	9785.49511719000	395.77437397000			
550	558225.28083300	390.74081677	9063.49267578000	390.74085775200			
551	559201.92473800	291.05232364	4285.54394531000	291.05231165700			
552	556912.48919500	517.45304129	14275.42675780000	517.45300889200			
553	555646.19944300	278.38581454	4064.65576172000	278.38592692500			
554	558721.27547900	361.97447538	7644.43164063000	361.97456123500			
555	557819.17876900	2191.33172588	256228.78320300000	2191.33165286000			
556	557429.12735800	351.82063566	7375.18359375000	351.82061920200			
557	555357.37071400	1259.99711810	57930.00000000000	1259.99711724000			
558	557340.87461100	344.54984191	7236.94628906000	344.54987670800			
559	555916.34043000	435.95520072	11810.54980470000	435.95529192700			
560	556220.22828600	595.37366258	21049.54199220000	595.37366236200			
561	559072.78874900	345.36221301	6572.91162109000	345.36213406100			
562	557163.26660200	288.87908623	4355.26855469000	288.87918061200			
563	555741.38265100	323.24712824	6261.48095703000	323.24709321900			
564	555466.78806300	454.06300842	12510.40234380000	454.06297059000			
565	557587.83849800	358.47323737	7727.69189453000	358.47319567500			
566	558317.17550800	342.60819364	7070.51318359000	342.60806485600			
567	558573.19022800	368.91349710	8108.52539063000	368.91351340500			
568	556016.90818300	398.51517795	9914.74218750000	398.51517371300			
569	559357.03595400	336.83022531	6349.32031250000	336.83022065700			
570	556343.98909600	394.79432591	9753.49218750000	394.79431420200			
571	558490.49067400	429.59935260	10831.58593750000	429.59930590200			
572	559179.14440200	371.54389656	8492.13378906000	371.54388873500			
573	555626.37899800	333.87763891	6761.63574219000	333.87764886500			
574	558198.75519200	337.69239135	6708.81201172000	337.69245630000			
575	557147.34869000	281.16404618	3959.24707031000	281.16406891600			
576	559054.22505900	311.85437387	4631.88134766000	311.85440365500			
577	558755.32158100	386.79640272	9046.46337891000	386.79644976600			
578	558870.29613500	364.62402050	8470.01367188000	364.62407938000			
579	557316.12830300	310.97810734	5113.24658203000	310.97824718300			
580	556883.59013600	513.06113176	14061.65820310000	513.06112649700			
581	557430.65583000	324.84349450	6140.74658203000	324.84337167200			
582	555714.19827100	371.77856100	8657.58398438000	371.77848482600			
583	559338.92831500	318.18506245	5515.79394531000	318.18503257100			
584	557132.42366900	283.36438970	4066.81103516000	283.36442070300			
585	558292.70222800	332.51624595	6579.33496094000	332.51617062200			
586	556176.04265400	337.52550553	5553.54052734000	337.52540778800			
587	557586.31899800	362.26859231	7735.96044922000	362.26858717600			
588	559153.48895300	315.87721178	5591.74755859000	315.87727315500			

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	A	B	C	D	E	F	G	H	I
589	51331	51345	07-10-527-061	3144 STRATFORD ST	25-07-10-527-061	0710527061	163/4	Lot	401-RESIDENTIAL
590	51332	51346	40-03-484-024	3426 MACKIN RD	25-40-03-484-024	4003484024	024	Lot	401-RESIDENTIAL
591	51334	51348	07-10-527-092	3140 WALTON ST	25-07-10-527-092	0710527092	216	Lot	401-RESIDENTIAL
592	51335	51349	40-10-278-021	3152 SLOAN ST	25-40-10-278-021	4010278021	021	Lot	401-RESIDENTIAL
593	51336	51350	07-10-527-046	3125 DEVONSHIRE ST	25-07-10-527-046	0710527046	133	Lot	401-RESIDENTIAL
594	51337	51351	07-10-576-120	NORTH SHORE DR	25-07-10-576-120	0710576120	450N	Lot	400-RESIDENTIAL VACANT
595	51343	51357	07-10-527-007	3145 FLUSHING RD	25-07-10-527-007	0710527007	21-4/53-5	Lot	201-COMMERCIAL IMPROVED
596	51346	51360	40-10-227-022	1422 ELDORADO DR	25-40-10-227-022	4010227022	022	Lot	401-RESIDENTIAL
597	51351	51365	40-03-482-001	3437 CLEMENT ST	25-40-03-482-001	4003482001	001	Lot	401-RESIDENTIAL
598	51374	51388	40-10-280-025	FLUSHING RD	25-40-10-280-025	4010280025	025	Lot	305-IND UTILITY VACANT
599	51378	51392	07-10-527-020	3133 HATHERLY AVE	25-07-10-527-020	0710527020	83/4	Lot	401-RESIDENTIAL
600	51384	51398	40-10-280-005	3143 SLOAN ST	25-40-10-280-005	4010280005	005	Lot	401-RESIDENTIAL
601	51386	51400	40-10-231-039	3238 N STEVENSON ST	25-40-10-231-039	4010231039	039	Lot	401-RESIDENTIAL
602	51387	51401	40-10-227-028	3256 PROSPECT ST	25-40-10-227-028	4010227028	028	Lot	401-RESIDENTIAL
603	51391	51405	40-10-278-006	3151 RASKOB ST	25-40-10-278-006	4010278006	006	Lot	401-RESIDENTIAL
604	51408	51422	40-10-201-006	3415 MACKIN RD	25-40-10-201-006	4010201006	006	Lot	401-RESIDENTIAL
605	51414	51428	40-10-201-008	1425 ELDORADO DR	25-40-10-201-008	4010201008	008	Lot	401-RESIDENTIAL
606	51417	51431	40-03-482-009	3436 BARTH ST	25-40-03-482-009	4003482009	009	Lot	401-RESIDENTIAL
607	51442	51456	07-10-527-035	3130 DEVONSHIRE ST	25-07-10-527-035	0710527035	112	Lot	401-RESIDENTIAL
608	51444	51458	07-10-527-097	3139 WALTON ST	25-07-10-527-097	0710527097	223-5	Lot	401-RESIDENTIAL
609	51450	51464	40-10-278-022	3148 SLOAN ST	25-40-10-278-022	4010278022	022	Lot	401-RESIDENTIAL
610	51466	51480	40-03-484-006	3423 BARTH ST	25-40-03-484-006	4003484006	006	Lot	401-RESIDENTIAL
611	51489	51503	40-10-280-027	FLUSHING RD	25-40-10-280-027	4010280027	027	Lot	200-COMMERCIAL VACANT
612	51495	51509	40-10-280-038	3139 SLOAN ST	25-40-10-280-038	4010280038	038	Lot	401-RESIDENTIAL
613	51496	51510	40-10-231-001	3245 WOLCOTT ST	25-40-10-231-001	4010231001	001	Lot	401-RESIDENTIAL
614	51502	51516	40-03-484-023	3418 MACKIN RD	25-40-03-484-023	4003484023	023	Lot	401-RESIDENTIAL
615	51514	51528	07-10-527-093	3134 WALTON ST	25-07-10-527-093	0710527093	217	Lot	401-RESIDENTIAL
616	51521	51535	07-10-527-071	3129 STRATFORD ST	25-07-10-527-071	0710527071	177/8	Lot	401-RESIDENTIAL
617	51526	51540	07-10-576-119	NORTH SHORE DR	25-07-10-576-119	0710576119	450S	Lot	400-RESIDENTIAL VACANT
618	51533	51547	07-10-527-062	3134 STRATFORD ST	25-07-10-527-062	0710527062	165	Lot	401-RESIDENTIAL
619	51540	51554	40-10-227-020	1426 ELDORADO DR	25-40-10-227-020	4010227020	020	Lot	401-RESIDENTIAL
620	51541	51555	40-10-278-007	3147 RASKOB ST	25-40-10-278-007	4010278007	007	Lot	401-RESIDENTIAL
621	51544	51558	07-10-527-045	3117 DEVONSHIRE ST	25-07-10-527-045	0710527045	131/2	Lot	401-RESIDENTIAL
622	51547	51561	40-03-482-002	3429 CLEMENT ST	25-40-03-482-002	4003482002	002	Lot	401-RESIDENTIAL
623	51554	51568	40-10-278-023	3144 SLOAN ST	25-40-10-278-023	4010278023	023	Lot	401-RESIDENTIAL
624	51556	51570	07-10-527-006	3135 FLUSHING RD	25-07-10-527-006	0710527006	17-20/56	Lot	201-COMMERCIAL IMPROVED
625	51557	51571	40-03-482-019	3430 BARTH ST	25-40-03-482-019	4003482019	019	Lot	401-RESIDENTIAL
626	51559	51573	07-10-527-036	3124 DEVONSHIRE ST	25-07-10-527-036	0710527036	113	Lot	401-RESIDENTIAL
627	51560	51574	07-10-576-089	3136 NORTH SHORE DR	25-07-10-576-089	0710576089	293	Lot	401-RESIDENTIAL
628	51575	51589	40-10-231-020	3230 N STEVENSON ST	25-40-10-231-020	4010231020	020	Lot	401-RESIDENTIAL
629	51590	51604	40-03-484-007	3419 BARTH ST	25-40-03-484-007	4003484007	007	Lot	401-RESIDENTIAL
630	51591	51605	40-10-227-029	3248 PROSPECT ST	25-40-10-227-029	4010227029	029	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
589	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3144	STRATFORD ST	FLINT	48504
590	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3426	MACKIN RD	FLINT	48504
591	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3140	WALTON ST	FLINT	48504
592	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3152	SLOAN ST	FLINT	48504
593	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3125	DEVONSHIRE ST	FLINT	48504
594	Residential	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080			NORTH SHORE DR	FLINT	48504
595	Commercial	0.49000001	0.49	CARMAN-AINSWORTH SCHOOLS	25080		3145	FLUSHING RD	FLINT	48504
596	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		1422	ELDORADO DR	FLINT	48504
597	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3437	CLEMENT ST	FLINT	48504
598	Industrial	0.17000000	0.17	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
599	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080		3133	HATHERLY AVE	FLINT	48504
600	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3143	SLOAN ST	FLINT	48504
601	Residential	0.19000000	0.19	FLINT SCHOOLS	25010	N	3238	STEVENSON ST	FLINT	48504
602	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		3256	PROSPECT ST	FLINT	48504
603	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3151	RASKOB ST	FLINT	48504
604	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3415	MACKIN RD	FLINT	48504
605	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1425	ELDORADO DR	FLINT	48504
606	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3436	BARTH ST	FLINT	48504
607	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3130	DEVONSHIRE ST	FLINT	48504
608	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		3139	WALTON ST	FLINT	48504
609	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3148	SLOAN ST	FLINT	48504
610	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3423	BARTH ST	FLINT	48504
611	Commercial	0.16000000	0.16	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
612	Residential	0.34000000	0.34	FLINT SCHOOLS	25010		3139	SLOAN ST	FLINT	48504
613	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3245	WOLCOTT ST	FLINT	48504
614	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3418	MACKIN RD	FLINT	48504
615	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3134	WALTON ST	FLINT	48504
616	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3129	STRATFORD ST	FLINT	48504
617	Residential	0.80000001	0.8	CARMAN-AINSWORTH SCHOOLS	25080			NORTH SHORE DR	FLINT	48504
618	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		3134	STRATFORD ST	FLINT	48504
619	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		1426	ELDORADO DR	FLINT	48504
620	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3147	RASKOB ST	FLINT	48504
621	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3117	DEVONSHIRE ST	FLINT	48504
622	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3429	CLEMENT ST	FLINT	48504
623	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3144	SLOAN ST	FLINT	48504
624	Commercial	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080		3135	FLUSHING RD	FLINT	48504
625	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3430	BARTH ST	FLINT	48504
626	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3124	DEVONSHIRE ST	FLINT	48504
627	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3136	NORTH SHORE DR	FLINT	48504
628	Residential	0.16000000	0.16	FLINT SCHOOLS	25010	N	3230	STEVENSON ST	FLINT	48504
629	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3419	BARTH ST	FLINT	48504
630	Residential	0.23999999	0.24	FLINT SCHOOLS	25010		3248	PROSPECT ST	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
589	STONE, PHYLLIS A	3144 STRATFORD ST	FLINT	MI	48504	
590	GORDON, CLIFTON TRUST	3426 MACKIN RD	FLINT	MI	48504	GORDON, CLIFTON TRUST
591	BERGER, ONDA C	3140 WALTON ST	FLINT	MI	48504	MH REO VENTURE LLC
592	NEUROHR, MICHAEL & JODEEN TRUST	3209 DUFFIELD RD	FLUSHING	MI	48433	NEUROHR, MICHAEL & JODEEN TRUST
593	PHILLIPS, WILLIAM J	3125 DEVONSHIRE ST	FLINT	MI	48504	PHILLIPS, JANET R
594	NIKHIL-DEVEN PROPERTIES LLC	1170 CHARTER DR, SUITE F	FLINT	MI	48532	
595	MICHAEL, ANTHONY G & CAROL A	3145 FLUSHING RD	FLINT	MI	48504	
596	GREEN, VICTOR & WF MAE	1422 ELDORADO DR	FLINT	MI	48504	GREEN, VICTOR & WF MAE
597	JOHNSON, BARBARA	3437 CLEMENT ST	FLINT	MI	48504	JOHNSON, BARBARA
598	CONSUMERS POWER CO	ONE ENERGY PLAZA	JACKSON	MI	49201	CONSUMERS POWER CO
599	STOKOSZYNSKI, MICHAEL	3133 HATHERLY AVE	FLINT	MI	48504	
600	ROBERTSON, ANGELEE	3143 SLOAN ST	FLINT	MI	48504	ROBERTSON, ANGELEE
601	PHH MORTGAGE CORP	2001 BISHOPS GATE BLVD	MOUNT LAUREL	NJ	08054	PHH MORTGAGE CORP
602	CHANDLER, AVERY & BARBARA	3256 PROSPECT ST	FLINT	MI	48504	CHANDLER, AVERY & BARBARA
603	BOHANNON, NAOMI & MIGUEL, HUBERT	1814 LYNBROOK LN	FLINT	MI	48507	BOHANNON, NAOMI & MIGUEL, HUBERT
604	OLIVO, SHEILAH	3415 MACKIN RD	FLINT	MI	48504	OLIVO, SHEILAH
605	BARNETT, RONALD JR & WF ALYAA	1425 ELDORADO DR	FLINT	MI	48504	BARNETT, RONALD JR & WF ALYAA
606	FLINT ONE, LLC	1381 WARNER AVE STE C	TUSTIN	CA	92780	FLINT ONE, LLC
607	GARNER, JAMICKA L	3130 DEVONSHIRE ST	FLINT	MI	48504	
608	NADERHOFF, TERRY M	3139 WALTON AVE	FLINT	MI	48504	
609	NEUROHR, MICHAEL & JODEEN TRUST	3209 DUFFIELD RD	FLUSHING	MI	48433	NEUROHR, MICHAEL & JODEEN TRUST
610	PRATT, ALMA	3423 BARTH ST	FLINT	MI	48504	PRATT, ALMA
611	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
612	BYRD, MATTHEW	3139 SLOAN ST	FLINT	MI	48504	BYRD, MATTHEW
613	GOLDBERG, THEODORE & WF SYBIL	222 E DARTMOUTH	FLINT	MI	48505	GOLDBERG, THEODORE & WF SYBIL
614	ISOM, TERRY S	3418 MACKIN RD	FLINT	MI	48504	ISOM, TERRY S
615	SCHULZE, CHRISTINA	3134 WALTON ST	FLINT	MI	48504	BURNASH, CHARLES D & SPRING M
616	RODGERS, DENNIS E & TERESA R	3129 STRATFORD ST	FLINT	MI	48504	
617	NIKHIL-DEVEN PROPERTIES LLC	1170 CHARTER DR, SUITE F	FLINT	MI	48532	
618	JURK, NORMA J TR	3134 STRATFORD ST	FLINT	MI	48504	
619	NFH CAPITAL PARTNERS I, LLC	601 W FORT ST STE 440	DETROIT	MI	48266	NFH CAPITAL PARTNERS I, LLC
620	SCHLEE, RYAN	G-4084 CORUNNA RD	FLINT	MI	48532	SCHLEE, RYAN
621	TRIPLETT, NADIA	3117 DEVONSHIRE ST	FLINT	MI	48504	
622	BOUNTIFUL PROPERTIES, LLC	6185 CALKINS RD	FLINT	MI	48532	BOUNTIFUL PROPERTIES, LLC
623	SHIELDS, ROBERT & WF PATRICIA	3144 SLOAN ST	FLINT	MI	48504	SHIELDS, ROBERT & WF PATRICIA
624	CHAMBERS, SHARON	2233 S ELMS RD	SWARTZ CREEK	MI	48473	
625	JCM UNIVERSAL INC	206 W PIERSON RD	FLINT	MI	48505	JCM UNIVERSAL INC
626	PATTEE, WILLIAM D & MARJORIE C	3154 AMELIA AVE	FLUSHING	MI	48433	
627	ABRAHAM, BRIAN	1468 CLAIRWOOD DR	BURTON	MI	48509	
628	CLIFTON, CHARLES & WF C	3230 N STEVENSON ST	FLINT	MI	48504	CLIFTON, CHARLES & WF C
629	FOUSE, JOHNNY & IRENE	3419 BARTH ST	FLINT	MI	48504	FOUSE, JOHNNY & IRENE
630	POUNDS, JANIE M	3248 PROSPECT ST	FLINT	MI	48504	POUNDS, JANIE M

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
589					100	No	22800	22550	22800	13291674.06880000
590	3426 MACKIN RD	FLINT	MI	48504	100	No	11500	11684	11500	13291674.23450000
591	1320 W HILL RD	FLINT	MI	48507	100	No	18500	18280	18500	13291675.79670000
592	3209 DUFFIELD RD	FLUSHING	MI	48433	0	No	8400	8534	8400	13291676.55000000
593	3125 DEVONSHIRE ST	FLINT	MI	48504	100	No	12400	12290	12400	13291676.80540000
594					0	No	7200	7310	7200	13291677.09300000
595					0	No	51100	52730	51100	13291679.47470000
596	1422 ELDORADO DR	FLINT	MI	48504	100	No	22000	22352	22000	13291680.53910000
597	3437 CLEMENT ST	FLINT	MI	48504	100	No	16200	16459	16200	13291682.16780000
598	ONE ENERGY PLAZA	JACKSON	MI	49201	0	No	9500	7735	9500	13291690.60680000
599					100	No	18300	18080	18300	13291692.35400000
600	3143 SLOAN ST	FLINT	MI	48504	100	No	12200	12395	12200	13291694.44600000
601	2001 BISHOPS GATE BLVD	MOUNT LAUREL	NJ	08054	0	No	17500	17780	17500	13291694.66860000
602	3256 PROSPECT ST	FLINT	MI	48504	100	No	21500	21844	21500	13291695.89370000
603	1814 LYNBROOK LN	FLINT	MI	48507	0	No	10500	10668	10500	13291696.36530000
604	3415 MACKIN RD	FLINT	MI	48504	100	No	15200	15443	15200	13291702.77550000
605	1425 ELDORADO DR	FLINT	MI	48504	0	No	20600	20929	20600	13291703.21370000
606	1381 WARNER AVE STE C	TUSTIN	CA	92780	0	No	3500	3556	3500	13291704.95840000
607					0	No	12100	11980	12100	13291713.06200000
608					100	No	25100	24890	25100	13291713.33820000
609	3209 DUFFIELD RD	FLUSHING	MI	48433	0	No	8300	8432	8300	13291715.00040000
610	3423 BARTH ST	FLINT	MI	48504	100	No	9700	9855	9700	13291722.54990000
611	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13291728.06780000
612	3139 SLOAN ST	FLINT	MI	48504	100	No	10700	10871	10700	13291730.12520000
613	222 E DARTMOUTH	FLINT	MI	48505	0	No	31200	31699	31200	13291730.45430000
614	3418 MACKIN RD	FLINT	MI	48504	100	No	16500	16764	16500	13291732.91940000
615	2111 NERREDIA	FLINT	MI	48532	100	No	13700	13610	13700	13291738.06210000
616					100	No	15700	15640	15700	13291741.33520000
617					0	No	7200	7310	7200	13291742.02980000
618					100	No	16000	15840	16000	13291745.69360000
619	601 W FORT ST STE 440	DETROIT	MI	48266	0	No	21200	21539	21200	13291748.31710000
620	G-4084 CORUNNA RD	FLINT	MI	48532	0	No	8800	8940	8800	13291748.52330000
621					100	No	21800	21530	21800	13291749.39280000
622	6185 CALKINS RD	FLINT	MI	48532	0	No	11500	11684	11500	13291750.60420000
623	3144 SLOAN ST	FLINT	MI	48504	0	No	10000	10160	10000	13291753.27280000
624					0	No	27600	28340	27600	13291753.50320000
625	206 W PIERSON RD	FLINT	MI	48505	0	No	11500	11684	11500	13291753.61180000
626					0	No	13500	13300	13500	13291754.88930000
627					0	No	11400	11270	11400	13291754.93060000
628	3230 N STEVENSON ST	FLINT	MI	48504	100	No	17800	18084	17800	13291761.39770000
629	3419 BARTH ST	FLINT	MI	48504	100	No	13300	13512	13300	13291768.85740000
630	3248 PROSPECT ST	FLINT	MI	48504	100	No	21500	21844	21500	13291768.92700000

Container Specialties Inc
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	AJ	AK	AL	AM	AN	AO	AP
589	555880.03920600	377.68473270	8812.71093750000	377.68475736000			
590	559034.06016500	363.03515092	7602.28857422000	363.03516412000			
591	555602.72376500	330.04647714	6549.07519531000	330.04658735500			
592	557302.43081500	293.23381617	4292.81445313000	293.23382299600			
593	555987.00559800	330.01322189	6529.61767578000	330.01325063700			
594	555008.12761700	497.81021090	14663.93164060000	497.81018595700			
595	556552.83448900	672.78850272	21495.31396480000	672.78858204200			
596	558591.90781600	339.36140694	7146.04785156000	339.36139523600			
597	559441.90321500	382.47555352	8880.73779297000	382.47554557300			
598	556860.96272400	433.59581662	7210.07812500000	433.59584419400			
599	556298.29674500	418.37284291	10683.28173830000	418.37278206000			
600	557117.13465200	282.53511349	4059.62158203000	282.53517546500			
601	558166.22596900	365.35156693	8172.82666016000	365.35145141000			
602	558456.12435500	429.38289472	10750.26757810000	429.38298227100			
603	557404.19525100	316.15674947	5613.22509766000	316.15673127300			
604	558850.56793800	290.85955176	5133.64697266000	290.85957232800			
605	558767.55582600	376.10414686	8206.96191406000	376.10409857600			
606	559319.67819900	319.26240523	5579.33154297000	319.26247792700			
607	556160.28316400	341.65678677	5804.78710938000	341.65679521800			
608	555418.56373500	455.72345934	12602.01318360000	455.72347059800			
609	557286.60522300	297.85243100	4537.93798828000	297.85239837900			
610	559133.51602000	311.19928789	5348.29296875000	311.19937558200			
611	556846.25683200	428.63303695	6899.78271484000	428.63306834900			
612	557053.71656100	557.19110029	14727.75048830000	557.19114071000			
613	558262.46274400	343.81782462	7177.89062500000	343.81784226000			
614	559010.64813900	352.83536271	7032.38525391000	352.83541830800			
615	555579.31302900	331.06144344	6606.13867188000	331.06136422200			
616	555682.48149800	372.51235721	8704.75830078000	372.51243240800			
617	554837.42930700	759.26635812	34826.54248050000	759.26639803200			
618	555852.91289800	340.00818232	6920.37841797000	340.00819565900			
619	558617.77093800	362.32228445	7977.33984375000	362.32222861200			
620	557385.34094700	315.88485447	5687.50585938000	315.88484794200			
621	555959.47524900	377.67156126	8914.74511719000	377.67153767100			
622	559416.14908100	334.54504528	6503.34960938000	334.54510279600			
623	557269.98995800	293.80387125	4322.43310547000	293.80380876900			
624	556543.01014300	609.94541315	13520.64550780000	609.94549425600			x
625	559299.06772700	323.68559408	5822.87841797000	323.68564616300			
626	556142.06607100	336.92940740	5512.68115234000	336.92937043000			
627	555189.55010000	314.11071728	5394.16406250000	314.11072496300			
628	558138.82779400	340.06396505	6863.84814453000	340.06395725600			
629	559114.44850900	306.96273044	5115.21972656000	306.96268598000			
630	558519.04574900	427.02119973	10309.00341800000	427.02125593400			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
631	51604	51618	07-10-527-019	3127 HATHERLY AVE	25-07-10-527-019	0710527019	81/2	Lot	401-RESIDENTIAL
632	51611	51625	40-10-201-007	1433 ELDORADO DR	25-40-10-201-007	4010201007	007	Lot	401-RESIDENTIAL
633	51614	51628	40-03-484-018	3412 MACKIN RD	25-40-03-484-018	4003484018	018	Lot	401-RESIDENTIAL
634	51625	51639	40-03-480-005	3436 CLEMENT ST	25-40-03-480-005	4003480005	005	Lot	401-RESIDENTIAL
635	51650	51664	40-10-278-024	3140 SLOAN ST	25-40-10-278-024	4010278024	024	Lot	401-RESIDENTIAL
636	51654	51668	40-10-231-040	3239 WOLCOTT ST	25-40-10-231-040	4010231040	040	Lot	401-RESIDENTIAL
637	51655	51669	40-10-278-008	3143 RASKOB ST	25-40-10-278-008	4010278008	008	Lot	401-RESIDENTIAL
638	51677	51691	07-10-527-094	3128 WALTON ST	25-07-10-527-094	0710527094	219	Lot	401-RESIDENTIAL
639	51680	51694	40-10-276-010	3150 RASKOB ST	25-40-10-276-010	4010276010	010	Lot	401-RESIDENTIAL
640	51685	51699	07-10-576-090	3114 CLARENDON ST	25-07-10-576-090	0710576090	294	Lot	401-RESIDENTIAL
641	51689	51703	07-10-527-096	WALTON AVE	25-07-10-527-096	0710527096	222	Lot	700-EXEMPT VACANT
642	51690	51704	07-10-527-070	3121 STRATFORD ST	25-07-10-527-070	0710527070	176	Lot	401-RESIDENTIAL
643	51694	51708	40-03-482-018	3420 BARTH ST	25-40-03-482-018	4003482018	018	Lot	401-RESIDENTIAL
644	51696	51710	07-10-527-037	DEVONSHIRE ST	25-07-10-527-037	0710527037	114	Lot	400-RESIDENTIAL VACANT
645	51702	51716	40-03-482-003	3425 CLEMENT ST	25-40-03-482-003	4003482003	003	Lot	401-RESIDENTIAL
646	51703	51717	07-10-527-063	3126 STRATFORD ST	25-07-10-527-063	0710527063	167	Lot	401-RESIDENTIAL
647	51717	51731	07-10-527-005	FLUSHING RD	25-07-10-527-005	0710527005	14-7/57/58	Lot	700-EXEMPT VACANT
648	51726	51740	40-03-484-008	3413 BARTH ST	25-40-03-484-008	4003484008	008	Lot	401-RESIDENTIAL
649	51733	51747	40-10-227-019	1430 ELDORADO DR	25-40-10-227-019	4010227019	019	Lot	401-RESIDENTIAL
650	51760	51774	40-10-280-040	3127 SLOAN ST	25-40-10-280-040	4010280040	040	Lot	401-RESIDENTIAL
651	51767	51781	40-10-278-025	3136 SLOAN ST	25-40-10-278-025	4010278025	025	Lot	401-RESIDENTIAL
652	51773	51787	40-10-231-021	3224 N STEVENSON ST	25-40-10-231-021	4010231021	021	Lot	401-RESIDENTIAL
653	51779	51793	40-10-278-009	3139 RASKOB ST	25-40-10-278-009	4010278009	009	Lot	401-RESIDENTIAL
654	51780	51794	07-10-527-044	3107 DEVONSHIRE ST	25-07-10-527-044	0710527044	129/30	Lot	401-RESIDENTIAL
655	51783	51797	40-03-484-020	3402 MACKIN RD	25-40-03-484-020	4003484020	020	Lot	401-RESIDENTIAL
656	51803	51817	07-10-527-018	3119 HATHERLY AVE	25-07-10-527-018	0710527018	80	Lot	401-RESIDENTIAL
657	51807	51821	40-10-229-001	3249 PROSPECT ST	25-40-10-229-001	4010229001	001	Lot	401-RESIDENTIAL
658	51811	51825	07-10-576-111	NORTH SHORE DR	25-07-10-576-111	0710576111	343/4	Lot	400-RESIDENTIAL VACANT
659	51813	51827	40-03-480-001	3433 CONCORD ST	25-40-03-480-001	4003480001	001	Lot	401-RESIDENTIAL
660	51819	51833	40-03-482-012	3416 BARTH ST	25-40-03-482-012	4003482012	012	Lot	401-RESIDENTIAL
661	51831	51845	40-10-231-004	3233 WOLCOTT ST	25-40-10-231-004	4010231004	004	Lot	401-RESIDENTIAL
662	51832	51846	40-03-484-019	1501 WABASH AVE	25-40-03-484-019	4003484019	019	Lot	401-RESIDENTIAL
663	51833	51847	40-10-227-030	3240 PROSPECT ST	25-40-10-227-030	4010227030	030	Lot	401-RESIDENTIAL
664	51845	51859	07-10-527-064	3120 STRATFORD ST	25-07-10-527-064	0710527064	168	Lot	401-RESIDENTIAL
665	51847	51861	40-03-480-006	3424 CLEMENT ST	25-40-03-480-006	4003480006	006	Lot	401-RESIDENTIAL
666	51851	51865	40-10-278-026	3132 SLOAN ST	25-40-10-278-026	4010278026	026	Lot	401-RESIDENTIAL
667	51852	51866	40-03-482-004	3421 CLEMENT ST	25-40-03-482-004	4003482004	004	Lot	401-RESIDENTIAL
668	51856	51870	40-10-276-012	3144 RASKOB ST	25-40-10-276-012	4010276012	012	Lot	401-RESIDENTIAL
669	51861	51875	40-10-278-010	3135 RASKOB ST	25-40-10-278-010	4010278010	010	Lot	401-RESIDENTIAL
670	51863	51877	07-10-527-069	3117 STRATFORD ST	25-07-10-527-069	0710527069	174/5	Lot	401-RESIDENTIAL
671	51866	51880	07-10-527-038	3112 DEVONSHIRE ST	25-07-10-527-038	0710527038	116	Lot	401-RESIDENTIAL
672	51874	51888	40-10-280-054	3102 FLUSHING RD	25-40-10-280-054	4010280054	054	Lot	201-COMMERCIAL IMPROVED

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
631	Residential	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080		3127	HATHERLY AVE	FLINT	48504
632	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1433	ELDORADO DR	FLINT	48504
633	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3412	MACKIN RD	FLINT	48504
634	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3436	CLEMENT ST	FLINT	48504
635	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3140	SLOAN ST	FLINT	48504
636	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3239	WOLCOTT ST	FLINT	48504
637	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3143	RASKOB ST	FLINT	48504
638	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3128	WALTON ST	FLINT	48504
639	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3150	RASKOB ST	FLINT	48504
640	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3114	CLARENDON ST	FLINT	48504
641	Exempt	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080			WALTON AVE	FLINT	48504
642	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3121	STRATFORD ST	FLINT	48504
643	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3420	BARTH ST	FLINT	48504
644	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080			DEVONSHIRE ST	FLINT	48504
645	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3425	CLEMENT ST	FLINT	48504
646	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3126	STRATFORD ST	FLINT	48504
647	Exempt	0.44999999	0.45	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
648	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3413	BARTH ST	FLINT	48504
649	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		1430	ELDORADO DR	FLINT	48504
650	Residential	0.49000001	0.49	FLINT SCHOOLS	25010		3127	SLOAN ST	FLINT	48504
651	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3136	SLOAN ST	FLINT	48504
652	Residential	0.19000000	0.19	FLINT SCHOOLS	25010	N	3224	STEVENSON ST	FLINT	48504
653	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3139	RASKOB ST	FLINT	48504
654	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3107	DEVONSHIRE ST	FLINT	48504
655	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3402	MACKIN RD	FLINT	48504
656	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3119	HATHERLY AVE	FLINT	48504
657	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3249	PROSPECT ST	FLINT	48504
658	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080			NORTH SHORE DR	FLINT	48504
659	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3433	CONCORD ST	FLINT	48504
660	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3416	BARTH ST	FLINT	48504
661	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3233	WOLCOTT ST	FLINT	48504
662	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		1501	WABASH AVE	FLINT	48504
663	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3240	PROSPECT ST	FLINT	48504
664	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3120	STRATFORD ST	FLINT	48504
665	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3424	CLEMENT ST	FLINT	48504
666	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3132	SLOAN ST	FLINT	48504
667	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3421	CLEMENT ST	FLINT	48504
668	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3144	RASKOB ST	FLINT	48504
669	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3135	RASKOB ST	FLINT	48504
670	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3117	STRATFORD ST	FLINT	48504
671	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3112	DEVONSHIRE ST	FLINT	48504
672	Commercial	1.05999994	1.06	FLINT SCHOOLS	25010		3102	FLUSHING RD	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
631	GERE, GERTRUDE ETAL	3127 HATHERLY AVE	FLINT	MI	48504	
632	LANGSTON, HUDIE & WF DELORES	1433 ELDORADO DR	FLINT	MI	48504	LANGSTON, HUDIE & WF DELORES
633	CRAWFORD, ANTHONY	3412 MACKIN RD	FLINT	MI	48504	CRAWFORD, ANTHONY
634	SCHAFER, FAITH J	3436 CLEMENT ST	FLINT	MI	48504	SCHAFER, FAITH J
635	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
636	COLLINS, DENARD & MARY	3239 WOLCOTT ST	FLINT	MI	48504	COLLINS, DENARD & MARY
637	ROSS, SHERRY	3143 RASKOB ST	FLINT	MI	48504	ROSS, SHERRY
638	POLAN, CARLAJEAN M	3128 WALTON ST	FLINT	MI	48504	
639	HUGHES, SAMUEL D	3150 RASKOB ST	FLINT	MI	48504	HUGHES, SAMUEL D
640	PRITCHARD, SCOTT	3114 CLARENDON ST	FLINT	MI	48504	
641	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST, 2ND FLR	FLINT	MI	48502	
642	ETHRIDGE, JAMES L & LIDA R & ETAL	3121 STRATFORD ST	FLINT	MI	48504	
643	KEYES, JEANNE	3420 BARTH ST	FLINT	MI	48504	KEYES, JEANNE
644	CAREY, DALE R & BARBARA S	3115 HATHERLY AVE	FLINT	MI	48504	
645	MILLER, JAMES H	3425 CLEMENT ST	FLINT	MI	48504	MILLER, JAMES H
646	STONE, PHYLLIS	3144 STRATFORD ST	FLINT	MI	48504	
647	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST, 2ND FLR	FLINT	MI	48502	
648	FOREMAN, JESSIE & ARLEGIA	3413 BARTH ST	FLINT	MI	48504	FOREMAN, JESSIE & ARLEGIA
649	NFH CAPITAL PARTNERS I, LLC	601 W FORT ST	DETROIT	MI	48226	NFH CAPITAL PARTNERS I, LLC
650	LARD-JOHNSON, B & LARD, K	3127 SLOAN ST	FLINT	MI	48504	LARD-JOHNSON, B & LARD, K
651	DORTHE J JANUARY, LLC	2512 MEADOWCROFT DR	BURTON	MI	48519	DORTHE J JANUARY, LLC
652	MINOR, ROBERT L & WF MARY E	1917 SHAMROCK LN	FLINT	MI	48504	MINOR, ROBERT L & WF MARY E
653	MACK, JAMES C SR	3139 RASKOB ST	FLINT	MI	48504	MACK, JAMES C SR
654	SOBHIE, MOHIB	3107 DEVONSHIRE ST	FLINT	MI	48504	
655	ROBERTS, JOHN III & EMMA TRUST	3402 MACKIN RD	FLINT	MI	48504	ROBERTS, JOHN III & EMMA TRUST
656	BOYEA, JASON	3119 HATHERLY AVE	FLINT	MI	48504	DESERT SUN HOLDINGS LLC
657	TAYLOR WILLIAMS, CAROLYN	3249 PROSPECT ST	FLINT	MI	48504	TAYLOR WILLIAMS, CAROLYN
658	SCANLON, JOSEPH F & CHRISTINE E	3101 CLARENDON ST	FLINT	MI	48504	
659	COSEY, EVERETT & YUXIA	3433 CONCORD ST	FLINT	MI	48504	COSEY, EVERETT & YUXIA
660	JUNCTURE ENTERPRISES, LLC	4499 DAVISON RD	BURTON	MI	48509	JUNCTURE ENTERPRISES, LLC
661	MASON, GREGORY	3233 WOLCOTT ST	FLINT	MI	48504	MASON, GREGORY
662	ROBINSON, MILDRED A	1501 WABASH AVE	FLINT	MI	48504	ROBINSON, MILDRED A
663	COX, EDITH J	3240 PROSPECT ST	FLINT	MI	48504	COX, EDITH J
664	ROGERS, JOSEPH A	3120 STRATFORD ST	FLINT	MI	48504	
665	BUTLER, ACY & WF CAROLYN	3424 CLEMENT ST	FLINT	MI	48504	BUTLER, ACY & WF CAROLYN
666	1104 HOUSES, LLC	521 W COURT ST	FLINT	MI	48504	1104 HOUSES, LLC
667	BROWN, WILLIE L	3421 CLEMENT ST	FLINT	MI	48504	BROWN, WILLIE L
668	NORRIS, ROSE	3144 RASKOB ST	FLINT	MI	48504	NORRIS, ROSE
669	1106 HOUSES, LLC	521 W COURT ST	FLINT	MI	48503	1106 HOUSES, LLC
670	FIERRO, KELLY J	3117 STRATFORD ST	FLINT	MI	48504	
671	D&S PROPERTIES OF FLINT, LLC	5289 O'CONNOR PASS	SWARTZ CREEK	MI	48473	
672	MANSOUR, JAY & JASON	5025 LATIMER ST	WEST BLOOMFIELD	MI	48324	MANSOUR, JAY & JASON

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
631					100	No	11000	10970	11000	13291775.47380000
632	1433 ELDORADO DR	FLINT	MI	48504	100	No	18700	18999	18700	13291778.04190000
633	3412 MACKIN RD	FLINT	MI	48504	100	No	12700	12903	12700	13291779.14640000
634	3436 CLEMENT ST	FLINT	MI	48504	100	No	18900	19202	18900	13291783.11770000
635	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13291791.34660000
636	3239 WOLCOTT ST	FLINT	MI	48504	100	No	17900	18186	17900	13291792.96430000
637	3143 RASKOB ST	FLINT	MI	48504	100	No	11200	11379	11200	13291793.08570000
638					100	No	9200	9140	9200	13291801.19410000
639	3150 RASKOB ST	FLINT	MI	48504	100	No	10200	10363	10200	13291801.49360000
640					0	No	11500	11370	11500	13291802.81540000
641					0	Yes	0	0	0	13291804.01990000
642					100	No	8100	8020	8100	13291804.13930000
643	3420 BARTH ST	FLINT	MI	48504	100	No	11700	11887	11700	13291804.83770000
644					0	No	2500	2540	2500	13291805.53250000
645	3425 CLEMENT ST	FLINT	MI	48504	100	No	16200	16459	16200	13291807.40890000
646					0	No	11900	11780	11900	13291807.72730000
647					0	Yes	0	0	0	13291811.94330000
648	3413 BARTH ST	FLINT	MI	48504	100	No	12700	12903	12700	13291815.58240000
649	601 W FORT ST	DETROIT	MI	48226	0	No	20400	20726	20400	13291816.85130000
650	3127 SLOAN ST	FLINT	MI	48504	100	No	12000	12192	12000	13291825.68880000
651	2512 MEADOWCROFT DR	BURTON	MI	48519	0	No	8600	8737	8600	13291827.39360000
652	1917 SHAMROCK LN	FLINT	MI	48504	0	No	18100	18389	18100	13291828.94440000
653	3139 RASKOB ST	FLINT	MI	48504	100	Yes	0	0	0	13291831.03530000
654					0	No	16400	16250	16400	13291833.13050000
655	3402 MACKIN RD	FLINT	MI	48504	100	No	12000	12192	12000	13291833.84450000
656	1320 W HILL RD	FLINT	MI	48507	100	No	13700	13510	13700	13291838.26270000
657	3249 PROSPECT ST	FLINT	MI	48504	100	No	28900	29362	28900	13291841.78440000
658					100	No	3200	3250	3200	13291843.39210000
659	3433 CONCORD ST	FLINT	MI	48504	100	No	12700	12903	12700	13291844.09030000
660	4499 DAVISON RD	BURTON	MI	48509	0	No	4700	4775	4700	13291849.32020000
661	3233 WOLCOTT ST	FLINT	MI	48504	100	No	20200	20523	20200	13291854.59970000
662	1501 WABASH AVE	FLINT	MI	48504	100	No	11700	11887	11700	13291855.35630000
663	3240 PROSPECT ST	FLINT	MI	48504	100	No	18700	18999	18700	13291855.80090000
664					100	No	9400	9340	9400	13291859.33170000
665	3424 CLEMENT ST	FLINT	MI	48504	100	No	17500	17780	17500	13291861.07050000
666	521 W COURT ST	FLINT	MI	48504	0	No	7800	7924	7800	13291862.85990000
667	3421 CLEMENT ST	FLINT	MI	48504	100	No	13700	13919	13700	13291862.92790000
668	3144 RASKOB ST	FLINT	MI	48504	100	No	12600	12801	12600	13291866.20270000
669	521 W COURT ST	FLINT	MI	48503	0	No	8500	8636	8500	13291867.18340000
670					100	No	10600	10560	10600	13291867.72370000
671					0	No	17400	17270	17400	13291868.38050000
672	5025 LATIMER ST	WEST BLOOMFIELD	MI	48324	0	No	123300	125272	123300	13291872.22830000

Container Specialties Inc
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	AJ	AK	AL	AM	AN	AO	AP
631	556265.32590200	416.66840689	10614.28320310000	416.66847871900			
632	558816.74114200	366.75102603	8291.17675781000	366.75096964400			
633	558991.70873400	308.95375786	4499.86914063000	308.95378895000			
634	559580.49369900	382.69793912	8873.25585938000	382.69792206400			
635	557254.59318600	295.27313460	4400.28027344000	295.27315753600			
636	558236.28382300	329.80834990	6461.03759766000	329.80825071300			
637	557367.04595700	285.93629374	4166.81396484000	285.93640049200			
638	555555.06855600	332.58555625	6685.59570313000	332.58551337700			
639	557539.68907300	371.08841010	8266.74267578000	371.08834119500			
640	555244.76597400	367.40760297	6458.11230469000	367.40758553000			
641	555385.06915200	311.17766242	5688.05517578000	311.17770069400			
642	555657.86369000	281.62091205	4298.67285156000	281.62087677000			
643	559278.01379800	329.07719786	6118.34472656000	329.07712316100			
644	556123.08741200	373.38763270	7820.68847656000	373.38765677100			
645	559392.55479700	334.97921843	6520.75878906000	334.97915126000			
646	555829.84153500	336.75774375	6732.79248047000	336.75771875100			
647	556499.49843700	652.68218528	19456.66259770000	652.68224506400			
648	559095.58103900	312.94031671	5425.19287109000	312.94030614800			
649	558644.09840900	355.67723921	7428.03857422000	355.67726102900			
650	557021.83982300	593.30290056	21235.72119140000	593.30281546800			
651	557239.13535000	286.40166314	3929.38427734000	286.40160530800			
652	558110.41422700	368.52588288	8354.53662109000	368.52592156500			
653	557350.62956900	287.83321335	4274.65576172000	287.83325530800			
654	555928.13987700	376.62034025	8818.59375000000	376.62037020300			
655	558936.66604200	322.90624074	5918.85498047000	322.90613414800			
656	556241.30417000	330.67707410	5445.35888672000	330.67702825400			
657	558381.91274500	372.35076675	8642.56298828000	372.35072736700			
658	555072.91260000	366.10583187	8811.16455078000	366.10595362600			
659	559669.51169100	364.79763002	7998.18017578000	364.79759567800			
660	559259.40412100	294.67398335	4270.04736328000	294.67395164100			
661	558210.84217900	340.55407632	6995.17089844000	340.55413551800			
662	558986.74121400	315.08807532	5525.74755859000	315.08807419800			
663	558549.57785300	360.58324899	8006.83642578000	360.58328650300			
664	555809.94888700	295.88427793	4629.74902344000	295.88435898800			
665	559550.88391100	378.58496259	8819.16357422000	378.58492381200			
666	557224.34447200	292.02483511	4231.12646484000	292.02495549100			
667	559369.34622200	329.71687525	6235.94824219000	329.71691920900			
668	557514.86370200	338.78920034	6641.11230469000	338.78914239900			
669	557335.28564200	276.98652077	3731.37402344000	276.98646434800			
670	555633.66122500	375.33336682	8810.06103516000	375.33335210800			
671	556098.74072400	386.93326985	8701.25390625000	386.93332122500			
672	556784.09203300	918.85065421	46051.21386720000	918.85060194900			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
673	51879	51893	07-10-527-095	3122 WALTON ST	25-07-10-527-095	0710527095	220/1	Lot	401-RESIDENTIAL
674	51882	51896	40-03-484-010	1513 WABASH AVE	25-40-03-484-010	4003484010	010	Lot	401-RESIDENTIAL
675	51885	51899	07-10-576-112	3116 NORTH SHORE DR	25-07-10-576-112	0710576112	345	Lot	700-EXEMPT VACANT
676	51888	51902	07-10-576-088	3113 WALTON ST	25-07-10-576-088	0710576088	291/2	Lot	401-RESIDENTIAL
677	51892	51906	40-10-276-026	3143 BERKLEY ST	25-40-10-276-026	4010276026	026	Lot	401-RESIDENTIAL
678	51893	51907	07-10-527-017	3115 HATHERLY AVE	25-07-10-527-017	0710527017	79	Lot	401-RESIDENTIAL
679	51906	51920	40-03-482-013	3412 BARTH ST	25-40-03-482-013	4003482013	013	Lot	401-RESIDENTIAL
680	51918	51932	40-10-227-017	1434 ELDORADO DR	25-40-10-227-017	4010227017	017	Lot	401-RESIDENTIAL
681	51925	51939	07-10-527-043	3103 DEVONSHIRE ST	25-07-10-527-043	0710527043	128	Lot	401-RESIDENTIAL
682	51932	51946	07-10-576-113	3112 NORTH SHORE DR	25-07-10-576-113	0710576113	346	Lot	401-RESIDENTIAL
683	51933	51947	40-03-484-009	3401 BARTH ST	25-40-03-484-009	4003484009	009	Lot	401-RESIDENTIAL
684	51937	51951	40-10-231-023	3216 N STEVENSON ST	25-40-10-231-023	4010231023	023	Lot	401-RESIDENTIAL
685	51941	51955	40-10-278-027	3128 SLOAN ST	25-40-10-278-027	4010278027	027	Lot	401-RESIDENTIAL
686	51948	51962	07-10-527-065	3116 STRATFORD ST	25-07-10-527-065	0710527065	169	Lot	401-RESIDENTIAL
687	51951	51965	40-10-278-011	3131 RASKOB ST	25-40-10-278-011	4010278011	011	Lot	401-RESIDENTIAL
688	51971	51985	40-03-480-002	3425 CONCORD ST	25-40-03-480-002	4003480002	002	Lot	401-RESIDENTIAL
689	51975	51989	07-10-576-091	CLARENDON ST	25-07-10-576-091	0710576091	295-8	Lot	400-RESIDENTIAL VACANT
690	51981	51995	07-10-527-004	3119 FLUSHING RD	25-07-10-527-004	0710527004	11-3/59-61	Lot	200-COMMERCIAL VACANT
691	51990	52004	40-10-231-006	3225 WOLCOTT ST	25-40-10-231-006	4010231006	006	Lot	401-RESIDENTIAL
692	51991	52005	40-03-482-005	3413 CLEMENT ST	25-40-03-482-005	4003482005	005	Lot	401-RESIDENTIAL
693	51993	52007	07-10-400-004	N BALLENGER HWY	25-07-10-400-004	0710400004	400-004	Tract	200-COMMERCIAL VACANT
694	51999	52013	07-10-527-016	3109 HATHERLY AVE	25-07-10-527-016	0710527016	78	Lot	700-EXEMPT VACANT
695	52000	52014	07-10-576-110	3101 CLARENDON ST	25-07-10-576-110	0710576110	342	Lot	401-RESIDENTIAL
696	52001	52015	40-10-276-013	3136 RASKOB ST	25-40-10-276-013	4010276013	013	Lot	401-RESIDENTIAL
697	52013	52027	07-10-576-114	3088 NORTH SHORE DR	25-07-10-576-114	0710576114	347/8	Lot	700-EXEMPT VACANT
698	52017	52031	40-03-480-007	3420 CLEMENT ST	25-40-03-480-007	4003480007	007	Lot	401-RESIDENTIAL
699	52027	52041	07-10-527-039	3106 DEVONSHIRE ST	25-07-10-527-039	0710527039	117	Lot	401-RESIDENTIAL
700	52030	52044	40-10-280-044	3117 SLOAN ST	25-40-10-280-044	4010280044	044	Lot	401-RESIDENTIAL
701	52035	52049	07-10-576-072	3116 WALTON ST	25-07-10-576-072	0710576072	232	Lot	401-RESIDENTIAL
702	52036	52050	40-10-278-028	3124 SLOAN ST	25-40-10-278-028	4010278028	028	Lot	401-RESIDENTIAL
703	52037	52051	07-10-527-068	3107 STRATFORD ST	25-07-10-527-068	0710527068	173	Lot	401-RESIDENTIAL
704	52039	52053	40-10-227-001	3317 MACKIN RD	25-40-10-227-001	4010227001	001	Lot	401-RESIDENTIAL
705	52040	52054	40-10-229-016	3228 WOLCOTT ST	25-40-10-229-016	4010229016	016	Lot	401-RESIDENTIAL
706	52041	52055	40-10-278-012	3127 RASKOB ST	25-40-10-278-012	4010278012	012	Lot	401-RESIDENTIAL
707	52045	52059	40-03-482-017	1601 WABASH AVE	25-40-03-482-017	4003482017	017	Lot	401-RESIDENTIAL
708	52046	52060	40-10-227-031	3234 PROSPECT ST	25-40-10-227-031	4010227031	031	Lot	401-RESIDENTIAL
709	52049	52063	07-10-527-066	3112 STRATFORD ST	25-07-10-527-066	0710527066	170	Lot	401-RESIDENTIAL
710	52053	52067	40-10-233-008	BERKLEY ST	25-40-10-233-008	4010233008	008	Lot	400-RESIDENTIAL VACANT
711	52060	52074	40-03-478-004	3422 CONCORD ST	25-40-03-478-004	4003478004	004	Lot	401-RESIDENTIAL
712	52061	52075	40-10-229-002	3235 PROSPECT ST	25-40-10-229-002	4010229002	002	Lot	401-RESIDENTIAL
713	52068	52082	40-10-280-048	1115 SUTTON AVE	25-40-10-280-048	4010280048	048	Lot	306-IND UTILITY IMPROVED
714	52075	52089	07-10-400-005	1071 N BALLENGER HWY	25-07-10-400-005	0710400005	400-005	Tract	201-COMMERCIAL IMPROVED

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
673	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		3122	WALTON ST	FLINT	48504
674	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		1513	WABASH AVE	FLINT	48504
675	Exempt	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		3116	NORTH SHORE DR	FLINT	48504
676	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3113	WALTON ST	FLINT	48504
677	Residential	0.28000000	0.28	FLINT SCHOOLS	25010		3143	BERKLEY ST	FLINT	48504
678	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3115	HATHERLY AVE	FLINT	48504
679	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3412	BARTH ST	FLINT	48504
680	Residential	0.23999999	0.24	FLINT SCHOOLS	25010		1434	ELDORADO DR	FLINT	48504
681	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3103	DEVONSHIRE ST	FLINT	48504
682	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		3112	NORTH SHORE DR	FLINT	48504
683	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3401	BARTH ST	FLINT	48504
684	Residential	0.17000000	0.17	FLINT SCHOOLS	25010	N	3216	STEVENSON ST	FLINT	48504
685	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3128	SLOAN ST	FLINT	48504
686	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3116	STRATFORD ST	FLINT	48504
687	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3131	RASKOB ST	FLINT	48504
688	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3425	CONCORD ST	FLINT	48504
689	Residential	0.47000000	0.47	CARMAN-AINSWORTH SCHOOLS	25080			CLARENDON ST	FLINT	48504
690	Commercial	0.70999998	0.71	CARMAN-AINSWORTH SCHOOLS	25080		3119	FLUSHING RD	FLINT	48504
691	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3225	WOLCOTT ST	FLINT	48504
692	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3413	CLEMENT ST	FLINT	48504
693	Commercial	2.17000008	2.17	CARMAN-AINSWORTH SCHOOLS	25080	N		BALLENGER HWY	FLINT	48504
694	Exempt	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3109	HATHERLY AVE	FLINT	48504
695	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3101	CLARENDON ST	FLINT	48504
696	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3136	RASKOB ST	FLINT	48504
697	Exempt	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3088	NORTH SHORE DR	FLINT	48504
698	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3420	CLEMENT ST	FLINT	48504
699	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		3106	DEVONSHIRE ST	FLINT	48504
700	Residential	0.41000000	0.41	FLINT SCHOOLS	25010		3117	SLOAN ST	FLINT	48504
701	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3116	WALTON ST	FLINT	48504
702	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3124	SLOAN ST	FLINT	48504
703	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3107	STRATFORD ST	FLINT	48504
704	Residential	0.20999999	0.21	FLINT SCHOOLS	25010		3317	MACKIN RD	FLINT	48504
705	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3228	WOLCOTT ST	FLINT	48504
706	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3127	RASKOB ST	FLINT	48504
707	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		1601	WABASH AVE	FLINT	48504
708	Residential	0.25999999	0.26	FLINT SCHOOLS	25010		3234	PROSPECT ST	FLINT	48503
709	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3112	STRATFORD ST	FLINT	48504
710	Residential	0.16000000	0.16	FLINT SCHOOLS	25010			BERKLEY ST	FLINT	48504
711	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3422	CONCORD ST	FLINT	48504
712	Residential	0.23999999	0.24	FLINT SCHOOLS	25010		3235	PROSPECT ST	FLINT	48504
713	Industrial	0.56999999	0.57	FLINT SCHOOLS	25010		1115	SUTTON AVE	FLINT	48504
714	Commercial	2.64000010	2.64	CARMAN-AINSWORTH SCHOOLS	25080	N	1071	BALLENGER HWY	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
673	BARRES, WAYNE M	3122 WALTON ST	FLINT	MI	48504	
674	CAMPBELL, DOLORES	1513 WABASH AVE	FLINT	MI	48504	CAMPBELL, DOLORES
675	HAYES, SUSAN	3116 NORTH SHORE DR	FLINT	MI	48504	GENESEE COUNTY LAND BANK
676	E & R HOMES LLC	PO BOX 239	FLUSHING	MI	48433	
677	GANT, JOSEPH A	3143 BERKLEY ST	FLINT	MI	48504	GANT, JOSEPH A
678	CAREY, DALE R & BARBARA S	3115 HATHERLY AVE	FLINT	MI	48504	
679	PIVOTAL GROUP, LLC	1946 STANHOPE ST	GROSSE POINTE WOODS	MI	48236	PIVOTAL GROUP, LLC
680	SCOTT, VIRGIL & YVONNE	1434 ELDORADO DR	FLINT	MI	48504	SCOTT, VIRGIL & YVONNE
681	ANNAN, ANDROMEDA	6908 S COUNTRY WOODS CIR	MIDVALE	UT	84047	
682	FLOWERS, ROBERT A & PAMELA S	3112 NORTH SHORE DR	FLINT	MI	48504	
683	DANTZLER, NORMAN	3401 BARTH ST	FLINT	MI	48504	DANTZLER, NORMAN
684	SPEIGHTS, CURTIS & WF MARVALENE	3208 N STEVENSON ST	FLINT	MI	48504	SPEIGHTS, CURTIS & WF MARVALENE
685	DABISH, SAMEER	2701 TIMBER LN	FLUSHING	MI	48433	DABISH, SAMEER
686	NAVARRE, SHAWN	3116 STRATFORD ST	FLINT	MI	48504	
687	NORFLEET, JANIQUA	3131 RASKOB ST	FLINT	MI	48504	NORFLEET, JANIQUA
688	PATTERSON, HELEN & BEULAH	3425 CONCORD ST	FLINT	MI	48504	PATTERSON, HELEN & BEULAH
689	MISSION OF PEACE NATIONAL CORP	877 E FIFTH AVE	FLINT	MI	48503	
690	DANIELSON, EUGENE C	6213 BALLARD DR	FLINT	MI	48505	
691	DAVIS, CONTESSA M	3225 WOLCOTT ST	FLINT	MI	48504	DAVIS, CONTESSA M
692	CATRON, WILEY JR & CINNAMON	3413 CLEMENT ST	FLINT	MI	48504	CATRON, WILEY JR & CINNAMON
693	NIKHIL-DEVEN PROPERTIES LLC	1170 CHARTER DR, SUITE F	FLINT	MI	48532	
694	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	
695	SCANLON, JOSEPH F & CHRISTINE E	3101 CLARENDON ST	FLINT	MI	48532	
696	MCCRARY, GERALDINE M	3136 RASKOB ST	FLINT	MI	48504	MCCRARY, GERALDINE M
697	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502-1832	
698	CARSON, RUSSELL	1710 W GENESEE ST	FLINT	MI	48504	CARSON, RUSSELL
699	FEDERAL HOME LOAN MORTGAGE CORP	1410 SPRING HILL RD	MC LEAN	VA	22102	
700	FOWLKES, BOBBY L	3117 SLOAN ST	FLINT	MI	48504	FOWLKES, BOBBY L
701	TREMAINE LUMBER CO	2424 CRANEWOOD	FENTON	MI	48430	
702	CLEMONS, JASON M	3124 SLOAN ST	FLINT	MI	48504	CLEMONS, JASON M
703	PEPIN, ROBERT J JR & KATHRYN	3107 STRATFORD ST	FLINT	MI	48504	
704	THOMPSON, MANSEL & HATTIE	3317 MACKIN RD	FLINT	MI	48504	THOMPSON, MANSEL & HATTIE
705	GOULD, ESTELLA L	3228 WOLCOTT ST	FLINT	MI	48504	GOULD, ESTELLA L
706	FRC PROPERTIES, INC	5190 NEIL RD	RENO	NV	89502	FRC PROPERTIES, INC
707	JONES, ANGELA	1601 WABASH AVE	FLINT	MI	48504	JONES, ANGELA
708	COLEMAN, WILLIAM & WF M C	3234 PROSPECT ST	FLINT	MI	48503	COLEMAN, WILLIAM & WF M C
709	FIELD, HOWARD J III & CAROLYN	3112 STRATFORD ST	FLINT	MI	48504	
710	TAYLOR, CONNIE M	3138 BERKLEY ST	FLINT	MI	48504	TAYLOR, CONNIE M
711	MCCUNE, L B & WF LORRAINE	3422 CONCORD ST	FLINT	MI	48504	MCCUNE, L B & WF LORRAINE
712	CROUDY, LENORE	3235 PROSPECT ST	FLINT	MI	48504	CROUDY, LENORE
713	CONSUMERS POWER CO	ONE ENERGY PLAZA	JACKSON	MI	49201	CONSUMERS POWER CO
714	PARK PLAZA MEDICAL BLDG INC	1071 N BALLENGER HWY STE	FLINT	MI	48504	

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
673					100	No	27700	27330	27700	13291874.47230000
674	1513 WABASH AVE	FLINT	MI	48504	100	No	12400	12598	12400	13291875.81880000
675	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	100	Yes	0	0	0	13291877.19420000
676					0	No	17400	17170	17400	13291877.83890000
677	3143 BERKLEY ST	FLINT	MI	48504	100	No	20000	20320	20000	13291879.56730000
678					100	No	12000	11880	12000	13291880.13450000
679	1946 STANHOPE ST	GROSSE POINTE WOODS	MI	48236	0	No	8800	8940	8800	13291885.95520000
680	1434 ELDORADO DR	FLINT	MI	48504	100	No	23600	23977	23600	13291891.48080000
681					0	No	7000	7010	7000	13291895.22740000
682					100	No	16000	15840	16000	13291897.16800000
683	3401 BARTH ST	FLINT	MI	48504	100	No	11000	11176	11000	13291897.51250000
684	3208 N STEVENSON ST	FLINT	MI	48504	0	No	17800	18084	17800	13291899.31370000
685	2701 TIMBER LN	FLUSHING	MI	48433	0	No	10800	10972	10800	13291900.53640000
686					100	No	9200	9140	9200	13291902.04000000
687	3131 RASKOB ST	FLINT	MI	48504	0	No	8600	8737	8600	13291902.43360000
688	3425 CONCORD ST	FLINT	MI	48504	100	No	11800	11988	11800	13291909.83520000
689					0	No	5500	5580	5500	13291910.95140000
690					0	No	10400	10560	10400	13291913.35170000
691	3225 WOLCOTT ST	FLINT	MI	48504	100	No	20000	20320	20000	13291917.83850000
692	3413 CLEMENT ST	FLINT	MI	48504	100	No	11700	11887	11700	13291917.95520000
693					0	No	20600	20920	20600	13291918.42350000
694					0	Yes	0	0	0	13291921.76930000
695					100	No	10400	10260	10400	13291921.96780000
696	3136 RASKOB ST	FLINT	MI	48504	100	No	12600	12801	12600	13291922.77810000
697					0	Yes	0	0	0	13291927.11190000
698	1710 W GENESEE ST	FLINT	MI	48504	0	No	12400	12598	12400	13291927.82070000
699					0	No	9700	9550	9700	13291932.68090000
700	3117 SLOAN ST	FLINT	MI	48504	100	No	16600	16865	16600	13291933.87170000
701					0	No	9800	9750	9800	13291936.92070000
702	3124 SLOAN ST	FLINT	MI	48504	100	No	8600	8737	8600	13291938.60370000
703					0	No	17100	16960	17100	13291938.74990000
704	3317 MACKIN RD	FLINT	MI	48504	100	No	18300	18592	18300	13291939.50750000
705	3228 WOLCOTT ST	FLINT	MI	48504	100	No	20400	20726	20400	13291939.56390000
706	5190 NEIL RD	RENO	NV	89502	0	No	9000	9144	9000	13291939.93580000
707	1601 WABASH AVE	FLINT	MI	48504	100	No	11700	11887	11700	13291941.62010000
708	3234 PROSPECT ST	FLINT	MI	48503	100	No	26000	26416	26000	13291942.12460000
709					100	No	13000	12900	13000	13291943.23830000
710	3138 BERKLEY ST	FLINT	MI	48504	0	No	900	746	900	13291945.05520000
711	3422 CONCORD ST	FLINT	MI	48504	100	No	17400	17678	17400	13291947.53530000
712	3235 PROSPECT ST	FLINT	MI	48504	100	No	19100	19405	19100	13291948.83240000
713	ONE ENERGY PLAZA	JACKSON	MI	49201	0	No	11600	11785	11600	13291953.87020000
714					0	No	677900	695960	677900	13291956.85710000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
673	555528.39351600	372.24785285	8564.97167969000	372.24773089900			
674	559036.74329600	320.13712685	5790.95263672000	320.13715770200			
675	555010.74275700	265.21185385	4001.74707031000	265.21195556700			
676	555353.69947700	394.47940038	9666.64257813000	394.47941247500			
677	557621.65483000	440.67727272	11982.34228520000	440.67727539400			
678	556224.01715500	331.31081154	5444.27490234000	331.31086732800			
679	559243.94168700	294.97856658	4291.03808594000	294.97850505900			
680	558677.02815000	433.02391030	10665.87548830000	433.02387790500			
681	555903.46667000	284.59745230	4331.37792969000	284.59733784200			
682	554968.37647000	257.58744185	3837.48291016000	257.58745230600			
683	559088.07383100	322.41333085	5899.31542969000	322.41335050400			
684	558081.53311700	349.49950224	7380.29248047000	349.49952035600			
685	557208.97426000	295.14022418	4403.27197266000	295.14016518800			
686	555793.27138400	299.30590686	4820.11962891000	299.30597715900			
687	557320.61301000	283.26368087	4047.01367188000	283.26368130500			
688	559644.52388300	335.75478927	6615.62158203000	335.75477327800			
689	555238.05829500	627.82238533	20435.74658200000	627.82234370200			
690	556470.43640500	761.05022542	30897.58203130000	761.05032503200			x
691	558184.12674900	338.62576273	6888.28515625000	338.62576127000			
692	559346.73028700	332.75976793	6391.55419922000	332.75980542300			
693	554643.87225600	1348.41848885	94612.32617190000	1348.41846841000			
694	556207.96109800	328.88669214	5303.62500000000	328.88657183700			
695	555073.63091200	342.30503861	5210.16308594000	342.30505183200			
696	557491.21220700	336.85311363	6553.04980469000	336.85325121500			
697	554901.74194700	362.60290531	8002.18847656000	362.60294461600			
698	559523.16779400	335.30415677	6533.07177734000	335.30418766800			
699	556074.78649400	376.05178745	8062.71240234000	376.05187890600			
700	556987.26066700	590.80582078	17671.45947270000	590.80575884000			
701	555499.41446800	300.88140273	5021.52978516000	300.88133760400			
702	557192.54034200	294.67225145	4385.29785156000	294.67220400000			
703	555609.31604600	313.05051036	5700.89648438000	313.05054283300			
704	558747.85489400	392.84423202	9301.25830078000	392.84427041700			
705	558335.98832600	379.50127770	8525.73974609000	379.50123394000			
706	557304.86681900	287.69494383	4255.64404297000	287.69492533100			
707	559192.59574900	316.09107802	5676.92285156000	316.09107295200			
708	558583.30266500	423.12884504	11277.84570310000	423.12884036200			
709	555777.60042100	286.52193425	4198.35546875000	286.52198163900			
710	557769.63407800	346.36852492	7064.74707031000	346.36855480800			
711	559805.67074400	381.73450392	8679.11328125000	381.73456990500			
712	558418.44218400	404.37283544	10245.78759770000	404.37283505000			
713	556886.82229400	1039.77745715	24845.77880860000	1039.77731220000			
714	554278.03324600	1528.60057439	114861.56591800000	1528.60053018000			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
715	52090	52104	40-03-482-016	1609 WABASH AVE	25-40-03-482-016	4003482016	016	Lot	401-RESIDENTIAL
716	52091	52105	40-10-276-003	3135 BERKLEY ST	25-40-10-276-003	4010276003	003	Lot	401-RESIDENTIAL
717	52092	52106	40-10-231-025	3208 N STEVENSON ST	25-40-10-231-025	4010231025	025	Lot	401-RESIDENTIAL
718	52094	52108	07-10-576-087	3107 WALTON ST	25-07-10-576-087	0710576087	289/90	Lot	401-RESIDENTIAL
719	52097	52111	07-10-527-015	3105 HATHERLY AVE	25-07-10-527-015	0710527015	77	Lot	401-RESIDENTIAL
720	52105	52119	40-03-480-003	3421 CONCORD ST	25-40-03-480-003	4003480003	003	Lot	401-RESIDENTIAL
721	52111	52125	40-10-276-014	3132 RASKOB ST	25-40-10-276-014	4010276014	014	Lot	401-RESIDENTIAL
722	52126	52140	07-10-527-042	3093 DEVONSHIRE ST	25-07-10-527-042	0710527042	125-7	Lot	401-RESIDENTIAL
723	52137	52151	40-10-278-029	3120 SLOAN ST	25-40-10-278-029	4010278029	029	Lot	401-RESIDENTIAL
724	52139	52153	07-10-576-107	1183 DONALDSON BLVD	25-07-10-576-107	0710576107	339	Lot	401-RESIDENTIAL
725	52140	52154	40-10-278-013	3123 RASKOB ST	25-40-10-278-013	4010278013	013	Lot	401-RESIDENTIAL
726	52142	52156	07-10-527-120	HATHERLY AVE	25-07-10-527-120	0710527120	61/62	Lot	400-RESIDENTIAL VACANT
727	52149	52163	40-10-231-041	3217 WOLCOTT ST	25-40-10-231-041	4010231041	041	Lot	401-RESIDENTIAL
728	52155	52169	40-03-482-015	1613 WABASH AVE	25-40-03-482-015	4003482015	015	Lot	401-RESIDENTIAL
729	52158	52172	40-03-485-011	1502 WABASH AVE	25-40-03-485-011	4003485011	011	Lot	401-RESIDENTIAL
730	52159	52173	07-10-576-073	3112 WALTON ST	25-07-10-576-073	0710576073	233	Lot	401-RESIDENTIAL
731	52162	52176	40-03-480-008	3414 CLEMENT ST	25-40-03-480-008	4003480008	008	Lot	401-RESIDENTIAL
732	52167	52181	07-10-576-108	1187 DONALDSON BLVD	25-07-10-576-108	0710576108	340	Lot	401-RESIDENTIAL
733	52170	52184	07-10-576-071	3103 STRATFORD ST	25-07-10-576-071	0710576071	231	Lot	401-RESIDENTIAL
734	52191	52205	40-03-482-014	3401 CLEMENT ST	25-40-03-482-014	4003482014	014	Lot	401-RESIDENTIAL
735	52194	52208	07-10-576-109	3093 CLARENDON ST	25-07-10-576-109	0710576109	341	Lot	401-RESIDENTIAL
736	52198	52212	40-10-233-001	3143 N STEVENSON ST	25-40-10-233-001	4010233001	001	Lot	401-RESIDENTIAL
737	52202	52216	40-10-276-015	3128 RASKOB ST	25-40-10-276-015	4010276015	015	Lot	401-RESIDENTIAL
738	52203	52217	07-10-527-014	3101 HATHERLY AVE	25-07-10-527-014	0710527014	76	Lot	401-RESIDENTIAL
739	52204	52218	07-10-527-067	3104 STRATFORD ST	25-07-10-527-067	0710527067	171/2	Lot	401-RESIDENTIAL
740	52212	52226	07-10-527-040	3096 DEVONSHIRE ST	25-07-10-527-040	0710527040	118-20	Lot	401-RESIDENTIAL
741	52215	52229	40-10-227-002	3313 MACKIN RD	25-40-10-227-002	4010227002	002	Lot	401-RESIDENTIAL
742	52220	52234	07-10-527-119	3113 FLUSHING RD	25-07-10-527-119	0710527119	10	Lot	401-RESIDENTIAL
743	52221	52235	40-10-233-009	3138 BERKLEY ST	25-40-10-233-009	4010233009	009	Lot	401-RESIDENTIAL
744	52228	52242	40-10-278-014	3119 RASKOB ST	25-40-10-278-014	4010278014	014	Lot	401-RESIDENTIAL
745	52245	52259	07-10-576-086	3099 WALTON ST	25-07-10-576-086	0710576086	288	Lot	401-RESIDENTIAL
746	52259	52273	40-03-480-004	3413 CONCORD ST	25-40-03-480-004	4003480004	004	Lot	401-RESIDENTIAL
747	52267	52281	40-10-231-042	3202 N STEVENSON ST	25-40-10-231-042	4010231042	042	Lot	401-RESIDENTIAL
748	52268	52282	40-03-485-002	1514 WABASH AVE	25-40-03-485-002	4003485002	002	Lot	401-RESIDENTIAL
749	52269	52283	40-10-276-004	3129 BERKLEY ST	25-40-10-276-004	4010276004	004	Lot	401-RESIDENTIAL
750	52270	52284	07-10-576-074	3104 WALTON ST	25-07-10-576-074	0710576074	235	Lot	401-RESIDENTIAL
751	52274	52288	40-10-229-017	3218 WOLCOTT ST	25-40-10-229-017	4010229017	017	Lot	401-RESIDENTIAL
752	52281	52295	07-10-576-070	3099 STRATFORD ST	25-07-10-576-070	0710576070	230	Lot	401-RESIDENTIAL
753	52286	52300	40-10-278-043	3112 SLOAN ST	25-40-10-278-043	4010278043	043	Lot	401-RESIDENTIAL
754	52304	52318	40-10-227-032	3228 PROSPECT ST	25-40-10-227-032	4010227032	032	Lot	401-RESIDENTIAL
755	52321	52335	40-10-276-016	3124 RASKOB ST	25-40-10-276-016	4010276016	016	Lot	401-RESIDENTIAL
756	52323	52337	40-03-485-012	3312 MACKIN RD	25-40-03-485-012	4003485012	012	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
715	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1609	WABASH AVE	FLINT	48504
716	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3135	BERKLEY ST	FLINT	48504
717	Residential	0.16000000	0.16	FLINT SCHOOLS	25010	N	3208	STEVENSON ST	FLINT	48504
718	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3107	WALTON ST	FLINT	48504
719	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3105	HATHERLY AVE	FLINT	48504
720	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3421	CONCORD ST	FLINT	48504
721	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3132	RASKOB ST	FLINT	48504
722	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		3093	DEVONSHIRE ST	FLINT	48504
723	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3120	SLOAN ST	FLINT	48504
724	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		1183	DONALDSON BLVD	FLINT	48504
725	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3123	RASKOB ST	FLINT	48504
726	Residential	0.14000000	0.14	CARMAN-AINSWORTH SCHOOLS	25080			HATHERLY AVE	FLINT	48504
727	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3217	WOLCOTT ST	FLINT	48504
728	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1613	WABASH AVE	FLINT	48504
729	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1502	WABASH AVE	FLINT	48504
730	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3112	WALTON ST	FLINT	48504
731	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3414	CLEMENT ST	FLINT	48504
732	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		1187	DONALDSON BLVD	FLINT	48504
733	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3103	STRATFORD ST	FLINT	48504
734	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3401	CLEMENT ST	FLINT	48504
735	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3093	CLARENDON ST	FLINT	48504
736	Residential	0.15000001	0.15	FLINT SCHOOLS	25010	N	3143	STEVENSON ST	FLINT	48504
737	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3128	RASKOB ST	FLINT	48504
738	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3101	HATHERLY AVE	FLINT	48504
739	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3104	STRATFORD ST	FLINT	48504
740	Residential	0.25999999	0.26	CARMAN-AINSWORTH SCHOOLS	25080		3096	DEVONSHIRE ST	FLINT	48504
741	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3313	MACKIN RD	FLINT	48504
742	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3113	FLUSHING RD	FLINT	48504
743	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3138	BERKLEY ST	FLINT	48504
744	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3119	RASKOB ST	FLINT	48504
745	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		3099	WALTON ST	FLINT	48504
746	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3413	CONCORD ST	FLINT	48504
747	Residential	0.16000000	0.16	FLINT SCHOOLS	25010	N	3202	STEVENSON ST	FLINT	48504
748	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1514	WABASH AVE	FLINT	48504
749	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3129	BERKLEY ST	FLINT	48504
750	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3104	WALTON ST	FLINT	48504
751	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3218	WOLCOTT ST	FLINT	48504
752	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		3099	STRATFORD ST	FLINT	48504
753	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3112	SLOAN ST	FLINT	48504
754	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		3228	PROSPECT ST	FLINT	48504
755	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3124	RASKOB ST	FLINT	48504
756	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3312	MACKIN RD	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
715	BANKSTON, BILLIE & PENROSE	1609 WABASH AVE	FLINT	MI	48504	BANKSTON, BILLIE & PENROSE
716	OBLOJ, MARK A	3135 BERKLEY ST	FLINT	MI	48504	OBLOJ, MARK A
717	SPEIGHTS, CURTIS & MARVALENE	3208 N STEVENSON ST	FLINT	MI	48504	SPEIGHTS, CURTIS & MARVALENE
718	BRYERS, CURT	6059 SIPES LN	FLINT	MI	48532	
719	HARTMAN, ELEANOR TR	3091 HATHERLY AVE	FLINT	MI	48504	
720	MANNING, ROBERT E	3421 CONCORD ST	FLINT	MI	48504	MANNING, ROBERT E
721	GAINES, PATRICIA	3132 RASKOB ST	FLINT	MI	48504	GAINES, PATRICIA
722	JOSEPH, JOY E	3093 DEVONSHIRE ST	FLINT	MI	48504	
723	SWIFT, DOREATHA	3120 SLOAN ST	FLINT	MI	48504	SWIFT, DOREATHA
724	BALL, DEANDRE M	6039 FOUNTAIN POINTE	GRAND BLANC	MI	48439	
725	TOWNSEND, ALBERT & WF CAROL	3123 RASKOB ST	FLINT	MI	48504	TOWNSEND, ALBERT & WF CAROL
726	LUTZ, DAVID	3113 FLUSHING RD	FLINT	MI	48504	
727	FREEMAN, GEORGIA L	3217 WOLCOTT ST	FLINT	MI	48504	FREEMAN, GEORGIA L
728	MCCOVERY, DEBRA	1613 WABASH AVE	FLINT	MI	48504	MCCOVERY, DEBRA
729	PAYNE, CLIFFORD & ITHALEAN	1502 WABASH AVE	FLINT	MI	48504	PAYNE, CLIFFORD & ITHALEAN
730	BRYERS, CURT	6059 SIPES LN	FLINT	MI	48532	
731	CRAWFORD, JAMES & WF CHERYL	3414 CLEMENT ST	FLINT	MI	48504	CRAWFORD, JAMES & WF CHERYL
732	BLAIR, MICHELE S	9231 SHOSHONE TRL	FLUSHING	MI	48433-1037	
733	GROSHONG, CHRISTINA	3103 STRATFORD ST	FLINT	MI	48504	
734	HORTON, THRESSA N	3420 CLEMENT ST	FLINT	MI	48504	HORTON, THRESSA N
735	HYDE, PAUL & JANET L TRUST	3093 CLARENDON ST	FLINT	MI	48504	
736	COOK, PEARLIE	3143 N STEVENSON ST	FLINT	MI	48504	COOK, PEARLIE
737	FREE INVESTMENTS LLC	4450 TWIN OAKS	HOLLY	MI	48442	FREE INVESTMENTS LLC
738	HARTMAN, ELEANOR TR	3091 HATHERLY AVE	FLINT	MI	48504	
739	ZACHERY, JAMES & DEBRA	3104 STRATFORD ST	FLINT	MI	48504	
740	SHERMAN, SANDRA L	3096 DEVONSHIRE ST	FLINT	MI	48504	
741	MCNEAL, THOMAS & WF CECILIA	3313 MACKIN RD	FLINT	MI	48504	MCNEAL, THOMAS & WF CECILIA
742	LUTZ, DAVID	3113 FLUSHING RD	FLINT	MI	48504	
743	TAYLOR, CONNIE M	3138 BERKLEY ST	FLINT	MI	48504	TAYLOR, CONNIE M
744	EREMIA, JOSEPH & CHARLOTTE	3119 RASKOB ST	FLINT	MI	48504	EREMIA, JOSEPH & CHARLOTTE
745	CRYDERMAN, SHONDA L	3099 WALTON ST	FLINT	MI	48504	
746	MILLER, WILLIE	3413 CONCORD ST	FLINT	MI	48504	MILLER, WILLIE
747	PARKER, CANDICE N	3202 N STEVENSON ST	FLINT	MI	48504	PARKER, CANDICE N
748	FIELDS, CURTIS	1514 WABASH AVE	FLINT	MI	48504	FIELDS, CURTIS
749	FRENCH, FRANCIS E	3129 BERKLEY ST	FLINT	MI	48504	FRENCH, FRANCIS E
750	BLATRE PROPERTIES, LLC	7438 TIMBERLEA CT	FLINT	MI	48532	
751	HATCHER, BRANDON	3218 WOLCOTT ST	FLINT	MI	48504	HATCHER, BRANDON
752	PACIFIC BAY CAPITAL GROUP LLC	15375 LAARBOLEDA	MORGAN HILL	CA	95037	
753	HENDERSON, NOVALEAN REV TR	4409 WHEATLAND DR	SWARTZ CREEK	MI	48473	HENDERSON, NOVALEAN REV TR
754	SCHULER, CLARENCE & SHIRLEY	3228 PROSPECT ST	FLINT	MI	48504	SCHULER, CLARENCE & SHIRLEY
755	JC GEMINI III-D LLC	2025 W BALBOA BLVD STE C	NEWPORT BEACH	CA	92663	JC GEMINI III-D LLC
756	THOMPSON, VALERIE	3312 MACKIN RD	FLINT	MI	48504	THOMPSON, VALERIE

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
715	1609 WABASH AVE	FLINT	MI	48504	100	No	15700	15951	15700	13291962.22150000
716	3135 BERKLEY ST	FLINT	MI	48504	100	No	16000	16256	16000	13291962.55620000
717	3208 N STEVENSON ST	FLINT	MI	48504	100	No	15600	15849	15600	13291963.19490000
718					0	No	22600	22350	22600	13291963.42200000
719					0	No	7100	7010	7100	13291964.20330000
720	3421 CONCORD ST	FLINT	MI	48504	100	No	12700	12903	12700	13291967.96750000
721	3132 RASKOB ST	FLINT	MI	48504	100	No	11200	11379	11200	13291969.63520000
722					100	No	15000	14930	15000	13291974.78230000
723	3120 SLOAN ST	FLINT	MI	48504	100	No	4100	4165	4100	13291977.83160000
724					0	No	11200	11070	11200	13291978.43170000
725	1114 CHURCH	FLINT	MI	48502	100	No	4900	4978	4900	13291978.43870000
726					100	No	1800	1820	1800	13291978.94900000
727	3217 WOLCOTT ST	FLINT	MI	48504	100	No	18600	18897	18600	13291980.11210000
728	1613 WABASH AVE	FLINT	MI	48504	100	No	12700	12903	12700	13291982.31690000
729	1502 WABASH AVE	FLINT	MI	48504	100	No	15300	15544	15300	13291982.92840000
730					0	No	10900	10900	10900	13291983.19650000
731	3414 CLEMENT ST	FLINT	MI	48504	100	No	12000	12192	12000	13291983.50320000
732					0	No	13700	13610	13700	13291986.69610000
733					0	No	10100	9950	10100	13291988.39770000
734	3420 CLEMENT ST	FLINT	MI	48504	0	No	12700	12903	12700	13292002.77500000
735					100	No	12700	12590	12700	13292003.17010000
736	3143 N STEVENSON ST	FLINT	MI	48504	100	No	16500	16764	16500	13292004.15930000
737	4450 TWIN OAKS	HOLLY	MI	48442	0	No	10800	10972	10800	13292005.97980000
738					0	No	8400	8330	8400	13292006.24730000
739					0	No	15700	15540	15700	13292006.69470000
740					100	No	32000	31690	32000	13292010.34420000
741	3313 MACKIN RD	FLINT	MI	48504	100	No	17800	18084	17800	13292012.30170000
742					100	No	10500	10460	10500	13292014.12400000
743	3138 BERKLEY ST	FLINT	MI	48504	100	No	17300	17576	17300	13292014.69270000
744	3119 RASKOB ST	FLINT	MI	48504	100	No	10700	10871	10700	13292017.24880000
745					100	No	7300	7210	7300	13292020.01000000
746	3413 CONCORD ST	FLINT	MI	48504	100	No	11500	11684	11500	13292024.41770000
747	3202 N STEVENSON ST	FLINT	MI	48504	100	No	18300	18592	18300	13292026.34430000
748	1514 WABASH AVE	FLINT	MI	48504	100	No	12900	13106	12900	13292027.20650000
749	3129 BERKLEY ST	FLINT	MI	48504	100	No	12800	13004	12800	13292027.27470000
750					0	No	7900	7820	7900	13292027.33980000
751	3218 WOLCOTT ST	FLINT	MI	48504	100	No	22500	22860	22500	13292029.77330000
752					0	No	7900	7820	7900	13292033.16460000
753	4409 WHEATLAND DR	SWARTZ CREEK	MI	48473	0	No	9300	9448	9300	13292034.94180000
754	3228 PROSPECT ST	FLINT	MI	48504	100	No	21500	21844	21500	13292039.46500000
755	2025 W BALBOA BLVD STE C	NEWPORT BEACH	CA	92663	0	No	8100	8229	8100	13292042.95130000
756	3312 MACKIN RD	FLINT	MI	48504	100	No	11600	11785	11600	13292043.16940000

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	AJ	AK	AL	AM	AN	AO	AP
715	559241.73444000	308.35404349	5280.27148438000	308.35421977900			
716	557588.16375500	326.63365405	6232.90869141000	326.63366846800			
717	558054.79253300	340.09402274	6902.26513672000	340.09412759200			
718	555322.31727000	353.30060210	7741.29101563000	353.30055450000			
719	556192.52384400	333.19549766	5562.92285156000	333.19558751400			
720	559620.41512300	335.45484333	6583.21972656000	335.45491109800			
721	557471.33144200	295.76649592	4366.42626953000	295.76644819200			
722	555873.04192500	448.63507152	12437.89404300000	448.63503649000			
723	557176.52717200	298.36302921	4587.49560547000	298.36298147600			
724	554949.52350300	312.62592494	5170.54150391000	312.62598714000			
725	557289.38527100	287.71331322	4239.15917969000	287.71335458000			
726	556386.45905500	356.89504195	6083.86914063000	356.89514154400			
727	558158.76467800	335.66893333	6740.24072266000	335.66898127600			
728	559288.72297400	307.24571999	5225.84130859000	307.24579850400			
729	558906.86050000	372.80107385	8203.89843750000	372.80117398100			
730	555486.08914300	288.24828662	4458.87939453000	288.24830787900			
731	559499.23477700	330.68158200	6301.66699219000	330.68158354600			
732	555004.86056600	296.39399376	4762.52343750000	296.39396485900			
733	555585.23361700	298.66006719	5024.13037109000	298.66018011300			
734	559338.31617100	318.28326232	5796.20263672000	318.28331549100			
735	555052.71612100	314.77321890	5579.74365234000	314.77314183800			
736	557855.31928300	335.80483404	6716.56738281000	335.80489205400			
737	557455.71027100	290.47980710	4097.75341797000	290.47980916300			
738	556176.09349100	330.05317677	5325.58886719000	330.05320746200			
739	555754.79564000	393.83322923	9625.09179688000	393.83328289200			
740	556035.15156500	462.77522212	11404.55273440000	462.77530847500			
741	558702.92204600	377.42446801	8906.17968750000	377.42450336700			
742	556500.55101200	302.08701474	4820.00439453000	302.08693933100			
743	557743.50325600	369.55414611	8394.07470703000	369.55412553400			
744	557272.83868600	291.59429911	4420.82519531000	291.59430993300			
745	555300.21254500	273.06276040	3909.74951172000	273.06285675500			
746	559596.96133800	330.12636629	6285.65234375000	330.12633945200			
747	558028.75824400	345.62808207	7185.52978516000	345.62812763100			
748	558977.89612200	293.81032602	4820.28369141000	293.81035767300			
749	557561.38929300	365.20563059	8189.74560547000	365.20547494200			
750	555469.20257700	297.05541099	4922.57861328000	297.05538407500			
751	558309.58499000	347.61950139	7607.70947266000	347.61948751100			
752	555570.76044800	275.21249310	3982.04931641000	275.21250154500			
753	557152.66045400	372.27760257	8502.87792969000	372.27754252700			
754	558583.28080900	414.57017432	10864.41552730000	414.57020408300			
755	557440.92375000	295.95031149	4405.62011719000	295.95037975400			
756	558882.61639100	347.07795957	6736.39355469000	347.07789526600			

Container Specialties Inc
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	A	B	C	D	E	F	G	H	I
757	52324	52338	40-10-231-009	3209 WOLCOTT ST	25-40-10-231-009	4010231009	009	Lot	401-RESIDENTIAL
758	52325	52339	07-10-576-082	1205 DONALDSON BLVD	25-07-10-576-082	0710576082	284	Lot	401-RESIDENTIAL
759	52327	52341	07-10-527-013	3097 HATHERLY AVE	25-07-10-527-013	0710527013	75	Lot	401-RESIDENTIAL
760	52333	52347	40-03-485-001	3319 BARTH ST	25-40-03-485-001	4003485001	001	Lot	401-RESIDENTIAL
761	52338	52352	40-10-280-033	1127 SUTTON AVE	25-40-10-280-033	4010280033	033	Lot	401-RESIDENTIAL
762	52349	52363	40-03-480-011	3402 CLEMENT ST	25-40-03-480-011	4003480011	011	Lot	401-RESIDENTIAL
763	52358	52372	40-10-278-015	3115 RASKOB ST	25-40-10-278-015	4010278015	015	Lot	401-RESIDENTIAL
764	52367	52381	40-10-233-002	3139 N STEVENSON ST	25-40-10-233-002	4010233002	002	Lot	401-RESIDENTIAL
765	52375	52389	07-10-576-083	1211 DONALDSON BLVD	25-07-10-576-083	0710576083	285	Lot	401-RESIDENTIAL
766	52389	52403	40-10-280-032	3101 SLOAN ST	25-40-10-280-032	4010280032	032	Lot	401-RESIDENTIAL
767	52398	52412	07-10-576-075	3100 WALTON ST	25-07-10-576-075	0710576075	236	Lot	401-RESIDENTIAL
768	52400	52414	07-10-576-069	3095 STRATFORD ST	25-07-10-576-069	0710576069	229	Lot	401-RESIDENTIAL
769	52405	52419	40-10-229-038	3217 PROSPECT ST	25-40-10-229-038	4010229038	038	Lot	401-RESIDENTIAL
770	52417	52431	07-10-576-084	1215 DONALDSON BLVD	25-07-10-576-084	0710576084	286	Lot	401-RESIDENTIAL
771	52420	52434	40-03-480-010	1709 WABASH AVE	25-40-03-480-010	4003480010	010	Lot	401-RESIDENTIAL
772	52428	52442	40-10-227-003	3307 MACKIN RD	25-40-10-227-003	4010227003	003	Lot	401-RESIDENTIAL
773	52435	52449	40-10-276-017	3120 RASKOB ST	25-40-10-276-017	4010276017	017	Lot	401-RESIDENTIAL
774	52443	52457	40-10-276-005	3123 BERKLEY ST	25-40-10-276-005	4010276005	005	Lot	401-RESIDENTIAL
775	52453	52467	07-10-527-012	3091 HATHERLY AVE	25-07-10-527-012	0710527012	74	Lot	401-RESIDENTIAL
776	52461	52475	07-10-576-051	3083 DEVONSHIRE ST	25-07-10-576-051	0710576051	169/24	Lot	401-RESIDENTIAL
777	52464	52478	40-10-231-027	3140 N STEVENSON ST	25-40-10-231-027	4010231027	027	Lot	401-RESIDENTIAL
778	52469	52483	40-10-233-010	3132 BERKLEY ST	25-40-10-233-010	4010233010	010	Lot	401-RESIDENTIAL
779	52472	52486	07-10-576-121	3100 STRATFORD ST	25-07-10-576-121	0710576121	170/-171	Lot	401-RESIDENTIAL
780	52477	52491	40-03-483-004	3320 BARTH ST	25-40-03-483-004	4003483004	004	Lot	401-RESIDENTIAL
781	52484	52498	40-10-278-016	3111 RASKOB ST	25-40-10-278-016	4010278016	016	Lot	401-RESIDENTIAL
782	52487	52501	07-10-576-085	1219 DONALDSON BLVD	25-07-10-576-085	0710576085	287	Lot	401-RESIDENTIAL
783	52492	52506	07-10-527-002	3105 FLUSHING RD	25-07-10-527-002	0710527002	5-9/62-66	Lot	201-COMMERCIAL IMPROVED
784	52512	52526	40-03-485-013	3306 MACKIN RD	25-40-03-485-013	4003485013	013	Lot	401-RESIDENTIAL
785	52521	52535	40-10-281-019	3042 FLUSHING RD	25-40-10-281-019	4010281019	019	Lot	201-COMMERCIAL IMPROVED
786	52523	52537	40-03-480-009	3401 CONCORD ST	25-40-03-480-009	4003480009	009	Lot	401-RESIDENTIAL
787	52524	52538	40-10-233-003	3135 N STEVENSON ST	25-40-10-233-003	4010233003	003	Lot	401-RESIDENTIAL
788	52525	52539	07-10-576-106	DONALDSON BLVD	25-07-10-576-106	0710576106	337/8	Lot	400-RESIDENTIAL VACANT
789	52527	52541	40-10-231-011	3201 WOLCOTT ST	25-40-10-231-011	4010231011	011	Lot	401-RESIDENTIAL
790	52529	52543	40-10-229-033	3210 WOLCOTT ST	25-40-10-229-033	4010229033	033	Lot	401-RESIDENTIAL
791	52539	52553	40-10-278-037	3108 SLOAN ST	25-40-10-278-037	4010278037	037	Lot	400-RESIDENTIAL VACANT
792	52549	52563	40-03-483-003	1608 WABASH AVE	25-40-03-483-003	4003483003	003	Lot	401-RESIDENTIAL
793	52561	52575	40-10-276-018	3116 RASKOB ST	25-40-10-276-018	4010276018	018	Lot	401-RESIDENTIAL
794	52566	52580	40-03-485-003	3309 BARTH ST	25-40-03-485-003	4003485003	003	Lot	401-RESIDENTIAL
795	52569	52583	40-10-276-006	3119 BERKLEY ST	25-40-10-276-006	4010276006	006	Lot	401-RESIDENTIAL
796	52575	52589	07-10-527-041	DEVONSHIRE ST	25-07-10-527-041	0710527041	121-3	Lot	400-RESIDENTIAL VACANT
797	52577	52591	40-10-227-033	3220 PROSPECT ST	25-40-10-227-033	4010227033	033	Lot	401-RESIDENTIAL
798	52584	52598	40-03-483-002	1614 WABASH AVE	25-40-03-483-002	4003483002	002	Lot	401-RESIDENTIAL

Container Specialties Inc
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	J	K	L	M	N	O	P	Q	R	S
757	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3209	WOLCOTT ST	FLINT	48504
758	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		1205	DONALDSON BLVD	FLINT	48504
759	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3097	HATHERLY AVE	FLINT	48504
760	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3319	BARTH ST	FLINT	48504
761	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1127	SUTTON AVE	FLINT	48504
762	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3402	CLEMENT ST	FLINT	48504
763	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3115	RASKOB ST	FLINT	48504
764	Residential	0.11000000	0.11	FLINT SCHOOLS	25010	N	3139	STEVENSON ST	FLINT	48504
765	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		1211	DONALDSON BLVD	FLINT	48504
766	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3101	SLOAN ST	FLINT	48504
767	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3100	WALTON ST	FLINT	48504
768	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		3095	STRATFORD ST	FLINT	48504
769	Residential	0.34999999	0.35	FLINT SCHOOLS	25010		3217	PROSPECT ST	FLINT	48504
770	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		1215	DONALDSON BLVD	FLINT	48504
771	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		1709	WABASH AVE	FLINT	48504
772	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3307	MACKIN RD	FLINT	48504
773	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3120	RASKOB ST	FLINT	48504
774	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3123	BERKLEY ST	FLINT	48504
775	Residential	0.15000001	0.15	CARMAN-AINSWORTH SCHOOLS	25080		3091	HATHERLY AVE	FLINT	48504
776	Residential	0.25999999	0.26	CARMAN-AINSWORTH SCHOOLS	25080		3083	DEVONSHIRE ST	FLINT	48504
777	Residential	0.15000001	0.15	FLINT SCHOOLS	25010	N	3140	STEVENSON ST	FLINT	48504
778	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3132	BERKLEY ST	FLINT	48504
779	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3100	STRATFORD ST	FLINT	48504
780	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3320	BARTH ST	FLINT	48504
781	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3111	RASKOB ST	FLINT	48504
782	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		1219	DONALDSON BLVD	FLINT	48504
783	Commercial	0.92000002	0.92	CARMAN-AINSWORTH SCHOOLS	25080		3105	FLUSHING RD	FLINT	48504
784	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3306	MACKIN RD	FLINT	48504
785	Commercial	0.28999999	0.29	FLINT SCHOOLS	25010		3042	FLUSHING RD	FLINT	48504
786	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3401	CONCORD ST	FLINT	48504
787	Residential	0.11000000	0.11	FLINT SCHOOLS	25010	N	3135	STEVENSON ST	FLINT	48504
788	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080			DONALDSON BLVD	FLINT	48504
789	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3201	WOLCOTT ST	FLINT	48504
790	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3210	WOLCOTT ST	FLINT	48504
791	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3108	SLOAN ST	FLINT	48504
792	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1608	WABASH AVE	FLINT	48504
793	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3116	RASKOB ST	FLINT	48504
794	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3309	BARTH ST	FLINT	48504
795	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3119	BERKLEY ST	FLINT	48504
796	Residential	0.30000001	0.3	CARMAN-AINSWORTH SCHOOLS	25080			DEVONSHIRE ST	FLINT	48504
797	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3220	PROSPECT ST	FLINT	48504
798	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1614	WABASH AVE	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
757	GREEN, J JR & V & WHITE, T & A	1920 FRANCIS AVE	FLINT	MI	48505	GREEN, J JR & V & WHITE, T & A
758	WASHINGTON, ETTA	G1205 DONALDSON BLVD	FLINT	MI	48504	
759	HARTMAN, ELEANOR & HARTMAN, GARY L	3091 HATHERLY AVE	FLINT	MI	48504	
760	JOHNSON, HELEN M	3319 BARTH ST	FLINT	MI	48504	JOHNSON, HELEN M
761	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
762	TAYLOR, D SR & COLLINS, S ET AL	9174 WRIGHT ST	MERRILLVILLE BRA	IN	46410	TAYLOR, D SR & COLLINS, S ET AL
763	EREMIA, JOSEPH & CHARLOTTE	3119 RASKOB ST	FLINT	MI	48504	EREMIA, JOSEPH & CHARLOTTE
764	ISAAC, IRA JR & NANCY	3139 N STEVENSON ST	FLINT	MI	48504	ISAAC, IRA JR & NANCY
765	CASADONTE, DAVID J & RHONDA L TR	3366 PONEMAH DR	FENTON	MI	48430	
766	MCINTOSH, TAMI	2621 CLEMENT ST	FLINT	MI	48504	MCINTOSH, TAMI
767	BROHN, CONNIE L	3100 WALTON ST	FLINT	MI	48504	
768	HARBOUR PORTFOLIO VII LP	PO BOX 1996	IRMO	SC	29063	
769	DREW, BERNARD & DREW, CHRISTEL	1161 N BALLENGER HWY STE	FLINT	MI	48504	DREW, BERNARD & DREW, CHRISTEL
770	HUGHES, RICHARD W & DEBRA M	G1215 DONALDSON BLVD	FLINT	MI	48504	
771	KUKULKA, DOROTHY M ET AL	1709 WABASH AVE	FLINT	MI	48504	KUKULKA, DOROTHY M ET AL
772	RANDLE, SONYA	3307 MACKIN RD	FLINT	MI	48504	RANDLE, SONYA
773	CONERLY, BENNETTA N	3120 RASKOB ST	FLINT	MI	48504	CONERLY, BENNETTA N
774	WILLIAMS, MARY A	3123 BERKLEY ST	FLINT	MI	48504	WILLIAMS, MARY A
775	HARTMAN, ELEANOR	3091 HATHERLY AVE	FLINT	MI	48504	
776	DAVIS, MARK & CHERYL L	3083 DEVONSHIRE ST	FLINT	MI	48504	
777	SOUTHALL, WARREN	3140 N STEVENSON ST	FLINT	MI	48504	SOUTHALL, WARREN
778	HUMPHRIES, DENIKA	3132 BERKLEY ST	FLINT	MI	48504	HUMPHRIES, DENIKA
779	ISAAC, IMAD	1320 W HILL RD	FLINT	MI	48507	
780	HARRIS, WAYMOND & LEOLA	3320 BARTH ST	FLINT	MI	48504	HARRIS, WAYMOND & LEOLA
781	BROWN, LARRY L	3111 RASKOB ST	FLINT	MI	48504	BROWN, LARRY L
782	CLARK, DORIS J	G1219 DONALDSON BLVD	FLINT	MI	48504	HUGHES, DEBRA M
783	P & L PROPERTIES INC	3105 FLUSHING RD	FLINT	MI	48504	
784	GRANBERRY, JEANETTA	3306 MACKIN RD	FLINT	MI	48504	GRANBERRY, JEANETTA
785	GRANT, JUDITH	3042 FLUSHING RD	FLINT	MI	48504	GRANT, JUDITH
786	NORTON, ROGERS & LINDA REV TRUST	3401 CONCORD ST	FLINT	MI	48504	NORTON, ROGERS & LINDA REV TRUST
787	WILSON, STACIE D	3135 N STEVENSON ST	FLINT	MI	48504	WILSON, STACIE D
788	JOHNSON, GREGORY L & PATRICIA	3066 CHATFIELD	FLINT	MI	48504	
789	EVANS, MILDRED	3201 WOLCOTT ST	FLINT	MI	48504	EVANS, MILDRED
790	GILLES, TAMIKA	3210 WOLCOTT ST	FLINT	MI	48504	GILLES, TAMIKA
791	1105 HOUSES, LLC	521 W COURT ST	FLINT	MI	48503	1105 HOUSES, LLC
792	CONNOR, MARIAN E	1608 WABASH AVE	FLINT	MI	48504	CONNOR, MARIAN E
793	ALSTON, AURELIOUS JR	2305 CRESTBROOK	FLINT	MI	48507	ALSTON, AURELIOUS JR
794	TEAMWORK PROPERTIES, LLC	5519 COPLEY SQ	GRAND BLANC	MI	48439	TEAMWORK PROPERTIES, LLC
795	TOWNER, BRENDA A	3119 BERKLEY ST	FLINT	MI	48504	TOWNER, BRENDA A
796	NAVARRE-JONES, KIMBERLY G	4266 E COLDWATER RD	FLINT	MI	48506	
797	CHANDLER, WILLIE & LILLIAN	3220 PROSPECT ST	FLINT	MI	48504	CHANDLER, WILLIE & LILLIAN
798	SHELLEY, THEODORA E	1614 WABASH AVE	FLINT	MI	48504	SHELLEY, THEODORA E

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
757	1920 FRANCIS AVE	FLINT	MI	48505	0	No	16200	16459	16200	13292043.51400000
758					100	No	19500	19300	19500	13292043.52910000
759					0	No	10200	10160	10200	13292043.62200000
760	3319 BARTH ST	FLINT	MI	48504	100	No	13900	14122	13900	13292047.27650000
761	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292048.73810000
762	9174 WRIGHT ST	MERRILLVILLE BRA	IN	46410	0	No	16200	16459	16200	13292051.96140000
763	3119 RASKOB ST	FLINT	MI	48504	0	No	10500	10668	10500	13292055.18560000
764	3139 N STEVENSON ST	FLINT	MI	48504	100	No	15400	15646	15400	13292058.48160000
765					0	No	14100	13910	14100	13292060.75960000
766	2621 CLEMENT ST	FLINT	MI	48504	0	No	13300	13512	13300	13292066.26010000
767					100	No	17700	17570	17700	13292070.71870000
768					0	No	12900	12700	12900	13292071.22530000
769	1161 N BALLENGER HWY STE	FLINT	MI	48504	100	No	38300	38912	38300	13292073.33990000
770					0	No	11200	11170	11200	13292077.11640000
771	1709 WABASH AVE	FLINT	MI	48504	100	No	13100	13309	13100	13292077.67120000
772	3307 MACKIN RD	FLINT	MI	48504	100	No	15400	15646	15400	13292079.10870000
773	3120 RASKOB ST	FLINT	MI	48504	100	No	8300	8432	8300	13292080.63210000
774	3123 BERKLEY ST	FLINT	MI	48504	100	No	12600	12801	12600	13292082.80160000
775					100	No	18500	18280	18500	13292085.36000000
776					100	No	21500	21330	21500	13292087.71210000
777	3140 N STEVENSON ST	FLINT	MI	48504	100	No	20800	21132	20800	13292088.72190000
778	3132 BERKLEY ST	FLINT	MI	48504	100	No	15200	15443	15200	13292090.42550000
779					0	No	15700	15540	15700	13292090.95780000
780	3320 BARTH ST	FLINT	MI	48504	100	No	13700	13919	13700	13292092.11180000
781	3111 RASKOB ST	FLINT	MI	48504	0	No	9500	9652	9500	13292092.98560000
782	G1219 DONALDSON BLVD	FLINT	MI	48504	100	No	13200	13100	13200	13292094.65460000
783					0	No	113800	116730	113800	13292096.68460000
784	3306 MACKIN RD	FLINT	MI	48504	100	No	11600	11785	11600	13292100.38340000
785	3042 FLUSHING RD	FLINT	MI	48504	0	No	67700	66348	67700	13292103.33700000
786	3401 CONCORD ST	FLINT	MI	48504	100	No	15900	16154	15900	13292103.76600000
787	3135 N STEVENSON ST	FLINT	MI	48504	100	No	16500	16764	16500	13292103.93810000
788					100	No	3400	3450	3400	13292104.31750000
789	3201 WOLCOTT ST	FLINT	MI	48504	100	No	17800	18084	17800	13292105.42970000
790	3210 WOLCOTT ST	FLINT	MI	48504	100	No	21200	21539	21200	13292105.64680000
791	521 W COURT ST	FLINT	MI	48503	0	No	800	812	800	13292107.51100000
792	1608 WABASH AVE	FLINT	MI	48504	100	No	13700	13919	13700	13292111.98120000
793	2305 CRESTBROOK	FLINT	MI	48507	0	No	8700	8839	8700	13292117.67530000
794	5519 COPLEY SQ	GRAND BLANC	MI	48439	0	No	14200	14427	14200	13292119.50160000
795	3119 BERKLEY ST	FLINT	MI	48504	100	No	13000	13208	13000	13292121.24830000
796					0	No	6500	6500	6500	13292125.33990000
797	3220 PROSPECT ST	FLINT	MI	48504	100	No	20900	21234	20900	13292125.75570000
798	1614 WABASH AVE	FLINT	MI	48504	100	No	13300	13512	13300	13292130.47550000

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	AJ	AK	AL	AM	AN	AO	AP
757	558132.04798800	344.35794992	7185.37158203000	344.35802132000			
758	555161.02415800	311.26404498	5432.50195313000	311.26397014200			
759	556149.05337900	376.52474444	6471.50292969000	376.52471288800			
760	559026.67177400	306.40851270	5443.88525391000	306.40855119900			
761	556951.11421600	294.11123075	4537.06054688000	294.11127370800			
762	559454.23125200	352.21370722	7585.96337891000	352.21374696500			
763	557257.43954800	283.89801556	4007.23291016000	283.89808919800			
764	557834.74126100	292.90224984	4702.31835938000	292.90220381100			
765	555207.59854600	296.26718229	4719.02490234000	296.26718302600			
766	556992.42359100	296.76887696	4692.48876953000	296.76890605900			
767	555452.74529700	281.46412414	4200.14404297000	281.46415720200			
768	555557.00410400	271.28571413	3796.94921875000	271.28570636100			
769	558400.67013100	501.97654604	15119.44921880000	501.97667070300			
770	555249.99177900	291.74503794	4506.72998047000	291.74510015800			
771	559517.01361500	322.55323522	6102.94482422000	322.55334566000			
772	558682.94539700	345.52999469	6937.72558594000	345.52989758600			
773	557424.69536200	294.28598920	4334.07226563000	294.28600813500			
774	557537.57831200	291.42440670	4337.80712891000	291.42441316200			
775	556132.03600900	370.74879679	6350.04394531000	370.74877569400			
776	555830.40404600	428.45426677	11416.24609380000	428.45418520300			
777	558002.98183700	337.26063080	6748.00878906000	337.26066078900			
778	557711.80162000	375.33128709	8707.92773438000	375.33128560700			
779	555719.05135200	388.66199408	9335.47070313000	388.66207652500			
780	559130.83829600	312.83884578	5667.47558594000	312.83884968900			
781	557242.04123900	292.19168863	4417.35107422000	292.19171617900			
782	555295.10345500	307.75303968	5314.82421875000	307.75301303200			
783	556404.63664300	826.35527970	40078.94433590000	826.35543851400			
784	558859.05326600	359.67319747	7471.23730469000	359.67327414900			
785	556690.31379100	495.71513504	12688.58056640000	495.71517389100			
786	559579.89620300	351.56727766	7574.64843750000	351.56724654400			
787	557816.58005800	298.70091219	4983.93505859000	298.70088345800			
788	554878.08693000	379.54581630	8976.80859375000	379.54586627400			
789	558106.66683000	326.93044583	6326.03955078000	326.93051919700			
790	558281.08830700	369.33458171	8457.77050781000	369.33462950300			
791	557089.64434000	293.12906669	4565.87255859000	293.12913513500			
792	559179.32547700	293.52931621	4729.06884766000	293.52931368900			
793	557408.52666700	292.56597217	4257.93017578000	292.56594418100			
794	558970.06845900	369.23506712	8353.00488281000	369.23512268500			
795	557521.79251200	291.37564689	4318.15673828000	291.37565435000			
796	555989.32969300	464.16768210	13206.97363280000	464.16764944500			
797	558554.38620000	353.81284128	7642.97607422000	353.81274017400			
798	559224.97329800	298.95474491	5008.26708984000	298.95474890200			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
799	52587	52601	40-10-278-042	1159 SUTTON AVE	25-40-10-278-042	4010278042	042	Lot	401-RESIDENTIAL
800	52589	52603	07-10-576-066	1231 DONALDSON BLVD	25-07-10-576-066	0710576066	224	Lot	401-RESIDENTIAL
801	52599	52613	07-10-576-105	3075 CLARENDON ST	25-07-10-576-105	0710576105	335/6	Lot	401-RESIDENTIAL
802	52604	52618	40-10-227-005	3301 MACKIN RD	25-40-10-227-005	4010227005	005	Lot	401-RESIDENTIAL
803	52605	52619	07-10-527-011	3087 HATHERLY AVE	25-07-10-527-011	0710527011	72/3	Lot	401-RESIDENTIAL
804	52608	52622	40-10-281-006	1116 SUTTON AVE	25-40-10-281-006	4010281006	006	Lot	400-RESIDENTIAL VACANT
805	52615	52629	40-10-231-028	3136 N STEVENSON ST	25-40-10-231-028	4010231028	028	Lot	401-RESIDENTIAL
806	52617	52631	40-10-233-011	3124 BERKLEY ST	25-40-10-233-011	4010233011	011	Lot	401-RESIDENTIAL
807	52618	52632	07-10-576-067	1235 DONALDSON BLVD	25-07-10-576-067	0710576067	225	Lot	401-RESIDENTIAL
808	52633	52647	40-03-483-001	3319 CLEMENT ST	25-40-03-483-001	4003483001	001	Lot	401-RESIDENTIAL
809	52637	52651	40-10-233-004	3129 N STEVENSON ST	25-40-10-233-004	4010233004	004	Lot	401-RESIDENTIAL
810	52639	52653	40-10-278-033	1163 SUTTON AVE	25-40-10-278-033	4010278033	033	Lot	400-RESIDENTIAL VACANT
811	52641	52655	40-10-276-019	3112 RASKOB ST	25-40-10-276-019	4010276019	019	Lot	401-RESIDENTIAL
812	52642	52656	40-03-478-011	3402 CONCORD ST	25-40-03-478-011	4003478011	011	Lot	401-RESIDENTIAL
813	52643	52657	40-03-485-014	3302 MACKIN RD	25-40-03-485-014	4003485014	014	Lot	401-RESIDENTIAL
814	52645	52659	07-10-576-068	1245 DONALDSON BLVD	25-07-10-576-068	0710576068	226-8	Lot	401-RESIDENTIAL
815	52647	52661	07-10-576-122	3092 STRATFORD ST	25-07-10-576-122	0710576122	-171/172	Lot	401-RESIDENTIAL
816	52655	52669	40-10-281-005	SUTTON AVE	25-40-10-281-005	4010281005	005	Lot	400-RESIDENTIAL VACANT
817	52662	52676	40-10-276-007	3115 BERKLEY ST	25-40-10-276-007	4010276007	007	Lot	401-RESIDENTIAL
818	52680	52694	40-10-278-032	3101 RASKOB ST	25-40-10-278-032	4010278032	032	Lot	401-RESIDENTIAL
819	52693	52707	40-03-485-005	3301 BARTH ST	25-40-03-485-005	4003485005	005	Lot	401-RESIDENTIAL
820	52697	52711	40-10-281-004	1124 SUTTON AVE	25-40-10-281-004	4010281004	004	Lot	401-RESIDENTIAL
821	52702	52716	07-10-576-050	3071 DEVONSHIRE ST	25-07-10-576-050	0710576050	167/8	Lot	401-RESIDENTIAL
822	52705	52719	40-10-229-007	3209 PROSPECT ST	25-40-10-229-007	4010229007	007	Lot	401-RESIDENTIAL
823	52714	52728	40-10-229-034	3202 WOLCOTT ST	25-40-10-229-034	4010229034	034	Lot	401-RESIDENTIAL
824	52720	52734	40-03-483-010	3306 BARTH ST	25-40-03-483-010	4003483010	010	Lot	401-RESIDENTIAL
825	52722	52736	40-10-281-016	3026 FLUSHING RD	25-40-10-281-016	4010281016	016	Lot	201-COMMERCIAL IMPROVED
826	52723	52737	07-10-576-115	3066 CHATFIELD ST	25-07-10-576-115	0710576115	349/50	Lot	401-RESIDENTIAL
827	52724	52738	40-10-233-012	3120 BERKLEY ST	25-40-10-233-012	4010233012	012	Lot	401-RESIDENTIAL
828	52734	52748	40-10-231-043	3131 WOLCOTT ST	25-40-10-231-043	4010231043	043	Lot	401-RESIDENTIAL
829	52750	52764	40-10-231-029	3130 N STEVENSON ST	25-40-10-231-029	4010231029	029	Lot	401-RESIDENTIAL
830	52761	52775	40-10-281-023	1128 SUTTON AVE	25-40-10-281-023	4010281023	023	Lot	401-RESIDENTIAL
831	52764	52778	40-10-233-005	3123 N STEVENSON ST	25-40-10-233-005	4010233005	005	Lot	401-RESIDENTIAL
832	52767	52781	40-03-481-004	3320 CLEMENT ST	25-40-03-481-004	4003481004	004	Lot	401-RESIDENTIAL
833	52768	52782	07-10-576-104	3071 CLARENDON ST	25-07-10-576-104	0710576104	334	Lot	401-RESIDENTIAL
834	52772	52786	07-10-400-015	N BALLENGER HWY	25-07-10-400-015	0710400015	400-015	Tract	200-COMMERCIAL VACANT
835	52778	52792	40-10-276-024	3102 RASKOB ST	25-40-10-276-024	4010276024	024	Lot	401-RESIDENTIAL
836	52779	52793	40-10-227-006	3215 MACKIN RD	25-40-10-227-006	4010227006	006	Lot	401-RESIDENTIAL
837	52781	52795	07-10-576-031	3074 DEVONSHIRE ST	25-07-10-576-031	0710576031	108	Lot	401-RESIDENTIAL
838	52782	52796	40-03-485-006	3225 BARTH ST	25-40-03-485-006	4003485006	006	Lot	401-RESIDENTIAL
839	52784	52798	40-03-485-015	3220 MACKIN RD	25-40-03-485-015	4003485015	015	Lot	401-RESIDENTIAL
840	52786	52800	40-10-227-056	3214 PROSPECT ST	25-40-10-227-056	4010227056	056	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
799	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1159	SUTTON AVE	FLINT	48504
800	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		1231	DONALDSON BLVD	FLINT	48504
801	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		3075	CLARENDON ST	FLINT	48504
802	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3301	MACKIN RD	FLINT	48504
803	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080		3087	HATHERLY AVE	FLINT	48504
804	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1116	SUTTON AVE	FLINT	48504
805	Residential	0.14000000	0.14	FLINT SCHOOLS	25010	N	3136	STEVENSON ST	FLINT	48504
806	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3124	BERKLEY ST	FLINT	48504
807	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		1235	DONALDSON BLVD	FLINT	48504
808	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3319	CLEMENT ST	FLINT	48504
809	Residential	0.13000000	0.13	FLINT SCHOOLS	25010	N	3129	STEVENSON ST	FLINT	48504
810	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1163	SUTTON AVE	FLINT	48504
811	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3112	RASKOB ST	FLINT	48504
812	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3402	CONCORD ST	FLINT	48504
813	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3302	MACKIN RD	FLINT	48504
814	Residential	0.31999999	0.32	CARMAN-AINSWORTH SCHOOLS	25080		1245	DONALDSON BLVD	FLINT	48504
815	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3092	STRATFORD ST	FLINT	48504
816	Residential	0.10000000	0.1	FLINT SCHOOLS	25010			SUTTON AVE	FLINT	48504
817	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3115	BERKLEY ST	FLINT	48504
818	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3101	RASKOB ST	FLINT	48504
819	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3301	BARTH ST	FLINT	48504
820	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1124	SUTTON AVE	FLINT	48504
821	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3071	DEVONSHIRE ST	FLINT	48504
822	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3209	PROSPECT ST	FLINT	48504
823	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3202	WOLCOTT ST	FLINT	48504
824	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3306	BARTH ST	FLINT	48504
825	Commercial	0.28000000	0.28	FLINT SCHOOLS	25010		3026	FLUSHING RD	FLINT	48504
826	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		3066	CHATFIELD ST	FLINT	48504
827	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3120	BERKLEY ST	FLINT	48504
828	Residential	0.28999999	0.29	FLINT SCHOOLS	25010		3131	WOLCOTT ST	FLINT	48504
829	Residential	0.13000000	0.13	FLINT SCHOOLS	25010	N	3130	STEVENSON ST	FLINT	48504
830	Residential	0.20999999	0.21	FLINT SCHOOLS	25010		1128	SUTTON AVE	FLINT	48504
831	Residential	0.11000000	0.11	FLINT SCHOOLS	25010	N	3123	STEVENSON ST	FLINT	48504
832	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3320	CLEMENT ST	FLINT	48504
833	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3071	CLARENDON ST	FLINT	48504
834	Commercial	0.85000002	0.85	CARMAN-AINSWORTH SCHOOLS	25080	N		BALLENGER HWY	FLINT	48504
835	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3102	RASKOB ST	FLINT	48504
836	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3215	MACKIN RD	FLINT	48504
837	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3074	DEVONSHIRE ST	FLINT	48504
838	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3225	BARTH ST	FLINT	48504
839	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3220	MACKIN RD	FLINT	48504
840	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		3214	PROSPECT ST	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
799	GILLESPIE, MATTHEW & WF DENISE	1159 SUTTON AVE	FLINT	MI	48504	GILLESPIE, MATTHEW & WF DENISE
800	ANNUNZIATA, VINCENZO	G1231 DONALDSON BLVD	FLINT	MI	48504	
801	GORTON, JOE	1234 PINEHURST	FLINT	MI	48507	FANNIE MAE
802	HALFORD, BETTY J	3301 MACKIN RD	FLINT	MI	48504	HALFORD, BETTY J
803	ERVIN, TRACINE	3087 HATHERLY AVE	FLINT	MI	48504	TREASURE ENTERPRISE
804	GRANT, JUDITH I	3042 FLUSHING RD	FLINT	MI	48504	GRANT, JUDITH I
805	DUNCAN, ELONZO	3136 N STEVENSON ST	FLINT	MI	48504	DUNCAN, ELONZO
806	HIGGINBOTHAM, CHERRI	3124 BERKLEY ST	FLINT	MI	48504	HIGGINBOTHAM, CHERRI
807	LEFF, ROBERT A	5332 DURWOOD DR	SWARTZ CREEK	MI	48473	
808	TOLBERT, ANTHONY	6435 JENNINGS RD	MOUNT MORRIS	MI	48458	TOLBERT, ANTHONY
809	EWING, BOBBIE	3129 N STEVENSON ST	FLINT	MI	48504	EWING, BOBBIE
810	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	GENESEE COUNTY LAND BANK
811	LASSITER, MARLENE L	3112 RASKOB ST	FLINT	MI	48504	LASSITER, MARLENE L
812	SAMS, WILLIAM E SR	3412 CONCORD ST	FLINT	MI	48504	SAMS, WILLIAM E SR
813	HARRIS, OMAR J	3302 MACKIN RD	FLINT	MI	48504	HARRIS, OMAR J
814	VERKENNES, JAMIE	G1245 DONALDSON BLVD	FLINT	MI	48504	TOWNE MORTGAGE COMPANY
815	SUTTON, JULIA	3092 STRATFORD ST	FLINT	MI	48504	
816	GRANT, JUDITH I	3042 FLUSHING RD	FLINT	MI	48504	GRANT, JUDITH I
817	COLLINS, PRESTON	2902 EATON PL	FLINT	MI	48506	COLLINS, PRESTON
818	WILLIAMS, SHARISLA	3101 RASKOB ST	FLINT	MI	48504	WILLIAMS, SHARISLA
819	CR CAPITAL GROUP, LLC	45 KNOLLWOOD RD STE 400	ELMSFORD	NY	10523	CR CAPITAL GROUP, LLC
820	UNUVAR, MUSTAFA	4156 CALKINS RD	FLINT	MI	48532	UNUVAR, MUSTAFA
821	FEDERAL NATIONAL MORTGAGE ASSOC	14523 SW MILLIKAN WAY	BEAVERTON	OR	97005	
822	EPPS, SANDRA	3209 PROSPECT ST	FLINT	MI	48504	EPPS, SANDRA
823	H U D	4400 WILL ROGERS PKWY STE	OKLAHOMA CITY	OK	73108	H U D
824	EDELEN, THOMAS H SR	3306 BARTH ST	FLINT	MI	48504	EDELEN, THOMAS H SR
825	MORSE, TIMOTHY & WF DONNA	412 E ROLSTON RD	LINDEN	MI	48451	MORSE, TIMOTHY & WF DONNA
826	JOHNSON, GREGORY L & PATRICIA	3066 CHATFIELD ST	FLINT	MI	48504	
827	MOORE, VIRDEAN	302 E ATHERTON RD	FLINT	MI	48507	MOORE, VIRDEAN
828	MCGAUGHY, JOEL & KATHLEEN	3131 WOLCOTT ST	FLINT	MI	48504	MCGAUGHY, JOEL & KATHLEEN
829	RICHMOND, DENNIS & ROSE	3130 N STEVENSON ST	FLINT	MI	48504	RICHMOND, DENNIS & ROSE
830	UNUVAR, MUSTAFA	4156 CALKINS RD	FLINT	MI	48532	UNUVAR, MUSTAFA
831	ARMSTEAD, LOIS	2638 PINETREE DR	FLINT	MI	48506	ARMSTEAD, LOIS
832	MAYNIE, TYRONE & WILLA	3320 CLEMENT ST	FLINT	MI	48504	MAYNIE, TYRONE & WILLA
833	BAKER, GERALD & ANDERSON, KATHRYN	3071 CLARENDON ST	FLINT	MI	48504	TDM INC
834	FILIPPIS INVESTMENT CO, LLC	2845 CROOKS RD	ROCHESTER HILLS	MI	48309	
835	GIBSON, LENITTA	3102 RASKOB ST	FLINT	MI	48504	GIBSON, LENITTA
836	POINTER, LILLIAN J	3215 MACKIN RD	FLINT	MI	48504	POINTER, LILLIAN J
837	CARPENTER, BLAIR M	3074 DEVONSHIRE ST	FLINT	MI	48504	MARTIN, DARRALD A
838	HIGH, CLAUDE	2013 COPEMAN	FLINT	MI	48504	HIGH, CLAUDE
839	GOFF, JEWELL L	3220 MACKIN RD	FLINT	MI	48504	GOFF, JEWELL L
840	MARSHALL, OTIS & WF CAROLYN	3214 PROSPECT ST	FLINT	MI	48504	MARSHALL, OTIS & WF CAROLYN

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
799	1159 SUTTON AVE	FLINT	MI	48504	100	No	5000	5080	5000	13292131.36030000
800					100	No	9200	9140	9200	13292131.75140000
801	14221 DALLAS PKWY STE 100	DALLAS	TX	75254	0	No	13300	13200	13300	13292139.35310000
802	3301 MACKIN RD	FLINT	MI	48504	100	No	19500	19812	19500	13292143.24500000
803	1161 N BALLENGER HWY #12	FLINT	MI	48504	0	No	26100	25800	26100	13292143.26170000
804	3042 FLUSHING RD	FLINT	MI	48504	0	No	600	425	600	13292143.87110000
805	3136 N STEVENSON ST	FLINT	MI	48504	0	No	15200	15443	15200	13292146.77980000
806	3124 BERKLEY ST	FLINT	MI	48504	100	No	12100	12293	12100	13292148.01510000
807					0	No	11200	11070	11200	13292148.25620000
808	6435 JENNINGS RD	MOUNT MORRIS	MI	48458	0	No	13400	13614	13400	13292151.16070000
809	3129 N STEVENSON ST	FLINT	MI	48504	100	No	15600	15849	15600	13292152.61880000
810	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	0	Yes	0	0	0	13292154.57510000
811	3112 RASKOB ST	FLINT	MI	48504	100	No	8400	8534	8400	13292154.88190000
812	3412 CONCORD ST	FLINT	MI	48504	0	No	11700	11887	11700	13292154.88650000
813	3302 MACKIN RD	FLINT	MI	48504	100	No	10900	11074	10900	13292154.95180000
814	2170 E BIG BEAVER RD	TROY	MI	48083	0	No	20600	20420	20600	13292156.32790000
815					100	No	9600	9550	9600	13292157.21730000
816	3042 FLUSHING RD	FLINT	MI	48504	0	No	600	425	600	13292160.71820000
817	2902 EATON PL	FLINT	MI	48506	0	No	10000	10160	10000	13292162.94000000
818	3101 RASKOB ST	FLINT	MI	48504	100	No	8000	8128	8000	13292170.46150000
819	45 KNOLLWOOD RD STE 400	ELMSFORD	NY	10523	0	No	12200	12395	12200	13292174.69420000
820	4156 CALKINS RD	FLINT	MI	48532	0	No	7300	7416	7300	13292176.33270000
821					0	No	8000	7920	8000	13292178.70980000
822	3209 PROSPECT ST	FLINT	MI	48504	100	No	23700	24079	23700	13292179.19030000
823	4400 WILL ROGERS PKWY STE	OKLAHOMA CITY	OK	73108	0	No	17300	17576	17300	13292182.59080000
824	3306 BARTH ST	FLINT	MI	48504	100	No	12900	13106	12900	13292184.77710000
825	412 E ROLSTON RD	LINDEN	MI	48451	0	No	26200	26314	26200	13292185.10990000
826					100	No	18800	18590	18800	13292185.23290000
827	302 E ATHERTON RD	FLINT	MI	48507	0	No	11500	11684	11500	13292185.39750000
828	3131 WOLCOTT ST	FLINT	MI	48504	100	No	17200	17475	17200	13292191.39340000
829	3130 N STEVENSON ST	FLINT	MI	48504	100	No	16500	16764	16500	13292199.25160000
830	4156 CALKINS RD	FLINT	MI	48532	0	No	9600	9753	9600	13292201.05620000
831	2638 PINETREE DR	FLINT	MI	48506	0	No	15000	15240	15000	13292201.52160000
832	3320 CLEMENT ST	FLINT	MI	48504	100	No	16500	16764	16500	13292202.60320000
833	521 W COURT ST	FLINT	MI	48503	100	No	9600	9550	9600	13292202.68290000
834					0	No	10100	10260	10100	13292204.65380000
835	3102 RASKOB ST	FLINT	MI	48504	100	No	10400	10566	10400	13292209.11630000
836	3215 MACKIN RD	FLINT	MI	48504	100	No	15200	15443	15200	13292209.90990000
837	4062 LONE PINE RD	HARRISON	MI	48625	100	No	10000	9950	10000	13292210.60150000
838	2013 COPEMAN	FLINT	MI	48504	0	No	11500	11684	11500	13292210.76700000
839	3220 MACKIN RD	FLINT	MI	48504	100	No	11700	11887	11700	13292211.39580000
840	3214 PROSPECT ST	FLINT	MI	48504	0	No	20400	20585	20400	13292213.13090000

Container Specialties Inc
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	AJ	AK	AL	AM	AN	AO	AP
799	557147.34012700	363.10708623	8132.86035156000	363.10713562300			
800	555403.40954000	313.48905138	5387.52246094000	313.48901577200			
801	554973.44865100	386.83017271	9302.66894531000	386.83010831700			
802	558657.35751500	367.43671605	8139.65820313000	367.43671284100			
803	556100.06099800	428.21390669	10994.95068360000	428.21386324800			
804	556770.38549600	301.90939590	4749.80175781000	301.90948076200			
805	557978.85372300	328.05473608	6260.60693359000	328.05472068300			
806	557688.44584300	288.14165094	4193.80810547000	288.14167134300			
807	555450.01115300	305.19295126	5006.91259766000	305.19297295900			
808	559275.20612300	313.28582422	5718.99023438000	313.28585902400			
809	557795.79964900	309.24824725	5501.72509766000	309.24822314700			
810	557202.78613700	283.02401302	4078.13671875000	283.02401086700			
811	557393.07993700	292.83867596	4287.53955078000	292.83869780400			
812	559701.18443000	336.45988680	6854.53906250000	336.45990449400			
813	558836.67575800	334.59445201	6046.12011719000	334.59455770300			
814	555524.06262600	478.13302438	13757.00048830000	478.13297781800			
815	555695.90524000	304.57852522	5117.62207031000	304.57835936100			
816	556810.87726100	298.26443680	4561.30224609000	298.26437531200			
817	557503.72155400	308.05823509	5170.23925781000	308.05830178700			
818	557241.66431600	288.58124782	4396.11669922000	288.58125711000			
819	558948.02455100	289.19257901	4148.94580078000	289.19253971800			
820	556850.91478100	298.12392089	4558.98046875000	298.12388410800			
821	555795.41165500	354.70719475	7769.06250000000	354.70718820200			x
822	558359.82783900	355.88813562	7781.90185547000	355.88811117700			
823	558252.53396600	365.37300485	8080.44091797000	365.37302171700			
824	559118.67813000	373.43359520	8578.84228516000	373.43365100000			
825	556633.25357200	441.93544124	12067.34667970000	441.93542468600			
826	554848.12199600	363.47236737	8186.62988281000	363.47240599400			
827	557672.36409000	288.57339904	4227.91894531000	288.57346010400			
828	558070.91952700	448.48154812	12424.66406250000	448.48154421900			
829	557956.79248900	314.37075498	5540.86621094000	314.37077793500			
830	556910.32536600	383.35677686	9082.36474609000	383.35672722400			
831	557775.81729400	298.76119717	4977.74658203000	298.76127115300			
832	559398.27656000	370.61850730	8531.67138672000	370.61841656900			
833	554949.97383900	296.98753505	4674.17285156000	296.98756305100			
834	554427.13197900	919.14594774	36974.33789060000	919.14594330100			
835	557337.19377500	294.43336683	4548.42675781000	294.43326704700			
836	558629.92596100	357.05312276	7579.68847656000	357.05309735600			
837	555952.93326800	306.13802545	5276.22216797000	306.13801854500			
838	558932.17191500	288.71438461	4130.28955078000	288.71426669100			
839	558813.68457500	366.73866979	7895.29003906000	366.73865953800			
840	558517.13181800	416.11712058	10778.67578130000	416.11709319800			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
841	52796	52810	40-03-483-005	3309 CLEMENT ST	25-40-03-483-005	4003483005	005	Lot	401-RESIDENTIAL
842	52806	52820	40-10-281-013	FULSOM ST	25-40-10-281-013	4010281013	013	Lot	400-RESIDENTIAL VACANT
843	52818	52832	40-10-276-023	1205 SUTTON AVE	25-40-10-276-023	4010276023	023	Lot	401-RESIDENTIAL
844	52832	52846	07-10-576-030	3073 HATHERLY AVE	25-07-10-576-030	0710576030	107/71	Lot	401-RESIDENTIAL
845	52833	52847	07-10-576-048	3084 STRATFORD ST	25-07-10-576-048	0710576048	163/4	Lot	401-RESIDENTIAL
846	52834	52848	40-03-481-002	1710 WABASH AVE	25-40-03-481-002	4003481002	002	Lot	401-RESIDENTIAL
847	52842	52856	40-10-276-022	1209 SUTTON AVE	25-40-10-276-022	4010276022	022	Lot	401-RESIDENTIAL
848	52848	52862	40-10-281-012	FULSOM ST	25-40-10-281-012	4010281012	012	Lot	400-RESIDENTIAL VACANT
849	52850	52864	07-10-576-081	3079 WALTON ST	25-07-10-576-081	0710576081	279-99	Lot	401-RESIDENTIAL
850	52852	52866	40-03-483-011	BARTH ST	25-40-03-483-011	4003483011	011	Lot	400-RESIDENTIAL VACANT
851	52854	52868	40-10-233-013	3112 BERKLEY ST	25-40-10-233-013	4010233013	013	Lot	401-RESIDENTIAL
852	52855	52869	07-10-576-103	3067 CLARENDON ST	25-07-10-576-103	0710576103	333	Lot	401-RESIDENTIAL
853	52857	52871	40-10-276-021	1213 SUTTON AVE	25-40-10-276-021	4010276021	021	Lot	401-RESIDENTIAL
854	52864	52878	40-10-229-040	PROSPECT ST	25-40-10-229-040	4010229040	040	Lot	400-RESIDENTIAL VACANT
855	52871	52885	40-10-233-006	3117 N STEVENSON ST	25-40-10-233-006	4010233006	006	Lot	401-RESIDENTIAL
856	52881	52895	40-10-281-017	FULSOM ST	25-40-10-281-017	4010281017	017	Lot	400-RESIDENTIAL VACANT
857	52882	52896	40-10-231-030	3124 N STEVENSON ST	25-40-10-231-030	4010231030	030	Lot	401-RESIDENTIAL
858	52883	52897	40-10-229-021	3136 WOLCOTT ST	25-40-10-229-021	4010229021	021	Lot	401-RESIDENTIAL
859	52886	52900	40-10-279-004	1152 SUTTON AVE	25-40-10-279-004	4010279004	004	Lot	401-RESIDENTIAL
860	52889	52903	40-03-481-001	3315 CONCORD ST	25-40-03-481-001	4003481001	001	Lot	401-RESIDENTIAL
861	52892	52906	07-10-576-032	3070 DEVONSHIRE ST	25-07-10-576-032	0710576032	109	Lot	401-RESIDENTIAL
862	52898	52912	40-10-276-020	3105 BERKLEY ST	25-40-10-276-020	4010276020	020	Lot	401-RESIDENTIAL
863	52903	52917	40-10-281-018	FULSOM ST	25-40-10-281-018	4010281018	018	Lot	400-RESIDENTIAL VACANT
864	52904	52918	40-03-485-007	3221 BARTH ST	25-40-03-485-007	4003485007	007	Lot	401-RESIDENTIAL
865	52908	52922	07-10-576-116	3060 CHATFIELD ST	25-07-10-576-116	0710576116	351/2	Lot	401-RESIDENTIAL
866	52911	52925	07-10-400-017	1101 N BALLENGER HWY	25-07-10-400-017	0710400017	400-017	Tract	201-COMMERCIAL IMPROVED
867	52921	52935	07-10-576-049	1271 DONALDSON BLVD	25-07-10-576-049	0710576049	165/6	Lot	401-RESIDENTIAL
868	52934	52948	40-10-279-003	1156 SUTTON AVE	25-40-10-279-003	4010279003	003	Lot	401-RESIDENTIAL
869	52937	52951	40-03-485-016	3214 MACKIN RD	25-40-03-485-016	4003485016	016	Lot	401-RESIDENTIAL
870	52939	52953	40-10-281-010	1123 FULSOM ST	25-40-10-281-010	4010281010	010	Lot	401-RESIDENTIAL
871	52940	52954	40-10-227-007	3207 MACKIN RD	25-40-10-227-007	4010227007	007	Lot	401-RESIDENTIAL
872	52941	52955	07-10-576-065	3078 WALTON ST	25-07-10-576-065	0710576065	222/3	Lot	401-RESIDENTIAL
873	52956	52970	40-10-231-014	3125 WOLCOTT ST	25-40-10-231-014	4010231014	014	Lot	401-RESIDENTIAL
874	52957	52971	40-03-483-013	BARTH ST	25-40-03-483-013	4003483013	013	Lot	400-RESIDENTIAL VACANT
875	52960	52974	07-10-527-001	3083 FLUSHING RD	25-07-10-527-001	0710527001	1-6/67-70	Lot	201-COMMERCIAL IMPROVED
876	52963	52977	40-03-483-006	3305 CLEMENT ST	25-40-03-483-006	4003483006	006	Lot	401-RESIDENTIAL
877	52969	52983	40-03-481-010	3310 CLEMENT ST	25-40-03-481-010	4003481010	010	Lot	401-RESIDENTIAL
878	52990	53004	40-10-281-009	1127 FULSOM ST	25-40-10-281-009	4010281009	009	Lot	401-RESIDENTIAL
879	53009	53023	40-10-233-007	3111 N STEVENSON ST	25-40-10-233-007	4010233007	007	Lot	401-RESIDENTIAL
880	53029	53043	40-10-279-002	1160 SUTTON AVE	25-40-10-279-002	4010279002	002	Lot	401-RESIDENTIAL
881	53031	53045	40-10-281-008	1131 FULSOM ST	25-40-10-281-008	4010281008	008	Lot	401-RESIDENTIAL
882	53032	53046	40-10-229-039	3131 PROSPECT ST	25-40-10-229-039	4010229039	039	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
841	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3309	CLEMENT ST	FLINT	48504
842	Residential	0.09000000	0.09	FLINT SCHOOLS	25010			FULSOM ST	FLINT	48504
843	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1205	SUTTON AVE	FLINT	48504
844	Residential	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080		3073	HATHERLY AVE	FLINT	48504
845	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080		3084	STRATFORD ST	FLINT	48504
846	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		1710	WABASH AVE	FLINT	48504
847	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1209	SUTTON AVE	FLINT	48504
848	Residential	0.10000000	0.1	FLINT SCHOOLS	25010			FULSOM ST	FLINT	48504
849	Residential	0.64999998	0.65	CARMAN-AINSWORTH SCHOOLS	25080		3079	WALTON ST	FLINT	48504
850	Residential	0.10000000	0.1	FLINT SCHOOLS	25010			BARTH ST	FLINT	48504
851	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3112	BERKLEY ST	FLINT	48504
852	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		3067	CLARENDON ST	FLINT	48504
853	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1213	SUTTON AVE	FLINT	48504
854	Residential	0.15000001	0.15	FLINT SCHOOLS	25010			PROSPECT ST	FLINT	48504
855	Residential	0.11000000	0.11	FLINT SCHOOLS	25010	N	3117	STEVENSON ST	FLINT	48504
856	Residential	0.05000000	0.05	FLINT SCHOOLS	25010			FULSOM ST	FLINT	48504
857	Residential	0.14000000	0.14	FLINT SCHOOLS	25010	N	3124	STEVENSON ST	FLINT	48504
858	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3136	WOLCOTT ST	FLINT	48504
859	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1152	SUTTON AVE	FLINT	48504
860	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3315	CONCORD ST	FLINT	48504
861	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3070	DEVONSHIRE ST	FLINT	48504
862	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3105	BERKLEY ST	FLINT	48504
863	Residential	0.05000000	0.05	FLINT SCHOOLS	25010			FULSOM ST	FLINT	48504
864	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3221	BARTH ST	FLINT	48504
865	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3060	CHATFIELD ST	FLINT	48504
866	Commercial	1.85000002	1.85	CARMAN-AINSWORTH SCHOOLS	25080	N	1101	BALLENGER HWY	FLINT	48504
867	Residential	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080		1271	DONALDSON BLVD	FLINT	48504
868	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1156	SUTTON AVE	FLINT	48504
869	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3214	MACKIN RD	FLINT	48504
870	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1123	FULSOM ST	FLINT	48504
871	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3207	MACKIN RD	FLINT	48504
872	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3078	WALTON ST	FLINT	48504
873	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3125	WOLCOTT ST	FLINT	48504
874	Residential	0.09000000	0.09	FLINT SCHOOLS	25010			BARTH ST	FLINT	48504
875	Commercial	1.40999997	1.41	CARMAN-AINSWORTH SCHOOLS	25080		3083	FLUSHING RD	FLINT	48504
876	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3305	CLEMENT ST	FLINT	48504
877	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3310	CLEMENT ST	FLINT	48504
878	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1127	FULSOM ST	FLINT	48504
879	Residential	0.12000000	0.12	FLINT SCHOOLS	25010	N	3111	STEVENSON ST	FLINT	48504
880	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		1160	SUTTON AVE	FLINT	48504
881	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1131	FULSOM ST	FLINT	48504
882	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3131	PROSPECT ST	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
841	GILLARD, D & JAMES, GARRETT	3309 CLEMENT ST	FLINT	MI	48504	GILLARD, D & JAMES, GARRETT
842	GRANT, JUDITH	3042 FLUSHING RD	FLINT	MI	48504	GRANT, JUDITH
843	KATTOLA, JONATHAN	206 W PIERSON RD	FLINT	MI	48505	KATTOLA, JONATHAN
844	HARTMAN, ELEANOR TR	3091 HATHERLY AVE	FLINT	MI	48504	
845	PEPITONE, RANDEE & RAPPLEY, JANE	3084 STRATFORD ST	FLINT	MI	48504	
846	JOSEY, KAREN & CISOWSKI, BETTY	1710 WABASH AVE	FLINT	MI	48504	JOSEY, KAREN & CISOWSKI, BETTY
847	BLACKWELL, EL-HAILE S III	2262 KEVIN DAVID DR	FLINT	MI	48505	BLACKWELL, EL-HAILE S III
848	GRANT, JUDITH	3042 FLUSHING RD	FLINT	MI	48504	GRANT, JUDITH
849	HYDE, JOHN H JR	3079 WALTON ST	FLINT	MI	48504	HYDE, JOHN H SR & JOANNE E
850	EDELEN, THOMAS H SR	3306 BARTH ST	FLINT	MI	48504	EDELEN, THOMAS H SR
851	WILSON, LILLIE MAE	3112 BERKLEY ST	FLINT	MI	48504	WILSON, LILLIE MAE
852	ROOS, MICHAEL	3019 GEHRING DR	FLINT	MI	48506	
853	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK
854	EPPS, SANDRA	3209 PROSPECT ST	FLINT	MI	48504	EPPS, SANDRA
855	PITTS, HOSETTA R	3117 N STEVENSON ST	FLINT	MI	48504	PITTS, HOSETTA R
856	GRANT, JUDITH	3042 FLUSHING RD	FLINT	MI	48504	GRANT, JUDITH
857	COCHRAN, MELISSA	3124 N STEVENSON ST	FLINT	MI	48504	COCHRAN, MELISSA
858	WRIGHT, MARTHA M	3136 WOLCOTT ST	FLINT	MI	48504	WRIGHT, MARTHA M
859	ARMSTRONG, JOHN & EDNA	1152 SUTTON AVE	FLINT	MI	48504	ARMSTRONG, JOHN & EDNA
860	CUBA, DANIEL E	3315 CONCORD ST	FLINT	MI	48504	CUBA, DANIEL E
861	NEUROHR, MICHAEL J & JODEEN R	3070 DEVONSHIRE ST	FLINT	MI	48504	NEUROHR, MICHAEL J
862	LENOIR, KING SR	3105 BERKLEY ST	FLINT	MI	48504	LENOIR, KING SR
863	HARTMAN, GRAYDON & BROWNE, KEITH	1470 JOANN ST	FENTON	MI	48430	HARTMAN, GRAYDON & BROWNE, KEITH
864	NORTON, QUINTISHA L	3221 BARTH ST	FLINT	MI	48504	NORTON, QUINTISHA L
865	HODGE, PEGGY K	3060 CHATFIELD ST	FLINT	MI	48504	CASTLE, RICHARD D ETAL
866	FILIPPIS INVESTMENT CO LLC	2845 CROOKS RD	ROCHESTER	MI	48309	
867	NAGY, DOUGLAS B & KATHERYN M	G1271 DONALDSON BLVD	FLINT	MI	48504	
868	JC GEMINI III-C, LLC	2025 W BALBOA BLVD STE C	NEWPORT BEACH	CA	92663	JC GEMINI III-C, LLC
869	TAYLOR LOWE, COURTNEY	3214 MACKIN RD	FLINT	MI	48504	TAYLOR LOWE, COURTNEY
870	HARTMAN, GRAYDON & BROWNE, KEITH	10159 CARMER RD	FENTON	MI	48430	HARTMAN, GRAYDON & BROWNE, KEITH
871	LATHON, JOHNIE & WF GERTRUDE	3207 MACKIN RD	FLINT	MI	48504	LATHON, JOHNIE & WF GERTRUDE
872	THOMAS, RICHARD P	8504 WOODRIDGE DR	DAVISON	MI	48423	
873	LOPEZ, GERALD L	3125 WOLCOTT ST	FLINT	MI	48504	LOPEZ, GERALD L
874	CORTHION, IVA	3220 BARTH ST	FLINT	MI	48504	CORTHION, IVA
875	DEVOS, BRIAN G	59150 PILOT LN	RAY	MI	48096	
876	FLEMING, VICKIE E	3305 CLEMENT ST	FLINT	MI	48504	FLEMING, VICKIE E
877	MOSLEY, JAMES	3310 CLEMENT ST	FLINT	MI	48504	MOSLEY, JAMES
878	SCHENDER, WILLIAM JR	1127 FULSOM ST	FLINT	MI	48504	SCHENDER, WILLIAM JR
879	COOLEY, MARY L	1111 ROYAL CREST DR	FLINT	MI	48532	COOLEY, MARY L
880	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK
881	MESSENGER, DENNIS & WF ANNIE	104 RIPLEY ST	LINDEN	MI	48451	MESSENGER, DENNIS & WF ANNIE
882	WINGATE, ALFREDIA	3131 PROSPECT ST	FLINT	MI	48504	WINGATE, ALFREDIA

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
841	3309 CLEMENT ST	FLINT	MI	48504	100	No	13700	13919	13700	13292217.74020000
842	3042 FLUSHING RD	FLINT	MI	48504	0	No	500	425	500	13292222.49290000
843	206 W PIERSON RD	FLINT	MI	48505	0	No	12200	12395	12200	13292225.63610000
844					0	No	13500	13410	13500	13292230.16910000
845					100	No	20600	20420	20600	13292230.46900000
846	1710 WABASH AVE	FLINT	MI	48504	100	No	11100	11277	11100	13292230.81790000
847	2262 KEVIN DAVID DR	FLINT	MI	48505	0	No	12200	12395	12200	13292234.10300000
848	3042 FLUSHING RD	FLINT	MI	48504	0	No	600	425	600	13292239.05770000
849	2709 GREENBRIAR CT	TEMPLE	TX	76502	100	No	23000	22860	23000	13292239.47390000
850	3306 BARTH ST	FLINT	MI	48504	100	No	600	609	600	13292240.86440000
851	3112 BERKLEY ST	FLINT	MI	48504	100	No	11900	12090	11900	13292242.11980000
852					0	No	8900	8730	8900	13292242.29120000
853	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13292242.63940000
854	3209 PROSPECT ST	FLINT	MI	48504	0	No	2400	2136	2400	13292245.25880000
855	3117 N STEVENSON ST	FLINT	MI	48504	0	No	11900	12090	11900	13292247.53400000
856	3042 FLUSHING RD	FLINT	MI	48504	0	No	300	212	300	13292251.55250000
857	3124 N STEVENSON ST	FLINT	MI	48504	100	No	16800	17068	16800	13292252.01290000
858	3136 WOLCOTT ST	FLINT	MI	48504	100	No	18600	18897	18600	13292252.08710000
859	1152 SUTTON AVE	FLINT	MI	48504	100	No	9600	9753	9600	13292253.10950000
860	3315 CONCORD ST	FLINT	MI	48504	100	No	12000	12192	12000	13292254.81990000
861	PO BOX 234	FLUSHING	MI	48433	0	No	9400	9240	9400	13292256.51350000
862	3105 BERKLEY ST	FLINT	MI	48504	100	No	14800	15036	14800	13292258.17360000
863	1470 JOANN ST	FENTON	MI	48430	0	No	300	212	300	13292259.53430000
864	3221 BARTH ST	FLINT	MI	48504	100	No	12200	12395	12200	13292259.93640000
865	PO BOX 263	TAWAS CITY	MI	48764	100	No	11800	11780	11800	13292261.55560000
866					0	No	191500	196490	191500	13292261.98160000
867					100	No	18000	17780	18000	13292265.02290000
868	2025 W BALBOA BLVD STE C	NEWPORT BEACH	CA	92663	0	No	9500	9652	9500	13292270.46600000
869	3214 MACKIN RD	FLINT	MI	48504	100	No	14500	14732	14500	13292271.27700000
870	10159 CARMER RD	FENTON	MI	48430	0	No	2800	2844	2800	13292271.78790000
871	3207 MACKIN RD	FLINT	MI	48504	100	No	15700	15951	15700	13292271.89890000
872					0	No	10300	10260	10300	13292272.15890000
873	3125 WOLCOTT ST	FLINT	MI	48504	100	No	13000	13208	13000	13292277.33740000
874	3220 BARTH ST	FLINT	MI	48504	100	No	600	609	600	13292277.51480000
875					0	No	77600	79750	77600	13292278.74330000
876	3305 CLEMENT ST	FLINT	MI	48504	100	No	15700	15951	15700	13292279.71700000
877	3310 CLEMENT ST	FLINT	MI	48504	100	No	11600	11785	11600	13292281.39910000
878	1127 FULSOM ST	FLINT	MI	48504	100	No	3800	3860	3800	13292287.78220000
879	1111 ROYAL CREST DR	FLINT	MI	48532	0	No	15600	15849	15600	13292295.01230000
880	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13292304.18320000
881	104 RIPLEY ST	LINDEN	MI	48451	0	No	9600	9753	9600	13292304.25510000
882	3131 PROSPECT ST	FLINT	MI	48504	100	No	14600	14833	14600	13292304.72750000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
841	559220.32173100	348.66224477	7150.99853516000	348.66222836900			
842	556694.75480000	275.44418843	3937.07812500000	275.44419680300			
843	557376.39170500	288.26367146	4224.80126953000	288.26368009400			
844	556056.80294800	409.22287352	10337.70312500000	409.22279006000			x
845	555668.12844700	419.59056249	10971.92285160000	419.59060086000			
846	559465.98464700	322.66934197	6141.06494141000	322.66931201100			
847	557417.26435700	342.93714822	4512.42285156000	342.93711753300			
848	556733.67655300	282.98224841	4288.94140625000	282.98232565600			
849	555165.19186300	681.40905742	28279.24853520000	681.40901481000			
850	559095.13262000	289.54301251	4187.09570313000	289.54308299400			
851	557649.62267500	368.94133079	8388.83886719000	368.94132388100			
852	554934.99465100	285.08182596	4058.99414063000	285.08190749700			
853	557455.37913600	346.80756168	5428.40917969000	346.80757773200			
854	558334.28999800	328.40369444	6417.49365234000	328.40370066400			
855	557756.57007900	297.44760989	4914.16406250000	297.44753878000			
856	556763.21669200	235.85753945	1970.01757813000	235.85744012800			
857	557935.10243200	329.41367269	6312.30273438000	329.41367858700			
858	558219.15325900	361.38647515	7853.40527344000	361.38654832300			
859	557030.49112900	292.26583199	4628.71533203000	292.26592484700			
860	559523.99672500	327.29871397	6383.34423828000	327.29859918600			
861	555938.33881500	280.86264767	4174.48583984000	280.86273084000			
862	557495.97116400	361.16304641	6184.69189453000	361.16306189900			
863	556783.52460100	242.93640652	2301.20214844000	242.93634079500			
864	558912.01344700	343.64833070	7021.22705078000	343.64830294000			
865	554819.15192800	358.56928599	7925.66357422000	358.56908642800			
866	554581.75975500	1168.55197854	80793.30566410000	1168.55196056000			
867	555762.25114500	406.71814524	10327.52880860000	406.71822941900			
868	557069.98739600	279.87248781	3988.26025391000	279.87246438100			
869	558789.54520800	348.16200322	6845.39941406000	348.16189584200			
870	556813.65702800	279.60174453	4081.48242188000	279.60176745000			
871	558604.53158700	346.46282697	7008.49560547000	346.46278264500			
872	555378.37441700	320.32705671	5784.31542969000	320.32708785800			
873	558034.84092900	326.76778543	6319.60400391000	326.76782230000			
874	559080.53499000	287.26272185	4077.48730469000	287.26273185100			
875	556321.48148400	1007.35408717	61335.63574220000	1007.35409401000			x
876	559194.91106100	352.85631034	7370.15820313000	352.85637379200			
877	559375.72349700	334.47216317	6556.95800781000	334.47226695500			
878	556852.45003400	281.96129860	4177.65087891000	281.96139133300			
879	557737.45203300	303.87706472	5234.16210938000	303.87711038800			
880	557111.29057700	394.88739217	7654.38964844000	394.88736266600			
881	556892.28566000	285.66196999	4339.37597656000	285.66194104600			
882	558309.75050200	327.54078775	6402.77392578000	327.54076661100			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
883	53045	53059	40-10-231-031	3118 N STEVENSON ST	25-40-10-231-031	4010231031	031	Lot	401-RESIDENTIAL
884	53060	53074	40-10-233-019	3106 BERKLEY ST	25-40-10-233-019	4010233019	019	Lot	401-RESIDENTIAL
885	53077	53091	40-10-282-015	FLUSHING RD	25-40-10-282-015	4010282015	015	Lot	200-COMMERCIAL VACANT
886	53079	53093	07-10-576-027	1283 DONALDSON BLVD	25-07-10-576-027	0710576027	102	Lot	401-RESIDENTIAL
887	53081	53095	40-10-227-053	3202 PROSPECT ST	25-40-10-227-053	4010227053	053	Lot	401-RESIDENTIAL
888	53083	53097	40-03-485-008	3213 BARTH ST	25-40-03-485-008	4003485008	008	Lot	401-RESIDENTIAL
889	53085	53099	07-10-576-102	3063 CLARENDON ST	25-07-10-576-102	0710576102	330-2	Lot	401-RESIDENTIAL
890	53092	53106	40-03-481-005	3309 CONCORD ST	25-40-03-481-005	4003481005	005	Lot	401-RESIDENTIAL
891	53103	53117	40-10-229-043	3128 WOLCOTT ST	25-40-10-229-043	4010229043	043	Lot	401-RESIDENTIAL
892	53106	53120	07-10-576-076	3074 WALTON ST	25-07-10-576-076	0710576076	237	Lot	401-RESIDENTIAL
893	53112	53126	40-03-483-014	3220 BARTH ST	25-40-03-483-014	4003483014	014	Lot	401-RESIDENTIAL
894	53117	53131	07-10-576-064	1244 DONALDSON BLVD	25-07-10-576-064	0710576064	220/1	Lot	401-RESIDENTIAL
895	53118	53132	07-10-576-117	3050 CHATFIELD ST	25-07-10-576-117	0710576117	353	Lot	401-RESIDENTIAL
896	53122	53136	40-10-279-013	3042 SLOAN ST	25-40-10-279-013	4010279013	013	Lot	401-RESIDENTIAL
897	53123	53137	07-10-576-080	3068 CLARENDON ST	25-07-10-576-080	0710576080	278/301	Lot	401-RESIDENTIAL
898	53125	53139	40-10-233-018	1255 SUTTON AVE	25-40-10-233-018	4010233018	018	Lot	401-RESIDENTIAL
899	53127	53141	40-03-485-017	3206 MACKIN RD	25-40-03-485-017	4003485017	017	Lot	401-RESIDENTIAL
900	53134	53148	40-10-279-001	1168 SUTTON AVE	25-40-10-279-001	4010279001	001	Lot	401-RESIDENTIAL
901	53135	53149	40-10-227-008	3201 MACKIN RD	25-40-10-227-008	4010227008	008	Lot	401-RESIDENTIAL
902	53140	53154	07-10-576-028	1287 DONALDSON BLVD	25-07-10-576-028	0710576028	103	Lot	401-RESIDENTIAL
903	53148	53162	40-10-231-015	3119 WOLCOTT ST	25-40-10-231-015	4010231015	015	Lot	401-RESIDENTIAL
904	53149	53163	40-03-481-011	3302 CLEMENT ST	25-40-03-481-011	4003481011	011	Lot	401-RESIDENTIAL
905	53157	53171	07-10-576-029	1293 DONALDSON BLVD	25-07-10-576-029	0710576029	104/6	Lot	401-RESIDENTIAL
906	53160	53174	07-10-576-016	3070 HATHERLY AVE	25-07-10-576-016	0710576016	46	Lot	401-RESIDENTIAL
907	53161	53175	40-03-483-007	3221 CLEMENT ST	25-40-03-483-007	4003483007	007	Lot	401-RESIDENTIAL
908	53163	53177	40-10-233-017	1259 SUTTON AVE	25-40-10-233-017	4010233017	017	Lot	401-RESIDENTIAL
909	53179	53193	40-10-231-032	3112 N STEVENSON ST	25-40-10-231-032	4010231032	032	Lot	401-RESIDENTIAL
910	53185	53199	40-10-233-016	SUTTON AVE	25-40-10-233-016	4010233016	016	Lot	400-RESIDENTIAL VACANT
911	53186	53200	40-10-229-010	3127 PROSPECT ST	25-40-10-229-010	4010229010	010	Lot	401-RESIDENTIAL
912	53189	53203	40-10-277-004	3050 RASKOB ST	25-40-10-277-004	4010277004	004	Lot	401-RESIDENTIAL
913	53190	53204	40-10-279-014	SLOAN ST	25-40-10-279-014	4010279014	014	Lot	400-RESIDENTIAL VACANT
914	53206	53220	40-03-481-006	3301 CONCORD ST	25-40-03-481-006	4003481006	006	Lot	401-RESIDENTIAL
915	53209	53223	07-10-576-047	3068 STRATFORD ST	25-07-10-576-047	0710576047	162	Lot	401-RESIDENTIAL
916	53217	53231	07-10-576-077	3068 WALTON ST	25-07-10-576-077	0710576077	238	Lot	401-RESIDENTIAL
917	53222	53236	40-10-233-015	1267 SUTTON AVE	25-40-10-233-015	4010233015	015	Lot	401-RESIDENTIAL
918	53227	53241	40-10-282-008	1114 FULSOM ST	25-40-10-282-008	4010282008	008	Lot	401-RESIDENTIAL
919	53232	53246	40-03-485-019	MACKIN RD	25-40-03-485-019	4003485019	019	Lot	400-RESIDENTIAL VACANT
920	53234	53248	40-03-485-010	1513 SENECA ST	25-40-03-485-010	4003485010	010	Lot	401-RESIDENTIAL
921	53238	53252	40-03-483-015	3212 BARTH ST	25-40-03-483-015	4003483015	015	Lot	401-RESIDENTIAL
922	53242	53256	07-10-576-118	CHATFIELD ST	25-07-10-576-118	0710576118	355	Lot	400-RESIDENTIAL VACANT
923	53250	53264	40-03-481-012	3226 CLEMENT ST	25-40-03-481-012	4003481012	012	Lot	401-RESIDENTIAL
924	53260	53274	40-10-277-003	SUTTON AVE	25-40-10-277-003	4010277003	003	Lot	400-RESIDENTIAL VACANT

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
883	Residential	0.14000000	0.14	FLINT SCHOOLS	25010	N	3118	STEVENSON ST	FLINT	48504
884	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3106	BERKLEY ST	FLINT	48504
885	Commercial	0.09000000	0.09	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
886	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		1283	DONALDSON BLVD	FLINT	48504
887	Residential	0.25000000	0.25	FLINT SCHOOLS	25010		3202	PROSPECT ST	FLINT	48504
888	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3213	BARTH ST	FLINT	48504
889	Residential	0.28999999	0.29	CARMAN-AINSWORTH SCHOOLS	25080		3063	CLARENDON ST	FLINT	48504
890	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3309	CONCORD ST	FLINT	48504
891	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3128	WOLCOTT ST	FLINT	48504
892	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3074	WALTON ST	FLINT	48504
893	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3220	BARTH ST	FLINT	48504
894	Residential	0.20000000	0.2	CARMAN-AINSWORTH SCHOOLS	25080		1244	DONALDSON BLVD	FLINT	48504
895	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3050	CHATFIELD ST	FLINT	48504
896	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3042	SLOAN ST	FLINT	48504
897	Residential	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080		3068	CLARENDON ST	FLINT	48504
898	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1255	SUTTON AVE	FLINT	48504
899	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3206	MACKIN RD	FLINT	48504
900	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		1168	SUTTON AVE	FLINT	48504
901	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3201	MACKIN RD	FLINT	48504
902	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		1287	DONALDSON BLVD	FLINT	48504
903	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3119	WOLCOTT ST	FLINT	48504
904	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3302	CLEMENT ST	FLINT	48504
905	Residential	0.33000001	0.33	CARMAN-AINSWORTH SCHOOLS	25080		1293	DONALDSON BLVD	FLINT	48504
906	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3070	HATHERLY AVE	FLINT	48504
907	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3221	CLEMENT ST	FLINT	48504
908	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1259	SUTTON AVE	FLINT	48504
909	Residential	0.12000000	0.12	FLINT SCHOOLS	25010	N	3112	STEVENSON ST	FLINT	48504
910	Residential	0.09000000	0.09	FLINT SCHOOLS	25010			SUTTON AVE	FLINT	48504
911	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3127	PROSPECT ST	FLINT	48504
912	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3050	RASKOB ST	FLINT	48504
913	Residential	0.09000000	0.09	FLINT SCHOOLS	25010			SLOAN ST	FLINT	48504
914	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3301	CONCORD ST	FLINT	48504
915	Residential	0.14000000	0.14	CARMAN-AINSWORTH SCHOOLS	25080		3068	STRATFORD ST	FLINT	48504
916	Residential	0.14000000	0.14	CARMAN-AINSWORTH SCHOOLS	25080		3068	WALTON ST	FLINT	48504
917	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1267	SUTTON AVE	FLINT	48504
918	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1114	FULSOM ST	FLINT	48504
919	Residential	0.11000000	0.11	FLINT SCHOOLS	25010			MACKIN RD	FLINT	48504
920	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1513	SENECA ST	FLINT	48504
921	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3212	BARTH ST	FLINT	48504
922	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080			CHATFIELD ST	FLINT	48504
923	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3226	CLEMENT ST	FLINT	48504
924	Residential	0.10000000	0.1	FLINT SCHOOLS	25010			SUTTON AVE	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
883	MILLER, CHARLIE G & WF SARETA V	3118 N STEVENSON ST	FLINT	MI	48504	MILLER, CHARLIE G & WF SARETA V
884	WATERFORD, JAMES C	3106 BERKLEY ST	FLINT	MI	48504	WATERFORD, JAMES C
885	R & E MORGAN, LLC	G-6443 W PIERSON RD	FLUSHING	MI	48433	R & E MORGAN, LLC
886	HIGGINS, PHILLIP O	801 S SAGINAW ST, STE #30	FLINT	MI	48502	HIGGINS, MARVIN
887	GARRISON, CHARLES & HATTIE	3202 PROSPECT ST	FLINT	MI	48504	GARRISON, CHARLES & HATTIE
888	WELLS FARGO BANK, NA	3476 STATEVIEW BLVD	FORT MILL	SC	29715	WELLS FARGO BANK, NA
889	VANLANDUYT, CHRISTOPHER M	3063 CLARENDON ST	FLINT	MI	48504	
890	SHACKLEFORD, THEORA	3309 CONCORD ST	FLINT	MI	48504	SHACKLEFORD, THEORA
891	JONES, DEBORAH	7297 VASSAR RD	OTISVILLE	MI	48463	JONES, DEBORAH
892	HORNAK, MYLAN H	3074 WALTON ST	FLINT	MI	48504	
893	CORTHION, IVA	3220 BARTH ST	FLINT	MI	48504	CORTHION, IVA
894	HARRIS, SALLY JO	G1244 DONALDSON BLVD	FLINT	MI	48504	
895	RAPPLEY, JANE	3050 CHATFIELD ST	FLINT	MI	48504	
896	FERGUSON, ROBERT & WHITE, M	G-3343 W RIDGEWAY AVE	FLINT	MI	48504	FERGUSON, ROBERT & WHITE, M
897	TRIPLETT, NADIA	1501 VANDERBELT	FLINT	MI	48502	
898	THOMAS, TERRENCE L	1162 E FOSS AVE	FLINT	MI	48505	THOMAS, TERRENCE L
899	MOBLEY, CHARLIE & KAREN	3206 MACKIN RD	FLINT	MI	48504	MOBLEY, CHARLIE & KAREN
900	ZUNIGA, CECILIO III & SWALLOWS, T	1168 SUTTON AVE	FLINT	MI	48504	ZUNIGA, CECILIO III & SWALLOWS, T
901	HARRIS, MADISON L	2261 WOODS WEST DR	FLUSHING	MI	48433	HARRIS, MADISON L
902	HURST, PATRICIA G	G1287 DONALDSON BLVD	FLINT	MI	48504	
903	BAKER, MARVIN	3119 WOLCOTT ST	FLINT	MI	48504	BAKER, MARVIN
904	GILES, LOVIE	3302 CLEMENT ST	FLINT	MI	48504	GILES, LOVIE
905	NAU, HAROLD R	G1293 DONALDSON BLVD	FLINT	MI	48504	
906	WILLIAMS, KAREN D	1276 N DYE RD	FLINT	MI	48532	
907	CHAPMAN, MURPHY	3221 CLEMENT ST	FLINT	MI	48504	CHAPMAN, MURPHY
908	COOPER, GREGORY & WF J	2428 S DUFFIELD RD	LENNON	MI	48449	COOPER, GREGORY & WF J
909	ROBB FAMILY TRUST	1210 SAN JUAN DR	FLINT	MI	48504	ROBB FAMILY TRUST
910	GENESEE COUNTY LAND BANK	452 S SAGINAW ST FLR #2	FLINT	MI	48502	GENESEE COUNTY LAND BANK
911	GILL, STANLEY SR	3127 PROSPECT ST	FLINT	MI	48504	GILL, STANLEY SR
912	BROWNE, BOOTH & BARBARA	5015 CEDARDALE LN	FLUSHING	MI	48433	BROWNE, BOOTH & BARBARA
913	FERGUSON, ROBERT & WHITE, M	G-3343 W RIDGEWAY AVE	FLINT	MI	48504	FERGUSON, ROBERT & WHITE, M
914	MCCLURE, BARBARA A	3301 CONCORD ST	FLINT	MI	48504	MCCLURE, BARBARA A
915	SCHAFER, JOSEPH J	3068 STRATFORD ST	FLINT	MI	48504	OLDER, BERNARD & ALBERTA E
916	GRULKE, JUDITH C	3068 WALTON ST	FLINT	MI	48504	
917	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
918	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
919	GENESEE COUNTY LAND BANK	452 S SAGINAW ST FLR #2	FLINT	MI	48502	GENESEE COUNTY LAND BANK
920	CHAMBERS, PAMELA	3126 MACKIN RD	FLINT	MI	48504	CHAMBERS, PAMELA
921	HOME LAND BLDG & RMDLG	PO BOX 32007	FLINT	MI	48532	HOME LAND BLDG & RMDLG
922	KOUZA, RAAD J & BERNADETTE F TR	1229 N BALLENGER HWY	FLINT	MI	48504	
923	FULLER, ARLYN & SARAH	3226 CLEMENT ST	FLINT	MI	48504	FULLER, ARLYN & SARAH
924	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
883	3118 N STEVENSON ST	FLINT	MI	48504	100	No	16000	16256	16000	13292307.62740000
884	3106 BERKLEY ST	FLINT	MI	48504	100	No	11900	12090	11900	13292313.36530000
885	G-6443 W PIERSON RD	FLUSHING	MI	48433	0	No	6900	7010	6900	13292316.20210000
886	PO BOX 2035	SOUTHFIELD	MI	48037	100	No	14000	13910	14000	13292316.22330000
887	3202 PROSPECT ST	FLINT	MI	48504	100	No	20500	20828	20500	13292316.48310000
888	3476 STATEVIEW BLVD	FORT MILL	SC	29715	0	No	11500	11684	11500	13292316.58250000
889					100	No	11600	11580	11600	13292316.74380000
890	3309 CONCORD ST	FLINT	MI	48504	0	No	14600	14833	14600	13292318.86970000
891	7297 VASSAR RD	OTISVILLE	MI	48463	0	No	13700	13919	13700	13292320.91920000
892					100	No	15300	15130	15300	13292322.09130000
893	3220 BARTH ST	FLINT	MI	48504	100	No	16600	16865	16600	13292324.23860000
894					0	No	14000	13910	14000	13292326.46410000
895					100	No	15300	15130	15300	13292326.82770000
896	G-3343 W RIDGEWAY AVE	FLINT	MI	48504	0	No	3600	3657	3600	13292327.97800000
897					0	No	15800	15640	15800	13292328.06660000
898	1162 E FOSS AVE	FLINT	MI	48505	0	No	6900	7010	6900	13292328.63710000
899	3206 MACKIN RD	FLINT	MI	48504	100	No	10900	11074	10900	13292328.99060000
900	1168 SUTTON AVE	FLINT	MI	48504	100	No	4400	4470	4400	13292329.84630000
901	2261 WOODS WEST DR	FLUSHING	MI	48433	0	No	12100	16052	12100	13292329.93880000
902					100	No	11700	11580	11700	13292333.30290000
903	3119 WOLCOTT ST	FLINT	MI	48504	100	No	13100	13309	13100	13292336.79880000
904	3302 CLEMENT ST	FLINT	MI	48504	100	No	15000	15240	15000	13292337.85990000
905					100	No	9500	9440	9500	13292341.59690000
906					0	No	12100	11980	12100	13292342.31900000
907	3221 CLEMENT ST	FLINT	MI	48504	0	No	11600	11785	11600	13292343.05940000
908	2428 S DUFFIELD RD	LENNON	MI	48449	0	No	2500	2540	2500	13292344.19270000
909	1210 SAN JUAN DR	FLINT	MI	48504	0	No	11500	11684	11500	13292358.86480000
910	452 S SAGINAW ST FLR #2	FLINT	MI	48502	0	Yes	0	0	0	13292360.39510000
911	3127 PROSPECT ST	FLINT	MI	48504	100	No	19700	20015	19700	13292361.50320000
912	5015 CEDARDALE LN	FLUSHING	MI	48433	0	No	10000	10160	10000	13292363.26210000
913	G-3343 W RIDGEWAY AVE	FLINT	MI	48504	0	No	500	425	500	13292364.32370000
914	3301 CONCORD ST	FLINT	MI	48504	100	No	11100	11277	11100	13292370.71320000
915	3063 STRATFORD ST	FLINT	MI	48504	100	No	15300	15130	15300	13292372.02550000
916					100	No	13100	12900	13100	13292373.06800000
917	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292375.08860000
918	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292377.22830000
919	452 S SAGINAW ST FLR #2	FLINT	MI	48502	0	Yes	0	0	0	13292378.64350000
920	3126 MACKIN RD	FLINT	MI	48504	0	No	11000	11176	11000	13292379.53770000
921	PO BOX 32007	FLINT	MI	48532	0	No	12200	12395	12200	13292380.80010000
922					0	No	2100	2130	2100	13292382.11760000
923	3226 CLEMENT ST	FLINT	MI	48504	100	No	13200	13411	13200	13292384.44170000
924	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13292387.47510000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
883	557911.86550600	328.11583000	6236.03369141000	328.11580321100			
884	557586.73641200	278.14557708	3950.54345703000	278.14563258500			
885	556582.49470300	276.00348167	3829.67871094000	276.00341532700			
886	555892.34313700	312.18595428	5556.61816406000	312.18604291800			
887	558476.83608400	421.21399410	10937.00292970000	421.21402170700			
888	558889.15817600	319.82729683	5779.73925781000	319.82734368600			
889	554906.26271900	448.25656596	12454.56689450000	448.25661092100			
890	559474.63826500	326.02427798	6018.94677734000	326.02426474900			
891	558193.88816700	349.36249602	7325.72070313000	349.36240005000			
892	555359.50401100	312.67965969	5411.54541016000	312.67959074100			
893	559061.06149500	333.51586702	6507.07470703000	333.51597467700			
894	555462.88162600	378.50801538	8924.34667969000	378.50796405100			
895	554794.76497900	312.62512566	5712.79296875000	312.62512230400			
896	557028.67756100	277.89308060	3887.22607422000	277.89306361800			
897	555121.14933500	517.09902840	10126.18261720000	517.09898825300			
898	557622.94573800	275.71176431	3842.78173828000	275.71175778700			
899	558765.50105400	357.68183385	7400.20214844000	357.68192504800			
900	557164.60056000	400.93685720	8606.05419922000	400.93691218200			
901	558581.58006200	338.24041497	6567.37060547000	338.24032977800			
902	555938.40750200	290.10955133	4396.90771484000	290.10949655000			
903	558010.68238000	331.68675388	6570.46826172000	331.68678411600			
904	559352.04965800	327.26263780	6203.58056641000	327.26252795700			
905	556013.14564400	482.85939229	14188.67041020000	482.85932432000			
906	556177.28128600	286.01361903	4523.93603516000	286.01359612500			
907	559168.45201400	356.09081172	7538.07421875000	356.09085503900			
908	557659.81776800	280.09257309	4077.37158203000	280.09255881300			
909	557890.69918300	310.90228394	5328.87646484000	310.90235547800			
910	557696.52530700	274.71143659	3832.91259766000	274.71143089400			
911	558286.73860200	312.07344935	5687.58203125000	312.07337739700			
912	557295.70025500	371.01837561	8538.79052734000	371.01853174700			
913	557014.36880600	280.19758878	3959.32568359000	280.19767214000			
914	559452.44390700	326.48506072	6018.00634766000	326.48512146800			
915	555591.77027800	316.30931146	5983.85986328000	316.30926466700			
916	555340.32397600	322.42049204	5951.93115234000	322.42041234900			
917	557734.39392800	280.29080617	4136.79638672000	280.29090969400			
918	556635.75235900	301.87116081	4547.85791016000	301.87109306800			
919	558744.61162000	312.63298382	4850.16796875000	312.63287132900			
920	558832.74867700	307.96214140	5140.88134766000	307.96219787000			
921	559037.09229400	329.61404712	6312.75292969000	329.61408822300			
922	554774.77992100	314.87582042	5846.18310547000	314.87579119700			
923	559332.37912700	289.89823843	4288.42089844000	289.89824934300			
924	557354.45975200	286.51536162	4276.14208984000	286.51536496700			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
925	53266	53280	07-10-576-101	3051 CLARENDON ST	25-07-10-576-101	0710576101	329	Lot	401-RESIDENTIAL
926	53274	53288	07-10-576-046	DONALDSON BLVD	25-07-10-576-046	0710576046	161	Lot	700-EXEMPT VACANT
927	53279	53293	40-10-227-009	3133 MACKIN RD	25-40-10-227-009	4010227009	009	Lot	401-RESIDENTIAL
928	53283	53297	40-10-282-007	1116 FULSOM ST	25-40-10-282-007	4010282007	007	Lot	401-RESIDENTIAL
929	53284	53298	40-10-231-016	3111 WOLCOTT ST	25-40-10-231-016	4010231016	016	Lot	401-RESIDENTIAL
930	53297	53311	40-10-227-055	PROSPECT ST	25-40-10-227-055	4010227055	055	Lot	400-RESIDENTIAL VACANT
931	53305	53319	40-03-485-009	1517 SENECA ST	25-40-03-485-009	4003485009	009	Lot	401-RESIDENTIAL
932	53308	53322	40-10-279-015	3034 SLOAN ST	25-40-10-279-015	4010279015	015	Lot	401-RESIDENTIAL
933	53316	53330	40-10-279-005	RASKOB ST	25-40-10-279-005	4010279005	005	Lot	400-RESIDENTIAL VACANT
934	53319	53333	40-10-277-002	1214 SUTTON AVE	25-40-10-277-002	4010277002	002	Lot	401-RESIDENTIAL
935	53322	53336	07-10-576-013	DONALDSON BLVD	25-07-10-576-013	0710576013	40	Lot	700-EXEMPT VACANT
936	53334	53348	07-10-576-045	1266 DONALDSON BLVD	25-07-10-576-045	0710576045	160	Lot	401-RESIDENTIAL
937	53348	53362	40-10-282-020	3006 FLUSHING RD	25-40-10-282-020	4010282020	020	Lot	201-COMMERCIAL IMPROVED
938	53356	53370	40-03-483-008	3213 CLEMENT ST	25-40-03-483-008	4003483008	008	Lot	401-RESIDENTIAL
939	53362	53376	40-10-282-006	1120 FULSOM ST	25-40-10-282-006	4010282006	006	Lot	401-RESIDENTIAL
940	53370	53384	40-10-231-038	3106 N STEVENSON ST	25-40-10-231-038	4010231038	038	Lot	401-RESIDENTIAL
941	53374	53388	40-10-229-012	3119 PROSPECT ST	25-40-10-229-012	4010229012	012	Lot	401-RESIDENTIAL
942	53380	53394	40-10-229-042	WOLCOTT ST	25-40-10-229-042	4010229042	042	Lot	400-RESIDENTIAL VACANT
943	53386	53400	40-10-277-001	3039 BERKLEY ST	25-40-10-277-001	4010277001	001	Lot	401-RESIDENTIAL
944	53387	53401	40-03-481-007	3225 CONCORD ST	25-40-03-481-007	4003481007	007	Lot	401-RESIDENTIAL
945	53389	53403	07-10-576-014	1313 DONALDSON BLVD	25-07-10-576-014	0710576014	41	Lot	401-RESIDENTIAL
946	53391	53405	40-03-481-013	3222 CLEMENT ST	25-40-03-481-013	4003481013	013	Lot	401-RESIDENTIAL
947	53392	53406	40-10-282-001	1132 FULSOM ST	25-40-10-282-001	4010282001	001	Lot	401-RESIDENTIAL
948	53398	53412	07-10-576-078	3062 WALTON ST	25-07-10-576-078	0710576078	239	Lot	401-RESIDENTIAL
949	53399	53413	07-10-576-044	1270 DONALDSON BLVD	25-07-10-576-044	0710576044	159	Lot	401-RESIDENTIAL
950	53402	53416	07-10-576-100	3047 CLARENDON ST	25-07-10-576-100	0710576100	328	Lot	201-COMMERCIAL IMPROVED
951	53413	53427	07-10-576-063	3063 STRATFORD ST	25-07-10-576-063	0710576063	217-9	Lot	401-RESIDENTIAL
952	53422	53436	40-10-277-015	3044 RASKOB ST	25-40-10-277-015	4010277015	015	Lot	401-RESIDENTIAL
953	53423	53437	40-10-282-005	1124 FULSOM ST	25-40-10-282-005	4010282005	005	Lot	401-RESIDENTIAL
954	53424	53438	40-10-231-037	1305 SUTTON AVE	25-40-10-231-037	4010231037	037	Lot	401-RESIDENTIAL
955	53439	53453	40-10-279-016	3030 SLOAN ST	25-40-10-279-016	4010279016	016	Lot	401-RESIDENTIAL
956	53443	53457	40-10-279-007	3035 RASKOB ST	25-40-10-279-007	4010279007	007	Lot	401-RESIDENTIAL
957	53457	53471	40-03-483-019	1605 SENECA ST	25-40-03-483-019	4003483019	019	Lot	401-RESIDENTIAL
958	53463	53477	07-10-576-054	3064 STRATFORD ST	25-07-10-576-054	0710576054	173	Lot	401-RESIDENTIAL
959	53467	53481	40-10-231-035	1309 SUTTON AVE	25-40-10-231-035	4010231035	035	Lot	401-RESIDENTIAL
960	53486	53500	07-10-576-015	3061 FLUSHING RD	25-07-10-576-015	0710576015	42-5	Lot	201-COMMERCIAL IMPROVED
961	53492	53506	40-10-227-010	3125 MACKIN RD	25-40-10-227-010	4010227010	010	Lot	401-RESIDENTIAL
962	53493	53507	40-03-481-014	3216 CLEMENT ST	25-40-03-481-014	4003481014	014	Lot	401-RESIDENTIAL
963	53496	53510	40-10-234-006	3040 BERKLEY ST	25-40-10-234-006	4010234006	006	Lot	401-RESIDENTIAL
964	53499	53513	07-10-576-098	N BALLENGER HWY	25-07-10-576-098	0710576098	324/5	Lot	200-COMMERCIAL VACANT
965	53501	53515	40-10-231-034	1313 SUTTON AVE	25-40-10-231-034	4010231034	034	Lot	401-RESIDENTIAL
966	53502	53516	40-03-483-018	1609 SENECA ST	25-40-03-483-018	4003483018	018	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
925	Residential	0.08000000	0.08	CARMAN-AINSWORTH SCHOOLS	25080		3051	CLARENDON ST	FLINT	48504
926	Exempt	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080			DONALDSON BLVD	FLINT	48504
927	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3133	MACKIN RD	FLINT	48504
928	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1116	FULSOM ST	FLINT	48504
929	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3111	WOLCOTT ST	FLINT	48504
930	Residential	0.16000000	0.16	FLINT SCHOOLS	25010			PROSPECT ST	FLINT	48504
931	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		1517	SENECA ST	FLINT	48504
932	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3034	SLOAN ST	FLINT	48504
933	Residential	0.10000000	0.1	FLINT SCHOOLS	25010			RASKOB ST	FLINT	48504
934	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1214	SUTTON AVE	FLINT	48504
935	Exempt	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080			DONALDSON BLVD	FLINT	48504
936	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		1266	DONALDSON BLVD	FLINT	48504
937	Commercial	0.37000000	0.37	FLINT SCHOOLS	25010		3006	FLUSHING RD	FLINT	48504
938	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3213	CLEMENT ST	FLINT	48504
939	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1120	FULSOM ST	FLINT	48504
940	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	3106	STEVENSON ST	FLINT	48504
941	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3119	PROSPECT ST	FLINT	48504
942	Residential	0.34000000	0.34	FLINT SCHOOLS	25010			WOLCOTT ST	FLINT	48504
943	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3039	BERKLEY ST	FLINT	48504
944	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3225	CONCORD ST	FLINT	48504
945	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		1313	DONALDSON BLVD	FLINT	48504
946	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3222	CLEMENT ST	FLINT	48504
947	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1132	FULSOM ST	FLINT	48504
948	Residential	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080		3062	WALTON ST	FLINT	48504
949	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		1270	DONALDSON BLVD	FLINT	48504
950	Commercial	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3047	CLARENDON ST	FLINT	48504
951	Residential	0.25000000	0.25	CARMAN-AINSWORTH SCHOOLS	25080		3063	STRATFORD ST	FLINT	48504
952	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3044	RASKOB ST	FLINT	48504
953	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1124	FULSOM ST	FLINT	48504
954	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1305	SUTTON AVE	FLINT	48504
955	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3030	SLOAN ST	FLINT	48504
956	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3035	RASKOB ST	FLINT	48504
957	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1605	SENECA ST	FLINT	48504
958	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3064	STRATFORD ST	FLINT	48504
959	Residential	0.08000000	0.08	FLINT SCHOOLS	25010		1309	SUTTON AVE	FLINT	48504
960	Commercial	0.56999999	0.57	CARMAN-AINSWORTH SCHOOLS	25080		3061	FLUSHING RD	FLINT	48504
961	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3125	MACKIN RD	FLINT	48504
962	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3216	CLEMENT ST	FLINT	48504
963	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3040	BERKLEY ST	FLINT	48504
964	Commercial	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080	N		BALLENGER HWY	FLINT	48504
965	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1313	SUTTON AVE	FLINT	48504
966	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1609	SENECA ST	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
925	RAPPLEY, HAROLD & RANDEE	3051 CLARENDON ST	FLINT	MI	48504	
926	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502-1832	
927	CHAPMAN, MURPHY	3133 MACKIN RD	FLINT	MI	48504	CHAPMAN, MURPHY
928	TEEPLES, CHRIS A & WF KAREN L	6376 YORKSHIRE NORTH RIDI	FLINT	MI	48532	TEEPLES, CHRIS A & WF KAREN L
929	SUN MANAGEMENT INC	29566 NORTHWESTERN HWY, S	SOUTHFIELD	MI	48034	SUN MANAGEMENT INC
930	WADDELL, JONATHAN	3120 PROSPECT ST	FLINT	MI	48504	WADDELL, JONATHAN
931	HAIRSTON, CEPEDA & WF MARY	3120 BARTH ST	FLINT	MI	48504	HAIRSTON, CEPEDA & WF MARY
932	MURPHY, PAUL	3034 SLOAN ST	FLINT	MI	48504	MURPHY, PAUL
933	ZUNIGA, CECILIO III & SWALLOWS, T	1168 SUTTON AVE	FLINT	MI	48504	ZUNIGA, CECILIO III & SWALLOWS, T
934	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
935	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	
936	BANGS, CARRIE M & HAMILTON, CHAD R	G1266 DONALDSON BLVD	FLINT	MI	48504	GENESEE COUNTY LAND BANK AUTHORITY
937	R & E MORGAN, LLC	G-6443 W PIERSON RD	FLUSHING	MI	48433	R & E MORGAN, LLC
938	PEA, DUNCAN E	3213 CLEMENT ST	FLINT	MI	48504	PEA, DUNCAN E
939	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
940	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK
941	WILSON, CHRISTOPHER	2707 PLAINFIELD AVE	FLINT	MI	48506	WILSON, CHRISTOPHER
942	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
943	TOWNSEND, EDWARD & VELMA	3039 BERKLEY ST	FLINT	MI	48504	TOWNSEND, EDWARD & VELMA
944	SIMMS, VIVIAN T	3225 CONCORD ST	FLINT	MI	48504	SIMMS, VIVIAN T
945	CRAWLEY, ELMER & HURLEY, TIFFANY	G1313 DONALDSON BLVD	FLINT	MI	48504	LEEHNYR, CAROL J
946	BANKS, MADELINE	3222 CLEMENT ST	FLINT	MI	48504	BANKS, MADELINE
947	BROWN, KEITH J	10159 CARMER RD	FENTON	MI	48430	BROWN, KEITH J
948	EDWARDS, CHRISTOPHER	3062 WALTON ST	FLINT	MI	48504	
949	HARRIS, T'NASA	G1270 DONALDSON BLVD	FLINT	MI	48504	
950	KRISHNAMOORTHY, MADHAVAN	7460 DRY CREEK DR APT 2A	GRAND BLANC	MI	48439	
951	OLDER, BERNARD	3063 STRATFORD ST	FLINT	MI	48504	
952	DSOUZA, LOYOLA M	3044 RASKOB ST	FLINT	MI	48504	DSOUZA, LOYOLA M
953	DAVIS, ANNIE L	3609 WISNER ST	FLINT	MI	48504	DAVIS, ANNIE L
954	ANDERSON, AUTUMN	10221 HARTLAND	FENTON	MI	48430	ANDERSON, AUTUMN
955	MARSH, DYMITRIUS	1605 STONE ST	FLINT	MI	48503	MARSH, DYMITRIUS
956	JMZ PROPERTIES, LLC	G-4084 CORUNNA RD STE A	FLINT	MI	48532	JMZ PROPERTIES, LLC
957	STEELE, ANITA	G-6027 DETROIT ST	MOUNT MORRIS	MI	48458	STEELE, ANITA
958	ANDERSON, KIM	3064 STRATFORD ST	FLINT	MI	48504	
959	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK
960	LEE, LANG YAM	700 BOLLENGER	ROCHESTER	MI	48307	
961	LUNDGREN, ETHEL J TRUST	3375 N LINDEN RD, APT 244	FLINT	MI	48504	LUNDGREN, ETHEL J TRUST
962	S & S INVESTMENT HOLDINGS, LLC	7171 HWY 6 NORTH, STE 103	HOUSTON	TX	77095	S & S INVESTMENT HOLDINGS, LLC
963	ANDERSON, KAREN & HUSB TERRY	3040 BERKLEY ST	FLINT	MI	48504	ANDERSON, KAREN & HUSB TERRY
964	KOUZA, RAAD J & BERNADETTE F TR	1229 N BALLENGER HWY	FLINT	MI	48504	
965	HARTSOE, ROBERT	663 PEAK RD	CRESTON	NC	28615	HARTSOE, ROBERT
966	PHILLIPS, CHARLIE & DELORIS	1609 SENECA ST	FLINT	MI	48504	PHILLIPS, CHARLIE & DELORIS

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
925					100	No	6000	5990	6000	13292389.35700000
926					0	Yes	0	0	0	13292391.80550000
927	3133 MACKIN RD	FLINT	MI	48504	0	No	15200	15443	15200	13292393.30270000
928	6376 YORKSHIRE NORTH RIDI	FLINT	MI	48532	0	No	3800	3860	3800	13292394.24550000
929	29566 NORTHWESTERN HWY, S	SOUTHFIELD	MI	48034	0	No	11900	12090	11900	13292394.43990000
930	3120 PROSPECT ST	FLINT	MI	48504	0	No	6100	6197	6100	13292397.39590000
931	3120 BARTH ST	FLINT	MI	48504	0	No	10200	10363	10200	13292399.24980000
932	3034 SLOAN ST	FLINT	MI	48504	100	No	3300	3352	3300	13292400.18750000
933	1168 SUTTON AVE	FLINT	MI	48504	100	No	500	425	500	13292403.48750000
934	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13292404.15910000
935					0	Yes	0	0	0	13292404.94140000
936	452 S SAGINAW ST	FLINT	MI	48502-1832	100	No	13500	13500	13500	13292406.78480000
937	G-6443 W PIERSON RD	FLUSHING	MI	48433	0	No	56800	56692	56800	13292410.27640000
938	3213 CLEMENT ST	FLINT	MI	48504	0	No	13200	13411	13200	13292411.48030000
939	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292413.18310000
940	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13292415.72640000
941	2707 PLAINFIELD AVE	FLINT	MI	48506	0	No	19500	19812	19500	13292416.38270000
942	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292418.11750000
943	3039 BERKLEY ST	FLINT	MI	48504	100	No	12200	12395	12200	13292419.66690000
944	3225 CONCORD ST	FLINT	MI	48504	100	No	11300	11480	11300	13292420.44420000
945	7451 WADE ST	SWARTZ CREEK	MI	48473	100	No	11000	10870	11000	13292420.98850000
946	3222 CLEMENT ST	FLINT	MI	48504	100	No	12400	12598	12400	13292421.40850000
947	10159 CARMER RD	FENTON	MI	48430	0	No	6900	7010	6900	13292422.66820000
948					100	No	11700	11580	11700	13292424.76640000
949					100	No	17000	16760	17000	13292424.93730000
950					0	No	16400	16840	16400	13292425.60810000
951					100	No	19500	19400	19500	13292428.70440000
952	3044 RASKOB ST	FLINT	MI	48504	100	No	8700	8839	8700	13292431.45500000
953	3609 WISNER ST	FLINT	MI	48504	0	No	5400	5486	5400	13292431.58050000
954	10221 HARTLAND	FENTON	MI	48430	0	No	6500	6604	6500	13292432.11980000
955	1605 STONE ST	FLINT	MI	48503	0	No	3000	3048	3000	13292437.79370000
956	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	2500	2540	2500	13292440.10560000
957	G-6027 DETROIT ST	MOUNT MORRIS	MI	48458	0	No	11200	11379	11200	13292443.42480000
958					100	No	9000	8940	9000	13292445.29770000
959	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13292446.66740000
960					0	No	48500	49880	48500	13292454.31000000
961	3375 N LINDEN RD, APT 244	FLINT	MI	48504	0	No	15200	15443	15200	13292457.68180000
962	7171 HWY 6 NORTH, STE 103	HOUSTON	TX	77095	0	No	6900	7010	6900	13292457.97660000
963	3040 BERKLEY ST	FLINT	MI	48504	100	No	11500	11684	11500	13292458.82100000
964					0	No	5300	5380	5300	13292459.16720000
965	663 PEAK RD	CRESTON	NC	28615	0	No	8100	8229	8100	13292461.83740000
966	1609 SENECA ST	FLINT	MI	48504	100	No	13200	13411	13200	13292462.77300000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
925	554879.23934400	279.04696258	3687.64453125000	279.04695942500			
926	555641.55074900	280.82874808	4264.02880859000	280.82885254700			
927	558558.75053100	366.62858126	7990.58544922000	366.62860183500			
928	556671.71930600	303.84383444	4282.17187500000	303.84380647900			
929	557986.63559300	319.35996871	5957.83105469000	319.35994117100			
930	558439.07924700	337.60456945	6794.99072266000	337.60459003200			
931	558881.11537600	317.39933011	5729.50634766000	317.39930858800			
932	556998.94704200	280.66793571	3939.58593750000	280.66783582700			
933	557109.89018500	292.47248164	4205.87548828000	292.47252100000			
934	557393.31617800	286.12206907	4254.79785156000	286.12202434000			
935	556131.58173600	300.33680554	4980.88525391000	300.33674745100			
936	555682.74130400	279.45005979	4168.61328125000	279.45001700000			
937	556548.64426400	522.40918566	15981.13427730000	522.40928850000			
938	559139.96810200	375.55872487	8588.70751953000	375.55892099400			
939	556707.19898800	323.85088174	5034.39941406000	323.85088151900			
940	557833.52835900	283.86579175	4270.09277344000	283.86587143900			
941	558264.30077400	313.88296517	5835.22265625000	313.88293694400			
942	558154.25715700	491.74691983	14869.09570310000	491.74688077400			
943	557432.15513600	284.68998715	4182.38037109000	284.69003472000			
944	559432.00106300	317.52452873	5512.22851563000	317.52464656300			
945	556176.90857800	292.24421050	4624.03271484000	292.24420843300			
946	559316.65739100	284.82885101	4024.25878906000	284.82888611900			
947	556819.97466800	280.82025443	4526.40039063000	280.82019908000			
948	555319.53742400	315.23718165	5606.15869141000	315.23718665200			
949	555726.54806400	297.38530904	5010.48193359000	297.38524815900			
950	554866.09683500	289.35892443	4290.08837891000	289.35895133600			
951	555423.05929900	426.77919663	11076.94140630000	426.77911537200			
952	557278.30556600	286.06720062	4015.19384766000	286.06716158200			
953	556745.55693000	336.26522765	5336.38476563000	336.26534162500			
954	557871.59976800	276.40451379	3905.02050781000	276.40448901900			
955	556984.29282400	288.25943947	4282.24560547000	288.25929800900			
956	557095.93116900	290.76760156	4149.55859375000	290.76772209600			
957	558983.47242600	295.00925674	4968.31738281000	295.00921170300			
958	555588.15555100	297.42416300	4543.36083984000	297.42420562700			
959	557907.32791800	272.13584242	3697.48437500000	272.13584447300			
960	556294.33545400	659.01178062	24906.68408200000	659.01167594700			x
961	558526.60865400	361.19354367	7703.22607422000	361.19352093300			
962	559300.94759600	288.06938389	4212.84667969000	288.06934046400			
963	557524.68503300	281.96448651	4079.17822266000	281.96452142800			
964	554747.09059400	402.57352142	10118.45068360000	402.57338732200			
965	557943.02716600	277.10708350	3944.83642578000	277.10699072400			
966	559031.52417700	295.52347258	4958.52197266000	295.52327429000			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
967	53504	53518	40-10-229-014	3115 PROSPECT ST	25-40-10-229-014	4010229014	014	Lot	401-RESIDENTIAL
968	53505	53519	40-10-282-002	3019 SLOAN ST	25-40-10-282-002	4010282002	002	Lot	401-RESIDENTIAL
969	53509	53523	40-10-277-016	3040 RASKOB ST	25-40-10-277-016	4010277016	016	Lot	401-RESIDENTIAL
970	53511	53525	40-10-227-041	3120 PROSPECT ST	25-40-10-227-041	4010227041	041	Lot	401-RESIDENTIAL
971	53513	53527	40-03-481-008	3219 CONCORD ST	25-40-03-481-008	4003481008	008	Lot	401-RESIDENTIAL
972	53514	53528	07-10-576-026	3046 DEVONSHIRE ST	25-07-10-576-026	0710576026	100/1	Lot	401-RESIDENTIAL
973	53515	53529	40-10-277-006	BERKLEY ST	25-40-10-277-006	4010277006	006	Lot	400-RESIDENTIAL VACANT
974	53522	53536	40-10-234-005	1256 SUTTON AVE	25-40-10-234-005	4010234005	005	Lot	401-RESIDENTIAL
975	53523	53537	40-10-282-014	1111 DONALDSON ST	25-40-10-282-014	4010282014	014	Lot	401-RESIDENTIAL
976	53526	53540	40-10-279-017	3026 SLOAN ST	25-40-10-279-017	4010279017	017	Lot	401-RESIDENTIAL
977	53532	53546	40-10-279-008	3031 RASKOB ST	25-40-10-279-008	4010279008	008	Lot	401-RESIDENTIAL
978	53534	53548	40-10-231-033	1317 SUTTON AVE	25-40-10-231-033	4010231033	033	Lot	401-RESIDENTIAL
979	53538	53552	40-03-483-017	1613 SENECA ST	25-40-03-483-017	4003483017	017	Lot	401-RESIDENTIAL
980	53549	53563	07-10-576-079	1157 N BALLENGER HWY	25-07-10-576-079	0710576079	269-305	Lot	201-COMMERCIAL IMPROVED
981	53554	53568	40-10-226-009	3130 MACKIN RD	25-40-10-226-009	4010226009	009	Lot	401-RESIDENTIAL
982	53556	53570	40-10-234-004	1258 SUTTON AVE	25-40-10-234-004	4010234004	004	Lot	401-RESIDENTIAL
983	53561	53575	07-10-576-099	1137 N BALLENGER HWY	25-07-10-576-099	0710576099	326/7	Lot	201-COMMERCIAL IMPROVED
984	53562	53576	40-03-481-015	3214 CLEMENT ST	25-40-03-481-015	4003481015	015	Lot	401-RESIDENTIAL
985	53566	53580	07-10-576-043	3039 DEVONSHIRE ST	25-07-10-576-043	0710576043	157/8	Lot	401-RESIDENTIAL
986	53572	53586	40-10-282-013	1115 DONALDSON ST	25-40-10-282-013	4010282013	013	Lot	401-RESIDENTIAL
987	53581	53595	40-10-229-015	3111 PROSPECT ST	25-40-10-229-015	4010229015	015	Lot	401-RESIDENTIAL
988	53582	53596	40-03-483-016	1617 SENECA ST	25-40-03-483-016	4003483016	016	Lot	401-RESIDENTIAL
989	53585	53599	40-10-277-017	3036 RASKOB ST	25-40-10-277-017	4010277017	017	Lot	401-RESIDENTIAL
990	53590	53604	40-10-282-003	3015 SLOAN ST	25-40-10-282-003	4010282003	003	Lot	401-RESIDENTIAL
991	53593	53607	40-10-234-002	1260 SUTTON AVE	25-40-10-234-002	4010234002	002	Lot	401-RESIDENTIAL
992	53595	53609	07-10-576-025	1296 DONALDSON BLVD	25-07-10-576-025	0710576025	98/9	Lot	401-RESIDENTIAL
993	53597	53611	40-10-277-007	3031 BERKLEY ST	25-40-10-277-007	4010277007	007	Lot	401-RESIDENTIAL
994	53599	53613	07-10-576-055	3060 STRATFORD ST	25-07-10-576-055	0710576055	174/5	Lot	401-RESIDENTIAL
995	53601	53615	40-10-227-011	3121 MACKIN RD	25-40-10-227-011	4010227011	011	Lot	401-RESIDENTIAL
996	53612	53626	40-10-229-031	3102 WOLCOTT ST	25-40-10-229-031	4010229031	031	Lot	401-RESIDENTIAL
997	53618	53632	40-10-279-009	3027 RASKOB ST	25-40-10-279-009	4010279009	009	Lot	401-RESIDENTIAL
998	53619	53633	40-10-282-012	1119 DONALDSON ST	25-40-10-282-012	4010282012	012	Lot	401-RESIDENTIAL
999	53622	53636	40-10-234-001	1268 SUTTON AVE	25-40-10-234-001	4010234001	001	Lot	401-RESIDENTIAL
1000	53624	53638	07-10-576-062	3055 STRATFORD ST	25-07-10-576-062	0710576062	215/6	Lot	401-RESIDENTIAL
1001	53627	53641	40-10-279-028	3022 SLOAN ST	25-40-10-279-028	4010279028	028	Lot	401-RESIDENTIAL
1002	53628	53642	40-03-481-009	3213 CONCORD ST	25-40-03-481-009	4003481009	009	Lot	401-RESIDENTIAL
1003	53637	53651	40-10-226-003	1512 SENECA ST	25-40-10-226-003	4010226003	003	Lot	401-RESIDENTIAL
1004	53644	53658	40-10-229-029	1355 SUTTON AVE	25-40-10-229-029	4010229029	029	Lot	401-RESIDENTIAL
1005	53660	53674	40-10-277-018	3032 RASKOB ST	25-40-10-277-018	4010277018	018	Lot	401-RESIDENTIAL
1006	53662	53676	40-10-282-011	1123 DONALDSON ST	25-40-10-282-011	4010282011	011	Lot	401-RESIDENTIAL
1007	53667	53681	40-10-227-012	3117 MACKIN RD	25-40-10-227-012	4010227012	012	Lot	401-RESIDENTIAL
1008	53672	53686	40-10-227-046	3112 PROSPECT ST	25-40-10-227-046	4010227046	046	Lot	401-RESIDENTIAL

Container Specialties Inc
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	J	K	L	M	N	O	P	Q	R	S
967	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3115	PROSPECT ST	FLINT	48504
968	Residential	0.08000000	0.08	FLINT SCHOOLS	25010		3019	SLOAN ST	FLINT	48504
969	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3040	RASKOB ST	FLINT	48504
970	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3120	PROSPECT ST	FLINT	48504
971	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3219	CONCORD ST	FLINT	48504
972	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3046	DEVONSHIRE ST	FLINT	48504
973	Residential	0.09000000	0.09	FLINT SCHOOLS	25010			BERKLEY ST	FLINT	48504
974	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1256	SUTTON AVE	FLINT	48504
975	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1111	DONALDSON ST	FLINT	48504
976	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3026	SLOAN ST	FLINT	48504
977	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3031	RASKOB ST	FLINT	48504
978	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1317	SUTTON AVE	FLINT	48504
979	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1613	SENECA ST	FLINT	48504
980	Commercial	1.27999997	1.28	CARMAN-AINSWORTH SCHOOLS	25080	N	1157	BALLENGER HWY	FLINT	48504
981	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3130	MACKIN RD	FLINT	48504
982	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1258	SUTTON AVE	FLINT	48504
983	Commercial	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080	N	1137	BALLENGER HWY	FLINT	48504
984	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3214	CLEMENT ST	FLINT	48504
985	Residential	0.16000000	0.16	CARMAN-AINSWORTH SCHOOLS	25080		3039	DEVONSHIRE ST	FLINT	48504
986	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1115	DONALDSON ST	FLINT	48504
987	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3111	PROSPECT ST	FLINT	48504
988	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		1617	SENECA ST	FLINT	48504
989	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3036	RASKOB ST	FLINT	48504
990	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3015	SLOAN ST	FLINT	48504
991	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1260	SUTTON AVE	FLINT	48504
992	Residential	0.20999999	0.21	CARMAN-AINSWORTH SCHOOLS	25080		1296	DONALDSON BLVD	FLINT	48504
993	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3031	BERKLEY ST	FLINT	48504
994	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		3060	STRATFORD ST	FLINT	48504
995	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3121	MACKIN RD	FLINT	48504
996	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3102	WOLCOTT ST	FLINT	48504
997	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3027	RASKOB ST	FLINT	48504
998	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1119	DONALDSON ST	FLINT	48504
999	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1268	SUTTON AVE	FLINT	48504
1000	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		3055	STRATFORD ST	FLINT	48504
1001	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3022	SLOAN ST	FLINT	48504
1002	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3213	CONCORD ST	FLINT	48504
1003	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1512	SENECA ST	FLINT	48504
1004	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1355	SUTTON AVE	FLINT	48504
1005	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3032	RASKOB ST	FLINT	48504
1006	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1123	DONALDSON ST	FLINT	48504
1007	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3117	MACKIN RD	FLINT	48504
1008	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3112	PROSPECT ST	FLINT	48504

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	T	U	V	W	X	Y
967	HARRIS, ROBERT & WF PAULA	3115 PROSPECT ST	FLINT	MI	48504	HARRIS, ROBERT & WF PAULA
968	SZPIECH, RAYMOND & WF SANDRA	27051 HICKORY DR	HARRISON TOWNSHIP	MI	48045	SZPIECH, RAYMOND & WF SANDRA
969	MOSS, DOROTHY M	3040 RASKOB ST	FLINT	MI	48504	MOSS, DOROTHY M
970	WADDELL, JONATHAN E	3120 PROSPECT ST	FLINT	MI	48504	WADDELL, JONATHAN E
971	RUFFIN, DARLENE	3219 CONCORD ST	FLINT	MI	48504	RUFFIN, DARLENE
972	HORTON, KEVIN & LAWSON, WILLIAM F	6308 W COURT ST	FLINT	MI	48532	
973	TOWNSEND, EDWARD & VELMA	3039 BERKLEY ST	FLINT	MI	48504	TOWNSEND, EDWARD & VELMA
974	ASILED PROPERTIES, LLC	P O BOX 219	FLINT	MI	48501	ASILED PROPERTIES, LLC
975	JENNINGS, RUTH A	1111 DONALDSON ST	FLINT	MI	48504	JENNINGS, RUTH A
976	WILSON, HERBERT J	6703 SALLY CT	FLINT	MI	48505	WILSON, HERBERT J
977	HOMESOLUTIONS PROP, LLC	3031 RASKOB ST	FLINT	MI	48504	HOMESOLUTIONS PROP, LLC
978	COOPER, GREGORY & WF J	2428 S DUFFIELD RD	LENNON	MI	48449	COOPER, GREGORY & WF J
979	IRELAND-TORREY, KATRINA	1613 SENECA ST	FLINT	MI	48504	IRELAND-TORREY, KATRINA
980	HANNAWA HOLDINGS LLC	2425 FRANKLIN RD	BLOOMFIELD HILLS	MI	48302	
981	CARSON, WILBER & WF M	3130 MACKIN RD	FLINT	MI	48504	CARSON, WILBER & WF M
982	PM DEVELOPMENT	3022 CONCORD ST	FLINT	MI	48504	PM DEVELOPMENT
983	ADMIRAL PETROLEUM COMPANY	785 W RANDALL ST	COOPERSVILLE	MI	49404	
984	HICKS, JIMMIE & ROSEMARY	3214 CLEMENT ST	FLINT	MI	48504	HICKS, JIMMIE & ROSEMARY
985	MATHERS, LAVINA I TR	3039 DEVONSHIRE ST	FLINT	MI	48504	
986	SIMPSON, LYLE	402 W SECOND ST	FLINT	MI	48503	SIMPSON, LYLE
987	WHITE, JOHN & WF RUBY	1309 SAN JUAN DR	FLINT	MI	48504	WHITE, JOHN & WF RUBY
988	TREASURE ENTERPRISE, LLC	1161 N BALLENGER HWY #12	FLINT	MI	48504	TREASURE ENTERPRISE, LLC
989	TYLER, CLARENCE JR	3036 RASKOB ST	FLINT	MI	48504	TYLER, CLARENCE JR
990	LOOMIS, CHRISTINE E	12310 N GENESEE RD	CLIO	MI	48420	LOOMIS, CHRISTINE E
991	DUNBAR, DARCY	3033 #2 INGALLS ST	SWARTZ CREEK	MI	48473	DUNBAR, DARCY
992	IRIZARRY, LUIS	G1296 DONALDSON BLVD	FLINT	MI	48504	
993	CHAPMAN, SANDRA K	5402 SYCAMORE LN	FLINT	MI	48532	CHAPMAN, SANDRA K
994	BRYERS, CURT A	6059 SIPES LN	FLINT	MI	48532	GENESEE COUNTY LAND BANK
995	DAVIS, WILLIAM T	3121 MACKIN RD	FLINT	MI	48504	DAVIS, WILLIAM T
996	BROWN, DEONTA	3102 WOLCOTT ST	FLINT	MI	48504	BROWN, DEONTA
997	ZERKA, MILAD	G-4084 CORUNNA RD STE A	FLINT	MI	48532	ZERKA, MILAD
998	FANNIE MAE	3900 WISCONSIN AVE NW	WASHINGTON	DC	20016	FANNIE MAE
999	FISHER, CORLISS E	1268 SUTTON AVE	FLINT	MI	48504	FISHER, CORLISS E
1000	ROWELL, KRISTINA	3055 STRATFORD ST	FLINT	MI	48504	
1001	UNUVAR, MUSTAFA	4156 CALKINS RD	FLINT	MI	48532	UNUVAR, MUSTAFA
1002	FINKLEA, SHERIKA L	3213 CONCORD ST	FLINT	MI	48504	FINKLEA, SHERIKA L
1003	WELLS, CYNTHIA G	1512 SENECA ST	FLINT	MI	48504	WELLS, CYNTHIA G
1004	MCDOWELL, LOIS S	PO BOX 13336	FLINT	MI	48501	MCDOWELL, LOIS S
1005	UNSEL, ANDREA A	10379 N IRISH RD	OTISVILLE	MI	48463	UNSEL, ANDREA A
1006	TALHELM, KIRK C	115 E SECOND ST BOX 607	EVART	MI	49631	TALHELM, KIRK C
1007	PITMAN, SHIRLEY J	3117 MACKIN RD	FLINT	MI	48504	PITMAN, SHIRLEY J
1008	HILL, WANDA	3112 PROSPECT ST	FLINT	MI	48504	HILL, WANDA

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
967	3115 PROSPECT ST	FLINT	MI	48504	100	No	10800	10972	10800	13292463.98700000
968	27051 HICKORY DR	HARRISON TOWNSHIP	MI	48045	100	No	6500	6604	6500	13292464.00740000
969	3040 RASKOB ST	FLINT	MI	48504	100	No	8100	8229	8100	13292466.98090000
970	3120 PROSPECT ST	FLINT	MI	48504	100	No	25700	26111	25700	13292468.86920000
971	3219 CONCORD ST	FLINT	MI	48504	100	No	13900	14122	13900	13292470.55760000
972					0	No	15700	15640	15700	13292470.56870000
973	3039 BERKLEY ST	FLINT	MI	48504	0	No	500	425	500	13292471.42290000
974	P O BOX 219	FLINT	MI	48501	0	No	7500	7620	7500	13292473.58600000
975	1111 DONALDSON ST	FLINT	MI	48504	0	No	7300	7416	7300	13292473.73970000
976	6703 SALLY CT	FLINT	MI	48505	0	No	8100	8229	8100	13292475.02500000
977	3031 RASKOB ST	FLINT	MI	48504	100	No	10900	11074	10900	13292477.37030000
978	2428 S DUFFIELD RD	LENNON	MI	48449	0	No	4500	4572	4500	13292478.35330000
979	1613 SENECA ST	FLINT	MI	48504	100	No	13800	14020	13800	13292481.30260000
980					0	No	99500	101090	99500	13292486.23360000
981	3130 MACKIN RD	FLINT	MI	48504	100	No	11800	11988	11800	13292488.61190000
982	3022 CONCORD ST	FLINT	MI	48504	0	No	8900	9042	8900	13292489.85300000
983					0	No	52800	54250	52800	13292493.66220000
984	3214 CLEMENT ST	FLINT	MI	48504	100	No	11700	11887	11700	13292493.80550000
985					100	No	11700	11580	11700	13292495.70630000
986	402 W SECOND ST	FLINT	MI	48503	0	No	4400	4470	4400	13292497.70600000
987	1309 SAN JUAN DR	FLINT	MI	48504	0	No	12600	12801	12600	13292502.32980000
988	1161 N BALLENGER HWY #12	FLINT	MI	48504	0	No	12400	12598	12400	13292502.45480000
989	3036 RASKOB ST	FLINT	MI	48504	0	No	8100	8229	8100	13292502.66100000
990	12310 N GENESEE RD	CLIO	MI	48420	0	No	7100	7213	7100	13292503.75910000
991	3033 #2 INGALLS ST	SWARTZ CREEK	MI	48473	0	No	7300	7416	7300	13292504.12270000
992					100	No	16100	15950	16100	13292505.17390000
993	5402 SYCAMORE LN	FLINT	MI	48532	0	No	10400	10566	10400	13292507.12200000
994	452 S SAGINAW ST	FLINT	MI	48502	0	No	17500	17500	17500	13292507.52540000
995	3121 MACKIN RD	FLINT	MI	48504	100	No	8600	8737	8600	13292508.50150000
996	3102 WOLCOTT ST	FLINT	MI	48504	100	No	7800	7924	7800	13292516.02810000
997	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	2200	2235	2200	13292518.37430000
998	3900 WISCONSIN AVE NW	WASHINGTON	DC	20016	0	No	10700	10871	10700	13292519.35640000
999	1268 SUTTON AVE	FLINT	MI	48504	100	No	11200	11379	11200	13292520.72940000
1000					100	No	17300	17170	17300	13292521.99200000
1001	4156 CALKINS RD	FLINT	MI	48532	0	No	8100	8229	8100	13292523.47590000
1002	3213 CONCORD ST	FLINT	MI	48504	100	No	10200	10363	10200	13292523.90930000
1003	1512 SENECA ST	FLINT	MI	48504	100	No	10700	10871	10700	13292528.56040000
1004	PO BOX 13336	FLINT	MI	48501	100	No	6900	7010	6900	13292531.30580000
1005	10379 N IRISH RD	OTISVILLE	MI	48463	0	No	8100	8229	8100	13292539.92960000
1006	115 E SECOND ST BOX 607	EVART	MI	49631	0	No	3800	3860	3800	13292540.17380000
1007	3117 MACKIN RD	FLINT	MI	48504	100	No	9200	9347	9200	13292543.33800000
1008	3112 PROSPECT ST	FLINT	MI	48504	100	No	15600	15849	15600	13292544.37970000

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	AJ	AK	AL	AM	AN	AO	AP
967	558244.97683000	274.90988284	4012.71972656000	274.90991086400			
968	556803.35944200	255.88903166	3463.36523438000	255.88912188400			
969	557263.78408800	286.23479053	4021.06689453000	286.23483228800			
970	558412.36666200	367.44080601	8369.96337891000	367.44076257300			
971	559410.63619800	331.16589709	6221.88916016000	331.16599088400			
972	555857.80621300	389.82155660	9487.89013672000	389.82155929800			
973	557375.67025500	287.13703467	3991.39208984000	287.13698772100			
974	557562.30068600	281.26896445	4033.62939453000	281.26895485800			
975	556601.87033100	296.64598096	4751.18603516000	296.64587796800			
976	556969.00289300	283.19395372	3976.41503906000	283.19390665000			
977	557080.05287600	295.65413713	4444.19287109000	295.65411349700			
978	557981.83979000	285.47925241	4360.90722656000	285.47926976200			
979	559078.51932600	292.87588791	4794.74560547000	292.87589846100			
980	555072.37601100	976.56687487	55650.16748050000	976.56696917500			
981	558699.14766900	351.60903827	7197.25048828000	351.60911487700			
982	557598.88648900	281.12300090	4016.97753906000	281.12294482400			
983	554840.33169200	412.59903306	10627.62353520000	412.59898488400			
984	559286.70832300	277.53152041	3715.20068359000	277.53157900100			
985	555675.58926500	336.89251223	6954.29541016000	336.89252472600			
986	556638.39119400	279.99496835	3953.22705078000	279.99494001300			
987	558228.56891400	272.57429110	3924.04150391000	272.57432770100			
988	559129.01972500	315.41362621	5860.86376953000	315.41354321300			
989	557249.03408200	287.15613253	4066.52441406000	287.15614482500			
990	556789.65933600	266.41808808	3938.30224609000	266.41805112700			
991	557636.41093300	282.23508994	4066.15576172000	282.23499403500			
992	555952.33147300	383.82229749	9174.94335938000	383.82221420500			
993	557361.32532700	290.01158466	4150.24902344000	290.01162149100			
994	555563.00253100	391.95392734	9577.10009766000	391.95389181300			
995	558508.77805600	288.48560851	3893.17919922000	288.48558671000			
996	558077.29875400	280.30644226	3976.41210938000	280.30652554600			
997	557064.06262300	302.56067542	4843.42578125000	302.56084150900			
998	556672.42415400	285.53193384	4193.98046875000	285.53197827800			
999	557675.78638300	291.93147066	4549.11279297000	291.93149615200			
1000	555386.80153500	345.70534277	7391.81933594000	345.70531924500			
1001	556948.92735800	340.22609952	6878.02050781000	340.22606900800			
1002	559388.11000400	333.27253503	6309.89550781000	333.27249271000			
1003	558770.17702100	269.96913268	4227.90429688000	269.96895108900			
1004	558114.64192500	282.41982573	4120.49462891000	282.41987432100			
1005	557233.00891500	294.23735552	4433.96240234000	294.23730979200			
1006	556706.61165600	281.16635221	3938.61669922000	281.16643595500			
1007	558494.06817100	295.70013517	4291.67626953000	295.70014931200			
1008	558381.38777500	360.84609620	8025.51806641000	360.84603423300			

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	A	B	C	D	E	F	G	H	I
1009	53675	53689	40-10-229-028	1359 SUTTON AVE	25-40-10-229-028	4010229028	028	Lot	401-RESIDENTIAL
1010	53676	53690	40-03-481-021	1701 SENECA ST	25-40-03-481-021	4003481021	021	Lot	401-RESIDENTIAL
1011	53681	53695	40-10-226-010	3126 MACKIN RD	25-40-10-226-010	4010226010	010	Lot	401-RESIDENTIAL
1012	53685	53699	07-10-576-033	3036 DEVONSHIRE ST	25-07-10-576-033	0710576033	110/1	Lot	401-RESIDENTIAL
1013	53689	53703	07-10-576-042	3031 DEVONSHIRE ST	25-07-10-576-042	0710576042	156	Lot	401-RESIDENTIAL
1014	53692	53706	40-10-226-002	3123 BARTH ST	25-40-10-226-002	4010226002	002	Lot	401-RESIDENTIAL
1015	53694	53708	07-10-576-012	DONALDSON BLVD	25-07-10-576-012	0710576012	39	Lot	700-EXEMPT VACANT
1016	53701	53715	40-10-279-010	3023 RASKOB ST	25-40-10-279-010	4010279010	010	Lot	401-RESIDENTIAL
1017	53702	53716	40-10-232-005	1302 SUTTON AVE	25-40-10-232-005	4010232005	005	Lot	401-RESIDENTIAL
1018	53706	53720	40-10-282-010	1127 DONALDSON ST	25-40-10-282-010	4010282010	010	Lot	401-RESIDENTIAL
1019	53710	53724	40-10-229-026	1363 SUTTON AVE	25-40-10-229-026	4010229026	026	Lot	401-RESIDENTIAL
1020	53713	53727	40-10-277-008	3023 BERKLEY ST	25-40-10-277-008	4010277008	008	Lot	401-RESIDENTIAL
1021	53724	53738	40-10-283-015	2976 FLUSHING RD	25-40-10-283-015	4010283015	015	Lot	201-COMMERCIAL IMPROVED
1022	53737	53751	40-03-481-019	1707 SENECA ST	25-40-03-481-019	4003481019	019	Lot	401-RESIDENTIAL
1023	53751	53765	40-10-234-016	3034 BERKLEY ST	25-40-10-234-016	4010234016	016	Lot	401-RESIDENTIAL
1024	53756	53770	07-10-576-024	3039 HATHERLY AVE	25-07-10-576-024	0710576024	96/7	Lot	401-RESIDENTIAL
1025	53761	53775	40-02-359-013	1602 SENECA ST	25-40-02-359-013	4002359013	013	Lot	401-RESIDENTIAL
1026	53763	53777	07-10-576-056	3056 STRATFORD ST	25-07-10-576-056	0710576056	176/7	Lot	401-RESIDENTIAL
1027	53765	53779	40-10-234-007	3021 N STEVENSON ST	25-40-10-234-007	4010234007	007	Lot	401-RESIDENTIAL
1028	53766	53780	40-10-232-004	1306 SUTTON AVE	25-40-10-232-004	4010232004	004	Lot	401-RESIDENTIAL
1029	53776	53790	40-10-229-025	3101 PROSPECT ST	25-40-10-229-025	4010229025	025	Lot	401-RESIDENTIAL
1030	53777	53791	40-10-277-019	3028 RASKOB ST	25-40-10-277-019	4010277019	019	Lot	401-RESIDENTIAL
1031	53785	53799	40-10-279-027	3014 SLOAN ST	25-40-10-279-027	4010279027	027	Lot	401-RESIDENTIAL
1032	53786	53800	07-10-576-011	1318 DONALDSON BLVD	25-07-10-576-011	0710576011	38/37	Lot	401-RESIDENTIAL
1033	53787	53801	40-10-227-013	3113 MACKIN RD	25-40-10-227-013	4010227013	013	Lot	401-RESIDENTIAL
1034	53795	53809	07-10-576-059	1177 N BALLENGER HWY	25-07-10-576-059	0710576059	209-43	Lot	201-COMMERCIAL IMPROVED
1035	53800	53814	40-10-282-009	1133 DONALDSON ST	25-40-10-282-009	4010282009	009	Lot	401-RESIDENTIAL
1036	53804	53818	40-03-481-018	1713 SENECA ST	25-40-03-481-018	4003481018	018	Lot	401-RESIDENTIAL
1037	53813	53827	40-10-232-003	1310 SUTTON AVE	25-40-10-232-003	4010232003	003	Lot	401-RESIDENTIAL
1038	53820	53834	07-10-576-061	3047 STRATFORD ST	25-07-10-576-061	0710576061	213/4	Lot	401-RESIDENTIAL
1039	53838	53852	40-10-279-011	3019 RASKOB ST	25-40-10-279-011	4010279011	011	Lot	401-RESIDENTIAL
1040	53854	53868	40-10-232-002	1314 SUTTON AVE	25-40-10-232-002	4010232002	002	Lot	401-RESIDENTIAL
1041	53860	53874	07-10-576-034	3032 DEVONSHIRE ST	25-07-10-576-034	0710576034	112	Lot	401-RESIDENTIAL
1042	53863	53877	40-10-226-004	3117 BARTH ST	25-40-10-226-004	4010226004	004	Lot	401-RESIDENTIAL
1043	53865	53879	40-03-481-016	1719 SENECA ST	25-40-03-481-016	4003481016	016	Lot	401-RESIDENTIAL
1044	53868	53882	40-10-234-008	N STEVENSON ST	25-40-10-234-008	4010234008	008	Lot	400-RESIDENTIAL VACANT
1045	53875	53889	07-10-576-041	3027 DEVONSHIRE ST	25-07-10-576-041	0710576041	154/5	Lot	401-RESIDENTIAL
1046	53880	53894	07-10-576-009	3047 FLUSHING RD	25-07-10-576-009	0710576009	35	Lot	700-EXEMPT VACANT
1047	53882	53896	40-10-277-020	3024 RASKOB ST	25-40-10-277-020	4010277020	020	Lot	401-RESIDENTIAL
1048	53893	53907	40-10-277-009	3019 BERKLEY ST	25-40-10-277-009	4010277009	009	Lot	401-RESIDENTIAL
1049	53894	53908	40-10-227-045	1401 SUTTON AVE	25-40-10-227-045	4010227045	045	Lot	401-RESIDENTIAL
1050	53897	53911	07-10-576-057	3052 STRATFORD ST	25-07-10-576-057	0710576057	177/8	Lot	401-RESIDENTIAL

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	J	K	L	M	N	O	P	Q	R	S
1009	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1359	SUTTON AVE	FLINT	48504
1010	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		1701	SENECA ST	FLINT	48504
1011	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3126	MACKIN RD	FLINT	48504
1012	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3036	DEVONSHIRE ST	FLINT	48504
1013	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3031	DEVONSHIRE ST	FLINT	48504
1014	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3123	BARTH ST	FLINT	48504
1015	Exempt	0.13000000	0.13	CARMAN-AINSWORTH SCHOOLS	25080			DONALDSON BLVD	FLINT	48504
1016	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3023	RASKOB ST	FLINT	48504
1017	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1302	SUTTON AVE	FLINT	48504
1018	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1127	DONALDSON ST	FLINT	48504
1019	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1363	SUTTON AVE	FLINT	48504
1020	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		3023	BERKLEY ST	FLINT	48504
1021	Commercial	0.10000000	0.1	FLINT SCHOOLS	25010		2976	FLUSHING RD	FLINT	48504
1022	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1707	SENECA ST	FLINT	48504
1023	Residential	0.28000000	0.28	FLINT SCHOOLS	25010		3034	BERKLEY ST	FLINT	48504
1024	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3039	HATHERLY AVE	FLINT	48504
1025	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1602	SENECA ST	FLINT	48504
1026	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		3056	STRATFORD ST	FLINT	48504
1027	Residential	0.09000000	0.09	FLINT SCHOOLS	25010	N	3021	STEVENSON ST	FLINT	48504
1028	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1306	SUTTON AVE	FLINT	48504
1029	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3101	PROSPECT ST	FLINT	48504
1030	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3028	RASKOB ST	FLINT	48504
1031	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3014	SLOAN ST	FLINT	48504
1032	Residential	0.22000000	0.22	CARMAN-AINSWORTH SCHOOLS	25080		1318	DONALDSON BLVD	FLINT	48504
1033	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3113	MACKIN RD	FLINT	48504
1034	Commercial	0.70999998	0.71	CARMAN-AINSWORTH SCHOOLS	25080	N	1177	BALLENGER HWY	FLINT	48504
1035	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1133	DONALDSON ST	FLINT	48504
1036	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		1713	SENECA ST	FLINT	48504
1037	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1310	SUTTON AVE	FLINT	48504
1038	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		3047	STRATFORD ST	FLINT	48504
1039	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3019	RASKOB ST	FLINT	48504
1040	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1314	SUTTON AVE	FLINT	48504
1041	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3032	DEVONSHIRE ST	FLINT	48504
1042	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3117	BARTH ST	FLINT	48504
1043	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		1719	SENECA ST	FLINT	48504
1044	Residential	0.09000000	0.09	FLINT SCHOOLS	25010	N		STEVENSON ST	FLINT	48504
1045	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3027	DEVONSHIRE ST	FLINT	48504
1046	Exempt	0.14000000	0.14	CARMAN-AINSWORTH SCHOOLS	25080		3047	FLUSHING RD	FLINT	48504
1047	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3024	RASKOB ST	FLINT	48504
1048	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3019	BERKLEY ST	FLINT	48504
1049	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1401	SUTTON AVE	FLINT	48504
1050	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3052	STRATFORD ST	FLINT	48504

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	T	U	V	W	X	Y
1009	COLLIER, PETRINA	1077 TAHOE TRL	FLINT	MI	48532	COLLIER, PETRINA
1010	ROBINSON, YOLANDA	1701 SENECA ST	FLINT	MI	48504	ROBINSON, YOLANDA
1011	CHAMBERS, PAMELA	3126 MACKIN RD	FLINT	MI	48504	CHAMBERS, PAMELA
1012	MC AFEE JR, ELMER C	3036 DEVONSHIRE ST	FLINT	MI	48504	
1013	TURCSAK, JOSEPH & DENSMORE M	3031 DEVONSHIRE ST	FLINT	MI	48504	
1014	JONES, JANICE	3123 BARTH ST	FLINT	MI	48504	JONES, JANICE
1015	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502-1832	
1016	JENKINS, LARRY & WF CHERYLE	5496 E STANLEY RD	FLINT	MI	48506	JENKINS, LARRY & WF CHERYLE
1017	BROOKS, MANOSHA	1302 SUTTON AVE	FLINT	MI	48504	BROOKS, MANOSHA
1018	HARBOUR PORTFOLIO VIII, LP	8214 WESTCHESTER STE 635	DALLAS	TX	75225	HARBOUR PORTFOLIO VIII, LP
1019	SHEFFEY, VICTOR	PO BOX 3350	FLINT	MI	48502	SHEFFEY, VICTOR
1020	SMITH, RICHARD W & WF KATHLEEN	1731 N CENTER RD	FLINT	MI	48506	SMITH, RICHARD W & WF KATHLEEN
1021	A D LEASING CO INC	PO BOX 348	FLINT	MI	48501-0348	A D LEASING CO INC
1022	JOHNSON, BETTIE L	1707 SENECA ST	FLINT	MI	48504	JOHNSON, BETTIE L
1023	DRY INVESTMENTS, INC	3034 BERKLEY ST	FLINT	MI	48504	DRY INVESTMENTS, INC
1024	FRIESSS, LYNDEL S & THOMPSON, W	3039 HATHERLY AVE	FLINT	MI	48504	
1025	WOODSON BEY, OSCAR & ALMA	6158 ORMADA DR	KALAMAZOO	MI	49048	WOODSON BEY, OSCAR & ALMA
1026	MAZZHO PROPERTIES LLC	6299 PINECROFT CT	FLINT	MI	48532	
1027	RIGGS, EMMA J	PO BOX 1110	FLINT	MI	48501	RIGGS, EMMA J
1028	JOHNSON, AMBER	P O BOX 738	GRAND BLANC	MI	48480	JOHNSON, AMBER
1029	WYNN, SHILDAK	3101 PROSPECT ST	FLINT	MI	48504	WYNN, SHILDAK
1030	OLDS, BURLEIGH & JOANNE	3028 RASKOB ST	FLINT	MI	48504	OLDS, BURLEIGH & JOANNE
1031	TILLMAN, ERIC	3014 SLOAN ST	FLINT	MI	48504	TILLMAN, ERIC
1032	KING, JERMAINE	G1318 DONALDSON BLVD	FLINT	MI	48504	
1033	ZERKA, MILAD	G-4084 CORUNNA RD STE A	FLINT	MI	48532	ZERKA, MILAD
1034	RAINE INVESTMENTS LLC	1962 LAKEPOINT DR	ORTONVILLE	MI	48462	
1035	EDMONDS, ROBERT N & JOYCE	5068 E FARRAND RD	CLIO	MI	48420	EDMONDS, ROBERT N & JOYCE
1036	BRADLEY, MICHAEL	1713 SENECA ST	FLINT	MI	48504	BRADLEY, MICHAEL
1037	WAYBARK, WILLIAM C	1222 HUGHES	FLINT	MI	48503	WAYBARK, WILLIAM C
1038	HICKS, JAMES W & ALICE M	3047 STRATFORD ST	FLINT	MI	48504	
1039	JMZ PROPERTIES, LLC	G-4084 CORUNNA RD STE A	FLINT	MI	48532	JMZ PROPERTIES, LLC
1040	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1041	HARRIS, GARY L	3032 DEVONSHIRE ST	FLINT	MI	48504	
1042	GREEN, CHARLES III & CYNTHIA	3117 BARTH ST	FLINT	MI	48504	GREEN, CHARLES III & CYNTHIA
1043	EILLISON, ERICA	1719 SENECA ST	FLINT	MI	48504	EILLISON, ERICA
1044	ROMER, EMMA J	PO BOX 1110	FLINT	MI	48501	ROMER, EMMA J
1045	VANDECAR, JEANNE K	630 ROXBURY CT	OXFORD	MI	48371	
1046	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	
1047	TARDY, JEANETTE	3024 RASKOB ST	FLINT	MI	48504	TARDY, JEANETTE
1048	AGAPE GODS LOVE COGIC ET AL	3019 BERKLEY ST	FLINT	MI	48504	AGAPE GODS LOVE COGIC ET AL
1049	MOORE, DARREN & TEEA	1401 SUTTON AVE	FLINT	MI	48504	MOORE, DARREN & TEEA
1050	SOUSA, SARA	3052 STRATFORD ST	FLINT	MI	48504	

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1009	1077 TAHOE TRL	FLINT	MI	48532	0	No	13100	12395	13100	13292547.08050000
1010	1701 SENECA ST	FLINT	MI	48504	100	No	14000	14224	14000	13292547.71080000
1011	3126 MACKIN RD	FLINT	MI	48504	100	No	12400	12598	12400	13292549.33210000
1012					100	No	13600	13510	13600	13292551.00110000
1013					100	No	14500	14320	14500	13292552.68830000
1014	3123 BARTH ST	FLINT	MI	48504	100	No	21000	21336	21000	13292553.09070000
1015					0	Yes	0	0	0	13292554.09080000
1016	5496 E STANLEY RD	FLINT	MI	48506	0	No	11900	12090	11900	13292558.41060000
1017	1302 SUTTON AVE	FLINT	MI	48504	100	No	11500	11684	11500	13292558.65590000
1018	8214 WESTCHESTER STE 635	DALLAS	TX	75225	0	No	6500	6604	6500	13292560.55460000
1019	PO BOX 3350	FLINT	MI	48502	100	No	12500	12700	12500	13292562.30100000
1020	1731 N CENTER RD	FLINT	MI	48506	0	No	8000	8128	8000	13292562.35980000
1021	PO BOX 348	FLINT	MI	48501-0348	0	No	28600	28346	28600	13292565.43940000
1022	1707 SENECA ST	FLINT	MI	48504	100	No	11100	11277	11100	13292567.70490000
1023	3034 BERKLEY ST	FLINT	MI	48504	0	No	12800	13004	12800	13292570.35570000
1024					100	No	11400	11270	11400	13292571.43780000
1025	6158 ORMADA DR	KALAMAZOO	MI	49048	100	No	11100	11277	11100	13292573.24700000
1026					0	No	10900	10760	10900	13292573.59050000
1027	PO BOX 1110	FLINT	MI	48501	0	No	10900	11074	10900	13292574.07710000
1028	P O BOX 738	GRAND BLANC	MI	48480	100	No	10800	10972	10800	13292574.18620000
1029	3101 PROSPECT ST	FLINT	MI	48504	100	No	9600	9753	9600	13292577.70570000
1030	3028 RASKOB ST	FLINT	MI	48504	100	No	9100	9245	9100	13292578.15100000
1031	3014 SLOAN ST	FLINT	MI	48504	100	No	14300	14528	14300	13292581.07530000
1032					0	No	14900	14830	14900	13292581.07790000
1033	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	3600	3657	3600	13292581.14270000
1034					0	No	100800	76050	100800	13292584.16520000
1035	5068 E FARRAND RD	CLIO	MI	48420	0	No	5400	5486	5400	13292584.92630000
1036	1713 SENECA ST	FLINT	MI	48504	100	No	10400	10566	10400	13292586.78610000
1037	1222 HUGHES	FLINT	MI	48503	0	No	7000	7112	7000	13292589.69100000
1038					100	No	14200	14120	14200	13292594.72520000
1039	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	2500	2540	2500	13292598.89370000
1040	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13292605.65430000
1041					100	No	8500	8430	8500	13292607.14570000
1042	3117 BARTH ST	FLINT	MI	48504	100	No	10000	10160	10000	13292608.00520000
1043	1719 SENECA ST	FLINT	MI	48504	100	No	9400	9550	9400	13292608.45940000
1044	PO BOX 1110	FLINT	MI	48501	0	No	500	425	500	13292610.08590000
1045					0	No	15600	15440	15600	13292612.36100000
1046					0	Yes	0	0	0	13292613.51920000
1047	3024 RASKOB ST	FLINT	MI	48504	100	No	8600	8737	8600	13292614.84090000
1048	3019 BERKLEY ST	FLINT	MI	48504	0	No	10400	10566	10400	13292617.83710000
1049	1401 SUTTON AVE	FLINT	MI	48504	100	No	12200	12395	12200	13292617.94960000
1050					100	No	14100	13910	14100	13292619.03230000

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	AJ	AK	AL	AM	AN	AO	AP
1009	558152.28062900	280.31500848	4025.94775391000	280.31506616100			
1010	559238.26918300	311.42520991	5545.06982422000	311.42521288600			
1011	558673.16064600	356.45692932	7457.92724609000	356.45690664400			
1012	555827.14486700	360.26027390	7983.39062500000	360.26022494900			
1013	555653.64208100	290.80736744	4709.62695313000	290.80735787800			
1014	558817.25118900	302.10852443	5278.13427734000	302.10857710900			
1015	556077.63988600	307.34437143	5472.47802734000	307.34444159200			
1016	557047.21380400	291.09564344	4276.48730469000	291.09559525600			
1017	557772.10896800	283.94042843	4203.20654297000	283.94054117200			
1018	556740.26504300	284.93050368	4098.78759766000	284.93056893200			
1019	558188.80611600	277.85864337	3885.97070313000	277.85871179600			
1020	557338.04601000	372.53704630	8518.26611328000	372.53706704100			
1021	556486.03837400	289.12445667	4412.83837891000	289.12448244400			
1022	559285.44448700	296.65568772	4781.48339844000	296.65576926700			
1023	557513.01965300	439.08330028	12024.14941410000	439.08325420700			
1024	555926.59145800	296.91867763	4908.56787109000	296.91866878000			
1025	558948.46581900	291.46591497	5116.97070313000	291.46586739700			
1026	555536.88365300	305.98331446	5137.32958984000	305.98326422100			
1027	557623.00014500	281.61566743	3917.57958984000	281.61571594300			
1028	557809.64803900	279.02236069	3930.65039063000	279.02234692900			
1029	558225.71027500	282.81972636	4126.96191406000	282.81969772400			
1030	557217.80860700	289.74134607	4191.48583984000	289.74126591400			
1031	556928.14502800	322.86530058	5861.92431641000	322.86526202900			
1032	556147.91562300	389.23170944	9437.38134766000	389.23169804800			
1033	558479.15545600	299.30049858	4494.79199219000	299.30052372000			
1034	555269.26844200	806.37976765	30915.75634770000	806.37977192100			
1035	556776.15281600	299.55759310	4758.84472656000	299.55755374600			
1036	559332.40214300	310.84365241	5475.44970703000	310.84366758900			
1037	557847.05031700	285.14797522	4212.14453125000	285.14802896900			
1038	555359.51386600	340.81428041	7221.94921875000	340.81431842800			
1039	557030.73272800	301.35623093	4848.20605469000	301.35624288100			
1040	557885.15877300	284.13228539	4133.90283203000	284.13230357900			
1041	555805.38877500	284.19209145	4178.82617188000	284.19217941700			
1042	558763.15918300	329.21402495	6115.99511719000	329.21403613700			
1043	559382.19386300	313.19577125	5569.53076172000	313.19572143200			
1044	557608.49130000	283.29960498	4033.23925781000	283.29966938100			
1045	555629.56465100	356.19025490	7889.60546875000	356.19024090800			
1046	556295.30185300	324.85222027	6049.33789063000	324.85210716100			
1047	557202.35246800	289.47597700	4167.76171875000	289.47597728400			
1048	557314.59026000	290.61838503	4197.08007813000	290.61845498600			
1049	558324.06604400	303.21148928	5180.11865234000	303.21137346400			
1050	555518.76045700	301.15219326	4916.66650391000	301.15204702200			

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	A	B	C	D	E	F	G	H	I
1051	53898	53912	40-10-227-014	3109 MACKIN RD	25-40-10-227-014	4010227014	014	Lot	401-RESIDENTIAL
1052	53902	53916	40-10-232-001	1318 SUTTON AVE	25-40-10-232-001	4010232001	001	Lot	401-RESIDENTIAL
1053	53908	53922	07-10-576-124	3038 HATHERLY AVE	25-07-10-576-124	0710576124	47	Lot	401-RESIDENTIAL
1054	53909	53923	40-10-279-025	3010 SLOAN ST	25-40-10-279-025	4010279025	025	Lot	401-RESIDENTIAL
1055	53910	53924	40-02-359-002	1614 SENECA ST	25-40-02-359-002	4002359002	002	Lot	401-RESIDENTIAL
1056	53911	53925	40-10-283-016	2970 FLUSHING RD	25-40-10-283-016	4010283016	016	Lot	201-COMMERCIAL IMPROVED
1057	53922	53936	07-10-576-023	3033 HATHERLY AVE	25-07-10-576-023	0710576023	95/6	Lot	401-RESIDENTIAL
1058	53924	53938	40-02-359-014	3120 BARTH ST	25-40-02-359-014	4002359014	014	Lot	401-RESIDENTIAL
1059	53948	53962	40-10-232-014	3022 N STEVENSON ST	25-40-10-232-014	4010232014	014	Lot	401-RESIDENTIAL
1060	53952	53966	40-10-227-044	1405 SUTTON AVE	25-40-10-227-044	4010227044	044	Lot	401-RESIDENTIAL
1061	53970	53984	40-10-279-012	3015 RASKOB ST	25-40-10-279-012	4010279012	012	Lot	401-RESIDENTIAL
1062	53972	53986	40-10-234-018	3026 BERKLEY ST	25-40-10-234-018	4010234018	018	Lot	401-RESIDENTIAL
1063	53974	53988	40-10-283-025	DONALDSON ST	25-40-10-283-025	4010283025	025	Lot	200-COMMERCIAL VACANT
1064	53986	54000	07-10-576-035	3026 DEVONSHIRE ST	25-07-10-576-035	0710576035	113	Lot	401-RESIDENTIAL
1065	53987	54001	40-10-234-009	3013 N STEVENSON ST	25-40-10-234-009	4010234009	009	Lot	401-RESIDENTIAL
1066	54001	54015	40-02-359-001	3123 CLEMENT ST	25-40-02-359-001	4002359001	001	Lot	401-RESIDENTIAL
1067	54007	54021	40-10-277-021	3020 RASKOB ST	25-40-10-277-021	4010277021	021	Lot	401-RESIDENTIAL
1068	54019	54033	40-10-277-010	3015 BERKLEY ST	25-40-10-277-010	4010277010	010	Lot	401-RESIDENTIAL
1069	54022	54036	40-10-227-015	3105 MACKIN RD	25-40-10-227-015	4010227015	015	Lot	401-RESIDENTIAL
1070	54042	54056	07-10-576-125	3034 HATHERLY AVE	25-07-10-576-125	0710576125	48	Lot	700-EXEMPT VACANT
1071	54043	54057	40-10-226-018	3110 MACKIN RD	25-40-10-226-018	4010226018	018	Lot	201-COMMERCIAL IMPROVED
1072	54044	54058	07-10-576-008	3043 FLUSHING RD	25-07-10-576-008	0710576008	34	Lot	401-RESIDENTIAL
1073	54047	54061	40-10-230-005	1352 SUTTON AVE	25-40-10-230-005	4010230005	005	Lot	400-RESIDENTIAL VACANT
1074	54048	54062	07-10-576-058	3048 STRATFORD ST	25-07-10-576-058	0710576058	179	Lot	401-RESIDENTIAL
1075	54049	54063	40-10-226-005	3113 BARTH ST	25-40-10-226-005	4010226005	005	Lot	401-RESIDENTIAL
1076	54082	54096	40-10-279-026	SLOAN ST	25-40-10-279-026	4010279026	026	Lot	400-RESIDENTIAL VACANT
1077	54083	54097	40-10-232-015	3018 N STEVENSON ST	25-40-10-232-015	4010232015	015	Lot	401-RESIDENTIAL
1078	54102	54116	40-10-232-006	3025 WOLCOTT ST	25-40-10-232-006	4010232006	006	Lot	401-RESIDENTIAL
1079	54111	54125	07-10-576-123	3037 FLUSHING RD	25-07-10-576-123	0710576123	32/33/36	Lot	201-COMMERCIAL IMPROVED
1080	54132	54146	40-10-230-004	1356 SUTTON AVE	25-40-10-230-004	4010230004	004	Lot	401-RESIDENTIAL
1081	54134	54148	07-10-576-036	3024 DEVONSHIRE ST	25-07-10-576-036	0710576036	114	Lot	401-RESIDENTIAL
1082	54137	54152	40-10-234-010	3009 N STEVENSON ST	25-40-10-234-010	4010234010	010	Lot	401-RESIDENTIAL
1083	54140	54155	40-10-279-024	1159 DONALDSON ST	25-40-10-279-024	4010279024	024	Lot	401-RESIDENTIAL
1084	54145	54160	40-10-283-004	DONALDSON ST	25-40-10-283-004	4010283004	004	Lot	200-COMMERCIAL VACANT
1085	54148	54163	07-10-576-060	1185 N BALLENGER HWY	25-07-10-576-060	0710576060	212	Lot	201-COMMERCIAL IMPROVED
1086	54150	54165	40-02-359-015	3116 BARTH ST	25-40-02-359-015	4002359015	015	Lot	401-RESIDENTIAL
1087	54151	54166	40-10-277-022	3016 RASKOB ST	25-40-10-277-022	4010277022	022	Lot	401-RESIDENTIAL
1088	54166	54181	40-10-277-011	BERKLEY ST	25-40-10-277-011	4010277011	011	Lot	400-RESIDENTIAL VACANT
1089	54173	54188	40-10-227-016	3101 MACKIN RD	25-40-10-227-016	4010227016	016	Lot	401-RESIDENTIAL
1090	54192	54207	07-10-576-022	3023 HATHERLY AVE	25-07-10-576-022	0710576022	93/4	Lot	700-EXEMPT VACANT
1091	54202	54217	40-10-230-003	1364 SUTTON AVE	25-40-10-230-003	4010230003	003	Lot	401-RESIDENTIAL
1092	54206	54221	40-10-279-022	1163 DONALDSON ST	25-40-10-279-022	4010279022	022	Lot	401-RESIDENTIAL

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	J	K	L	M	N	O	P	Q	R	S
1051	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3109	MACKIN RD	FLINT	48504
1052	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1318	SUTTON AVE	FLINT	48504
1053	Residential	0.08000000	0.08	CARMAN-AINSWORTH SCHOOLS	25080		3038	HATHERLY AVE	FLINT	48504
1054	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3010	SLOAN ST	FLINT	48504
1055	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1614	SENECA ST	FLINT	48504
1056	Commercial	0.18000001	0.18	FLINT SCHOOLS	25010		2970	FLUSHING RD	FLINT	48504
1057	Residential	0.17000000	0.17	CARMAN-AINSWORTH SCHOOLS	25080		3033	HATHERLY AVE	FLINT	48504
1058	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3120	BARTH ST	FLINT	48504
1059	Residential	0.09000000	0.09	FLINT SCHOOLS	25010	N	3022	STEVENSON ST	FLINT	48504
1060	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1405	SUTTON AVE	FLINT	48504
1061	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3015	RASKOB ST	FLINT	48504
1062	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3026	BERKLEY ST	FLINT	48504
1063	Commercial	0.20000000	0.2	FLINT SCHOOLS	25010			DONALDSON ST	FLINT	48504
1064	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		3026	DEVONSHIRE ST	FLINT	48504
1065	Residential	0.09000000	0.09	FLINT SCHOOLS	25010	N	3013	STEVENSON ST	FLINT	48504
1066	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3123	CLEMENT ST	FLINT	48504
1067	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3020	RASKOB ST	FLINT	48504
1068	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3015	BERKLEY ST	FLINT	48504
1069	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3105	MACKIN RD	FLINT	48504
1070	Exempt	0.08000000	0.08	CARMAN-AINSWORTH SCHOOLS	25080		3034	HATHERLY AVE	FLINT	48504
1071	Commercial	0.44999999	0.45	FLINT SCHOOLS	25010		3110	MACKIN RD	FLINT	48504
1072	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3043	FLUSHING RD	FLINT	48504
1073	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1352	SUTTON AVE	FLINT	48504
1074	Residential	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080		3048	STRATFORD ST	FLINT	48504
1075	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3113	BARTH ST	FLINT	48504
1076	Residential	0.10000000	0.1	FLINT SCHOOLS	25010			SLOAN ST	FLINT	48504
1077	Residential	0.09000000	0.09	FLINT SCHOOLS	25010	N	3018	STEVENSON ST	FLINT	48504
1078	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3025	WOLCOTT ST	FLINT	48504
1079	Commercial	0.50000000	0.5	CARMAN-AINSWORTH SCHOOLS	25080		3037	FLUSHING RD	FLINT	48504
1080	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1356	SUTTON AVE	FLINT	48504
1081	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		3024	DEVONSHIRE ST	FLINT	48504
1082	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	3009	STEVENSON ST	FLINT	48504
1083	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1159	DONALDSON ST	FLINT	48504
1084	Commercial	0.12000000	0.12	FLINT SCHOOLS	25010			DONALDSON ST	FLINT	48504
1085	Commercial	0.11000000	0.11	CARMAN-AINSWORTH SCHOOLS	25080	N	1185	BALLENGER HWY	FLINT	48504
1086	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3116	BARTH ST	FLINT	48504
1087	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3016	RASKOB ST	FLINT	48504
1088	Residential	0.09000000	0.09	FLINT SCHOOLS	25010			BERKLEY ST	FLINT	48504
1089	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3101	MACKIN RD	FLINT	48504
1090	Exempt	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3023	HATHERLY AVE	FLINT	48504
1091	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1364	SUTTON AVE	FLINT	48504
1092	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1163	DONALDSON ST	FLINT	48504

Container Specialties Inc
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	T	U	V	W	X	Y
1051	KELLOGG, SHAWN	3109 MACKIN RD	FLINT	MI	48504	KELLOGG, SHAWN
1052	MAGNUSON, ROBERT & WF DIANE	10106 N CLIO RD	CLIO	MI	48420	MAGNUSON, ROBERT & WF DIANE
1053	GENTRY, KEVIN D	5094 SADDLE CREEK CIRCLE	ELLENWOOD	GA	30294	
1054	NICHOLSON, DWAYNE IRA	160 CROWN ST	BROOKLYN	NY	11225	NICHOLSON, DWAYNE IRA
1055	BOONE, SHARAVE	1614 SENECA ST	FLINT	MI	48504	BOONE, SHARAVE
1056	A D LEASING CO INC	PO BOX 348	FLINT	MI	48501-0348	A D LEASING CO INC
1057	VALENTINE, PAUL L JR	1103 BORGSTROM AVE	YPSILANTI	MI	48198	
1058	SMITH, MARY C	3120 BARTH ST	FLINT	MI	48504	SMITH, MARY C
1059	HARBOUR PORTFOLIO VII, LP	8214 WESTCHESTER DR STE 6	DALLAS	TX	75225	HARBOUR PORTFOLIO VII, LP
1060	BANKERS TRUST COMPANY OF CALIFORNIA	1405 SUTTON AVE	FLINT	MI	48504	BANKERS TRUST COMPANY OF CALIFORNIA
1061	WHITFIELD, GLEN W	3015 RASKOB ST	FLINT	MI	48504	WHITFIELD, GLEN W
1062	BASS, PATRICIA A	3026 BERKLEY ST	FLINT	MI	48504	BASS, PATRICIA A
1063	A D LEASING CO INC	PO BOX 348	FLINT	MI	48501-0348	A D LEASING CO INC
1064	HARRIS, DANIEL E	3026 DEVONSHIRE ST	FLINT	MI	48504	
1065	SOUTHALL, VALERIE C	3013 N STEVENSON ST	FLINT	MI	48504	SOUTHALL, VALERIE C
1066	WESTON, BARBARA	PO BOX 13252	FLINT	MI	48501	WESTON, BARBARA
1067	CHAPMAN INVESTMENT GROUP	5402 SYCAMORE LN	FLINT	MI	48532	CHAPMAN INVESTMENT GROUP
1068	ASILED PROPERTIES LLC	PO BOX 219	FLINT	MI	48501	ASILED PROPERTIES LLC
1069	CRENSHAW, BETHANY	3105 MACKIN RD	FLINT	MI	48504	CRENSHAW, BETHANY
1070	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502	
1071	GUIDING LIGHT BAPT CH	3110 MACKIN RD	FLINT	MI	48504	GUIDING LIGHT BAPT CH
1072	FISHER, JOSEPH M	11175 S SEYMOUR RD	GAINES	MI	48436	
1073	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
1074	RESIDENTIAL REHABERS INC	1439 SACKNER RD	FENTON	MI	48430	
1075	HONEYCUTT, MARILYN	3113 BARTH ST	FLINT	MI	48504	HONEYCUTT, MARILYN
1076	NICHOLSON, DWAYNE IRA	160 CROWN ST	BROOKLYN	NY	11225	NICHOLSON, DWAYNE IRA
1077	BURRELL, AUSTINEA S	3018 N STEVENSON ST	FLINT	MI	48504	BURRELL, AUSTINEA S
1078	IN SEVEN, LLC	1112 PRICE AVE	COLUMBIA	SC	29201	IN SEVEN, LLC
1079	ATLURI, VENKATA R & SUMITHA	160 PEACHTREE RD	COPPELL	TX	75019	
1080	HARRISON, WILLA N	1356 SUTTON AVE	FLINT	MI	48504	HARRISON, WILLA N
1081	DESERT SUN HOLDINGS, LLC	1320 W HILL RD	FLINT	MI	48507	
1082	GREENE, MARY A & DYKES, RENE M	3009 N STEVENSON ST	FLINT	MI	48504	GREENE, MARY A & DYKES, RENE M
1083	PHILLIPS, ELIZABETH TRUST	432 N SAGINAW ST #800	FLINT	MI	48502	PHILLIPS, ELIZABETH TRUST
1084	CITIZENS BANK	PO BOX 1675	FLINT	MI	48501	CITIZENS BANK
1085	WRIGHT, DOLLINE	1185 N BALLENGER HWY	FLINT	MI	48504	
1086	DAVIS, ALLEN & SHERRA	3116 BARTH ST	FLINT	MI	48504	DAVIS, ALLEN & SHERRA
1087	ZERKA, SALIM	5289 O'CONNOR PASS	SWARTZ CREEK	MI	48473	ZERKA, SALIM
1088	GENESEE COUNTY LAND BANK	452 S SAGINAW ST FLR #2	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1089	DUNBAR, DOUGLAS R & WF FRIEDA	3101 MACKIN RD	FLINT	MI	48504	DUNBAR, DOUGLAS R & WF FRIEDA
1090	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST	FLINT	MI	48502-1832	
1091	HILGENDORF, MARILYN ETAL	1364 SUTTON AVE	FLINT	MI	48504	HILGENDORF, MARILYN ETAL
1092	TOMA, JASON	1400 BAMFORD DR	WATERFORD	MI	48328	TOMA, JASON

Container Specialties Inc
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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1051	3109 MACKIN RD	FLINT	MI	48504	100	No	8600	8737	8600	13292619.16980000
1052	10106 N CLIO RD	CLIO	MI	48420	0	No	7300	7416	7300	13292621.35490000
1053					0	No	7200	7110	7200	13292623.91570000
1054	160 CROWN ST	BROOKLYN	NY	11225	0	No	5800	5892	5800	13292624.17580000
1055	1614 SENECA ST	FLINT	MI	48504	100	No	8300	8432	8300	13292624.76090000
1056	PO BOX 348	FLINT	MI	48501-0348	0	No	35800	35661	35800	13292624.76500000
1057					0	No	11900	11780	11900	13292628.31290000
1058	3120 BARTH ST	FLINT	MI	48504	100	No	10700	10871	10700	13292628.88470000
1059	8214 WESTCHESTER DR STE 6	DALLAS	TX	75225	0	No	11200	11379	11200	13292635.02660000
1060	1405 SUTTON AVE	FLINT	MI	48504	0	No	12600	12801	12600	13292636.72980000
1061	3015 RASKOB ST	FLINT	MI	48504	0	No	9500	9652	9500	13292641.89410000
1062	3026 BERKLEY ST	FLINT	MI	48504	100	No	10400	10566	10400	13292642.62870000
1063	PO BOX 348	FLINT	MI	48501-0348	0	No	900	914	900	13292642.73310000
1064					100	No	9600	9440	9600	13292645.30930000
1065	3013 N STEVENSON ST	FLINT	MI	48504	100	No	7400	7518	7400	13292645.80370000
1066	PO BOX 13252	FLINT	MI	48501	100	No	8300	8432	8300	13292649.19920000
1067	5402 SYCAMORE LN	FLINT	MI	48532	0	No	8100	8229	8100	13292650.86340000
1068	PO BOX 219	FLINT	MI	48501	0	No	6500	6604	6500	13292655.17750000
1069	3105 MACKIN RD	FLINT	MI	48504	100	No	8900	9042	8900	13292655.83210000
1070					0	Yes	0	0	0	13292661.22280000
1071	3110 MACKIN RD	FLINT	MI	48504	0	Yes	0	0	0	13292661.28730000
1072					0	No	11800	11680	11800	13292661.51520000
1073	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292661.98920000
1074					0	No	10600	10460	10600	13292662.23870000
1075	3113 BARTH ST	FLINT	MI	48504	100	No	11500	11684	11500	13292662.33730000
1076	160 CROWN ST	BROOKLYN	NY	11225	0	No	600	533	600	13292671.18580000
1077	3018 N STEVENSON ST	FLINT	MI	48504	100	No	2600	2641	2600	13292671.23590000
1078	1112 PRICE AVE	COLUMBIA	SC	29201	0	No	11200	11379	11200	13292674.61630000
1079					0	No	77900	80360	77900	13292676.28640000
1080	1356 SUTTON AVE	FLINT	MI	48504	100	No	12600	12801	12600	13292681.92040000
1081					0	No	9900	9850	9900	13292682.08680000
1082	3009 N STEVENSON ST	FLINT	MI	48504	100	No	11200	11379	11200	13292682.81220000
1083	432 N SAGINAW ST #800	FLINT	MI	48502	0	No	8100	8229	8100	13292683.21230000
1084	PO BOX 1675	FLINT	MI	48501	0	No	500	508	500	13292685.05650000
1085					0	No	24400	25090	24400	13292685.41420000
1086	3116 BARTH ST	FLINT	MI	48504	0	No	11000	11176	11000	13292686.00570000
1087	5289 O'CONNOR PASS	SWARTZ CREEK	MI	48473	0	No	9100	9245	9100	13292686.28320000
1088	452 S SAGINAW ST FLR #2	FLINT	MI	48502	0	Yes	0	0	0	13292691.34770000
1089	3101 MACKIN RD	FLINT	MI	48504	100	No	11400	11582	11400	13292693.39980000
1090					0	Yes	0	0	0	13292698.35250000
1091	1364 SUTTON AVE	FLINT	MI	48504	100	No	11800	11988	11800	13292701.65740000
1092	1400 BAMFORD DR	WATERFORD	MI	48328	0	No	7300	7416	7300	13292702.93560000

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	AJ	AK	AL	AM	AN	AO	AP
1051	558463.92863800	296.49674169	4351.28125000000	296.49679223900			
1052	557923.29053800	286.63247929	4233.31250000000	286.63245400400			
1053	556066.39933300	249.66627648	3376.36865234000	249.66626842100			
1054	556899.13078000	287.03417563	4601.92041016000	287.03415509700			
1055	559018.09166600	362.65963399	8129.18701172000	362.65957542600			
1056	556467.31659300	354.57371585	7767.03369141000	354.57371182700			
1057	555904.33358300	343.52349439	7193.25439453000	343.52348146100			
1058	558928.35944900	293.44335415	5092.49902344000	293.44348102900			
1059	557772.34142300	281.91534938	4077.93896484000	281.91526838900			
1060	558371.35515100	297.63177707	4918.94238281000	297.63172486100			
1061	557017.17099200	293.88975242	4427.43505859000	293.88980734500			
1062	557483.87115300	295.72187881	4413.69775391000	295.72183071200			
1063	556554.27777400	378.89690379	8652.21630859000	378.89691568400			
1064	555790.03712600	280.43689059	4048.12548828000	280.43682836300			
1065	557594.42516400	278.02311185	3793.11132813000	278.02305428400			
1066	559076.24412100	290.09572766	4502.15039063000	290.09586333000			
1067	557187.50287900	286.98028513	4025.74267578000	286.98028738600			
1068	557299.81623100	292.30994936	4281.17236328000	292.31000313900			
1069	558448.54397400	294.03592596	4226.09277344000	294.03588225700			
1070	556052.14775300	249.22126848	3380.49707031000	249.22126408400			
1071	558627.00156100	571.96977307	19415.18701170000	571.96977278100			
1072	556276.60666900	299.87401481	4726.52246094000	299.87404172700			
1073	558021.26252700	299.88685243	4985.90527344000	299.88687876900			
1074	555501.53911500	295.28419301	4643.02246094000	295.28417209400			
1075	558744.69722400	325.54143901	5988.12548828000	325.54142869800			
1076	556878.30327600	277.66814538	4555.48486328000	277.66821289700			
1077	557757.02225600	277.03408955	3817.41455078000	277.03405651600			
1078	557866.33220700	289.30352247	4218.65576172000	289.30353002300			
1079	556203.41452400	794.47955236	21983.22607420000	794.47953832700			
1080	558068.66816300	308.41859195	5366.98046875000	308.41870515400			
1081	555775.79028000	275.27645106	3792.39208984000	275.27655182400			
1082	557579.71244200	287.24610636	4288.85791016000	287.24610469700			
1083	556942.96102500	287.94694824	4197.24853516000	287.94695036800			
1084	556599.13510700	343.39031904	5333.53613281000	343.39023874600			
1085	555347.92965300	300.23645276	4971.77001953000	300.23651087200			
1086	558907.05292200	331.02054678	6270.99804688000	331.02063304400			
1087	557172.17141800	288.64895858	4103.10839844000	288.64887114800			
1088	557284.25954300	287.81664518	4038.40722656000	287.81660011400			
1089	558432.84928900	299.84363588	4547.73388672000	299.84366946500			
1090	555876.23137900	355.20962868	7844.42578125000	355.20957832200			
1091	558115.50765300	302.19762362	4977.68164063000	302.19748620400			
1092	556977.19209700	283.80466661	3965.88623047000	283.80458760200			

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	A	B	C	D	E	F	G	H	I
1093	54207	54222	40-10-283-003	DONALDSON ST	25-40-10-283-003	4010283003	003	Lot	200-COMMERCIAL VACANT
1094	54209	54224	40-10-234-019	3018 BERKLEY ST	25-40-10-234-019	4010234019	019	Lot	401-RESIDENTIAL
1095	54211	54226	40-02-357-003	3126 CLEMENT ST	25-40-02-357-003	4002357003	003	Lot	401-RESIDENTIAL
1096	54218	54233	40-02-359-003	3117 CLEMENT ST	25-40-02-359-003	4002359003	003	Lot	401-RESIDENTIAL
1097	54224	54239	40-10-226-006	3109 BARTH ST	25-40-10-226-006	4010226006	006	Lot	401-RESIDENTIAL
1098	54227	54242	40-10-232-007	3021 WOLCOTT ST	25-40-10-232-007	4010232007	007	Lot	401-RESIDENTIAL
1099	54255	54270	07-10-576-037	3020 DEVONSHIRE ST	25-07-10-576-037	0710576037	115	Lot	401-RESIDENTIAL
1100	54260	54275	40-10-283-002	DONALDSON ST	25-40-10-283-002	4010283002	002	Lot	400-RESIDENTIAL VACANT
1101	54262	54277	40-10-230-001	1368 SUTTON AVE	25-40-10-230-001	4010230001	001	Lot	401-RESIDENTIAL
1102	54264	54279	40-10-234-011	3005 N STEVENSON ST	25-40-10-234-011	4010234011	011	Lot	401-RESIDENTIAL
1103	54268	54283	07-10-576-040	1213 N BALLENGER HWY	25-07-10-576-040	0710576040	151-3	Lot	201-COMMERCIAL IMPROVED
1104	54273	54288	40-10-277-012	BERKLEY ST	25-40-10-277-012	4010277012	012	Lot	400-RESIDENTIAL VACANT
1105	54274	54289	40-10-279-021	1167 DONALDSON ST	25-40-10-279-021	4010279021	021	Lot	401-RESIDENTIAL
1106	54281	54296	40-10-232-016	3014 N STEVENSON ST	25-40-10-232-016	4010232016	016	Lot	401-RESIDENTIAL
1107	54282	54297	40-10-277-023	3012 RASKOB ST	25-40-10-277-023	4010277023	023	Lot	401-RESIDENTIAL
1108	54292	54307	40-02-357-002	1710 SENECA ST	25-40-02-357-002	4002357002	002	Lot	401-RESIDENTIAL
1109	54302	54317	40-10-230-009	3022 WOLCOTT ST	25-40-10-230-009	4010230009	009	Lot	401-RESIDENTIAL
1110	54303	54318	07-10-576-039	1205 N BALLENGER HWY	25-07-10-576-039	0710576039	148-50	Lot	201-COMMERCIAL IMPROVED
1111	54304	54319	40-02-359-016	3110 BARTH ST	25-40-02-359-016	4002359016	016	Lot	401-RESIDENTIAL
1112	54314	54329	40-10-283-001	DONALDSON ST	25-40-10-283-001	4010283001	001	Lot	200-COMMERCIAL VACANT
1113	54326	54341	40-10-232-009	3013 WOLCOTT ST	25-40-10-232-009	4010232009	009	Lot	401-RESIDENTIAL
1114	54338	54353	40-10-226-007	3105 BARTH ST	25-40-10-226-007	4010226007	007	Lot	401-RESIDENTIAL
1115	54343	54358	07-10-576-005	FLUSHING RD	25-07-10-576-005	0710576005	30-1/49-50	Lot	200-COMMERCIAL VACANT
1116	54344	54359	07-11-551-056	1160 N BALLENGER HWY	25-07-11-551-056	0711551056	264-8/306	Lot	201-COMMERCIAL IMPROVED
1117	54348	54363	07-10-576-038	DEVONSHIRE ST	25-07-10-576-038	0710576038	116	Lot	400-RESIDENTIAL VACANT
1118	54354	54369	40-10-283-022	FLUSHING RD	25-40-10-283-022	4010283022	022	Lot	400-RESIDENTIAL VACANT
1119	54357	54372	40-10-234-021	3014 BERKLEY ST	25-40-10-234-021	4010234021	021	Lot	401-RESIDENTIAL
1120	54358	54373	40-10-234-012	3001 N STEVENSON ST	25-40-10-234-012	4010234012	012	Lot	401-RESIDENTIAL
1121	54365	54380	40-10-283-023	2950 FLUSHING RD	25-40-10-283-023	4010283023	023	Lot	201-COMMERCIAL IMPROVED
1122	54372	54387	40-02-359-004	3113 CLEMENT ST	25-40-02-359-004	4002359004	004	Lot	401-RESIDENTIAL
1123	54383	54398	07-10-576-021	3019 HATHERLY AVE	25-07-10-576-021	0710576021	91/2	Lot	401-RESIDENTIAL
1124	54394	54409	40-10-277-013	BERKLEY ST	25-40-10-277-013	4010277013	013	Lot	400-RESIDENTIAL VACANT
1125	54397	54412	40-10-230-010	3018 WOLCOTT ST	25-40-10-230-010	4010230010	010	Lot	401-RESIDENTIAL
1126	54399	54414	40-10-230-006	3041 PROSPECT ST	25-40-10-230-006	4010230006	006	Lot	401-RESIDENTIAL
1127	54406	54421	40-10-277-029	1201 DONALDSON ST	25-40-10-277-029	4010277029	029	Lot	401-RESIDENTIAL
1128	54409	54424	40-02-357-014	3118 CLEMENT ST	25-40-02-357-014	4002357014	014	Lot	401-RESIDENTIAL
1129	54413	54428	40-10-228-002	1406 SUTTON AVE	25-40-10-228-002	4010228002	002	Lot	401-RESIDENTIAL
1130	54416	54431	40-10-228-003	3026 PROSPECT ST	25-40-10-228-003	4010228003	003	Lot	401-RESIDENTIAL
1131	54434	54449	40-10-232-017	N STEVENSON ST	25-40-10-232-017	4010232017	017	Lot	400-RESIDENTIAL VACANT
1132	54441	54456	40-10-232-010	3009 WOLCOTT ST	25-40-10-232-010	4010232010	010	Lot	401-RESIDENTIAL
1133	54443	54458	40-02-359-017	3106 BARTH ST	25-40-02-359-017	4002359017	017	Lot	401-RESIDENTIAL
1134	54448	54463	40-11-157-007	1152 DONALDSON ST	25-40-11-157-007	4011157007	007	Lot	401-RESIDENTIAL

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	J	K	L	M	N	O	P	Q	R	S
1093	Commercial	0.12000000	0.12	FLINT SCHOOLS	25010			DONALDSON ST	FLINT	48504
1094	Residential	0.22000000	0.22	FLINT SCHOOLS	25010		3018	BERKLEY ST	FLINT	48504
1095	Residential	0.22000000	0.22	FLINT SCHOOLS	25010		3126	CLEMENT ST	FLINT	48504
1096	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3117	CLEMENT ST	FLINT	48504
1097	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3109	BARTH ST	FLINT	48504
1098	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3021	WOLCOTT ST	FLINT	48504
1099	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		3020	DEVONSHIRE ST	FLINT	48504
1100	Residential	0.11000000	0.11	FLINT SCHOOLS	25010			DONALDSON ST	FLINT	48504
1101	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		1368	SUTTON AVE	FLINT	48504
1102	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	3005	STEVENSON ST	FLINT	48504
1103	Commercial	0.31000000	0.31	CARMAN-AINSWORTH SCHOOLS	25080	N	1213	BALLENGER HWY	FLINT	48504
1104	Residential	0.10000000	0.1	FLINT SCHOOLS	25010			BERKLEY ST	FLINT	48504
1105	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1167	DONALDSON ST	FLINT	48504
1106	Residential	0.20999999	0.21	FLINT SCHOOLS	25010	N	3014	STEVENSON ST	FLINT	48504
1107	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3012	RASKOB ST	FLINT	48504
1108	Residential	0.20999999	0.21	FLINT SCHOOLS	25010		1710	SENECA ST	FLINT	48504
1109	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3022	WOLCOTT ST	FLINT	48504
1110	Commercial	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080	N	1205	BALLENGER HWY	FLINT	48504
1111	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3110	BARTH ST	FLINT	48504
1112	Commercial	0.12000000	0.12	FLINT SCHOOLS	25010			DONALDSON ST	FLINT	48504
1113	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3013	WOLCOTT ST	FLINT	48504
1114	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3105	BARTH ST	FLINT	48504
1115	Commercial	0.56000000	0.56	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
1116	Commercial	0.63999999	0.64	CARMAN-AINSWORTH SCHOOLS	25080	N	1160	BALLENGER HWY	FLINT	48504
1117	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080			DEVONSHIRE ST	FLINT	48504
1118	Residential	0.01000000	0.01	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
1119	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3014	BERKLEY ST	FLINT	48504
1120	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	3001	STEVENSON ST	FLINT	48504
1121	Commercial	0.80000001	0.8	FLINT SCHOOLS	25010		2950	FLUSHING RD	FLINT	48504
1122	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3113	CLEMENT ST	FLINT	48504
1123	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		3019	HATHERLY AVE	FLINT	48504
1124	Residential	0.17000000	0.17	FLINT SCHOOLS	25010			BERKLEY ST	FLINT	48504
1125	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3018	WOLCOTT ST	FLINT	48504
1126	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3041	PROSPECT ST	FLINT	48504
1127	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1201	DONALDSON ST	FLINT	48504
1128	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3118	CLEMENT ST	FLINT	48504
1129	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		1406	SUTTON AVE	FLINT	48504
1130	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		3026	PROSPECT ST	FLINT	48504
1131	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N		STEVENSON ST	FLINT	48504
1132	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3009	WOLCOTT ST	FLINT	48504
1133	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3106	BARTH ST	FLINT	48504
1134	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1152	DONALDSON ST	FLINT	48504

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	T	U	V	W	X	Y
1093	CITIZENS BANK	PO BOX 1675	FLINT	MI	48501	CITIZENS BANK
1094	VAUGHN, EVELYN	3018 BERKLEY ST	FLINT	MI	48504	VAUGHN, EVELYN
1095	BLACKWELL AME ZION CH	1902 SONNY ST	FLINT	MI	48504	BLACKWELL AME ZION CH
1096	BARTON, MONIQUE Y	5705 DAYBREAK TERRACE	BALTIMORE	MD	21206	BARTON, MONIQUE Y
1097	GARNER, KAREN D	3109 BARTH ST	FLINT	MI	48504	GARNER, KAREN D
1098	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1099	BECK, BRANDON	G-3020 DEVONSHIRE ST	FLINT	MI	48504	
1100	A D LEASING CO INC	PO BOX 348	FLINT	MI	48501-0348	A D LEASING CO INC
1101	GREEN, MAUREEN E	1368 SUTTON AVE	FLINT	MI	48504	GREEN, MAUREEN E
1102	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
1103	NASER, AZIZ	5475 MIDDLEBELT RD	WEST BLOOMFIELD	MI	48323	
1104	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1105	PATRICK, PATRICIA	ROUTE 2 BOX 110	DE KALB	MS	39328	PATRICK, PATRICIA
1106	JORDAN, TRACEY	3014 N STEVENSON ST	FLINT	MI	48504	JORDAN, TRACEY
1107	WESTSIDE, LLC	PO BOX 1234	GRAND BLANC	MI	48480	WESTSIDE, LLC
1108	TAYLOR, CHARLES & VELMA TRUST	1710 SENECA ST	FLINT	MI	48504	TAYLOR, CHARLES & VELMA TRUST
1109	NASH, PANDORA L	PO BOX 6088	SPRING HILL	FL	34611	NASH, PANDORA L
1110	BALLENGER HWY MOBIL	4385 BRIGHTON DR	GRAND BLANC	MI	48439	
1111	GREEN, JOHN F	3110 BARTH ST	FLINT	MI	48504	GREEN, JOHN F
1112	A D LEASING CO INC	PO BOX 348	FLINT	MI	48501-0348	A D LEASING CO INC
1113	CALHOUN, SHARMAINE	3013 WOLCOTT ST	FLINT	MI	48504	CALHOUN, SHARMAINE
1114	HENDERSON, DANIEL	3105 BARTH ST	FLINT	MI	48504	HENDERSON, DANIEL
1115	VELMEIR BALLENGER CO, LLC	24255 W 13 MILE RD STE 22	BINGHAM FARMS	MI	48025	
1116	BANK OF AMERICA CORP	101 N TRYON ST	CHARLOTTE	NC	28255	
1117	BECK, BRANDON ROY	3020 DEVONSHIRE ST	FLINT	MI	48504	
1118	CITY OF FLINT	FLUSHING RD	FLINT	MI	48504	CITY OF FLINT
1119	CHAPMAN, SANDRA K	5402 SYCAMORE LN	FLINT	MI	48532	CHAPMAN, SANDRA K
1120	WILLIAMS, TIFFANY M	PO BOX 320737	FLINT	MI	48532	WILLIAMS, TIFFANY M
1121	CITIZENS COML & SAV BANK	PO BOX 1675	FLINT	MI	48501	CITIZENS COML & SAV BANK
1122	RAULS, VIOLA	3113 CLEMENT ST	FLINT	MI	48504	RAULS, VIOLA
1123	POTTS, JESSICA A	3019 HATHERLY AVE	FLINT	MI	48504	GENESEE COUNTY LAND BANK
1124	TOWNSEND, EDWARD	2235 MILBOURNE AVE	FLINT	MI	48504	TOWNSEND, EDWARD
1125	PIERCE, TODD	3018 WOLCOTT ST	FLINT	MI	48504	PIERCE, TODD
1126	BELL, MATT	2113 N CHEVROLET AVE	FLINT	MI	48504	BELL, MATT
1127	TOWNSEND, DELISA	P O BOX 219	FLINT	MI	48501	TOWNSEND, DELISA
1128	ADP ENTERPRISES, LLC	1397 FOXBORO LN	FLINT	MI	48532	ADP ENTERPRISES, LLC
1129	WARES, WILLIAM	1406 SUTTON AVE	FLINT	MI	48504	WARES, WILLIAM
1130	JONES, ARLENA	3026 PROSPECT ST	FLINT	MI	48504	JONES, ARLENA
1131	MAXWELL, JASON & MORRISETTE, R	PO BOX 13602	FLINT	MI	48501	MAXWELL, JASON & MORRISETTE, R
1132	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1133	POLLARD, ALVIN	3106 BARTH ST	FLINT	MI	48504	POLLARD, ALVIN
1134	RHODES, LUKAS	504 IRVIN RIDGE RD	MC VEYTOWN	PA	17051	RHODES, LUKAS

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1093	PO BOX 1675	FLINT	MI	48501	0	No	400	406	400	13292702.99880000
1094	3018 BERKLEY ST	FLINT	MI	48504	100	No	14400	14630	14400	13292703.71100000
1095	1902 SONNY ST	FLINT	MI	48504	0	Yes	0	0	0	13292704.57330000
1096	5705 DAYBREAK TERRACE	BALTIMORE	MD	21206	0	No	11500	11684	11500	13292706.55820000
1097	3109 BARTH ST	FLINT	MI	48504	100	No	11500	11684	11500	13292709.73670000
1098	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13292710.76070000
1099					100	No	8800	8730	8800	13292720.14720000
1100	PO BOX 348	FLINT	MI	48501-0348	0	No	600	609	600	13292722.33900000
1101	1368 SUTTON AVE	FLINT	MI	48504	100	No	10800	10972	10800	13292722.76830000
1102	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292723.04690000
1103					0	No	59600	61060	59600	13292724.57540000
1104	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	0	Yes	0	0	0	13292727.40000000
1105	ROUTE 2 BOX 110	DE KALB	MS	39328	0	No	5900	5994	5900	13292728.17870000
1106	3014 N STEVENSON ST	FLINT	MI	48504	0	No	14100	14325	14100	13292730.54170000
1107	PO BOX 1234	GRAND BLANC	MI	48480	0	No	8100	8229	8100	13292730.91670000
1108	1710 SENECA ST	FLINT	MI	48504	100	No	15900	16154	15900	13292735.13870000
1109	PO BOX 6088	SPRING HILL	FL	34611	100	No	12200	12395	12200	13292739.51100000
1110					0	No	108300	111040	108300	13292741.38480000
1111	3110 BARTH ST	FLINT	MI	48504	100	No	10200	10363	10200	13292741.56230000
1112	PO BOX 348	FLINT	MI	48501-0348	0	No	500	508	500	13292744.38460000
1113	3013 WOLCOTT ST	FLINT	MI	48504	100	No	11600	11600	11600	13292749.22480000
1114	3105 BARTH ST	FLINT	MI	48504	100	No	5400	5386	5400	13292754.19700000
1115					0	No	16000	16250	16000	13292755.90490000
1116					0	No	52600	53740	52600	13292757.29320000
1117					100	No	1400	1400	1400	13292758.68660000
1118	FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13292761.80840000
1119	5402 SYCAMORE LN	FLINT	MI	48532	0	No	8100	8229	8100	13292764.24240000
1120	PO BOX 320737	FLINT	MI	48532	0	No	5400	5486	5400	13292764.43190000
1121	PO BOX 1675	FLINT	MI	48501	0	No	29000	21848	29000	13292766.35160000
1122	3113 CLEMENT ST	FLINT	MI	48504	100	No	11200	11379	11200	13292769.00650000
1123	452 S SAGINAW ST	FLINT	MI	48502	100	No	14600	14600	14600	13292773.05530000
1124	2235 MILBOURNE AVE	FLINT	MI	48504	0	No	800	640	800	13292778.43480000
1125	3018 WOLCOTT ST	FLINT	MI	48504	100	No	6700	6807	6700	13292779.58320000
1126	2113 N CHEVROLET AVE	FLINT	MI	48504	0	No	6400	6502	6400	13292780.51740000
1127	P O BOX 219	FLINT	MI	48501	0	No	2000	2032	2000	13292783.20760000
1128	1397 FOXBORO LN	FLINT	MI	48532	0	No	11500	11684	11500	13292783.90320000
1129	1406 SUTTON AVE	FLINT	MI	48504	100	No	13800	14020	13800	13292785.86800000
1130	3026 PROSPECT ST	FLINT	MI	48504	100	No	10900	11074	10900	13292786.42700000
1131	PO BOX 13602	FLINT	MI	48501	0	No	500	425	500	13292790.58890000
1132	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13292791.66210000
1133	3106 BARTH ST	FLINT	MI	48504	100	No	10000	10160	10000	13292791.89850000
1134	504 IRVIN RIDGE RD	MC VEYTOWN	PA	17051	0	No	4100	4165	4100	13292793.41770000

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	AJ	AK	AL	AM	AN	AO	AP
1093	556636.34688700	332.28120953	5151.68408203000	332.28128522000			
1094	557458.85623000	395.65868220	9719.13183594000	395.65876418500			
1095	559187.03791700	394.02297546	9392.48486328000	394.02292936300			
1096	559012.60382900	361.44826998	6689.15234375000	361.44827606100			
1097	558724.90140200	309.10662383	5044.47167969000	309.10667001900			
1098	557851.80218800	281.42993711	3862.28759766000	281.42994056900			
1099	555760.54933100	288.54110427	4403.88476563000	288.54110478600			
1100	556672.51110100	319.55319660	4824.74560547000	319.55331541800			
1101	558163.92758300	323.35572144	5962.78027344000	323.35576070300			
1102	557563.19794500	290.84355212	4497.43310547000	290.84357735900			
1103	555596.83033500	557.06806034	13320.67333980000	557.06793271100			
1104	557270.22116500	290.64588190	4139.45996094000	290.64593428800			
1105	557009.92324900	298.20680981	4551.90771484000	298.20684390000			
1106	557734.02194700	380.94162574	9013.18994141000	380.94170646900			
1107	557156.89098300	323.03318062	5807.68652344000	323.03308242900			
1108	559261.96221700	391.19110316	9279.92236328000	391.19114061700			
1109	558017.32515500	296.37538576	4655.89843750000	296.37553228300			
1110	555495.76728600	504.01709612	15522.12841800000	504.01708511700			
1111	558889.66994300	315.37548589	5617.24707031000	315.37550344500			
1112	556708.97358100	316.07338647	5025.93066406000	316.07332730400			
1113	557835.81769800	297.31623011	4717.31445313000	297.31631336600			
1114	558706.66709000	314.28093290	5317.69189453000	314.28097112100			
1115	556132.07090600	768.16312547	24470.98144530000	768.16321573700			
1116	554966.40037700	676.32477267	27848.76953130000	676.32475228300			
1117	555747.31508500	277.45623053	3807.86279297000	277.45614405800			
1118	556366.82835100	271.59734812	561.43359375000	271.59738875400			
1119	557434.14783300	297.45816529	4388.71826172000	297.45810315800			
1120	557546.62932500	290.04413145	4472.73144531000	290.04420786700			
1121	556477.02301000	780.33843070	35058.36572270000	780.33853105600			
1122	558992.80013500	361.27476535	7806.71972656000	361.27470561100			
1123	555847.43044300	358.29088997	7974.90429688000	358.29095778500			
1124	557250.64982400	350.22892709	7343.31103516000	350.22887456700			
1125	558001.08528200	289.39220343	4267.73876953000	289.39226465700			
1126	558112.57487600	297.13431782	4557.25976563000	297.13429827800			
1127	557101.92056100	293.79372827	4699.85546875000	293.79367230200			
1128	559173.59186100	315.30430390	4820.91943359000	315.30429390400			
1129	558311.96690100	320.21104232	5669.54394531000	320.21090766700			
1130	558262.59521900	473.29054538	8165.21386719000	473.29055161000			
1131	557709.57556200	287.00555346	4189.39794922000	287.00552797300			
1132	557819.05439100	294.56331510	4620.77880859000	294.56337127500			
1133	558869.50556900	314.99029792	5588.12353516000	314.99033016800			
1134	556805.67484100	301.09507989	4828.09228516000	301.09507922500			

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	A	B	C	D	E	F	G	H	I
1135	54457	54472	40-10-226-008	3101 BARTH ST	25-40-10-226-008	4010226008	008	Lot	401-RESIDENTIAL
1136	54462	54477	40-10-234-022	3010 BERKLEY ST	25-40-10-234-022	4010234022	022	Lot	401-RESIDENTIAL
1137	54464	54479	40-10-226-017	3028 MACKIN RD	25-40-10-226-017	4010226017	017	Lot	401-RESIDENTIAL
1138	54472	54487	40-10-234-013	2959 N STEVENSON ST	25-40-10-234-013	4010234013	013	Lot	401-RESIDENTIAL
1139	54481	54496	40-10-228-004	3025 MACKIN RD	25-40-10-228-004	4010228004	004	Lot	401-RESIDENTIAL
1140	54485	54500	40-10-277-027	1205 DONALDSON ST	25-40-10-277-027	4010277027	027	Lot	401-RESIDENTIAL
1141	54516	54531	40-10-230-011	3014 WOLCOTT ST	25-40-10-230-011	4010230011	011	Lot	401-RESIDENTIAL
1142	54524	54539	07-10-576-004	FLUSHING RD	25-07-10-576-004	0710576004	29/51	Lot	200-COMMERCIAL VACANT
1143	54530	54545	07-10-576-019	1223 N BALLENGER HWY	25-07-10-576-019	0710576019	87	Lot	401-RESIDENTIAL
1144	54541	54556	40-10-230-007	3017 PROSPECT ST	25-40-10-230-007	4010230007	007	Lot	401-RESIDENTIAL
1145	54542	54557	40-11-157-006	1156 DONALDSON ST	25-40-11-157-006	4011157006	006	Lot	401-RESIDENTIAL
1146	54557	54572	07-11-551-057	3012 CLARENDON ST	25-07-11-551-057	0711551057	307	Lot	401-RESIDENTIAL
1147	54574	54589	40-10-283-011	ROCKFORD ST	25-40-10-283-011	4010283011	011	Lot	200-COMMERCIAL VACANT
1148	54577	54592	40-10-232-018	3002 N STEVENSON ST	25-40-10-232-018	4010232018	018	Lot	401-RESIDENTIAL
1149	54579	54594	40-10-277-026	1209 DONALDSON ST	25-40-10-277-026	4010277026	026	Lot	401-RESIDENTIAL
1150	54587	54602	40-10-232-012	3005 WOLCOTT ST	25-40-10-232-012	4010232012	012	Lot	401-RESIDENTIAL
1151	54602	54617	40-10-234-023	3006 BERKLEY ST	25-40-10-234-023	4010234023	023	Lot	401-RESIDENTIAL
1152	54603	54618	40-02-359-006	3107 CLEMENT ST	25-40-02-359-006	4002359006	006	Lot	401-RESIDENTIAL
1153	54639	54654	40-10-234-014	2955 N STEVENSON ST	25-40-10-234-014	4010234014	014	Lot	401-RESIDENTIAL
1154	54644	54659	40-02-359-018	3102 BARTH ST	25-40-02-359-018	4002359018	018	Lot	401-RESIDENTIAL
1155	54648	54663	40-02-357-015	3110 CLEMENT ST	25-40-02-357-015	4002357015	015	Lot	401-RESIDENTIAL
1156	54653	54668	40-11-103-001	3029 BARTH ST	25-40-11-103-001	4011103001	001	Lot	401-RESIDENTIAL
1157	54673	54688	40-10-277-025	1213 DONALDSON ST	25-40-10-277-025	4010277025	025	Lot	401-RESIDENTIAL
1158	54674	54689	40-10-283-009	ROCKFORD ST	25-40-10-283-009	4010283009	009	Lot	200-COMMERCIAL VACANT
1159	54678	54693	07-10-576-020	1229 N BALLENGER HWY	25-07-10-576-020	0710576020	88-90	Lot	201-COMMERCIAL IMPROVED
1160	54679	54694	40-10-230-012	3010 WOLCOTT ST	25-40-10-230-012	4010230012	012	Lot	401-RESIDENTIAL
1161	54686	54701	40-10-230-008	3013 PROSPECT ST	25-40-10-230-008	4010230008	008	Lot	401-RESIDENTIAL
1162	54694	54709	07-11-551-043	1186 N BALLENGER HWY	25-07-11-551-043	0711551043	203-8/244	Lot	201-COMMERCIAL IMPROVED
1163	54700	54715	40-11-157-017	1160 DONALDSON ST	25-40-11-157-017	4011157017	017	Lot	401-RESIDENTIAL
1164	54712	54727	40-11-105-034	3021 MACKIN RD	25-40-11-105-034	4011105034	034	Lot	401-RESIDENTIAL
1165	54718	54733	40-10-232-019	2964 N STEVENSON ST	25-40-10-232-019	4010232019	019	Lot	401-RESIDENTIAL
1166	54724	54739	40-10-232-013	3001 WOLCOTT ST	25-40-10-232-013	4010232013	013	Lot	401-RESIDENTIAL
1167	54728	54743	07-11-551-044	3014 WALTON ST	25-07-11-551-044	0711551044	244	Lot	201-COMMERCIAL IMPROVED
1168	54744	54759	40-10-234-024	3002 BERKLEY ST	25-40-10-234-024	4010234024	024	Lot	401-RESIDENTIAL
1169	54747	54762	40-10-234-015	2951 N STEVENSON ST	25-40-10-234-015	4010234015	015	Lot	401-RESIDENTIAL
1170	54748	54763	40-10-277-024	1217 DONALDSON ST	25-40-10-277-024	4010277024	024	Lot	401-RESIDENTIAL
1171	54751	54766	40-11-105-018	3018 PROSPECT ST	25-40-11-105-018	4011105018	018	Lot	401-RESIDENTIAL
1172	54761	54776	40-11-103-008	3024 MACKIN RD	25-40-11-103-008	4011103008	008	Lot	401-RESIDENTIAL
1173	54777	54792	40-11-157-018	2938 SLOAN ST	25-40-11-157-018	4011157018	018	Lot	401-RESIDENTIAL
1174	54788	54803	40-02-359-020	3030 BARTH ST	25-40-02-359-020	4002359020	020	Lot	401-RESIDENTIAL
1175	54791	54806	40-02-359-007	3101 CLEMENT ST	25-40-02-359-007	4002359007	007	Lot	401-RESIDENTIAL
1176	54793	54808	40-11-108-011	3006 WOLCOTT ST	25-40-11-108-011	4011108011	011	Lot	401-RESIDENTIAL

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Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
1135	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3101	BARTH ST	FLINT	48504
1136	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3010	BERKLEY ST	FLINT	48504
1137	Residential	0.31999999	0.32	FLINT SCHOOLS	25010		3028	MACKIN RD	FLINT	48504
1138	Residential	0.09000000	0.09	FLINT SCHOOLS	25010	N	2959	STEVENSON ST	FLINT	48504
1139	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		3025	MACKIN RD	FLINT	48504
1140	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1205	DONALDSON ST	FLINT	48504
1141	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3014	WOLCOTT ST	FLINT	48504
1142	Commercial	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080			FLUSHING RD	FLINT	48504
1143	Residential	0.14000000	0.14	CARMAN-AINSWORTH SCHOOLS	25080	N	1223	BALLENGER HWY	FLINT	48504
1144	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3017	PROSPECT ST	FLINT	48504
1145	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1156	DONALDSON ST	FLINT	48504
1146	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		3012	CLARENDON ST	FLINT	48504
1147	Commercial	0.13000000	0.13	FLINT SCHOOLS	25010			ROCKFORD ST	FLINT	48504
1148	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	3002	STEVENSON ST	FLINT	48504
1149	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1209	DONALDSON ST	FLINT	48504
1150	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3005	WOLCOTT ST	FLINT	48504
1151	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3006	BERKLEY ST	FLINT	48504
1152	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3107	CLEMENT ST	FLINT	48504
1153	Residential	0.09000000	0.09	FLINT SCHOOLS	25010	N	2955	STEVENSON ST	FLINT	48504
1154	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3102	BARTH ST	FLINT	48504
1155	Residential	0.22000000	0.22	FLINT SCHOOLS	25010		3110	CLEMENT ST	FLINT	48504
1156	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3029	BARTH ST	FLINT	48504
1157	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1213	DONALDSON ST	FLINT	48504
1158	Commercial	0.23999999	0.24	FLINT SCHOOLS	25010			ROCKFORD ST	FLINT	48504
1159	Commercial	0.34000000	0.34	CARMAN-AINSWORTH SCHOOLS	25080	N	1229	BALLENGER HWY	FLINT	48532
1160	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3010	WOLCOTT ST	FLINT	48504
1161	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3013	PROSPECT ST	FLINT	48504
1162	Commercial	0.62000000	0.62	CARMAN-AINSWORTH SCHOOLS	25080	N	1186	BALLENGER HWY	FLINT	48504
1163	Residential	0.25999999	0.26	FLINT SCHOOLS	25010		1160	DONALDSON ST	FLINT	48504
1164	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3021	MACKIN RD	FLINT	48504
1165	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	2964	STEVENSON ST	FLINT	48504
1166	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3001	WOLCOTT ST	FLINT	48504
1167	Commercial	0.07000000	0.07	CARMAN-AINSWORTH SCHOOLS	25080		3014	WALTON ST	FLINT	48504
1168	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3002	BERKLEY ST	FLINT	48504
1169	Residential	0.09000000	0.09	FLINT SCHOOLS	25010	N	2951	STEVENSON ST	FLINT	48504
1170	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1217	DONALDSON ST	FLINT	48504
1171	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3018	PROSPECT ST	FLINT	48504
1172	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3024	MACKIN RD	FLINT	48504
1173	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		2938	SLOAN ST	FLINT	48504
1174	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3030	BARTH ST	FLINT	48504
1175	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3101	CLEMENT ST	FLINT	48504
1176	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3006	WOLCOTT ST	FLINT	48504

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	T	U	V	W	X	Y
1135	PEGG, JAMES & WF JANICE	16131 HAVILAND BEACH	LINDEN	MI	48451	PEGG, JAMES & WF JANICE
1136	ASILED PROPERTIES, LLC	P O BOX 219	FLINT	MI	48501	ASILED PROPERTIES, LLC
1137	GUIDING LIGHT BAPTIST CHURCH	3110 MACKIN RD	FLINT	MI	48504	GUIDING LIGHT BAPTIST CHURCH
1138	DAWKINS, JESSIE JR & WF P	46 SAWMILL CREEK TRL	SAGINAW	MI	48603-8626	DAWKINS, JESSIE JR & WF P
1139	RANDLE, STEPHANI	3025 MACKIN RD	FLINT	MI	48504	RANDLE, STEPHANI
1140	FLETCHER, IRMA J	1205 DONALDSON ST	FLINT	MI	48504	FLETCHER, IRMA J
1141	MILLER, CLAUDIA L	1712 IOWA AVE	FLINT	MI	48506	MILLER, CLAUDIA L
1142	VELMEIR BALLENGER CO, LLC	24255 W 13 MILE RD STE 22	BINGHAM FARMS	MI	48025	
1143	KOUZA, SAFFA	3484 AMBLESIDE DR	FLUSHING	MI	48433	
1144	TREASURE ENTERPRISE, LLC	1161 N BALLENGER HWY #12	FLINT	MI	48504	TREASURE ENTERPRISE, LLC
1145	CAMPBELL, DORIS & ROOSEVELT	90 EAGLE RIDGE	LAKE ORION	MI	48360	CAMPBELL, DORIS & ROOSEVELT
1146	BOST, TIFFANY A T	3506 WESLEY ST	FLINT	MI	48505	
1147	BALLENGER-FLUSHING NW LLC	2307 S SAGINAW ST	FLINT	MI	48503	BALLENGER-FLUSHING NW LLC
1148	MAXWELL, JASON & MORRISETTE, R	PO BOX 13602	FLINT	MI	48501	MAXWELL, JASON & MORRISETTE, R
1149	BURKINA HOLDING CORP	PO BOX 320678	FLINT	MI	48532-0012	BURKINA HOLDING CORP
1150	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
1151	RAMSEY, JOAN R	3006 BERKLEY ST	FLINT	MI	48504	RAMSEY, JOAN R
1152	GISSENDANNER, GRETA J	3107 CLEMENT ST	FLINT	MI	48504	GISSENDANNER, GRETA J
1153	HUNT, COLUMBUS J	2955 N STEVENSON ST	FLINT	MI	48504	HUNT, COLUMBUS J
1154	HARRINGTON, CAROLYN	3102 BARTH ST	FLINT	MI	48504	HARRINGTON, CAROLYN
1155	HAMPTON, RICHARD & LOVIE	3110 CLEMENT ST	FLINT	MI	48504	HAMPTON, RICHARD & LOVIE
1156	LETAVIS, MARK E	9154 TIMBERLINE DR	GRAND BLANC	MI	48439	LETAVIS, MARK E
1157	DESERT SUN HOLDINGS, LLC	1320 W HILL RD	FLINT	MI	48507	DESERT SUN HOLDINGS, LLC
1158	BALLENGER-FLUSHING NW LLC	2307 S SAGINAW ST	FLINT	MI	48503	BALLENGER-FLUSHING NW LLC
1159	R B K PROPERTIES LLC	1229 N BALLENGER HWY	FLINT	MI	48532	
1160	FISHER, YOLANDA	3010 WOLCOTT ST	FLINT	MI	48504	FISHER, YOLANDA
1161	CROSS, RODNEY E	9229 N LINDEN RD	CLIO	MI	48420	CROSS, RODNEY E
1162	SAGINAW ST MINI MART INC	5398 TERRITORIAL RD	GRAND BLANC	MI	48439	
1163	HUGHES, ANNETTE	3150 RASKOB ST	FLINT	MI	48504	HUGHES, ANNETTE
1164	MIZISIN, DENNIS	PO BOX 90676	BURTON	MI	48509	MIZISIN, DENNIS
1165	COTTON, GLENN	PO BOX 4026	FLINT	MI	48504	COTTON, GLENN
1166	WEBB, EMMA L	3001 WOLCOTT ST	FLINT	MI	48504	WEBB, EMMA L
1167	JOHNSON, DAVID	4052 E PIERSON RD	FLINT	MI	48506	
1168	FANNIE MAE	14221 DALLAS PKWY STE 100	DALLAS	TX	75254	FANNIE MAE
1169	BANK OF AMERICA, NA	2375 N GLENVILLE DR	RICHARDSON	TX	75082-4315	BANK OF AMERICA, NA
1170	BOLDEN, BOBBY	1217 DONALDSON ST	FLINT	MI	48504	BOLDEN, BOBBY
1171	MILLER, STEPHANIE A	3018 PROSPECT ST	FLINT	MI	48504	MILLER, STEPHANIE A
1172	HARRIS, KESHA	4465 BRISTOLWOOD DR	FLINT	MI	48507	HARRIS, KESHA
1173	COLLINS, AKEYLA	2938 SLOAN ST	FLINT	MI	48504	COLLINS, AKEYLA
1174	BROWN, ROBERT REV TRUST	3030 BARTH ST	FLINT	MI	48504	BROWN, ROBERT REV TRUST
1175	RUFFIN, ALEXIS	6026 COVERED WAGON TRL	FLINT	MI	48532	RUFFIN, ALEXIS
1176	DUKES, DENISE & MARRELL	3006 WOLCOTT ST	FLINT	MI	48504	DUKES, DENISE & MARRELL

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1135	16131 HAVILAND BEACH	LINDEN	MI	48451	0	No	6700	6807	6700	13292797.67870000
1136	P O BOX 219	FLINT	MI	48501	0	No	6900	7010	6900	13292799.58960000
1137	3110 MACKIN RD	FLINT	MI	48504	0	Yes	0	0	0	13292799.69670000
1138	46 SAWMILL CREEK TRL	SAGINAW	MI	48603-8626	0	No	11700	11887	11700	13292803.89880000
1139	3025 MACKIN RD	FLINT	MI	48504	100	No	18300	18592	18300	13292805.58120000
1140	1205 DONALDSON ST	FLINT	MI	48504	100	No	3800	3860	3800	13292808.56390000
1141	1712 IOWA AVE	FLINT	MI	48506	0	No	16400	16662	16400	13292816.27410000
1142					0	No	13500	13710	13500	13292817.54640000
1143					0	No	11500	11370	11500	13292817.84870000
1144	1161 N BALLENGER HWY #12	FLINT	MI	48504	0	No	7400	6705	7400	13292819.99660000
1145	90 EAGLE RIDGE	LAKE ORION	MI	48360	0	No	7500	7620	7500	13292820.53520000
1146					0	No	12900	12700	12900	13292824.46630000
1147	2307 S SAGINAW ST	FLINT	MI	48503	0	No	400	406	400	13292828.49110000
1148	PO BOX 13602	FLINT	MI	48501	0	No	8900	9042	8900	13292829.44430000
1149	PO BOX 320678	FLINT	MI	48532-0012	0	No	8100	8229	8100	13292829.60610000
1150	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292830.96570000
1151	3006 BERKLEY ST	FLINT	MI	48504	100	No	7000	7112	7000	13292833.62710000
1152	3107 CLEMENT ST	FLINT	MI	48504	100	No	12000	12192	12000	13292833.76240000
1153	2955 N STEVENSON ST	FLINT	MI	48504	0	No	11500	11684	11500	13292840.01120000
1154	3102 BARTH ST	FLINT	MI	48504	100	No	9500	9652	9500	13292841.12050000
1155	3110 CLEMENT ST	FLINT	MI	48504	100	No	15400	15646	15400	13292841.56670000
1156	9154 TIMBERLINE DR	GRAND BLANC	MI	48439	0	No	11200	11379	11200	13292843.95340000
1157	1320 W HILL RD	FLINT	MI	48507	0	No	6900	10566	6900	13292850.55160000
1158	2307 S SAGINAW ST	FLINT	MI	48503	0	No	800	812	800	13292851.14280000
1159					0	No	96400	98850	96400	13292852.74290000
1160	3010 WOLCOTT ST	FLINT	MI	48504	100	No	10800	10972	10800	13292853.24870000
1161	9229 N LINDEN RD	CLIO	MI	48420	0	No	6500	6604	6500	13292856.35210000
1162					0	No	92200	94480	92200	13292857.94410000
1163	3150 RASKOB ST	FLINT	MI	48504	0	No	11800	11988	11800	13292859.88130000
1164	PO BOX 90676	BURTON	MI	48509	0	No	4300	4368	4300	13292864.35770000
1165	PO BOX 4026	FLINT	MI	48504	0	No	7100	7213	7100	13292867.80760000
1166	3001 WOLCOTT ST	FLINT	MI	48504	100	No	10900	11074	10900	13292869.57270000
1167					0	No	10500	10360	10500	13292870.14090000
1168	14221 DALLAS PKWY STE 100	DALLAS	TX	75254	0	No	6600	6705	6600	13292874.53310000
1169	2375 N GLENVILLE DR	RICHARDSON	TX	75082-4315	100	No	11900	12090	11900	13292875.64690000
1170	1217 DONALDSON ST	FLINT	MI	48504	100	No	9800	9956	9800	13292875.68260000
1171	3018 PROSPECT ST	FLINT	MI	48504	100	No	11200	11379	11200	13292876.61960000
1172	4465 BRISTOLWOOD DR	FLINT	MI	48507	0	No	8600	8737	8600	13292880.78430000
1173	2938 SLOAN ST	FLINT	MI	48504	0	No	14500	14732	14500	13292885.86660000
1174	3030 BARTH ST	FLINT	MI	48504	100	No	9600	9753	9600	13292889.42250000
1175	6026 COVERED WAGON TRL	FLINT	MI	48532	0	No	9900	10058	9900	13292890.75300000
1176	3006 WOLCOTT ST	FLINT	MI	48504	0	No	5100	5181	5100	13292891.33460000

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	AJ	AK	AL	AM	AN	AO	AP
1135	558688.22004600	305.08856295	4843.49462891000	305.08849809000			
1136	557420.03356400	287.30263726	3841.89257813000	287.30255022200			
1137	558569.18812100	471.94631497	13866.39404300000	471.94627208300			
1138	557530.72242100	282.45946291	4084.56103516000	282.45953263800			
1139	558385.88217100	359.89912387	7990.32910156000	359.89913732700			
1140	557137.92269100	276.79846550	3909.31689453000	276.79846642100			
1141	557985.70434100	284.23504594	3976.83007813000	284.23498505300			
1142	556107.22551100	711.91616522	15837.95605470000	711.91609112600			
1143	555700.91456500	324.25933463	5954.61181641000	324.25937540500			
1144	558096.95797600	292.43673005	4349.85253906000	292.43668430200			
1145	556842.97603400	293.36316255	4550.19384766000	293.36311483700			
1146	554887.70461200	282.36288772	4003.06396484000	282.36288989000			
1147	556595.05770100	356.24616869	5501.47119141000	356.24606290500			
1148	557694.69746300	291.95052597	4386.47460938000	291.95063972700			
1149	557171.65916600	278.52713053	3968.09863281000	278.52705389100			
1150	557802.97185200	280.81909449	3988.32714844000	280.81895221400			
1151	557406.04528300	292.18165391	4109.61816406000	292.18162198000			
1152	558966.53985900	354.55013501	7436.76708984000	354.55010118800			
1153	557516.34996600	276.17330883	3749.18066406000	276.17335099800			
1154	558849.45122800	311.19196833	5407.10791016000	311.19188170400			
1155	559149.83816200	397.22918881	9605.75781250000	397.22915765400			
1156	558669.00333800	324.66141135	5909.40625000000	324.66143951600			
1157	557206.46676800	282.01094350	4114.89453125000	282.01090361200			
1158	556649.37506200	429.62265465	10669.87841800000	429.62265857100			
1159	555793.49044900	494.96631537	14994.36865230000	494.96628384300			
1160	557970.80262900	291.17525772	4313.91601563000	291.17522856000			
1161	558081.61738800	282.91636213	3888.09326172000	282.91631800600			
1162	555219.30218100	736.62500364	27086.78759770000	736.62497246100			
1163	556913.32481500	428.79178325	11186.19580080000	428.79180519100			
1164	558362.35140800	293.22704164	4653.91796875000	293.22701837500			
1165	557679.25280300	289.91005391	4220.57373047000	289.91006221700			
1166	557788.12057000	285.82322246	4302.08544922000	285.82325651600			
1167	555136.33467600	232.09197505	3034.66455078000	232.09195444900			
1168	557391.26542500	313.94002763	5229.00585938000	313.94009829800			
1169	557501.80798800	282.14960658	4030.37304688000	282.14960509400			
1170	557241.17073600	289.04076219	4381.59619141000	289.04070004200			
1171	558245.92648400	338.99969350	6767.43896484000	338.99971166000			
1172	558535.11934600	323.66722626	5643.69433594000	323.66724680100			
1173	556795.87787700	326.43424662	6119.95605469000	326.43416997900			
1174	558831.99103300	304.96529890	5135.33789063000	304.96532205700			
1175	558944.77948100	325.56259225	5861.04785156000	325.56258581600			
1176	557955.18065000	290.97637193	4278.93066406000	290.97640380500			

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	A	B	C	D	E	F	G	H	I
1177	54799	54814	40-11-108-001	3009 PROSPECT ST	25-40-11-108-001	4011108001	001	Lot	401-RESIDENTIAL
1178	54805	54820	07-11-551-055	3007 WALTON ST	25-07-11-551-055	0711551055	261-3	Lot	401-RESIDENTIAL
1179	54817	54832	40-11-103-002	3025 BARTH ST	25-40-11-103-002	4011103002	002	Lot	401-RESIDENTIAL
1180	54819	54834	40-02-357-016	3106 CLEMENT ST	25-40-02-357-016	4002357016	016	Lot	401-RESIDENTIAL
1181	54828	54843	07-11-551-030	N BALLENGER HWY	25-07-11-551-030	0711551030	146/7	Lot	200-COMMERCIAL VACANT
1182	54832	54847	40-11-111-007	2960 N STEVENSON ST	25-40-11-111-007	4011111007	007	Lot	401-RESIDENTIAL
1183	54840	54855	40-11-105-002	3017 MACKIN RD	25-40-11-105-002	4011105002	002	Lot	401-RESIDENTIAL
1184	54848	54863	40-11-111-001	WOLCOTT ST	25-40-11-111-001	4011111001	001	Lot	400-RESIDENTIAL VACANT
1185	54890	54905	40-11-157-019	SLOAN ST	25-40-11-157-019	4011157019	019	Lot	400-RESIDENTIAL VACANT
1186	54893	54908	07-10-576-126	1275 N BALLENGER HWY	25-07-10-576-126	0710576126	21-27/53	Lot	201-COMMERCIAL IMPROVED
1187	54897	54912	40-11-151-001	2947 N STEVENSON ST	25-40-11-151-001	4011151001	001	Lot	401-RESIDENTIAL
1188	54903	54918	40-11-105-019	3014 PROSPECT ST	25-40-11-105-019	4011105019	019	Lot	401-RESIDENTIAL
1189	54909	54924	40-11-151-006	1255 DONALDSON ST	25-40-11-151-006	4011151006	006	Lot	401-RESIDENTIAL
1190	54913	54928	40-11-103-009	3020 MACKIN RD	25-40-11-103-009	4011103009	009	Lot	401-RESIDENTIAL
1191	54924	54939	40-11-108-012	3002 WOLCOTT ST	25-40-11-108-012	4011108012	012	Lot	401-RESIDENTIAL
1192	54933	54948	40-11-108-002	3005 PROSPECT ST	25-40-11-108-002	4011108002	002	Lot	401-RESIDENTIAL
1193	54958	54973	40-02-359-021	3026 BARTH ST	25-40-02-359-021	4002359021	021	Lot	401-RESIDENTIAL
1194	54963	54978	40-11-155-006	1202 DONALDSON ST	25-40-11-155-006	4011155006	006	Lot	401-RESIDENTIAL
1195	54982	54997	40-11-111-008	2956 N STEVENSON ST	25-40-11-111-008	4011111008	008	Lot	401-RESIDENTIAL
1196	54983	54998	40-02-359-008	3029 CLEMENT ST	25-40-02-359-008	4002359008	008	Lot	401-RESIDENTIAL
1197	54988	55003	07-11-551-045	3008 WALTON ST	25-07-11-551-045	0711551045	245-7	Lot	401-RESIDENTIAL
1198	54993	55008	40-11-105-003	3013 MACKIN RD	25-40-11-105-003	4011105003	003	Lot	401-RESIDENTIAL
1199	55001	55016	40-11-111-002	2953 WOLCOTT ST	25-40-11-111-002	4011111002	002	Lot	401-RESIDENTIAL
1200	55016	55031	40-11-151-005	1259 DONALDSON ST	25-40-11-151-005	4011151005	005	Lot	401-RESIDENTIAL
1201	55038	55053	40-11-103-004	3017 BARTH ST	25-40-11-103-004	4011103004	004	Lot	401-RESIDENTIAL
1202	55054	55069	40-11-155-004	1206 DONALDSON ST	25-40-11-155-004	4011155004	004	Lot	401-RESIDENTIAL
1203	55058	55073	40-11-105-020	3010 PROSPECT ST	25-40-11-105-020	4011105020	020	Lot	401-RESIDENTIAL
1204	55080	55095	40-11-108-013	2960 WOLCOTT ST	25-40-11-108-013	4011108013	013	Lot	401-RESIDENTIAL
1205	55093	55108	40-11-157-016	2927 RASKOB ST	25-40-11-157-016	4011157016	016	Lot	201-COMMERCIAL IMPROVED
1206	55100	55115	40-11-103-010	3014 MACKIN RD	25-40-11-103-010	4011103010	010	Lot	401-RESIDENTIAL
1207	55101	55116	40-11-159-008	FLUSHING RD	25-40-11-159-008	4011159008	008	Lot	400-RESIDENTIAL VACANT
1208	55116	55131	40-11-105-004	3009 MACKIN RD	25-40-11-105-004	4011105004	004	Lot	401-RESIDENTIAL
1209	55117	55132	40-11-108-003	3001 PROSPECT ST	25-40-11-108-003	4011108003	003	Lot	401-RESIDENTIAL
1210	55121	55136	40-11-157-010	2928 SLOAN ST	25-40-11-157-010	4011157010	010	Lot	401-RESIDENTIAL
1211	55124	55139	40-11-151-003	1263 DONALDSON ST	25-40-11-151-003	4011151003	003	Lot	401-RESIDENTIAL
1212	55125	55140	40-11-155-003	1210 DONALDSON ST	25-40-11-155-003	4011155003	003	Lot	401-RESIDENTIAL
1213	55126	55141	40-02-359-023	3022 BARTH ST	25-40-02-359-023	4002359023	023	Lot	401-RESIDENTIAL
1214	55140	55155	07-11-551-060	1208 N BALLENGER HWY	25-07-11-551-060	0711551060	142-145/+	Lot	201-COMMERCIAL IMPROVED
1215	55141	55156	40-02-359-009	3025 CLEMENT ST	25-40-02-359-009	4002359009	009	Lot	401-RESIDENTIAL
1216	55142	55157	40-11-111-003	2949 WOLCOTT ST	25-40-11-111-003	4011111003	003	Lot	401-RESIDENTIAL
1217	55151	55166	40-11-111-009	2952 N STEVENSON ST	25-40-11-111-009	4011111009	009	Lot	401-RESIDENTIAL
1218	55181	55196	40-11-105-021	3006 PROSPECT ST	25-40-11-105-021	4011105021	021	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
1177	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3009	PROSPECT ST	FLINT	48504
1178	Residential	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080		3007	WALTON ST	FLINT	48504
1179	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		3025	BARTH ST	FLINT	48504
1180	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3106	CLEMENT ST	FLINT	48504
1181	Commercial	0.23000000	0.23	CARMAN-AINSWORTH SCHOOLS	25080	N		BALLENGER HWY	FLINT	48504
1182	Residential	0.09000000	0.09	FLINT SCHOOLS	25010	N	2960	STEVENSON ST	FLINT	48504
1183	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3017	MACKIN RD	FLINT	48504
1184	Residential	0.09000000	0.09	FLINT SCHOOLS	25010			WOLCOTT ST	FLINT	48504
1185	Residential	0.03000000	0.03	FLINT SCHOOLS	25010			SLOAN ST	FLINT	48504
1186	Commercial	1.17999995	1.18	CARMAN-AINSWORTH SCHOOLS	25080	N	1275	BALLENGER HWY	FLINT	48504
1187	Residential	0.14000000	0.14	FLINT SCHOOLS	25010	N	2947	STEVENSON ST	FLINT	48504
1188	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3014	PROSPECT ST	FLINT	48504
1189	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1255	DONALDSON ST	FLINT	48504
1190	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3020	MACKIN RD	FLINT	48504
1191	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3002	WOLCOTT ST	FLINT	48504
1192	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3005	PROSPECT ST	FLINT	48504
1193	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3026	BARTH ST	FLINT	48504
1194	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1202	DONALDSON ST	FLINT	48504
1195	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	2956	STEVENSON ST	FLINT	48504
1196	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3029	CLEMENT ST	FLINT	48504
1197	Residential	0.23999999	0.24	CARMAN-AINSWORTH SCHOOLS	25080		3008	WALTON ST	FLINT	48504
1198	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3013	MACKIN RD	FLINT	48504
1199	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2953	WOLCOTT ST	FLINT	48504
1200	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1259	DONALDSON ST	FLINT	48504
1201	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3017	BARTH ST	FLINT	48504
1202	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1206	DONALDSON ST	FLINT	48504
1203	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3010	PROSPECT ST	FLINT	48504
1204	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2960	WOLCOTT ST	FLINT	48504
1205	Commercial	0.34999999	0.35	FLINT SCHOOLS	25010		2927	RASKOB ST	FLINT	48504
1206	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3014	MACKIN RD	FLINT	48504
1207	Residential	0.05000000	0.05	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
1208	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3009	MACKIN RD	FLINT	48504
1209	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		3001	PROSPECT ST	FLINT	48504
1210	Residential	0.28000000	0.28	FLINT SCHOOLS	25010		2928	SLOAN ST	FLINT	48504
1211	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		1263	DONALDSON ST	FLINT	48504
1212	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1210	DONALDSON ST	FLINT	48504
1213	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3022	BARTH ST	FLINT	48504
1214	Commercial	0.69000000	0.69	CARMAN-AINSWORTH SCHOOLS	25080	N	1208	BALLENGER HWY	FLINT	48504
1215	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3025	CLEMENT ST	FLINT	48504
1216	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2949	WOLCOTT ST	FLINT	48504
1217	Residential	0.16000000	0.16	FLINT SCHOOLS	25010	N	2952	STEVENSON ST	FLINT	48504
1218	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3006	PROSPECT ST	FLINT	48504

Container Specialties Inc
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	T	U	V	W	X	Y
1177	MOORE, ERWIN	3009 PROSPECT ST	FLINT	MI	48504	MOORE, ERWIN
1178	HAMMERSLEY, STEVEN R	3007 WALTON ST	FLINT	MI	48504	FEDERAL HOME LOAN MORTGAGE CORP
1179	DILLARD, MARY A	3025 BARTH ST	FLINT	MI	48504	DILLARD, MARY A
1180	ADKINS, GERALDINE	3106 CLEMENT ST	FLINT	MI	48504	ADKINS, GERALDINE
1181	SMITH, BRADY D	1208 N BALLENGER HWY	FLINT	MI	48504	
1182	SIMMONDS, ROBERT & ELAINE	472 SIMMONDS DR	OTISVILLE	MI	48463	SIMMONDS, ROBERT & ELAINE
1183	DARROUGH, KEITH	3202 WOLCOTT ST	FLINT	MI	48504	DARROUGH, KEITH
1184	WEBB, EMMA L	3001 WOLCOTT ST	FLINT	MI	48504	WEBB, EMMA L
1185	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1186	VELMEIR BALLENGER CO, LLC	24255 W 13 MILE RD STE 22	BINGHAM FARMS	MI	48025	
1187	CALLAWAY, TWILLIA	2947 N STEVENSON ST	FLINT	MI	48504	CALLAWAY, TWILLIA
1188	RNR PROPERTIES NORTH, LLC	3014 PROSPECT ST	FLINT	MI	48504	RNR PROPERTIES NORTH, LLC
1189	ANDERSON, RONNIE	1255 DONALDSON ST	FLINT	MI	48504	ANDERSON, RONNIE
1190	JMZ PROPERTIES, LLC	G-4084 CORUNNA RD STE A	FLINT	MI	48532	JMZ PROPERTIES, LLC
1191	TREASURE ENTERPRISE, LLC	1161 N BALLENGER HWY #12	FLINT	MI	48504	TREASURE ENTERPRISE, LLC
1192	WILLIAMS, CELIA	1032 S DAYTON ST	DAVISON	MI	48423	WILLIAMS, CELIA
1193	BRASWELL, MARIO J SR	3026 BARTH ST	FLINT	MI	48504	BRASWELL, MARIO J SR
1194	HARBOUR PORTFOLIO VII, LP	8214 WESTCHESTER STE 635	DALLAS	TX	75225	HARBOUR PORTFOLIO VII, LP
1195	WATERSON, ALFRED & WF MARGARET	2956 N STEVENSON ST	FLINT	MI	48504	WATERSON, ALFRED & WF MARGARET
1196	COLE, HENRY D & WF VERONICA	3029 CLEMENT ST	FLINT	MI	48504	COLE, HENRY D & WF VERONICA
1197	DECKER, ALAN A & SANDRA J	6080 COUSINS DR	SWARTZ CREEK	MI	48473	
1198	MURPHY, ALEXANDER J	3013 MACKIN RD	FLINT	MI	48504	MURPHY, ALEXANDER J
1199	PEOPLE, ANNIE L	2953 WOLCOTT ST	FLINT	MI	48504	PEOPLE, ANNIE L
1200	LECRONE, JANICE	3236 W ORIOLE AVE	VISALIA	CA	93291	LECRONE, JANICE
1201	NEAL, SANDY T	1324 ARROWWOOD LN	GRAND BLANC	MI	48439	NEAL, SANDY T
1202	JACKSON, CASEY K	5718 EDGAR HOLT DR	FLINT	MI	48505	JACKSON, CASEY K
1203	RICE, LARRY & FISHER, MARILYN	3010 PROSPECT ST	FLINT	MI	48504	RICE, LARRY & FISHER, MARILYN
1204	FATOUHI, DANI S	2960 WOLCOTT ST	FLINT	MI	48504	FATOUHI, DANI S
1205	LITTLE FLOCK CH OF FLINT	3021 CONCORD ST	FLINT	MI	48504	LITTLE FLOCK CH OF FLINT
1206	DAVID, DAVID L & DAVID, GLADYS	3014 MACKIN RD	FLINT	MI	48504	DAVID, DAVID L & DAVID, GLADYS
1207	CITY OF FLINT	FLUSHING RD	FLINT	MI	48504	CITY OF FLINT
1208	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
1209	FLINT REAL ESTATE CO	1021 FLUSHING RD	FLINT	MI	48504	FLINT REAL ESTATE CO
1210	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
1211	ASILED PROPERTIES	PO BOX 219	FLINT	MI	48501	ASILED PROPERTIES
1212	ISAAC, CHARLES JR	11098 W GELN	CLIO	MI	48420	ISAAC, CHARLES JR
1213	HUTCHINSON RENTALS, LLC	6509 N SAGINAW ST	FLINT	MI	48505	HUTCHINSON RENTALS, LLC
1214	SMITH, BRADY D JR	G-1208 N BALLENGER HWY	FLINT	MI	48504	
1215	MILOW, JOHNNIE L SR & WF ANTONIA W	3025 CLEMENT ST	FLINT	MI	48504	MILOW, JOHNNIE L SR & WF ANTONIA W
1216	HILL, JACQUELINE L	2949 WOLCOTT ST	FLINT	MI	48504	HILL, JACQUELINE L
1217	HAYGOOD, D'ANTONINA	2952 N STEVENSON ST	FLINT	MI	48504	HAYGOOD, D'ANTONINA
1218	BROWNE, BOOTH & WF BARBARA	5015 CEDARDALE	FLUSHING	MI	48433	BROWNE, BOOTH & WF BARBARA

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1177	3009 PROSPECT ST	FLINT	MI	48504	0	No	6700	6807	6700	13292892.96270000
1178	1410 SPRING HILL RD	MC LEAN	VA	22102	100	No	18800	18690	18800	13292896.41480000
1179	3025 BARTH ST	FLINT	MI	48504	100	No	10700	10871	10700	13292899.50990000
1180	3106 CLEMENT ST	FLINT	MI	48504	100	No	12000	12192	12000	13292899.88630000
1181					0	No	8000	8120	8000	13292903.77670000
1182	472 SIMMONDS DR	OTISVILLE	MI	48463	0	No	7500	7620	7500	13292904.53730000
1183	3202 WOLCOTT ST	FLINT	MI	48504	0	No	12200	12395	12200	13292905.94790000
1184	3001 WOLCOTT ST	FLINT	MI	48504	100	No	500	425	500	13292908.05130000
1185	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	0	Yes	0	0	0	13292919.77100000
1186					0	No	428800	438600	428800	13292921.36390000
1187	2947 N STEVENSON ST	FLINT	MI	48504	100	No	7300	7416	7300	13292922.78720000
1188	3014 PROSPECT ST	FLINT	MI	48504	0	No	9200	9347	9200	13292925.22870000
1189	1255 DONALDSON ST	FLINT	MI	48504	100	No	10900	11074	10900	13292926.01470000
1190	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	6200	6299	6200	13292927.08570000
1191	1161 N BALLENGER HWY #12	FLINT	MI	48504	0	No	7500	7620	7500	13292929.64690000
1192	1032 S DAYTON ST	DAVISON	MI	48423	0	No	7300	7416	7300	13292931.29890000
1193	3026 BARTH ST	FLINT	MI	48504	100	No	9600	9753	9600	13292935.65840000
1194	8214 WESTCHESTER STE 635	DALLAS	TX	75225	0	No	7800	7924	7800	13292936.87810000
1195	2956 N STEVENSON ST	FLINT	MI	48504	0	No	6500	6604	6500	13292941.52890000
1196	3029 CLEMENT ST	FLINT	MI	48504	100	No	11200	11379	11200	13292941.58800000
1197					100	No	19600	19400	19600	13292943.31200000
1198	3013 MACKIN RD	FLINT	MI	48504	100	No	5900	5994	5900	13292944.17860000
1199	2953 WOLCOTT ST	FLINT	MI	48504	100	No	12100	12293	12100	13292946.76910000
1200	3236 W ORIOLE AVE	VISALIA	CA	93291	0	No	8900	9042	8900	13292950.31260000
1201	1324 ARROWWOOD LN	GRAND BLANC	MI	48439	0	No	11000	11176	11000	13292954.90080000
1202	5718 EDGAR HOLT DR	FLINT	MI	48505	0	No	7300	7416	7300	13292960.62500000
1203	3010 PROSPECT ST	FLINT	MI	48504	100	No	6900	7010	6900	13292961.46460000
1204	2960 WOLCOTT ST	FLINT	MI	48504	100	No	10900	11074	10900	13292967.87370000
1205	3021 CONCORD ST	FLINT	MI	48504	0	Yes	0	0	0	13292970.26970000
1206	3014 MACKIN RD	FLINT	MI	48504	0	No	9600	9753	9600	13292973.04280000
1207	FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13292973.53780000
1208	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292978.70470000
1209	1021 FLUSHING RD	FLINT	MI	48504	0	No	10000	10160	10000	13292979.06100000
1210	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13292980.31990000
1211	PO BOX 219	FLINT	MI	48501	0	No	7500	7620	7500	13292981.51580000
1212	11098 W GELN	CLIO	MI	48420	0	No	7300	7416	7300	13292981.51940000
1213	6509 N SAGINAW ST	FLINT	MI	48505	0	No	10100	10100	10100	13292981.75680000
1214					0	No	68200	69900	68200	13292987.98940000
1215	3025 CLEMENT ST	FLINT	MI	48504	100	No	11500	11684	11500	13292988.37560000
1216	2949 WOLCOTT ST	FLINT	MI	48504	100	No	10500	10668	10500	13292988.38930000
1217	2952 N STEVENSON ST	FLINT	MI	48504	100	No	11900	12090	11900	13292989.73930000
1218	5015 CEDARDALE	FLUSHING	MI	48433	0	No	6900	7010	6900	13292998.14930000

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	AJ	AK	AL	AM	AN	AO	AP
1177	558066.78304000	290.46277044	4314.81396484000	290.46284740500			
1178	554968.26821900	436.24692939	11809.95166020000	436.24706870900			
1179	558645.45844600	345.23333002	7004.10205078000	345.23331348200			
1180	559126.90971700	312.67318198	4794.84863281000	312.67313100700			
1181	555408.70831400	397.81375538	9863.98974609000	397.81368105500			
1182	557664.54689700	288.42923769	4086.08789063000	288.42924441400			
1183	558344.27399400	289.20504509	4438.17773438000	289.20512964000			
1184	557772.59976400	277.12905101	3931.55273438000	277.12900335100			
1185	556784.51439400	230.63065141	1229.21826172000	230.63065908200			
1186	556069.58067300	949.73309326	51616.37841800000	949.73308359400			
1187	557483.95471500	325.69386873	6161.70996094000	325.69383938300			
1188	558225.78653000	290.67623266	4261.49511719000	290.67619088000			
1189	557335.32759100	303.31836157	4955.54052734000	303.31848781600			
1190	558514.71220600	322.03712550	5561.87792969000	322.03710521500			
1191	557939.31541900	293.94004468	4409.44873047000	293.94001968100			
1192	558050.95873100	288.58047997	4252.54150391000	288.58050382700			
1193	558813.05349700	302.98977616	5053.84619141000	302.98984039000			
1194	557039.65301200	300.63572129	4840.21044922000	300.63587047100			
1195	557650.32915600	293.65842312	4304.13281250000	293.65838293100			
1196	558924.23616900	329.66289651	6087.25292969000	329.66296861000			
1197	555118.87480500	412.74009155	10611.35400390000	412.74014183900			
1198	558330.06557300	275.78980023	3745.16992188000	275.78978553100			
1199	557757.06170600	282.48741039	4256.74609375000	282.48741295900			
1200	557370.93670900	281.65276035	3874.50683594000	281.65277556900			
1201	558621.66481800	325.24966695	5920.22167969000	325.24968804700			
1202	557075.14570500	281.73552493	3890.26025391000	281.73554886100			
1203	558210.42030300	284.40505181	3955.96972656000	284.40505568500			
1204	557923.38805400	292.31492948	4299.27001953000	292.31484346900			
1205	556877.17547500	493.58340032	15123.06494140000	493.58341913700			
1206	558494.61025300	321.48529694	5536.46093750000	321.48532302600			
1207	556286.86377500	511.74131928	2208.00195313000	511.74118008200			
1208	558313.59724800	280.35654431	3961.05517578000	280.35649558400			
1209	558030.78003100	329.52187593	6388.91699219000	329.52178478700			
1210	556759.40472200	445.08841377	12316.08691410000	445.08845932100			
1211	557422.28286100	373.05052457	8583.54785156000	373.05049425900			
1212	557108.52808600	289.49408961	4255.14111328000	289.49403653500			
1213	558794.61552200	305.04116964	5100.12011719000	305.04115170200			
1214	555443.37960000	839.08999113	30259.52880860000	839.08988937800			
1215	558905.69015700	307.25290925	4872.70361328000	307.25279325300			
1216	557740.98946800	284.18926531	4400.12011719000	284.18926055000			
1217	557631.49265800	341.01665776	6767.98974609000	341.01667416600			
1218	558195.56598100	290.26492433	4282.52539063000	290.26492410600			

Container Specialties Inc
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	A	B	C	D	E	F	G	H	I
1219	55198	55213	07-11-551-042	2523 STRATFORD ST	25-07-11-551-042	0711551042	201/2	Lot	401-RESIDENTIAL
1220	55209	55224	40-11-155-002	1214 DONALDSON ST	25-40-11-155-002	4011155002	002	Lot	401-RESIDENTIAL
1221	55219	55234	40-11-103-005	3013 BARTH ST	25-40-11-103-005	4011103005	005	Lot	401-RESIDENTIAL
1222	55224	55239	40-11-108-014	2956 WOLCOTT ST	25-40-11-108-014	4011108014	014	Lot	401-RESIDENTIAL
1223	55256	55271	40-11-103-011	3010 MACKIN RD	25-40-11-103-011	4011103011	011	Lot	401-RESIDENTIAL
1224	55257	55272	40-11-105-005	MACKIN RD	25-40-11-105-005	4011105005	005	Lot	400-RESIDENTIAL VACANT
1225	55270	55285	40-11-151-002	1267 DONALDSON ST	25-40-11-151-002	4011151002	002	Lot	401-RESIDENTIAL
1226	55278	55293	40-11-155-012	2932 RASKOB ST	25-40-11-155-012	4011155012	012	Lot	401-RESIDENTIAL
1227	55309	55324	40-02-359-024	3018 BARTH ST	25-40-02-359-024	4002359024	024	Lot	401-RESIDENTIAL
1228	55310	55325	40-11-155-001	1218 DONALDSON ST	25-40-11-155-001	4011155001	001	Lot	401-RESIDENTIAL
1229	55314	55329	40-11-111-004	2945 WOLCOTT ST	25-40-11-111-004	4011111004	004	Lot	401-RESIDENTIAL
1230	55315	55330	07-11-551-015	1232 N BALLENGER HWY	25-07-11-551-015	0711551015	82-6/117	Lot	201-COMMERCIAL IMPROVED
1231	55317	55332	40-11-159-005	2918 FLUSHING RD	25-40-11-159-005	4011159005	005	Lot	201-COMMERCIAL IMPROVED
1232	55324	55339	40-11-111-011	N STEVENSON ST	25-40-11-111-011	4011111011	011	Lot	400-RESIDENTIAL VACANT
1233	55339	55354	40-11-105-022	3002 PROSPECT ST	25-40-11-105-022	4011105022	022	Lot	401-RESIDENTIAL
1234	55350	55365	40-11-108-004	2929 PROSPECT ST	25-40-11-108-004	4011108004	004	Lot	401-RESIDENTIAL
1235	55362	55377	40-02-359-010	3021 CLEMENT ST	25-40-02-359-010	4002359010	010	Lot	401-RESIDENTIAL
1236	55398	55413	40-11-105-006	3001 MACKIN RD	25-40-11-105-006	4011105006	006	Lot	401-RESIDENTIAL
1237	55400	55415	40-11-103-012	3006 MACKIN RD	25-40-11-103-012	4011103012	012	Lot	401-RESIDENTIAL
1238	55410	55425	40-11-103-006	3011 BARTH ST	25-40-11-103-006	4011103006	006	Lot	401-RESIDENTIAL
1239	55420	55435	40-11-155-013	2928 RASKOB ST	25-40-11-155-013	4011155013	013	Lot	401-RESIDENTIAL
1240	55428	55443	40-11-108-023	2952 WOLCOTT ST	25-40-11-108-023	4011108023	023	Lot	401-RESIDENTIAL
1241	55431	55446	40-11-159-003	FLUSHING RD	25-40-11-159-003	4011159003	003	Lot	200-COMMERCIAL VACANT
1242	55441	55456	40-11-111-016	1301 DONALDSON ST	25-40-11-111-016	4011111016	016	Lot	401-RESIDENTIAL
1243	55452	55467	40-11-111-006	2941 WOLCOTT ST	25-40-11-111-006	4011111006	006	Lot	401-RESIDENTIAL
1244	55458	55473	40-11-105-023	2934 PROSPECT ST	25-40-11-105-023	4011105023	023	Lot	401-RESIDENTIAL
1245	55460	55475	40-11-157-011	2916 SLOAN ST	25-40-11-157-011	4011157011	011	Lot	401-RESIDENTIAL
1246	55463	55478	40-11-157-013	2919 RASKOB ST	25-40-11-157-013	4011157013	013	Lot	401-RESIDENTIAL
1247	55465	55480	40-02-359-025	3014 BARTH ST	25-40-02-359-025	4002359025	025	Lot	401-RESIDENTIAL
1248	55474	55489	40-11-152-003	1252 DONALDSON ST	25-40-11-152-003	4011152003	003	Lot	401-RESIDENTIAL
1249	55485	55500	40-11-155-007	2931 BERKLEY ST	25-40-11-155-007	4011155007	007	Lot	401-RESIDENTIAL
1250	55486	55501	07-11-551-027	2503 DEVONSHIRE ST	25-07-11-551-027	0711551027	141	Lot	401-RESIDENTIAL
1251	55502	55517	40-11-108-005	PROSPECT ST	25-40-11-108-005	4011108005	005	Lot	400-RESIDENTIAL VACANT
1252	55528	55543	40-11-105-007	2977 MACKIN RD	25-40-11-105-007	4011105007	007	Lot	401-RESIDENTIAL
1253	55536	55551	40-11-111-015	1305 DONALDSON ST	25-40-11-111-015	4011111015	015	Lot	401-RESIDENTIAL
1254	55555	55570	07-11-551-016	2506 DEVONSHIRE ST	25-07-11-551-016	0711551016	118	Lot	401-RESIDENTIAL
1255	55559	55574	40-11-103-013	3002 MACKIN RD	25-40-11-103-013	4011103013	013	Lot	400-RESIDENTIAL VACANT
1256	55565	55580	40-02-359-011	3013 CLEMENT ST	25-40-02-359-011	4002359011	011	Lot	401-RESIDENTIAL
1257	55593	55608	40-11-152-002	1256 DONALDSON ST	25-40-11-152-002	4011152002	002	Lot	401-RESIDENTIAL
1258	55614	55629	40-11-105-024	2930 PROSPECT ST	25-40-11-105-024	4011105024	024	Lot	401-RESIDENTIAL
1259	55629	55644	40-11-111-014	1309 DONALDSON ST	25-40-11-111-014	4011111014	014	Lot	401-RESIDENTIAL
1260	55641	55656	07-11-551-026	2499 DEVONSHIRE ST	25-07-11-551-026	0711551026	140	Lot	401-RESIDENTIAL

Container Specialties Inc
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	J	K	L	M	N	O	P	Q	R	S
1219	Residential	0.19000000	0.19	CARMAN-AINSWORTH SCHOOLS	25080		2523	STRATFORD ST	FLINT	48504
1220	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1214	DONALDSON ST	FLINT	48504
1221	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3013	BARTH ST	FLINT	48504
1222	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2956	WOLCOTT ST	FLINT	48504
1223	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		3010	MACKIN RD	FLINT	48504
1224	Residential	0.09000000	0.09	FLINT SCHOOLS	25010			MACKIN RD	FLINT	48504
1225	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1267	DONALDSON ST	FLINT	48504
1226	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2932	RASKOB ST	FLINT	48504
1227	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3018	BARTH ST	FLINT	48504
1228	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		1218	DONALDSON ST	FLINT	48504
1229	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2945	WOLCOTT ST	FLINT	48504
1230	Commercial	0.62000000	0.62	CARMAN-AINSWORTH SCHOOLS	25080	N	1232	BALLENGER HWY	FLINT	48504
1231	Commercial	1.61000001	1.61	FLINT SCHOOLS	25010		2918	FLUSHING RD	FLINT	48504
1232	Residential	0.05000000	0.05	FLINT SCHOOLS	25010	N		STEVENSON ST	FLINT	48504
1233	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3002	PROSPECT ST	FLINT	48504
1234	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		2929	PROSPECT ST	FLINT	48504
1235	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		3021	CLEMENT ST	FLINT	48504
1236	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		3001	MACKIN RD	FLINT	48504
1237	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		3006	MACKIN RD	FLINT	48504
1238	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		3011	BARTH ST	FLINT	48504
1239	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		2928	RASKOB ST	FLINT	48504
1240	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		2952	WOLCOTT ST	FLINT	48504
1241	Commercial	0.18000001	0.18	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
1242	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1301	DONALDSON ST	FLINT	48504
1243	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2941	WOLCOTT ST	FLINT	48504
1244	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2934	PROSPECT ST	FLINT	48504
1245	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		2916	SLOAN ST	FLINT	48504
1246	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		2919	RASKOB ST	FLINT	48504
1247	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3014	BARTH ST	FLINT	48504
1248	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		1252	DONALDSON ST	FLINT	48504
1249	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2931	BERKLEY ST	FLINT	48504
1250	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		2503	DEVONSHIRE ST	FLINT	48504
1251	Residential	0.09000000	0.09	FLINT SCHOOLS	25010			PROSPECT ST	FLINT	48504
1252	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2977	MACKIN RD	FLINT	48504
1253	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1305	DONALDSON ST	FLINT	48504
1254	Residential	0.09000000	0.09	CARMAN-AINSWORTH SCHOOLS	25080		2506	DEVONSHIRE ST	FLINT	48504
1255	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		3002	MACKIN RD	FLINT	48504
1256	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		3013	CLEMENT ST	FLINT	48504
1257	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1256	DONALDSON ST	FLINT	48504
1258	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2930	PROSPECT ST	FLINT	48504
1259	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1309	DONALDSON ST	FLINT	48504
1260	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		2499	DEVONSHIRE ST	FLINT	48504

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	T	U	V	W	X	Y
1219	NIXON, EVELYN S	280 W BRUNSWICK DR	DEWITT	MI	48820-9187	RESIDENTIAL GROUP 119 LLC
1220	DAVIS, YAMESIA L	110 E BAKER ST	FLINT	MI	48505	DAVIS, YAMESIA L
1221	THOMPSON, LINDA C	3013 BARTH ST	FLINT	MI	48504	THOMPSON, LINDA C
1222	ZERKA, MILAD	G-4084 CORUNNA RD STE A	FLINT	MI	48532	ZERKA, MILAD
1223	JMZ PROPERTIES, LLC	G-4084 CORUNNA RD STE A	FLINT	MI	48532	JMZ PROPERTIES, LLC
1224	EDMONDS, MARY E	3001 MACKIN RD	FLINT	MI	48504	EDMONDS, MARY E
1225	MILLER, DAVID W	3921 TUXEDO AVE	FLINT	MI	48507	MILLER, DAVID W
1226	FOSS, KEVIN & WF MELISSA A	2932 RASKOB ST	FLINT	MI	48504	FOSS, KEVIN & WF MELISSA A
1227	ELLISON, FLORDIE JR & MAXINE	3018 BARTH ST	FLINT	MI	48504	ELLISON, FLORDIE JR & MAXINE
1228	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1229	CHEW, DEONDRA	626 W RUTH AVE	FLINT	MI	48505	CHEW, DEONDRA
1230	MCDONALDS CORP 21-1063	PO BOX 182571	COLUMBUS	OH	43218	
1231	A D LEASING CO INC	2307 S SAGINAW ST	FLINT	MI	48503	A D LEASING CO INC
1232	1104 HOUSES, LLC	521 W COURT ST	FLINT	MI	48503	1104 HOUSES, LLC
1233	BROWNE, BOOTH & WF BARBARA	5015 CEDARDALE	FLUSHING	MI	48433	BROWNE, BOOTH & WF BARBARA
1234	DOROTHE J ENTERPRISE, LLC	2515 MEADOWCROFT DR	BURTON	MI	48519	DOROTHE J ENTERPRISE, LLC
1235	TALLEY, EARNEST & WF JOYCE	3021 CLEMENT ST	FLINT	MI	48504	TALLEY, EARNEST & WF JOYCE
1236	EDMONDS, MARY E	3001 MACKIN RD	FLINT	MI	48504	EDMONDS, MARY E
1237	JMZ PROPERTIES, LLC	G-4084 CORUNNA RD STE A	FLINT	MI	48532	JMZ PROPERTIES, LLC
1238	PERDUE, LILLIE M	3011 BARTH ST	FLINT	MI	48504	PERDUE, LILLIE M
1239	DMZ PROPERTIES, LLC	G-4084 CORUNNA RD STE A	FLINT	MI	48532	DMZ PROPERTIES, LLC
1240	TEAMWORK PROPERTIES LLC	1320 W HILL RD	FLINT	MI	48507	TEAMWORK PROPERTIES LLC
1241	BALLENGER-FLUSHING NW LLC	2307 S SAGINAW ST	FLINT	MI	48503	BALLENGER-FLUSHING NW LLC
1242	1104 HOUSES, LLC	521 W COURT ST	FLINT	MI	48503	1104 HOUSES, LLC
1243	ALEA IACTA EST, LLC	1381 WARNER AVE STE C	TUSTIN	CA	92780	ALEA IACTA EST, LLC
1244	SMITH, WILLIE	2934 PROSPECT ST	FLINT	MI	48504	SMITH, WILLIE
1245	FED NAT'L MTG ASSOC	1726 WALNUT CREEK	FLINT	MI	48507	FED NAT'L MTG ASSOC
1246	GENTRY, RENEE W	2919 RASKOB ST	FLINT	MI	48504	GENTRY, RENEE W
1247	FED HOME LOAN MORTGAGE CORP	1161 N BALLENGER HWY STE	FLINT	MI	48504	FED HOME LOAN MORTGAGE CORP
1248	BETHEL UNITED METHODIST CHURCH	1309 N BALLENGER HWY	FLINT	MI	48504	BETHEL UNITED METHODIST CHURCH
1249	HOWARD, JERRY & JACQUELINE	5382 MORRISH RD	SWARTZ CREEK	MI	48473	HOWARD, JERRY & JACQUELINE
1250	SHEPARD, JILL TRUSTEE	PO BOX 356	LINDEN	MI	48451	HASENFRATZ, KRISTEN & DOUGLAS
1251	MUNGER, GLADYS L	2921 PROSPECT ST	FLINT	MI	48504	MUNGER, GLADYS L
1252	PREFOUNTAIN, HELEN E	2977 MACKIN RD	FLINT	MI	48504	PREFOUNTAIN, HELEN E
1253	HOWARD, JERRY A	5382 MORRISH RD	SWARTZ CREEK	MI	48473	HOWARD, JERRY A
1254	HART, RICHARD J & VICKI	5391 THRUSH ST	GRAND BLANC	MI	48439	
1255	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1256	WALKER, P & DIXON-WALKER, S	3013 CLEMENT ST	FLINT	MI	48504	WALKER, P & DIXON-WALKER, S
1257	BETHEL UNITED METHODIST CHURCH	1309 N BALLENGER HWY	FLINT	MI	48504	BETHEL UNITED METHODIST CHURCH
1258	SMITH, J D	2930 PROSPECT ST	FLINT	MI	48504	SMITH, J D
1259	CARTER, FRED	1309 DONALDSON ST	FLINT	MI	48504	CARTER, FRED
1260	PEEL, TERRY L & WENDY	1106 PEACH BLOSSOM CIR	BURTON	MI	48509	

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1219	8155 ANNSBURY DR STE 100	SHELBY TOWNSHIP	MI	48316	0	No	26200	25900	26200	13293000.64340000
1220	110 E BAKER ST	FLINT	MI	48505	0	No	7300	7416	7300	13293002.37560000
1221	3013 BARTH ST	FLINT	MI	48504	100	No	11800	11988	11800	13293005.34230000
1222	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	3600	3657	3600	13293006.09860000
1223	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	5100	5181	5100	13293015.17460000
1224	3001 MACKIN RD	FLINT	MI	48504	100	No	500	425	500	13293015.42510000
1225	3921 TUXEDO AVE	FLINT	MI	48507	0	No	5000	5080	5000	13293017.29670000
1226	2932 RASKOB ST	FLINT	MI	48504	0	No	10100	10261	10100	13293019.12060000
1227	3018 BARTH ST	FLINT	MI	48504	0	No	10300	10464	10300	13293027.39680000
1228	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	0	Yes	0	0	0	13293027.40240000
1229	626 W RUTH AVE	FLINT	MI	48505	0	No	12000	12192	12000	13293029.24510000
1230					0	No	219100	225240	219100	13293029.44960000
1231	2307 S SAGINAW ST	FLINT	MI	48503	0	No	338300	343712	338300	13293029.73170000
1232	521 W COURT ST	FLINT	MI	48503	0	No	300	212	300	13293031.75010000
1233	5015 CEDARDALE	FLUSHING	MI	48433	0	No	8000	8128	8000	13293035.29140000
1234	2515 MEADOWCROFT DR	BURTON	MI	48519	0	No	8600	8737	8600	13293036.61980000
1235	3021 CLEMENT ST	FLINT	MI	48504	100	No	10600	10769	10600	13293040.74920000
1236	3001 MACKIN RD	FLINT	MI	48504	100	No	8000	8128	8000	13293052.82750000
1237	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	6100	6197	6100	13293053.69530000
1238	3011 BARTH ST	FLINT	MI	48504	100	No	11500	11684	11500	13293056.85260000
1239	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	4400	4470	4400	13293059.87190000
1240	1320 W HILL RD	FLINT	MI	48507	0	No	12200	12395	12200	13293062.19280000
1241	2307 S SAGINAW ST	FLINT	MI	48503	0	No	22600	22961	22600	13293063.18600000
1242	521 W COURT ST	FLINT	MI	48503	0	No	9600	9753	9600	13293067.56590000
1243	1381 WARNER AVE STE C	TUSTIN	CA	92780	0	No	5000	5080	5000	13293071.53840000
1244	2934 PROSPECT ST	FLINT	MI	48504	100	No	8600	8737	8600	13293072.76700000
1245	1726 WALNUT CREEK	FLINT	MI	48507	0	No	7800	7924	7800	13293073.30740000
1246	2919 RASKOB ST	FLINT	MI	48504	100	No	11500	11684	11500	13293073.53090000
1247	1161 N BALLENGER HWY STE	FLINT	MI	48504	0	No	10000	10160	10000	13293073.81540000
1248	1309 N BALLENGER HWY	FLINT	MI	48504	0	No	5700	5791	5700	13293075.59940000
1249	5382 MORRISH RD	SWARTZ CREEK	MI	48473	0	No	8100	8229	8100	13293077.94800000
1250	5155 LAKEWOOD DR	GRAND BLANC	MI	48439-9353	0	No	10800	10660	10800	13293078.70140000
1251	2921 PROSPECT ST	FLINT	MI	48504	0	No	500	508	500	13293083.28730000
1252	2977 MACKIN RD	FLINT	MI	48504	100	No	3600	3657	3600	13293090.82400000
1253	5382 MORRISH RD	SWARTZ CREEK	MI	48473	0	No	8400	8534	8400	13293092.06950000
1254					0	No	11600	11480	11600	13293094.79910000
1255	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13293095.18190000
1256	3013 CLEMENT ST	FLINT	MI	48504	100	No	10500	10668	10500	13293096.35900000
1257	1309 N BALLENGER HWY	FLINT	MI	48504	0	No	6700	6807	6700	13293101.86080000
1258	2930 PROSPECT ST	FLINT	MI	48504	100	No	7800	7924	7800	13293109.71220000
1259	1309 DONALDSON ST	FLINT	MI	48504	100	No	11900	12090	11900	13293113.36560000
1260					0	No	10100	9950	10100	13293115.27840000

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	AJ	AK	AL	AM	AN	AO	AP
1219	555202.94472900	366.41553361	8322.44921875000	366.41562623900			
1220	557142.76749500	286.94455088	4084.87109375000	286.94447508000			
1221	558600.27694100	325.38115195	5896.49707031000	325.38114256600			
1222	557908.17506700	294.39344915	4384.02587891000	294.39350296500			
1223	558477.03471000	303.60452540	4558.73193359000	303.60458630100			
1224	558298.98671200	281.49866352	4011.17578125000	281.49866858900			
1225	557474.95620000	298.79207723	4616.46728516000	298.79201884100			
1226	557034.19760500	292.91487140	4118.32812500000	292.91480441400			
1227	558775.20089300	309.28770706	5206.77685547000	309.28773494700			
1228	557178.68920000	306.62875408	5012.93652344000	306.62886233600			
1229	557724.73678200	275.37159640	4035.03320313000	275.37155809500			
1230	555695.41526900	669.94143644	27152.83398440000	669.94140845600			
1231	556457.16557700	1133.00870798	69927.36083980000	1133.00883051000			
1232	557621.52510300	261.34051422	2316.93164063000	261.34044760200			
1233	558179.81595100	286.06697096	4086.32910156000	286.06702344800			
1234	558007.66311200	326.11327273	6249.09472656000	326.11314782300			
1235	558885.11366600	353.11727800	7372.68945313000	353.11725209700			
1236	558284.22423000	283.99445224	4122.33984375000	283.99451275200			
1237	558459.24247100	307.87079009	4803.85449219000	307.87084293200			
1238	558577.72308100	333.38976537	6299.44873047000	333.38972266300			
1239	557020.61452500	307.70113095	5007.38378906000	307.70111136400			
1240	557884.80865800	372.60633819	8504.10253906000	372.60640198000			
1241	556308.14121900	352.16608004	7933.38281250000	352.16610267000			
1242	557567.14550000	297.50630901	4803.75878906000	297.50647407000			
1243	557710.50811800	282.53754105	4369.48974609000	282.53745868800			
1244	558164.55058800	289.44289301	4281.91943359000	289.44283411300			
1245	556721.40579600	369.28695086	8407.40185547000	369.28709089500			
1246	556835.22397700	378.77750160	8800.20458984000	378.77752781000			
1247	558756.60652400	316.20732082	5392.75927734000	316.20731498200			
1248	557273.52490000	291.15175984	4624.18359375000	291.15182550600			
1249	557124.12127900	295.70644973	4552.15722656000	295.70642769800			
1250	555449.57201600	284.76139635	3876.27832031000	284.76127170200			
1251	557987.78938200	281.08468295	4008.54687500000	281.08478566300			
1252	558267.25836800	288.10391367	4316.08496094000	288.10397305200			
1253	557604.63298000	282.19925348	4111.76708984000	282.19925976400			
1254	555617.65012400	277.80848564	3928.86767578000	277.80860309900			
1255	558441.44692000	314.20591583	5157.85791016000	314.20589451700			
1256	558863.44483600	320.58362854	5607.57812500000	320.58353944200			
1257	557308.74916300	274.99633376	3878.73876953000	274.99631970000			
1258	558149.25709800	282.76583291	3959.58154297000	282.76588337900			
1259	557638.56605900	277.33962114	3883.39453125000	277.33976468300			
1260	555435.41254800	293.86888773	4386.12158203000	293.86889472200			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
1261	55659	55674	40-11-108-017	2944 WOLCOTT ST	25-40-11-108-017	4011108017	017	Lot	401-RESIDENTIAL
1262	55662	55677	40-11-155-008	2927 BERKLEY ST	25-40-11-155-008	4011155008	008	Lot	401-RESIDENTIAL
1263	55665	55680	40-11-108-006	2921 PROSPECT ST	25-40-11-108-006	4011108006	006	Lot	401-RESIDENTIAL
1264	55666	55681	40-11-103-007	1513 WINONA ST	25-40-11-103-007	4011103007	007	Lot	401-RESIDENTIAL
1265	55696	55711	40-11-105-008	2973 MACKIN RD	25-40-11-105-008	4011105008	008	Lot	401-RESIDENTIAL
1266	55707	55722	40-11-157-004	2915 RASKOB ST	25-40-11-157-004	4011157004	004	Lot	401-RESIDENTIAL
1267	55708	55723	07-11-551-007	1252 N BALLENGER HWY	25-07-11-551-007	0711551007	18-20/54/5	Lot	201-COMMERCIAL IMPROVED
1268	55718	55733	40-11-111-013	1313 DONALDSON ST	25-40-11-111-013	4011111013	013	Lot	401-RESIDENTIAL
1269	55735	55750	07-11-551-032	2510 STRATFORD ST	25-07-11-551-032	0711551032	183-6	Lot	401-RESIDENTIAL
1270	55756	55771	07-11-551-006	1274 N BALLENGER HWY	25-07-11-551-006	0711551006	15-7	Lot	201-COMMERCIAL IMPROVED
1271	55762	55777	40-11-105-025	2926 PROSPECT ST	25-40-11-105-025	4011105025	025	Lot	401-RESIDENTIAL
1272	55764	55779	07-11-551-014	2507 HATHERLY AVE	25-07-11-551-014	0711551014	80/1	Lot	700-EXEMPT VACANT
1273	55773	55788	40-02-359-028	1601 WINONA ST	25-40-02-359-028	4002359028	028	Lot	401-RESIDENTIAL
1274	55793	55808	40-11-111-012	1317 DONALDSON ST	25-40-11-111-012	4011111012	012	Lot	401-RESIDENTIAL
1275	55801	55816	40-11-155-009	2923 BERKLEY ST	25-40-11-155-009	4011155009	009	Lot	401-RESIDENTIAL
1276	55802	55817	40-11-108-018	2940 WOLCOTT ST	25-40-11-108-018	4011108018	018	Lot	401-RESIDENTIAL
1277	55803	55818	40-11-108-008	PROSPECT ST	25-40-11-108-008	4011108008	008	Lot	400-RESIDENTIAL VACANT
1278	55809	55824	40-11-157-012	1151 N BALLENGER HWY	25-40-11-157-012	4011157012	012	Lot	201-COMMERCIAL IMPROVED
1279	55817	55832	07-11-551-025	2495 DEVONSHIRE ST	25-07-11-551-025	0711551025	139	Lot	401-RESIDENTIAL
1280	55829	55844	40-11-105-010	2969 MACKIN RD	25-40-11-105-010	4011105010	010	Lot	401-RESIDENTIAL
1281	55831	55846	40-02-359-027	1605 WINONA ST	25-40-02-359-027	4002359027	027	Lot	401-RESIDENTIAL
1282	55885	55900	07-11-551-017	2492 DEVONSHIRE ST	25-07-11-551-017	0711551017	119-22	Lot	401-RESIDENTIAL
1283	55887	55902	40-11-105-027	2922 PROSPECT ST	25-40-11-105-027	4011105027	027	Lot	401-RESIDENTIAL
1284	55946	55961	40-11-155-010	2919 BERKLEY ST	25-40-11-155-010	4011155010	010	Lot	401-RESIDENTIAL
1285	55970	55985	40-11-105-011	2965 MACKIN RD	25-40-11-105-011	4011105011	011	Lot	401-RESIDENTIAL
1286	55977	55992	40-11-108-009	2913 PROSPECT ST	25-40-11-108-009	4011108009	009	Lot	401-RESIDENTIAL
1287	56005	56020	40-11-157-005	1161 N BALLENGER HWY	25-40-11-157-005	4011157005	005	Lot	201-COMMERCIAL IMPROVED
1288	56009	56024	40-11-108-022	2932 WOLCOTT ST	25-40-11-108-022	4011108022	022	Lot	401-RESIDENTIAL
1289	56026	56041	40-11-105-028	2918 PROSPECT ST	25-40-11-105-028	4011105028	028	Lot	401-RESIDENTIAL
1290	56034	56049	07-11-551-013	2495 HATHERLY AVE	25-07-11-551-013	0711551013	78/9	Lot	401-RESIDENTIAL
1291	56052	56067	40-11-104-014	1502 WINONA ST	25-40-11-104-014	4011104014	014	Lot	401-RESIDENTIAL
1292	56098	56113	40-11-155-011	2915 BERKLEY ST	25-40-11-155-011	4011155011	011	Lot	401-RESIDENTIAL
1293	56105	56120	40-11-160-011	1102 N BALLENGER HWY	25-40-11-160-011	4011160011	011	Lot	201-COMMERCIAL IMPROVED
1294	56118	56133	40-11-105-013	2961 MACKIN RD	25-40-11-105-013	4011105013	013	Lot	401-RESIDENTIAL
1295	56124	56139	07-11-551-005	2509 FLUSHING RD	25-07-11-551-005	0711551005	12-4	Lot	201-COMMERCIAL IMPROVED
1296	56132	56147	40-11-104-001	1514 WINONA ST	25-40-11-104-001	4011104001	001	Lot	401-RESIDENTIAL
1297	56143	56158	40-11-160-014	FLUSHING RD	25-40-11-160-014	4011160014	014	Lot	400-RESIDENTIAL VACANT
1298	56157	56172	40-11-108-021	1359 DONALDSON ST	25-40-11-108-021	4011108021	021	Lot	401-RESIDENTIAL
1299	56159	56174	40-11-155-014	1207 N BALLENGER HWY	25-40-11-155-014	4011155014	014	Lot	201-COMMERCIAL IMPROVED
1300	56177	56192	40-11-105-029	2914 PROSPECT ST	25-40-11-105-029	4011105029	029	Lot	401-RESIDENTIAL
1301	56240	56255	40-11-108-020	1363 DONALDSON ST	25-40-11-108-020	4011108020	020	Lot	400-RESIDENTIAL VACANT
1302	56264	56279	40-11-105-014	2957 MACKIN RD	25-40-11-105-014	4011105014	014	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
1261	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2944	WOLCOTT ST	FLINT	48504
1262	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2927	BERKLEY ST	FLINT	48504
1263	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2921	PROSPECT ST	FLINT	48504
1264	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		1513	WINONA ST	FLINT	48504
1265	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2973	MACKIN RD	FLINT	48504
1266	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2915	RASKOB ST	FLINT	48504
1267	Commercial	0.61000001	0.61	CARMAN-AINSWORTH SCHOOLS	25080	N	1252	BALLENGER HWY	FLINT	48504
1268	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1313	DONALDSON ST	FLINT	48504
1269	Residential	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080		2510	STRATFORD ST	FLINT	48504
1270	Commercial	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080	N	1274	BALLENGER HWY	FLINT	48504
1271	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2926	PROSPECT ST	FLINT	48504
1272	Exempt	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		2507	HATHERLY AVE	FLINT	48504
1273	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		1601	WINONA ST	FLINT	48504
1274	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1317	DONALDSON ST	FLINT	48504
1275	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2923	BERKLEY ST	FLINT	48504
1276	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2940	WOLCOTT ST	FLINT	48504
1277	Residential	0.10000000	0.1	FLINT SCHOOLS	25010			PROSPECT ST	FLINT	48504
1278	Commercial	0.20000000	0.2	FLINT SCHOOLS	25010	N	1151	BALLENGER HWY	FLINT	48504
1279	Residential	0.14000000	0.14	CARMAN-AINSWORTH SCHOOLS	25080		2495	DEVONSHIRE ST	FLINT	48504
1280	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2969	MACKIN RD	FLINT	48504
1281	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		1605	WINONA ST	FLINT	48504
1282	Residential	0.34999999	0.35	CARMAN-AINSWORTH SCHOOLS	25080		2492	DEVONSHIRE ST	FLINT	48504
1283	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2922	PROSPECT ST	FLINT	48504
1284	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2919	BERKLEY ST	FLINT	48504
1285	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2965	MACKIN RD	FLINT	48504
1286	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		2913	PROSPECT ST	FLINT	48504
1287	Commercial	0.50999999	0.51	FLINT SCHOOLS	25010	N	1161	BALLENGER HWY	FLINT	48504
1288	Residential	0.20999999	0.21	FLINT SCHOOLS	25010		2932	WOLCOTT ST	FLINT	48504
1289	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2918	PROSPECT ST	FLINT	48504
1290	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080		2495	HATHERLY AVE	FLINT	48504
1291	Residential	0.33000001	0.33	FLINT SCHOOLS	25010		1502	WINONA ST	FLINT	48504
1292	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2915	BERKLEY ST	FLINT	48504
1293	Commercial	0.36000001	0.36	FLINT SCHOOLS	25010	N	1102	BALLENGER HWY	FLINT	48504
1294	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2961	MACKIN RD	FLINT	48504
1295	Commercial	0.36000001	0.36	CARMAN-AINSWORTH SCHOOLS	25080		2509	FLUSHING RD	FLINT	48504
1296	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		1514	WINONA ST	FLINT	48504
1297	Residential	0.05000000	0.05	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
1298	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1359	DONALDSON ST	FLINT	48504
1299	Commercial	1.05999994	1.06	FLINT SCHOOLS	25010	N	1207	BALLENGER HWY	FLINT	48504
1300	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2914	PROSPECT ST	FLINT	48504
1301	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		1363	DONALDSON ST	FLINT	48504
1302	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2957	MACKIN RD	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
1261	ELROD, BONNIE	2944 WOLCOTT ST	FLINT	MI	48504	ELROD, BONNIE
1262	HOWARD, JERRY & JACQUELINE	5382 MORRISH RD	SWARTZ CREEK	MI	48473	HOWARD, JERRY & JACQUELINE
1263	MUNGER, GLADYS L	2921 PROSPECT ST	FLINT	MI	48504	MUNGER, GLADYS L
1264	REED, SHANETA & POWELL, MAURICE	1513 WINONA ST	FLINT	MI	48504	REED, SHANETA & POWELL, MAURICE
1265	1106 HOUSES, LLC	521 W COURT ST	FLINT	MI	48503	1106 HOUSES, LLC
1266	STEPHEN, BERNEIL & VERBIE	2497 KETZLER DR	FLINT	MI	48507	STEPHEN, BERNEIL & VERBIE
1267	POPOFF, KOSTA & KAREN	1252 N BALLENGER HWY	FLINT	MI	48504	K & D CORPORATION, INC
1268	DAVIS, SHIRLEY & DAVIS, TENICIA	1313 DONALDSON ST	FLINT	MI	48504	DAVIS, SHIRLEY & DAVIS, TENICIA
1269	JONES, CHARLES P	2510 STRATFORD ST	FLINT	MI	48504	
1270	TIM DONUT US LIMITED INC	4150 TULLER RD STE 236	DUBLIN	OH	43017	
1271	HARRIS, OMAR	606 E PHILADELPHIA BLVD	FLINT	MI	48505	HARRIS, OMAR
1272	GENESEE COUNTY LAND BANK AUTHORITY	452 S SAGINAW ST 2ND FLOO	FLINT	MI	48502	
1273	FARAH, BEN & WF IRENE	1601 WINONA ST	FLINT	MI	48504	FARAH, BEN & WF IRENE
1274	SMITH, PASTELLA	1317 DONALDSON ST	FLINT	MI	48504	SMITH, PASTELLA
1275	DMZ PROPERTIES, LLC	G-4084 CORUNNA RD STE A	FLINT	MI	48532	DMZ PROPERTIES, LLC
1276	MCALLISTER, ANDREA	2940 WOLCOTT ST	FLINT	MI	48504	MCALLISTER, ANDREA
1277	MUNGER, GLADYS L	2921 PROSPECT ST	FLINT	MI	48504	MUNGER, GLADYS L
1278	JON, HO SIK & WF KUK HEE	5145 SANDALWOOD CIR	GRAND BLANC	MI	48439	JON, HO SIK & WF KUK HEE
1279	DESERT HOLDING LLC	1320 W HILL RD	FLINT	MI	48507	
1280	LANGSTON, LILLIE M	2969 MACKIN RD	FLINT	MI	48504	LANGSTON, LILLIE M
1281	KELLY, BARBARA A	1605 WINONA ST	FLINT	MI	48504	KELLY, BARBARA A
1282	WALTON-JOSEPH, EILEEN L & WALTON, D	2492 DEVONSHIRE ST	FLINT	MI	48504	
1283	POWELL, PAULINE	2922 PROSPECT ST	FLINT	MI	48504	POWELL, PAULINE
1284	PARKS, MILDRED L	2074 CRYSTALWOOD TRAIL	FLUSHING	MI	48433	PARKS, MILDRED L
1285	MARTIN, TOYE	2349 COPEMAN	FLINT	MI	48504	MARTIN, TOYE
1286	BROWN, BOOTH & BARBARA	5015 CEDARDALE	FLUSHING	MI	48433	BROWN, BOOTH & BARBARA
1287	HOLLEY, LARRY & CARLEEN	1161 N BALLENGER HWY #7	FLINT	MI	48504	HOLLEY, LARRY & CARLEEN
1288	JONES-ROBERTS, CORETTA	2932 WOLCOTT ST	FLINT	MI	48504	JONES-ROBERTS, CORETTA
1289	WILSON, ERTHA	4096 E CARPENTER RD	FLINT	MI	48504	WILSON, ERTHA
1290	CROFF, DAVID	2495 HATHERLY AVE	FLINT	MI	48504	
1291	KNIGHTEN, ROBERT & WF ERMA	1502 WINONA ST	FLINT	MI	48504	KNIGHTEN, ROBERT & WF ERMA
1292	WALKER, BESSIE	2915 BERKLEY ST	FLINT	MI	48504	WALKER, BESSIE
1293	AUTO CITY SERVICE INC	14165 N FENTON RD STE 202	FENTON	MI	48430	AUTO CITY SERVICE INC
1294	WALKER, LALONDUS	PO BOX 310853	FLINT	MI	48531	WALKER, LALONDUS
1295	SHEROSKI REAL PROPERTY LLC	1081 S STATE	DAVISON	MI	48423	
1296	THOMPSON, LILLIAN D	1514 WINONA ST	FLINT	MI	48504	THOMPSON, LILLIAN D
1297	CITY OF FLINT	FLUSHING RD	FLINT	MI	48504	CITY OF FLINT
1298	KELLEY, SUSAN M & KING, JAMES J	1359 DONALDSON ST	FLINT	MI	48504	KELLEY, SUSAN M & KING, JAMES J
1299	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1300	MALONE, TANESHA	PO BOX 321003	FLINT	MI	48532	MALONE, TANESHA
1301	KING, JAMES & WF SUSAN	1363 DONALDSON ST	FLINT	MI	48504	KING, JAMES & WF SUSAN
1302	BRYANT, ANTHONY & WF SHAWN	2019 COPEMAN BLVD	FLINT	MI	48504	BRYANT, ANTHONY & WF SHAWN

Container Specialties Inc
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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1261	2944 WOLCOTT ST	FLINT	MI	48504	100	No	11200	11379	11200	13293118.48170000
1262	5382 MORRISH RD	SWARTZ CREEK	MI	48473	0	No	6700	6807	6700	13293119.66110000
1263	2921 PROSPECT ST	FLINT	MI	48504	100	No	7800	7924	7800	13293120.08850000
1264	1513 WINONA ST	FLINT	MI	48504	100	No	14100	14325	14100	13293120.36800000
1265	521 W COURT ST	FLINT	MI	48503	0	No	8300	8432	8300	13293128.72020000
1266	2497 KETZLER DR	FLINT	MI	48507	0	No	3600	3657	3600	13293130.69830000
1267	1252 N BALLENGER HWY	FLINT	MI	48504	0	No	124700	128320	124700	13293130.77320000
1268	1313 DONALDSON ST	FLINT	MI	48504	100	No	10100	10261	10100	13293133.15610000
1269					100	No	27300	27120	27300	13293137.55020000
1270					0	No	149600	153000	149600	13293146.63100000
1271	606 E PHILADELPHIA BLVD	FLINT	MI	48505	0	No	6500	6604	6500	13293147.07330000
1272					0	Yes	0	0	0	13293147.28320000
1273	1601 WINONA ST	FLINT	MI	48504	100	No	14300	14528	14300	13293149.08390000
1274	1317 DONALDSON ST	FLINT	MI	48504	100	No	10400	10566	10400	13293155.30960000
1275	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	3400	3454	3400	13293158.13730000
1276	2940 WOLCOTT ST	FLINT	MI	48504	100	No	10800	10972	10800	13293158.15320000
1277	2921 PROSPECT ST	FLINT	MI	48504	0	No	500	425	500	13293158.27280000
1278	5145 SANDALWOOD CIR	GRAND BLANC	MI	48439	0	No	27500	27432	27500	13293159.28700000
1279					0	No	10400	10260	10400	13293162.12520000
1280	2969 MACKIN RD	FLINT	MI	48504	100	No	10900	11074	10900	13293165.30480000
1281	1605 WINONA ST	FLINT	MI	48504	100	No	12200	12395	12200	13293166.63190000
1282					100	No	23900	23770	23900	13293183.37350000
1283	2922 PROSPECT ST	FLINT	MI	48504	0	No	8100	8229	8100	13293183.61900000
1284	2074 CRYSTALWOOD TRAIL	FLUSHING	MI	48433	0	No	7000	7112	7000	13293195.48860000
1285	2349 COPEMAN	FLINT	MI	48504	0	No	10500	10668	10500	13293202.31320000
1286	5015 CEDARDALE	FLUSHING	MI	48433	0	No	10700	10871	10700	13293204.81160000
1287	1161 N BALLENGER HWY #7	FLINT	MI	48504	0	No	154400	135934	154400	13293214.78800000
1288	2932 WOLCOTT ST	FLINT	MI	48504	100	No	14800	15036	14800	13293216.31170000
1289	4096 E CARPENTER RD	FLINT	MI	48504	0	No	7300	7416	7300	13293219.58360000
1290					100	No	13600	13510	13600	13293221.67500000
1291	1502 WINONA ST	FLINT	MI	48504	100	No	17300	17576	17300	13293225.55680000
1292	2915 BERKLEY ST	FLINT	MI	48504	100	No	10400	10566	10400	13293234.08710000
1293	14165 N FENTON RD STE 202	FENTON	MI	48430	0	No	62400	62484	62400	13293236.97000000
1294	PO BOX 310853	FLINT	MI	48531	0	No	8400	8534	8400	13293239.68760000
1295					0	No	73800	75690	73800	13293240.22360000
1296	1514 WINONA ST	FLINT	MI	48504	100	No	12400	12598	12400	13293242.13860000
1297	FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13293245.19770000
1298	1359 DONALDSON ST	FLINT	MI	48504	100	No	7000	7112	7000	13293250.26040000
1299	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13293251.12730000
1300	PO BOX 321003	FLINT	MI	48532	0	No	6800	6908	6800	13293256.98460000
1301	1363 DONALDSON ST	FLINT	MI	48504	100	No	500	508	500	13293271.46700000
1302	2019 COPEMAN BLVD	FLINT	MI	48504	0	No	3800	3860	3800	13293276.73660000

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	AJ	AK	AL	AM	AN	AO	AP
1261	557862.11527500	296.64771800	4429.40234375000	296.64769840600			
1262	557110.01502700	293.39813446	4471.48974609000	293.39813132200			
1263	557972.95009300	279.57960876	3965.87158203000	279.57956253000			
1264	558550.20819800	380.08441523	8814.84179688000	380.08453072500			
1265	558252.17350100	281.63193898	3973.78857422000	281.63186478700			
1266	556811.67401900	298.93289371	4500.03955078000	298.93290767700			
1267	555907.89095900	655.87750625	26716.03515630000	655.87759368800			
1268	557671.11663500	273.58648615	3706.98388672000	273.58647729300			
1269	555319.45492400	516.64634037	15531.85107420000	516.64636875000			
1270	556064.68224900	504.79861866	15218.66992190000	504.79866250700			
1271	558133.95655900	289.63206031	4334.12451172000	289.63202392900			
1272	555703.82804800	353.73193303	7736.49169922000	353.73195854800			
1273	558690.47905200	364.51931983	6364.56103516000	364.51942840800			
1274	557702.99659000	279.42514508	3950.93115234000	279.42506017400			
1275	557093.82679700	288.30390118	4183.92187500000	288.30381458700			
1276	557849.06090600	298.45573196	4430.57666016000	298.45574377200			
1277	557957.34535700	285.16108136	4277.66308594000	285.16099738500			
1278	556669.18591300	497.99117584	8727.73632813000	497.99107988700			
1279	555417.59370100	327.91357301	6175.95556641000	327.91355233100			
1280	558236.78303400	284.65099387	4112.76269531000	284.65104167700			
1281	558742.91055700	392.45905301	8439.50585938000	392.45911330600			
1282	555584.58424600	500.45392367	15073.50585940000	500.45394689900			
1283	558118.34388900	278.82499470	3801.93652344000	278.82510309200			
1284	557077.71077000	290.63181936	4281.81445313000	290.63179768700			
1285	558221.61768400	283.81505452	4055.27197266000	283.81500538100			
1286	557940.02818300	311.13775878	5543.90966797000	311.13784372000			
1287	556751.53349100	629.57209732	22250.62695310000	629.57200127000			
1288	557809.98942900	380.54490142	8935.41748047000	380.54495904200			
1289	558103.51469200	285.01358303	4137.11865234000	285.01364009100			
1290	555676.14886400	355.76985315	7813.57812500000	355.76988971800			
1291	558388.53240300	480.52528139	14407.77587890000	480.52534922400			
1292	557061.26495500	294.88338224	4480.33349609000	294.88341057700			
1293	556260.06273200	509.79608249	15708.29199220000	509.79622996100			
1294	558206.20675300	287.30083534	4219.66992188000	287.30083578600			
1295	556029.34237400	512.69849136	15710.83007810000	512.69861702700			
1296	558500.47556900	347.58620151	7276.52148438000	347.58619554700			
1297	556182.49178700	442.47633299	2051.24121094000	442.47634736900			
1298	557863.84529400	284.00034209	4060.92675781000	284.00031819900			
1299	556978.63066600	1004.15609209	46284.79150390000	1004.15604075000			
1300	558089.00848700	282.35287729	4022.89550781000	282.35277997100			
1301	557898.41263400	286.80967715	4209.94531250000	286.80967010800			
1302	558190.64968700	283.74511309	4023.21142578000	283.74509730500			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
1303	56269	56284	07-11-551-018	2488 DEVONSHIRE ST	25-07-11-551-018	0711551018	122/3	Lot	401-RESIDENTIAL
1304	56273	56288	07-11-551-012	2491 HATHERLY AVE	25-07-11-551-012	0711551012	77	Lot	401-RESIDENTIAL
1305	56324	56339	40-11-108-019	1367 DONALDSON ST	25-40-11-108-019	4011108019	019	Lot	401-RESIDENTIAL
1306	56325	56340	40-11-105-035	PROSPECT ST	25-40-11-105-035	4011105035	035	Lot	400-RESIDENTIAL VACANT
1307	56334	56349	40-11-104-002	2961 BARTH ST	25-40-11-104-002	4011104002	002	Lot	401-RESIDENTIAL
1308	56359	56374	40-11-104-015	2962 MACKIN RD	25-40-11-104-015	4011104015	015	Lot	401-RESIDENTIAL
1309	56419	56434	07-11-551-004	2501 FLUSHING RD	25-07-11-551-004	0711551004	11/2	Lot	201-COMMERCIAL IMPROVED
1310	56451	56466	40-11-105-015	2951 MACKIN RD	25-40-11-105-015	4011105015	015	Lot	401-RESIDENTIAL
1311	56467	56482	07-11-551-011	HATHERLY AVE	25-07-11-551-011	0711551011	75/6	Lot	400-RESIDENTIAL VACANT
1312	56471	56486	07-11-551-003	2497 FLUSHING RD	25-07-11-551-003	0711551003	8-23/56-60	Lot	201-COMMERCIAL IMPROVED
1313	56473	56488	40-11-152-001	1309 N BALLENGER HWY	25-40-11-152-001	4011152001	001	Lot	201-COMMERCIAL IMPROVED
1314	56509	56524	40-11-104-003	2955 BARTH ST	25-40-11-104-003	4011104003	003	Lot	401-RESIDENTIAL
1315	56543	56558	40-11-104-016	2956 MACKIN RD	25-40-11-104-016	4011104016	016	Lot	401-RESIDENTIAL
1316	56552	56567	40-11-105-036	1401 DONALDSON ST	25-40-11-105-036	4011105036	036	Lot	401-RESIDENTIAL
1317	56564	56579	40-11-158-006	1154 N BALLENGER HWY	25-40-11-158-006	4011158006	006	Lot	201-COMMERCIAL IMPROVED
1318	56582	56597	40-11-109-003	2930 WOLCOTT ST	25-40-11-109-003	4011109003	003	Lot	401-RESIDENTIAL
1319	56626	56641	40-11-160-017	1124 N BALLENGER HWY	25-40-11-160-017	4011160017	017	Lot	201-COMMERCIAL IMPROVED
1320	56653	56668	40-11-105-031	DONALDSON ST	25-40-11-105-031	4011105031	031	Lot	400-RESIDENTIAL VACANT
1321	56681	56696	40-11-105-016	2947 MACKIN RD	25-40-11-105-016	4011105016	016	Lot	401-RESIDENTIAL
1322	56711	56726	40-11-104-017	2950 MACKIN RD	25-40-11-104-017	4011104017	017	Lot	401-RESIDENTIAL
1323	56717	56732	40-11-109-002	1360 DONALDSON ST	25-40-11-109-002	4011109002	002	Lot	401-RESIDENTIAL
1324	56720	56735	40-11-161-020	2822 FLUSHING RD	25-40-11-161-020	4011161020	020	Lot	201-COMMERCIAL IMPROVED
1325	56732	56747	40-11-158-026	1166 N BALLENGER HWY	25-40-11-158-026	4011158026	026	Lot	201-COMMERCIAL IMPROVED
1326	56805	56820	40-11-161-017	FLUSHING RD	25-40-11-161-017	4011161017	017	Lot	400-RESIDENTIAL VACANT
1327	56826	56841	40-11-109-001	1368 DONALDSON ST	25-40-11-109-001	4011109001	001	Lot	401-RESIDENTIAL
1328	56849	56864	40-11-105-017	2941 MACKIN RD	25-40-11-105-017	4011105017	017	Lot	401-RESIDENTIAL
1329	56858	56873	07-11-551-002	2485 FLUSHING RD	25-07-11-551-002	0711551002	7/61	Lot	201-COMMERCIAL IMPROVED
1330	56868	56883	40-11-104-018	2944 MACKIN RD	25-40-11-104-018	4011104018	018	Lot	401-RESIDENTIAL
1331	56871	56886	40-11-109-007	2924 WOLCOTT ST	25-40-11-109-007	4011109007	007	Lot	401-RESIDENTIAL
1332	56926	56941	40-11-156-003	1202 N BALLENGER HWY	25-40-11-156-003	4011156003	003	Lot	201-COMMERCIAL IMPROVED
1333	57014	57029	40-11-158-015	2830 SLOAN ST	25-40-11-158-015	4011158015	015	Lot	401-RESIDENTIAL
1334	57020	57035	40-11-156-002	1204 N BALLENGER HWY	25-40-11-156-002	4011156002	002	Lot	201-COMMERCIAL IMPROVED
1335	57059	57074	40-11-158-007	2835 RASKOB ST	25-40-11-158-007	4011158007	007	Lot	400-RESIDENTIAL VACANT
1336	57086	57101	40-11-109-004	2909 PROSPECT ST	25-40-11-109-004	4011109004	004	Lot	401-RESIDENTIAL
1337	57122	57137	40-11-106-006	2912 PROSPECT ST	25-40-11-106-006	4011106006	006	Lot	401-RESIDENTIAL
1338	57161	57176	40-11-109-008	2910 WOLCOTT ST	25-40-11-109-008	4011109008	008	Lot	401-RESIDENTIAL
1339	57164	57179	40-11-156-001	1214 N BALLENGER HWY	25-40-11-156-001	4011156001	001	Lot	201-COMMERCIAL IMPROVED
1340	57244	57259	40-11-158-016	2824 SLOAN ST	25-40-11-158-016	4011158016	016	Lot	401-RESIDENTIAL
1341	57262	57277	40-11-161-019	2802 FLUSHING RD	25-40-11-161-019	4011161019	019	Lot	200-COMMERCIAL VACANT
1342	57280	57295	40-11-154-014	2852 BERKLEY ST	25-40-11-154-014	4011154014	014	Lot	401-RESIDENTIAL
1343	57288	57303	40-11-158-009	2831 RASKOB ST	25-40-11-158-009	4011158009	009	Lot	401-RESIDENTIAL
1344	57299	57314	40-11-109-005	2905 PROSPECT ST	25-40-11-109-005	4011109005	005	Lot	401-RESIDENTIAL

Container Specialties Inc
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	J	K	L	M	N	O	P	Q	R	S
1303	Residential	0.12000000	0.12	CARMAN-AINSWORTH SCHOOLS	25080		2488	DEVONSHIRE ST	FLINT	48504
1304	Residential	0.10000000	0.1	CARMAN-AINSWORTH SCHOOLS	25080		2491	HATHERLY AVE	FLINT	48504
1305	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		1367	DONALDSON ST	FLINT	48504
1306	Residential	0.11000000	0.11	FLINT SCHOOLS	25010			PROSPECT ST	FLINT	48504
1307	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		2961	BARTH ST	FLINT	48504
1308	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		2962	MACKIN RD	FLINT	48504
1309	Commercial	0.14000000	0.14	CARMAN-AINSWORTH SCHOOLS	25080		2501	FLUSHING RD	FLINT	48504
1310	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		2951	MACKIN RD	FLINT	48504
1311	Residential	0.18000001	0.18	CARMAN-AINSWORTH SCHOOLS	25080			HATHERLY AVE	FLINT	48504
1312	Commercial	1.19000006	1.19	CARMAN-AINSWORTH SCHOOLS	25080		2497	FLUSHING RD	FLINT	48504
1313	Commercial	4.19000006	4.19	FLINT SCHOOLS	25010	N	1309	BALLENGER HWY	FLINT	48504
1314	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		2955	BARTH ST	FLINT	48504
1315	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		2956	MACKIN RD	FLINT	48504
1316	Residential	0.17000000	0.17	FLINT SCHOOLS	25010		1401	DONALDSON ST	FLINT	48504
1317	Commercial	0.10000000	0.1	FLINT SCHOOLS	25010	N	1154	BALLENGER HWY	FLINT	48504
1318	Residential	0.18000001	0.18	FLINT SCHOOLS	25010		2930	WOLCOTT ST	FLINT	48504
1319	Commercial	1.12000000	1.12	FLINT SCHOOLS	25010	N	1124	BALLENGER HWY	FLINT	48504
1320	Residential	0.11000000	0.11	FLINT SCHOOLS	25010			DONALDSON ST	FLINT	48504
1321	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2947	MACKIN RD	FLINT	48504
1322	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		2950	MACKIN RD	FLINT	48504
1323	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		1360	DONALDSON ST	FLINT	48504
1324	Commercial	0.58999997	0.59	FLINT SCHOOLS	25010		2822	FLUSHING RD	FLINT	48504
1325	Commercial	0.49000001	0.49	FLINT SCHOOLS	25010	N	1166	BALLENGER HWY	FLINT	48504
1326	Residential	0.01000000	0.01	FLINT SCHOOLS	25010			FLUSHING RD	FLINT	48504
1327	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		1368	DONALDSON ST	FLINT	48504
1328	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2941	MACKIN RD	FLINT	48504
1329	Commercial	0.27000001	0.27	CARMAN-AINSWORTH SCHOOLS	25080		2485	FLUSHING RD	FLINT	48504
1330	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		2944	MACKIN RD	FLINT	48504
1331	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		2924	WOLCOTT ST	FLINT	48504
1332	Commercial	0.11000000	0.11	FLINT SCHOOLS	25010	N	1202	BALLENGER HWY	FLINT	48504
1333	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		2830	SLOAN ST	FLINT	48504
1334	Commercial	0.19000000	0.19	FLINT SCHOOLS	25010	N	1204	BALLENGER HWY	FLINT	48504
1335	Residential	0.16000000	0.16	FLINT SCHOOLS	25010		2835	RASKOB ST	FLINT	48504
1336	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		2909	PROSPECT ST	FLINT	48504
1337	Residential	0.20000000	0.2	FLINT SCHOOLS	25010		2912	PROSPECT ST	FLINT	48504
1338	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		2910	WOLCOTT ST	FLINT	48504
1339	Commercial	0.20000000	0.2	FLINT SCHOOLS	25010	N	1214	BALLENGER HWY	FLINT	48504
1340	Residential	0.14000000	0.14	FLINT SCHOOLS	25010		2824	SLOAN ST	FLINT	48504
1341	Commercial	0.19000000	0.19	FLINT SCHOOLS	25010		2802	FLUSHING RD	FLINT	48504
1342	Residential	0.13000000	0.13	FLINT SCHOOLS	25010		2852	BERKLEY ST	FLINT	48504
1343	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		2831	RASKOB ST	FLINT	48504
1344	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		2905	PROSPECT ST	FLINT	48504

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	T	U	V	W	X	Y
1303	CAMPBELL, JAMES E	2488 DEVONSHIRE ST	FLINT	MI	48504	
1304	NATZKE, MICHELE	2491 HATHERLY AVE	FLINT	MI	48504	
1305	SHELTON, MAKESHA	P O BOX 211	BRINKLEY	AR	72021	SHELTON, MAKESHA
1306	BUCHANAN, GOLDIE ET AL	G-3387 MALLERY ST	FLINT	MI	48504	BUCHANAN, GOLDIE ET AL
1307	DEMPS, NAPOLEON & MARY	2961 BARTH ST	FLINT	MI	48504	DEMPS, NAPOLEON & MARY
1308	PARKER, DEANNA & HOBSIN, EARLENE	2962 MACKIN RD	FLINT	MI	48504	PARKER, DEANNA & HOBSIN, EARLENE
1309	BEARUP, ALICE J TRUST	3280 CRAYTON RD	NAPLES	FL	34103	
1310	BARBEE, VICTORIA & OAKS, PAULA	2951 MACKIN RD	FLINT	MI	48504	BARBEE, VICTORIA & OAKS, PAULA
1311	BLACKHAWK INVESTMENTS LTD	18202 CODY CT	RENO	NV	89508-2522	
1312	SHIN, RICHARD	604 DRURY CT	FLUSHING	MI	48433	
1313	BETHEL UNITED METHODIST CHURCH	1309 N BALLENGER HWY	FLINT	MI	48504	BETHEL UNITED METHODIST CHURCH
1314	RUSSELL, RHONDA	2955 BARTH ST	FLINT	MI	48504	RUSSELL, RHONDA
1315	MI SEVEN, LLC	1112 PRICE AVE	COLUMBIA	SC	29201	MI SEVEN, LLC
1316	BUCHANAN-FRAME, M & BUCHANAN, G	1401 DONALDSON ST	FLINT	MI	48504	BUCHANAN-FRAME, M & BUCHANAN, G
1317	WILLIAMS, AJ & DONNICE TRUST	1154 N BALLENGER HWY	FLINT	MI	48504	WILLIAMS, AJ & DONNICE TRUST
1318	H U D	4400 WILL ROGERS PKWY STE	OKLAHOMA CITY	OK	73108	H U D
1319	RITE INVESTORS #2-MI	PO BOX 3165	HARRISBURG	PA	17105	RITE INVESTORS #2-MI
1320	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1321	KING, LLC	2707 E COURT ST	FLINT	MI	48503	KING, LLC
1322	DOUGLAS, DERNICE	2950 MACKIN RD	FLINT	MI	48504	DOUGLAS, DERNICE
1323	HOOD, ROBIN & RONALD	1360 DONALDSON ST	FLINT	MI	48504	HOOD, ROBIN & RONALD
1324	A ONE PLUS, LLC	604 DRURY CT	FLUSHING	MI	48433	A ONE PLUS, LLC
1325	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER
1326	CITY OF FLINT	FLUSHING RD	FLINT	MI	48504	CITY OF FLINT
1327	ARMSTRONG, JON & WF WILLIE	1368 DONALDSON ST	FLINT	MI	48504	ARMSTRONG, JON & WF WILLIE
1328	PRIDEGON, LENA TOY	820 TULANE DR	FLINT	MI	48503	PRIDEGON, LENA TOY
1329	2ND CHANCE CHURCH ETAL	PO BOX 225	FLINT	MI	48501-0225	
1330	CHAMBERS, PAMELA	3126 MACKIN RD	FLINT	MI	48504	CHAMBERS, PAMELA
1331	FANNIE MAE	14221 DALLAS PKWY STE 100	DALLAS	TX	75254	FANNIE MAE
1332	GREEN, HUDSON D	1202 N BALLENGER HWY	FLINT	MI	48504	GREEN, HUDSON D
1333	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1334	GREEN, HUDSON D	1204 N BALLENGER HWY	FLINT	MI	48504	GREEN, HUDSON D
1335	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1336	COLEN, JAIME J	2909 PROSPECT ST	FLINT	MI	48504	COLEN, JAIME J
1337	HOPKINS REV TRUST	804 TULANE DR	FLINT	MI	48503	HOPKINS REV TRUST
1338	RICH, WILLIAM & ALICE	2910 WOLCOTT ST	FLINT	MI	48504	RICH, WILLIAM & ALICE
1339	GREEN, HUDSON D	1214 N BALLENGER HWY	FLINT	MI	48504	GREEN, HUDSON D
1340	WALKER, JACK	2380 NOLEN DR	FLINT	MI	48504	WALKER, JACK
1341	NOOR UNITY CENTER	1031 S GRAHAM RD	FLINT	MI	48532	NOOR UNITY CENTER
1342	MARSHALL, JANET M	3102 BROWNELL BLVD	FLINT	MI	48504	MARSHALL, JANET M
1343	GENESEE COUNTY LAND BANK	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	GENESEE COUNTY LAND BANK
1344	GENESEE COUNTY TREASURER	1101 BEACH ST	FLINT	MI	48502	GENESEE COUNTY TREASURER

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	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1303					100	No	12600	12490	12600	13293278.10860000
1304					100	No	7200	7110	7200	13293279.65380000
1305	P O BOX 211	BRINKLEY	AR	72021	0	No	8100	8229	8100	13293296.66100000
1306	G-3387 MALLERY ST	FLINT	MI	48504	0	No	700	533	700	13293296.73950000
1307	2961 BARTH ST	FLINT	MI	48504	100	No	11200	11379	11200	13293299.37070000
1308	2962 MACKIN RD	FLINT	MI	48504	100	No	11700	11887	11700	13293307.42710000
1309					0	No	17400	17880	17400	13293323.77640000
1310	2951 MACKIN RD	FLINT	MI	48504	100	No	12600	12801	12600	13293330.90450000
1311					0	No	2700	2740	2700	13293338.36850000
1312					0	No	21000	94990	21000	13293339.21870000
1313	1309 N BALLENGER HWY	FLINT	MI	48504	0	Yes	0	0	0	13293340.07820000
1314	2955 BARTH ST	FLINT	MI	48504	100	No	12900	13106	12900	13293348.82520000
1315	1112 PRICE AVE	COLUMBIA	SC	29201	0	No	13200	13411	13200	13293354.57550000
1316	1401 DONALDSON ST	FLINT	MI	48504	100	No	5700	5791	5700	13293357.37250000
1317	1154 N BALLENGER HWY	FLINT	MI	48504	0	No	30400	30175	30400	13293359.02210000
1318	4400 WILL ROGERS PKWY STE	OKLAHOMA CITY	OK	73108	0	No	12200	12395	12200	13293365.44090000
1319	PO BOX 3165	HARRISBURG	PA	17105	0	No	329200	327660	329200	13293381.47740000
1320	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13293388.36840000
1321	2707 E COURT ST	FLINT	MI	48503	0	No	10000	10160	10000	13293395.40870000
1322	2950 MACKIN RD	FLINT	MI	48504	100	No	12900	13106	12900	13293401.64280000
1323	1360 DONALDSON ST	FLINT	MI	48504	0	No	13400	13614	13400	13293402.59910000
1324	604 DRURY CT	FLUSHING	MI	48433	0	No	141800	141528	141800	13293403.14500000
1325	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13293405.68930000
1326	FLUSHING RD	FLINT	MI	48504	0	Yes	0	0	0	13293428.02180000
1327	1368 DONALDSON ST	FLINT	MI	48504	100	No	12300	12496	12300	13293436.74080000
1328	820 TULANE DR	FLINT	MI	48503	0	No	2800	2844	2800	13293442.96940000
1329					0	No	57500	59130	57500	13293445.53580000
1330	3126 MACKIN RD	FLINT	MI	48504	0	No	11700	11887	11700	13293448.55920000
1331	14221 DALLAS PKWY STE 100	DALLAS	TX	75254	0	No	16300	16560	16300	13293449.42660000
1332	1202 N BALLENGER HWY	FLINT	MI	48504	0	No	18700	18694	18700	13293459.71950000
1333	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13293482.41410000
1334	1204 N BALLENGER HWY	FLINT	MI	48504	0	No	57100	45784	57100	13293483.18250000
1335	452 S SAGINAW ST 2ND FLR	FLINT	MI	48502	0	Yes	0	0	0	13293489.25210000
1336	2909 PROSPECT ST	FLINT	MI	48504	100	No	12400	12598	12400	13293495.70860000
1337	804 TULANE DR	FLINT	MI	48503	0	No	20100	20421	20100	13293503.64710000
1338	2910 WOLCOTT ST	FLINT	MI	48504	100	No	14900	15138	14900	13293512.71920000
1339	1214 N BALLENGER HWY	FLINT	MI	48504	0	No	59300	36572	59300	13293513.79070000
1340	2380 NOLEN DR	FLINT	MI	48504	0	No	2800	2844	2800	13293536.32220000
1341	1031 S GRAHAM RD	FLINT	MI	48532	0	No	6200	6299	6200	13293544.36980000
1342	3102 BROWNELL BLVD	FLINT	MI	48504	100	No	11500	11684	11500	13293546.84890000
1343	452 S SAGINAW ST 2ND FL	FLINT	MI	48502	0	Yes	0	0	0	13293548.18020000
1344	1101 BEACH ST	FLINT	MI	48502	0	Yes	0	0	0	13293551.66890000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
1303	555549.57061600	307.84049970	5339.46386719000	307.84054086800			
1304	555653.85665600	278.93537323	4175.79882813000	278.93540074800			
1305	557930.82174300	284.14583008	4048.42675781000	284.14583452300			
1306	558070.73581500	300.59788860	4835.04541016000	300.59791272300			
1307	558476.07496000	315.96664990	5620.60888672000	315.96661604300			
1308	558354.91653800	331.41688457	5899.04150391000	331.41684235200			
1309	556023.63845100	330.12999652	6258.78906250000	330.13000598600			
1310	558168.74972200	354.13151216	7988.64550781000	354.13152439800			
1311	555631.94638300	353.72508960	7741.74609375000	353.72508451800			
1312	555892.41303100	1012.50239389	51629.67236330000	1012.50238377000			
1313	557394.45836100	1739.38784260	182440.83642600000	1739.38786939000			
1314	558455.78726000	314.02779506	5502.06689453000	314.02774331000			
1315	558334.97671200	327.42301841	5722.92187500000	327.42299074500			
1316	558035.46099800	344.18454702	7273.01171875000	344.18446606000			
1317	556577.25358400	295.19718366	4528.77343750000	295.19721634900			
1318	557745.51425900	353.54099207	7691.75146484000	353.54096378400			
1319	556378.27984300	1298.01962062	48695.31396480000	1298.01969585000			
1320	558088.08856400	294.35921772	4771.24023438000	294.35928654500			
1321	558155.59316300	254.28590861	3823.99316406000	254.28599307200			
1322	558316.32571300	325.94112263	5688.20556641000	325.94113485400			
1323	557804.90102100	315.88254767	5888.79492188000	315.88254681800			
1324	556201.65077900	975.80161796	25558.93359380000	975.80166875700			
1325	556656.29985500	707.35930148	21547.02587890000	707.35904547700			
1326	556109.35874800	171.30459386	231.47753906300	171.30470375600			
1327	557857.75751900	328.03033063	6400.95556641000	328.03035719600			
1328	558135.01716600	273.66152648	4458.38232422000	273.66147497300			
1329	555869.58227300	690.89019532	11781.05664060000	690.89012223300			
1330	558295.93844700	326.34408780	5760.21142578000	326.34408033900			
1331	557718.91549000	338.77051135	6969.16699219000	338.77056188700			
1332	556825.97435800	303.01027420	4874.20019531000	303.01014917200			
1333	556559.15615600	326.38408492	6168.20898438000	326.38410248000			
1334	556883.60459300	366.76636875	8221.93164063000	366.76631815900			
1335	556668.99589800	342.78249158	6979.72021484000	342.78248474500			
1336	557808.91567800	329.90437681	6162.19335938000	329.90440522900			
1337	557978.21498000	370.77901774	8546.63623047000	370.77904229200			
1338	557694.25528300	321.19889686	6168.30810547000	321.19887078200			
1339	556958.35385900	377.96324492	8807.00146484000	377.96325793600			
1340	556537.33746700	320.98355638	5891.36621094000	320.98357690500			
1341	556120.92348200	363.97501684	8070.80908203000	363.97500314600			
1342	557111.36599700	315.25025799	5498.56542969000	315.25036487900			
1343	556644.63034500	330.25270554	6347.23193359000	330.25272172400			
1344	557788.13822400	334.87091021	6490.97949219000	334.87091089000			

Container Specialties Inc
Parcels with no public water supply connection

	A	B	C	D	E	F	G	H	I
1345	57313	57328	40-11-156-015	2838 RASKOB ST	25-40-11-156-015	4011156015	015	Lot	401-RESIDENTIAL
1346	57354	57369	40-11-106-007	2910 PROSPECT ST	25-40-11-106-007	4011106007	007	Lot	401-RESIDENTIAL
1347	57361	57376	40-11-161-010	LAVENDER AVE	25-40-11-161-010	4011161010	010	Lot	200-COMMERCIAL VACANT
1348	57398	57413	40-11-161-003	2811 SLOAN ST	25-40-11-161-003	4011161003	003	Lot	401-RESIDENTIAL
1349	57399	57414	40-11-156-004	2839 BERKLEY ST	25-40-11-156-004	4011156004	004	Lot	401-RESIDENTIAL
1350	57421	57436	40-11-158-018	2820 SLOAN ST	25-40-11-158-018	4011158018	018	Lot	401-RESIDENTIAL
1351	57427	57442	40-11-154-001	2857 N STEVENSON ST	25-40-11-154-001	4011154001	001	Lot	401-RESIDENTIAL
1352	57431	57446	40-11-109-006	2903 PROSPECT ST	25-40-11-109-006	4011109006	006	Lot	306-IND UTILITY IMPROVED
1353	57443	57458	40-11-154-015	2848 BERKLEY ST	25-40-11-154-015	4011154015	015	Lot	401-RESIDENTIAL
1354	57448	57463	40-11-109-012	1351 N BALLENGER HWY	25-40-11-109-012	4011109012	012	Lot	401-RESIDENTIAL
1355	57468	57483	40-11-158-010	2825 RASKOB ST	25-40-11-158-010	4011158010	010	Lot	401-RESIDENTIAL
1356	57475	57490	40-11-161-009	1115 LAVENDER AVE	25-40-11-161-009	4011161009	009	Lot	401-RESIDENTIAL
1357	57507	57522	40-11-156-016	2832 RASKOB ST	25-40-11-156-016	4011156016	016	Lot	401-RESIDENTIAL
1358	57553	57568	40-11-156-005	2835 BERKLEY ST	25-40-11-156-005	4011156005	005	Lot	401-RESIDENTIAL
1359	57583	57598	40-11-158-019	2816 SLOAN ST	25-40-11-158-019	4011158019	019	Lot	401-RESIDENTIAL
1360	57596	57611	40-11-154-003	2853 N STEVENSON ST	25-40-11-154-003	4011154003	003	Lot	401-RESIDENTIAL
1361	57612	57627	40-11-154-017	2844 BERKLEY ST	25-40-11-154-017	4011154017	017	Lot	401-RESIDENTIAL
1362	57627	57642	40-11-158-011	2821 RASKOB ST	25-40-11-158-011	4011158011	011	Lot	401-RESIDENTIAL
1363	57639	57654	40-11-109-014	2901 PROSPECT ST	25-40-11-109-014	4011109014	014	Lot	401-RESIDENTIAL
1364	57674	57689	40-11-156-017	2828 RASKOB ST	25-40-11-156-017	4011156017	017	Lot	401-RESIDENTIAL
1365	57739	57754	40-11-156-006	2831 BERKLEY ST	25-40-11-156-006	4011156006	006	Lot	401-RESIDENTIAL
1366	57782	57797	40-11-153-003	2852 N STEVENSON ST	25-40-11-153-003	4011153003	003	Lot	401-RESIDENTIAL
1367	57791	57806	40-11-154-004	2849 N STEVENSON ST	25-40-11-154-004	4011154004	004	Lot	401-RESIDENTIAL
1368	57799	57814	40-11-154-018	2840 BERKLEY ST	25-40-11-154-018	4011154018	018	Lot	401-RESIDENTIAL
1369	57811	57826	40-11-158-012	2817 RASKOB ST	25-40-11-158-012	4011158012	012	Lot	401-RESIDENTIAL
1370	57838	57853	40-11-156-018	2824 RASKOB ST	25-40-11-156-018	4011156018	018	Lot	401-RESIDENTIAL
1371	57867	57882	40-11-153-002	1314 N BALLENGER HWY	25-40-11-153-002	4011153002	002	Lot	401-RESIDENTIAL
1372	57892	57907	40-11-156-007	2827 BERKLEY ST	25-40-11-156-007	4011156007	007	Lot	401-RESIDENTIAL
1373	57929	57944	40-11-154-005	2845 N STEVENSON ST	25-40-11-154-005	4011154005	005	Lot	401-RESIDENTIAL
1374	57934	57949	40-11-154-019	2836 BERKLEY ST	25-40-11-154-019	4011154019	019	Lot	401-RESIDENTIAL

Container Specialties Inc
Parcels with no public water supply connection

	J	K	L	M	N	O	P	Q	R	S
1345	Residential	0.19000000	0.19	FLINT SCHOOLS	25010		2838	RASKOB ST	FLINT	48504
1346	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2910	PROSPECT ST	FLINT	48504
1347	Commercial	0.13000000	0.13	FLINT SCHOOLS	25010			LAVENDER AVE	FLINT	48504
1348	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2811	SLOAN ST	FLINT	48504
1349	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2839	BERKLEY ST	FLINT	48504
1350	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		2820	SLOAN ST	FLINT	48504
1351	Residential	0.13000000	0.13	FLINT SCHOOLS	25010	N	2857	STEVENSON ST	FLINT	48504
1352	Industrial	0.05000000	0.05	FLINT SCHOOLS	25010		2903	PROSPECT ST	FLINT	48504
1353	Residential	0.12000000	0.12	FLINT SCHOOLS	25010		2848	BERKLEY ST	FLINT	48504
1354	Residential	0.23999999	0.24	FLINT SCHOOLS	25010	N	1351	BALLENGER HWY	FLINT	48504
1355	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		2825	RASKOB ST	FLINT	48504
1356	Residential	0.15000001	0.15	FLINT SCHOOLS	25010		1115	LAVENDER AVE	FLINT	48504
1357	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2832	RASKOB ST	FLINT	48504
1358	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2835	BERKLEY ST	FLINT	48504
1359	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2816	SLOAN ST	FLINT	48504
1360	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	2853	STEVENSON ST	FLINT	48504
1361	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2844	BERKLEY ST	FLINT	48504
1362	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2821	RASKOB ST	FLINT	48504
1363	Residential	0.28000000	0.28	FLINT SCHOOLS	25010		2901	PROSPECT ST	FLINT	48504
1364	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2828	RASKOB ST	FLINT	48504
1365	Residential	0.11000000	0.11	FLINT SCHOOLS	25010		2831	BERKLEY ST	FLINT	48504
1366	Residential	0.18000001	0.18	FLINT SCHOOLS	25010	N	2852	STEVENSON ST	FLINT	48504
1367	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	2849	STEVENSON ST	FLINT	48504
1368	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2840	BERKLEY ST	FLINT	48504
1369	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2817	RASKOB ST	FLINT	48504
1370	Residential	0.09000000	0.09	FLINT SCHOOLS	25010		2824	RASKOB ST	FLINT	48504
1371	Residential	0.12000000	0.12	FLINT SCHOOLS	25010	N	1314	BALLENGER HWY	FLINT	48504
1372	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2827	BERKLEY ST	FLINT	48504
1373	Residential	0.10000000	0.1	FLINT SCHOOLS	25010	N	2845	STEVENSON ST	FLINT	48504
1374	Residential	0.10000000	0.1	FLINT SCHOOLS	25010		2836	BERKLEY ST	FLINT	48504

Container Specialties Inc
Parcels with no public water supply connection

	T	U	V	W	X	Y
1345	CRANNIE, JAMES G	2838 RASKOB ST	FLINT	MI	48504	CRANNIE, JAMES G
1346	GROSS, CHARLIE & VICTORIA	6499 LEHRING RD	HOLLY	MI	48442	GROSS, CHARLIE & VICTORIA
1347	NOOR UNITY CENTER	1031 S GRAHAM RD	FLINT	MI	48532	NOOR UNITY CENTER
1348	JOHNSON, CHARLES L	2811 SLOAN ST	FLINT	MI	48504	JOHNSON, CHARLES L
1349	DOZIER, KAREN E	2839 BERKLEY ST	FLINT	MI	48504	DOZIER, KAREN E
1350	SMITH, DON & SHIRLEY	2820 SLOAN ST	FLINT	MI	48504	SMITH, DON & SHIRLEY
1351	JMZ PROPERTIES, LLC	G-4084 CORUNNA RD STE A	FLINT	MI	48532	JMZ PROPERTIES, LLC
1352	CONSUMERS POWER CO	ONE ENERGY PLAZA	JACKSON	MI	49201	CONSUMERS POWER CO
1353	CARR, VERONICA	2848 BERKLEY ST	FLINT	MI	48504	CARR, VERONICA
1354	MITCHELL, MICHAEL	1351 N BALLENGER HWY	FLINT	MI	48504	MITCHELL, MICHAEL
1355	LAY, RUNDRE R	2825 RASKOB ST	FLINT	MI	48504	LAY, RUNDRE R
1356	KEITH, ADOLPH & VERA	1115 LAVENDER AVE	FLINT	MI	48504	KEITH, ADOLPH & VERA
1357	REEVES, MARY E	2725 WALTER ST	FLINT	MI	48504	REEVES, MARY E
1358	DOZIER, KAREN	2839 BERKLEY ST	FLINT	MI	48504	DOZIER, KAREN
1359	EDMOND, JAMES D	2816 SLOAN ST	FLINT	MI	48504	EDMOND, JAMES D
1360	LUDORF, RICHARD L	2853 N STEVENSON ST	FLINT	MI	48504	LUDORF, RICHARD L
1361	SK & K MGMT, LLC	6313 PINE RIDGE CT	FLUSHING	MI	48433	SK & K MGMT, LLC
1362	BULLOCK, JOHN & EVELYN	2821 RASKOB ST	FLINT	MI	48504	BULLOCK, JOHN & EVELYN
1363	THOMAS, SONJA	2901 PROSPECT ST	FLINT	MI	48504	THOMAS, SONJA
1364	WALKER, LAWANA	2828 RASKOB ST	FLINT	MI	48504	WALKER, LAWANA
1365	BURNS, DELTONYA	5056 PARKWOOD CT	FLUSHING	MI	48433	BURNS, DELTONYA
1366	BOWE, RAYMOND	2852 N STEVENSON ST	FLINT	MI	48504	BOWE, RAYMOND
1367	TODD, KENNETH & LEEFORD	323 DRIFTWOOD CIR	PRUDENVILLE	MI	48651-9407	TODD, KENNETH & LEEFORD
1368	FLEMING, ANDREW & PEGGY	2257 BATES RD	MOUNT MORRIS	MI	48458	FLEMING, ANDREW & PEGGY
1369	FORSTER, BIRTIE	2817 RASKOB ST	FLINT	MI	48504	FORSTER, BIRTIE
1370	ZERKA, MILAD	G-4084 CORUNNA RD STE A	FLINT	MI	48532	ZERKA, MILAD
1371	MCKNIGHT, JOLIE M	1314 N BALLENGER HWY	FLINT	MI	48504	MCKNIGHT, JOLIE M
1372	WALKER, ALONDREA	6819 CRANWOOD DR	FLINT	MI	48505	WALKER, ALONDREA
1373	TURNER, JACQUELINE	3252 W ASHLAN AVE #162	FRESNO	CA	93722	TURNER, JACQUELINE
1374	HOWE, BRUCE & WINIFRED	2836 BERKLEY ST	FLINT	MI	48504	HOWE, BRUCE & WINIFRED

Container Specialties Inc
Parcels with no public water supply connection

	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1345	2838 RASKOB ST	FLINT	MI	48504	100	No	11200	11379	11200	13293555.26060000
1346	6499 LEHRING RD	HOLLY	MI	48442	0	No	8900	9042	8900	13293566.95990000
1347	1031 S GRAHAM RD	FLINT	MI	48532	0	No	400	406	400	13293568.42800000
1348	2811 SLOAN ST	FLINT	MI	48504	100	No	10900	11074	10900	13293578.33350000
1349	2839 BERKLEY ST	FLINT	MI	48504	100	No	10900	11074	10900	13293578.38260000
1350	2820 SLOAN ST	FLINT	MI	48504	100	No	10100	10261	10100	13293585.47370000
1351	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	4800	4876	4800	13293587.17670000
1352	ONE ENERGY PLAZA	JACKSON	MI	49201	0	No	3400	3454	3400	13293588.80550000
1353	2848 BERKLEY ST	FLINT	MI	48504	100	No	11900	12090	11900	13293593.18110000
1354	1351 N BALLENGER HWY	FLINT	MI	48504	100	No	9900	10058	9900	13293594.11850000
1355	2825 RASKOB ST	FLINT	MI	48504	100	No	10100	10261	10100	13293597.69380000
1356	1115 LAVENDER AVE	FLINT	MI	48504	100	No	13200	13411	13200	13293599.86760000
1357	2725 WALTER ST	FLINT	MI	48504	0	No	12500	12500	12500	13293609.79710000
1358	2839 BERKLEY ST	FLINT	MI	48504	0	No	8300	8432	8300	13293618.44410000
1359	2816 SLOAN ST	FLINT	MI	48504	100	No	9900	10058	9900	13293626.49120000
1360	2853 N STEVENSON ST	FLINT	MI	48504	100	No	10500	10668	10500	13293630.52150000
1361	6313 PINE RIDGE CT	FLUSHING	MI	48433	0	No	9600	9753	9600	13293634.34710000
1362	2821 RASKOB ST	FLINT	MI	48504	100	No	8300	8432	8300	13293637.84390000
1363	2901 PROSPECT ST	FLINT	MI	48504	100	No	13600	13817	13600	13293641.41950000
1364	2828 RASKOB ST	FLINT	MI	48504	100	No	10200	10363	10200	13293646.80220000
1365	5056 PARKWOOD CT	FLUSHING	MI	48433	0	No	13100	13309	13100	13293658.80510000
1366	2852 N STEVENSON ST	FLINT	MI	48504	100	No	18500	18796	18500	13293666.50920000
1367	323 DRIFTWOOD CIR	PRUDENVILLE	MI	48651-9407	0	No	11200	11379	11200	13293669.94050000
1368	2257 BATES RD	MOUNT MORRIS	MI	48458	0	No	11200	11379	11200	13293672.10040000
1369	2817 RASKOB ST	FLINT	MI	48504	100	No	10000	10160	10000	13293676.30730000
1370	G-4084 CORUNNA RD STE A	FLINT	MI	48532	0	No	2500	2540	2500	13293683.49520000
1371	1314 N BALLENGER HWY	FLINT	MI	48504	100	No	9900	10058	9900	13293690.83970000
1372	6819 CRANWOOD DR	FLINT	MI	48505	0	No	7900	8026	7900	13293698.85920000
1373	3252 W ASHLAN AVE #162	FRESNO	CA	93722	0	No	10300	10464	10300	13293708.00860000
1374	2836 BERKLEY ST	FLINT	MI	48504	100	No	11800	11988	11800	13293709.52980000

Container Specialties Inc
Parcels with no public water supply connection

	AJ	AK	AL	AM	AN	AO	AP
1345	556817.54711800	364.11194537	8120.42089844000	364.11205903400			
1346	557957.70871600	279.13196934	3910.89794922000	279.13184182400			
1347	556192.25935000	315.44840698	5478.33398438000	315.44846077400			
1348	556353.04326100	265.22773752	3955.78076172000	265.22780017400			
1349	556920.20956500	294.82633854	4488.63378906000	294.82633975700			
1350	556516.47152200	307.05962632	5173.40283203000	307.05971191400			
1351	557209.79660800	316.55989507	5472.52197266000	316.55989642100			
1352	557773.44885700	250.83421157	2012.55175781000	250.83426552300			
1353	557092.65946400	306.71762853	5046.67382813000	306.71766340500			
1354	557655.35400900	431.84416958	10240.62695310000	431.84409439200			
1355	556623.90235300	300.38424681	4817.45117188000	300.38429507600			
1356	556239.05319100	331.29036873	6325.35205078000	331.29027389100			
1357	556794.85280900	288.28776488	4166.37646484000	288.28777386600			
1358	556904.44520500	295.15290023	4503.80517578000	295.15287341800			
1359	556500.45364300	283.25616223	3944.62060547000	283.25612555100			
1360	557192.06443800	299.41990068	4564.83349609000	299.41975227400			
1361	557075.75595400	293.51017721	4347.94824219000	293.51016999300			
1362	556607.51240900	287.37697371	4166.27197266000	287.37694974300			
1363	557744.86842000	439.69013919	11982.62695310000	439.69010018700			
1364	556779.52002300	288.78787658	4182.20849609000	288.78792676400			
1365	556887.82665500	297.31722466	4615.22753906000	297.31734781200			
1366	557338.58266300	354.42418594	7728.99169922000	354.42418522900			
1367	557176.44822000	298.14843359	4507.45703125000	298.14844971400			
1368	557060.30060200	291.99640140	4266.34423828000	291.99650686300			
1369	556590.97298700	292.93802273	4475.27197266000	292.93808834600			
1370	556764.55562400	287.21160463	4089.69042969000	287.21167890400			
1371	557398.23740600	301.95290600	5113.05761719000	301.95282343200			
1372	556871.04524800	294.40799814	4461.22216797000	294.40796892500			
1373	557160.07848800	294.89849757	4344.79882813000	294.89849195100			
1374	557044.94148300	292.26991662	4279.00927734000	292.26990981400			

From: Tim Davidek <T_DAVIDEK@gcdcwws.com>
Sent: Wednesday, May 06, 2015 4:49 PM
To: Spielberg, John (DEQ)
Subject: RE: Flint Twp 3261 Flushing Rd

John,

Not sure I will have to review our locator map for Flint Township. In the 1 – 2 mile radius of 3261 Flushing Rd I would guess 70% - 75%.

Tim Davidek

From: Spielberg, John (DEQ) [mailto:SPIELBERGJ@michigan.gov]
Sent: Wednesday, May 06, 2015 11:32 AM
To: Tim Davidek
Subject: RE: Flint Twp 3261 Flushing Rd

Thanks a lot, Tim. How much of Flint Township is connected to the public supply? Looks like the area shown in the map you emailed me has about 90% of the residences connected.

From: Tim Davidek [mailto:T_DAVIDEK@gcdcwws.com]
Sent: Wednesday, May 06, 2015 10:37 AM
To: Spielberg, John (DEQ)
Subject: FW: Flint Twp 3261 Flushing Rd

John,

Attached is an aerial of the area south 3261 Flushing Road. For the addresses/parcels with an M attached that address/parcel has public water. If there is not an M associated with the address/parcel they do not have public water.

Thanks,

Tim Davidek
Assistant Director - Operations

FLINT TWP
3261 FLUSHING RD

1 inch = 292 feet

5/4/2015

From: Benzie, Richard (DEQ)
Sent: Friday, July 31, 2015 8:03 PM
To: Prysby, Mike (DEQ);Busch, Stephen (DEQ)
Cc: Devereaux, Tracy Jo (DEQ)
Subject: Flint communications
Attachments: Flint messages 2015.xlsx

Here is a list of the messages I have that involve communication about Flint during the first half of 2015. Most of the messages I received were internal but there are some that included communication with Flint representatives. However, I am simply receiving a copy and one or both of you are also involved in those communications.

The ones that are from me are all internal and not to or with Flint.

	A	B	C	D	E	F
1	From	Subject	Received	Size	Categories	In Folder
2	Busch, Stephen (DEQ)	RE: Need upate on lead / copper tests for Flint	Fri 7/24	2 MB		Inbox
3	Shekter Smith, Liane (DEQ)	RE: AGENDA for Today's Call on Flint	Tue 7/21	42 KB		Inbox
4	Shekter Smith, Liane (DEQ)	FW: AGENDA for Today's Call on Flint	Tue 7/21	55 KB		Inbox
5	Benzie, Richard (DEQ)	RE: ODWMA/LEG00139/Pavlov/Use of Lake Huron by Detroit and Flint	Mon 7/20	30 KB		Sent Items
6	Busch, Stephen (DEQ)	RE: ODWMA/LEG00139/Pavlov/Use of Lake Huron by Detroit and Flint	Mon 7/20	69 KB		Inbox
7	Busch, Stephen (DEQ)	FW: Flint Water Question from a Pregnant Flint Resident	7/16/2015	450 KB		Inbox
8	Busch, Stephen (DEQ)	RE: TTHMs in Flint	7/16/2015	25 KB		Inbox
9	Benzie, Richard (DEQ)	TTHMs in Flint	7/15/2015	10 KB		Sent Items
10	Shekter Smith, Liane (DEQ)	RE: Call from ACLU reporter about Flint	7/9/2015	35 KB		Inbox
11	Benzie, Richard (DEQ)	Re: Call from ACLU reporter about Flint	7/8/2015	18 KB		Sent Items
12	Shekter Smith, Liane (DEQ)	FW: Flint	7/8/2015	35 KB		Inbox
13	Busch, Stephen (DEQ)	FW: Call from ACLU reporter about Flint	7/8/2015	28 KB		Inbox
14	Shekter Smith, Liane (DEQ)	FW: Lead results in Flint - Call in # 312-353-4768 Code: 372928	7/7/2015	71 KB		Inbox
15	Shekter Smith, Liane (DEQ)	Fw: Flint	7/1/2015	37 KB		Inbox
16	Busch, Stephen (DEQ)	Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015	6/9/2015	193 KB		Inbox
17	Wurfel, Brad (DEQ)	RE: Draft Flint TTHM Violation Notice	6/5/2015	34 KB		Inbox
18	Busch, Stephen (DEQ)	Draft Flint TTHM Violation Notice	6/5/2015	66 KB		Inbox
19	Crooks, Jennifer	April 27 Flint Sampling Update from Miguel	6/2/2015	43 KB		Inbox
20	Busch, Stephen (DEQ)	RE: Communications between City of Flint and DEQ	5/28/2015	8 MB		Inbox
21	Crooks, Jennifer	Flint sample results/2 houses for (dw) metals (Cu, Pb, Zn)	5/27/2015	451 KB		Inbox
22	Fitzner, Wendy (DEQ)	FW: City of Flint SRF project progress	5/27/2015	28 KB		Inbox
23	Swendsen, Kurt (DEQ)	FW: Flint SRF	5/27/2015	28 KB		Inbox
24	Fitzner, Wendy (DEQ)	RE: Communications between City of Flint and DEQ	5/26/2015	34 KB		Inbox
25	Pallone, Maggie (DEQ)	Re: Communications between City of Flint and DEQ	5/26/2015	38 KB		Inbox
26	Butler, Sonya (DEQ)	RE: Communications between City of Flint and DEQ	5/26/2015	31 KB		Inbox
27	Shekter Smith, Liane (DEQ)	FW: Communications between City of Flint and DEQ	5/26/2015	27 KB		Inbox
28	Busch, Stephen (DEQ)	RE: Communications between City of Flint and DEQ	5/26/2015	40 KB		Inbox
29	Benzie, Richard (DEQ)	RE: Communications between City of Flint and DEQ	5/26/2015	14 KB		Sent Items
30	Shekter Smith, Liane (DEQ)	FW: Communications between City of Flint and DEQ	5/26/2015	34 KB		Inbox
31	Crooks, Jennifer	Flint	5/7/2015	50 KB		Inbox
32	Benzie, Richard (DEQ)	Fw: Flint Corrosion Control?	5/2/2015	41 KB		Sent Items
33	Cook, Pat (DEQ)	RE: Flint Corrosion Control?	5/1/2015	62 KB		Inbox
34	Busch, Stephen (DEQ)	Flint EM	4/30/2015	24 KB		Inbox
35	Cook, Pat (DEQ)	FW: Flint Corrosion Control?	4/28/2015	65 KB		Inbox
36	Crooks, Jennifer	FINAL BRIEFING: Flint Hot Issue	4/16/2015	68 KB		Inbox
37	Crooks, Jennifer	RA visit to Flint, Michigan	4/15/2015	76 KB		Inbox
38	Crooks, Jennifer	R5 Regional Administrator to visit Flint area this Friday	4/15/2015	40 KB		Inbox
39	Shekter Smith, Liane (DEQ)	FW: Flint water system from Mlive	4/8/2015	76 KB		Inbox
40	Prysby, Mike (DEQ)	RE: City of Flint Water	4/6/2015	35 KB		Inbox
41	Benzie, Richard (DEQ)	Re: City of Flint Water	4/6/2015	26 KB		Sent Items
42	Prysby, Mike (DEQ)	FW: City of Flint Water	4/6/2015	32 KB		Inbox

	A	B	C	D	E	F
43	Benzie, Richard (DEQ)	RE: Water Dilemma in Flint	3/30/2015	32 KB		Sent Items
44	Crooks, Jennifer	FYI: Water Dilemma in Flint	3/30/2015	58 KB		Inbox
45	Shekter Smith, Liane (DEQ)	FW: Flint Water	3/24/2015	35 KB		Inbox
46	Butler, Sonya (DEQ)	FW: Flint Water	3/24/2015	27 KB		Inbox
47	Monosmith, Carrie (DEQ)	RE: MHA & Michigan DEQ re: McLaren-Flint Water Treatment to Prevent Legionella	3/19/2015	26 KB		Inbox
48	Monosmith, Carrie (DEQ)	FW: MHA & Michigan DEQ re: McLaren-Flint Water Treatment to Prevent Legionella	3/19/2015	40 KB		Inbox
49	Shekter Smith, Liane (DEQ)	RE: Flint Drinking Water Letter?	3/17/2015	37 KB		Inbox
50	Shekter Smith, Liane (DEQ)	FW: City of Flint Information - Consultants	3/17/2015	30 KB		Inbox
51	Busch, Stephen (DEQ)	RE: Flint	3/17/2015	29 KB		Inbox
52	Wurfel, Brad (DEQ)	Flint	3/16/2015	23 KB		Inbox
53	Busch, Stephen (DEQ)	Accepted: Flint	3/13/2015	16 KB		Inbox
54	Benzie, Richard (DEQ)	Flint	3/12/2015	13 KB		Sent Items
55	Benzie, Richard (DEQ)	RE: Update: Call with White House Flint Liaison	3/11/2015	27 KB		Sent Items
56	Busch, Stephen (DEQ)	RE: Update: Call with White House Flint Liaison	3/11/2015	45 KB		Inbox
57	Benzie, Richard (DEQ)	FW: Update: Call with White House Flint Liaison	3/10/2015	25 KB		Sent Items
58	Crooks, Jennifer	Update: Call with White House Flint Liaison	3/10/2015	57 KB		Inbox
59	Howes, Sarah (DEQ)	RE: Flint Drinking Water TTHM Standard Violation - 1st quarter 2015	3/5/2015	35 KB		Inbox
60	Busch, Stephen (DEQ)	Flint Drinking Water TTHM Standard Violation - 1st quarter 2015	3/5/2015	319 KB		Inbox
61	Shekter Smith, Liane (DEQ)	FW: Draft Flint TTHM Violation Notice for comment	3/4/2015	107 KB		Inbox
62	Butler, Sonya (DEQ)	Flint Update	3/4/2015	28 KB		Inbox
63	Busch, Stephen (DEQ)	Draft Flint TTHM Violation Notice for comment	3/2/2015	114 KB		Inbox
64	Benzie, Richard (DEQ)	RE: HIGH LEAD: FLINT Water testing Results	2/27/2015	54 KB		Sent Items
65	Busch, Stephen (DEQ)	Updated Flint TTHM Results	2/27/2015	51 KB		Inbox
66	Busch, Stephen (DEQ)	RE: HIGH LEAD: FLINT Water testing Results	2/27/2015	76 KB		Inbox
67	Shekter Smith, Liane (DEQ)	FW: HIGH LEAD: FLINT Water testing Results	2/26/2015	49 KB		Inbox
68	Busch, Stephen (DEQ)	Fwd: HIGH LEAD: FLINT Water testing Results	2/26/2015	40 KB		Inbox
69	Butler, Sonya (DEQ)	FW: flint article	2/26/2015	33 KB		Inbox
70	Crooks, Jennifer	FYI: Flint Michigan control 2-20-15	2/24/2015	561 KB		Inbox
71	Crooks, Jennifer	RE: Controlled Correspondence from citizen in Flint	2/11/2015	41 KB		Inbox
72	Crooks, Jennifer	RE: Controlled Correspondence from citizen in Flint	2/11/2015	42 KB		Inbox
73	Benzie, Richard (DEQ)	RE: Controlled Correspondence from citizen in Flint	2/11/2015	13 KB		Sent Items
74	Busch, Stephen (DEQ)	RE: Controlled Correspondence from citizen in Flint	2/11/2015	32 KB		Inbox
75	Crooks, Jennifer	Controlled Correspondence from citizen in Flint	2/11/2015	54 KB		Inbox
76	Busch, Stephen (DEQ)	RE: Letter from the White House-Flint	2/9/2015	364 KB		Inbox
77	Crooks, Jennifer	Letter from the White House-Flint	2/9/2015	36 KB		Inbox
78	Berndt, Jason (DEQ)	RE: Source Wster assessment Flint River	2/6/2015	15 MB		Inbox
79	Berndt, Jason (DEQ)	RE: Source Wster assessment Flint River	2/6/2015	31 KB		Inbox
80	Busch, Stephen (DEQ)	RE: Source Wster assessment Flint River	2/6/2015	32 KB		Inbox
81	Prysby, Mike (DEQ)	Flint	2/6/2015	22 KB		Inbox
82	Prysby, Mike (DEQ)	RE: CAZ description - Flint River	2/6/2015	161 KB		Inbox
83	Berndt, Jason (DEQ)	RE: Source Wster assessment Flint River	2/6/2015	4 MB		Inbox
84	Busch, Stephen (DEQ)	RE: CAZ description - Flint River	2/6/2015	161 KB		Inbox

	A	B	C	D	E	F
85	Benzie, Richard (DEQ)	FW: CAZ description - Flint River	2/6/2015	146 KB		Sent Items
86	Benzie, Richard (DEQ)	FW: Flint event on Tuesday	2/3/2015	133 KB		Sent Items
87	Shekter Smith, Liane (DEQ)	FW: Flint event on Tuesday	2/3/2015	149 KB		Inbox
88	Prysby, Mike (DEQ)	Re: Flint event on Tuesday	2/3/2015	34 KB		Inbox
89	Benzie, Richard (DEQ)	FW: Flint event on Tuesday	2/3/2015	133 KB		Sent Items
90	Benzie, Richard (DEQ)	FW: Gillie's Coney Island offers up free well water for Flint residents | MLive.com	2/3/2015	15 KB		Sent Items
91	Busch, Stephen (DEQ)	FW: Flint event on Tuesday	2/3/2015	152 KB		Inbox
92	Ladouceur, Anita (DEQ)	RE: Gillie's Coney Island offers up free well water for Flint residents | MLive.com	2/3/2015	34 KB		Inbox
93	DeBruyn, Dana (DEQ)	RE: Gillie's Coney Island offers up free well water for Flint residents | MLive.com	1/30/2015	30 KB		Inbox
94	Benzie, Richard (DEQ)	RE: Gillie's Coney Island offers up free well water for Flint residents | MLive.com	1/30/2015	14 KB		Sent Items
95	Benzie, Richard (DEQ)	FW: Gillie's Coney Island offers up free well water for Flint residents | MLive.com	1/30/2015	11 KB		Sent Items
96	Monosmith, Carrie (DEQ)	RE: Gillie's Coney Island offers up free well water for Flint residents | MLive.com	1/30/2015	28 KB		Inbox
97	DeBruyn, Dana (DEQ)	FW: Gillie's Coney Island offers up free well water for Flint residents | MLive.com	1/30/2015	29 KB		Inbox
98	Busch, Stephen (DEQ)	FW: What is the state's role in Flint's water fiasco?	1/29/2015	61 KB		Inbox
99	Prysby, Mike (DEQ)	Re: ABC12 News Flint water test results comment?	1/27/2015	38 KB		Inbox
100	Benzie, Richard (DEQ)	RE: ABC12 News Flint water test results comment?	1/27/2015	23 KB		Sent Items
101	Prysby, Mike (DEQ)	FW: ABC12 News Flint water test results comment?	1/27/2015	41 KB		Inbox
102	Prysby, Mike (DEQ)	RE: ABC12 News Flint water test results comment?	1/27/2015	37 KB		Inbox
103	Busch, Stephen (DEQ)	RE: ABC12 News Flint water test results comment?	1/27/2015	34 KB		Inbox
104	Shekter Smith, Liane (DEQ)	RE: ABC12 News Flint water test results comment?	1/27/2015	31 KB		Inbox
105	Busch, Stephen (DEQ)	RE: ABC12 News Flint water test results comment?	1/27/2015	32 KB		Inbox
106	Prysby, Mike (DEQ)	FW: ABC12 News Flint water test results comment?	1/27/2015	27 KB		Inbox
107	Benzie, Richard (DEQ)	RE: interview for article on Flint drinking water	1/26/2015	25 KB		Sent Items
108	Busch, Stephen (DEQ)	FW: interview for article on Flint drinking water	1/26/2015	47 KB		Inbox
109	Busch, Stephen (DEQ)	Flint Hospital Meeting	1/26/2015	27 KB		Inbox
110	Benzie, Richard (DEQ)	RE: Flint in the Free Press	1/23/2015	9 KB		Sent Items
111	Berndt, Jason (DEQ)	Flint in the Free Press	1/23/2015	29 KB		Inbox
112	Shekter Smith, Liane (DEQ)	RE: more flint	1/21/2015	26 KB		Inbox
113	Busch, Stephen (DEQ)	Fwd: more flint	1/21/2015	24 KB		Inbox
114	Busch, Stephen (DEQ)	RE: Flint Mayor request to Governor regarding Flint Water	1/21/2015	822 KB		Inbox
115	Shekter Smith, Liane (DEQ)	RE: Flint Mayor request to Governor regarding Flint Water	1/21/2015	45 KB		Inbox
116	Wurfel, Brad (DEQ)	RE: Flint Mayor request to Governor regarding Flint Water	1/21/2015	45 KB		Inbox
117	Shekter Smith, Liane (DEQ)	RE: Flint Mayor request to Governor regarding Flint Water	1/21/2015	42 KB		Inbox
118	Wurfel, Brad (DEQ)	RE: Flint Mayor request to Governor regarding Flint Water	1/21/2015	41 KB		Inbox
119	Wurfel, Brad (DEQ)	RE: Flint Mayor request to Governor regarding Flint Water	1/21/2015	41 KB		Inbox
120	Shekter Smith, Liane (DEQ)	RE: Flint Mayor request to Governor regarding Flint Water	1/21/2015	41 KB		Inbox
121	Busch, Stephen (DEQ)	Flint Mayor request to Governor regarding Flint Water	1/21/2015	35 KB		Inbox
122	Prysby, Mike (DEQ)	tally of Flint calls	1/20/2015	66 KB		Inbox
123	Rosenthal, Adam (DEQ)	Flint Disinfection By-Product data	1/16/2015	52 KB		Inbox
124	Benzie, Richard (DEQ)	Accepted: Pre-meeting Flint Drinking Water Public Meeting	1/16/2015	11 KB		Sent Items
125	Benzie, Richard (DEQ)	Re: Flint Drinking Water	1/15/2015	15 KB		Sent Items
126	Drullinger, Dave (DEQ)	RE: Flint Drinking Water	1/15/2015	29 KB		Inbox

	A	B	C	D	E	F
127	Drullinger, Dave (DEQ)	RE: Flint Drinking Water	1/15/2015	27 KB		Inbox
128	Benzie, Richard (DEQ)	RE: Flint Drinking Water	1/15/2015	11 KB		Sent Items
129	Benzie, Richard (DEQ)	RE: Flint Drinking Water	1/15/2015	13 KB		Sent Items
130	Drullinger, Dave (DEQ)	RE: Flint Drinking Water	1/15/2015	27 KB		Inbox
131	Drullinger, Dave (DEQ)	RE: Flint Drinking Water	1/15/2015	29 KB		Inbox
132	Prysby, Mike (DEQ)	Re: Flint Drinking Water	1/15/2015	27 KB		Inbox
133	Benzie, Richard (DEQ)	RE: Flint Drinking Water	1/15/2015	11 KB		Sent Items
134	Prysby, Mike (DEQ)	Re: Flint Drinking Water	1/15/2015	21 KB		Inbox
135	Benzie, Richard (DEQ)	RE: Flint Drinking Water	1/15/2015	14 KB		Sent Items
136	Drullinger, Dave (DEQ)	Flint Drinking Water	1/15/2015	19 KB		Inbox
137	Prysby, Mike (DEQ)	tally of Flint calls	1/14/2015	66 KB		Inbox
138	Busch, Stephen (DEQ)	Flint Emergency Financial Manager	1/14/2015	29 KB		Inbox
139	Busch, Stephen (DEQ)	Re: question on Flint	1/13/2015	36 KB		Inbox
140	Prysby, Mike (DEQ)	Re: question on Flint	1/13/2015	29 KB		Inbox
141	Crooks, Jennifer	RE: question on Flint	1/13/2015	44 KB		Inbox
142	Benzie, Richard (DEQ)	RE: question on Flint	1/13/2015	15 KB		Sent Items
143	Prysby, Mike (DEQ)	Tally of calls - Flint	1/12/2015	70 KB		Inbox
144	Benzie, Richard (DEQ)	RE: Facility Notification: Flint State Office Building	1/12/2015	38 KB		Sent Items
145	Prysby, Mike (DEQ)	Flint response	1/12/2015	25 KB		Inbox
146	Prysby, Mike (DEQ)	RE: DIR00004 Warner / Water toxins in Flint MI	1/12/2015	36 KB		Inbox
147	Prysby, Mike (DEQ)	RE: Facility Notification: Flint State Office Building	1/12/2015	50 KB		Inbox
148	Benzie, Richard (DEQ)	RE: DIR00004 Warner / Water toxins in Flint MI	1/9/2015	18 KB		Sent Items
149	Prysby, Mike (DEQ)	RE: DIR00004 Warner / Water toxins in Flint MI	1/9/2015	32 KB		Inbox
150	Busch, Stephen (DEQ)	RE: Flint Legislator Questions	1/9/2015	39 KB		Inbox
151	Howes, Sarah (DEQ)	RE: Flint Legislator Questions	1/9/2015	38 KB		Inbox
152	Willard, Veronica (DEQ)	FW: DIR00004 Warner / Water toxins in Flint MI	1/9/2015	134 KB		Inbox
153	Prysby, Mike (DEQ)	tally of Flint calls	1/9/2015	65 KB		Inbox
154	Prysby, Mike (DEQ)	FW: Facility Notification: Flint State Office Building	1/9/2015	46 KB		Inbox
155	Benzie, Richard (DEQ)	RE: Flint Legislator Questions	1/9/2015	14 KB		Sent Items
156	Busch, Stephen (DEQ)	Flint Legislator Questions	1/9/2015	27 KB		Inbox
157	Prysby, Mike (DEQ)	Tally of FLint calls	1/8/2015	65 KB		Inbox
158	Busch, Stephen (DEQ)	RE: Flint new city administrator	1/8/2015	58 KB		Inbox
159	Benzie, Richard (DEQ)	RE: Flint new city administrator	1/8/2015	10 KB		Sent Items
160	Busch, Stephen (DEQ)	Flint new city administrator	1/8/2015	23 KB		Inbox
161	Prysby, Mike (DEQ)	Tally of Flint calls (updated)	1/8/2015	68 KB		Inbox
162	Rosenthal, Adam (DEQ)	RE: flint	1/8/2015	32 KB		Inbox
163	Prysby, Mike (DEQ)	RE: flint	1/8/2015	27 KB		Inbox
164	Benzie, Richard (DEQ)	RE: flint	1/8/2015	12 KB		Sent Items
165	Benzie, Richard (DEQ)	RE: flint	1/8/2015	12 KB		Sent Items
166	Prysby, Mike (DEQ)	FW: more flint	1/8/2015	29 KB		Inbox
167	Prysby, Mike (DEQ)	FW: flint	1/8/2015	26 KB		Inbox
168	Scherbarth, John (AG)	RE: Flint Water Supply System	1/8/2015	43 KB		Inbox

	A	B	C	D	E	F
169	Benzie, Richard (DEQ)	RE: Tally of Flint calls	1/7/2015	14 KB		Sent Items
170	Benzie, Richard (DEQ)	RE: Flint Water Supply System	1/7/2015	22 KB		Sent Items
171	Scherbarth, John (AG)	FW: Flint Water Supply System	1/7/2015	34 KB		Inbox
172	Busch, Stephen (DEQ)	FW: Tally of Flint calls	1/7/2015	62 KB		Inbox
173	Benzie, Richard (DEQ)	Accepted: Rep. Neeley-Flint Drinking Water	1/6/2015	12 KB		Sent Items
174	Scherbarth, John (AG)	RE: Flint Water Supply System	1/6/2015	32 KB		Inbox
175	Benzie, Richard (DEQ)	RE: Flint Water Supply System	1/6/2015	56 KB		Sent Items
176	Scherbarth, John (AG)	Flint Water Supply System	1/6/2015	28 KB		Inbox
177	Prysby, Mike (DEQ)	Flint NBC News Interview - Flint TTHMs	1/6/2015	71 KB		Inbox
178	Prysby, Mike (DEQ)	Media Inquiry - City of Flint	1/5/2015	70 KB		Inbox

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Monday, October 05, 2015 2:55 PM
To: Prysby, Mike (DEQ)
Subject: Flint CCR
Attachments: Complete 2014 CCR (Flint).pdf

Mike,

Here is the 2014 Flint CCR.

--
Mike Glasgow
Utilities Administrator
City of Flint
1101 S. Saginaw St.
Flint, MI 48502
(810)766-7135 ext. 2602

From: Rennaker, Joanne (DEQ)
Sent: Tuesday, November 24, 2015 3:50 PM
To: Prysby, Mike (DEQ)
Subject: RE: Letter for final
Attachments: Standby OP Req. 2015.doc

For your records

From: Prysby, Mike (DEQ)
Sent: Tuesday, November 24, 2015 2:07 PM
To: Rennaker, Joanne (DEQ)
Subject: Letter for final

Joanne,

Attached is a letter for final to the city of Flint. Thanks!

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

DAN WYANT
DIRECTOR

November 24, 2015

Mr. Michael Glasgow
Utilities Administrator
City of Flint
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 2310

Dear Mr. Glasgow:

SUBJECT: Water Supply - City of Flint (City) Water Treatment Plant (WTP) Standby Operation Requirements

The purpose of this letter is to summarize stand-by operation requirements for use of the City's WTP as an emergency back-up to allow for continuous supply of finished water to the City's entire distribution system in case of an interruption in water supply as a wholesale customer of the Detroit Water and Sewerage Department (DWSD) / Great Lakes Water Authority (GLWA).

At this time, the City WTP has been re-designated as an emergency standby WTP using the Flint River as its water source. Once connection to and raw water service from the Karegnondi Water Authority (KWA) becomes available, the City WTP may once again be converted back into continuous operation using KWA water from Lake Huron as its primary source, and the Flint River as an emergency standby source.

The City WTP, as an emergency standby facility, shall periodically test WTP operations to maintain operational reliability in accordance with the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), but shall not distribute treated water to its customers as part of these test operations. Instead, treated water shall be discharged to the Flint River in accordance with the requirements of the National Pollutant Discharge Elimination System (NPDES) under the Natural Resources Environmental Protection Act, 1994 PA 451, as amended. The City WTP shall conduct these operational test runs on a quarterly basis for a minimum duration of one week (7 days) of continuous operation using conventional filtration and disinfection byproduct precursor removal. If the City intends to utilize additional treatment for precipitative softening as part of emergency standby operation, then quarterly operational test runs

shall be conducted for a minimum duration of two weeks (14 days) continuous operation.
Water production operating ranges at the City WTP may be flexible, but must evaluate both operation and performance at varying flow rates under a scheme that incorporates all equipment required to achieve conventional filtration, including but not limited to coagulation, flocculation, sedimentation, and filtration, along with disinfection byproduct precursor removal using ozonation. Additional treatment for precipitative lime softening shall also be included, if applicable.

Adequate levels of treatment staffing shall be provided at the City WTP when in operation. The City shall continue to retain a full time F-1 level certified operator-in-charge (OIC) who shall supervise operation of the City WTP. The City shall also require an F-4 or higher level certified shift operator to be on site and in charge of each operating shift at the City WTP when the OIC is not on site. Sufficient staffing is essential in order to maintain 24-hour operation (either for test-run or emergency operation) of the WTP.

Operational monitoring shall be conducted during test-runs of the City WTP. An operations report shall be prepared for each completed WTP test-run. The operations report shall include all of the following information:

- Treatment rates (daily)
- Ozone dosage (daily)
- Ozone residual (daily average, maximum and minimum)
- Coagulant dosage as Fe^{+3} (daily)
- Turbidity
    - Raw (continuous)
    - Settled (every 4 hours)
    - Applied (every 4 hours)
    - Individual Filter Effluent (continuous)
    - Combined Filter Effluent (continuous)
- Chlorine dosage (daily)
- Chlorine residual (continuous, daily average, maximum and minimum)
- pH, raw and treated (every 8 hours)
- Total Hardness as $CaCO_3$, raw and treated (every 8 hours)
- Non-Carbonate Hardness as $CaCO_3$, raw and treated (every 8 hours)
- Calcium as Ca^{+2}, raw and treated (every 8 hours)
- Magnesium as Mg^{+2} raw and treated (every 8 hours)
- Chloride as Cl^{-}, raw and treated (every 8 hours)
- Total Coliform, raw, post ozone, settled, applied and treated (every 8 hours)
- Heterotrophic Plate Count, raw and treated (every 8 hours)
- Temperature degrees Celsius, raw and treated (every 8 hours)
- Department of Environmental Quality (DEQ) Unit 37 Chemical Analysis, treated water (once per test run by certified lab)

If the City WTP is placed into operation as a result of an emergency, the City shall continue operation of its corrosion control treatment system in accordance with the

provisions outlined in the DEQ's October 30, 2015, letter to the City, *Corrosion Control Treatment Operation*, attached.

Treated water that is discharged must meet the bacteriological and turbidity requirements of Act 399 as a condition of operational preparedness. Treated water that is discharged must also meet any requirements set forth by the DEQ, Water Resource Division (WRD). Please note that according to a November 6, 2015, letter from the DEQ, WRD, to the City, the City's Certificate of Coverage (COC) MIG640053, issued under the NPDES General Permit No. MIG640000, expired April 1, 2015. A COC under this General Permit must be obtained prior to any discharge from the City WTP. Please contact Ms. Stephanie Kammer, acting Lansing District supervisor, WRD, at 517-897-1597 or kammers@michigan.gov, regarding NPDES permitting issues.

Our office would be glad to meet with City staff to further discuss test-run operations in more detail and answer any questions. If you have any questions regarding this correspondence, please contact me at the number below or at prysbym@michigan.gov.

Sincerely,

Michael F. Prysby, P.E.,
District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-290-8817

Enclosure

cc: Ms. Natasha Henderson, City of Flint
Mr. Brent Wright, City of Flint
Mr. Stephen Busch, DEQ
Ms. Stephanie Kammer, DEQ

From: Sygo, Jim (DEQ)
Sent: Friday, December 04, 2015 4:13 PM
To: Shekter Smith, Liane (DEQ);Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Cc: Dykema, Linda D. (DHHS)
Subject: FW: Attached -- Task Force Comments on Residential Sampling Protocol
Attachments: Task Force Comments on MDHHS Residential Sampling Protocol 12-4-15.pdf

This is what we got back from EPA on the protocol being used by HHS

From: Kaplan, Robert [mailto:kaplan.robert@epa.gov]
Sent: Friday, December 04, 2015 3:18 PM
To: Sygo, Jim (DEQ)
Subject: Attached -- Task Force Comments on Residential Sampling Protocol

Jim,

Thanks for giving the Task Force the opportunity to comment on the Residential Sampling Protocol. I've attached EPA's comments.

- Bob

Robert Kaplan
Deputy Regional Administrator
U.S. EPA Region 5
Phone: (312) 886-1499
Cell: (312) 515-9827
Fax: (312) 692-2075

From: Maul, Sue (DEQ)
Sent: Tuesday, December 15, 2015 1:03 PM
To: Busch, Stephen (DEQ);Prysby, Mike (DEQ)
Subject: FW: Mislabeled attachment?

Can either of you answer Nathan's question? Is this meeting agenda where III. B. states short term goal – Flint River, the only notification we have in writing of Flint's decision to use the river?

Sue

From: Gambill, Nathan (AG)
Sent: Tuesday, December 15, 2015 9:55 AM
To: Maul, Sue (DEQ)
Cc: Kuhl, Richard (AG)
Subject: Mislabeled attachment?

Sue,

I'm reading through the Flint water documents. Attachment seven is identified in the timeline as Flint's June 2013 notification to DEQ that it plans to use the Flint River. But attachment seven is just an untitled meeting agenda. Is there a mistake, or do we not have anything from Flint formally notifying us of their decision to use the Flint River?

Thanks for any help you can give.

Best,

Nate Gambill
Assistant Attorney General
Michigan Department of Attorney General
Environment, Natural Resources, and Agriculture Division
525 West Ottawa Street
P.O. Box 30755
Lansing, MI 48909
Phone: 517-373-7540
Fax: 517-241-3473

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From: Doty, Susan (DEQ)
Sent: Wednesday, December 16, 2015 4:15 PM
To: Kammer, Stephanie (DEQ)
Cc: Prysby, Mike (DEQ);Fish, Kim (DEQ);Russell, Jon (DEQ);Trumble, Luke (DEQ)
Subject: FW: Complaint on Henry Creek, Lapeer Co.
Attachments: Dec 14 inspection.pdf

Hi Stephanie,
FYi- This is about the Genesee County Impoundment in Lapeer.

We have not received the response to our VN it was due December 15.

First, I left a message with Matt Raysin (Permittee contact). I called and spoke with Mike Moroni from AECOM about obtaining the response that was due yesterday. He said there was a miscommunication between them and the Permittee on who was going to submit it. I told him it was past due.

I told him that I see that they are still having an sediment laden discharge from the site (inspection from Lapeer in a small rain event is attached) and that we have has a PEAS complaint. He said it is "Frankly impossible to remove the sediment from the storm water and if that is the case then we need to address every gravel road in Michigan".

I discussed with Mr. Moroni that he has a permitted site vs a gravel road and with that permit comes obligations. I said I disagreed that there are quite a few options that have not been tried on the site. I offered a site meeting. They would like it before the holidays. We are looking at the 21 or 22 and Lapeer CEA will be invited.

I have no idea if they have applied for a Dam Safety permit. Maybe Luke can let us know about that.

Please let me know if you have any questions.

-Susan

Susan Doty
Environmental Quality Analyst
Department of Environmental Quality
Water Resources Division
Lansing District Office
525 W. Allegan Street
Lansing, Michigan 48909
NOTE NEW PHONE NUMBER: 517-230-1430
Dotys2@michigan.gov
www.michigan.gov/soilerosion
Subscribe to our Soil Erosion and Construction Storm Water Email List by clicking on the red envelope

-----Original Message-----
From: Dorothy Wicks [mailto:dwicks@LapeerCounty.org]
Sent: Wednesday, December 16, 2015 12:10 PM

To: Doty, Susan (DEQ) <Dotys2@michigan.gov>
Subject: RE: Complaint on Henry Creek, Lapeer Co.

dw

-----Original Message-----
From: Doty, Susan (DEQ) [mailto:Dotys2@michigan.gov]
Sent: Wednesday, December 16, 2015 11:36 AM
To: Dorothy Wicks <dwicks@LapeerCounty.org>
Subject: RE: Complaint on Henry Creek, Lapeer Co.

I think their sediment basin size should be evaluated, they did not build it per plans.

Susan Doty
Environmental Quality Analyst
Department of Environmental Quality
Water Resources Division
Lansing District Office
525 W. Allegan Street
Lansing, Michigan 48909
NOTE NEW PHONE NUMBER: 517-230-1430
Dotys2@michigan.gov
www.michigan.gov/soilerosion
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-----Original Message-----
From: Dorothy Wicks [mailto:dwicks@LapeerCounty.org]
Sent: Wednesday, December 16, 2015 11:22 AM
To: Doty, Susan (DEQ) <Dotys2@michigan.gov>
Subject: RE: Complaint on Henry Creek, Lapeer Co.

Funny you should ask. I am going to the scanner right now to get inspection and photos scanned for you and the KWA and contractors. Chip found clouded waters from the outfall throughout the drain near the site. -- And this is with a light rain on Monday.

My report to them will say they may use PAMs, tacked down mulch blankets, etc. to stop sediment from leaving site. They also need to clean drain pipes of sediment ASAP.

You mentioned a while back their sediment basin may not be large enough to handle the storm water. Do you think I should be asking for another one to be installed, or make this one larger?

Report and photos to you in a few minutes.

Dorothy Wicks, RS
Environmental Health Director
Lapeer County Health Department
810.245.5791 direct
810.667.0283 fax
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-----Original Message-----
From: Doty, Susan (DEQ) [mailto:Dotys2@michigan.gov]
Sent: Wednesday, December 16, 2015 9:12 AM
To: Dorothy Wicks <dwicks@LapeerCounty.org>
Subject: RE: Complaint on Henry Creek, Lapeer Co.

How did it go?

Susan Doty
Environmental Quality Analyst
Department of Environmental Quality
Water Resources Division
Lansing District Office
525 W. Allegan Street
Lansing, Michigan 48909
NOTE NEW PHONE NUMBER: 517-230-1430
Dotys2@michigan.gov
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-----Original Message-----
From: Dorothy Wicks [mailto:dwicks@LapeerCounty.org]
Sent: Monday, December 14, 2015 1:20 PM
To: Doty, Susan (DEQ) <Dotys2@michigan.gov>
Subject: RE: Complaint on Henry Creek, Lapeer Co.

Sending staff out to complainant's address today. And it's raining here so we'll get a real-time look at any sediment potentially leaving the site. The site is not blanketed -- there are 2 projects going on simultaneously : the impoundment which has been going for many months - lots of excavation and pushing dirt around; and the water plant site which just started a month or so ago. All the vegetation has been scraped off many acres. There is big equipment all over the place.

I spoke with staff this morning about instructing them to blanket any areas near collection basins and slopes leading to ditches and surface waters. [that they are not driving on].
I agree with you they'll likely have to clean out cement collection pipes. The company did not give staff a lot of details, only that they were working on clean up.

I'll know more when staff return to the office this afternoon.

Dorothy Wicks, RS
Environmental Health Director
Lapeer County Health Department
810.245.5791 direct
810.667.0283 fax
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-----Original Message-----
From: Doty, Susan (DEQ) [mailto:Dotys2@michigan.gov]
Sent: Friday, December 11, 2015 3:38 PM
To: Dorothy Wicks <dwicks@LapeerCounty.org>
Subject: RE: Complaint on Henry Creek, Lapeer Co.

Have your staff been out there during a rain event? The complainants address is 3321 Marathon Rd.

Thanks for looking into it. Is the site blanketed? Does there appear to be erosion of not they may have to clean their pipes too.

I look forward to an update.
Thanks,
Susan

Susan Doty
Environmental Quality Analyst
Department of Environmental Quality
Water Resources Division
Lansing District Office
525 W. Allegan Street
Lansing, Michigan 48909
NOTE NEW PHONE NUMBER: 517-230-1430
Dotys2@michigan.gov
www.michigan.gov/soilerosion
Subscribe to our Soil Erosion and Construction Storm Water Email List by clicking on the red envelope

-----Original Message-----
From: Dorothy Wicks [mailto:dwicks@LapeerCounty.org]
Sent: Friday, December 11, 2015 3:26 PM
To: Doty, Susan (DEQ) <Dotys2@michigan.gov>
Subject: RE: Complaint on Henry Creek, Lapeer Co.

One of my staff just attended a meeting at the site yesterday with contractors and KWA representatives. He mentioned to me the contractor and he talked about cleaning out the drain, but I don't have all the details. I expect to get more information Monday morning.

I can't open the photo file. Can you get me the address of the complainant? We'll look at the drain from her property also.

Dorothy Wicks, RS
Environmental Health Director
Lapeer County Health Department
810.245.5791 direct

810.667.0283 fax
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-----Original Message-----
From: Doty, Susan (DEQ) [mailto:Dotys2@michigan.gov]
Sent: Friday, December 11, 2015 10:05 AM
To: Dorothy Wicks <dwicks@LapeerCounty.org>
Subject: FW: Complaint on Henry Creek, Lapeer Co.

Hi Dorothy,
It appears that we have continued problems with this locations. Can you let me know how your enforcement process is going?
Thanks,
Susan

Susan Doty
Environmental Quality Analyst
Department of Environmental Quality
Water Resources Division
Lansing District Office
525 W. Allegan Street
Lansing, Michigan 48909
NOTE NEW PHONE NUMBER: 517-230-1430
Dotys2@michigan.gov
www.michigan.gov/soilerosion
Subscribe to our Soil Erosion and Construction Storm Water Email List by clicking on the red envelope

-----Original Message-----
From: Kammer, Stephanie (DEQ)
Sent: Friday, December 11, 2015 8:02 AM
To: Drullinger, Dave (DEQ) <DRULLINGERD@michigan.gov>
Cc: Doty, Susan (DEQ) <Dotys2@michigan.gov>
Subject: RE: Complaint on Henry Creek, Lapeer Co.

I think this is actually Genesee County's plant. Susan was out there in November and cited them for soil erosion issues at the site.

I'm not aware that they are permitted for any type of discharge from the plant itself.

-----Original Message-----
From: Drullinger, Dave (DEQ)
Sent: Thursday, December 10, 2015 4:53 PM
To: Kammer, Stephanie (DEQ) <KAMMERS@michigan.gov>
Subject: RE: Complaint on Henry Creek, Lapeer Co.

Thanks Stephanie. It is a new issue to me, but the caller seemed surprised that it hadn't been reported by others yet.

=== Dave

-----Original Message-----
From: Kammer, Stephanie (DEQ)
Sent: Thursday, December 10, 2015 4:42 PM
To: Drullinger, Dave (DEQ)
Cc: Doty, Susan (DEQ)
Subject: Re: Complaint on Henry Creek, Lapeer Co.

Thanks Dave. We will look into it.

Sent from my iPhone

> On Dec 10, 2015, at 4:15 PM, Drullinger, Dave (DEQ) <DRULLINGERD@michigan.gov> wrote:
>
> Hi Stephanie, please forward to the appropriate staff:
>
> I received a complaint that a new "water plant" (pump station?) constructed to serve the City of Flint pipeline from Lake Huron has a new disharge pipe running from the "plant" at the NE corner of Marathon and Stanley Rd (red circle on bottom of photo, Columbiaville, Lapeer Co) to the west along Stanley Rd, and discharging to Henry Drain (blue arrow). Since installation of the pipe in summer 2015, the quality of Henry Drain has been noticably impacted. They claim it used to be very clear most of the time, but now it is dirty all the time and they won't go in it. They say the pipe from the "plant" discharges a dark liquid in both wet and dry weather.
>
> The caller was Leslie Dungey at 810-728-2650. Leslie's address is marked on the map, and she said you can come onto their property to look at the condition of Henry Drain where it crosses their property. One reason to take them up on their offer is that they have a bridge over the creek that is visible from an aerial closeup. I did not ask if they pulled a permit for the bridge.
>
>
> [cid:image004.png@01D13365.2534B620]
> Thank you.
>
> === Dave
>
> <image004.png>

From: dan53053@comcast.net
Sent: Friday, December 18, 2015 11:12 AM
To: Berman, Jonathan (DEQ)
Cc: tdavidek@gcdcwws.com;Mark Horgan (m_horgan@gcdcwws.com);John O'Brien (jobrien@gcdcwws.com);Prysby, Mike (DEQ)
Subject: Re: Genesee County DWRF # 7405-01 (Meters): Comments on Project Plan
Attachments: MDEQ 40 mailing address.xls

Jonathan,

Thanks for your comments. Please see our responses below.

In relation to our phone conversation regarding the plans and spec's, I anticipate sending you revised spec's next week.

Thanks,
Dan

From: "Jonathan Berman (DEQ)" <BERMANJ@michigan.gov>
To: "dan53053@comcast.net" <dan53053@comcast.net>
Cc: "tdavidek@gcdcwws.com" <tdavidek@gcdcwws.com>, "Mark Horgan (m_horgan@gcdcwws.com)" <m_horgan@gcdcwws.com>, "John O'Brien (jobrien@gcdcwws.com)" <jobrien@gcdcwws.com>, "Mike Prysby (DEQ)" <PRYSBYM@michigan.gov>
Sent: Thursday, December 10, 2015 3:57:41 PM
Subject: Genesee County DWRF # 7405-01 (Meters): Comments on Project Plan

Good afternoon, Dan.

Below are my comments on the Project Plan. We ask that you respond to (and/or resolve) these items by January 11th.

#1) I understand the meter replacement map in Appendix B shows the municipalities where new meter installation will take place while the Figure 1-1 shows the actual service area for the county system. Will the entire DWRF project contain meter installation in all 10 townships (i.e. Clayton, Davison, Flint, Flushing, Gaines, Montrose, Mt. Morris, Richfield, Thetford and Vienna) where new meters will be installed? We need you to provide a map which not only shows the municipalities where new meter installation will take place for the entire DWRF project, but also identifies the locations of the proposed five (5) base stations for the entire DWRF project.

In answer to the first part of the question, yes, we will be installing meters in all 10 of the townships. In answer to the second part of your question, there is a propagation map in Appendix B showing the locations of the seven towers in the original project. We have installed the base stations at Beecher Tank and Houran Tank. If you need a new map please let me know.

#2) Are there no capital improvements and/or replacement costs over the 20 year planning period for keeping the Manual Ready System? Are the no replacement costs over the 20 year planning period to switch to the Meter Replacement and AMR/AMI System?

I'm not sure what you mean by " Manual Ready System" ?

No, there are no replacement costs anticipated for the 20 year planning period. The new meters, endpoints and base stations have a 20 year life expectancy.

#3) a. I understand the entire DWRF project has anticipated impacts to the state regulated resources of floodplains, inland lakes and streams, or wetlands. Confirm.

We do NOT anticipate any impacts from the Meter Replacement and AMR/AMI Project.

b. Did you obtain clearance from SHPO? We need a copy.

SHPO letter is in Appendix J and we received no response

#4) a. For the full construction footprint for the entire DWRF project (new meters and antennas), do you conclude that it is in an urban area where no suitable wildlife habitat for state species is present or that the construction work is limited to existing structures? If so, contact with MSU-MNFI can be waived. Otherwise, a Rare Species Review request must be submitted via the MSU-MNFI website (http://mnfi.anr.msu.edu/services/rare-species-review.cfm) to generate a letter from MSU-MNFI staff summarizing their findings.

Yes, we conclude that The Meter Replacement and AMR/AMI Project is an urban area where no suitable wildlife habitat for state species is present and that the construction work is limited to existing structures.

b. For the full construction footprint for the entire DWRF project (new meters and antennas), do you conclude that it is in an urban area where no suitable wildlife habitat for federal species is present, or if construction work is limited to existing structures and in turn the project will have "no effect" on any federally listed species? If so, contact with U.S. FWS can be waived. Otherwise, the U.S. FWS

procedure at Section 7 Consultation website (www.fws.gov/midwest/endangered/section7/index.html) must be followed.

Yes, we conclude that Meter Replacement and AMR/AMI Project it is in an urban area where no suitable wildlife habitat for federal species is present, and the construction work is limited to existing structures and in turn the project will have "no effect" on any federally listed species.

#5) Are any of the new antennas for the DWRF project located within 5 miles of any licensed airport? If so, how much height will the new antennas add to existing water towers or cell towers? If it is significant, you may need to contact MDOT Bureau of Aeronautics.

The new antennas heights are not significant.

#6) Will there be any service interruptions? Yes there may be short service interruptions. If so, what should users anticipate? We have prepared a letter and a FAQ that will go to each customer outlining the process. What hours/days of the week will construction take place? Project work will take place Monday through Saturday during daylight hours with special appointments at other hours to meet customers needs. In a 2nd Quarter schedule, we expect construction to begin by May 2016. Per our telephone discussion you confirmed that we are anticipating a 3rd Quarter Schedule. Based on that we would anticipate construction to begin by July 2016, In turn, when would construction completion be expected? We would anticipate construction completion in July 2018.

#7) Will construction result in traffic congestion, limited driveway access, and/or noise? No. If so, describe mitigation. Any dust/soil erosion? No Will there be any excavation? No. Will a soil erosion permit not be necessary? A soil erosion permit will not be necessary. What permit(s) will be needed for construction? We do not anticipate that any additional permits will be necessary.

#8) Will there be an increase to user rates to repay DWRF loan debt? If so, what is the estimated increase to the annual user rate for the typical residential customer? If not, how will DWRF loan debt be repaid? Page 34 leaves this issue unanswered. Note that while we wait for EPA to decide if the project must be re-bid, we will continue use the $5.4 million cost estimate. No, there will not be an increase in the user rate for the project. The existing rates are sufficient to repay the DWRF loan. See Page 34, the last sentence under Section 3.4. Also see the User Rate Analysis submitted on 12-3-2015.

#9) Below are selections from the November 2010 EA-FNSI for Genesee County DWRF #'s 7340-01 and 7341-01. Is this information still accurate? Identify any updates in your response.

"...Genesee's water system service area consists of approximately 145,000 residents inside the county. as depicted in Figure A, along with over 8,000 residents outside the county in Birch Run (village and

township) in Shiawassee County to the west and New Lothrop in Saginaw County to the north. The Genesee County Drain Commissioner's Office is responsible for the operation and maintenance of the system. Potable water from the Detroit Water and Sewerage Department (DWSD) is purchased by the city of Flint (Flint), which sells a portion of its supply to Genesee. The actual source of the DWSD water supply is Lake Huron in close proximity to the city of Port Huron. After treatment at DWSD's water treatment plant the potable water routed for Flint and then Genesee travels through a single 72-inch-diameter water supply main courtesy of the Imlay Pump Station."

"Genesee's water system (Figure B) has around 116 miles of transmission and distribution water main ranging in pipe diameter size from 6-inch to 72-inch with approximately 98 percent ductile iron, less than 2 percent cast-iron, and less than 1 percent concrete pipe. Genesee's other water system components include 6 major pump stations, 21 storage facilities, and 1 standpipe."

See Revised below

"...Genesee's water system service area consists of approximately 145,000 residents inside the county. The Genesee County Drain Commissioner's Office is responsible for the operation and maintenance of the system. Potable water from the Detroit Water and Sewerage Department (DWSD) is currently purchased by Genesee County. The actual source of the DWSD water supply is Lake Huron in close proximity to the city of Port Huron. After treatment at DWSD's water treatment plant the potable water routed for Flint and then Genesee travels through a single 72-inch-diameter water supply main courtesy of the Imlay Pump Station." Genesee County is a member of the Karegnondi Water Authority (KWA) which is currently constructing a source water supply system from Lake Huron to Genesee County. Genesee County anticipates switching to KWA water in 2017-2018.

"Genesee's water system (Figure B) has around 543 miles of transmission and distribution water main ranging in pipe diameter size from 6-inch to 72-inch with approximately 98 percent ductile iron, less than 2 percent cast-iron, and less than 1 percent concrete pipe. Genesee's other water system components include 6 major pump stations, 21 storage facilities, and 1 standpipe."

#10) We need a list of 40 mailing addresses where water bills are actually sent (i.e. we do not want to our postcards returned to us by USPS) which are for customers that will receive new meters/be located near new antennas for the DWRF project.

We have attached a list of 40 active accounts with both the connection address and the billing address.

Let me know if you have any questions. Thanks.

Regards,

Jonathan M. Berman

Senior Project Manager, EQA

Michigan Department of Environmental Quality

Office of Drinking Water and Municipal Assistance

Revolving Loan Section

Bermanj@michigan.gov

Phone #: 517-284-5400 (note new number)

Fax #: 517-373-4797 (note new number)

Constitution Hall – 4th Floor South (note new floor location)

525 W. Allegan

Lansing, MI 48933 (for deliveries)

P.O. Box 30241

Lansing, MI 48909-7741 (mailing)

DWRF website: www.michigan.gov/drinkingwaterrevolvingfund

SRF/SWQIF website: www.michigan.gov/cleanwaterrevolvingfund

	A	B	C	D	E	F	G	H	I	J
1	Loc. No	Customer Name	Location Address	City	St	Zip	Mailing Address	City	St	Zip
2	14-0000011270	SINCLAIR BROADCAST GROUP	3463 PIERSON W	FLINT	MI	48504	10706 BEAVER DAM RD	HUNT VALLEY	MD	21030
3	14-0000012080	PIERSON PLAZA	4050 PIERSON W	FLINT	MI	48504	4050 W PIERSON RD	FLINT	MI	48504-1335
4	14-0000012430	J & J FLINT REAL ESTATE	3425 PIERSON W	FLINT	MI	48504	15 CHATEAU DU LAT	FENTON	MI	48430
5	14-0000502910	PHILLIPS TOPPER WORLD	5449 CLIO	FLINT	MI	48504	5449 CLIO	FLINT	MI	48504
6	14-0000554210	ARTHUR PAIGE	3472 PASADENA W	FLINT	MI	48504	3472 W PASADENA AVE	FLINT	MI	48504-2353
7	14-0000600060	TREASURE ENTERPRISE LLC	4403 CLIO PLAZA STE B	FLINT	MI	48504	1161 N BALLENGER HWY STE 12	FLINT	MI	48504
8	14-0000600310	AUTO PRIDE COLLISION	8086 CLIO	MT MORRIS	MI	48458	6034 W PIERSON RD	FLUSHING	MI	48433
9	14-0000607020	MICHIGAN SHEET METAL	4070 DOLAN	FLINT	MI	48504	4070 DOLAN DR	FLINT	MI	48504-1323
10	14-0000629220	DELONG AUTO REPAIR	3511 PIERSON W	FLINT	MI	48504	G3511 PIERSON RD	FLINT	MI	48504
11	14-0000633760	FIRST MERIT BANK	6452 PIERSON W	FLUSHING	MI	48433	106 S. MAIN STREET TOW44	AKRON	OH	44308
12	14-0000644830	SKATE PROPERTIES LLC	3464 ANN	FLUSHING	MI	48433	5315 S SAGINAW RD	FLINT	MI	48507-4426
13	14-0000648380	TUFFY MUFFLER SHOPS OF FLINT	4175 PIERSON W	FLINT	MI	48504	3456 PIERSON PL STE 1	FLUSHING	MI	48433-2474
14	14-0000648970	COFFEE BEANERY	3441 PIERSON PL	FLUSHING	MI	48433	3429 PIERSON PL	FLUSHING	MI	48433-2413
15	14-000064897A	SHAW SERVICE INC	3441 PIERSON PL	FLUSHING	MI	48433	3429 PIERSON PL	FLUSHING	MI	48433-2413
16	14-0000725110	SCI ACCOUNTS PAYABLE-UTILITY	5501 PIERSON W	FLUSHING	MI	48433	PO BOX 4055	DANVILLE	IL	61834-4055
17	14-0000725750	DISCOUNT TIRE CO C/O FACILITY	4481 PIERSON W	FLINT	MI	48504	PO BOX 2440	SPOKANE	WA	99210-2440
18	14-0000755640	CENTRAL CONCRETE PRODUCTS	4067 COMMERCE	FLUSHING	MI	48433	4067 COMMERCE DR	FLUSHING	MI	48433-2311
19	14-0000764150	RIVER RIDGE ALC	7012 RIVER	FLUSHING	MI	48433	607 DRURY CT	FLUSHING	MI	48433
20	7-0000017820	CENTRAL TRANSPORT LLC	3347 TORREY RD	FLINT	MI	48507	12225 STEPHENS RD	WARREN	MI	48089
21	7-0000275410	WOODCRAFT KITCHENS INC	3573 FLUSHING	FLINT	MI	48504	P O BOX 310735	FLINT	MI	48531
22	7-0000350410	FIRESIDE COFFEE CO	3239 ELMS S	SWARTZ CREEK	MI	48473	3239 ELMS RD	SWARTZ CREEK	MI	48473
23	7-0000354060	MATRIX EXPEDITED SERVICES	4268 HOLIDAY DR4	FLINT	MI	48507	4268 HOLIDAY DR	FLINT	MI	48507
24	7-0000387550	CHEMICAL BANK	3501 LINDEN S	FLINT	MI	48507	333 E MAIN ST	MIDLAND	MI	48640
25	7-0000388670	CHECKER FLAG QUICK LUBE & CAR WASH CTR	4129 CORUNNA	FLINT	MI	48532	G4129 CORUNNA RD	FLINT	MI	48532
26	7-0000389330	HART MEDICAL EQUIPMENT	2316 BALLENGER HWY S	FLINT	MI	48503	89 54TH ST, STE 2	GRAND RAPIDS	MI	49548
27	7-0000390280	IBACH ENTERPRISES LLC	4101 HOLIDAY	FLINT	MI	48507	12900 HAGGERTY RD	BELLEVILLE	MI	48111
28	7-0000392650	TDM INC	2101 MILL	FLINT	MI	48532	521 W COURT ST	FLINT	MI	48503
29	7-0000392920	KING PAR & ICE CREAM SHOPPE	5160 FLUSHING	FLUSHING	MI	48433	5160 FLUSHING RD	FLUSHING	MI	48433
30	7-0000393480	INTERNET SOLUTIONS GROUP INC	5225 EXCHANGE	FLINT	MI	48507	305 E EISENHOWER PKWY STE 300	ANN ARBOR	MI	48108
31	7-0000393730	COONS TRAILER LEASING	4221 HOLIDAY	FLINT	MI	48507	4221 HOLIDAY DR	FLINT	MI	48507
32	7-0000394330	RICO EQUIPMENT CO	3020 AIRPARK DR S	FLINT	MI	48507	3020 AIRPARK DR S	FLINT	MI	48507
33	7-0000395150	LEISURE WORLD ASSOC	4175 MILLER RD	FLINT	MI	48507	4175 MILLER RD	FLINT	MI	48507
34	7-0000395770	FAMILY CHRISTIAN LLC	5038 MILLER	FLINT	MI	48507	5300 PATTERSON SE	GRAND RAPIDS	MI	49530
35	7-0000396270	JVV	5242 EXCHANGE	FLINT	MI	48507	5242 EXCHANGE DR	FLINT	MI	48507
36	7-0000396310	MI SOMERSET RETAIL CENTER LLC	4290 MILLER	FLINT	MI	48507	P O BOX 30400	LANSING	MI	48909
37	7-0000396910	GEORGE F EYDE FAMILY, LLC	3050 LINDEN S	FLINT	MI	48507	PO BOX 4218	EAST LANSING	MI	48823
38	7-0000396970	SAGELINK CREDIT UNION	3378 LENNON	FLINT	MI	48507	P O BOX 108	DURAND	MI	48429
39	7-0000396990	MC CLELLAN AIRCRAFT MAIN	4270 TORREY	FLINT	MI	48507	4270 TORREY RD	FLINT	MI	48507
40	7-0000397110	INTEGRITY BUSINESS SOLUTIONS	2255 LINDEN S	FLINT	MI	48532	4740 TALON CT SE STE 8	GRAND RAPIDS	MI	49512
41	7-0000397410	AVFLIGHT FLINT	3375 BRISTOL W	FLINT	MI	48507	P O BOX 1387	ANN ARBOR	MI	48106

From: Busch, Stephen (DEQ)
Sent: Monday, January 04, 2016 1:02 PM
To: Lytle, Darren
Cc: Prysby, Mike (DEQ)
Subject: RE: Quesion
Attachments: FW: Scanned files for EPA

Darren,

Adam was able to pull the info you requested and it is in the attached email, there are 4 pdfs.

Stephen Busch, P.E.
MDEQ Lansing District Coordinator
Office of Drinking Water and Municipal Assistance
Lansing and Jackson District Supervisor
517-643-2314
buschs@michigan.gov

From: Lytle, Darren [mailto:Lytle.Darren@epa.gov]
Sent: Thursday, December 17, 2015 6:55 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: Quesion

Mike,

Could you provide me Flint distribution system water quality data going back maybe 3 years? I am interested in TCR sampling results, chlorine data, etc... I am interested in comparing historic data to the latest data albeit more extensive now as it comes in.

Thanks much, Darren

Darren A. Lytle, Ph.D., P.E.
Branch Chief (Acting)
U.S. Environmental Protection Agency
26 West Martin Luther King Dr.
Cincinnati, Ohio 45268
Phone: (513) 569-7432
Fax: (513) 487-2543
email: lytle.darren@epa.gov

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Friday, October 16, 2015 1:32 PM
To: Lytle, Darren <Lytle.Darren@epa.gov>; Schock, Michael <Schock.Michael@epa.gov>
Cc: Busch, Stephen (DEQ) <BUSCHS@michigan.gov>
Subject: FW: Flint WTP PH2 SEG4 - Corrosion Control

Darren, Michael

We have received Flint's corrosion control proposal from their consultant. If you have comments, please provide them to me by Monday morning.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Matta, Samir [mailto:SFMatta@lan-inc.com]
Sent: Friday, October 16, 2015 12:02 AM
To: Prysby, Mike (DEQ)
Subject: Flint WTP PH2 SEG4 - Corrosion Control

Hi Mike,

Please see attached plans for the Corrosion Control Plan for the City of Flint. I will have the official submittal package to you tomorrow afternoon after I get Brent or Mike's signature on the permit application. I will call you when I get back in Lansing to drop the package. Is three sets of full size plans adequate? Would you like some half size plans? Let me know.

Basis of Design

Given that Flint will require lead and copper corrosion control and given that Detroit utilizes orthophosphate for their corrosion control methodology, and that Flint will be receiving Detroit water for the immediate future, orthophosphate is the appropriate corrosion control methodology for Flint. A dosage of 0.8 mg/l as PO_4 has been recommended for the Detroit water. Numerous utilities utilizing Lake Michigan water have a target dosage of 0.9 mg/l as PO_4. Therefore, a target dosage in the range of 0.8 to 0.9 mg/l appears appropriate.

It is expected that, at least initially, there will be a significant PO_4 demand in the system. This will require a significantly higher dosage until this demand is satisfied and the target residual can be maintained. We are therefore designing for capability of a maximum dosage of 1.5 mg/l.
The arriving Detroit water will likely have some residual PO_4 when it arrives at Flint. It has been reported that this residual will be approximately 0.4 mg/l. The system must therefore be capable of a minimum dosage of 0.4 mg/l.

Based upon the usage of 75% Phosphoric Acid and a flow range of 4 MGD to 25 MGD, with an average day of 16 MGD, the expected feed rate will be 1.35 to 32 gpd. Average Phosphoric Acid feed is expected to be 10.8 gpd, requiring 30 days storage of 325 gal.

Orthophosphate will need to be applied at two locations. Detroit water will enter the Flint system at Control Station CS2, and supplementary phosphate will be applied there. However, on occasion some incoming water may need to be diverted to the Dort Reservoir, bypassing CS2. This water would then be introduced to the system through High Service Pump Station PS4 and phosphate would be introduced at this location.

Please let me know if the information is adequate or you require additional information.

Thanks.

Samir F. Matta, PE
Team Leader

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
2121 University Park Dr, Suite 100 • Okemos, MI 48864-6901
D 517.819.2367 **C** 517.819.2367
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From: Rosenthal, Adam (DEQ)
Sent: Monday, January 04, 2016 11:52 AM
To: Busch, Stephen (DEQ)
Subject: FW: Scanned files for EPA
Attachments: MORs 2013 - Flint.pdf; MORs 2014 - Flint.pdf; Mors 2015 & Water Sample data - Flint.pdf; WQMs - Flint.pdf

for Darren

From: Rennaker, Joanne (DEQ)
Sent: Monday, January 04, 2016 11:44 AM
To: Rosenthal, Adam (DEQ)
Subject: Scanned files for EPA

Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

For Month of December 2013

Flint Water Plant	2310	Genesee
NAME OF WATER SYSTEM	WSSN	COUNTY

Michael Glasgow	F-1R S-3
CERTIFIED OPERATOR	CLASSIFICATION

SIGNATURE OF APPROPRIATE OFFICIAL

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

DEQ
RESOURCE MANAGEMENT DIVISION
JAN 16 2014
LANSING DISTRICT

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

Coagulation Parameters **WSSN 2310** **Dec-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	23.27	10.99	12.29								3	0.08	0.09
2	23.49	11.39	12.11								3	0.08	0.09
3	22.66	9.72	12.94								3	0.08	0.08
4	22.99	10.25	12.74								3	0.10	0.12
5	21.67	9.51	12.16								3	0.08	0.10
6	22.22	9.91	12.31								3	0.07	0.09
7	21.68	9.44	12.24								3	0.07	0.08
8	21.25	9.06	12.19								3	0.08	0.08
9	21.15	8.97	12.18								3	0.07	0.08
10	22.01	9.96	12.05								3	0.08	0.08
11	22.38	10.26	12.11								3	0.08	0.09
12	22.26	9.88	12.38								3	0.08	0.09
13	23.10	10.02	13.08								3	0.09	0.09
14	22.29	10.39	11.90								0	n/a	n/a
15	23.66	11.70	11.96								3	0.09	0.10
16	23.79	11.07	12.72								3	0.09	0.09
17	23.51	9.71	13.80								3	0.12	0.12
18	22.37	10.41	11.96								3	0.09	0.10
19	23.70	10.24	13.46								3	0.10	0.13
20	24.63	10.35	14.28								3	0.11	0.13
21	25.11	10.58	14.52								3	0.11	0.12
22	23.85	11.30	12.55								3	0.10	0.11
23	23.97	10.87	13.11								3	0.07	0.08
24	24.92	11.83	13.09								3	0.07	0.08
25	25.86	12.17	13.69								3	0.08	0.08
26	25.39	12.18	13.22								3	0.10	0.15
27	24.91	10.98	13.93								3	0.12	0.12
28	24.17	10.77	13.40								3	0.08	0.10
29	24.04	10.50	13.54								3	0.08	0.09
30	22.93	10.28	12.65								3	0.09	0.10
31	22.90	10.29	12.61								3	0.08	0.11
AVG	23.29	10.48	12.81								3	0.09	0.10
MAX	25.86	12.18	14.52								3	0.12	0.15
MIN	21.15	8.97	11.90								0	0.07	0.08
Total	722.11	324.96	397.15										

FLINT
WATER PLANT & FACILITIES

Flouridation & Chlorination **WSSN 2310** **Dec-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.43					0.8	1.0	0.8	0.8			0.9	
2			0.54					0.9	1.2	0.9	0.8			1.0	
3			0.57					0.7	1.0	0.8	0.8			0.9	
4			0.58					0.9	1.0	0.8	0.7			0.8	
5			0.54					0.7	1.0	0.8	0.8			0.9	
6			0.58					0.9	1.0	0.9	0.8			1.0	
7			0.57					0.9	1.0	0.8	0.8			1.0	
8			0.57					0.7	0.9	0.8	0.8			0.8	
9			0.61					0.9	1.0	0.8	0.8			0.9	
10			0.60					0.9	1.0	0.8	0.8			1.0	
11			0.61					0.9	1.0	0.9	0.9			1.0	
12			0.57					0.8	1.0	0.9	0.8			0.9	
13			0.61					0.9	1.0	0.8	0.9			1.0	
14			n.s.					n.s.	n.s.	n.s.	n.s.			0.9	
15			0.54					0.7	0.9	0.9	0.8			0.9	
16			0.60					0.9	1.0	0.9	0.9			0.9	
17			0.57					0.7	1.0	0.9	0.8			0.9	
18			0.62					0.9	1.0	0.9	0.8			0.9	
19			0.59					0.9	1.0	0.9	0.8			0.9	
20			0.64					1.0	1.0	0.9	0.9			0.9	
21			0.60					0.8	0.9	0.8	0.8			0.8	
22			0.63					0.7	0.9	0.9	0.8			0.9	
23			0.54					0.7	1.0	0.9	0.9			0.9	
24			0.59					0.8	0.9	0.9	0.8			0.9	
25			0.54					0.8	1.0	0.9	0.8			0.9	
26			0.50					0.8	1.0	0.9	0.8			1.0	
27			0.51					0.7	1.0	0.9	0.9			0.9	
28			0.49					0.7	1.0	0.9	0.9			0.9	
29			0.51					0.7	1.0	0.9	0.8			0.8	
30			0.55					0.8	1.0	0.9	0.8			0.9	
31			0.48					0.7	1.0	0.9	0.8			0.9	
AVG			0.56					0.8	1.0	0.9	0.8			0.9	
MAX			0.64					1.0	1.2	0.9	0.9			1.0	
MIN			0.43					0.7	0.9	0.8	0.7			0.8	

n.s. = no sample collected/tested

Chemical Analyses **WSSN 2310** **Dec-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.36		100		72		28				30.5		5.8		
2		7.29		96		69		27				28.1		6.3		
3		7.30		98		69		29				29.7		5.8		
4		7.40		98		70		28				29.7		5.8		
5		7.35		96		71		25				28.9		5.8		
6		7.33		98		69		29				28.9		6.3		
7		7.34		98		70		28				28.9		6.3		
8		7.29		98		70		28				28.9		6.3		
9		7.36		98		70		28				29.7		5.8		
10		7.36		98		72		26				30.5		5.3		
11		7.40		98		71		27				28.9		6.3		
12		7.36		98		70		28				29.7		5.8		
13		7.38		96		73		23				28.9		5.8		
14		n.s		n.s		n.s		n/a				n.s.		n.s.		
15		7.24		98		71		27				29.7		5.8		
16		7.24		98		69		29				28.9		6.3		
17		7.26		98		68		30				29.7		6.3		
18		7.20		100		70		30				28.9		6.8		
19		7.30		100		70		30				29.7		6.3		
20		7.55		100		71		29				29.7		6.3		
21		7.23		100		68		32				28.9		6.8		
22		7.38		98		73		25				29.7		5.8		
23		7.22		100		72		28				29.7		6.3		
24		7.56		98		72		26				28.9		5.8		
25		7.31		100		73		27				28.9		6.8		
26		7.27		98		72		26				29.7		5.8		
27		7.28		98		65		33				29.7		6.3		
28		7.23		98		69		29				30.5		5.8		
29		7.20		98		73		25				28.9		6.3		
30		7.23		98		69		29				28.9		6.3		
31		7.15		98		73		25				29.7		5.8		
AVG		7.31		98		70		28				29.4		6.1		
MAX		7.56		100		73		33				30.5		6.8		
MIN		7.15		96		65		23				28.1		5.3		

n.s. = no sample collected/tested

Bacteriological & Physical Parameters **WSSN 2310** **Dec-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					16.2				
2	1/0		2/0	2/0	2/0	2/0					16.0				
3	1/0		2/0	2/0	2/0	2/0					15.3				
4	1/0		2/0	2/0	2/0	2/0					15.9				
5	1/0		2/0	2/0	2/0	2/0					15.3				
6	1/0		2/0	2/0	2/0	2/0					15.5				
7	1/0		2/0	2/0	2/0	2/0					15.2				
8	1/0		2/0	2/0	2/0	2/0					15.1				
9	1/0		2/0	2/0	2/0	2/0					14.7				
10	1/0		2/0	2/0	2/0	2/0					14.6				
11	1/0		2/0	2/0	2/0	2/0					15.2				
12	1/0		2/0	2/0	2/0	2/0			<2		16.6				
13	1/0		2/0	2/0	2/0	2/0					16.7				
14	0/0		0/0	0/0	0/0	2/0					n.s.				
15	1/0		2/0	2/0	2/0	2/0					15.3				
16	1/0		2/0	2/0	2/0	2/0					14.6				
17	1/0		2/0	2/0	2/0	2/0					14.9				
18	1/0		2/0	2/0	2/0	2/0					15.0				
19	1/0		2/0	2/0	2/0	2/0					14.1				
20	1/0		2/0	2/0	2/0	2/0					14.9				
21	1/0		2/0	2/0	2/0	2/0					14.6				
22	1/0		2/0	2/0	2/0	2/0					15.2				
23	1/0		2/0	2/0	2/0	2/0					14.9				
24	1/0		2/0	2/0	2/0	2/0					14.7				
25	1/0		2/0	2/0	2/0	2/0					13.0				
26	1/0		2/0	2/0	2/0	2/0					14.3				
27	1/0		2/0	2/0	2/0	2/0					14.4				
28	1/0		2/0	2/0	2/0	2/0					14.1				
29	1/0		2/0	2/0	2/0	2/0					14.1				
30	1/0		2/0	2/0	2/0	2/0					13.9				
31	1/0		2/0	2/0	2/0	2/0					12.5				
											14.9				
											16.7				
											12.5				

n.s. = no sample collected/tested

FLINT
WATER PLANT & FACILITIES

Distribution System Monitoring WSSN 2310 Dec-13

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											0.9	1.0	2
2									0.3	0.4	1.2	1.1	4
3									0.5	0.5	1.0	0.9	4
4	1.0	0.7	0.7	0.8	0.6	0.6	0.3	0.9	0.3	0.4	1.0	1.0	12
5	1.0	0.7	0.8	0.9	0.5	0.5	0.7	0.8	0.3	0.4	1.0	0.9	12
6									0.3	0.4	1.0	1.0	4
7											1.0	0.9	2
8											0.8	0.9	2
9									0.4	0.4	0.9	1.0	4
10									0.3	0.4	1.0	1.0	4
11									0.4	0.4	1.0	1.0	4
12	1.0	0.8	1.1	0.7	0.6	0.6	0.6	0.9	0.4	0.4	1.1	0.9	12
13									0.3	0.4	0.9	1.0	4
14													0
15											0.9	0.9	2
16	0.9	0.8	0.7						0.3	0.5	1.0	0.9	7
17				0.8	0.8	0.7	0.8	0.9	0.4	0.4	1.0	0.9	9
18									0.6	0.5	1.1	0.9	4
19	1.1	0.9	0.7	0.7	0.5	0.7	0.7	0.9	0.4	0.5	1.0	0.9	12
20									0.3	0.5	1.1	0.9	4
21											0.8	0.9	2
22											0.9	0.9	2
23											0.9	1.0	2
24											0.9	0.9	2
25											1.0	0.9	2
26											0.9	1.1	2
27											0.9	1.0	2
28											0.9	1.0	2
29											0.9	1.0	2
30											1.0	0.9	2
31											1.0	0.9	2

Monthly Cl_2 Avg.	**0.768**
Quarterly Cl_2 Avg.	**0.648**
Yearly Cl_2 Avg.	**0.726**
Total Samples	**130**

FLINT
WATER PLANT & FACILITIES

Distribution System Monitoring WSSN 2310 Dec-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.0	1.1	2
2									0.4	0.5	1.4	1.2	4
3									0.6	0.6	1.2	1.1	4
4	1.1	0.9	0.9	0.9	0.8	0.8	0.5	1.0	0.4	0.5	1.2	1.1	12
5	1.1	0.8	1.0	1.0	0.7	0.6	0.8	1.0	0.5	0.5	1.2	1.1	12
6									0.5	0.6	1.2	1.1	4
7											1.1	1.1	2
8											1.0	1.0	2
9									0.5	0.5	1.1	1.2	4
10									0.4	0.6	1.2	1.2	4
11									0.5	0.5	1.2	1.2	4
12	1.2	1.1	1.3	0.8	0.7	0.7	0.8	1.1	0.5	0.5	1.3	1.0	12
13									0.5	0.6	1.1	1.2	4
14													0
15											1.0	1.1	2
16	1.0	1.0	0.9						0.4	0.6	1.2	1.0	7
17				1.0	1.0	0.8	0.9	1.1	0.5	0.6	1.3	1.0	9
18									0.7	0.6	1.2	1.0	4
19	1.3	1.0	0.8	0.8	0.7	0.7	0.8	1.1	0.6	0.7	1.2	1.0	12
20									0.4	0.7	1.3	1.1	4
21											1.0	1.1	2
22											1.0	1.1	2
23											1.1	1.2	2
24											1.1	1.0	2
25											1.1	1.1	2
26											1.1	1.2	2
27											1.1	1.1	2
28											1.1	1.1	2
29											1.0	1.1	2
30											1.2	1.1	2
31											1.1	1.1	2

Monthly Cl_2 Avg.	**0.922**
Quarterly Cl_2 Avg.	**0.796**
Yearly Cl_2 Avg.	**0.892**
Total Samples	**130**

ROUTINE POSITIVE DISTRIBUTION SAMPLES Dec-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform

Total number of routine distribution samples analyzed:	**130**
Total number of routine distribution samples required:	**100**

003329

2310

D-5a 1/86
Authority; Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

For Month of November 2013

Flint Water Plant — NAME OF WATER SYSTEM
2310 — WSSN
Genesee — COUNTY

Michael Glasgow — CERTIFIED OPERATOR
F-1R S-3 — CLASSIFICATION

SIGNATURE OF APPROPRIATE OFFICIAL

DEQ
RESOURCE MANAGEMENT DIVISION
DEC 18 2013
LANSING DISTRICT

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.; Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

Coagulation Parameters **WSSN 2310** **Nov-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	21.73	8.70	13.03								3	0.07	0.07
2	21.72	9.24	12.47								3	0.06	0.07
3	22.43	9.69	12.74								3	0.06	0.07
4	23.42	11.01	12.40								3	0.06	0.06
5	24.54	11.72	12.82								3	0.09	0.10
6	23.65	11.22	12.43								3	0.09	0.11
7	24.02	11.61	12.41								3	0.09	0.09
8	23.24	10.89	12.35								3	0.09	0.10
9	20.77	9.73	11.05								3	0.06	0.08
10	21.35	9.40	11.95								3	0.08	0.09
11	20.96	9.71	11.25								3	0.07	0.08
12	23.13	10.71	12.43								3	0.12	0.13
13	22.38	10.26	12.11								3	0.09	0.09
14	22.73	10.76	11.97								3	0.10	0.11
15	21.75	11.75	10.00								3	0.09	0.11
16	22.66	10.77	11.89								3	0.08	0.09
17	22.51	10.53	11.98								3	0.07	0.08
18	22.03	9.44	12.59								3	0.09	0.10
19	22.42	9.46	12.96								3	0.08	0.08
20	21.84	9.41	12.42								3	0.08	0.08
21	22.12	10.16	11.95								3	0.09	0.10
22	22.35	9.93	12.42								3	0.08	0.08
23	21.38	9.89	11.50								3	0.08	0.09
24	22.09	10.59	11.50								3	0.09	0.10
25	22.20	9.60	12.61								3	0.07	0.08
26	22.40	10.02	12.37								3	0.08	0.08
27	22.48	10.14	12.34								3	0.08	0.09
28	22.57	10.62	11.95								3	0.08	0.08
29	22.58	11.10	11.48								3	0.08	0.09
30	22.61	11.14	11.47								3	0.09	0.10
AVG	22.40	10.31	12.09								3	0.08	0.09
MAX	24.54	11.75	13.03								3	0.12	0.13
MIN	20.77	8.70	10.00								3	0.06	0.06
Total	672.01	309.20	362.82										

FLINT
WATER PLANT & FACILITIES

Flouridation & Chlorination **WSSN 2310** **Nov-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.61					1.0	1.1	0.8	0.8			1.0	
2			0.62					1.0	1.0	0.7	0.8			0.9	
3			0.67					0.7	0.8	0.8	0.8			0.9	
4			0.67					0.9	0.9	0.8	0.8			0.9	
5			0.67					0.9	1.0	0.8	0.8			0.9	
6			0.67					0.8	1.0	0.8	0.8			0.9	
7			0.68					0.8	0.9	0.8	0.8			0.8	
8			0.67					0.9	0.9	0.7	0.8			0.9	
9			0.58					0.7	0.8	0.7	0.8			0.9	
10			0.61					0.7	0.8	0.7	0.6			0.8	
11			0.58					0.9	0.8	0.7	0.7			0.7	
12			0.61					0.7	0.9	0.7	0.7			0.8	
13			0.63					0.9	0.9	0.7	0.7			0.8	
14			0.52					0.7	0.9	0.7	0.6			0.8	
15			0.54					0.9	1.0	0.7	0.8			0.9	
16			0.53					0.7	0.8	0.7	0.7			0.8	
17			0.60					0.7	0.9	0.7	0.7			0.8	
18			0.62					0.9	0.9	0.8	0.8			0.9	
19			0.69					0.8	1.0	0.7	0.8			0.9	
20			0.59					0.8	0.9	0.8	0.7			0.9	
21			0.59					0.8	0.9	0.8	0.7			0.8	
22			0.60					0.9	1.0	0.8	0.8			1.0	
23			0.55					0.7	0.8	0.7	0.7			0.9	
24			0.56					0.7	0.9	0.7	0.7			0.8	
25			0.61					0.8	0.9	0.8	0.8			0.8	
26			0.58					0.7	1.0	0.8	0.7			0.8	
27			0.55					0.9	0.9	0.8	0.8			0.9	
28			0.50					0.7	0.9	0.8	0.8			0.9	
29			0.52					0.7	0.9	0.8	0.7			0.9	
30			0.53					0.8	0.9	0.8	0.7			0.8	
AVG			0.60					0.8	0.9	0.8	0.7			0.9	
MAX			0.69					1.0	1.1	0.8	0.8			1.0	
MIN			0.50					0.7	0.8	0.7	0.6			0.7	

Chemical Analyses **WSSN 2310** **Nov-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.22		100		73		27				28.9		6.8		
2		7.34		98		71		27				27.3		7.3		
3		7.27		98		69		29				28.9		6.3		
4		7.23		98		72		26				28.9		6.3		
5		7.26		96		71		25				28.9		5.8		
6		7.30		96		73		23				30.5		4.9		
7		7.32		100		70		30				29.7		6.3		
8		7.35		98		70		28				28.9		6.3		
9		7.50		98		74		24				28.1		6.8		
10		7.42		96		68		28				28.9		5.8		
11		7.40		100		69		31				28.9		6.8		
12		7.36		98		74		24				28.9		6.3		
13		7.41		98		71		27				29.7		5.8		
14		7.38		100		70		30				29.7		6.3		
15		7.30		100		69		31				28.1		7.3		
16		7.32		98		68		30				30.5		5.3		
17		7.29		98		66		32				29.7		5.8		
18		7.33		98		74		24				28.9		6.3		
19		7.34		96		72		24				30.5		4.9		
20		7.43		98		71		27				29.7		5.8		
21		7.47		100		67		33				29.7		6.3		
22		7.29		98		71		27				28.9		6.3		
23		7.33		94		72		22				29.7		4.9		
24		7.40		100		71		29				29.7		6.3		
25		7.44		98		73		25				29.7		5.8		
26		7.41		98		68		30				29.7		5.8		
27		7.36		98		69		29				28.9		6.3		
28		7.29		100		73		27				28.9		6.3		
29		7.32		100		74		26				29.7		6.3		
30		7.38		98		72		26				28.9		6.3		
AVG		7.35		98		71		27				29.2		6.1		
MAX		7.50		100		74		33				30.5		7.3		
MIN		7.22		94		66		22				27.3		4.9		

FLINT WATER PLANT & FACILITIES

Bacteriological & Physical Parameters **WSSN 2310** **Nov-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Sta II	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					14.5				
2	1/0		2/0	2/0	2/0	2/0					14.1				
3	1/0		2/0	2/0	2/0	2/0					16.3				
4	1/0		2/0	2/0	2/0	2/0					13.5				
5	1/0		2/0	2/0	2/0	2/0					13.7				
6	1/0		2/0	2/0	2/0	2/0					13.5				
7	1/0		2/0	2/0	2/0	2/0					16.7				
8	1/0		2/0	2/0	2/0	2/0					17.0				
9	1/0		2/0	2/0	2/0	2/0					17.4				
10	1/0		2/0	2/0	2/0	2/0					17.6				
11	1/0		2/0	2/0	2/0	2/0					17.6				
12	1/0		2/0	2/0	2/0	2/0					17.7				
13	1/0		2/0	2/0	2/0	2/0					17.4				
14	1/0		2/0	2/0	2/0	2/0					18.1				
15	1/0		2/0	2/0	2/1	2/0					18.5				
16	1/0		2/0	2/0	2/0	2/0					17.2				
17	1/0		2/0	2/0	2/0	2/0					19.3				
18	1/0		2/0	2/0	2/0	2/0					18.9				
19	1/0		2/0	2/0	2/0	2/0					18.8				
20	1/0		2/0	2/0	2/0	2/0					19.1				
21	1/0		2/0	2/0	2/0	2/0					16.9				
22	1/0		2/0	2/0	2/0	2/0					18.1				
23	1/0		2/0	2/0	2/0	2/0					16.4				
24	1/0		2/0	2/0	2/0	2/0					16.9				
25	1/0		2/0	2/0	2/0	2/0					16.3				
26	1/0		2/0	2/0	2/0	2/0					15.4				
27	1/0		2/0	2/0	2/0	2/0					15.3				
28	1/0		2/0	2/0	2/0	2/0					15.6				
29	1/0		2/0	2/0	2/0	2/0					15.9				
30	1/0		2/0	2/0	2/0	2/0					15.5				
											16.6				
											19.3				
											13.5				

FLINT WATER PLANT & FACILITIES

Distribution System Monitoring **WSSN 2310** **Nov-13**

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.2	0.3	1.0	1.1	4
2											0.9	1.0	2
3											0.8	0.8	2
4									0.3	0.3	0.9	0.9	4
5									0.5	0.3	0.9	1.0	4
6									0.3	0.3	1.0	1.0	4
7	0.9	0.6	0.7	0.6	0.5	0.4	0.4	0.7	0.4	0.3	0.9	0.8	12
8									0.3	0.3	0.9	0.8	4
9											0.8	0.8	2
10											0.8	0.8	2
11									0.2	0.3	0.8	0.8	4
12									0.4	0.3	0.9	0.8	4
13	0.9	0.5	0.5	0.3	0.6	0.4	0.3	0.6	0.2	0.3	0.9	0.8	12
14	0.9	0.6	0.6	0.5	0.5	0.5	0.4	0.7	0.3	0.3	0.9	0.9	12
15									0.3	0.3	1.0	0.9	4
16											0.8	0.8	2
17											0.9	0.8	2
18									0.2	0.3	0.9	0.9	4
19									0.5	0.4	1.0	1.0	4
20	0.3	0.7	0.4	0.3	0.5	0.7	0.3	0.8	0.2	0.4	0.9	0.9	12
21	0.9	0.7	0.5	0.7	0.6	0.5	0.5	0.7	0.3	0.4	0.9	0.9	12
22									0.3	0.4	1.0	1.0	4
23											0.8	0.8	2
24											0.8	0.9	2
25									0.3	0.3	0.9	0.9	4
26									0.5	0.4	1.0	0.9	4
27	0.8	0.7	0.4	0.4	0.6	0.8	0.3	0.8	0.3	0.3	0.9	0.9	12
28											0.9	0.9	2
29											0.9	0.8	2
30											0.9	0.9	2

Monthly Cl_2 Avg.	**0.638**
Quarterly Cl_2 Avg.	**0.612**
Yearly Cl_2 Avg.	**0.718**
Total Samples	**146**

FLINT
WATER PLANT & FACILITIES

Distribution System Monitoring **WSSN 2310** **Nov-13**

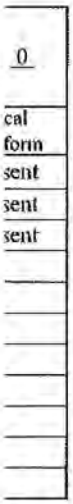
DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.4	0.4	1.2	1.2	4
2											1.2	1.4	2
3											1.0	1.0	2
4									0.4	0.4	1.0	1.1	4
5									0.6	0.4	1.1	1.2	4
6									0.4	0.4	1.1	1.1	4
7	1.1	0.7	0.8	0.7	0.6	0.5	0.5	0.9	0.5	0.4	1.1	1.0	12
8									0.4	0.4	1.1	0.9	4
9											1.0	1.0	2
10											1.0	1.0	2
11									0.4	0.4	1.0	0.9	4
12									0.5	0.4	1.1	0.9	4
13	1.0	0.6	0.7	0.4	0.7	0.5	0.4	0.8	0.3	0.4	1.0	1.0	12
14	1.1	0.7	0.7	0.6	0.7	0.6	0.5	0.9	0.4	0.4	1.1	1.0	12
15									0.5	0.5	1.2	1.2	4
16											0.9	0.9	2
17											1.0	0.9	2
18									0.3	0.4	1.1	1.1	4
19									0.6	0.5	1.2	1.2	4
20	0.4	0.8	0.6	0.4	0.7	0.9	0.4	1.0	0.3	0.5	1.1	1.0	12
21	1.1	0.8	0.7	0.8	0.7	0.6	0.6	0.9	0.4	0.5	1.1	1.0	12
22									0.4	0.5	1.2	1.2	4
23											1.0	0.9	2
24											0.9	1.0	2
25									0.4	0.5	1.1	1.1	4
26									0.6	0.5	1.2	1.0	4
27	0.9	0.8	0.6	0.6	0.7	0.9	0.5	1.0	0.4	0.5	1.1	1.1	12
28											1.0	1.0	2
29											1.0	0.9	2
30											1.0	1.0	2

Monthly Cl_2 Avg.	**0.781**
Quarterly Cl_2 Avg.	**0.757**
Yearly Cl_2 Avg.	**0.886**
Total Samples	**146**

FLINT
WATER PLANT & FACILITIES

ROUTINE POSITIVE DISTRIBUTION SAMPLES Nov-13

Total number of positive routine samples:				Total Coliform: 1			Fecal Coliform:
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fe Coli
11/15/2013	Control Station # 2 (Sta II)	Present	Absent	11/16/2013	Control Station # 2 (Sta II)	Absent	Abs
				11/16/2013	Baxter & Potter Rd.	Absent	Abs
				11/16/2013	Control Station # 5 (Dort Well)	Absent	Abs
Total number of routine distribution samples analyzed:				**146**			
Total number of routine distribution samples required:				**100**			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D-5a 1/86
Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

For Month of October 2013

Flint Water Plant — NAME OF WATER SYSTEM
2310 — WSSN
Genesee — COUNTY

Michael Glasgow — CERTIFIED OPERATOR
F-1R S-3 — CLASSIFICATION

Michael Glasgow
SIGNATURE OF APPROPRIATE OFFICIAL

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

DEQ
RESOURCE MANAGEMENT DIVISION
NOV 12 2013
LANSING DISTRICT

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

Coagulation Parameters **WSSN 2310** **Oct-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	24.17	11.12	13.06								3	0.16	0.21
2	23.97	10.99	12.98								3	0.11	0.14
3	24.45	11.12	13.33								3	0.13	0.15
4	25.60	13.32	12.28								3	0.13	0.14
5	25.36	12.57	12.79								3	0.13	0.13
6	27.32	12.50	14.82								3	0.18	0.20
7	26.72	12.87	13.85								3	0.14	0.15
8	27.02	13.25	13.77								3	0.13	0.15
9	28.06	13.77	14.29								3	0.12	0.15
10	26.09	13.49	12.60								3	0.12	0.14
11	25.48	12.43	13.06								3	0.13	0.14
12	24.17	11.14	13.03								3	0.11	0.12
13	24.13	9.79	14.34								3	0.10	0.10
14	22.79	10.03	12.77								3	0.11	0.11
15	23.27	9.53	13.74								3	0.10	0.11
16	22.78	9.08	13.70								3	0.08	0.09
17	24.04	11.27	12.77								3	0.09	0.10
18	23.76	11.64	12.12								3	0.11	0.11
19	23.61	11.88	11.73								3	0.10	0.11
20	22.67	11.11	11.56								0	n/a	n/a
21	23.39	10.70	12.69								3	0.12	0.13
22	21.98	10.00	11.97								3	0.10	0.11
23	22.38	10.26	12.12								3	0.10	0.10
24	23.32	10.62	12.70								3	0.11	0.13
25	22.53	9.39	13.15								3	0.11	0.13
26	20.68	9.72	10.96								3	0.07	0.08
27	20.42	8.85	11.58								3	0.07	0.08
28	21.55	9.24	12.30								3	0.07	0.07
29	22.99	9.72	13.27								3	0.08	0.09
30	22.84	10.09	12.76								3	0.09	0.11
31	21.98	8.79	13.19								3	0.10	0.12
AVG	23.85	10.98	12.88								3	0.11	0.12
MAX	28.06	13.77	14.82								3	0.18	0.21
MIN	20.42	8.79	10.96								0	0.07	0.07
Total	739.50	340.25	399.25										

Flouridation & Chlorination **WSSN 2310** **Oct-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.64					0.7	0.8	0.7	0.7			0.8	
2			0.64					0.8	0.8	0.7	0.7			0.7	
3			0.66					0.7	0.9	0.7	0.6			0.8	
4			0.66					0.8	0.8	0.7	0.6			0.8	
5			0.71					0.8	0.8	0.7	0.7			0.8	
6			0.70					0.8	0.9	0.7	0.6			0.8	
7			0.69					0.9	0.9	0.7	0.7			0.8	
8			0.74					0.8	0.9	0.7	0.6			0.9	
9			0.75					0.9	0.9	0.7	0.7			0.8	
10			0.72					0.8	0.9	0.7	0.7			0.8	
11			0.75					0.8	0.9	0.8	0.7			0.9	
12			0.74					0.8	0.8	0.8	0.7			0.8	
13			0.63					0.8	0.9	0.7	0.7			0.8	
14			0.73					0.8	0.8	0.7	0.7			0.8	
15			0.74					0.7	0.9	0.7	0.6			0.8	
16			0.78					0.9	0.9	0.7	0.6			0.8	
17			0.79					0.8	0.9	0.7	0.6			0.9	
18			0.81					0.9	0.9	0.7	0.6			0.8	
19			0.77					0.9	0.8	0.7	0.7			0.8	
20			n.s					n.s	n.s	n.s	n.s			n.s	
21			0.73					0.9	1.0	0.7	0.7			0.9	
22			0.70					0.9	0.9	0.8	0.7			0.9	
23			0.67					0.9	1.0	0.6	0.7			0.9	
24			0.68					0.9	0.9	0.8	0.7			0.9	
25			0.70					0.8	1.0	0.7	0.7			0.9	
26			0.64					0.9	0.9	0.8	0.7			0.8	
27			0.60					0.7	0.8	0.7	0.7			0.8	
28			0.59					0.9	0.9	0.7	0.7			0.8	
29			0.66					0.8	0.9	0.7	0.6			0.8	
30			0.65					0.9	0.9	0.8	0.7			0.9	
31			0.60					0.6	0.9	0.7	0.7			0.9	
AVG			0.70					0.8	0.9	0.7	0.7			0.8	
MAX			0.81					0.9	1.0	0.8	0.7			0.9	
MIN			0.59					0.6	0.8	0.6	0.6			0.7	

n.s. = no sample collected/tested

Chemical Analyses **WSSN 2310** **Oct-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.36		98		74		24				28.9		6.3		
2		7.51		98		71		27				28.1		6.8		
3		7.32		98		73		25				28.9		6.3		
4		7.31		100		73		27				30.5		5.8		
5		7.44		98		75		23				28.9		6.3		
6		7.37		98		71		27				28.1		6.8		
7		7.43		98		71		27				28.9		6.3		
8		7.40		98		70		28				28.9		6.3		
9		7.43		98		73		25				28.9		6.3		
10		7.43		98		71		27				28.9		6.3		
11		7.35		100		74		26				30.5		5.8		
12		7.36		100		73		27				29.7		6.3		
13		7.28		98		71		27				28.1		6.8		
14		7.34		98		70		28				28.9		6.3		
15		7.47		98		73		25				28.1		6.8		
16		7.41		100		71		29				28.9		6.8		
17		7.38		98		65		33				28.9		6.3		
18		7.34		98		68		30				28.9		6.3		
19		7.41		96		65		31				27.3		6.8		
20		n.s.		n.s.		n.s		n.s.				n.s		n.s		
21		7.46		96		68		28				29.7		5.3		
22		7.36		96		71		25				28.9		5.8		
23		7.29		96		70		26				28.9		5.8		
24		7.37		98		72		26				28.9		6.3		
25		7.31		98		71		27				28.9		6.3		
26		7.22		96		69		27				28.9		5.8		
27		7.28		98		71		27				28.9		6.3		
28		7.35		98		68		30				28.9		6.3		
29		7.36		98		70		28				28.9		6.3		
30		7.27		100		71		29				29.7		6.3		
31		7.30		98		70		28				29.7		6.3		
AVG		7.36		98		71		27				29.0		6.3		
MAX		7.51		100		75		33				30.5		6.8		
MIN		7.22		96		65		23				27.3		5.3		

n.s. = no sample collected/tested

Bacteriological & Physical Parameters **WSSN 2310** **Oct-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					19.4				
2	1/0		2/0	2/0	2/0	2/0					19.4				
3	1/0		2/0	2/0	2/0	2/0					19.4				
4	1/0		2/0	2/0	2/0	2/0					20.9				
5	1/0		2/0	2/0	2/0	2/0					19.7				
6	1/0		2/0	2/0	2/0	2/0					19.6				
7	1/0		2/0	2/0	2/0	2/0					19.4				
8	1/0		2/0	2/0	2/0	2/0					19.3				
9	1/0		2/0	2/0	2/0	2/0					19.1				
10	1/0		2/0	2/0	2/0	2/0					18.2				
11	1/0		2/0	2/0	2/0	2/0					18.2				
12	1/0		2/0	2/0	2/0	2/0					18.4				
13	1/0		2/0	2/0	2/0	2/0					18.2				
14	1/0		2/0	2/0	2/0	2/0					18.8				
15	1/0		2/0	2/0	2/0	2/0					18.8				
16	1/0		2/0	2/0	2/0	2/0					18.5				
17	1/0		2/0	2/0	2/0	2/0			< 2		18.5				
18	1/0		2/0	2/0	2/0	2/0					18.5				
19	1/0		2/0	2/0	2/0	2/0					17.8				
20	0/0		0/0	0/0	0/0	0/0					n.s.				
21	1/0		2/0	2/0	2/0	2/0					17.7				
22	1/0		2/0	2/0	2/0	2/0					16.9				
23	1/0		2/0	2/0	2/0	2/0					16.7				
24	1/0		2/0	2/0	2/0	2/0					15.7				
25	1/0		2/0	2/0	2/0	2/0					14.9				
26	1/0		2/0	2/0	2/0	2/0					15.5				
27	1/0		2/0	2/0	2/0	2/0					14.8				
28	1/0		2/0	2/0	2/0	2/0					15.0				
29	1/0		2/0	2/0	2/0	2/0					15.9				
30	1/0		2/0	2/0	2/0	2/0					14.4				
31	1/0		2/0	2/0	2/0	2/0					14.8				
											17.7				
											20.9				
											14.4				

n.s. = no sample collected/tested

Distribution System Monitoring WSSN 2310 Oct-13

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											0.8	0.8	2
2									0.1	0.2	0.8	0.8	4
3	0.6	0.5	0.4	0.5	0.6	0.3	0.3	0.6	0.3	0.2	0.9	0.8	12
4									0.1	0.2	0.8	0.8	4
5											0.8	0.8	2
6											0.9	0.9	2
7									0.2	0.2	0.9	0.9	4
8									0.2	0.2	0.9	0.9	4
9	0.8	0.6	0.3	0.2	0.2	0.3	0.2	0.8	0.2	0.2	0.9	0.9	12
10	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.6	0.2	0.2	0.9	0.9	12
11									0.1	0.2	0.9	0.9	4
12											0.8	0.8	2
13											0.9	0.8	2
14									0.3	0.2	0.8	0.8	4
15									0.3	0.3	0.9	0.9	4
16	0.6	0.5	0.5	0.4	0.4	0.4		0.7	0.3	0.2	0.9	0.8	11
17	0.7	0.5	0.5	0.5	0.5	0.3	0.3	0.6	0.3	0.2	0.9	0.9	12
18									0.2	0.2	0.8	0.9	4
19											0.8	0.8	2
20													0
21											1.0	1.0	2
22									0.5	0.2	0.9	0.9	4
23									0.2	0.2	1.0	0.9	4
24	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.7	0.2	0.3	0.9	0.9	12
25									0.2	0.3	0.9	1.0	4
26											0.9	0.9	2
27											0.7	0.8	2
28									0.2	0.3	0.9	0.8	4
29									0.4	0.3	0.9	0.8	4
30									0.3	0.3	0.9	0.8	4
31	0.7	0.4	0.6	0.3	0.3	0.5	0.3	0.7	0.2	0.3	0.9	0.8	12

Monthly Cl_2 Avg.	**0.559**
Quarterly Cl_2 Avg.	**0.626**
Yearly Cl_2 Avg.	**0.717**
Total Samples	**157**

Distribution System Monitoring WSSN 2310 Oct-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.0	1.0	2
2									0.2	0.3	1.0	1.0	4
3	0.8	0.6	0.5	0.6	0.7	0.4	0.4	0.8	0.4	0.3	1.1	1.0	12
4									0.2	0.3	1.0	1.0	4
5											0.9	0.9	2
6											1.0	1.0	2
7									0.3	0.3	1.0	1.0	4
8									0.3	0.3	1.1	1.0	4
9	0.9	0.8	0.4	0.3	0.3	0.4	0.3	0.9	0.3	0.3	1.1	1.0	12
10	0.9	0.6	0.6	0.6	0.4	0.4	0.4	0.8	0.4	0.3	1.1	1.1	12
11									0.2	0.3	1.2	1.1	4
12											1.0	1.0	2
13											1.0	1.0	2
14									0.4	0.3	1.1	1.0	4
15									0.4	0.4	1.2	1.1	4
16	0.8	0.7	0.6	0.5	0.5	0.5		0.9	0.4	0.3	1.1	1.0	11
17	0.8	0.7	0.7	0.6	0.7	0.4	0.4	0.8	0.4	0.3	1.1	1.0	12
18									0.3	0.4	1.0	1.0	4
19											1.3	1.1	2
20													0
21											1.2	1.2	2
22									0.6	0.3	1.1	1.1	4
23									0.3	0.3	1.2	1.1	4
24	1.0	0.7	0.6	0.6	0.5	0.4	0.5	0.9	0.3	0.4	1.0	1.1	12
25									0.3	0.4	1.1	1.1	4
26											1.3	1.2	2
27											0.9	0.9	2
28									0.3	0.4	1.1	0.9	4
29									0.5	0.4	1.0	1.0	4
30									0.4	0.4	1.2	1.0	4
31	0.9	0.5	0.7	0.4	0.5	0.7	0.5	0.9	0.3	0.4	1.2	1.0	12

Monthly Cl_2 Avg.	**0.710**
Quarterly Cl_2 Avg.	**0.778**
Yearly Cl_2 Avg.	**0.887**
Total Samples	**157**

ROUTINE POSITIVE DISTRIBUTION SAMPLES Oct-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				157			
Total number of routine distribution samples required:				100			

003346

D-5a 1/86
Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

For Month of September 2013

Flint Water Plant — NAME OF WATER SYSTEM
2310 — WSSN
Genesee — COUNTY

Michael Glasgow — CERTIFIED OPERATOR
F-1R S-3 — CLASSIFICATION

Michael Glasgow
SIGNATURE OF APPROPRIATE OFFICIAL

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum___ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity___Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

DEQ
RESOURCE MANAGEMENT DIVISION
OCT 14 2013
LANSING DISTRICT

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

Coagulation Parameters **WSSN 2310** **Sep-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	22.76	12.02	10.74								3	0.12	0.13
2	24.29	13.28	11.01								3	0.11	0.11
3	25.95	12.62	13.32								3	0.15	0.19
4	27.67	13.65	14.02								3	0.14	0.17
5	28.30	14.32	13.98								3	0.19	0.25
6	27.26	13.73	13.54								3	0.13	0.20
7	27.02	14.34	12.68								1	0.19	0.19
8	25.30	15.01	10.30								3	0.13	0.13
9	25.65	13.94	11.72								3	0.12	0.14
10	29.40	14.27	15.14								3	0.17	0.18
11	26.74	13.89	12.85								3	0.20	0.22
12	25.49	12.77	12.72								3	0.13	0.17
13	25.93	13.00	12.93								3	0.11	0.12
14	24.83	12.03	12.79								3	0.11	0.12
15	23.43	13.38	10.05								3	0.10	0.11
16	25.90	13.32	12.58								3	0.10	0.12
17	28.32	12.29	16.03								3	0.18	0.21
18	26.72	12.67	14.05								3	0.12	0.13
19	26.68	12.02	14.67								3	0.08	0.09
20	26.62	12.87	13.75								3	0.10	0.13
21	27.34	13.31	14.03								2	0.10	0.13
22	26.71	13.08	13.62								3	0.13	0.16
23	25.44	11.95	13.50								3	0.09	0.10
24	25.20	11.33	13.87								3	0.12	0.15
25	25.70	11.92	13.78								3	0.11	0.12
26	26.75	13.36	13.39								3	0.11	0.12
27	27.79	13.89	13.90								3	0.12	0.14
28	27.66	14.90	12.77								3	0.12	0.14
29	26.74	14.58	12.16								3	0.14	0.15
30	25.12	12.43	12.69								3	0.14	0.18
AVG	26.29	13.20	13.08								3	0.13	0.15
MAX	29.40	15.01	16.03								3	0.20	0.25
MIN	22.76	11.33	10.05								1	0.08	0.09
Total	788.69	396.14	392.54										

Flouridation & Chlorination **WSSN 2310** **Sep-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.64					0.8	0.9	0.8	0.7			0.8	
2			0.64					0.9	0.9	0.7	0.8			0.8	
3			0.66					0.8	0.9	0.7	0.7			0.9	
4			0.67					0.9	0.9	0.7	0.7			0.9	
5			0.63					0.6	0.9	0.7	0.7			0.9	
6			0.68					0.8	0.9	0.7	0.6			1.0	
7			0.62					n.s.	n.t.	n.t.	n.t.			n.t.	
8			0.64					0.7	0.9	0.7	0.6			0.8	
9			0.64					0.8	0.8	0.7	0.6			0.7	
10			0.65					n.s.	1.0	0.6	0.6			0.9	
11			0.66					0.9	0.9	0.7	0.6			0.8	
12			0.65					0.9	0.9	0.7	0.7			0.8	
13			0.64					1.0	0.9	0.7	0.6			0.8	
14			0.61					0.7	0.8	0.7	0.7			0.9	
15			0.69					0.7	0.9	0.7	0.6			0.8	
16			0.66					0.8	0.9	0.7	0.7			0.9	
17			0.65					0.7	0.9	0.7	0.7			0.9	
18			0.65					0.8	0.9	0.8	0.7			0.9	
19			0.71					0.7	0.9	0.6	0.7			0.9	
20			0.69					0.9	0.9	0.7	0.7			0.9	
21			0.63					0.9	1.0	0.6	0.6			0.9	
22			0.67					0.7	0.9	0.7	0.6			0.8	
23			0.69					0.9	0.8	0.7	0.7			0.8	
24			0.71					0.8	0.9	0.7	0.7			0.9	
25			0.66					0.8	0.9	0.7	0.7			0.8	
26			0.69					0.7	0.9	0.7	0.7			0.9	
27			0.72					0.7	0.9	0.7	0.6			0.9	
28			0.60					0.9	0.9	0.7	0.7			0.8	
29			0.59					0.9	1.0	0.7	0.7			0.9	
30			0.57					0.9	1.0	0.7	0.7			0.8	
AVG			0.65					0.8	0.9	0.7	0.7			0.9	
MAX			0.72					1.0	1.0	0.8	0.8			1.0	
MIN			0.57					0.6	0.8	0.6	0.6			0.7	

n.t. = not tested, n.s. = no sample collected

Chemical Analyses **WSSN 2310** **Sep-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.22		100		72		28				28.9		6.8		
2		7.27		98		70		28				28.1		6.8		
3		7.30		98		68		30				28.1		6.3		
4		7.33		98		69		29				28.9		6.3		
5		7.34		98		69		29				28.9		6.3		
6		7.42		98		74		24				28.9		6.3		
7		n.t		100		70		30				28.9		6.8		
8		7.45		100		68		32				28.9		6.8		
9		7.43		96		70		26				28.1		6.3		
10		7.42		100		73		27				29.7		6.3		
11		7.39		98		71		27				28.9		6.3		
12		7.47		98		70		28				29.7		5.8		
13		7.29		94		69		25				28.1		5.8		
14		7.33		94		75		19				26.5		6.8		
15		7.28		98		73		25				28.9		6.3		
16		7.39		98		69		29				28.9		6.3		
17		7.45		98		69		29				28.9		6.3		
18		7.38		98		73		25				28.1		6.8		
19		7.36		98		74		24				29.7		5.8		
20		7.35		98		72		26				29.7		5.9		
21		7.45		98		73		25				29.7		5.8		
22		7.40		96		73		23				29.7		5.3		
23		7.39		98		73		25				30.5		5.3		
24		7.38		98		73		25				29.7		5.8		
25		7.44		98		67		31				28.9		6.3		
26		7.42		100		68		32				29.7		6.3		
27		7.44		98		68		30				28.9		6.3		
28		7.47		98		69		29				29.7		5.8		
29		7.31		100		72		28				29.7		6.3		
30		7.30		96		69		27				28.1		6.3		
AVG		7.37		98		71		27				29.0		6.2		
MAX		7.47		100		75		32				30.5		6.8		
MIN		7.22		94		67		19				26.5		5.3		

n.t. = not tested

Bacteriological & Physical Parameters **WSSN 2310** **Sep-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					23.3				
2	1/0		2/0	2/0	2/0	2/0					21.6				
3	1/0		2/0	2/0	2/0	2/0					21.1				
4	1/0		2/0	2/0	2/0	2/0					21.9				
5	1/0		2/0	2/0	2/0	2/0					22.0				
6	1/0		2/0	2/0	2/0	2/0					21.8				
7	0/0		1/0	1/0	1/0	1/0					n.t.				
8	1/0		2/0	2/0	2/0	2/0					21.8				
9	1/0		2/0	2/0	2/0	2/0					22.2				
10	0/0		2/0	2/0	2/0	2/0					22.1				
11	1/0		2/0	2/0	2/0	2/0					22.3				
12	1/0		2/0	2/0	2/0	2/0					22.4				
13	1/0		2/0	2/0	2/0	2/0					21.4				
14	1/0		2/0	2/0	2/0	2/0					19.1				
15	1/0		2/0	2/0	2/0	2/0					21.1				
16	1/0		2/0	2/0	2/0	2/0					20.8				
17	1/0		2/0	2/0	2/0	2/0					20.1				
18	1/0		2/0	2/0	2/0	2/0					21.0				
19	1/0		2/0	2/0	2/0	2/0					20.9				
20	1/0		2/0	2/0	2/0	2/0					20.7				
21	1/0		2/0	2/0	2/0	2/0					20.3				
22	1/0		2/0	2/0	2/0	2/0					19.5				
23	1/0		2/0	2/0	2/0	2/0					19.3				
24	1/0		2/0	2/0	2/0	2/0					19.8				
25	1/0		2/0	2/0	2/0	2/0					19.6				
26	1/0		2/0	2/0	2/0	2/0					19.6				
27	1/0		2/0	2/0	2/0	2/0					19.3				
28	1/0		2/0	2/0	2/0	2/0					19.4				
29	1/0		2/0	2/0	2/0	2/0					19.7				
30	1/0		2/0	2/0	2/0	2/0					19.5				
											20.8				
											23.3				
											19.1				

n.t. = not tested

Distribution System Monitoring **WSSN 2310** **Sep-13**

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											0.9	0.8	2
2											0.8	0.9	2
3											0.9	0.9	2
4	0.7	0.6	0.5	0.5	0.3	0.5	0.5	0.8	0.3	0.3	0.9	0.8	12
5	0.7	0.6	0.4	0.5	0.2	0.3	0.4	0.6	0.3	0.3	0.9	0.9	12
6									0.2	0.3	0.9	0.9	4
7													0
8											0.9	0.9	2
9									0.3	0.2	0.8	0.8	4
10											0.9	1.0	2
11	0.7	0.6	0.5	0.2	0.2	0.5	0.2	0.7	0.1	0.2	0.9	0.8	12
12	0.8	0.6	0.4	0.2	0.3	0.4	0.3	0.6	0.2	0.3	0.9	0.8	12
13									0.3	0.2	0.9	0.9	4
14									0.3	0.3	0.8	0.8	4
15											0.9	0.9	2
16											0.9	0.9	2
17	0.6	0.6	0.3	0.3	0.3	0.4	0.2	0.7			0.9	0.9	10
18											0.8	0.9	2
19	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.6			0.9	0.9	10
20											0.9	0.9	2
21											0.9	1.0	2
22											0.8	0.9	2
23											0.8	0.8	2
24											0.9	0.8	2
25											0.9	0.9	2
26											0.9	0.9	2
27											0.9	0.9	2
28											0.9	0.8	2
29											1.0	1.0	2
30									0.2	0.2	1.0	0.9	4

Monthly Cl_2 Avg.	**0.627**
Quarterly Cl_2 Avg.	**0.671**
Yearly Cl_2 Avg.	**0.728**
Total Samples	**124**

Distribution System Monitoring WSSN 2310 Sep-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.0	0.9	2
2											1.0	1.0	2
3											1.1	1.0	2
4	0.9	0.8	0.7	0.7	0.5	0.7	0.7	1.0	0.4	0.3	1.1	1.0	12
5	0.9	0.8	0.5	0.7	0.4	0.4	0.5	0.8	0.4	0.4	1.0	1.1	12
6									0.4	0.4	1.1	1.1	4
7													0
8											1.0	1.0	2
9									0.4	0.3	1.0	1.0	4
10											1.1	1.1	2
11	0.9	0.8	0.7	0.3	0.3	0.7	0.3	0.8	0.2	0.4	1.1	1.0	12
12	1.0	0.7	0.5	0.3	0.4	0.5	0.4	0.8	0.3	0.4	1.1	0.9	12
13									0.5	0.3	1.1	1.0	4
14									0.5	0.5	1.0	1.0	4
15											1.0	1.0	2
16											1.1	1.0	2
17	0.7	0.7	0.4	0.4	0.4	0.5	0.3	0.9			1.1	1.0	10
18											1.0	1.0	2
19	0.7	0.7	0.5	0.5	0.4	0.4	0.3	0.8			1.0	1.0	10
20											1.1	1.1	2
21											1.0	1.1	2
22											1.1	1.0	2
23											0.9	1.0	2
24											1.0	1.0	2
25											1.0	1.0	2
26											1.1	1.0	2
27											1.0	1.0	2
28											1.0	1.0	2
29											1.1	1.1	2
30									0.3	0.3	1.2	1.0	4

Monthly Cl_2 Avg.	**0.770**
Quarterly Cl_2 Avg.	**0.830**
Yearly Cl_2 Avg.	**0.900**
Total Samples	**124**

ROUTINE POSITIVE DISTRIBUTION SAMPLES Sept-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				124			
Total number of routine distribution samples required:				100			

003354

D-5a 1/86
Authority; Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

For Month of August 2013

Flint Water Plant — 2310 — Genesee
NAME OF WATER SYSTEM — WSSN — COUNTY

Michael Glasgow — F-1R S-3
CERTIFIED OPERATOR — CLASSIFICATION

Michael Glasgow
SIGNATURE OF APPROPRIATE OFFICIAL

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum___ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity___Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

DEQ
RESOURCE MANAGEMENT DIVISION
SEP 17 2013
LANSING DISTRICT

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

Chemical Analyses **WSSN 2310** **Aug-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.44		98		71		27				28.9		6.3		
2		7.34		98		73		25				29.7		5.8		
3		7.26		98		72		26				28.9		6.3		
4		n/a		100		75		25				28.9		6.8		
5		7.37		98		72		26				28.9		6.3		
6		7.42		96		72		24				28.1		6.3		
7		7.37		98		70		28				28.9		6.3		
8		7.28		98		71		27				28.1		6.8		
9		7.35		96		72		24				28.9		5.8		
10		7.29		96		69		27				28.1		6.3		
11		7.30		98		74		24				29.7		5.8		
12		7.28		98		69		29				28.9		6.3		
13		7.35		98		74		24				28.9		6.3		
14		7.39		100		73		27				28.9		6.8		
15		7.44		98		71		27				29.7		6.3		
16		7.44		96		73		23				28.9		5.8		
17		7.37		98		66		32				29.7		5.8		
18		7.32		98		72		26				28.9		6.3		
19		7.37		98		67		31				28.9		6.3		
20		7.35		100		74		26				28.1		7.3		
21		7.29		98		67		31				28.9		6.3		
22		7.29		98		67		31				28.1		6.8		
23		7.45		98		72		26				28.9		6.3		
24		7.29		98		74		24				28.9		6.3		
25		7.29		96		67		29				28.9		5.8		
26		7.39		100		74		26				28.9		6.8		
27		7.40		98		74		24				28.1		6.8		
28		7.37		98		70		28				28.9		6.3		
29		7.40		96		71		25				28.9		5.8		
30		7.30		98		73		25				28.9		6.3		
31		7.36		96		73		23				28.9		5.8		
AVG		7.35		98		71		26				28.8		6.3		
MAX		7.45		100		75		32				29.7		7.3		
MIN		7.26		96		66		23				28.1		5.8		

Bacteriological & Physical Parameters **WSSN 2310** **Aug-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					19.8				
2	1/0		2/0	2/0	2/0	2/0					19.4				
3	1/0		2/0	2/0	2/0	2/0					20.7				
4	1/0		2/0	2/0	2/0	2/0					n/a				
5	1/0		2/0	2/0	2/0	2/0					19.8				
6	1/0		2/0	2/0	2/0	2/0					19.9				
7	1/0		2/0	2/0	2/0	2/0					20.4				
8	1/0		2/0	2/0	2/0	2/0					20.6				
9	1/0		2/0	2/0	2/0	2/0					20.2				
10	1/0		2/0	2/0	2/0	2/0					21.2				
11	1/0		2/0	2/0	2/0	2/0					20.5				
12	1/0		2/0	2/0	2/0	2/0					20.3				
13	1/0		2/0	2/0	2/0	2/0					20.3				
14	1/0		2/0	2/0	2/0	2/0			< 2		20.2				
15	1/0		2/0	2/0	2/0	2/0					20.6				
16	1/0		2/0	2/0	2/0	2/0					20.8				
17	1/0		2/0	2/0	2/0	2/0					20.8				
18	1/0		2/0	2/0	2/0	2/0					21.0				
19	1/0		2/0	2/0	2/0	2/0					20.7				
20	1/0		2/0	2/0	2/0	2/0					24.1				
21	1/0		2/0	2/0	2/0	2/0					20.9				
22	1/0		2/0	2/0	2/0	2/0					20.8				
23	1/0		2/0	2/0	2/0	2/0					20.8				
24	1/0		2/0	2/0	2/0	2/0					21.1				
25	1/0		2/0	2/0	2/0	2/0					21.0				
26	1/0		2/0	2/0	2/0	2/0					22.8				
27	1/0		2/0	2/0	2/0	2/0					21.7				
28	1/0		2/0	2/0	2/0	2/0					21.6				
29	1/0		2/0	2/0	2/0	2/0					21.3				
30	1/0		2/0	2/0	2/0	2/0					21.0				
31	1/0		2/0	2/0	2/0	2/0					21.4				
											20.9				
											24.1				
											19.4				

Distribution System Monitoring WSSN 2310 Aug-13

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											0.9	1.0	2
2											1.1	1.1	2
3											0.9	1.0	2
4											1.0	1.0	2
5											1.0	1.0	2
6									0.3	0.3	1.0	1.0	4
7	0.9	0.6	0.5	0.5	0.5	0.6	0.3	0.9	0.3	0.3	1.0	0.9	12
8	1.0	0.7	0.6	0.7	0.5	0.4	0.4	0.8	0.4	0.3	1.1	0.9	12
9									0.1	0.3	1.0	0.9	4
10											1.0	0.9	2
11											0.8	0.9	2
12									0.3	0.2	0.9	0.9	4
13											0.8	0.8	2
14	0.5	0.7	0.5	0.4	0.3	0.5	0.3	0.7	0.2	0.2	0.8	0.8	12
15	0.8	0.5	0.4	0.6	0.5	0.3	0.3	0.6	0.3	0.2	0.9	0.9	12
16									0.1	0.2	0.9	0.8	4
17											0.9	0.9	2
18											0.9	0.9	2
19									0.3	0.2	0.9	0.9	4
20									0.2	0.3	0.9	0.9	4
21	0.4	0.6	0.4	0.4	0.3	0.6	0.2	0.7	0.2	0.2	0.9	0.9	12
22									0.3	0.2	0.9	0.9	4
23											0.9	1.0	2
24											0.9	0.9	2
25											0.9	0.9	2
26									0.4	0.3	0.9	0.9	4
27											0.9	0.9	2
28	0.8	0.7	0.4	0.3	0.3	0.3	0.3	0.7	0.3	0.3	0.9	0.9	12
29	0.7	0.6	0.5	0.2	0.2	0.2	0.3	0.7	0.3	0.3	0.9	0.9	12
30									0.1	0.3	0.9	0.8	4
31											0.9	0.9	2

Monthly Cl_2 Avg.	**0.625**
Quarterly Cl_2 Avg.	**0.713**
Yearly Cl_2 Avg.	**0.724**
Total Samples	**150**

Distribution System Monitoring WSSN 2310 Aug-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.1	1.2	2
2											1.3	1.3	2
3											1.1	1.1	2
4											1.1	1.1	2
5											1.2	1.2	2
6									0.4	0.5	1.2	1.2	4
7	1.0	0.8	0.7	0.7	0.6	0.8	0.5	1.0	0.5	0.4	1.2	1.0	12
8	1.2	0.8	0.7	0.9	0.6	0.5	0.6	1.0	0.6	0.4	1.3	0.1	12
9									0.3	0.4	1.2	1.1	4
10											1.1	1.0	2
11											1.0	1.1	2
12									0.3	0.2	1.0	1.0	4
13											0.9	0.9	2
14	0.7	0.8	0.7	0.6	0.4	0.7	0.4	0.9	0.3	0.3	0.9	1.0	12
15	1.0	0.6	0.6	0.7	0.6	0.4	0.4	0.8	0.4	0.3	1.0	1.0	12
16									0.3	0.3	1.1	1.0	4
17											1.1	1.1	2
18											1.1	1.1	2
19									0.4	0.3	1.0	1.1	4
20									0.3	0.4	1.0	1.0	4
21	0.5	0.8	0.5	0.6	0.4	0.7	0.3	0.9	0.3	0.3	1.1	1.1	12
22									0.4	0.3	1.1	1.1	4
23											1.1	1.1	2
24											1.1	1.1	2
25											1.1	1.1	2
26									0.5	0.4	1.1	1.0	4
27											1.1	1.0	2
28	1.0	0.9	0.5	0.5	0.4	0.4	0.4	0.9	0.5	0.4	1.1	1.0	12
29	0.8	0.7	0.7	0.3	0.4	0.3	0.5	0.9	0.4	0.4	1.1	1.1	12
30									0.3	0.4	1.1	1.0	4
31											1.1	1.1	2

Monthly Cl_2 Avg.	**0.768**
Quarterly Cl_2 Avg.	**0.879**
Yearly Cl_2 Avg.	**0.897**
Total Samples	**150**

ROUTINE POSITIVE DISTRIBUTION SAMPLES

Aug-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				**150**			
Total number of routine distribution samples required:				**100**			

D-5a 1/8003360
Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

ENTERED

For Month of July 2013

Flint Water Plant	2310	Genesee
NAME OF WATER SYSTEM	WSSN	COUNTY

Michael Glasgow	F-1R S-3
CERTIFIED OPERATOR	CLASSIFICATION

SIGNATURE OF APPROPRIATE OFFICIAL

DEQ
RESOURCE MANAGEMENT DIVISION
AUG 15 2013
LANSING DISTRICT

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

Coagulation Parameters **WSSN 2310** **Jul-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	24.72	12.34	12.38								3	0.09	0.09
2	24.24	11.39	12.85								3	0.08	0.08
3	23.45	11.51	11.94								3	0.10	0.14
4	24.12	11.80	12.32								3	0.11	0.12
5	24.61	13.27	11.34								2	0.10	0.10
6	25.94	13.75	12.19								3	0.13	0.14
7	26.13	13.83	12.30								3	0.12	0.13
8	26.16	13.86	12.30								3	0.09	0.10
9	27.07	13.15	13.92								3	0.11	0.11
10	27.01	13.13	13.88								3	0.11	0.12
11	26.66	12.94	13.71								3	0.08	0.08
12	25.86	12.86	13.00								3	0.10	0.10
13	27.36	14.15	13.22								3	0.10	0.10
14	27.92	14.41	13.50								3	0.11	0.13
15	29.32	15.07	14.25								3	0.11	0.12
16	32.67	17.23	15.44								3	0.22	0.23
17	34.88	21.78	13.10								3	0.24	0.25
18	34.49	19.44	15.05								3	0.29	0.37
19	35.05	18.40	16.65								3	0.19	0.23
20	30.53	15.58	14.95								3	0.18	0.22
21	29.25	15.89	13.37								3	0.12	0.15
22	31.97	17.01	14.96								3	0.16	0.20
23	30.00	15.83	14.17								3	0.13	0.15
24	27.86	13.50	14.36								3	0.09	0.10
25	28.35	14.84	13.51								3	0.15	0.17
26	27.20	15.46	11.74								3	0.10	0.11
27	27.27	13.50	13.78								3	0.11	0.12
28	27.08	13.58	13.49								3	0.09	0.10
29	26.96	13.84	13.12								3	0.07	0.08
30	28.00	13.53	14.47								3	0.11	0.12
31	26.93	13.23	13.70								3	0.10	0.10
AVG	28.03	14.52	13.52								3	0.13	0.14
MAX	35.05	21.78	16.65								3	0.29	0.37
MIN	23.45	11.39	11.34								2	0.07	0.08
Total	869.05	450.08	418.97										

FLINT
WATER PLANT & FACILITIES

Flouridation & Chlorination **WSSN 2310** **Jul-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.60					0.7	0.8	0.7	0.6			0.80	
2			0.59					0.7	0.8	0.7	0.7			0.80	
3			0.62					0.7	0.8	0.6	0.6			0.70	
4			0.58					0.7	0.7	0.6	0.6			0.70	
5			0.61					0.6	0.7	0.5	0.5			0.80	
6			0.60					0.6	0.6	0.5	0.5			0.60	
7			0.59					0.7	0.8	0.6	0.5			0.70	
8			0.66					0.7	0.9	0.5	0.6			0.80	
9			0.64					0.8	0.9	0.6	0.5			0.80	
10			0.65					0.8	0.9	0.6	0.6			0.90	
11			0.62					0.9	0.8	0.6	0.7			0.80	
12			0.65					0.8	0.8	0.8	0.7			0.90	
13			0.62					0.9	0.9	0.7	0.7			0.80	
14			0.61					0.8	0.9	0.7	0.7			0.80	
15			0.60					0.8	0.9	0.7	0.7			0.80	
16			0.62					0.8	0.9	0.7	0.7			0.90	
17			0.63					0.9	0.9	0.7	0.6			0.90	
18			0.62					0.7	1.0	0.8	0.7			1.00	
19			0.62					0.9	1.0	0.8	0.8			1.00	
20			0.59					0.8	1.0	0.8	0.8			0.90	
21			0.61					0.9	1.0	0.8	0.8			0.90	
22			0.59					1.0	1.1	0.8	0.8			1.10	
23			0.63					0.8	1.1	0.8	0.8			1.00	
24			0.63					0.9	0.9	0.9	0.9			0.90	
25			0.66					0.8	0.9	0.8	0.8			0.80	
26			0.63					0.9	0.9	0.8	0.8			0.90	
27			0.62					0.8	0.9	0.8	0.8			0.90	
28			0.66					0.7	0.9	0.7	0.7			1.00	
29			0.64					0.8	0.9	0.7	0.7			0.90	
30			0.65					0.9	0.9	0.8	0.7			0.90	
31			0.62					0.9	0.9	0.8	0.7			0.90	
AVG			0.62					0.8	0.9	0.7	0.7			0.9	
MAX			0.66					1.0	1.1	0.9	0.9			1.1	
MIN			0.58					0.6	0.6	0.5	0.5			0.6	

Chemical Analyses **WSSN 2310** **Jul-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.35		100		70		30				29.7		6.3		
2		7.38		98		72		26				29.4		5.8		
3		7.36		98		72		26				28.9		6.3		
4		7.32		98		73		25				28.9		6.3		
5		7.39		106		69		37				27.3		9.2		
6		7.42		98		70		28				27.3		7.3		
7		7.42		98		71		27				28.9		6.3		
8		7.32		96		71		25				28.9		5.8		
9		7.41		100		71		29				28.9		6.8		
10		7.38		98		72		26				28.1		6.8		
11		7.45		98		70		28				28.9		6.3		
12		7.39		96		72		24				28.9		5.8		
13		7.44		96		72		24				28.9		5.8		
14		7.42		98		73		25				30.5		5.3		
15		7.36		96		70		26				28.9		5.8		
16		7.40		96		71		25				28.9		5.8		
17		7.37		100		69		31				28.9		6.8		
18		7.44		98		73		25				28.9		6.3		
19		7.37		100		71		29				28.1		7.3		
20		7.40		98		71		27				28.9		6.3		
21		7.42		98		74		24				28.9		6.3		
22		7.39		100		68		32				28.9		6.8		
23		7.40		98		71		27				28.9		6.3		
24		7.42		100		72		28				29.7		6.3		
25		7.45		96		74		22				28.9		5.8		
26		7.43		96		69		27				32.1		3.9		
27		7.38		98		70		28				29.7		5.8		
28		7.30		98		71		27				28.9		6.3		
29		7.58		100		73		27				28.9		6.8		
30		7.41		100		69		31				29.7		6.3		
31		7.37		98		70		28				28.9		6.3		
AVG		7.40		98		71		27				29.0		6.3		
MAX		7.58		106		74		37				32.1		9.2		
MIN		7.30		96		68		22				27.3		3.9		

FLINT
WATER PLANT & FACILITIES

Bacteriological & Physical Parameters **WSSN 2310** **Jul-13**

DATE	Total Coliform Plant Tap							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					17.7				
2	1/0		2/0	2/0	2/0	2/0					17.9				
3	1/0		2/0	2/0	2/0	2/0					17.8				
4	1/0		2/0	2/0	2/0	2/0					18.7				
5	1/0		2/0	2/0	2/0	2/0					19.0				
6	1/0		2/0	2/0	2/0	2/0					19.4				
7	1/0		2/0	2/0	2/0	2/0					19.8				
8	1/0		2/0	2/0	2/0	2/0					20.3				
9	1/0		2/0	2/0	2/0	2/0					19.7				
10	1/0		2/0	2/0	2/0	2/0					21.1				
11	1/0		2/0	2/0	2/0	2/0					20.6				
12	1/0		2/0	2/0	2/0	2/0					20.5				
13	1/0		2/0	2/0	2/0	2/0					19.8				
14	1/0		2/0	2/0	2/0	2/0					20.3				
15	1/0		2/0	2/0	2/0	2/0					21.6				
16	1/0		2/0	2/0	2/0	2/0					22.3				
17	1/0		2/0	2/0	2/0	2/0					22.9				
18	1/0		2/0	2/0	2/0	2/0					23.2				
19	1/0		2/0	2/0	2/0	2/0					22.8				
20	1/0		2/0	2/0	2/0	2/0					21.2				
21	1/0		2/0	2/0	2/0	2/0					22.1				
22	1/0		2/0	2/0	2/0	2/0					21.7				
23	1/0		2/0	2/0	2/0	2/0					20.9				
24	1/0		2/0	2/0	2/0	2/0					21.1				
25	1/0		2/0	2/0	2/0	2/0					20.2				
26	1/0		2/0	2/0	2/0	2/0					19.9				
27	1/0		2/0	2/0	2/0	2/0					20.8				
28	1/0		2/0	2/0	2/0	2/0					20.5				
29	1/0		2/0	2/0	2/0	2/0			<2		20.4				
30	1/0		2/0	2/0	2/0	2/0					20.4				
31	1/0		2/0	2/0	2/0	2/0					20.6				
											20.5				
											23.2				
											17.7				

FLINT
WATER PLANT & FACILITIES

Distribution System Monitoring WSSN 2310 Jul-13

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.5	0.4	0.8	0.8	4
2	0.7	0.5	0.4	0.5	0.4	0.3	0.4	0.6	0.3	0.4	0.8	0.8	12
3	0.7	0.6	0.6	0.5	0.5		0.1	0.5	0.3	0.4	0.8	0.8	11
4											0.7	0.7	2
5											0.7	0.6	2
6											0.6	0.5	2
7											0.8	0.8	2
8											0.8	0.9	2
9	0.5	0.4	0.4	0.4	0.5	0.4	0.6	0.6			0.9	0.9	10
10									0.4	0.4	0.9	0.8	4
11											0.8	0.8	2
12	0.7	0.6	0.5	0.5	0.5	0.6	0.4	0.9			0.8	0.8	10
13											0.8	0.9	2
14											0.8	0.9	2
15											0.8	0.9	2
16	0.8	0.6	0.5	0.5	0.4	0.5	0.3	0.8			0.8	0.9	10
17											0.9	0.9	2
18									0.4	0.4	1.0	0.9	4
19									0.3	0.3	1.0	1.0	4
20											1.0	1.0	2
21											1.0	1.0	2
22											1.1	1.0	2
23	0.9	1.0	0.9	0.7	0.6	0.8	0.4	1.0			1.1	1.0	10
24											0.9	0.9	2
25	0.7	0.8	0.6	0.6	0.6		0.5	0.9			0.9	0.9	9
26											0.8	0.9	2
27											0.9	0.9	2
28											0.9	0.9	2
29											0.9	0.9	2
30											0.9	0.9	2
31									0.3	0.3	0.9	0.9	4

Monthly Cl_2 Avg.	**0.692**
Quarterly Cl_2 Avg.	**0.781**
Yearly Cl_2 Avg.	**0.719**
Total Samples	**130**

FLINT
WATER PLANT & FACILITIES

Distribution System Monitoring WSSN 2310 Jul-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.6	0.6	1.0	1.0	4
2	0.9	0.7	0.6	0.7	0.5	0.4	0.5	0.7	0.4	0.5	1.0	1.0	12
3	0.9	0.7	0.8	0.7	0.6		0.3	0.7	0.4	0.5	1.0	1.0	11
4											0.9	0.9	2
5											0.9	0.8	2
6											0.8	0.7	2
7											0.9	0.9	2
8											0.9	1.0	2
9	0.7	0.6	0.6	0.5	0.6	0.5	0.7	0.8			1.0	1.0	10
10									0.6	0.5	1.0	1.0	4
11	0.8	0.7	0.7	0.7	0.7	0.8	0.5	1.0			1.0	1.0	10
12											1.0	1.1	2
13											1.0	1.0	2
14											1.0	1.1	2
15											1.0	1.0	2
16	1.0	0.9	0.7	0.7	0.6	0.7	0.5	1.0			1.0	1.1	10
17											1.1	1.1	2
18									0.6	0.6	1.2	1.1	4
19									0.5	0.5	1.1	1.2	4
20											1.2	1.2	2
21											1.2	1.2	2
22	1.1	1.2	1.0	0.9	0.7	1.0	0.6	1.1			1.3	1.4	10
23											1.2	1.1	2
24											1.1	1.1	2
25	0.8	1.0	0.8	0.8	0.7		0.7	1.0			1.1	1.1	9
26											1.0	1.1	2
27											1.1	1.1	2
28											1.1	1.1	2
29											1.1	1.1	2
30											1.1	1.1	2
31									0.5	0.4	1.1	1.1	4

Monthly Cl_2 Avg.	**0.865**
Quarterly Cl_2 Avg.	**0.958**
Yearly Cl_2 Avg.	**0.894**
Total Samples	**130**

ROUTINE POSITIVE DISTRIBUTION SAMPLES Jul-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				130			
Total number of routine distribution samples required:				100			

003368

D-5a 1/86
Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT OF WATER TREATMENT PLANT

ENTERED

For Month of June 2013

Flint Water Plant — NAME OF WATER SYSTEM
2310 — WSSN
Genesee — COUNTY

Michael Glasgow — CERTIFIED OPERATOR
F-1R S-3 — CLASSIFICATION

Michael Glasgow — SIGNATURE OF APPROPRIATE OFFICIAL

DEQ
RESOURCE MANAGEMENT DIVISION
JUL 1 ? 2013
LANSING DISTRICT

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

Coagulation Parameters **WSSN 2310** **Jun-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	24.01	11.14	12.86								3	0.06	0.07
2	24.36	12.04	12.32								3	0.07	0.08
3	25.34	12.16	13.19								3	0.07	0.09
4	24.75	11.45	13.30								3	0.07	0.07
5	25.11	12.68	12.43								3	0.07	0.07
6	24.49	11.58	12.91								3	0.07	0.08
7	26.23	14.26	11.97								3	0.08	0.09
8	28.54	16.50	12.04								3	0.07	0.08
9	28.24	16.39	11.85								3	0.13	0.17
10	27.15	14.45	12.70								3	0.12	0.13
11	25.28	12.15	13.13								3	0.08	0.08
12	25.49	11.63	13.86								3	0.08	0.09
13	25.08	12.25	12.84								3	0.08	0.09
14	25.10	12.67	12.43								3	0.08	0.09
15	25.69	12.35	13.34								3	0.08	0.08
16	25.20	11.84	13.37								3	0.11	0.12
17	25.81	13.64	12.17								3	0.09	0.10
18	25.82	12.86	12.96								3	0.09	0.10
19	23.71	10.99	12.71								3	0.09	0.09
20	25.50	12.38	13.12								3	0.09	0.10
21	25.50	12.55	12.95								3	0.11	0.12
22	26.65	14.96	11.68								3	0.14	0.14
23	28.73	16.63	12.10								3	0.13	0.14
24	29.48	15.64	13.85								3	0.16	0.19
25	28.90	15.52	13.38								3	0.12	0.13
26	28.13	15.06	13.07								3	0.10	0.10
27	29.27	15.68	13.59								3	0.09	0.11
28	29.26	16.65	12.61								3	0.08	0.10
29	28.50	16.77	11.73								3	0.08	0.09
30	29.00	16.63	12.37								3	0.07	0.08
AVG	26.48	13.72	12.76								3	0.09	0.10
MAX	29.48	16.77	13.86								3	0.16	0.19
MIN	23.71	10.99	11.68								3	0.06	0.07
Total	794.28	411.46	382.82										

Flouridation & Chlorination **WSSN 2310** **Jun-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.55					0.7	0.9	0.7	0.8			0.8	
2			0.50					0.8	0.9	0.8	0.7			0.9	
3			0.55					0.9	1.1	0.9	0.8			0.9	
4			0.55					0.9	1.0	0.8	0.8			1.0	
5			0.52					0.9	1.0	0.9	0.8			1.0	
6			0.48					0.8	1.0	0.8	0.7			0.8	
7			0.54					0.9	1.0	0.9	0.9			1.0	
8			0.56					0.9	0.9	0.9	0.9			0.9	
9			0.54					0.7	1.0	0.9	0.8			0.9	
10			0.55					0.8	1.0	0.8	0.8			0.9	
11			0.54					0.8	1.0	0.9	0.8			0.8	
12			0.58					0.8	0.9	0.8	0.8			0.8	
13			0.55					0.7	0.9	0.8	0.8			0.8	
14			0.56					0.8	0.8	0.8	0.7			0.8	
15			0.55					0.9	1.0	0.7	0.7			1.0	
16			0.56					0.8	0.9	0.9	0.8			1.0	
17			0.54					0.8	0.9	0.8	0.7			0.8	
18			0.55					0.8	0.9	0.8	0.8			0.8	
19			0.57					0.9	0.9	0.8	0.7			0.8	
20			0.57					0.7	0.9	0.8	0.7			0.8	
21			0.60					0.7	0.8	0.7	0.7			0.8	
22			0.61					0.9	0.8	0.7	0.7			0.8	
23			0.60					0.7	0.8	0.7	0.6			0.8	
24			0.58					0.8	0.9	0.7	0.7			0.8	
25			0.55					0.7	0.8	0.6	0.5			0.8	
26			0.60					0.8	0.9	0.6	0.5			0.8	
27			0.53					0.9	0.9	0.7	0.6			0.9	
28			0.57					0.7	0.9	0.7	0.7			0.9	
29			0.61					0.8	0.8	0.7	0.7			0.8	
30			0.59					0.8	0.8	0.7	0.7			0.7	
AVG			0.56					0.8	0.9	0.8	0.7			0.9	
MAX			0.61					0.9	1.1	0.9	0.9			1.0	
MIN			0.48					0.7	0.8	0.6	0.5			0.7	

Chemical Analyses **WSSN 2310** **Jun-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.22		98		73		25				28.1		6.8		
2		7.36		96		71		25				28.1		6.3		
3		7.34		96		70		26				28.1		6.8		
4		7.34		98		73		25				29.7		5.8		
5		7.39		96		72		24				32.9		3.4		
6		7.50		98		68		30				29.7		5.8		
7		7.33		98		68		30				32.1		4.4		
8		7.40		98		66		32				30.5		5.3		
9		7.24		98		69		29				28.9		6.3		
10		7.36		98		69		29				28.9		6.3		
11		7.42		98		71		27				28.9		6.3		
12		7.50		98		72		26				29.7		5.8		
13		7.38		98		72		26				29.7		5.8		
14		7.35		98		72		26				26.5		7.8		
15		7.38		96		72		24				27.3		5.3		
16		7.43		102		72		30				32.1		5.3		
17		7.42		98		72		26				28.9		6.3		
18		7.43		98		69		29				28.9		6.3		
19		7.37		98		72		26				28.9		6.3		
20		7.45		98		72		26				29.7		5.8		
21		7.35		96		74		22				29.7		5.3		
22		7.41		100		73		27				29.7		6.3		
23		7.39		98		70		28				28.9		6.3		
24		7.40		98		69		29				28.9		6.3		
25		7.36		98		74		24				28.9		6.3		
26		7.49		98		74		24				28.9		6.3		
27		7.38		98		73		25				28.9		6.3		
28		7.32		98		69		29				28.9		6.3		
29		7.34		98		74		24				29.7		5.8		
30		7.38		98		70		28				28.9		6.3		
AVG		7.38		98		71		27				29.3		6.0		
MAX		7.50		102		74		32				32.9		7.8		
MIN		7.22		96		66		22				26.5		3.4		

Bacteriological & Physical Parameters **WSSN 2310** **Jun-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					14.6				
2	1/0		2/0	2/0	2/0	2/0					14.0				
3	1/0		2/0	2/0	2/0	2/0					13.4				
4	1/0		2/0	2/0	2/0	2/0					13.4				
5	1/0		2/0	2/0	2/0	2/0					12.8				
6	1/0		2/0	2/0	2/0	2/0			< 2		13.6				
7	1/0		2/0	2/0	2/0	2/0					14.0				
8	1/0		2/0	2/0	2/0	2/0					14.5				
9	1/0		2/0	2/0	2/0	2/0					14.6				
10	1/0		2/0	2/0	2/0	2/0					15.5				
11	1/0		2/0	2/0	2/0	2/0					16.2				
12	1/0		2/0	2/0	2/0	2/0					16.3				
13	1/0		2/0	2/0	2/0	2/0					16.2				
14	1/0		2/0	2/0	2/0	2/0					15.7				
15	1/0		2/0	2/0	2/0	2/0					15.5				
16	1/0		2/0	2/0	2/0	2/0					16.9				
17	1/0		2/0	2/0	2/0	2/0					16.1				
18	1/0		2/0	2/0	2/0	2/0					17.0				
19	1/0		2/0	2/0	2/0	2/0					15.9				
20	1/0		2/0	2/0	2/0	2/0					16.3				
21	1/0		2/0	2/0	2/0	2/0					17.7				
22	1/0		2/0	2/0	2/0	2/0					17.3				
23	1/0		2/0	2/0	2/0	2/0					18.2				
24	1/0		2/0	2/0	2/0	2/0					18.6				
25	1/0		2/0	2/0	2/0	2/0					18.4				
26	1/0		2/0	2/0	2/0	2/0					18.2				
27	1/0		2/0	2/0	2/0	2/0					18.4				
28	1/0		2/0	2/0	2/0	2/0					18.5				
29	1/0		2/0	2/0	2/0	2/0					18.3				
30	1/0		2/0	2/0	2/0	2/0					17.2				
											16.1				
											18.6				
											12.8				

Distribution System Monitoring **WSSN 2310** **Jun-13**

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											0.9	0.9	2
2											0.9	0.9	2
3									0.6	0.6	1.1	1.0	4
4											1.0	1.0	2
5	0.9	0.6	0.7	0.7	0.6	0.7	0.5	0.8	0.4	0.5	1.1	0.9	12
6	0.9	0.8	0.7	0.8	0.7	0.5	0.4	0.7	0.5	0.5	1.0	0.9	12
7											1.0	1.0	2
8											0.9	0.9	2
9											1.0	0.9	2
10									0.5	0.5	1.0	0.9	4
11											1.0	0.9	2
12	0.9	0.7	0.5	0.7	0.5	0.7	0.4	0.8	0.5	0.5	0.9	0.9	12
13											0.9	0.9	2
14											0.7	0.8	2
15											0.9	1.0	2
16											0.9	0.9	2
17									0.5	0.5	0.9	0.9	4
18											0.9	0.9	2
19	0.8	0.6	0.7	0.7	0.6	0.5	0.3	0.8	0.4	0.5	0.8	0.9	12
20									0.5	0.6	0.9	0.8	4
21											0.8	0.8	2
22											0.8	0.7	2
23											0.8	0.8	2
24									0.4	0.5	0.9	0.9	4
25											0.8	0.8	2
26	0.7	0.4	0.5	0.6	0.4	0.4	0.4	0.7	0.4	0.4	0.9	0.9	12
27											0.9	0.9	2
28											0.9	0.9	2
29											0.8	0.8	2
30											0.8	0.8	2

Monthly Cl_2 Avg.	**0.739**
Quarterly Cl_2 Avg.	**0.824**
Yearly Cl_2 Avg.	**0.714**
Total Samples	**120**

Distribution System Monitoring WSSN 2310 Jun-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.1	1.0	2
2											1.1	1.1	2
3									0.8	0.8	1.2	1.2	4
4											1.2	1.2	2
5	1.0	0.8	0.9	0.9	0.8	0.9	0.7	1.0	0.6	0.7	1.2	1.0	12
6	1.2	1.0	0.9	0.9	0.9	0.7	0.5	1.0	0.6	0.7	1.2	1.0	12
7											1.1	1.2	2
8											1.1	1.1	2
9											1.2	1.1	2
10									0.7	0.7	1.2	1.1	4
11											1.2	1.0	2
12	1.0	0.9	0.7	0.9	0.7	0.9	0.6	0.9	0.7	0.7	1.2	1.0	12
13											1.0	1.0	2
14											0.9	1.0	2
15											1.2	1.3	2
16											1.1	1.1	2
17									0.7	0.7	1.1	1.1	4
18											1.0	1.1	2
19	1.0	0.7	0.9	0.9	0.8	0.7	0.5	0.9	0.5	0.7	1.0	1.1	12
20									0.7	0.8	1.0	1.0	4
21											1.0	0.9	2
22											0.9	0.9	2
23											0.9	0.9	2
24									0.6	0.6	1.0	1.0	4
25											1.0	0.9	2
26	0.9	0.6	0.8	0.8	0.6	0.6	0.5	0.9	0.6	0.6	1.1	1.1	12
27											1.1	1.1	2
28											1.1	1.0	2
29											1.0	0.9	2
30											1.0	1.0	2

Monthly Cl_2 Avg.	**0.918**
Quarterly Cl_2 Avg.	**1.004**
Yearly Cl_2 Avg.	**0.888**
Total Samples	**120**

ROUTINE POSITIVE DISTRIBUTION SAMPLES

Jun-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform

Total number of routine distribution samples analyzed:	**120**
Total number of routine distribution samples required:	**100**

003376

D-Sa 1/86
Authority; Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

ENTERED

For Month of May 2013

Flint Water Plant — 2310 — Genesee
NAME OF WATER SYSTEM — PWSID — COUNTY

RESOURCE MANAGEMENT DIVISION
JUN 07 2013
LANSING DISTRICT

Michael Glasgow — F-1R S-3
CERTIFIED OPERATOR — CLASSIFICATION

Michael Glasgow
SIGNATURE OF APPROPRIATE OFFICIAL

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons _____
11. Total Power Cost per Million Gallons _____

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

Coagulation Parameters **WSSN 2310** **May-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	22.89	9.40	13.48								3	0.06	0.07
2	24.21	10.02	14.18								3	0.07	0.07
3	24.65	10.54	14.11								3	0.07	0.07
4	22.91	10.16	12.75								3	0.08	0.08
5	23.36	10.46	12.89								3	0.07	0.08
6	25.31	10.80	14.51								3	0.08	0.09
7	24.29	10.26	14.03								3	0.08	0.10
8	24.90	10.77	14.14								3	0.07	0.08
9	25.06	10.63	14.43								3	0.07	0.08
10	25.00	11.34	13.67								3	0.07	0.07
11	24.63	11.66	12.98								3	0.07	0.07
12	24.32	11.99	12.33								3	0.06	0.07
13	24.63	11.25	13.38								3	0.07	0.07
14	24.80	10.56	14.24								3	0.07	0.08
15	25.27	10.71	14.56								3	0.09	0.10
16	25.49	11.62	13.87								3	0.10	0.11
17	25.15	11.65	13.50								3	0.12	0.13
18	24.88	11.98	12.90								3	0.08	0.08
19	23.64	11.06	12.58								3	0.07	0.09
20	27.74	14.04	13.70								3	0.09	0.10
21	24.12	9.15	14.97								3	0.18	0.20
22	26.49	13.14	13.34								3	0.14	0.15
23	24.70	11.94	12.76								3	0.11	0.13
24	24.22	10.72	13.50								3	0.08	0.10
25	23.98	11.54	12.44								3	0.06	0.09
26	22.84	11.27	11.57								3	0.06	0.07
27	23.67	11.70	11.97								3	0.07	0.08
28	25.30	11.47	13.83								3	0.06	0.09
29	25.88	12.54	13.34								3	0.07	0.07
30	26.03	12.98	13.05								3	0.07	0.09
31	25.50	12.23	13.27								3	0.07	0.08
AVG	24.70	11.28	13.43								3	0.08	0.09
MAX	27.74	14.04	14.97								3	0.18	0.20
MIN	22.84	9.15	11.57								3	0.06	0.07
Total	765.83	349.56	416.28										

Flouridation & Chlorination **WSSN 2310** **May-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.57					0.9	1.0	0.9	0.9			0.9	
2			0.54					0.7	1.0	1.0	0.9			0.9	
3			0.56					0.9	1.0	0.9	0.9			1.0	
4			0.58					0.9	0.9	0.7	0.7			1.0	
5			0.56					0.7	0.9	0.9	0.9			0.9	
6			0.63					0.9	1.0	0.9	0.9			1.0	
7			0.54					0.7	1.0	0.8	0.8			0.8	
8			0.56					1.0	1.0	0.9	0.8			0.9	
9			0.51					0.8	1.0	0.8	0.8			0.9	
10			0.54					0.9	1.0	0.9	0.9			1.0	
11			0.52					0.9	1.0	0.9	0.9			1.0	
12			0.51					0.7	0.9	0.9	0.8			0.9	
13			0.50					0.8	1.0	0.9	0.8			0.9	
14			0.50					0.7	1.0	0.8	0.7			0.9	
15			0.50					0.9	0.9	0.8	0.7			0.9	
16			0.54					0.8	1.0	0.8	0.7			0.8	
17			0.55					0.8	1.0	0.8	0.8			0.9	
18			0.55					0.9	0.9	0.9	0.8			0.9	
19			0.52					0.8	0.9	0.8	0.7			0.9	
20			0.56					0.8	1.0	0.8	0.7			0.9	
21			0.62					0.8	0.9	0.7	0.8			0.9	
22			0.57					0.8	1.0	0.9	0.7			0.9	
23			0.58					0.9	1.0	0.9	0.7			0.8	
24			0.57					0.9	0.9	0.8	0.8			0.9	
25			0.54					0.8	0.9	0.8	0.7			1.0	
26			0.57					0.8	0.9	0.9	0.8			0.9	
27			0.55					0.7	1.0	0.9	0.9			0.8	
28			0.54					0.8	1.0	0.9	0.8			0.9	
29			0.52					0.9	1.0	0.8	0.8			0.9	
30			0.54					0.7	1.0	0.9	0.8			0.8	
31			0.59					0.9	0.9	0.9	0.8			1.0	
AVG			0.55					0.8	1.0	0.9	0.8			0.9	
MAX			0.63					1.0	1.0	1.0	0.9			1.0	
MIN			0.50					0.7	0.9	0.7	0.7			0.8	

Chemical Analyses **WSSN 2310** **May-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.23		98		69		29				29.7		5.8		
2		7.32		98		71		27				28.9		6.3		
3		7.30		98		71		27				29.7		5.8		
4		7.21		98		73		25				27.3		7.3		
5		7.28		98		71		27				29.7		5.8		
6		7.36		96		65		31				31.3		4.4		
7		7.33		98		71		27				29.7		5.8		
8		7.50		98		73		25				29.7		5.8		
9		7.43		98		71		27				28.9		6.3		
10		7.38		98		67		31				31.3		4.9		
11		7.31		96		73		23				31.3		4.4		
12		7.34		98		71		27				28.1		6.8		
13		7.44		98		66		32				29.7		5.8		
14		7.30		98		70		28				29.7		5.8		
15		7.38		98		72		26				28.9		6.3		
16		7.37		98		72		26				29.7		5.8		
17		7.40		98		73		25				30.5		4.9		
18		7.32		98		72		26				31.3		4.9		
19		7.22		98		72		26				28.9		6.3		
20		7.37		98		69		29				29.7		5.8		
21		7.37		96		68		28				28.9		5.8		
22		7.39		98		71		27				29.7		5.8		
23		7.41		98		72		26				28.9		6.3		
24		7.38		96		68		28				31.3		4.4		
25		7.30		96		70		26				29.7		5.3		
26		7.25		96		66		30				29.7		5.3		
27		7.38		98		71		27				29.7		5.8		
28		7.29		98		74		24				29.7		5.8		
29		7.30		96		67		29				28.9		5.8		
30		7.29		98		73		25				29.7		5.8		
31		7.30		100		68		32				30.5		5.8		
AVG		7.34		98		70		27				29.7		5.7		
MAX		7.50		100		74		32				31.3		7.3		
MIN		7.21		96		65		23				27.3		4.4		

Bacteriological & Physical Parameters **WSSN 2310** **May-13**

DATE	Total Coliform Plant Tap							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					12.1				
2	1/0		2/0	2/0	2/0	2/0					11.7				
3	1/0		2/0	2/0	2/0	2/0					12.2				
4	1/0		2/0	2/0	2/0	2/0					11.0				
5	1/0		2/0	2/0	2/0	2/0					10.9				
6	1/0		2/0	2/0	2/0	2/0					11.8				
7	1/0		2/0	2/0	2/0	2/0					11.4				
8	1/0		2/0	2/0	2/0	2/0					12.5				
9	1/0		2/0	2/0	2/0	2/0			< 2		12.2				
10	1/0		2/0	2/0	2/0	2/0					13.0				
11	1/0		2/0	2/0	2/0	2/0					12.2				
12	1/0		2/0	2/0	2/0	2/0					11.5				
13	1/0		2/0	2/0	2/0	2/0					10.8				
14	1/0		2/0	2/0	2/0	2/0					11.1				
15	1/0		2/0	2/0	2/0	2/0					12.4				
16	1/0		2/0	2/0	2/0	2/0					12.2				
17	1/0		2/0	2/0	2/0	2/0					13.5				
18	1/0		2/0	2/0	2/0	2/0					12.6				
19	1/0		2/0	2/0	2/0	2/0					12.3				
20	1/0		2/0	2/0	2/0	2/0					12.5				
21	1/0		2/0	2/0	2/0	2/0					13.1				
22	1/0		2/0	2/0	2/0	2/0					14.3				
23	1/0		2/0	2/0	2/0	2/0					13.0				
24	1/0		2/0	2/0	2/0	2/0					12.5				
25	1/0		2/0	2/0	2/0	2/0					12.8				
26	1/0		2/0	2/0	2/0	2/0					11.9				
27	1/0		2/0	2/0	2/0	2/0					12.1				
28	1/0		2/0	2/0	2/0	2/0					13.3				
29	1/0		2/0	2/0	2/0	2/0					12.6				
30	1/0		2/0	2/0	2/0	2/0					14.6				
31	1/0		2/0	2/0	2/0	2/0					14.5				
											12.4				
											14.6				
											10.8				

Distribution System Monitoring WSSN 2310 May-13

DATE	Free Chlorine Residual at Bacteriological Monitoring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1	0.9	0.6	0.8	0.7	0.8	0.8	1.0	0.8	0.6	0.7	1.0	0.9	12
2	1.1	0.7	0.8	0.9	0.7	0.6	0.7	0.8	0.6	0.7	1.0	1.0	12
3									0.6	0.7	1.0	1.0	4
4											0.9	0.9	2
5											0.9	0.9	2
6									0.7	0.7	1.0	1.0	4
7											1.0	0.9	2
8	0.9	0.9	0.9	0.9	0.7	0.7	0.8	0.8	0.5	0.7	1.0	0.9	12
9	0.9	0.8	0.7	0.9	0.5	0.5	0.6	0.7	0.7	0.6	1.0	0.9	12
10									0.5	0.6	1.0	1.0	4
11											1.0	1.0	2
12											0.9	0.9	2
13									0.6	0.6	1.0	0.9	4
14											1.0	0.9	2
15	0.9	0.9	1.0	0.9	0.8		0.7	0.9	0.5	0.6	0.9	0.9	11
16	1.0	0.8	0.8	0.8	0.7	0.5	0.7	0.7	0.7	0.6	1.0	0.9	12
17									0.4	0.7	1.0	0.9	4
18											0.9	0.9	2
19											0.9	0.9	2
20											1.0	1.0	2
21									0.7	0.7	0.8	1.0	4
22	0.6	0.7	0.9	0.8	0.7	0.8	0.7	0.9	0.6	0.6	1.0	0.9	12
23	0.9	0.8	0.7	0.8	0.7	0.5	0.6	0.8	0.6	0.6	1.0	0.9	12
24									0.5	0.6	0.9	0.9	4
25											0.8	0.9	2
26											0.8	0.9	2
27											1.1	0.9	2
28											1.0	0.9	2
29									0.5	0.5	1.0	1.0	4
30	1.0	0.8	0.7	0.8	0.6	0.3	0.6	0.7	0.7	0.6	1.0	0.9	12
31									0.4	0.6	0.9	0.9	4

Monthly Cl_2 Avg.	**0.796**
Quarterly Cl_2 Avg.	**0.837**
Yearly Cl_2 Avg.	**0.702**
Total Samples	**169**

Distribution System Monitoring WSSN 2310 May-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1	1.0	0.7	1.0	0.9	1.0	1.0	1.1	1.0	0.8	0.9	1.2	1.0	12
2	1.3	0.9	1.0	1.1	0.9	0.8	0.9	1.1	0.8	0.9	1.2	1.1	12
3									0.8	1.0	1.2	1.2	4
4											1.0	1.0	2
5											1.1	1.0	2
6									0.9	0.9	1.1	1.1	4
7											1.2	1.0	2
8	1.0	1.1	1.0	1.0	0.9	0.9	1.0	1.1	0.7	0.9	1.1	1.0	12
9	1.1	1.0	0.9	1.0	0.7	0.7	0.8	0.9	0.8	0.8	1.2	1.1	12
10									0.7	0.8	1.2	1.1	4
11											1.2	1.1	2
12											1.0	1.0	2
13									0.8	0.8	1.2	1.0	4
14											1.1	1.0	2
15	1.0	1.0	1.1	1.0	0.9		0.9	1.0	0.7	0.8	1.2	1.0	11
16	1.2	1.0	1.0	1.0	0.9	0.7	1.0	0.9	0.8	0.9	1.2	1.0	12
17									0.6	0.9	1.2	1.0	4
18											1.1	1.1	2
19											1.0	1.0	2
20											1.1	1.1	2
21									0.8	0.9	1.0	1.1	4
22	0.7	0.9	1.0	0.9	0.8	0.9	0.9	1.0	0.7	0.7	1.2	1.0	12
23	1.0	0.9	0.8	1.0	0.9	0.6	0.7	1.0	0.8	0.8	1.2	1.0	12
24									0.7	0.8	1.1	1.1	4
25											1.0	1.0	2
26											1.0	1.0	2
27											1.3	1.0	2
28											1.2	1.1	2
29									0.7	0.8	1.2	1.1	4
30	1.2	0.9	0.8	0.9	0.8	0.5	0.8	1.0	0.8	0.8	1.2	1.1	12
31									0.6	0.8	1.2	1.0	4

Monthly Cl_2 Avg.	**0.963**
Quarterly Cl_2 Avg.	**1.021**
Yearly Cl_2 Avg.	**0.875**
Total Samples	**169**

ROUTINE POSITIVE DISTRIBUTION SAMPLES May-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform

Total number of routine distribution samples analyzed:	**169**
Total number of routine distribution samples required:	**100**

003384

D-5a 1/86
Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

ENTERED

For Month of April 2013

Flint Water Plant	2310	Genesee
NAME OF WATER SYSTEM	WSSN	COUNTY

DEQ
RESOURCE MANAGEMENT DIVISION

Michael Glasgow		F-1R S-3
CERTIFIED OPERATOR		CLASSIFICATION

MAY 13 2013

Michael Glasgow
SIGNATURE OF APPROPRIATE OFFICIAL

LANSING DISTRICT

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

Coagulation Parameters **WSSN 2310** **Apr-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	23.13	9.26	13.87								3	0.07	0.07
2	22.12	8.10	14.02								3	0.06	0.07
3	21.09	7.61	13.47								3	0.06	0.07
4	22.83	9.47	13.36								3	0.06	0.06
5	23.06	10.06	13.00								3	0.06	0.07
6	22.69	10.29	12.40								3	0.08	0.09
7	22.29	9.62	12.68								3	0.07	0.08
8	23.30	9.63	13.66								3	0.07	0.08
9	23.82	9.73	14.10								3	0.08	0.10
10	23.86	10.18	13.68								3	0.10	0.10
11	23.38	9.45	13.94								3	0.08	0.09
12	22.96	9.84	13.12								3	0.09	0.09
13	23.40	9.73	13.68								3	0.07	0.08
14	22.95	9.62	13.33								3	0.08	0.09
15	21.86	7.93	13.92								3	0.07	0.08
16	22.71	8.35	14.36								3	0.06	0.07
17	24.00	9.54	14.46								3	0.06	0.07
18	23.74	9.81	13.92								3	0.06	0.07
19	23.32	9.75	13.57								3	0.06	0.06
20	23.74	9.93	13.81								3	0.06	0.07
21	23.27	10.07	13.20								3	0.06	0.07
22	23.67	9.77	13.90								3	0.06	0.08
23	24.23	10.15	14.08								3	0.08	0.10
24	23.64	9.61	14.03								3	0.08	0.09
25	23.23	10.00	13.23								3	0.09	0.14
26	24.22	9.91	14.31								3	0.08	0.09
27	23.77	11.00	12.76								3	0.09	0.09
28	24.24	11.84	12.40								3	0.07	0.08
29	23.51	10.53	12.98								3	0.06	0.06
30	24.05	10.51	13.54								3	0.07	0.09
AVG	23.27	9.71	13.56								3	0.07	0.08
MAX	24.24	11.84	14.46								3	0.10	0.14
MIN	21.09	7.61	12.40								3	0.06	0.06
Total	698.07	291.30	406.77										

Flouridation & Chlorination **WSSN 2310** **Apr-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.72					0.9	1.0	1.0	1.0			1.0	
2			0.70					0.9	1.1	1.0	1.0			1.1	
3			0.70					1.0	1.1	1.0	1.0			1.0	
4			0.59					0.8	1.1	1.0	0.9			0.8	
5			0.63					1.0	1.0	1.0	1.0			1.1	
6			n/a					1.0	1.0	1.0	0.9			1.0	
7			0.63					0.7	1.0	1.0	1.0			0.9	
8			0.57					0.9	1.1	0.9	0.9			0.9	
9			0.57					0.9	1.1	1.0	0.9			1.0	
10			0.57					0.9	1.0	1.0	0.9			1.0	
11			0.52					0.8	1.1	1.0	1.0			1.0	
12			0.54					0.9	1.2	1.0	1.0			1.2	
13			0.53					0.7	1.0	0.9	0.9			0.9	
14			0.47					0.7	1.0	0.9	0.9			0.9	
15			0.55					0.8	0.9	0.9	0.9			0.9	
16			0.57					0.8	0.9	0.8	0.9			0.9	
17			0.54					0.7	1.0	1.0	0.9			1.1	
18			0.55					0.7	1.0	0.9	0.8			1.0	
19			0.54					0.8	1.1	0.9	1.0			1.1	
20			0.57					0.9	1.0	0.9	0.9			1.0	
21			0.46					0.7	0.9	0.9	0.8			0.9	
22			0.55					0.9	1.0	0.9	0.9			0.9	
23			0.54					0.7	0.9	0.9	0.9			0.9	
24			0.54					0.9	1.0	0.9	0.9			1.0	
25			0.52					0.8	1.0	0.8	0.8			0.9	
26			0.54					0.9	1.1	0.9	0.9			1.0	
27			0.54					1.0	1.1	1.0	0.9			1.1	
28			0.52					0.9	1.0	0.9	0.8			0.8	
29			0.51					0.8	1.0	0.8	0.8			0.9	
30			0.55					0.7	1.0	0.9	0.8			0.9	
AVG			0.56					0.8	1.0	0.9	0.9			1.0	
MAX			0.72					1.0	1.2	1.0	1.0			1.2	
MIN			0.46					0.7	0.9	0.8	0.8			0.8	

Chemical Analyses **WSSN 2310** **Apr-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.31		98		72		26				27.3		7.3		
2		7.32		96		73		23				32.1		3.9		
3		7.43		100		71		29				31.3		5.3		
4		7.37		96		71		25				29.7		5.3		
5		7.31		98		70		28				29.7		5.8		
6		7.40		100		76		24				28.1		7.3		
7		7.32		98		73		25				29.7		5.8		
8		7.45		98		72		26				30.5		5.3		
9		7.30		100		70		30				31.3		5.3		
10		7.36		100		72		28				30.5		5.8		
11		7.25		100		72		28				30.5		5.3		
12		7.29		100		72		28				31.3		5.3		
13		7.28		98		73		25				29.7		5.8		
14		7.24		98		74		24				29.7		5.8		
15		7.26		98		72		26				30.5		5.3		
16		7.28		98		73		25				29.7		5.8		
17		7.26		98		72		26				29.7		5.8		
18		7.30		98		70		28				29.7		5.8		
19		7.30		100		73		27				33.7		3.9		
20		7.29		98		69		29				31.3		4.9		
21		7.33		94		74		20				30.5		4.4		
22		7.28		98		66		32				30.5		5.3		
23		7.28		98		70		28				31.3		4.9		
24		7.41		96		72		24				30.5		4.9		
25		7.47		98		74		24				30.5		5.3		
26		7.27		98		72		26				30.5		5.3		
27		7.31		98		72		26				30.5		5.3		
28		7.26		98		75		23				29.7		5.8		
29		7.33		98		68		30				29.7		5.8		
30		7.26		98		64		34				30.5		5.3		
AVG		7.32		98		72		27				30.3		5.4		
MAX		7.47		100		76		34				33.7		7.3		
MIN		7.24		94		64		20				27.3		3.9		

Bacteriological & Physical Parameters **WSSN 2310** **Apr-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					11.8				
2	1/0		2/0	2/0	2/0	2/0					11.2				
3	1/0		2/0	2/0	2/0	2/0					10.5				
4	1/0		2/0	2/0	2/0	2/0					11.4				
5	1/0		2/0	2/0	2/0	2/0					11.5				
6	1/0		2/0	2/0	2/0	2/0					9.3				
7	1/0		2/0	2/0	2/0	2/0					10.3				
8	1/0		2/0	2/0	2/0	2/0					9.9				
9	1/0		2/0	2/0	2/0	2/0					11.2				
10	1/0		2/0	2/0	2/0	2/0					10.2				
11	1/0		2/0	2/0	2/0	2/0					11.5				
12	1/0		2/0	2/0	2/0	2/0					11.5				
13	1/0		2/0	2/0	2/0	2/0					11.2				
14	1/0		2/0	2/0	2/0	2/0					11.6				
15	1/0		2/0	2/0	2/0	2/0					11.4				
16	1/0		2/0	2/0	2/0	2/0					10.2				
17	1/0		2/0	2/0	2/0	2/0					9.8				
18	1/0		2/0	2/0	2/0	2/0					10.4				
19	1/0		2/0	2/0	2/0	2/0					11.2				
20	1/0		2/0	2/0	2/0	2/0					10.5				
21	1/0		2/0	2/0	2/0	2/0					9.8				
22	1/0		2/0	2/0	2/0	2/0					10.3				
23	1/0		2/0	2/0	2/0	2/0					10.6				
24	1/0		2/0	2/0	2/0	2/0			< 2		11.3				
25	1/0		2/0	2/0	2/0	2/0					10.5				
26	1/0		2/0	2/0	2/0	2/0					12.1				
27	1/0		2/0	2/0	2/0	2/0					9.4				
28	1/0		2/0	2/0	2/0	2/0					10.3				
29	1/0		2/0	2/0	2/0	2/0					10.2				
30	1/0		2/0	2/0	2/0	2/0					10.3				
											10.7				
											12.1				
											9.3				

Distribution System Monitoring **WSSN 2310** **Apr-13**

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.7	0.8	1.0	1.0	4
2									0.7	0.8	1.1	1.1	4
3	0.8	0.8	0.9	0.9	0.7	0.9	0.9	1.0	0.7	0.8	1.1	1.1	12
4	1.1	0.9	0.8	1.1	1.0	0.9	1.0	1.0	0.7	0.7	1.1	1.0	12
5									0.7	0.8	1.0	1.0	4
6											0.9	1.0	2
7											1.0	1.0	2
8									0.6	0.8	1.1	1.0	4
9									0.7	0.8	1.1	1.0	4
10	1.1	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.7	0.9	1.0	1.0	12
11	1.2	0.9	0.9	1.1	0.8	0.8	1.1	0.9	0.8	0.8	1.1	1.1	12
12									0.6	0.9	1.2	1.2	4
13											0.9	1.0	2
14											1.0	0.9	2
15											0.9	0.9	2
16											0.9	0.9	2
17									0.7	0.8	1.0	1.0	4
18	1.1	0.8	0.8	1.0	1.0	0.9	0.9	0.8	0.8	0.7	1.0	0.9	12
19											1.1	1.0	2
20											1.0	1.0	2
21											0.9	0.9	2
22									0.5	0.7	1.0	0.9	4
23											0.9	0.9	2
24	0.8	0.7	0.8	0.8	0.6	0.8	0.9	0.8	0.6	0.8	1.1	0.9	12
25	1.1	0.9	0.8	0.9	0.8	0.6	0.7	0.9	0.6	0.7	1.1	0.9	12
26									0.6	0.7	1.1	1.1	4
27											1.1	1.1	2
28											1.0	0.9	2
29											0.9	1.0	2
30											1.0	1.0	2

Monthly Cl_2 Avg.	**0.899**
Quarterly Cl_2 Avg.	**0.817**
Yearly Cl_2 Avg.	**0.690**
Total Samples	**148**

Distribution System Monitoring WSSN 2310 Apr-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.8	1.0	1.2	1.2	4
2									0.9	1.0	1.3	1.3	4
3	1.0	1.0	1.1	1.1	0.9	1.1	1.0	1.1	0.8	1.0	1.2	1.2	12
4	1.3	1.1	1.1	1.3	1.2	1.0	1.2	1.3	0.9	1.0	1.3	1.2	12
5									0.9	1.0	1.3	1.2	4
6											1.1	1.2	2
7											1.2	1.2	2
8									0.8	1.0	1.3	1.1	4
9									0.9	1.0	1.3	1.1	4
10	1.3	1.1	1.0	1.0	1.0	1.0	1.0	1.1	0.9	1.1	1.1	1.1	12
11	1.3	1.1	1.1	1.3	1.1	1.0	1.3	1.2	0.9	1.0	1.3	1.3	12
12									0.8	1.1	1.4	1.4	4
13											1.1	1.1	2
14											1.1	1.1	2
15											1.1	1.1	2
16											1.0	1.1	2
17									0.9	1.0	1.2	1.2	4
18	1.2	0.9	1.0	1.1	1.2	1.0	1.0	1.1	0.9	1.0	1.2	1.1	12
19											1.2	1.2	2
20											1.2	1.2	2
21											1.1	1.0	2
22									0.7	0.9	1.2	1.1	4
23											1.0	1.2	2
24	1.0	0.9	1.0	1.0	0.8	1.0	1.1	1.0	0.8	1.0	1.3	1.1	12
25	1.3	1.1	1.0	1.1	1.0	0.7	0.9	1.1	0.8	1.0	1.3	1.0	12
26									0.8	0.9	1.3	1.3	4
27											1.3	1.3	2
28											1.1	1.0	2
29											1.1	1.1	2
30											1.2	1.2	2

Monthly Cl_2 Avg.	**1.085**
Quarterly Cl_2 Avg.	**1.002**
Yearly Cl_2 Avg.	**0.864**
Total Samples	**148**

ROUTINE POSITIVE DISTRIBUTION SAMPLES Apr-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				148			
Total number of routine distribution samples required:				100			

003392

2310

D-5a 1/86
Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

ENTERED

For Month of March 2013

Flint Water Plant — NAME OF WATER SYSTEM
2310 — WSSN
Genesee — COUNTY

Michael Glasgow — CERTIFIED OPERATOR
F-1R S-3 — CLASSIFICATION

Michael L Glasgow
SIGNATURE OF APPROPRIATE OFFICIAL

DEQ
RESOURCE MANAGEMENT DIVISION
APR 17 2013
LANSING DISTRICT

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum___ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity___Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

Coagulation Parameters **WSSN 2310** **Mar-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	26.18	10.66	15.52								3	0.06	0.07
2	26.51	10.42	16.09								3	0.07	0.07
3	25.67	10.29	15.38								3	0.07	0.07
4	26.85	10.94	15.91								3	0.06	0.07
5	26.32	10.40	15.92								3	0.07	0.08
6	24.86	10.48	14.38								3	0.07	0.07
7	24.76	9.92	14.84								3	0.07	0.09
8	24.07	9.30	14.77								3	0.07	0.07
9	23.84	8.88	14.97								3	0.07	0.07
10	22.49	8.48	14.01								3	0.06	0.06
11	23.36	8.45	14.91								3	0.07	0.08
12	24.19	8.57	15.62								3	0.08	0.09
13	23.77	9.34	14.43								3	0.08	0.11
14	24.44	10.20	14.24								3	0.08	0.09
15	25.18	10.57	14.62								3	0.08	0.09
16	24.49	10.41	14.08								3	0.08	0.09
17	24.31	10.21	14.10								3	0.09	0.11
18	26.08	10.96	15.12								3	0.09	0.10
19	25.56	10.90	14.66								3	0.08	0.09
20	25.33	10.78	14.55								3	0.08	0.08
21	25.16	10.22	14.94								3	0.07	0.09
22	22.97	8.72	14.24								3	0.06	0.06
23	22.12	8.58	13.54								3	0.06	0.06
24	22.91	8.71	14.21								3	0.06	0.07
25	22.68	8.49	14.20								3	0.07	0.07
26	23.98	9.21	14.77								3	0.08	0.10
27	24.15	10.37	13.78								3	0.06	0.07
28	24.49	10.20	14.29								3	0.07	0.08
29	24.70	10.72	13.98								3	0.07	0.07
30	24.10	10.82	13.28								3	0.07	0.07
31	23.58	11.16	12.41								3	0.06	0.07
AVG	24.49	9.91	14.57								3	0.07	0.08
MAX	26.85	11.16	16.09								3	0.09	0.11
MIN	22.12	8.45	12.41								3	0.06	0.06
Total	759.08	307.35	451.73										

Flouridation & Chlorination **WSSN 2310** **Mar-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.59					0.9	1.0	1.0	1.0			1.1	
2			0.58					1.0	1.1	1.1	1.0			1.1	
3			0.57					0.7	0.9	0.8	0.9			0.8	
4			0.58					0.9	1.0	0.9	0.8			1.0	
5			0.54					0.8	1.0	0.9	0.8			0.9	
6			0.56					0.9	1.0	0.9	0.9			1.0	
7			0.56					0.9	1.0	0.9	0.8			0.9	
8			0.62					0.9	1.1	1.0	0.9			1.1	
9			0.65					0.9	1.0	1.0	1.0			1.0	
10			0.68					0.7	1.0	1.0	0.9			0.9	
11			0.66					0.8	0.9	0.9	0.8			0.8	
12			0.65					0.7	1.0	0.9	0.8			0.9	
13			0.65					0.9	1.0	0.9	0.9			1.0	
14			0.60					0.7	1.0	0.9	0.9			0.9	
15			0.64					0.8	1.0	0.9	0.9			0.9	
16			0.64					0.7	0.9	0.9	0.8			0.8	
17			0.56					0.7	1.0	0.9	0.8			0.9	
18			0.64					0.9	1.1	1.0	0.9			1.1	
19			0.67					0.9	1.0	0.9	0.9			1.0	
20			0.70					0.9	1.0	0.9	0.9			1.0	
21			0.63					0.7	1.1	0.9	0.9			0.9	
22			0.65					0.9	1.1	1.0	0.9			1.1	
23			0.68					1.0	1.1	1.0	1.0			1.1	
24			0.65					0.5	1.0	1.0	0.9			0.9	
25			0.68					0.9	1.0	1.0	0.9			0.9	
26			0.70					0.7	1.1	1.0	0.9			1.0	
27			0.70					0.9	1.1	1.0	1.0			1.0	
28			0.65					1.0	1.1	1.0	0.9			1.0	
29			0.68					1.0	1.2	1.1	1.0			1.1	
30			0.67					0.9	1.1	1.0	1.0			1.1	
31			0.67					0.9	1.1	1.0	1.0			1.0	
AVG			0.64					0.8	1.0	1.0	0.9			1.0	
MAX			0.70					1.0	1.2	1.1	1.0			1.1	
MIN			0.54					0.5	0.9	0.8	0.8			0.8	

Chemical Analyses **WSSN 2310** **Mar-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.24		96		64		32				32.1		3.9		
2		7.21		98		72		26				29.7		5.8		
3		7.20		100		72		28				32.1		4.9		
4		7.24		98		67		31				30.5		5.3		
5		7.25		100		71		29				31.3		5.3		
6		7.29		98		71		27				30.5		5.3		
7		7.22		98		73		25				32.1		4.4		
8		7.27		102		75		27				32.1		5.3		
9		7.31		102		69		33				37.7		4.4		
10		7.25		98		70		28				31.3		5.3		
11		7.31		100		72		28				33.7		3.9		
12		7.31		100		70		30				31.3		5.3		
13		7.41		98		71		27				31.3		4.9		
14		7.27		98		69		29				31.3		4.9		
15		7.18		104		72		32				32.9		5.3		
16		7.27		100		74		26				32.9		4.4		
17		7.33		98		70		28				32.9		3.9		
18		7.23		96		71		25				30.5		4.9		
19		7.22		98		70		28				29.7		5.8		
20		7.34		100		66		34				31.3		5.3		
21		7.30		98		72		26				29.7		5.8		
22		7.17		100		71		29				30.5		5.8		
23		7.23		98		71		27				32.1		4.4		
24		7.26		98		67		31				30.5		5.3		
25		7.38		98		70		28				29.7		5.8		
26		7.34		98		68		30				29.7		5.8		
27		7.30		98		69		29				29.7		5.8		
28		7.30		98		72		26				29.7		5.8		
29		7.20		94		66		28				30.5		6.8		
30		7.23		96		71		25				32.1		3.9		
31		7.20		96		70		26				27.3		6.8		
AVG		7.27		99		70		28				31.2		5.2		
MAX		7.41		104		75		34				37.7		6.8		
MIN		7.17		94		64		25				27.3		3.9		

Bacteriological & Physical Parameters **WSSN 2310** **Mar-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					9.2				
2	1/0		2/0	2/0	2/0	2/0					9.5				
3	1/0		2/0	2/0	2/0	2/0					10.1				
4	1/0		2/0	2/0	2/0	2/0					10.3				
5	1/0		2/0	2/0	2/0	2/0					10.0				
6	1/0		2/0	2/0	2/0	2/0			< 2		10.6				
7	1/0		2/0	2/0	2/0	2/0					10.5				
8	1/0		2/0	2/0	2/0	2/0					10.7				
9	1/0		2/0	2/0	2/0	2/0					10.1				
10	1/0		2/0	2/0	2/0	2/0					10.9				
11	1/0		2/0	2/0	2/0	2/0					10.7				
12	1/0		2/0	2/0	2/0	2/0					10.7				
13	1/0		2/0	2/0	2/0	2/0					10.7				
14	1/0		2/0	2/0	2/0	2/0					10.3				
15	1/0		2/0	2/0	2/0	2/0					10.3				
16	1/0		2/0	2/0	2/0	2/0					10.7				
17	1/0		2/0	2/0	2/0	2/0					10.3				
18	1/0		2/0	2/0	2/0	2/0					11.1				
19	1/0		2/0	2/0	2/0	2/0					10.8				
20	1/0		2/0	2/0	2/0	2/0					10.5				
21	1/0		2/0	2/0	2/0	2/0					9.9				
22	1/0		2/0	2/0	2/0	2/0					10.7				
23	1/0		2/0	2/0	2/0	2/0					11.0				
24	1/0		2/0	2/0	2/0	2/0					9.6				
25	1/0		2/0	2/0	2/0	2/0					11.2				
26	1/0		2/0	2/0	2/0	2/0					10.6				
27	1/0		2/0	2/0	2/0	2/0					10.7				
28	1/0		2/0	2/0	2/0	2/0					10.7				
29	1/0		2/0	2/0	2/0	2/0					12.3				
30	1/0		2/0	2/0	2/0	2/0					11.0				
31	1/0		2/0	2/0	2/0	2/0					10.6				
											10.5				
											12.3				
											9.2				

Distribution System Monitoring WSSN 2310 Mar-13

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.5	0.6	1.0	1.0	4
2											1.0	1.1	2
3											0.9	0.9	2
4									0.6	0.6	1.0	0.9	4
5											1.0	0.9	2
6	0.9	0.8	0.9	0.6	0.8	0.9	0.8	0.9	0.5	0.6	1.0	0.9	12
7	1.1	0.9	0.9	0.6	0.9	0.6	0.9	1.0	0.4	0.6	1.0	1.0	12
8									0.6	0.6	1.1	1.0	4
9											1.0	1.0	2
10											0.9	1.0	2
11									0.6	0.6	0.9	0.9	4
12											1.0	0.9	2
13									0.5	0.7	1.0	1.0	4
14	1.0	0.8	0.9	0.8	0.9	0.7	0.7	0.8	0.6	0.7	1.1	0.9	12
15									0.6	0.7	1.1	0.9	4
16											0.9	0.9	2
17											0.9	1.0	2
18									0.6	0.7	1.0	1.1	4
19									0.4	0.7	1.1	0.9	4
20	1.0	0.9	0.9	0.6	0.8	0.8	1.0	0.9	0.6	0.7	1.0	0.9	12
21	1.1	0.8	0.9	0.7	0.9	0.7	1.0	0.9	0.6	0.7	1.1	1.0	12
22									0.6	0.7	1.1	1.1	4
23											1.1	1.1	2
24											0.9	1.0	2
25									0.6	0.7	0.9	1.0	4
26									0.6	0.6	1.1	1.0	4
27	1.2	0.9	0.9	0.8	1.0	1.0	0.9	1.0	0.6	0.7	1.1	1.0	12
28	1.0	0.9	0.9	0.7	0.8	0.9		0.9			1.1	1.0	9
29									0.7	0.8	1.1	1.2	4
30											1.1	1.0	2
31											1.0	1.1	2

Monthly Cl_2 Avg.	**0.863**
Quarterly Cl_2 Avg.	**0.761**
Yearly Cl_2 Avg.	**0.669**
Total Samples	**153**

Distribution System Monitoring WSSN 2310 Mar-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.6	0.8	1.3	1.2	4
2											1.2	1.3	2
3											1.0	1.0	2
4									0.8	0.8	1.2	1.1	4
5											1.3	1.1	2
6	1.1	1.0	1.1	0.8	1.0	1.1	1.0	1.1	0.7	0.8	1.3	1.2	12
7	1.3	1.1	1.2	0.8	1.2	0.7	1.2	1.2	0.6	0.9	1.3	1.2	12
8									0.7	0.9	1.3	1.2	4
9											1.2	1.2	2
10											1.1	1.2	2
11									0.8	0.9	1.1	1.1	4
12											1.2	1.0	2
13									0.7	0.9	1.2	1.2	4
14	1.2	1.0	1.1	1.0	1.1	0.8	0.9	1.1	0.7	0.9	1.3	1.0	12
15									0.8	0.9	1.2	1.1	4
16											1.0	1.1	2
17											1.1	1.1	2
18									0.8	0.9	1.3	1.2	4
19									0.6	0.9	1.2	1.1	4
20	1.1	1.1	1.1	0.8	0.9	1.0	1.1	1.0	0.7	0.9	1.3	1.0	12
21	1.3	1.0	1.1	0.8	1.0	0.9	1.2	1.2	0.8	0.9	1.3	1.1	12
22									0.8	0.9	1.4	1.3	4
23											1.3	1.3	2
24											1.1	1.2	2
25									0.8	0.9	1.1	1.2	4
26									0.7	0.8	1.3	1.2	4
27	1.4	1.0	1.0	1.0	1.2	1.2	1.1	1.2	0.8	0.9	1.3	1.2	12
28	1.1	1.0	1.1	0.9	0.9	1.0		1.1			1.3	1.1	9
29									0.9	1.0	1.2	1.3	4
30											1.3	1.2	2
31											1.2	1.2	2

Monthly Cl_2 Avg.	**1.05**
Quarterly Cl_2 Avg.	**0.942**
Yearly Cl_2 Avg.	**0.841**
Total Samples	**153**

ROUTINE POSITIVE DISTRIBUTION SAMPLES Mar-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				**153**			
Total number of routine distribution samples required:				**100**			

003400

D-5a 1/86
Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT OF WATER TREATMENT PLANT

ENTERED

For Month of February 2013

Flint Water Plant — NAME OF WATER SYSTEM
2310 — WSSN
Genesee — COUNTY

Michael Glasgow — CERTIFIED OPERATOR
F-1R S-3 — CLASSIFICATION

SIGNATURE OF APPROPRIATE OFFICIAL

DEQ
RESOURCE MANAGEMENT DIVISION
MAR 13 2013
LANSING DISTRICT

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (A13+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

Coagulation Parameters **WSSN 2310** **Feb-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	26.85	11.79	15.06								3	0.09	0.09
2	24.73	11.47	13.26								3	0.07	0.07
3	26.16	11.80	14.36								3	0.06	0.06
4	26.57	10.52	16.05								3	0.08	0.10
5	25.40	9.01	16.39								1	0.07	0.07
6	24.04	8.76	15.28								3	0.09	0.11
7	24.77	8.48	16.29								3	0.07	0.08
8	23.85	8.90	14.95								3	0.06	0.07
9	24.52	9.10	15.42								3	0.09	0.11
10	25.75	9.89	15.86								3	0.06	0.08
11	26.88	11.05	15.84								3	0.06	0.08
12	27.94	11.26	16.68								3	0.10	0.12
13	26.18	10.88	15.31								3	0.08	0.09
14	25.16	10.71	14.45								3	0.07	0.09
15	24.13	9.47	14.67								3	0.08	0.09
16	24.92	9.04	15.88								3	0.11	0.13
17	25.02	11.03	13.99								3	0.09	0.10
18	24.96	8.91	16.05								3	0.09	0.09
19	25.88	9.69	16.20								3	0.08	0.09
20	26.85	9.48	17.37								3	0.10	0.11
21	24.82	8.05	16.77								3	0.09	0.10
22	25.64	10.02	15.61								3	0.09	0.09
23	25.45	9.72	15.73								3	0.08	0.08
24	25.12	9.84	15.28								3	0.09	0.13
25	25.52	9.44	16.07								3	0.08	0.08
26	27.85	10.93	16.92								3	0.08	0.08
27	26.34	10.31	16.03								3	0.10	0.11
28	25.96	10.56	15.40								3	0.06	0.07
AVG	25.62	10.00	15.61								3	0.08	0.09
MAX	27.94	11.80	17.37								3	0.11	0.13
MIN	23.85	8.05	13.26								1	0.06	0.06
Total	717.27	280.12	437.15										

Flouridation & Chlorination **WSSN 2310** **Feb-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.62					0.8	1.0	0.9	0.9			1.0	
2			0.57					0.8	0.9	0.7	0.8			0.8	
3			0.63					0.7	0.9	0.8	0.8			0.8	
4			0.60					0.8	0.9	0.9	0.8			0.8	
5			0.60					0.8	0.9	0.9	0.8			0.9	
6			0.59					0.8	0.8	0.8	0.8			0.9	
7			0.60					0.7	1.0	0.9	0.8			0.8	
8			0.61					0.8	1.0	0.9	0.8			1.1	
9			0.64					1.0	1.1	1.0	1.0			n.r.	
10			0.54					0.5	0.9	0.8	0.7			0.9	
11			0.54					0.8	1.0	0.9	0.8			0.9	
12			0.52					0.8	1.0	0.9	0.8			0.9	
13			0.54					0.7	1.0	0.9	0.9			0.9	
14			0.52					0.8	0.9	0.9	0.9			1.0	
15			0.56					0.8	1.0	0.9	0.9			1.0	
16			0.53					1.0	1.1	1.0	0.9			1.0	
17			0.54					0.9	1.0	0.9	0.9			1.0	
18			0.59					0.9	1.0	0.9	0.9			1.0	
19			0.61					0.9	1.0	0.9	0.9			1.0	
20			0.59					0.9	1.0	0.8	0.8			0.9	
21			0.58					0.8	1.0	0.8	0.7			0.9	
22			0.60					0.9	1.0	0.9	0.9			1.0	
23			0.61					0.9	1.1	1.0	1.0			1.1	
24			0.59					0.7	0.9	0.8	0.9			0.9	
25			0.60					0.9	1.1	0.9	0.9			0.9	
26			0.56					0.7	1.0	0.9	0.8			0.8	
27			0.59					0.9	1.0	1.0	0.9			1.0	
28			0.50					0.9	1.0	0.9	0.9			0.9	
AVG			0.58					0.8	1.0	0.9	0.9			0.9	
MAX			0.64					1.0	1.1	1.0	1.0			1.1	
MIN			0.50					0.5	0.8	0.7	0.7			0.8	

n.r. = Not recorded or not tested

Chemical Analyses **WSSN 2310** **Feb-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.26		100		63		37				36.9		1.9		
2		7.45		100		71		29				36.9		1.9		
3		7.21		98		64		34				34.5		2.9		
4		7.23		98		69		29				33.7		3.4		
5		7.26		98		66		32				34.5		2.9		
6		7.39		98		67		31				32.9		3.9		
7		7.30		98		68		30				33.7		3.4		
8		7.27		100		72		28				31.3		5.3		
9		7.29		98		72		26				29.7		5.3		
10		7.35		100		66		34				32.1		4.9		
11		7.59		98		66		32				31.3		4.9		
12		7.21		98		68		30				35.3		2.4		
13		7.36		98		72		26				32.9		3.9		
14		7.23		96		70		26				31.3		4.4		
15		7.26		100		66		34				30.5		5.8		
16		7.24		96		72		24				30.5		4.9		
17		7.30		100		69		31				29.7		6.3		
18		7.30		96		68		28				28.9		5.8		
19		7.23		100		72		28				30.5		5.8		
20		7.24		100		72		28				31.3		5.1		
21		7.20		98		70		28				32.1		4.4		
22		7.22		98		71		27				30.5		5.3		
23		7.22		96		68		28				31.3		4.4		
24		7.16		98		69		29				33.7		3.4		
25		7.23		98		71		27				31.3		4.9		
26		7.26		98		69		29				31.3		4.9		
27		7.40		98		69		29				31.3		4.9		
28		7.20		100		70		30				32.1		4.9		
AVG		7.28		98		69		29				32.2		4.4		
MAX		7.59		100		72		37				36.9		6.3		
MIN		7.16		96		63		24				28.9		1.9		

Bacteriological & Physical Parameters **WSSN 2310** **Feb-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		1/0	2/0	2/0	2/0					9.5				
2	1/0		2/0	2/0	2/0	2/0					9.8				
3	1/0		2/0	2/0	2/0	2/0					9.9				
4	1/0		2/0	2/0	2/0	2/0					9.3				
5	1/0		2/0	2/0	2/0	2/0					n.r.				
6	1/0		2/0	2/0	2/0	2/0					9.5				
7	1/0		2/0	2/0	2/0	2/0					8.7				
8	1/0		2/0	2/0	2/0	2/0					9.5				
9	1/0		2/0	2/0	2/0	2/0					7.7				
10	1/0		2/0	2/0	2/0	2/0					8.9				
11	1/0		2/0	2/0	2/0	2/0					9.7				
12	1/0		2/0	2/0	2/0	2/0					8.8				
13	1/0		2/0	2/0	2/0	2/0			< 2		9.1				
14	1/0		2/0	2/0	2/0	2/0					12.2				
15	1/0		2/0	2/0	2/0	2/0					12.5				
16	1/0		2/0	2/0	2/0	2/0					8.9				
17	1/0		2/0	2/0	2/0	2/0					10.4				
18	1/0		2/0	2/0	2/0	2/0					9.6				
19	1/0		2/0	2/0	2/0	2/0					10.6				
20	1/0		2/0	2/0	2/0	2/0					9.3				
21	1/0		2/0	2/0	2/0	2/0					9.5				
22	1/0		2/0	2/0	2/0	2/0					10.3				
23	1/0		2/0	2/0	2/0	2/0					9.7				
24	1/0		2/0	2/0	2/0	2/0					9.2				
25	1/0		2/0	2/0	2/0	2/0					9.0				
26	1/0		2/0	2/0	2/0	2/0					10.0				
27	1/0		2/0	2/0	2/0	2/0					9.7				
28	1/0		2/0	2/0	2/0	2/0					10.3				
											9.7				
											12.5				
											7.7				

n.r. = Not recorded or not tested

Distribution System Monitoring WSSN 2310 Feb-13

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.3	0.6	0.9	1.0	4
2											0.9	0.9	2
3											0.9	0.9	2
4									0.3	0.6	0.9	0.9	4
5									0.3	0.5	0.9	0.9	4
6									0.3	0.6	0.8	0.8	4
7	1.0	0.6	0.9	0.6	0.7	0.6	0.8	0.8	0.3	0.6	1.0	1.0	12
8									0.4	0.6	0.9	1.0	4
9											1.1	1.1	2
10											0.9	0.8	2
11									0.5	0.6	1.0	0.9	4
12											1.0	0.9	2
13	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.9	0.4	0.6	1.0	0.9	12
14	1.0	0.7	0.8	1.0	0.7	0.6	0.8	0.8	0.5	0.6	0.8	0.9	12
15									0.4	0.6	0.9	1.0	4
16											1.1	1.0	2
17											1.0	1.0	2
18									0.5	0.6	1.0	1.0	4
19											1.0	1.0	2
20	1.0	0.8	0.8	0.8	0.6	0.8	0.7	0.9	0.4	0.6	1.0	1.0	12
21	0.7	0.8	0.9	1.1	0.9	0.6	0.9	0.9	0.6	0.6	1.0	0.9	12
22									0.4	0.6	1.0	1.0	4
23											1.0	1.1	2
24											0.9	0.9	2
25									0.4	0.6	1.1	1.0	4
26											1.0	0.9	2
27	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.9	0.5	0.6	1.0	0.9	12
28	1.1	0.9	0.7	1.0	0.8	0.7	0.7	0.9	0.6	0.6	1.0	0.9	12

Monthly Cl_2 Avg.	**0.791**
Quarterly Cl_2 Avg.	**0.701**
Yearly Cl_2 Avg.	**0.655**
Total Samples	**146**

Distribution System Monitoring WSSN 2310 Feb-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.5	0.8	1.1	1.2	4
2											1.1	1.0	2
3											1.0	1.0	2
4									0.5	0.8	1.1	1.1	4
5									0.5	0.8	1.1	1.1	4
6									0.5	0.9	1.2	1.1	4
7	1.2	0.8	1.0	0.8	0.8	0.7	1.0	1.1	0.5	0.8	1.2	1.2	12
8									0.6	0.8	1.1	1.2	4
9											1.3	1.3	2
10											1.1	1.0	2
11									0.7	0.9	1.2	1.1	4
12											1.2	1.1	2
13	1.1	1.0	1.0	1.0	0.9	0.9	1.0	1.1	0.6	0.9	1.2	1.1	12
14	1.3	0.9	1.0	1.1	0.8	0.7	1.1	1.1	0.6	0.8	1.1	1.1	12
15									0.6	0.8	1.2	1.1	4
16											1.3	1.2	2
17											1.1	1.1	2
18									0.7	0.9	1.2	1.2	4
19											1.2	1.2	2
20	1.1	0.9	1.0	0.9	0.8	1.0	0.9	1.0	0.5	0.8	1.2	1.1	12
21	0.8	0.9	1.0	1.3	1.0	0.7	1.1	1.1	0.7	0.8	1.2	1.1	12
22									0.5	0.9	1.2	1.2	4
23											1.2	1.2	2
24											1.1	1.1	2
25									0.6	0.8	1.3	1.1	4
26											1.2	1.1	2
27	0.9	1.0	1.0	1.0	0.9	0.9	0.9	1.0	0.7	0.8	1.2	1.1	12
28	1.3	1.1	0.9	1.2	1.1	0.8	1.0	1.2	0.7	0.9	1.2	1.0	12

Monthly Cl_2 Avg.	**0.983**
Quarterly Cl_2 Avg.	**0.877**
Yearly Cl_2 Avg.	**0.824**
Total Samples	**146**

ROUTINE POSITIVE DISTRIBUTION SAMPLES Feb-13

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				146			
Total number of routine distribution samples required:				100			

003408

2310

D-5a 1/96
Authority; Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

ENTERED

For Month of January 2013

Flint Water Plant — 2310 — Genesee
NAME OF WATER SYSTEM — WSSN — COUNTY

DEQ
RESOURCE MANAGEMENT DIVISION

Michael Glasgow — F-1R S-3
CERTIFIED OPERATOR — CLASSIFICATION

FEB 13 2013

LANSING DISTRICT

SIGNATURE OF APPROPRIATE OFFICIAL

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons _____
11. Total Power Cost per Million Gallons _____

Remarks:

A turbidity spike(inline alarm) was encountered on 1/20/2013 at 5:20pm at Baxter & Potter Rd. A coliform bacteria and turbidity sample were collected at 11:30pm. The sample showed a 0.9 NTU turbidity, a free chlorine residual of 0.8 mg/L, and was absent of coliform bacteria. On 1/21/2013, the daily B&P sample collected at 12:00pm, showed turbidity of .147 NTU. The turbidity event lasted between 12 to 18 hours. The turbidity spike reached Control Station #2 at 3:00pm on the 1/21/2013, and was diverted to Dort Well to allow for some dilution and possible settling for a few days. Daily samples collected from CS# 2 and Dort Well on the 21st and throughout the remainder of the month displayed good chlorine residuals and were absent of coliform bacteria. Lab testing later in the month showed higher levels of calcium, which leads us to believe the spike may have been from a slug of scale in the pipeline.

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

Coagulation Parameters **WSSN 2310** **Jan-13**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	22.05	9.97	12.08								3	0.07	0.07
2	22.31	9.24	13.07								3	0.09	0.09
3	23.13	9.06	14.07								3	0.10	0.10
4	23.63	8.39	15.25								3	0.09	0.09
5	22.94	8.43	14.51								3	0.10	0.10
6	21.98	8.40	13.58								3	0.07	0.08
7	22.42	9.29	13.13								3	0.08	0.08
8	23.56	9.26	14.30								3	0.08	0.10
9	23.11	9.50	13.61								3	0.07	0.08
10	23.04	9.84	13.20								3	0.06	0.07
11	22.78	10.43	12.35								3	0.06	0.07
12	22.92	9.92	13.00								3	0.06	0.07
13	23.01	10.25	12.76								3	0.05	0.06
14	23.62	9.59	14.03								3	0.06	0.07
15	21.16	9.33	11.84								3	0.07	0.07
16	21.80	9.00	12.80								3	0.06	0.07
17	23.73	9.26	14.47								3	0.11	0.14
18	24.12	9.52	14.60								3	0.11	0.16
19	23.25	10.07	13.18								3	0.06	0.07
20	22.36	9.78	12.58								3	0.07	0.08
21	22.93	9.30	13.63								3	0.30	0.77
22	22.88	9.60	13.28								3	0.10	0.10
23	23.10	9.78	13.32								3	0.08	0.10
24	23.43	10.05	13.39								3	0.07	0.08
25	23.72	9.75	13.97								3	0.08	0.10
26	24.77	9.84	14.94								3	0.09	0.09
27	24.12	9.81	14.31								3	0.07	0.08
28	25.75	10.48	15.28								3	0.08	0.08
29	26.94	10.72	16.22								3	0.08	0.09
30	27.10	12.05	15.05								3	0.13	0.14
31	27.25	11.54	15.70								3	0.08	0.10
AVG	23.51	9.72	13.79								3	0.09	0.11
MAX	27.25	12.05	16.22								3	0.30	0.77
MIN	21.16	8.39	11.84								3	0.05	0.06
Total	728.91	301.43	427.48										

Flouridation & Chlorination **WSSN 2310** **Jan-13**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.64					0.6	0.8	0.7	0.7			0.9	
2			0.66					0.8	0.9	0.9	0.8			0.8	
3			0.68					0.6	0.9	0.8	0.8			0.8	
4			0.67					0.8	0.9	0.9	0.9			0.9	
5			0.61					0.5	0.8	0.7	0.8			0.8	
6			0.62					0.8	0.9	0.8	0.7			0.8	
7			0.68					0.8	1.0	0.8	0.7			0.9	
8			0.69					0.6	1.0	0.8	0.7			0.8	
9			0.60					0.8	0.9	0.8	0.8			0.7	
10			0.67					0.6	0.9	0.8	0.8			0.9	
11			0.71					0.8	1.0	0.8	0.8			0.9	
12			0.65					0.7	0.8	0.7	0.7			0.9	
13			0.66					0.6	0.9	0.8	0.7			0.8	
14			0.70					0.7	0.9	0.8	0.8			0.8	
15			0.71					0.7	0.9	0.9	0.7			0.8	
16			0.69					0.8	0.9	0.9	0.8			0.9	
17			0.60					0.7	0.8	0.8	0.7			0.8	
18			0.69					0.8	0.9	0.8	0.8			0.7	
19			0.66					0.7	0.9	0.8	0.8			0.8	
20			0.64					0.7	0.9	0.8	0.7			0.8	
21			0.68					0.7	0.9	0.8	0.8			0.8	
22			0.65					0.7	0.9	0.8	0.8			0.8	
23			0.65					0.8	0.9	0.8	0.8			0.9	
24			0.63					0.8	1.0	0.9	0.8			0.9	
25			0.63					1.1	1.0	0.9	0.8			1.0	
26			0.65					0.8	1.0	0.8	0.9			0.9	
27			0.63					0.6	1.0	0.8	0.8			0.9	
28			0.60					0.8	0.7	0.9	0.8			0.8	
29			0.57					0.7	1.0	0.8	0.8			0.9	
30			0.62					0.8	1.0	0.9	0.8			0.9	
31			0.55					0.7	0.9	0.9	0.8			0.9	
AVG			0.65					0.7	0.9	0.8	0.8			0.8	
MAX			0.71					1.1	1.0	0.9	0.9			1.0	
MIN			0.55					0.5	0.7	0.7	0.7			0.7	

Chemical Analyses **WSSN 2310** **Jan-13**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.18		98		70		28				29.7		5.8		
2		7.22		98		70		28				29.7		5.8		
3		7.32		100		71		29				29.7		6.3		
4		7.25		100		68		32				29.7		6.3		
5		7.19		100		66		34				28.9		6.8		
6		7.21		100		66		34				28.9		6.8		
7		7.25		100		69		31				29.7		6.3		
8		7.21		100		70		30				29.7		6.3		
9		7.27		100		70		30				29.7		6.3		
10		7.27		98		71		27				29.7		5.8		
11		7.28		98		68		30				29.7		5.8		
12		7.21		100		68		32				29.7		6.3		
13		7.22		98		69		29				28.9		6.3		
14		7.50		98		69		29				28.9		6.3		
15		7.36		98		69		29				28.9		6.3		
16		7.34		98		71		27				29.7		5.8		
17		7.39		100		67		33				29.7		5.8		
18		7.34		100		74		26				29.7		6.3		
19		7.29		100		72		28				28.9		6.8		
20		7.25		98		67		31				29.7		5.8		
21		7.25		98		68		30				29.7		5.8		
22		7.33		98		73		25				28.1		6.8		
23		7.33		96		70		26				28.9		5.8		
24		7.32		96		69		27				28.9		5.8		
25		7.32		98		64		34				28.9		6.3		
26		7.29		92		66		26				26.5		6.3		
27		7.16		98		69		29				29.7		5.8		
28		7.26		98		68		30				29.7		5.8		
29		7.28		100		70		30				36.1		2.4		
30		7.31		98		71		27				34.5		2.9		
31		7.29		98		70		28				36.1		1.9		
AVG		7.28		98		69		29				29.9		5.8		
MAX		7.50		100		74		34				36.1		6.8		
MIN		7.16		92		64		25				26.5		1.9		

Bacteriological & Physical Parameters **WSSN 2310** **Jan-13**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					13.3				
2	1/0		2/0	2/0	2/0	2/0					13.3				
3	1/0		2/0	2/0	2/0	2/0					12.2				
4	1/0		2/0	2/0	2/0	2/0					13.9				
5	1/0		2/0	2/0	2/0	2/0					12.0				
6	1/0		2/0	2/0	2/0	2/0					12.0				
7	1/0		2/0	2/0	2/0	2/0					11.3				
8	1/0		2/0	2/0	2/0	2/0					10.9				
9	1/0		2/0	2/0	2/0	2/0					12.5				
10	1/0		2/0	2/0	2/0	2/0					11.7				
11	1/0		2/0	2/0	2/0	2/0					12.7				
12	1/0		2/0	2/0	2/0	2/0					12.5				
13	1/0		2/0	2/0	2/0	2/0					12.7				
14	1/0		2/0	2/0	2/0	2/0					12.2				
15	1/0		2/0	2/0	2/0	2/0					10.2				
16	1/0		2/0	2/0	2/0	2/0					10.8				
17	1/0		2/0	2/0	2/0	2/0					9.5				
18	1/0		2/0	2/0	2/0	2/0					9.1				
19	1/0		2/0	2/0	2/0	2/0					10.5				
20	2/0		2/0	2/0	2/0	2/0					10.1				
21	1/0		2/0	2/0	2/0	2/0					9.2				
22	1/0		2/0	2/0	2/0	2/0					9.3				
23	1/0		2/0	2/0	2/0	2/0					10.8				
24	1/0		2/0	2/0	2/0	2/0					12.2				
25	1/0		2/0	2/0	2/0	2/0					11.7				
26	1/0		2/0	2/0	2/0	2/0					9.6				
27	1/0		2/0	2/0	2/0	2/0					10.4				
28	1/0		2/0	2/0	2/0	2/0					10.7				
29	1/0		2/0	2/0	2/0	2/0					9.9				
30	1/0		2/0	2/0	2/0	2/0					9.9				
31	1/0		2/0	2/0	2/0	2/0			<2		9.2				
											11.2				
											13.9				
											9.1				

Distribution System Monitoring WSSN 2310 Jan-13

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											0.8	0.8	2
2									0.4	0.6	0.9	0.8	4
3	0.7	0.7	0.6	0.6	0.6	0.7	0.4	0.7	0.4	0.6	0.9	0.8	12
4									0.4		0.9	0.9	3
5											0.8	0.8	2
6											0.9	0.9	2
7									0.5	0.6	1.0	0.9	4
8											1.0	0.9	2
9	0.8	0.7	0.6		0.5	0.6	0.7	0.9	0.4	0.6	0.9	0.9	11
10	0.8	0.7	0.6	0.2	0.6	0.2	0.6	0.7	0.4	0.5	0.9	0.9	12
11									0.3	0.6	1.0	0.9	4
12											0.8	0.8	2
13											0.8	0.9	2
14											0.9	0.9	2
15											0.9	0.9	2
16									0.3	0.5	0.9	0.9	4
17	0.9	0.7	0.7	0.6	0.6	0.5	0.6	0.8	0.4	0.6	0.8	0.8	12
18									0.3	0.6	0.9	0.8	4
19											0.9	0.8	2
20											0.9	0.8	2
21											0.9	0.9	2
22									0.4	0.6	0.9	0.8	4
23									0.3	0.6	0.9	0.9	4
24	0.7	0.7	0.7	0.6	0.6	0.5	0.7	0.7	0.3	0.6	1.0	0.9	12
25									0.2	0.6	1.0	1.0	4
26											1.0	0.9	2
27											0.9	1.0	2
28										0.6	0.6	0.8	3
29											1.0	0.9	2
30	0.9	0.8	0.8	0.5	0.7	0.8	0.7	0.8	0.3	0.5	1.0	0.9	12
31	0.9	0.7	0.8	0.9	0.6	0.6	0.8	0.8	0.5	0.6	0.9	0.9	12

Monthly Cl_2 Avg.	**0.717**
Quarterly Cl_2 Avg.	**0.677**
Yearly Cl_2 Avg.	**0.648**
Total Samples	**149**

Distribution System Monitoring WSSN 2310 Jan-13

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.0	1.0	2
2									0.6	0.8	1.0	0.9	4
3	0.9	0.9	0.7	0.8	0.8	0.9	0.6	0.9	0.6	0.7	1.1	1.0	12
4									0.5		1.1	1.1	3
5											1.0	1.0	2
6											1.0	1.1	2
7									0.6	0.8	1.2	1.1	4
8											1.2	1.0	2
9	1.0	0.9	0.8		0.7	0.7	0.8	1.0	0.5	0.8	1.1	1.0	11
10	0.9	0.8	0.8	0.3	0.7	0.3	0.8	0.9	0.5	0.6	1.1	1.1	12
11									0.4	0.8	1.2	1.1	4
12											1.0	1.0	2
13											1.0	1.1	2
14											1.0	1.0	2
15											1.0	1.1	2
16									0.5	0.7	1.1	1.1	4
17	1.2	0.8	0.8	0.7	0.8	0.6	0.7	1.0	0.5	0.7	1.1	1.1	12
18									0.4	0.8	1.1	1.1	4
19											1.0	1.0	2
20											1.1	1.0	2
21											1.0	1.1	2
22									0.5	0.8	1.1	1.1	4
23									0.4	0.8	1.1	1.1	4
24	0.9	0.8	0.9	0.7	0.7	0.6	0.9	0.9	0.4	0.7	1.1	1.2	12
25									0.4	0.7	1.2	1.2	4
26											1.2	1.1	2
27											1.0	1.1	2
28										0.8	0.8	1.0	3
29											1.2	1.1	2
30	1.1	0.9	1.0	0.8	0.9	1.0	0.9	0.9	0.5	0.8	1.1	1.1	12
31	1.1	0.9	1.0	1.1	0.9	0.7	0.9	1.0	0.6	0.8	1.1	1.1	12

Monthly Cl_2 Avg.	**0.889**
Quarterly Cl_2 Avg.	**0.849**
Yearly Cl_2 Avg.	**0.814**
Total Samples	**149**

ROUTINE POSITIVE DISTRIBUTION SAMPLES

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform

Total number of routine distribution samples analyzed:	**149**
Total number of routine distribution samples required:	**100**

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow
Operator-in-Charge

December 2014
Month/Year

F-1R, F-2
Certification of Operator-in-Charge

F-1
Water Plant Classification

Michael Glasgow
Signature of Operator-in-Charge

Genesee
County

DEQ
RESOURCE MANAGEMENT DIVISION
FEB 06 2015
LANSING DISTRICT

Treatment Rate and Filter Data

Maximum Treatment Rate:	23.8	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	74	Hours
Average Head Loss:	n/a	Feet *(filter head loss meters not operational)
Average Filtration Rate:	2.4	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.2	Gallons Per Square Feet per Minute
Average Wash Water Use:	2.9%	Percent of Treated Water

Chemical Data

Chlorine on hand:	20,000	lb.	Est. supply:	30	days
Primary Coagulant (Ferric Chloride) on hand:	54,000	lb.	Est. supply:	18	days
Lime (CaO) on hand:	296	tons	Est. supply:	34	days
Fluoride on Hand:	16,630	lb.	Est. supply:	35	days
Cost of All Chemicals per Million Gallons:	n/a	dollars			
Total Power Cost per Million Gallons:	n/a	dollars			

Remarks	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	0	0
Number of filter confluence samples collected:	226	226
Percent of filter confluence samples > 0.3 NTU:	0.0%	0.0%
Number of filter confluence samples > 1 NTU	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? **NO**
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? **YES**
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant December 2014 Page 2

WSSN: 2310

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Lime Dosage (mg/L)	PW-340 Cationic Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
						Raw			Plate Settler	Applied
						Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	16.6	12.2	111.7	4.2	1.03	8	5.3	7.8	0.80	3.06
2	16.5	12.4	130.1	4.2	1.03	8	4.4	4.9	0.92	2.02
3	16.2	12.5	130.6	4.4	1.06	8	3.6	3.8	0.75	1.96
4	16.2	12.3	126.7	4.1	1.07	8	3.1	4.1	0.93	2.13
5	19.6	12.3	117.1	3.9	1.04	8	2.2	2.5	1.52	2.19
6	6.4	13.7	117.7	3.7	1.04	3	1.8	1.9	2.50	1.67
7	0.0	0.0	0.0	0.0	0.00	4	3.2	3.7	n/a	n/a
8	0.0	0.0	0.0	0.0	0.00	1	4.0	4.0	n/a	n/a
9	18.4	15.3	116.4	4.2	0.65	8	2.4	2.9	1.24	1.88
10	18.3	15.2	119.7	4.2	0.79	8	2.1	3.7	0.93	1.50
11	18.5	16.2	113.3	4.1	0.86	8	1.7	1.9	0.92	1.54
12	18.6	16.5	113.3	4.1	0.85	8	1.6	1.9	0.91	1.22
13	18.5	16.7	118.1	4.2	0.85	8	1.7	1.8	0.92	1.82
14	18.4	16.6	124.8	4.3	0.86	8	1.9	2.7	0.93	1.73
15	18.5	16.8	119.8	4.3	0.86	8	2.8	3.5	1.06	2.39
16	18.5	16.5	118.5	4.2	0.86	8	2.9	7.2	0.87	1.76
17	18.2	16.6	123.1	4.3	0.87	8	2.0	2.2	0.84	1.88
18	18.3	16.4	130.5	4.3	0.86	8	2.3	4.3	0.87	1.87
19	18.1	16.8	132.8	4.4	0.87	8	1.8	2.0	0.87	1.56
20	16.2	15.1	149.6	4.9	0.84	8	1.8	3.1	0.81	1.65
21	14.9	14.5	116.7	4.9	0.97	8	3.6	5.9	0.80	6.47
22	15.0	14.4	114.9	4.6	0.98	8	3.6	4.0	0.73	2.37
23	15.1	14.3	119.9	5.2	0.96	8	3.7	4.1	0.83	1.59
24	15.1	14.3	136.7	5.1	0.96	8	7.6	17.3	0.75	2.11
25	14.8	14.5	148.3	5.2	1.07	8	9.4	17.1	0.75	2.86
26	15.0	14.2	148.7	5.3	1.06	8	7.9	13.3	0.76	1.36
27	15.0	16.3	145.7	5.2	1.05	8	21.9	23.5	1.05	1.43
28	15.0	17.5	140.0	5.3	1.05	8	21.8	25.6	1.07	1.25
29	15.2	18.2	130.4	5.2	1.04	8	9.7	12.8	0.76	1.08
30	11.8	19.2	139.8	5.6	0.79	8	6.6	7.8	0.53	0.97
31	10.4	19.0	143.9	5.6	0.83	8	5.2	7.1	0.40	1.26
Avg.	15.1	14.4	119.3	4.3	0.87	7	4.95			1.95
Max.	19.6	19.2	149.6	5.6	1.07	8	21.9	25.6	2.50	6.47
Min.	0.0	0.0	0.0	0.0	0.00	1	1.60			0.97
Total	467.3									

Filter turbiditiy

City of Flint Water Treatment Plant

December 2014 Page 3

WSSN: 2310

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	8	0.09	0.11	6	0	0	8	0.09	0.10	6	0	0	0.09
2	8	0.08	0.09	6	0	0	8	0.08	0.09	6	0	0	0.08
3	8	0.08	0.12	6	0	0	8	0.07	0.10	6	0	0	0.07
4	8	0.07	0.10	6	0	0	8	0.07	0.08	6	0	0	0.07
5	8	0.07	0.08	6	0	0	8	0.07	0.09	6	0	0	0.08
6	2	0.10	0.12	2	0	0	2	0.10	0.10	2	0	0	0.08
7	0	n/a	n/a	0	0	0	0	n/a	n/a	0	0	0	0.07
8	0	n/a	n/a	0	0	0	0	n/a	n/a	0	0	0	0.12
9	8	0.09	0.19	6	0	0	8	0.07	0.11	6	0	0	0.08
10	8	0.08	0.14	6	0	0	8	0.06	0.07	6	0	0	0.05
11	8	0.08	0.10	6	0	0	8	0.07	0.10	6	0	0	0.07
12	8	0.09	0.13	6	0	0	8	0.09	0.14	6	0	0	0.07
13	8	0.07	0.10	6	0	0	8	0.07	0.08	6	0	0	0.08
14	8	0.06	0.07	6	0	0	8	0.06	0.07	6	0	0	0.05
15	8	0.06	0.06	6	0	0	8	0.06	0.07	6	0	0	0.06
16	8	0.07	0.08	6	0	0	8	0.06	0.06	6	0	0	0.06
17	8	0.07	0.08	6	0	0	8	0.07	0.08	6	0	0	0.08
18	8	0.07	0.11	6	0	0	8	0.06	0.07	6	0	0	0.07
19	8	0.08	0.13	6	0	0	8	0.06	0.09	6	0	0	0.07
20	8	0.07	0.10	6	0	0	8	0.07	0.09	6	0	0	0.06
21	8	0.06	0.07	6	0	0	8	0.06	0.09	6	0	0	0.07
22	8	0.06	0.07	6	0	0	8	0.07	0.16	6	0	0	0.06
23	8	0.07	0.09	6	0	0	8	0.07	0.12	6	0	0	0.07
24	8	0.06	0.10	6	0	0	8	0.06	0.10	6	0	0	0.06
25	8	0.06	0.09	6	0	0	8	0.06	0.10	6	0	0	0.06
26	8	0.08	0.16	6	0	0	8	0.07	0.15	6	0	0	0.08
27	8	0.08	0.12	6	0	0	8	0.07	0.11	6	0	0	0.07
28	8	0.07	0.11	6	0	0	8	0.05	0.07	6	0	0	0.07
29	8	0.07	0.09	6	0	0	8	0.06	0.07	6	0	0	0.08
30	8	0.06	0.08	6	0	0	8	0.05	0.06	6	0	0	0.06
31	8	0.07	0.09	6	0	0	8	0.06	0.08	6	0	0	0.08
Avg.	7	0.07	0.10	5	0	0	7	0.07	0.09	5	0	0	
Max.	8	0.10	0.19	6	0	0	8	0.10	0.16	6	0	0	0.12
Min.	0	0.06	0.06	0	0	0	0	0.05	0.06	0	0	0	

Fluoridation & Chlorination City of Flint Water Treatment Plant December 2014 Page 4

WSSN: 2310

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.5	0.22	0.71		2.0	3.8	5.8	0.5	0.8	3.0	3.5	3.0	3.5
2	0.5	0.21	0.72		2.0	3.6	5.6	0.7	1.0	3.0	3.5	2.7	3.2
3	0.5	0.23	0.72		2.1	3.0	5.1	0.7	1.0	2.7	3.2	2.5	2.9
4	0.5	0.21	0.73	0.64	2.0	3.0	5.0	0.6	0.8	3.0	3.5	2.4	2.8
5	0.4	0.21	0.68		1.9	3.0	4.9	0.6	0.8	2.7	3.2	2.2	2.5
6	0.5	0.22	0.77		1.9	3.0	4.9	0.4	0.6	3.1	3.5	2.1	2.5
7	0.0	0.22	0.70		0.0	0.0	0.0	n/a	n/a	3.0	3.5	2.4	2.8
8	0.0	0.22	0.71		0.0	0.0	0.0	n/a	n/a	2.9	3.2	2.6	2.9
9	0.4	0.24	0.67	0.65	2.0	2.3	4.3	0.6	0.8	2.2	2.9	2.7	3.1
10	0.4	0.22	0.71		1.8	2.7	4.5	0.5	0.8	2.6	2.9	2.4	2.7
11	0.4	0.24	0.69		1.8	2.8	4.6	0.5	0.7	2.5	3.1	2.4	2.8
12	0.4	0.21	0.64		1.8	2.7	4.5	0.6	0.8	2.4	2.9	2.0	2.3
13	0.4	0.21	0.63		2.0	2.6	4.6	0.6	0.8	3.0	3.5	2.6	2.9
14	0.4	0.20	0.64		2.0	2.6	4.6	0.7	1.0	2.9	3.2	2.9	3.1
15	0.4	0.24	0.64		2.0	2.6	4.6	0.7	0.9	2.8	3.0	2.6	2.9
16	0.4	0.24	0.63	0.60	2.0	2.6	4.6	0.7	0.9	2.8	3.0	2.3	2.5
17	0.4	0.22	0.63		2.0	2.6	4.6	0.7	0.9	2.7	3.0	2.4	3.0
18	0.4	0.21	0.59		2.0	2.7	4.7	0.6	0.8	2.6	3.0	2.1	2.4
19	0.4	0.21	0.58		2.1	2.6	4.7	0.7	0.9	3.0	3.3	2.6	3.1
20	0.4	0.20	0.61		1.9	2.6	4.5	0.6	0.8	2.6	3.1	2.0	2.5
21	0.4	0.22	0.62		1.3	2.4	3.7	0.6	0.8	2.8	3.0	2.6	2.8
22	0.4	0.22	0.63		2.0	2.6	4.6	0.9	1.1	2.7	3.1	2.6	3.0
23	0.4	0.23	0.63	0.64	1.9	3.1	5.0	0.6	0.9	2.9	3.2	2.5	2.9
24	0.4	0.20	0.63		1.9	3.0	4.9	0.9	1.1	2.8	3.0	2.3	2.7
25	0.4	0.21	0.63		1.9	3.1	5.0	0.5	0.7	2.6	3.0	1.7	2.2
26	0.4	0.23	0.69		2.0	2.8	4.8	0.6	0.7	2.8	3.1	2.3	2.6
27	0.4	0.19	0.60		2.1	2.8	4.9	0.7	0.9	2.9	3.5	1.9	2.5
28	0.4	0.20	0.67		1.9	3.0	4.9	0.6	0.9	2.7	3.0	2.4	2.7
29	0.4	0.21	0.62		1.9	3.0	4.9	0.6	0.9	2.7	3.0	2.7	3.0
30	0.4	0.20	0.60	0.54	1.9	3.1	5.0	0.6	0.9	2.7	2.9	1.9	2.5
31	0.4	0.22	0.63		1.9	3.3	5.2	0.8	1.1	2.7	3.1	2.8	3.1
Avg.	0.39	0.22	0.66	0.61	1.8	2.7	4.5	0.6	0.9	2.8	3.2	2.4	2.8
Max.	0.50	0.24	0.77	0.65	2.1	3.8	5.8	0.9	1.1	3.1	3.5	3.0	3.5
Min.	0.00	0.19	0.58	0.54	0.0	0.0	0.0	0.4	0.6	2.2	2.9	1.7	2.2

Chemical Analyses

City of Flint Water Treatment Plant

December 2014

WSSN: 2310

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.25	7.82	303	204	248	109	55	95	97.8	63.3	14.6	11.7	47	77
2	8.12	8.27	303	193	248	97	55	96	98.6	54.5	14.1	13.6	47	77
3	8.21	8.25	307	192	243	96	64	96	113.8	64.1	5.8	7.8	47	75
4	8.42	7.84	312	193	257	97	55	96	103.4	55.3	13.6	13.6	48	76
5	8.21	8.23	314	197	257	98	57	99	109.0	65.7	9.7	7.8	45	74
6	8.27	8.34	314	210	254	115	60	95	109.8	69.7	9.7	8.3	47	74
7	8.43	8.08	326	203	265	102	61	101	103.4	58.5	16.5	13.6	47	78
8	8.35	8.00	326	197	268	93	58	104	107.4	56.9	14.1	13.1	48	77
9	8.33	7.95	324	200	263	97	61	103	121.0	71.3	6.3	5.8	48	77
10	8.23	7.95	329	190	269	81	60	109	106.6	53.7	15.1	12.6	48	82
11	8.17	7.95	321	190	261	88	60	102	111.4	68.1	10.2	4.9	48	79
12	8.13	8.33	324	197	260	95	64	102	116.2	70.5	8.3	2.9	49	81
13	8.13	7.41	322	208	261	100	61	108	119.4	75.4	6.3	4.9	48	83
14	8.18	8.16	334	206	270	97	64	109	101.0	55.3	20.4	16.5	48	81
15	8.24	8.18	328	207	269	102	59	105	97.0	59.3	19.9	14.1	50	83
16	8.29	8.37	324	200	269	95	55	105	103.4	55.3	16.0	14.6	48	82
17	8.22	8.18	321	201	261	89	60	112	107.4	65.7	12.2	9.2	44	85
18	8.24	8.15	325	203	264	91	61	112	108.2	60.9	13.6	12.2	48	82
19	7.99	8.03	319	199	258	91	61	108	117.0	69.7	6.8	5.8	48	84
20	8.23	7.90	318	196	252	90	66	106	116.2	70.5	7.3	4.9	48	83
21	8.31	8.20	317	173	260	77	57	96	99.4	51.3	17.0	9.7	45	78
22	8.31	8.35	319	177	266	72	53	105	102.6	48.1	15.1	14.1	47	80
23	8.25	8.22	322	168	263	71	59	97	121.0	52.9	15.1	7.8	49	79
24	8.27	8.49	323	179	264	72	59	107	108.2	54.5	12.6	10.2	46	79
25	8.28	8.12	312	183	255	72	57	111	109.0	63.3	10.2	6.3	49	82
26	8.25	8.18	307	182	248	79	59	103	109.0	65.7	9.7	3.9	46	81
27	8.21	8.07	289	173	232	76	57	97	102.6	64.1	8.3	4.9	44	80
28	8.26	8.03	290	174	235	67	55	107	95.4	52.1	13.1	10.7	42	82
29	8.29	7.62	313	184	251	75	62	109	101.0	53.7	15.1	11.7	43	83
30	8.17	7.77	319	197	257	84	62	113	107.4	60.9	12.2	10.7	46	84
31	8.17	7.67	320	181	260	60	60	121	117.8	69.7	7.3	1.9	48	87
Avg.	8.24	8.07	317	192	258	88	59	104	107.8	61.3	12.1	9.3	47	80
Max.	8.43	8.49	334	210	270	115	66	121	121.0	75.4	20.4	16.5	50	87
Min.	7.99	7.41	289	168	232	60	53	95	95.4	48.1	5.8	1.9	42	74

Bacteriological & Physical Parameters

City of Flint Water Treatment Plant

WSSN: 2310

December 2014

Date	Total Coliform						Standard Plate Count (Simplate MPN)		Conductivity (mS)	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap	Tap	Raw	Raw	Tap	Raw	Tap
1	1	24066	12	0	1	0	> 14760	4	0.38	5.1				
2	1	18416	12	0	1	0	2320	2	0.38	6.4				
3	1	6152	12	0	1	0	1360	4	0.37	5.6				
4	1	2324	12	0	1	0	1020	< 2	0.38	5.4				
5	1	852	12	0	1	0	340	< 2	0.38	6.1				
6	1	518	4	0	1	0	40	2	0.40	7.2				
7	1	194	0	0	1	0	80	< 2	0.38	1.4				
8	1	350	0	0	1	0	240	< 2	0.38	3.3				
9	1	342	12	0	1	0	120	< 2	0.40	4.8				
10	1	346	12	0	1	0	240	< 2	0.38	6.5				
11	1	62	12	0	1	0	120	< 2	0.38	4.9				
12	1	40	12	0	1	0	< 2	< 2	0.39	6.0				
13	1	82	12	0	1	0	160	< 2	0.32	6.4				
14	1	40	12	0	1	0	80	2	0.39	5.6				
15	1	20	12	0	1	0	40	< 2	0.40	5.9				
16	1	219	12	0	1	0	> 14760	< 2	0.40	6.0				
17	1	83	12	0	1	0	166	< 2	0.39	6.3				
18	1	88	12	0	1	0	161	< 2	0.40	5.8				
19	1	56	12	0	1	0	116	2	0.39	6.4				
20	1	68	12	0	1	0	156	< 2	0.35	7.0				
21	1	248	12	0	1	0	137	< 2	0.36	3.9				
22	1	308	12	0	1	0	216	< 2	0.36	3.4				
23	1	1300	12	0	1	0	324	< 2	0.35	4.5				
24	1	1300	12	0	1	0	324	< 2	0.36	6.4				
25	1	687	12	0	1	0	470	< 2	0.37	7.4				
26	1	1986	12	0	1	0	392	< 2	0.36	5.1				
27	1	> 2419	12	0	1	0	> 738	< 2	0.37	5.6				
28	1	> 48392	12	0	1	0	9400	2	0.36	4.5				
29	1	39732	12	0	1	0	2640	< 2	0.37	4.0				
30	1	4286	12	0	1	0	560	< 2	0.37	2.2				
31	1	1976	12	0	1	0	300	< 2	0.37	2.6				
Avg.									0.38	5.2				
Max.							9400	4	0.40	7.4				
Min.									0.32	1.4				

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1									2.8	0.7	2
2	0.2	2.0	1.9	1.8	1.2	0.1	1.2	2.1	1.6	1.8	10
3	0.9	1.7	1.9	1.6	1.0	0.1	1.5	1.8	1.8	2.0	10
4	0.6	1.1	1.6	1.7	0.9	0.1	1.4	1.8	1.3	1.7	10
5											0
6											0
7											0
8									0.4	0.4	2
9	0.9	0.1	1.4	0.2	0.1	0.2	1.7	2.5	0.3	1.2	10
10	0.7	0.2	1.8	1.7	0.2	0.2	1.5	1.9	1.6	0.8	10
11	0.6	0.5		1.4	0.8	0.1	1.5	1.8	1.5	0.9	9
12											0
13											0
14											0
15									0.8	1.6	2
16	0.7	1.7	1.5	1.6	0.7	0.2	0.8	1.8	1.3	2.1	10
17	0.6	0.8	1.4	1.5	0.7	0.1	0.8	1.8	1.1	1.4	10
18	0.8	1.5	1.5	1.5	0.5	0.2	1.5	1.8	1.2	1.3	10
19	0.5	1.7	1.7	1.3	0.8	0.1			0.9	1.0	8
20											0
21											0
22											0
23	0.7	1.5	1.3	1.5	0.8	0.3	1.5	1.8	1.8	0.3	10
24	0.6	1.1	2.1	0.6	0.5	0.5	1.0	2.0	0.7	1.2	10
25											0
26											0
27											0
28											0
29											0
30	0.6	0.4	1.7	1.5	0.8	0.3	1.2	2.0		1.4	9
31											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	132
Total # of routine distribution samples required	100

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	0
Percent of routine distribution samples positive	0%

See page 9 for positive sample information.

Distribution Disinfectant Total Residual Summary	
Percentage of samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.1

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1									3.2	1.0	2
2	0.4	2.6	2.5	2.1	1.5	0.2	1.5	2.5	2.1	2.0	10
3	1.2	2.0	2.1	1.9	1.3	0.4	1.8	2.1	2.1	2.3	10
4	1.0	1.4	1.9	2.0	1.3	0.2	1.7	2.1	1.5	1.9	10
5											0
6											0
7											0
8									0.5	0.6	2
9	1.3	0.2	1.6	0.4	0.3	0.4	1.9	2.7	0.5	1.5	10
10	1.1	0.3	2.1	2.0	0.3	0.3	1.7	2.2	1.9	1.1	10
11	1.0	0.5	1.5	2.0	0.8	0.3	2.1	1.9	2.0	2.0	10
12	0.9	0.8		1.6	1.0	0.3	1.7	2.0	1.8	1.2	9
13											0
14											0
15									1.1	1.9	2
16	0.9	2.1	1.8	1.8	1.0	0.3	1.0	2.3	1.5	2.4	10
17	0.8	1.1	1.7	1.8	1.0	0.3	1.0	2.1	1.4	1.8	10
18	1.0	1.7	1.7	1.8	0.8	0.2	1.7	2.0	1.4	1.6	10
19	0.8	1.9	1.9	1.5	1.1	0.3			1.2	1.3	8
20											0
21											0
22											0
23	1.0	1.7	1.6	1.7	1.1	0.5	1.7	2.1	2.0	0.6	10
24	0.8	1.2	2.3	0.8	0.7	0.8	1.2	2.3	0.9	1.4	10
25											0
26											0
27											0
28											0
29											0
30	0.8	0.5	1.9	1.7	1.1	0.5	1.4	2.4		1.6	9
31											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.4

Positive Distribution Samples

Date	Monitoring station	Date	Repeat Monitoring Stations	Residual (mg/L) Free / Total	Present or Absent

003425

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow	**November 2014**
Operator-in-Charge	Month/Year
F-1R, F-2	**F-1**
Certification of Operator-in-Charge	Water Plant Classification
Michael Glasgow	**Genesee**
Signature of Operator-in-Charge	County

DEQ
RESOURCE MANAGEMENT DIVISION
DEC 15 2014
LANSING DISTRICT

Treatment Rate and Filter Data

Maximum Treatment Rate:	18.7	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	76	Hours
Average Head Loss:	n/a	Feet *(filter head loss meters not operational)
Average Filtration Rate:	2.1	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.2	Gallons Per Square Feet per Minute
Average Wash Water Use:	3.2%	Percent of Treated Water

Chemical Data

Chlorine on hand:	12,000	lb.	Est. supply:	15	days
Primary Coagulant (Ferric Chloride) on hand:	194,500	lb.	Est. supply:	22	days
Lime (CaO) on hand:	393	tons	Est. supply:	38	days
Fluoride on Hand:	15,000	lb.	Est. supply:	40	days
Cost of All Chemicals per Million Gallons:	n/a	dollars			
Total Power Cost per Million Gallons:	n/a	dollars			

Remarks	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	0	0
Number of filter confluence samples collected:	227	227
Percent of filter confluence samples > 0.3 NTU:	0.0%	0.0%
Number of filter confluence samples > 1 NTU	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? **NO**
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? **YES**
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

COMPLETED

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant November 2014 Page 2

WSSN: 2310

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Lime Dosage (mg/L)	PW-340 Catioinc Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
						Raw			Plate Settler	Applied
						Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	17.9	8.1	141.8	3.0	0.88	8	7.3	8.5	0.67	1.13
2	17.7	8.7	135.0	2.9	0.89	8	12.1	33.4	1.04	1.47
3	15.9	9.8	141.5	3.0	0.90	8	7.7	11.3	0.63	1.69
4	14.1	9.1	162.2	3.4	0.94	8	7.5	9.2	0.51	1.61
5	13.7	9.1	167.6	3.6	0.98	8	7.0	8.1	0.47	1.39
6	13.7	8.7	160.9	3.5	0.98	8	8.1	9.3	0.52	1.42
7	13.6	8.7	144.6	3.7	0.98	8	7.1	7.4	0.51	1.48
8	13.6	8.7	147.9	4.0	0.98	8	7.3	8.1	0.55	1.81
9	13.5	8.8	136.8	4.0	0.99	8	7.8	11.2	0.54	1.16
10	13.3	9.0	140.0	4.0	1.00	8	7.9	12.2	0.68	1.77
11	12.6	9.3	148.5	4.0	1.03	8	6.7	7.7	0.51	7.80
12	12.5	9.4	133.0	4.2	0.87	8	7.9	18.8	0.47	4.48
13	13.3	8.9	138.5	4.0	0.81	8	5.9	6.6	0.58	2.42
14	14.3	8.0	139.0	3.8	0.77	8	5.3	5.8	0.80	2.29
15	14.4	8.4	142.4	3.9	0.77	8	4.9	5.4	1.01	1.11
16	14.5	8.8	135.2	3.7	0.75	8	6.5	14.1	1.02	1.81
17	12.0	8.6	126.8	3.2	0.65	8	7.4	16.6	0.69	3.78
18	6.0	8.4	132.8	2.9	0.52	8	9.1	36.3	0.81	5.92
19	17.8	10.0	104.7	3.3	0.61	8	4.0	4.4	1.09	2.33
20	17.8	10.7	102.7	3.4	0.61	8	4.1	6.8	1.15	1.83
21	17.6	10.9	104.7	3.6	0.69	8	2.9	3.7	0.89	1.42
22	17.7	10.7	100.9	3.6	0.86	8	2.5	2.9	0.93	2.24
23	17.7	10.9	97.8	3.0	0.59	8	4.5	6.2	1.16	3.32
24	17.7	10.7	88.8	3.0	0.55	8	8.5	27.2	1.13	2.92
25	17.1	11.0	94.1	3.5	0.49	8	4.5	5.1	0.76	3.20
26	16.8	10.0	95.9	3.4	0.39	8	3.7	5.9	0.77	2.31
27	10.9	10.4	92.1	3.7	0.78	8	4.3	9.3	0.84	7.47
28	16.8	9.9	99.7	4.1	1.03	8	3.1	3.3	0.92	1.45
29	16.8	12.2	100.4	4.0	1.03	8	3.8	4.2	0.88	1.15
30	16.7	12.3	96.5	4.3	1.03	8	5.8	16.0	1.00	2.23
Avg.	14.9	9.6	125.1	3.6	0.81	8	6.17			2.55
Max.	17.9	12.3	167.6	4.3	1.03	8	12.1	36.3	1.16	7.80
Min.	6.0	8.0	88.8	2.9	0.39	8	2.50			1.11
Total	448.0									

Filter turbiditiy

City of Flint Water Treatment Plant

November 2014 Page 3

WSSN: 2310

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	8	0.09	0.14	6	0	0	8	0.10	0.12	6	0	0	0.11
2	8	0.10	0.13	6	0	0	8	0.09	0.11	6	0	0	0.10
3	8	0.10	0.13	6	0	0	8	0.10	0.13	6	0	0	0.11
4	8	0.10	0.11	6	0	0	8	0.11	0.13	6	0	0	0.12
5	8	0.08	0.11	6	0	0	8	0.08	0.09	6	0	0	0.09
6	8	0.09	0.11	6	0	0	8	0.09	0.11	6	0	0	0.11
7	8	0.10	0.12	6	0	0	8	0.10	0.12	6	0	0	0.12
8	8	0.10	0.17	6	0	0	8	0.09	0.12	6	0	0	0.11
9	8	0.11	0.13	6	0	0	8	0.10	0.13	6	0	0	0.11
10	8	0.11	0.15	6	0	0	8	0.10	0.15	6	0	0	0.12
11	8	0.10	0.18	6	0	0	8	0.09	0.14	6	0	0	0.11
12	8	0.10	0.14	6	0	0	8	0.08	0.10	6	0	0	0.10
13	8	0.08	0.09	6	0	0	8	0.07	0.09	6	0	0	0.09
14	8	0.07	0.09	6	0	0	8	0.07	0.09	6	0	0	0.09
15	8	0.07	0.08	6	0	0	8	0.07	0.09	6	0	0	0.08
16	8	0.07	0.09	6	0	0	8	0.08	0.13	6	0	0	0.08
17	5	0.07	0.09	5	0	0	5	0.07	0.09	5	0	0	0.07
18	2	0.10	0.12	2	0	0	2	0.08	0.10	2	0	0	0.07
19	8	0.08	0.10	6	0	0	8	0.07	0.09	6	0	0	0.07
20	8	0.08	0.10	6	0	0	8	0.06	0.07	6	0	0	0.07
21	8	0.08	0.09	6	0	0	8	0.07	0.09	6	0	0	0.08
22	8	0.08	0.12	6	0	0	8	0.07	0.09	6	0	0	0.07
23	8	0.08	0.08	6	0	0	8	0.08	0.09	6	0	0	0.07
24	8	0.08	0.12	6	0	0	8	0.08	0.09	6	0	0	0.08
25	8	0.09	0.12	6	0	0	8	0.08	0.10	6	0	0	0.07
26	8	0.09	0.10	6	0	0	8	0.08	0.10	6	0	0	0.07
27	4	0.08	0.09	4	0	0	4	0.07	0.09	4	0	0	0.07
28	8	0.08	0.09	6	0	0	8	0.08	0.11	6	0	0	0.06
29	8	0.08	0.08	6	0	0	8	0.08	0.15	6	0	0	0.06
30	8	0.09	0.11	6	0	0	8	0.09	0.11	6	0	0	0.08
Avg.	8	0.09	0.11	6	0	0	8	0.08	0.11	6	0	0	
Max.	8	0.11	0.18	6	0	0	8	0.11	0.15	6	0	0	0.12
Min.	2	0.07	0.08	2	0	0	2	0.06	0.07	2	0	0	

Fluoridation & Chlorination City of Flint Water Treatment Plant November 2014 Page 4

WSSN: 2310

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.50	0.18	0.64		2.4	3.6	6.0	0.8	1.1	3.2	3.5	2.4	2.9
2	0.50	0.21	0.73		2.2	3.3	5.4	0.9	1.3	3.2	3.5	3.0	3.5
3	0.50	0.21	0.76		2.4	3.5	5.9	0.9	1.3	3.2	3.5	3.2	3.5
4	0.45	0.22	0.72	0.69	2.5	3.5	6.0	0.8	1.1	3.2	3.5	2.9	3.3
5	0.45	0.22	0.70		2.4	3.2	5.6	0.9	1.1	3.2	3.5	2.1	2.5
6	0.45	0.22	0.72		2.3	3.6	5.9	0.7	1.0	3.2	3.5	2.4	2.8
7	0.45	0.22	0.75		2.4	4.1	6.5	0.8	1.1	2.5	3.1	1.8	2.4
8	0.40	0.23	0.69		2.3	3.9	6.2	0.9	1.1	3.0	3.5	2.5	2.9
9	0.40	0.23	0.67		2.2	3.8	6.0	0.8	1.0	3.0	3.5	3.0	3.5
10	0.40	0.22	0.63		2.2	4.1	6.3	0.7	1.0	3.0	3.5	3.0	3.5
11	0.45	0.26	0.71	0.68	1.6	4.2	5.8	0.8	1.1	3.0	3.5	3.0	3.5
12	0.40	0.21	0.63		1.7	3.6	5.3	0.8	1.0	2.6	3.0	2.1	2.5
13	0.35	0.21	0.55		2.1	3.6	5.7	0.8	1.1	3.0	3.5	2.9	3.2
14	0.40	0.22	0.58		2.0	3.7	5.7	0.8	1.1	3.2	3.5	2.3	3.0
15	0.40	0.23	0.61		1.8	3.7	5.5	0.7	0.9	3.0	3.5	2.5	3.0
16	0.35	0.21	0.54		1.8	3.7	5.5	0.5	0.8	3.2	3.5	2.7	3.0
17	0.35	0.22	0.63		1.6	3.5	5.1	0.5	0.8	3.2	3.5	2.9	3.2
18	0.35	0.22	0.61	0.59	1.9	2.9	4.8	0.2	0.3	3.0	3.2	2.8	3.3
19	0.30	0.22	0.46		1.9	2.9	4.8	0.5	0.8	2.5	3.0	2.2	2.8
20	0.40	0.22	0.60		1.9	3.0	4.9	0.5	0.7	3.0	3.4	2.1	2.4
21	0.45	0.21	0.66		1.8	2.9	4.7	0.6	0.9	2.7	3.1	2.2	2.6
22	0.40	0.20	0.61		2.0	3.0	5.0	0.5	0.8	2.5	3.0	2.0	2.5
23	0.35	0.21	0.59		2.1	2.8	4.9	0.6	0.9	3.0	3.5	2.7	3.2
24	0.40	0.21	0.62		2.0	2.7	4.7	0.8	1.1	2.8	3.2	2.7	3.2
25	0.40	0.23	0.64		2.2	2.8	5.0	0.7	1.0	2.6	3.1	2.4	3.0
26	0.40	0.22	0.63		2.0	2.7	4.7	0.7	1.0	2.9	3.4	2.5	2.9
27	0.40	0.22	0.63		1.5	2.6	4.1	0.7	1.0	3.0	3.5	2.8	3.2
28	0.40	0.20	0.61		2.0	2.9	4.9	0.7	0.9	2.7	3.3	2.1	2.6
29	0.40	0.21	0.62		2.1	3.3	5.4	0.6	0.8	2.4	3.1	2.2	2.5
30	0.40	0.21	0.69		2.1	3.8	5.9	0.6	0.9	3.0	3.5	3.0	3.5
Avg.	0.41	0.22	0.64	0.65	2.0	3.4	5.4	0.7	1.0	2.9	3.4	2.5	3.0
Max.	0.50	0.26	0.76	0.69	2.5	4.2	6.5	0.9	1.3	3.2	3.5	3.2	3.5
Min.	0.30	0.18	0.46	0.59	1.5	2.6	4.1	0.2	0.3	2.4	3.0	1.8	2.4

Chemical Analyses

City of Flint Water Treatment Plant — November 2014 — Page 5

WSSN: 2310

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.32	7.75	281	168	225	91	56	77	101.8	64.1	6.8	1.0	45	67
2	8.43	8.17	286	163	238	81	48	82	89.8	47.3	15.1	10.7	44	67
3	8.41	8.11	285	175	230	84	55	91	93.0	49.7	12.6	11.7	45	70
4	8.39	7.29	285	172	233	78	52	94	93.0	54.5	13.1	9.2	46	70
5	8.41	7.61	290	162	240	81	50	81	90.6	51.3	15.6	8.7	49	72
6	8.40	7.72	288	160	235	81	53	79	89.0	46.5	15.6	9.2	46	69
7	8.41	7.71	289	167	236	82	53	85	102.6	59.9	8.3	4.9	45	68
8	8.41	7.77	291	164	232	78	59	86	102.6	60.1	8.3	3.4	47	69
9	8.46	7.80	297	160	236	78	61	82	86.6	42.5	19.4	13.1	48	71
10	8.44	7.82	294	166	241	83	53	83	93.0	43.3	14.6	14.1	47	70
11	8.52	8.09	296	168	237	84	59	84	107.4	60.1	7.3	3.4	48	70
12	8.50	7.81	297	167	244	81	53	86	96.2	50.5	13.1	9.2	45	71
13	8.51	7.39	300	163	241	78	59	85	112.2	59.3	4.9	4.4	48	70
14	8.53	7.59	301	148	241	60	60	88	115.4	59.3	3.4	1.5	46	69
15	8.54	7.77	302	146	235	64	67	82	109.0	52.1	7.8	4.9	47	68
16	8.54	8.13	301	149	247	64	54	85	100.2	41.7	11.7	10.2	49	72
17	8.57	7.57	313	152	249	64	64	88	101.8	40.9	13.6	11.2	47	71
18	8.48	7.53	307	152	254	70	53	82	95.4	44.9	17.5	8.7	47	72
19	8.51	7.59	308	183	248	90	60	93	104.2	65.7	11.7	3.9	47	68
20	8.42	7.50	313	187	248	95	65	92	104.2	64.9	12.2	5.8	47	73
21	8.31	8.14	310	191	251	100	59	91	113.8	70.5	6.8	2.9	47	72
22	8.31	7.92	308	202	249	113	59	89	103.4	68.9	12.2	6.8	48	74
23	8.38	7.97	321	213	252	122	69	91	101.0	64.1	17.0	12.6	48	76
24	8.36	8.34	312	211	246	121	66	90	85.0	56.1	23.8	18.0	50	75
25	8.25	7.85	311	209	250	111	61	98	105.0	70.1	11.2	6.8	50	75
26	8.22	8.29	311	196	251	108	60	88	107.4	71.3	10.2	4.4	47	72
27	8.40	8.24	310	189	255	100	55	89	99.4	54.5	14.6	12.6	48	72
28	8.32	8.23	304	179	248	100	56	79	116.2	64.9	3.9	1.0	48	69
29	8.16	8.45	302	192	245	102	57	90	109.8	64.1	7.3	7.3	47	72
30	8.20	8.04	309	197	149	102	160	95	102.6	61.7	12.6	10.2	46	77
Avg.	8.40	7.87	301	175	240	88	61	87	101.1	56.8	11.7	7.7	47	71
Max.	8.57	8.45	321	213	255	122	160	98	116.2	71.3	23.8	18.0	50	77
Min.	8.16	7.29	281	146	149	60	48	77	85.0	40.9	3.4	1.0	44	67

Bacteriological & Physical Parameters

City of Flint Water Treatment Plant
WSSN: 2310

November 2014

Date	Total Coliform						Standard Plate Count (Simplate MPN)		Conductivity (mS)	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap	Tap	Raw	Raw	Tap	Raw	Tap
1	1	564	12	0	1	0	860	< 2	0.39	10.8				
2	1	654	12	0	1	0	1060	< 2	0.38	8.8				
3	1	296	12	0	1	0	190	< 2	0.39	8.9				
4	1	218	12	0	1	0	160	< 2	0.36	9.6				
5	1	486	12	0	1	0	3780	< 2	0.36	9.0				
6	1	194	12	0	1	0	3660	< 2	0.36	9.8				
7	1	268	12	0	1	0	1770	< 2	0.40	10.2				
8	1	194	12	0	1	0	4180	< 2	0.37	9.3				
9	1	296	12	0	1	0	3420	< 2	0.39	8.1				
10	1	172	12	0	1	0	4460	2	0.40	8.8				
11	1	296	12	0	1	0	1720	< 2	0.40	8.3				
12	1	218	12	0	1	0	1600	< 2	0.37	7.7				
13	1	40	12	0	1	0	1420	< 2	0.39	7.0				
14	1	126	12	0	1	0	800	< 2	0.37	6.4				
15	1	104	12	0	1	0	420	< 2	0.37	6.3				
16	1	82	12	0	1	0	560	< 2	0.36	5.5				
17	1	104	10	0	1	0	340	< 2	0.37	4.7				
18	1	104	4	0	1	0	160	< 2	0.33	4.0				
19	1	40	12	0	1	0	40	< 2	0.40	4.9				
20	1	40	12	0	1	0	520	< 2	0.41	5.3				
21	1	20	12	0	1	0	80	2	0.42	5.4				
22	1	82	12	0	1	0	80	< 2	0.44	5.9				
23	1	168	12	0	1	0	340	2	0.46	5.8				
24	1	768	12	0	1	0	660	< 2	0.46	6.4				
25	1	596	12	0	1	0	420	< 2	0.46	6.2				
26	1	1008	12	0	1	0	340	< 2	0.43	5.6				
27	1	1240	8	0	1	0	460	2	0.36	5.1				
28	1	7308	12	0	1	0	2240	< 2	0.37	5.4				
29	1	9768	12	0	1	0	3120	< 2	0.38	6.3				
30	1	19608	12	0	1	0	5140	< 2	0.37	6.5				
Avg.									0.39	7.1				
Max.							5140	2	0.46	10.8				
Min.									0.33	4.0				

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3											0
4	0.4	1.6	1.2	1.5	0.8	0.1	0.3	1.9	0.8	1.8	10
5											0
6	0.3	1.2	1.1	1.6	1.0	0.1	0.2	1.5	1.5	1.0	10
7											0
8											0
9											0
10											0
11	0.5	1.4	1.7	1.8	0.9	0.1	0.5	1.8	1.2	2.0	10
12	0.1	1.0	1.1	1.6	0.5	0.1	0.1	2.7	0.8	0.7	10
13	0.5	1.1	1.5	1.8	0.3	0.1	0.5	2.2	1.7	0.5	10
14									0.6	1.8	2
15											0
16											0
17										1.3	1
18	0.1	0.3	1.7	0.4	0.4	0.1	0.2	1.7	0.3	0.7	10
19	0.5	0.3	1.3	1.8	0.5	0.1	1.0	1.8	3.5	1.5	10
20	0.7	1.3	1.4	1.9	0.5	0.1	0.7	1.7	1.7	1.8	10
21											0
22											0
23											0
24									1.1	0.5	2
25	0.5	1.6	1.6	0.9	0.3	0.1	1.5	1.5	0.9	1.6	10
26	0.6	0.7	1.9	1.7	1.0	0.2	0.6	1.7	1.8	1.7	10
27											0
28	0.1	0.8	1.5	1.4	0.6	0.6	1.5	1.7	0.7	1.4	10
29											0
30											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	115
Total # of routine distribution samples required	100

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	0
Percent of routine distribution samples positive	0%

Distribution Disinfectant Total Residual Summary	
Percentage of samples with a detectable disinfectant residual	97%
Average disinfectant residual this month	1.0

See page 9 for positive sample information.

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3											0
4	0.7	1.8	1.4	1.7	1.0	1.5	0.5	2.3	1.2	2.1	10
5											0
6	0.5	1.5	1.5	1.9	1.3	0.2	0.3	2.0	1.8	1.4	10
7											0
8											0
9											0
10											0
11	0.9	1.7	2.2	2.1	1.3	0.2	0.8	2.2	1.5	2.3	10
12	0.3	1.3	1.4	1.9	0.8	0.2	0.3	3.2	1.1	1.0	10
13	0.8	1.5	1.8	2.0	0.5	0.2	0.9	2.5	2.0	0.8	10
14									0.8	2.1	2
15											0
16											0
17										1.6	1
18	0.2	0.5	2.0	0.6	0.6	0.2	0.3	2.2	0.5	1.0	10
19	0.8	0.5	1.7	2.3	0.8	0.4	1.4	2.2	3.5	1.8	10
20	1.0	1.6	1.7	2.2	0.8	0.2	1.1	2.1	1.9	2.4	10
21											0
22											0
23											0
24									1.4	0.8	2
25	0.8	1.9	2.0	1.3	0.6	0.3	1.8	1.8	1.3	2.0	10
26	1.1	1.0	1.7	2.1	1.3	0.3	0.9	2.1	2.1	2.0	10
27											0
28	0.2	1.2	1.8	1.7	0.9	0.9	1.8	2.1	1.1	1.7	10
29											0
30											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.3

Positive Distribution Samples

Date	Monitoring station	Date	Repeat Monitoring Stations	Residual (mg/L) Free / Total	Present or Absent

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow	**October 2014**
Operator-in-Charge	Month/Year
F-1R, F-2	**F-1**
Certification of Operator-in-Charge	Water Plant Classification
Michael Glasgow	**Genesee**
Signature of Operator-in-Charge	County

DEQ
RESOURCE MANAGEMENT DIVISION
NOV 17 2014
LANSING DISTRICT

Treatment Rate and Filter Data

Maximum Treatment Rate:	23.3	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	84	Hours
Average Head Loss:	n/a	Feet *(filter head loss meters not operational)
Average Filtration Rate:	1.9	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.3	Gallons Per Square Feet per Minute
Average Wash Water Use:	2.7%	Percent of Treated Water

Chemical Data

Chlorine on hand:	20,000	lb.	Est. supply:	25	days
Primary Coagulant (Ferric Chloride) on hand:	133,600	lb.	Est. supply:	16	days
Lime (CaO) on hand:	239	tons	Est. supply:	24	days
Fluoride on Hand:	10,000	lb.	Est. supply:	27	days
Cost of All Chemicals per Million Gallons:	n/a	dollars			
Total Power Cost per Million Gallons:	n/a	dollars			

Remarks	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	0	0
Number of filter confluence samples collected:	246	246
Percent of filter confluence samples > 0.3 NTU:	0.0%	0.0%
Number of filter confluence samples > 1 NTU	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? **NO**
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? **YES**
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

COMPLETED

Data entered

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant October 2014 Page 2

WSSN: 2310

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Lime Dosage (mg/L)	PW-340 Cationic Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
						Raw			Plate Settler	Applied
						Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	15.6	7.3	140.2	3.3	0.82	7	10.9	21.4	0.50	1.28
2	14.2	6.6	142.1	2.8	0.84	8	10.4	14.5	0.48	1.80
3	13.8	6.4	133.2	3.3	0.90	8	11.9	17.9	0.53	0.77
4	14.1	6.2	132.1	3.3	0.84	8	13.1	31.4	0.50	1.11
5	13.8	6.9	149.7	3.2	0.86	8	13.1	29.3	1.29	1.07
6	13.8	7.1	131.5	3.5	0.88	8	12.2	18.9	0.75	1.59
7	13.9	8.3	133.2	3.4	0.85	8	10.4	17.1	0.62	0.72
8	13.8	8.3	137.5	3.3	0.86	8	9.7	13.1	0.61	0.80
9	13.8	8.2	131.8	3.3	0.86	8	8.5	12.3	0.65	0.96
10	13.6	8.5	119.8	3.4	0.87	8	8.4	10.9	0.67	1.34
11	13.5	8.5	126.0	3.4	0.88	8	7.5	8.8	0.74	1.70
12	13.7	8.4	118.0	3.4	0.87	8	8.3	11.1	0.80	1.55
13	13.7	8.4	126.3	3.4	0.87	8	10.5	30.2	0.82	1.03
14	13.6	8.4	126.8	3.4	0.87	8	7.3	9.0	0.76	0.93
15	13.4	8.5	129.5	3.4	0.89	7	11.1	16.1	0.80	1.21
16	13.3	8.6	130.2	3.5	0.89	7	7.9	9.3	0.77	0.91
17	16.6	9.1	132.7	3.2	0.88	8	7.8	10.2	1.15	0.74
18	19.5	10.8	126.2	3.3	1.02	8	6.8	9.6	0.87	1.57
19	18.7	11.7	127.7	3.3	1.02	8	7.2	16.9	0.60	1.17
20	18.3	11.7	125.9	3.1	1.04	8	6.1	7.9	0.61	0.77
21	18.3	11.6	128.1	3.0	1.04	7	8.8	18.2	0.76	0.59
22	18.4	10.8	131.0	2.9	0.93	8	6.1	7.3	0.84	0.85
23	18.3	11.4	154.3	2.9	0.94	8	8.6	24.6	0.79	1.20
24	18.5	11.3	155.8	2.8	0.93	8	5.7	6.0	0.77	0.99
25	18.5	10.9	153.2	2.9	0.93	8	5.8	6.1	0.80	1.45
26	15.6	10.1	143.5	3.1	0.90	8	9.9	18.8	0.56	1.56
27	13.9	6.3	149.3	3.3	0.86	8	15.7	48.2	0.51	1.10
28	13.7	5.9	130.6	3.3	0.86	8	9.3	10.7	0.49	0.91
29	13.7	6.0	150.6	3.3	0.87	8	11.6	25.3	0.48	1.03
30	18.0	8.3	126.8	2.7	0.81	8	8.9	11.3	0.52	1.53
31	18.3	8.2	129.4	2.7	0.79	8	6.7	7.1	0.54	1.28
Avg.	15.5	8.7	134.6	3.2	0.89	8	9.23			1.15
Max.	19.5	11.7	155.8	3.5	1.04	8	15.7	48.2	1.29	1.80
Min.	13.3	5.9	118.0	2.7	0.79	7	5.70			0.59
Total	479.9									

Filter turbiditiy

City of Flint Water Treatment Plant

October 2014 Page 3

WSSN: 2310

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	8	0.11	0.14	6	0	0	8	0.08	0.12	6	0	0	0.09
2	8	0.09	0.12	6	0	0	8	0.08	0.11	6	0	0	0.08
3	7	0.08	0.09	6	0	0	7	0.07	0.09	6	0	0	0.07
4	8	0.09	0.10	6	0	0	8	0.09	0.12	6	0	0	0.08
5	8	0.10	0.12	6	0	0	8	0.09	0.11	6	0	0	0.09
6	8	0.10	0.14	6	0	0	8	0.10	0.13	6	0	0	0.09
7	8	0.08	0.08	6	0	0	8	0.08	0.11	6	0	0	0.08
8	8	0.09	0.11	6	0	0	8	0.08	0.10	6	0	0	0.09
9	8	0.09	0.12	6	0	0	8	0.10	0.13	6	0	0	0.10
10	8	0.09	0.12	6	0	0	8	0.08	0.10	6	0	0	0.09
11	8	0.09	0.13	6	0	0	8	0.09	0.12	6	0	0	0.10
12	8	0.09	0.12	6	0	0	8	0.09	0.14	6	0	0	0.09
13	8	0.09	0.12	6	0	0	8	0.07	0.08	6	0	0	0.07
14	8	0.09	0.11	6	0	0	8	0.09	0.10	6	0	0	0.08
15	8	0.08	0.09	6	0	0	8	0.07	0.09	6	0	0	0.08
16	7	0.10	0.12	6	0	0	7	0.09	0.11	6	0	0	0.09
17	8	0.08	0.09	6	0	0	8	0.08	0.09	6	0	0	0.08
18	8	0.08	0.09	6	0	0	8	0.07	0.08	6	0	0	0.08
19	8	0.07	0.09	6	0	0	8	0.07	0.08	6	0	0	0.07
20	8	0.08	0.11	6	0	0	8	0.09	0.15	6	0	0	0.08
21	8	0.08	0.10	6	0	0	8	0.08	0.10	6	0	0	0.09
22	8	0.08	0.10	6	0	0	8	0.09	0.10	6	0	0	0.09
23	8	0.08	0.14	6	0	0	8	0.07	0.08	6	0	0	0.09
24	8	0.07	0.09	6	0	0	8	0.07	0.10	6	0	0	0.09
25	8	0.07	0.10	6	0	0	8	0.07	0.09	6	0	0	0.11
26	8	0.07	0.12	6	0	0	8	0.07	0.09	6	0	0	0.08
27	8	0.07	0.11	6	0	0	8	0.06	0.08	6	0	0	0.09
28	8	0.08	0.11	6	0	0	8	0.08	0.10	6	0	0	0.08
29	8	0.09	0.10	6	0	0	8	0.09	0.10	6	0	0	0.11
30	8	0.11	0.14	6	0	0	8	0.10	0.13	6	0	0	0.11
31	8	0.10	0.14	6	0	0	8	0.09	0.11	6	0	0	0.12
Avg.	8	0.09	0.11	6	0	0	8	0.08	0.10	6	0	0	
Max.	8	0.11	0.14	6	0	0	8	0.10	0.15	6	0	0	0.12
Min.	7	0.07	0.08	6	0	0	7	0.06	0.08	6	0	0	

Fluoridation & Chlorination City of Flint Water Treatment Plant October 2014

WSSN: 2310

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.5	0.20	0.68		2.6	4.0	6.6	0.7	1.1	3.2	3.5	2.5	3.2
2	0.5	0.21	0.70		2.7	4.0	6.7	0.7	0.9	3.0	3.5	2.5	3.1
3	0.5	0.21	0.72		2.9	4.1	7.0	0.5	0.7	2.7	3.5	2.5	3.1
4	0.4	0.22	0.72		2.7	3.9	6.6	0.7	1.1	3.2	3.5	2.4	2.9
5	0.4	0.20	0.67		2.9	4.2	7.1	1.1	1.4	3.2	3.7	1.9	2.4
6	0.5	0.21	0.70		2.6	3.9	6.5	0.6	0.9	3.2	3.5	2.3	2.8
7	0.5	0.20	0.71	0.62	2.6	3.9	6.5	0.6	0.8	3.2	3.5	2.4	2.7
8	0.4	0.23	0.69		2.6	4.0	6.6	0.8	1.0	3.2	3.5	2.5	3.1
9	0.4	0.19	0.66		2.5	3.9	6.4	0.7	1.0	3.2	3.5	2.5	3.0
10	0.4	0.20	0.62		2.4	3.8	6.2	0.7	0.9	3.0	3.5	2.4	3.1
11	0.4	0.21	0.63		2.3	3.9	6.2	0.7	0.9	3.0	3.5	2.7	3.1
12	0.4	0.21	0.66		2.3	3.8	6.1	0.6	0.8	2.8	3.5	1.9	2.5
13	0.4	0.20	0.63		2.4	4.1	6.5	0.8	1.1	3.2	3.5	3.2	3.5
14	0.4	0.22	0.68		2.5	4.0	6.5	0.6	0.9	2.9	3.5	2.8	3.2
15	0.4	0.21	0.64		2.5	3.9	6.4	0.7	1.1	3.2	3.5	2.8	3.5
16	0.4	0.21	0.74		2.5	4.0	6.5	0.7	1.0	3.0	3.5	3.0	3.5
17	0.4	0.20	0.70	0.68	2.6	4.0	6.6	0.5	0.8	3.1	3.5	3.2	3.5
18	0.5	0.21	0.62		2.7	3.3	6.0	0.6	1.1	3.0	3.5	3.2	3.5
19	0.4	0.21	0.63		2.6	3.4	6.0	0.9	1.2	3.0	3.5	3.0	3.5
20	0.4	0.21	0.59		2.4	3.7	6.1	0.6	0.9	3.0	3.5	3.0	3.5
21	0.4	0.20	0.66	0.62	2.4	3.7	6.1	0.5	0.9	3.0	3.5	2.7	3.1
22	0.4	0.22	0.65		2.4	3.8	6.2	0.5	0.8	2.6	3.5	2.1	2.6
23	0.4	0.20	0.64		2.5	3.6	6.1	0.7	0.9	3.0	3.5	2.8	3.0
24	0.4	0.22	0.67		2.4	3.5	5.9	0.7	1.0	2.9	3.5	2.2	2.7
25	0.5	0.21	0.68		2.3	3.6	5.9	0.6	0.9	2.8	3.5	2.2	2.7
26	0.4	0.20	0.66		2.2	3.7	5.9	0.8	1.0	3.0	3.5	3.0	3.5
27	0.4	0.20	0.64		2.1	4.5	6.6	0.7	1.0	3.0	3.5	2.9	3.3
28	0.4	0.21	0.67	0.65	2.1	3.9	6.0	0.5	0.8	2.7	3.5	2.7	3.2
29	0.5	0.21	0.67		2.3	4.1	6.4	0.6	0.8	3.0	3.5	2.3	2.8
30	0.5	0.20	0.66		2.2	3.4	5.6	0.6	1.1	3.0	3.5	3.0	3.5
31	0.5	0.18	0.71		2.2	3.4	5.6	0.6	0.8	2.9	3.5	2.1	2.6
Avg.	0.43	0.21	0.67	0.64	2.5	3.8	6.3	0.7	1.0	3.0	3.5	2.6	3.1
Max.	0.50	0.23	0.74	0.68	2.9	4.5	7.1	1.1	1.4	3.2	3.7	3.2	3.5
Min.	0.40	0.18	0.59	0.62	2.1	3.3	5.6	0.5	0.7	2.6	3.5	1.9	2.4

Chemical Analyses City of Flint Water Treatment Plant October 2014 Page 5

WSSN: 2310

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.00	7.81	254	144	219	72	35	72	81.8	45.7	12.6	7.8	41	65
2	8.19	7.85	249	147	209	68	40	79	81.8	49.7	10.2	5.8	42	62
3	8.17	7.91	254	157	206	74	48	83	85.8	54.5	10.7	4.3	44	62
4	8.13	7.43	249	160	205	83	44	77	84.2	55.2	10.7	5.8	43	61
5	8.28	7.83	253	157	210	82	43	75	77.0	51.3	15.1	6.8	43	61
6	8.26	7.89	255	152	208	74	47	78	79.4	49.7	13.6	6.3	42	62
7	8.28	7.45	259	162	210	87	49	75	77.8	48.1	15.6	9.7	41	64
8	8.26	7.65	253	162	202	76	51	86	87.4	57.7	8.2	4.9	42	64
9	8.27	7.90	252	157	209	77	43	80	79.4	47.3	13.1	8.7	42	64
10	8.26	7.60	256	166	205	84	51	82	85.8	54.5	9.7	6.3	42	65
11	8.31	7.45	254	175	203	86	51	89	86.0	63.3	7.8	4.3	43	64
12	8.25	7.69	255	156	204	71	51	85	81.0	51.3	13.1	7.3	44	65
13	8.38	7.79	256	152	210	76	46	76	72.9	48.1	17.5	6.8	45	66
14	8.34	7.53	255	155	203	73	52	82	89.0	56.9	8.3	2.9	45	65
15	7.97	7.88	249	148	206	70	43	78	71.3	48.9	18.0	5.3	43	67
16	8.32	7.90	256	156	212	80	44	76	84.2	47.3	11.2	9.2	45	68
17	8.36	7.68	260	160	210	83	50	77	69.7	45.7	21.4	10.7	43	67
18	8.24	7.96	252	167	210	79	42	88	81.8	53.7	11.7	5.8	42	70
19	8.31	8.11	262	174	211	82	51	92	83.4	54.5	13.1	8.7	42	71
20	8.21	7.60	264	182	212	93	52	89	81.0	60.1	14.6	7.8	43	72
21	8.26	7.59	262	197	215	107	47	90	83.4	60.9	12.6	10.2	43	72
22	8.26	7.63	266	186	216	90	50	96	86.6	63.3	11.7	6.8	44	69
23	8.24	7.43	267	180	222	91	45	89	84.2	58.5	14.6	8.7	42	70
24	8.19	7.82	271	162	220	71	51	91	83.4	55.3	15.6	5.8	45	69
25	8.21	7.88	273	160	221	74	52	86	85.8	56.9	14.1	3.4	43	70
26	8.04	7.76	270	161	224	70	46	91	82.6	52.1	16.0	7.3	43	70
27	8.25	7.61	278	157	233	72	45	85	87.4	49.7	14.6	9.2	42	70
28	8.33	7.41	278	164	237	76	41	88	84.2	56.1	17.1	5.3	44	62
29	8.28	7.48	276	160	230	85	46	75	86.6	46.5	16.0	10.2	43	64
30	8.40	7.88	278	158	225	75	53	83	86.6	52.9	15.1	4.4	44	62
31	8.37	7.75	280	172	223	92	57	80	87.4	53.7	15.1	8.7	47	65
Avg.	8.25	7.71	261	163	214	80	47	83	82.5	53.2	13.5	6.9	43	66
Max.	8.40	8.11	280	197	237	107	57	96	89.0	63.3	21.4	10.7	47	72
Min.	7.97	7.41	249	144	202	68	35	72	69.7	45.7	7.8	2.9	41	61

Bacteriological & Physical Parameters

City of Flint Water Treatment Plant

WSSN: 2310

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Date	Total Coliform						Standard Plate Count (Simplate MPN)		Conductivity (mS)	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap	Tap	Raw	Raw	Tap	Raw	Tap
1	1	6152	12	0	1	0	> 14760	< 2	0.39	12.9				
2	1	15402	12	0	1	0	4960	< 2	0.38	18.4				
3	1	15402	12	0	1	0	3660	< 2	0.35	18.2				
4	1	2878	12	0	1	0	4040	< 2	0.39	18.5				
5	1	2092	12	0	1	0	4620	< 2	0.39	17.2				
6	1	1498	12	0	1	0	5320	< 2	0.39	15.3				
7	1	900	12	0	1	0	200	< 2	0.38	14.3				
8	1	1646	12	0	1	0	1240	< 2	0.39	14.3				
9	1	766	12	0	1	0	1720	< 2	0.38	14.0				
10	1	1262	12	0	1	0	1940	< 2	0.38	13.6				
11	1	378	12	0	1	0	340	< 2	0.40	13.3				
12	1	524	12	0	1	0	2000	< 2	0.42	13.8				
13	1	672	12	0	1	0	2240	< 2	0.39	12.4				
14	1	728	12	0	1	0	2560	< 2	0.37	15.1				
15	1	4718	12	0	1	0	8800	< 2	0.36	15.6				
16	1	462	12	0	1	0	4180	< 2	0.36	15.3				
17	1	590	12	0	1	0	7100	< 2	0.38	15.0				
18	1	626	12	0	1	0	1600	< 2	0.38	15.7				
19	1	342	12	0	1	0	2400	< 2	0.39	14.8				
20	1	218	12	0	1	0	1300	< 2	0.43	13.1				
21	1	498	12	0	1	0	1800	< 2	0.44	13.8				
22	1	634	12	0	1	0	3780	< 2	0.44	13.3				
23	1	350	12	0	1	0	1540	< 2	0.43	14.3				
24	1	268	12	0	1	0	960	< 2	0.42	11.7				
25	1	312	12	0	1	0	860	< 2	0.39	11.4				
26	1	264	12	0	1	0	1940	< 2	0.38	12.2				
27	1	690	12	0	1	0	1180	< 2	0.38	11.9				
28	1	256	12	0	1	0	1120	< 2	0.38	11.7				
29	1	518	12	0	1	0	800	< 2	0.39	12.9				
30	1	148	12	0	1	0	660	< 2	0.38	13.2				
31	1	170	12	0	1	0	700	< 2	0.39	11.3				

Avg.									0.39	14.1				
Max.							8800	0	0.44	18.5				
Min.									0.35	11.3				

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1	0.3	1.4	0.1	0.6	0.2	0.1	0.5	1.8	1.0	1.3	10
2	0.4	1.1	0.1	0.5	0.3	0.1	0.6	1.9	1.2	1.3	10
3											0
4											0
5											0
6	0.3	1.8	0.1	0.6	0.4	0.1	0.1	1.9	1.1	2.0	10
7	0.3	0.1	0.1	0.3	0.1	0.1	0.2	1.8	0.5	0.2	10
8	0.4	0.0	0.1	0.3	0.1	0.1	0.3	1.9	1.5	0.5	10
9	0.3	0.0	0.1	0.5	0.1	0.2	0.1	2.2	0.5	1.5	10
10	0.4	0.0	0.1	0.5	0.2	0.1	0.6	2.3	1.5	1.5	10
11											0
12											0
13											0
14	0.6	0.0	0.1	0.7	0.1	0.1	0.5	2.2	0.7	1.2	10
15	0.3	0.0	0.1	0.5	0.1	0.1	0.3	2.2	0.6	1.0	10
16	0.5	0.0	0.1	0.5	0.3	0.1	0.2	2.6	1.7	0.6	10
17											0
18											0
19											0
20											0
21	0.4	0.2	0.2	0.4	0.3	0.1	0.2	1.5	1.0	1.5	10
22	0.6	0.8	0.4	0.6	0.1	0.1	0.6	2.2	1.9	1.4	10
23	0.4	1.7	0.4	1.0	0.7	0.1	0.5	1.7	1.7	1.7	10
24											0
25											0
26											0
27									1.3	1.0	2
28	0.4	1.7	0.9	0.8	0.7	0.1	0.6	2.0	1.5	1.4	10
29	0.2	1.1	0.1	1.0	0.6	0.1	0.1	1.8	1.4	1.2	10
30	0.1	0.6	0.6	0.7	0.9	0.1	0.3	2.1	1.5	1.1	10
31									1.5	1.3	2

Distribution Sample Summary	
Total # of routine distribution samples analyzed	164
Total # of routine distribution samples required	100

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	5
Percent of routine distribution samples positive	3%

See page 9 for positive sample information.

Distribution Disinfectant Total Residual Summary	
Percentage of samples with a detectable disinfectant residual	96%
Average disinfectant residual this month	0.72

Distribution System Monitoring

City of Flint Water Treatment Plant

October 2014

WSSN: 2310

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1	0.6	1.7	0.3	0.9	0.4	0.2	0.7	2.2	1.3	1.5	10
2	0.7	1.4	0.3	0.8	0.6	0.2	0.8	2.4	1.6	1.6	10
3											0
4											0
5											0
6	0.6	2.3	0.3	1.0	0.6	0.2	0.2	2.1	1.4	2.3	10
7	0.6	0.2	0.2	0.5	0.2	0.2	0.4	2.1	0.7	0.3	10
8	0.8	0.1	0.2	0.5	0.2	0.3	0.5	2.3	2.0	0.8	10
9	0.5	0.1	0.2	0.8	0.2	0.2	0.2	2.5	0.8	1.7	10
10	0.6	0.1	0.3	0.9	0.4	0.3	0.8	2.7	1.8	1.8	10
11											0
12											0
13											0
14	1.0	0.0	0.3	1.1	0.3	0.4	0.9	2.5	1.0	1.6	10
15	0.6	0.0	0.3	0.7	0.2	0.2	0.5	2.7	0.9	1.4	10
16	0.9	0.0	0.3	0.9	0.5	0.3	0.4	3.0	2.0	1.0	10
17											0
18											0
19											0
20											0
21	0.7	0.4	0.5	0.7	0.5	0.2	0.4	1.7	1.2	1.8	10
22	1.1	1.2	0.6	1.0	0.1	0.1	0.9	2.5	2.3	2.0	10
23	0.7	2.3	0.7	1.3	0.9	0.2	0.7	2.2	2.2	1.9	10
24											0
25											0
26											0
27									1.5	1.3	2
28	0.7	2.0	1.2	1.1	1.0	0.2	0.9	2.3	1.8	1.7	10
29	0.4	1.5	0.3	1.4	0.9	0.2	0.3	2.3	1.7	1.5	10
30	0.1	1.0	1.0	1.1	1.4	0.2	0.6	2.5	1.8	1.5	10
31									1.8	1.7	2

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.0

Positive Distribution Samples

Date	Monitoring station	Date	Repeat Monitoring Stations	Residual (mg/L) Free / Total	Present or Absent
10/2/2014	3606 Corunna Rd	10/3/2014	3606 Corunna Rd	0.5 / 0.8	Absent
			3521 Corunna Rd	0.8 / 1.1	Absent
			3614 Corunna Rd	0.4 / 0.6	Absent
10/10/2014	3606 Corunna Rd	10/11/2014	3606 Corunna Rd	0.4 / 0.6	Absent
			3521 Corunna Rd	1.2 / 1.6	Absent
			3809 Corunna Rd	0.1 / 0.2	Absent
10/14/2014	822 S. Dort Hwy	10/15/2014	822 S. Dort Hwy	0.0 / 0.0	Present
			810 S. Dort Hwy	0.1 / 0.1	Absent
			2838 E. Court St.	0.1 / 0.3	Absent
		10/16/2014	822 S. Dort Hwy	0.0 / 0.0	Absent
			810 S. Dort Hwy	0.0 / 0.1	Absent
			2838 E. Court St.	0.1 / 0.2	Absent
10/16/2014	3606 Corunna Rd	10/17/2014	3606 Corunna Rd	0.4 / 0.7	Absent
			3521 Corunna Rd	0.7 / 1.0	Absent
			3614 Corunna Rd	0.5 / 0.7	Absent

2310

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow	**September 2014**
Operator-in-Charge	Month/Year
F-1R, F-2	**F-1**
Certification of Operator-in-Charge	Water Plant Classification
Michael Glasgow	**Genesee**
Signature of Operator-in-Charge	County

DEQ
RESOURCE MANAGEMENT DIVISION
OCT 20 2014
LANSING DISTRICT

Treatment Rate and Filter Data

Maximum Treatment Rate:	24.5	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	97	Hours
Average Head Loss:	n/a	Feet *(filter head loss meters not operational)
Average Filtration Rate:	2.1	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.4	Gallons Per Square Feet per Minute
Average Wash Water Use:	1.9%	Percent of Treated Water

Chemical Data

Chlorine on hand:	16000	lb.	Est. supply:	15	days
Primary Coagulant (Ferric Chloride) on hand:	234,000	lb.	Est. supply:	27	days
Lime (CaO) on hand:	223	tons	Est. supply:	22	days
Fluoride on Hand:	16,630	lb.	Est. supply:	45	days
Cost of All Chemicals per Million Gallons:	n/a	dollars			
Total Power Cost per Million Gallons:	n/a	dollars			

Remarks	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	0	0
Number of filter confluence samples collected:	180	180
Percent of filter confluence samples > 0.3 NTU:	0.0%	0.0%
Number of filter confluence samples > 1 NTU	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? **NO**
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? **YES**
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

COMPLETED

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant **WSSN: 2310** September 2014

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Lime Dosage (mg/L)	PW-340 Cationic Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
						Raw			Plate Settler	Applied
						Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	15.8	5.2	98.7	3.8	0.99	8	6.9	10.8	0.57	1.26
2	14.6	5.0	109.9	3.8	0.99	8	6.8	10.9	0.52	1.08
3	14.7	4.8	110.7	3.8	0.99	8	5.7	6.9	0.50	3.83
4	15.4	5.0	109.9	3.8	0.99	8	6.2	7.8	0.49	2.04
5	14.6	5.1	116.2	4.3	0.99	8	5.5	6.6	0.48	0.90
6	14.7	5.0	125.5	3.5	0.99	8	5.6	6.4	0.51	0.89
7	21.0	5.4	103.6	2.7	0.73	8	5.9	10.1	0.53	1.35
8	24.1	6.1	119.6	2.5	0.67	8	8.2	18.2	0.63	1.25
9	24.3	5.9	115.4	2.5	0.80	8	8.2	18.2	0.76	1.49
10	24.0	5.9	110.5	2.7	0.85	8	8.2	18.2	0.63	0.93
11	23.3	6.1	112.6	3.0	0.88	8	8.2	18.2	0.63	1.36
12	23.3	6.1	109.6	2.9	0.88	8	8.2	18.2	0.62	0.48
13	19.2	5.9	115.2	3.4	0.78	8	8.6	18.2	0.65	0.73
14	14.9	5.6	129.2	3.9	0.74	8	9.4	20.7	0.45	0.62
15	14.8	5.4	129.0	3.8	0.75	8	9.1	16.9	0.50	1.97
16	14.9	5.4	124.0	3.9	0.80	8	12.1	28.6	0.50	1.25
17	14.9	5.4	114.9	3.7	0.86	8	7.9	10.1	0.45	1.56
18	19.0	5.8	105.6	2.6	0.81	8	12.1	30.6	0.57	1.25
19	24.1	5.8	94.2	2.1	0.67	8	6.4	8.3	0.67	1.26
20	23.4	6.2	94.1	2.2	0.84	8	6.5	7.8	0.66	0.69
21	20.1	6.3	99.4	2.4	0.92	8	8.9	24.3	0.88	0.99
22	16.8	7.2	111.1	2.7	0.99	8	10.1	23.9	0.99	0.84
23	14.6	7.3	129.8	3.1	0.99	8	12.0	19.3	0.59	0.64
24	14.5	7.4	128.2	3.1	0.94	8	12.0	15.5	0.47	1.30
25	17.4	7.2	120.6	2.9	0.94	8	16.2	49.5	0.85	0.55
26	18.9	7.1	125.9	2.7	0.91	8	9.7	28.4	0.68	0.55
27	18.7	7.1	134.2	2.9	0.92	8	8.9	26.2	0.68	0.80
28	18.6	7.3	129.0	2.8	0.94	8	10.6	41.5	0.57	0.78
29	18.2	6.9	129.0	2.8	0.94	8	8.2	30.6	0.55	0.74
30	18.4	7.1	125.2	3.0	0.92	8	21.7	73.4	0.54	0.48
Avg.	18.4	6.1	116.0	3.1	0.88	8	9.13			1.13
Max.	24.3	7.4	134.2	4.3	0.99	8	21.7	73.4	0.99	3.83
Min.	14.5	4.8	94.1	2.1	0.67	8	5.50			0.48
Total	551.1									

Filter turbidity

City of Flint Water Treatment Plant

WSSN: 2310

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	8	0.13	0.18	6	0	0	8	0.13	0.15	6	0	0	0.13
2	8	0.13	0.19	6	0	0	8	0.13	0.15	6	0	0	0.12
3	8	0.13	0.20	6	0	0	8	0.12	0.17	6	0	0	0.12
4	8	0.10	0.13	6	0	0	8	0.10	0.13	6	0	0	0.11
5	8	0.08	0.10	6	0	0	8	0.08	0.10	6	0	0	0.11
6	8	0.09	0.13	6	0	0	8	0.09	0.10	6	0	0	0.11
7	8	0.11	0.15	6	0	0	8	0.11	0.14	6	0	0	0.11
8	8	0.12	0.17	6	0	0	8	0.13	0.20	6	0	0	0.14
9	8	0.12	0.16	6	0	0	8	0.12	0.15	6	0	0	0.12
10	8	0.11	0.12	6	0	0	8	0.12	0.17	6	0	0	0.13
11	8	0.11	0.14	6	0	0	8	0.12	0.14	6	0	0	0.13
12	8	0.09	0.11	6	0	0	8	0.11	0.14	6	0	0	0.12
13	8	0.10	0.11	6	0	0	8	0.10	0.11	6	0	0	0.10
14	8	0.09	0.11	6	0	0	8	0.10	0.13	6	0	0	0.09
15	8	0.08	0.10	6	0	0	8	0.08	0.10	6	0	0	0.08
16	8	0.08	0.09	6	0	0	8	0.08	0.10	6	0	0	0.07
17	8	0.10	0.17	6	0	0	8	0.09	0.12	6	0	0	0.09
18	8	0.11	0.14	6	0	0	8	0.11	0.13	6	0	0	0.10
19	8	0.09	0.11	6	0	0	8	0.11	0.20	6	0	0	0.10
20	8	0.11	0.14	6	0	0	8	0.10	0.12	6	0	0	0.09
21	8	0.10	0.11	6	0	0	8	0.10	0.12	6	0	0	0.09
22	8	0.08	0.10	6	0	0	8	0.07	0.10	6	0	0	0.09
23	8	0.07	0.08	6	0	0	8	0.07	0.08	6	0	0	0.07
24	8	0.08	0.14	6	0	0	8	0.07	0.10	6	0	0	0.08
25	8	0.08	0.09	6	0	0	8	0.09	0.10	6	0	0	0.08
26	8	0.10	0.12	6	0	0	8	0.10	0.12	6	0	0	0.12
27	8	0.09	0.12	6	0	0	8	0.10	0.13	6	0	0	0.09
28	8	0.10	0.11	6	0	0	8	0.09	0.11	6	0	0	0.10
29	8	0.11	0.13	6	0	0	8	0.19	0.10	6	0	0	0.10
30	8	0.13	0.16	6	0	0	8	0.11	0.14	6	0	0	0.11
Avg.	8	0.10	0.13	6	0	0	8	0.10	0.13	6	0	0	
Max.	8	0.13	0.20	6	0	0	8	0.19	0.20	6	0	0	0.14
Min.	8	0.07	0.08	6	0	0	8	0.07	0.08	6	0	0	

Fluoridation & Chlorination City of Flint Water Treatment Plant September 2014 Page 4

WSSN: 2310

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.50	0.19	0.72		3.6	3.6	7.2	0.3	0.6	2.7	3.3	1.5	1.9
2	0.50	0.18	0.70	0.63	3.7	3.5	7.2	0.4	0.8	2.5	3.2	1.2	1.8
3	0.50	0.19	0.69		3.6	3.6	7.2	0.4	0.7	1.9	2.4	1.2	1.9
4	0.50	0.19	0.69		3.6	3.6	7.2	0.5	0.9	2.6	3.2	1.7	2.2
5	0.50	0.20	0.69		3.6	3.3	6.9	0.5	0.8	2.0	2.6	1.6	1.9
6	0.50	0.21	0.65		3.6	3.6	7.2	0.3	0.7	2.2	2.7	1.4	1.8
7	0.40	0.20	0.62		3.2	3.5	6.7	0.2	0.5	2.2	2.7	1.2	1.8
8	0.50	0.19	0.57		3.6	4.1	7.7	0.5	0.8	2.5	3.0	1.7	2.2
9	0.50	0.20	0.69	0.69	3.8	4.1	7.9	0.6	0.9	3.1	3.4	3.0	3.3
10	0.50	0.19	0.69		3.8	3.9	7.7	0.6	0.9	3.2	3.5	1.8	2.1
11	0.50	0.19	0.69		3.9	4.0	7.9	0.5	0.9	2.7	3.2	3.1	3.5
12	0.50	0.18	0.70		3.7	3.8	7.5	0.5	0.8	2.9	3.5	2.1	2.7
13	0.50	0.16	0.69		3.5	3.8	7.3	0.4	0.7	2.9	3.5	2.1	2.9
14	0.40	0.20	0.69		3.6	4.2	7.8	0.6	0.9	3.0	3.5	3.0	3.5
15	0.40	0.19	0.64		3.4	3.7	7.1	0.9	1.4	3.2	3.5	3.0	3.5
16	0.40	0.20	0.64	0.65	3.0	3.6	6.6	0.8	1.1	2.6	3.2	1.9	2.4
17	0.50	0.17	0.65		2.9	3.9	6.8	0.6	1.2	2.8	3.5	2.4	3.1
18	0.40	0.18	0.65		2.4	3.5	5.9	0.6	1.0	3.2	3.5	3.0	3.3
19	0.40	0.18	0.66		2.4	3.4	5.8	0.4	0.8	2.6	3.2	2.1	2.8
20	0.50	0.24	0.65		2.5	4.2	6.7	0.4	0.7	2.7	3.3	1.9	2.3
21	0.50	0.18	0.70		2.4	4.2	6.6	0.5	0.9	3.1	3.5	3.2	3.4
22	0.40	0.19	0.66		3.0	4.8	7.8	0.9	1.3	3.2	3.5	3.3	3.5
23	0.40	0.20	0.60	0.63	2.9	3.7	6.6	0.7	1.1	3.2	3.5	2.3	2.6
24	0.40	0.20	0.64		2.9	3.6	6.5	1.0	1.5	2.9	3.5	3.1	3.3
25	0.40	0.19	0.64		2.5	3.7	6.2	0.7	1.0	3.2	3.5	2.2	2.6
26	0.40	0.21	0.65		2.5	4.2	6.7	0.6	1.0	2.7	3.2	2.2	2.6
27	0.40	0.19	0.65		2.5	4.1	6.6	0.6	0.9	3.0	3.5	2.0	2.6
28	0.40	0.23	0.71		2.6	4.0	6.6	0.9	1.3	3.1	3.5	3.1	3.5
29	0.50	0.21	0.70		2.6	4.0	6.6	0.8	1.2	3.1	3.5	3.0	3.5
30	0.50	0.21	0.67	0.65	2.5	4.3	6.8	0.7	1.0	2.9	3.5	2.4	2.7
Avg.	0.46	0.19	0.67	0.65	3.1	3.9	7.0	0.6	0.9	2.8	3.3	2.3	2.7
Max.	0.50	0.24	0.72	0.69	3.9	4.8	7.9	1.0	1.5	3.2	3.5	3.3	3.5
Min.	0.40	0.16	0.57	0.63	2.4	3.3	5.8	0.2	0.5	1.9	2.4	1.2	1.8

Chemical Analyses

City of Flint Water Treatment Plant

WSSN: 2310

September 2014

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.06	7.47	248	170	200	104	48	66	72.1	61.7	14.6	3.4	41	60
2	7.90	7.79	235	160	200	97	35	63	71.3	54.5	14.1	4.4	44	61
3	8.00	7.92	240	165	196	97	44	68	82.6	64.1	7.8	1.9	40	66
4	8.04	7.93	238	160	200	97	38	63	74.5	56.9	12.6	3.9	40	59
5	8.09	7.61	241	146	198	81	43	65	76.2	57.7	11.7	1.0	42	57
6	7.95	7.94	239	148	198	79	41	69	79.4	57.7	10.2	1.0	40	57
7	8.09	7.77	238	153	202	97	36	56	65.7	48.1	18.5	2.9	41	58
8	7.97	7.88	240	169	203	94	37	75	77.0	54.5	11.7	8.3	42	59
9	7.88	7.89	241	170	203	103	38	67	73.7	57.5	13.6	6.3	43	62
10	7.78	7.95	242	170	202	95	40	75	81.8	60.1	16.5	6.3	42	60
11	7.91	7.92	244	169	204	96	40	73	80.2	64.9	10.2	4.4	43	59
12	8.00	7.66	240	168	197	101	43	67	81.0	65.7	9.7	1.0	42	60
13	8.04	7.61	245	175	199	96	46	79	76.2	63.3	13.6	3.9	43	59
14	8.18	7.44	247	162	206	85	41	77	79.4	55.3	12.2	5.8	42	59
15	8.24	7.62	246	150	204	81	42	69	72.9	45.7	15.6	6.3	41	61
16	8.22	7.61	246	153	206	83	40	70	68.5	46.5	18.2	8.3	42	61
17	8.23	7.89	246	142	197	72	49	70	81.8	53.7	11.2	2.4	42	59
18	8.29	7.99	246	147	208	76	38	71	76.2	44.9	13.6	7.3	41	60
19	8.29	8.11	251	145	205	71	46	74	79.4	52.7	10.7	2.4	42	56
20	8.26	8.02	248	156	202	89	46	67	79.4	55.3	12.2	3.4	43	58
21	8.23	7.84	247	162	209	93	38	69	77.0	49.7	13.6	9.2	43	61
22	8.22	8.05	245	160	205	79	40	81	78.6	52.9	12.2	8.3	43	62
23	8.35	7.88	249	144	204	64	45	80	70.5	38.5	17.5	11.2	42	63
24	8.41	7.96	243	120	199	51	44	69	85.0	40.1	8.3	4.9	44	62
25	8.40	7.77	239	138	202	66	37	72	72.1	41.7	12.6	7.8	40	61
26	8.35	7.90	242	139	197	60	45	79	89.0	49.7	11.2	3.9	42	60
27	8.23	7.85	240	133	192	60	48	73	92.2	50.5	9.7	2.4	42	61
28	8.23	7.85	246	128	204	62	42	66	72.9	40.9	15.6	5.3	41	63
29	8.15	7.84	242	144	202	68	40	76	72.9	43.3	14.6	7.8	41	63
30	8.01	7.52	247	153	205	68	42	85	93.8	56.1	11.2	3.9	42	62
Avg.	8.13	7.82	243	153	202	82	42	71	77.8	52.8	12.8	5.0	42	60
Max.	8.41	8.11	251	175	209	104	49	85	93.8	65.7	18.5	11.2	44	66
Min.	7.78	7.44	235	120	192	51	35	56	65.7	38.5	7.8	1.0	40	56

Bacteriological & Physical Parameters

City of Flint Water Treatment Plant

WSSN: 2310

September 2014

Date	Total Coliform						Standard Plate Count (Simplate MPN)		Conductivity (mS)	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap	Tap	Raw	Raw	Tap	Raw	Tap
1	1	8212	12	0	1	0	3780	2	0.42	24.0				
2	1	12262	12	0	1	0	4620	< 2	0.42	24.0				
3	1	3912	12	0	1	0	1360	< 2	n.t.	23.8				
4	1	2749	12	0	1	0	1600	< 2	0.42	26.1				
5	1	1918	12	0	1	0	1720	< 2	0.39	24.1				
6	1	8212	12	0	1	0	2160	< 2	0.39	23.9				
7	1	5510	12	0	1	0	2640	< 2	0.41	23.5				
8	1	2910	12	0	1	0	2480	< 2	0.44	23.0				
9	1	2708	12	0	1	0	6980	< 2	0.44	23.4				
10	1	7308	12	0	1	0	> 14760	< 2	n.t.	23.5				
11	1	6510	12	0	1	0	8800	< 2	0.43	22.1				
12	1	8704	12	0	1	0	8800	< 2	0.43	21.4				
13	1	3570	12	0	1	0	3120	< 2	0.44	20.9				
14	1	8212	12	0	1	0	1360	< 2	0.38	20.0				
15	1	6510	12	0	1	0	3540	< 2	0.37	18.1				
16	1	12262	12	0	1	0	1660	< 2	0.37	17.7				
17	1	9222	12	0	1	0	1940	< 2	0.38	17.5				
18	1	10950	12	0	1	0	2400	< 2	0.36	17.4				
19	1	6152	12	0	1	0	6220	< 2	0.37	17.0				
20	1	5818	12	0	1	0	6780	< 2	0.37	18.0				
21	1	4028	12	0	1	0	2740	< 2	0.40	18.4				
22	1	12262	12	0	1	0	3900	< 2	0.39	18.0				
23	1	10950	12	0	1	0	4780	< 2	0.39	17.5				
24	1	10344	12	0	1	0	2560	< 2	0.36	17.6				
25	1	8704	12	0	1	0	2640	< 2	0.35	18.2				
26	1	15402	12	0	1	0	5740	< 2	0.36	18.6				
27	1	5226	12	0	1	0	7440	< 2	0.36	18.5				
28	1	7746	12	0	1	0	6780	< 2	0.35	19.4				
29	1	3578	12	0	1	0	5320	< 2	0.37	19.5				
30	1	31062	12	0	1	0	3320	< 2	0.38	19.2				

n.t.= not tested

Avg.									0.39	20.5				
Max.							8800	2	0.44	26.1				
Min.									0.35	17.0				

Distribution System Monitoring

City of Flint Water Treatment Plant

September 2014

WSSN: 2310

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2	0.1	0.4	0.1	0.2	0.0	0.1	0.1	0.8	0.4	0.9	10
3	0.1	0.3	0.1	0.2	0.0	0.1	0.1	0.7	0.5	0.5	10
4	0.1	0.3	0.1	0.2	0.1	0.1	0.1	0.8	0.2	0.8	10
5											0
6											0
7											0
8	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.7	0.6	0.7	10
9	0.3	0.6	0.1	0.1	0.1	0.1	0.2	1.5	1.5	0.5	10
10	0.3	0.8	0.1	0.1	0.2	0.1	0.2	1.5	3.5	1.2	10
11	0.3	0.9	0.1	0.4	0.2	0.1	0.1	1.3	1.4	1.6	10
12											0
13											0
14											0
15											0
16	0.2	0.6	0.1	0.4	0.1	0.2	0.1	1.3	0.9	1.3	10
17	0.3	1.2	0.1	1.0	0.2	0.0	0.1	1.7	2.7	1.5	10
18	0.2	0.7	0.1	0.4	0.2	0.2	0.2	1.7	0.8	1.4	10
19											0
20											0
21											0
22											0
23	0.3	1.6	0.1	0.8	0.2	0.2	0.3	2.3	1.1	0.9	10
24	0.5	1.5	0.2	0.7	0.6	0.1	1.0	2.1	1.7	2.1	10
25	0.3	0.1	0.1	0.7	0.2	0.1	0.2	1.7	3.5	2.3	10
26	0.5	0.1	0.1	0.9	0.5	0.1	0.4	2.2	3.5	1.7	10
27											0
28											0
29											0
30	0.5	0.1	0.1	0.7	0.1	0.1	0.6	2.4	1.8	1.7	10

Distribution Sample Summary	
Total # of routine distribution samples analyzed	150
Total # of routine distribution samples required	100

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	15
Percent of routine distribution samples positive	10%

See page 9 for positive sample information.

Distribution Disinfectant Total Residual Summary	
Percentage of samples with a detectable disinfectant residual	97%
Average disinfectant residual this month	0.64

Distribution System Monitoring

City of Flint Water Treatment Plant

September 2014

WSSN: 2310

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2	0.3	0.7	0.2	0.4	0.1	0.2	0.2	1.2	0.7	1.2	10
3	0.3	0.7	0.2	0.5	0.2	0.4	0.3	1.2	0.9	1.0	10
4	0.3	0.6	0.2	0.3	0.2	0.2	0.2	1.1	0.3	1.1	10
5											0
6											0
7											0
8	0.2	0.4	0.1	0.2	0.2	0.1	0.1	1.0	0.9	1.0	10
9	0.6	1.3	0.3	0.3	0.3	0.2	0.4	1.8	1.8	0.8	10
10	0.5	1.1	0.2	0.2	0.4	0.2	0.4	1.8	3.5	1.4	10
11	0.6	1.2	0.3	0.8	0.4	0.3	0.3	1.6	1.8	2.0	10
12											0
13											0
14											0
15											0
16	0.4	1.0	0.2	0.7	0.3	0.3	0.3	1.7	1.2	1.7	10
17	0.5	1.6	0.3	1.4	0.5	0.2	0.3	2.1	3.5	2.0	10
18	0.3	1.0	0.2	0.7	0.3	0.4	0.3	2.1	1.0	1.7	10
19											0
20											0
21											0
22											0
23	0.5	1.9	0.3	1.1	0.3	0.3	0.5	2.5	1.6	1.1	10
24	0.9	0.2	0.4	1.3	1.0	0.3	1.5	2.5	2.0	1.7	10
25	0.6	0.2	0.2	0.9	0.5	0.2	0.4	2.2	3.5	3.0	10
26	0.9	0.3	0.3	1.4	1.1	0.3	0.7	2.7	3.5	2.0	10
27											0
28											0
29											0
30	0.8	0.3	0.3	1.1	0.3	0.2	1.1	2.7	2.2	2.1	10

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	0.9

Distribution System Monitoring

City of Flint Water Treatment Plant

WSSN: 2310

Positive Distribution Samples

Date	Monitoring station	Date	Repeat Monitoring Stations	Residual (mg/L) Free / Total	Present or Absent
9/2/2014	2501 Flushing Rd	9/3/2014	2501 Flushing Rd	0.0 / 0.2	Present
			1117 N. Chevrolet	0.0 / 0.2	Present
			2740 Flushing Rd	0.1 / 0.3	Absent
		9/4/2014	2501 Flushing Rd	0.1 / 0.2	Present
			2205 N. Chevrolet	0.1 / 0.2	Present
			2740 Flushing Rd	0.1 / 0.3	Present
		9/5/2014	2501 Flushing Rd	0.1 / 0.2	Present
			2205 N. Chevrolet	0.1 / 0.3	Absent
			2740 Flushing Rd	0.1 / 0.2	Present
		9/6/2014	2501 Flushing Rd	0.2 / 0.3	Absent
			2205 Flushing Rd.	0.2 / 0.3	Absent
			1274 Ballenger Hwy	0.1 / 0.2	Absent
		9/7/2014	2501 Flushing Rd	0.2 / 0.3	Absent
			2205 Flushing Rd.	0.2 / 0.3	Absent
			1274 Ballenger Hwy	0.0 / 0.2	Present
		9/8/2014	2501 Flushing Rd	0.1 / 0.2	Absent
			1274 Ballenger Hwy	0.1 / 0.1	Absent
9/4/2014	3216 MLK Blvd.	9/5/2014	3216 MLK Blvd.	0.2 / 0.3	Absent
			3317 MLK Blvd.	0.1 / 0.2	Present
			3110 MLK Blvd.	0.1 / 0.2	Present
		9/6/2014	104 E. Pasadena Ave.	0.1 / 0.2	Absent
			3317 MLK Blvd.	0.2 / 0.3	Absent
			3110 MLK Blvd.	0.0 / 0.1	Absent
		9/7/2014	104 E. Pasadena Ave.	0.1 / 0.3	Absent
			3317 MLK Blvd.	0.1 / 0.3	Absent
			3110 MLK Blvd.	0.2 / 0.3	Absent
9/10/2014	3606 Corunna Rd.	9/11/2014	3606 Corunna Rd.	0.4 / 0.8	Absent
			3521 Corunna Rd.	0.3 / 0.5	Absent
			3614 Corunna Rd.	0.7 / 1.0	Absent
9/16/2014	3606 Corunna Rd.	9/17/2014	3606 Corunna Rd.	1.0 / 1.4	Absent
			3521 Corunna Rd.	0.7 / 1.0	Absent
			3614 Corunna Rd.	1.5 / 2.0	Absent
9/17/2014	3302 S. Dort Hwy	9/18/2014	3302 S. Dort Hwy	0.1 / 0.2	Absent
			3124 S. Dort Hwy	0.1 / 0.2	Absent
			3316 S. Dort Hwy.	0.1 / 0.2	Absent

003452

2310

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow	**August 2014**
Operator-in-Charge	Month/Year
F-1R, F-2	**F-1**
Certification of Operator-in-Charge	Water Plant Classification
Michael Glasgow	**Genesee**
Signature of Operator-in-Charge	County

DEQ
RESOURCE MANAGEMENT DIVISION

SEP 17 2014

LANSING DISTRICT

Treatment Rate and Filter Data

Maximum Treatment Rate:	24.4	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	78	Hours
Average Head Loss:		Feet *(filter head loss meters not operational)
Average Filtration Rate:	2.2	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.3	Gallons Per Square Feet per Minute
Average Wash Water Use:	2.8%	Percent of Treated Water

Chemical Data

Chlorine on hand:	12000	lb.	Est. supply:	10	days
Primary Coagulant (Ferric Chloride) on hand:	209,000	lb.	Est. supply:	23	days
Lime (CaO) on hand:	78	tons	Est. supply:	8	days
Fluoride on Hand:	23,280	lb.	Est. supply:	38	days
Cost of All Chemicals per Million Gallons:		dollars			
Total Power Cost per Million Gallons:		dollars			

Remarks	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	0	0
Number of filter confluence samples collected:	186	186
Percent of filter confluence samples > 0.3 NTU:	0.00%	0.00%
Number of filter confluence samples > 1 NTU	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? **NO**
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? **YES**
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

COMPLETED

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant **WSSN: 2310** August 2014 Page 2

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Lime Dosage (mg/L)	PW-340 Catioinc Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
						Raw			Plate Settler	Applied
						Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	14.50	16.4	124.4	2.6	0.20	6	7.3	8.4	1.77	1.45
2	14.45	14.2	117.6	2.5	0.19	6	5.8	6.0	1.75	0.97
3	14.40	13.8	119.8	2.7	0.20	6	4.8	5.5	0.42	0.97
4	20.07	9.7	113.4	2.3	0.16	6	4.8	6.1	0.62	1.07
5	23.58	9.5	124.1	1.9	0.12	6	6.2	7.1	0.71	3.10
6	20.82	11.0	124.6	2.2	0.14	6	6.2	7.0	0.64	3.23
7	22.15	9.9	107.7	2.2	0.17	6	6.2	7.0	0.87	2.36
8	17.36	9.6	113.9	2.5	0.24	6	5.2	5.6	0.57	3.83
9	14.43	7.8	110.0	2.7	0.20	6	4.7	5.6	0.52	4.84
10	14.49	7.4	127.3	3.3	0.20	6	5.0	5.6	0.48	1.44
11	14.51	6.3	115.0	3.3	0.15	6	6.2	10.6	0.49	3.64
12	16.56	7.8	118.9	4.0	0.14	6	11.3	19.3	0.96	9.76
13	16.83	8.2	104.6	3.3	0.17	6	6.0	15.4	0.80	5.19
14	17.02	8.1	97.7	3.3	0.15	6	6.2	7.0	0.50	2.53
15	17.60	7.6	94.1	3.2	0.27	6	6.2	8.6	0.58	5.06
16	16.43	7.4	94.1	3.1	0.27	6	6.2	8.0	0.56	2.89
17	17.95	6.8	94.1	3.1	0.26	6	6.2	8.0	0.56	1.40
18	18.05	6.8	107.7	3.1	0.26	6	6.2	7.9	0.53	0.97
19	16.89	7.0	107.8	3.3	0.34	6	6.2	13.7	0.49	2.40
20	14.69	7.0	117.4	3.8	0.39	6	8.1	11.7	0.54	1.20
21	15.22	7.0	110.8	3.8	0.39	6	6.7	7.6	0.45	0.74
22	15.24	7.0	117.3	3.8	0.39	6	7.1	12.4	0.44	0.97
23	14.60	6.8	116.5	3.9	0.39	6	5.8	6.9	0.41	4.19
24	14.64	6.8	110.5	3.8	0.39	6	6.6	10.4	0.41	0.90
25	14.55	6.7	108.6	3.8	0.39	6	6.1	9.4	0.40	1.49
26	14.58	6.7	119.2	3.8	0.39	6	6.2	10.6	0.40	0.62
27	14.54	6.7	108.0	3.9	0.39	6	7.1	11.7	0.46	0.98
28	20.09	6.8	101.5	3.0	0.31	6	5.5	6.3	0.52	1.26
29	23.80	7.1	94.3	2.4	0.24	6	5.4	6.2	0.57	1.66
30	21.68	7.0	97.2	2.4	0.24	6	5.4	6.2	0.57	3.88
31	15.63	3.6	110.4	3.7	0.37	6	6.4	10.3	0.53	4.15
Avg.	17.0	8.2	110.6	3.1	0.26	6	6.23			2.55
Max.	23.8	16.4	127.3	4.0	0.39	6	11.3	19.3	1.77	9.76
Min.	14.4	3.6	94.1	1.9	0.12	6	4.70			0.62
Total	527.3									

Filter turbidity City of Flint Water Treatment Plant August 2014 Page 3

WSSN: 2310

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	6	0.07	0.11	6	0	0	6	0.07	0.08	6	0	0	0.08
2	6	0.06	0.08	6	0	0	6	0.07	0.09	6	0	0	0.08
3	6	0.06	0.07	6	0	0	6	0.08	0.09	6	0	0	0.08
4	6	0.09	0.11	6	0	0	6	0.09	0.10	6	0	0	0.08
5	6	0.11	0.13	6	0	0	6	0.10	0.11	6	0	0	0.10
6	6	0.08	0.10	6	0	0	6	0.08	0.10	6	0	0	0.09
7	6	0.11	0.13	6	0	0	6	0.11	0.14	6	0	0	0.10
8	6	0.08	0.09	6	0	0	6	0.09	0.10	6	0	0	0.09
9	6	0.09	0.12	6	0	0	6	0.09	0.12	6	0	0	0.09
10	6	0.11	0.14	6	0	0	6	0.08	0.09	6	0	0	0.10
11	6	0.10	0.11	6	0	0	6	0.09	0.13	6	0	0	0.10
12	6	0.09	0.10	6	0	0	6	0.11	0.16	6	0	0	0.11
13	6	0.13	0.16	6	0	0	6	0.12	0.15	6	0	0	0.12
14	6	0.12	0.13	6	0	0	6	0.11	0.11	6	0	0	0.12
15	6	0.14	0.16	6	0	0	6	0.15	0.17	6	0	0	0.14
16	6	0.19	0.23	6	0	0	6	0.18	0.19	6	0	0	0.17
17	6	0.16	0.21	6	0	0	6	0.13	0.15	6	0	0	0.13
18	6	0.15	0.16	6	0	0	6	0.14	0.16	6	0	0	0.13
19	6	0.11	0.13	6	0	0	6	0.11	0.14	6	0	0	0.13
20	6	0.09	0.11	6	0	0	6	0.08	0.15	6	0	0	0.10
21	6	0.07	0.08	6	0	0	6	0.08	0.19	6	0	0	0.07
22	6	0.09	0.11	6	0	0	6	0.07	0.08	6	0	0	0.09
23	6	0.08	0.09	6	0	0	6	0.08	0.10	6	0	0	0.09
24	6	0.08	0.09	6	0	0	6	0.07	0.10	6	0	0	0.09
25	6	0.09	0.12	6	0	0	6	0.07	0.08	6	0	0	0.09
26	6	0.10	0.16	6	0	0	6	0.10	0.11	6	0	0	0.09
27	6	0.10	0.13	6	0	0	6	0.10	0.12	6	0	0	0.11
28	6	0.11	0.13	6	0	0	6	0.10	0.12	6	0	0	0.10
29	6	0.12	0.14	6	0	0	6	0.12	0.14	6	0	0	0.11
30	6	0.11	0.15	6	0	0	6	0.10	0.12	6	0	0	0.12
31	6	0.13	0.16	6	0	0	6	0.12	0.13	6	0	0	0.15
Avg.	6	0.10	0.13	6	0	0	6	0.10	0.12	6	0	0	
Max.	6	0.19	0.23	6	0	0	6	0.18	0.19	6	0	0	0.17
Min.	6	0.06	0.07	6	0	0	6	0.07	0.08	6	0	0	

Fluoridation & Chlorination City of Flint Water Treatment Plant **WSSN: 2310** August 2014

Date	Fluoriode Applied as F-mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.50	0.18	0.64		3.3	3.9	7.2	0.6	0.8	2.5	2.9	1.8	2.1
2	0.50	0.19	0.66		3.2	3.8	7.0	0.7	0.9	2.3	2.7	1.3	1.5
3	0.50	0.20	0.68		3.0	4.0	7.0	0.6	0.8	2.4	2.9	1.5	1.8
4	0.50	0.19	0.71		3.1	3.5	6.6	0.4	0.6	1.9	2.3	1.3	1.6
5	0.50	0.20	0.68		3.6	3.7	7.3	0.7	1.0	2.8	3.2	2.2	2.5
6	0.50	0.20	0.76	0.72	3.8	3.9	7.7	0.9	1.2	3.0	3.5	3.3	3.5
7	0.40	0.19	0.67		3.4	4.3	7.7	0.5	0.8	2.6	2.9	1.9	2.3
8	0.50	0.19	0.67		3.4	3.4	6.8	0.7	1.0	3.2	3.5	2.0	2.5
9	0.50	0.18	0.70		3.2	2.9	6.1	0.4	0.6	1.9	2.3	1.5	1.7
10	0.50	0.18	0.71		3.2	3.4	6.6	0.5	0.8	1.9	2.4	1.3	1.6
11	0.50	0.19	0.69		3.1	3.3	6.4	0.7	1.1	2.8	3.3	2.2	2.6
12	0.50	0.19	0.72	0.68	2.6	3.8	6.4	1.1	1.3	3.0	3.5	1.5	2.0
13	0.40	0.17	0.57		2.8	4.4	7.2	0.3	0.5	3.0	3.5	2.2	2.7
14	0.40	0.17	0.58		3.5	3.9	7.4	0.2	0.3	2.0	2.5	1.1	1.5
15	0.40	0.18	0.59		3.5	3.5	7.0	0.4	0.6	2.3	2.7	1.2	1.6
16	0.40	0.20	0.59		3.3	3.6	6.9	0.4	0.6	1.9	2.3	1.4	1.8
17	0.40	0.19	0.59		3.1	3.7	6.8	0.3	0.6	2.0	2.5	1.6	1.9
18	0.40	0.19	0.58		3.2	3.6	6.8	0.3	0.6	2.2	3.0	1.0	1.4
19	0.40	0.18	0.57	0.57	3.8	3.4	7.2	0.7	1.2	3.0	3.5	1.8	2.3
20	0.30	0.20	0.57		3.4	3.0	6.4	0.6	1.0	2.6	3.0	0.8	1.0
21	0.50	0.18	0.53		3.4	3.0	6.4	0.7	0.9	2.1	2.7	1.4	1.6
22	0.50	0.18	0.70		3.4	2.8	6.2	0.6	1.0	2.3	3.0	1.6	2.2
23	0.50	0.16	0.67		3.3	3.0	6.3	0.4	0.7	2.3	2.8	1.1	1.5
24	0.50	0.19	0.68		3.3	2.9	6.2	0.5	0.9	2.5	3.1	1.0	1.5
25	0.50	0.18	0.63		3.0	3.2	6.2	0.6	1.0	2.4	3.3	1.1	1.5
26	0.50	0.19	0.77	0.64	3.0	3.6	6.6	0.2	0.4	2.4	2.9	0.8	1.1
27	0.50	0.19	0.71		3.3	3.5	6.8	0.4	0.7	2.5	3.0	1.8	2.3
28	0.50	0.20	0.71		3.4	3.3	6.7	0.3	0.6	2.0	2.5	1.2	1.6
29	0.40	0.18	0.55		3.3	3.5	6.8	0.3	0.6	2.3	2.8	1.2	1.6
30	0.40	0.18	0.63		3.6	3.6	7.2	0.2	0.6	2.1	2.6	1.0	1.3
31	0.40	0.19	0.83		4.1	4.4	8.5	0.8	1.3	3.0	3.5	3.0	3.4
Avg.	0.46	0.19	0.66	0.65	3.3	3.5	6.9	0.5	0.8	2.4	2.9	1.6	1.9
Max.	0.50	0.20	0.83	0.72	4.1	4.4	8.5	1.1	1.3	3.2	3.5	3.3	3.5
Min.	0.30	0.16	0.53	0.57	2.6	2.8	6.1	0.2	0.3	1.9	2.3	0.8	1.0

Chemical Analyses

City of Flint Water Treatment Plant
WSSN: 2310

August 2014

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.10	7.74	237	173	196	77	41	96	88.2	64.9	4.4	3.4	41	75
2	8.14	7.62	240	173	195	77	45	96	89.8	66.5	7.3	2.0	40	77
3	8.22	7.45	239	176	199	86	40	90	70.5	57.5	15.1	7.8	41	76
4	8.36	7.43	233	172	193	84	40	88	72.1	65.7	13.1	2.9	39	74
5	8.02	8.05	229	149	194	74	35	75	70.5	44.1	11.7	11.2	40	64
6	7.96	7.74	232	144	192	50	40	94	69.7	44.1	14.1	8.3	40	65
7	7.99	7.89	231	163	195	85	36	78	67.3	48.9	14.6	8.3	41	67
8	7.96	7.94	248	153	196	70	52	83	67.3	44.9	21.4	9.2	38	65
9	8.39	7.75	242	150	195	75	47	75	64.9	56.1	19.9	2.9	42	62
10	8.20	7.97	239	152	197	72	42	80	87.4	56.1	5.3	2.4	43	62
11	8.32	7.93	236	142	197	75	39	67	70.5	48.1	14.6	6.8	39	64
12	8.19	7.87	235	143	193	79	42	64	68.1	47.3	15.6	4.4	38	58
13	7.98	7.71	221	148	185	89	36	59	60.9	44.1	15.6	7.3	39	61
14	7.59	7.64	227	159	190	92	37	67	66.5	52.1	14.6	7.8	38	61
15	8.02	7.88	235	169	193	98	42	71	87.4	62.5	6.8	3.9	40	60
16	8.09	7.99	237	174	191	101	46	73	85.0	62.5	5.8	4.9	41	59
17	8.01	8.09	231	164	192	92	39	72	88.2	60.9	6.8	3.4	39	60
18	8.07	7.72	236	153	196	92	40	61	63.3	46.5	18.9	8.7	39	60
19	7.97	7.99	236	151	197	85	39	66	87.4	52.1	4.9	3.9	39	62
20	8.04	7.65	226	147	189	87	37	60	67.3	48.1	13.6	7.3	38	61
21	8.13	7.94	233	139	192	79	41	60	71.3	48.9	13.6	3.4	41	60
22	8.33	7.64	234	149	189	84	45	65	70.5	48.1	13.1	8.3	39	59
23	8.13	7.88	229	146	195	69	34	77	68.9	49.7	14.1	5.8	40	57
24	8.26	7.60	230	149	195	88	35	61	70.5	50.5	12.2	5.3	42	60
25	8.14	7.65	235	142	194	77	41	65	71.3	48.9	13.1	3.4	40	60
26	8.15	7.61	234	155	194	87	40	68	88.2	54.4	6.3	4.4	41	58
27	8.01	7.61	242	152	200	86	42	66	76.2	52.9	12.2	3.9	40	60
28	8.06	7.73	243	157	198	87	45	70	89.8	60.1	5.8	1.0	42	60
29	7.95	8.01	241	153	197	83	44	70	86.6	56.9	5.3	1.9	44	63
30	7.85	7.75	235	160	193	86	42	74	85.8	56.9	5.3	4.9	43	60
31	8.02	7.77	239	157	200	91	39	66	77.0	50.5	11.7	5.8	45	65
Avg.	8.09	7.78	235	155	194	82	41	73	75.8	53.3	11.5	5.3	40	63
Max.	8.39	8.09	248	176	200	101	52	96	89.8	66.5	21.4	11.2	45	77
Min.	7.59	7.43	221	139	185	50	34	59	60.9	44.1	4.4	1.0	38	57

Bacteriological & Physical Parameters | City of Flint Water Treatment Plant | **WSSN: 2310** | August 2014 | Page 6

Date	Total Coliform						Standard Plate Count (Simplate MPN)		Conductivity (mS)	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap	Tap	Raw	Raw	Tap	Raw	Tap
1	1	7380	12	0	1	0	8280	< 2	0.50	21.8				
2	1	5510	12	0	1	0	5740	< 2	0.50	22.3				
3	1	4962	12	0	1	0	1060	< 2	0.45	24.7				
4	1	4286	12	0	1	0	1940	< 2	0.44	24.9				
5	1	1976	12	0	1	0	2740	< 2	0.50	23.7				
6	1	10950	12	0	1	0	11100	< 2	0.39	23.5				
7	1	18416	12	0	1	0	8280	< 2	0.43	23.3				
8	1	22398	12	0	1	0	>14760	< 2	0.41	23.6				
9	1	4564	12	0	1	0	>14760	< 2	0.50	24.2				
10	1	2028	12	0	1	0	9400	< 2	0.50	23.9				
11	1	3214	12	0	1	0	2080	< 2	0.42	25.2				
12	1	2752	12	0	1	0	1940	< 2	0.40	23.9				
13	1	6152	12	0	1	0	>14760	< 2	0.37	22.5				
14	1	1618	12	0	1	0	>14760	< 2	0.43	22.4				
15	1	2134	12	0	1	0	5740	< 2	0.44	22.1				
16	1	1232	12	0	1	0	12460	< 2	0.44	21.9				
17	1	1424	12	0	1	0	5140	< 2	0.41	21.4				
18	1	2802	12	0	1	0	8280	< 2	0.40	22.0				
19	1	1672	12	0	1	0	5520	< 2	0.40	22.5				
20	1	6882	12	0	1	0	>14760	< 2	0.40	22.8				
21	1	7304	12	0	1	0	1360	2	0.38	22.9				
22	1	8704	12	0	1	0	3420	< 2	0.40	22.5				
23	1	4564	12	0	1	0	>14760	< 2	0.38	24.7				
24	1	3328	12	0	1	0	1300	< 2	0.39	23.2				
25	1	3446	12	0	1	0	900	< 2	0.39	24.5				
26	1	4196	12	0	1	0	2000	2	0.40	25.0				
27	1	4284	12	0	1	0	1060	< 2	0.40	23.9				
28	1	3446	12	0	1	0	1360	< 2	0.41	22.7				
29	1	1424	12	0	1	0	12460	< 2	0.43	23.4				
30	1	4028	12	0	1	0	14760	< 2	0.42	23.5				
31	1	3232	12	0	1	0	2320	< 2	0.42	23.8				
Avg.									0.42	23.3				
Max.							14760	2	0.50	25.2				
Min.									0.37	21.4				

Distribution System Monitoring City of Flint Water Treatment Plant **WSSN: 2310** August 2014

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1											0
2											0
3											0
4											0
5											0
6	0.3	0.8	0.3	0.3	0.1	0.2	0.1	0.9	0.3	0.2	10
7	0.7	0.9	0.2	0.6	0.1	0.2	0.1	1.0	0.1	1.5	10
8											0
9											0
10											0
11									0.2	0.0	2
12	0.1	0.4	0.1	0.1	0.1	0.2	0.1	0.5	0.0	0.1	10
13	0.2	0.2	0.1	0.0	0.0	0.5	0.5	1.2	0.0	1.3	10
14	0.4	0.8	0.2	0.2	0.0	0.1	0.0	1.0	0.6	0.4	10
15											0
16											0
17											0
18											0
19	0.1	0.3	0.1	0.0	0.1	0.1	0.1	1.1	0.6	0.9	10
20	0.2	0.8	0.1	0.3	0.1	0.2	0.3	1.0	0.4	0.5	10
21	0.2	0.5	0.2	0.1	0.0	0.0	0.1	0.9	0.1	0.9	10
22	0.2	0.6	0.2	0.5	0.3	0.1	0.0	0.9	0.6	1.1	10
23											0
24											0
25											0
26	0.1	0.5	0.1	0.3	0.0	0.2	0.1	0.8	1.1	0.7	10
27	0.1	0.4	0.1	0.2	0.1	0.1	0.1	0.7	0.4	0.5	10
28	0.2	0.4	0.1	0.4	0.1	0.2	0.1	1.0	0.9	1.0	10
29									0.9	1.0	2
30											0
31											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	124
Total # of routine distribution samples required	100

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	15
Percent of routine distribution samples positive	12%

Distribution Disinfectant Total Residual Summary	
Percentage of samples with a detectable disinfectant residual	91%
Average disinfectant residual this month	0.37

Positive Distribution Samples					
Date	Monitoring Station	Date	Repeat Monitorong Stations	Residual	Positive or Negative
	See page 9				

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1											0
2											0
3											0
4											0
5											0
6	0.6	1.1	0.5	0.5	0.2	0.3	0.2	1.2	0.5	0.3	10
7	0.9	1.3	0.5	0.9	0.4	0.4	0.3	1.2	0.4	2.0	10
8											0
9											0
10											0
11											0
12	0.3	0.6	0.3	0.2	0.1	0.3	0.2	0.7	0.1	0.1	10
13	0.4	0.5	0.2	0.7	0.1	0.3	0.1	1.5	0.1	1.6	10
14	0.7	1.1	0.4	0.4	0.1	0.2	0.1	1.4	0.9	0.6	10
15											0
16											0
17											0
18											0
19	0.3	0.6	0.2	0.3	0.1	0.2	0.1	1.3	0.9	1.1	10
20	0.4	1.2	0.3	0.7	0.3	0.4	0.5	1.5	0.7	1.0	10
21	0.4	1.1	0.4	0.3	0.1	0.2	0.2	1.3	0.3	1.1	10
22	0.4	1.0	0.4	0.9	0.5	0.2	0.1	1.1	0.8	1.4	10
23											0
24											0
25											0
26	0.3	0.9	0.9	0.6	0.1	0.5	0.3	1.3	1.5	1.2	10
27	0.3	0.7	0.2	0.3	0.2	0.2	0.2	1.1	0.7	0.8	10
28	0.5	0.7	0.3	0.8	0.3	0.5	0.3	1.5	1.6	1.5	10
29									1.3	1.5	2
30											0
31											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	0.6

Positive Distribution Samples

Date	Monitoring station	Date	Repeat Monitoring Stations	Present or Absent
8/12/2014	3606 Corunna Rd	8/13/2014	3606 Corunna Rd	Present
		8/13/2014	3521 Corunna Rd	Present
		8/13/2014	3614 Corunna Rd.	Present
8/12/2014	2501 Flushing Rd	8/13/2014	2501 Flushing Rd	Present
		8/13/2014	1117 N. Chevrolet	Present
		8/13/2014	2740 Flushing Rd	Present
8/12/2014	1100 Cedar St.	8/13/2014	1100 Cedar St.	Present
		8/13/2014	1035 Ann Arbour St	Present
		8/13/2014	702 W. 12th St	Absent
8/14/2014	2501 Flushing Rd	8/15/2014	2501 Flushing Rd	Absent
		8/15/2014	1117 N. Chevrolet	Present
		8/15/2014	2740 Flushing Rd	Absent
		8/16/2014	2501 Flushing Rd	Absent
		8/16/2014	1117 N. Chevrolet	Present
		8/16/2014	2740 Flushing Rd	Absent
		8/17/2014	1117 N. Chevrolet	Absent
		8/18/2014	2501 Flushing Rd	Absent
		8/18/2014	1117 N. Chevrolet	Absent
		8/18/2014	2740 Flushing Rd	Absent
8/22/2014	5018 Clio Rd.	8/23/2014	5018 Clio Rd.	Absent
		8/23/2014	5005 Cloverlawn Dr.	Absent
		8/23/2014	4930 Clio Rd.	Absent

003461

2310

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow	**July 2014**
Operator-in-Charge	Month/Year
F-1R, F-2	**F-1**
Certification of Operator-in-Charge	Water Plant Classification
Michael Glasgow	**Genesee**
Signature of Operator-in-Charge	County

DEQ
RESOURCE MANAGEMENT DIVISION
AUG 1 4 2014
LANSING DISTRICT

Treatment Rate and Filter Data

Maximum Treatment Rate:	24.5	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	65	Hours
Average Head Loss:	*	Feet *(filter head loss m[illegible])
Average Filtration Rate:	2.3	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.8	Gallons Per Square Feet per Minute
Average Wash Water Use:	2.5%	Percent of Treated Water

Chemical Data

Chlorine on hand:	21000	lb.	Est. supply:	16 days
Primary Coagulant (Ferric Chloride) on hand:	174,603	lb.	Est. supply:	23 days
Lime (CaO) on hand:	219	tons	Est. supply:	21 days
Fluoride on Hand:	16,348	lb.	Est. supply:	27 days
Cost of All Chemicals per Million Gallons:		dollars		
Total Power Cost per Million Gallons:		dollars		

Remarks	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	0	0
Number of filter confluence samples collected:	186	186
Percent of filter confluence samples > 0.3 NTU:	0.00%	0.00%
Number of filter confluence samples > 1 NTU	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? **NO**
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? **YES**
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

COMPLETED

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant **WSSN: 2310** July 2014

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Lime Dosage (mg/L)	PW-340 Cationic Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
						Raw			Plate Settler	Applied
						Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	21.93	19.4	127.3	1.8	0.05	6	10.2	20.6	0.60	2.80
2	21.04	19.1	128.0	1.8	0.05	6	6.2	7.1	0.77	4.92
3	20.96	19.8	122.0	1.8	0.05	6	7.7	22.7	0.62	3.45
4	21.33	18.5	115.7	1.8	0.05	6	5.2	6.3	0.62	3.25
5	21.34	19.0	113.3	1.8	0.05	6	4.9	5.7	0.84	1.56
6	22.92	18.2	109.7	1.7	0.04	6	6.7	14.3	0.83	2.55
7	21.18	25.8	128.7	1.9	0.05	6	10.9	20.1	1.28	5.19
8	20.80	22.4	146.7	1.9	0.05	6	9.9	20.6	1.20	11.04
9	20.99	22.7	128.1	1.8	0.05	6	19.7	49.5	1.51	4.63
10	21.57	21.1	105.0	1.8	0.05	6	16.9	20.3	1.40	6.27
11	24.46	18.5	98.4	1.6	0.04	6	8.1	12.9	1.90	1.75
12	24.17	19.1	116.6	1.6	0.04	6	7.6	8.1	2.29	2.28
13	23.78	20.0	121.2	1.6	0.04	6	9.4	10.1	2.51	2.05
14	16.55	22.4	153.0	2.4	0.07	6	9.6	13.9	1.36	4.97
15	14.25	17.9	167.5	2.7	0.07	6	10.6	12.6	0.52	2.09
16	14.60	16.9	160.2	2.6	0.07	6	10.5	11.5	0.49	2.52
17	14.45	16.7	159.3	2.6	0.07	6	11.6	14.7	0.57	1.01
18	14.34	16.7	162.7	2.7	0.07	6	10.9	12.8	0.46	3.11
19	14.65	15.0	148.9	2.6	0.07	6	8.2	12.8	0.38	2.63
20	14.80	15.5	145.5	2.6	0.07	6	6.1	12.0	0.40	5.06
21	14.86	16.3	140.2	2.6	0.07	6	5.8	7.4	0.64	3.05
22	20.74	13.8	128.0	1.9	0.06	6	5.1	6.3	0.45	3.40
23	23.50	12.6	122.2	1.6	0.04	6	6.1	6.8	0.63	2.96
24	22.23	12.6	118.5	1.7	0.04	6	6.2	6.5	0.80	1.93
25	21.20	15.0	117.4	1.9	0.06	6	6.4	6.7	0.87	2.01
26	14.39	18.6	132.9	2.6	0.07	6	6.1	7.0	0.30	3.21
27	14.47	18.3	133.9	2.6	0.07	6	6.6	7.9	0.33	1.19
28	14.59	17.6	125.9	2.6	0.07	6	6.6	7.3	0.33	1.17
29	14.62	16.7	133.5	2.6	0.07	6	6.7	7.8	0.40	0.67
30	14.68	14.7	133.6	2.6	0.07	6	7.5	10.0	0.57	0.84
31	14.63	14.2	133.7	2.6	0.07	6	6.7	7.6	1.20	1.70
Avg.	18.7	17.9	131.5	2.1	0.06	6	8.41			3.07
Max.	24.5	25.8	167.5	2.7	0.07	6	19.7	49.5	2.51	11.04
Min.	14.3	12.6	98.4	1.6	0.04	6	4.90			0.67
Total	580.0									

Filter turbiditiy

City of Flint Water Treatment Plant
WSSN: 2310

July 2014

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	6	0.07	0.10	6	0	0	6	0.07	0.10	6	0	0	0.11
2	6	0.08	0.10	6	0	0	6	0.07	0.11	6	0	0	0.21
3	6	0.08	0.10	6	0	0	6	0.08	0.12	6	0	0	0.11
4	6	0.08	0.09	6	0	0	6	0.08	0.10	6	0	0	0.11
5	6	0.07	0.08	6	0	0	6	0.07	0.08	6	0	0	0.11
6	6	0.07	0.09	6	0	0	6	0.06	0.08	6	0	0	0.11
7	6	0.06	0.10	6	0	0	6	0.07	0.11	6	0	0	0.09
8	6	0.07	0.10	6	0	0	6	0.07	0.12	6	0	0	0.20
9	6	0.08	0.11	6	0	0	6	0.07	0.13	6	0	0	0.14
10	6	0.07	0.10	6	0	0	6	0.07	0.11	6	0	0	0.11
11	6	0.08	0.10	6	0	0	6	0.07	0.10	6	0	0	0.08
12	6	0.06	0.10	6	0	0	6	0.08	0.17	6	0	0	0.08
13	6	0.08	0.14	6	0	0	6	0.07	0.11	6	0	0	0.08
14	6	0.07	0.09	6	0	0	6	0.07	0.08	6	0	0	0.08
15	6	0.06	0.08	6	0	0	6	0.07	0.10	6	0	0	0.08
16	6	0.06	0.08	6	0	0	6	0.06	0.09	6	0	0	0.08
17	6	0.07	0.10	6	0	0	6	0.05	0.07	6	0	0	0.08
18	6	0.06	0.07	6	0	0	6	0.05	0.06	6	0	0	0.08
19	6	0.06	0.07	6	0	0	6	0.06	0.08	6	0	0	0.08
20	6	0.06	0.09	6	0	0	6	0.06	0.09	6	0	0	0.08
21	6	0.11	0.10	6	0	0	6	0.08	0.15	6	0	0	0.08
22	6	0.09	0.10	6	0	0	6	0.07	0.09	6	0	0	0.08
23	6	0.09	0.10	6	0	0	6	0.09	0.09	6	0	0	0.08
24	6	0.09	0.10	6	0	0	6	0.09	0.09	6	0	0	0.08
25	6	0.09	0.10	6	0	0	6	0.09	0.11	6	0	0	0.08
26	6	0.08	0.10	6	0	0	6	0.07	0.09	6	0	0	0.08
27	6	0.07	0.10	6	0	0	6	0.08	0.10	6	0	0	0.08
28	6	0.09	0.11	6	0	0	6	0.08	0.09	6	0	0	0.08
29	6	0.08	0.09	6	0	0	6	0.07	0.09	6	0	0	0.08
30	6	0.08	0.11	6	0	0	6	0.08	0.09	6	0	0	0.08
31	6	0.08	0.09	6	0	0	6	0.08	0.10	6	0	0	0.08
Avg.	6	0.07	0.10	6	0	0	6	0.07	0.10	6	0	0	
Max.	6	0.11	0.14	6	0	0	6	0.09	0.17	6	0	0	0.21
Min.	6	0.06	0.07	6	0	0	6	0.05	0.06	6	0	0	

Fluoridation & Chlorination | City of Flint Water Treatment Plant | **WSSN: 2310** | July 2014 |

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.00	0.15	0.14		4.1	3.3	7.4	0.7	1.0	1.3	1.7	1.3	1.6
2	0.04	0.15	0.56	0.15	4.0	4.0	8.0	0.9	1.1	2.5	3.2	1.9	2.2
3	0.04	0.19	0.54		3.9	4.1	8.0	0.5	0.6	3.2	3.5	1.8	1.9
4	0.04	0.19	0.56		3.8	4.1	7.9	0.5	0.8	1.9	2.4	1.4	1.7
5	0.04	0.17	0.59		3.7	4.5	8.2	0.6	0.8	2.0	2.5	1.5	1.7
6	0.30	0.17	0.58		3.5	4.6	8.1	0.6	0.9	2.0	2.4	1.7	1.9
7	0.40	0.17	0.61		3.9	5.2	9.1	0.8	1.2	2.4	3.0	1.8	2.3
8	0.50	0.15	0.64		3.6	4.7	8.3	0.5	0.7	2.9	3.5	2.1	2.3
9	0.40	0.17	0.64		3.3	4.8	8.1	0.2	0.6	2.8	3.2	1.9	2.2
10	0.50	0.17	0.73		3.4	4.6	8.0	0.6	1.0	2.7	3.5	1.5	2.0
11	0.30	0.20	0.59	0.65	2.9	4.3	7.2	0.3	0.7	1.9	2.6	1.5	1.9
12	0.40	0.15	0.66		2.8	4.3	7.1	0.3	0.6	2.0	2.4	1.5	1.9
13	0.40	0.19	0.68		2.8	4.3	7.1	0.4	0.6	1.9	2.3	1.6	1.8
14	0.40	0.20	0.72		4.3	5.1	9.4	0.7	1.0	2.1	2.6	1.9	2.2
15	0.40	0.19	0.70		4.6	4.2	8.8	0.7	1.0	2.5	3.0	2.2	2.5
16	0.40	0.19	0.71	0.66	4.3	3.6	7.9	0.7	0.9	2.2	2.7	1.9	2.2
17	0.40	0.19	0.69		4.1	3.7	7.8	0.5	0.7	2.8	3.2	1.9	2.2
18	0.40	0.22	0.65		4.5	3.6	8.1	0.8	1.1	2.5	3.0	1.9	2.3
19	0.40	0.17	0.67		4.4	3.1	7.5	0.8	1.1	2.4	2.8	1.8	2.0
20	0.40	0.21	0.66		4.3	3.1	7.4	0.7	1.0	2.5	2.9	1.8	2.1
21	0.50	0.18	0.75		4.0	2.7	6.7	0.8	1.1	2.4	2.8	1.7	2.0
22	0.40	0.19	0.65		3.4	3.4	6.8	0.6	0.8	1.8	2.2	1.4	1.7
23	0.40	0.19	0.59	0.66	3.5	4.2	7.7	0.8	1.0	2.3	2.9	1.9	2.2
24	0.40	0.19	0.64		3.6	4.1	7.7	0.6	0.8	2.2	2.8	2.1	2.6
25	0.40	0.21	0.62		4.1	4.2	8.3	0.5	0.7	2.4	2.8	1.9	2.2
26	0.60	0.21	0.88		5.3	2.7	8.0	1.4	1.7	2.5	3.1	1.9	2.3
27	0.50	0.17	0.79		4.6	2.6	7.2	0.9	1.2	2.7	3.1	1.7	1.9
28	0.50	0.19	0.72		4.7	2.7	7.4	0.9	1.1	2.1	2.6	1.6	1.8
29	0.50	0.19	0.70		4.8	2.6	7.4	1.1	1.3	2.2	2.6	1.7	2.0
30	0.50	0.19	0.28	0.62	4.5	2.7	7.2	1.1	1.5	2.2	2.6	1.8	2.1
31	0.50	0.18	0.61		3.2	3.9	7.1	0.5	0.8	2.1	2.4	1.7	2.0
Avg.	0.37	0.18	0.63	0.55	3.9	3.8	7.8	0.7	0.9	2.3	2.8	1.8	2.1
Max.	0.60	0.22	0.88	0.66	5.3	5.2	9.4	1.4	1.7	3.2	3.5	2.2	2.6
Min.	0.00	0.15	0.14	0.15	2.8	2.6	6.7	0.2	0.6	1.3	1.7	1.3	1.6

Chemical Analyses City of Flint Water Treatment Plant July 2014 Page 5

WSSN: 2310

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.04	7.81	260	158	214	58	46	100	88.2	55.4	9.7	5.3	43	88
2	8.08	7.59	258	150	24	54	234	96	89.8	50.5	8.3	5.8	45	90
3	8.25	7.51	260	176	224	54	36	122	93.0	63.3	8.6	4.4	44	87
4	8.21	7.67	273	190	222	84	51	106	81.0	64.1	15.6	5.8	45	87
5	8.23	7.66	272	193	226	75	46	118	88.2	65.7	13.1	7.3	45	91
6	8.24	7.62	273	171	225	71	48	100	85.8	57.7	14.6	4.9	45	91
7	8.17	7.43	241	173	204	43	37	130	81.8	60.9	5.8	5.1	45	89
8	8.27	7.49	247	179	209	35	38	144	95.4	68.1	5.3	4.4	45	101
9	8.11	7.49	246	164	208	64	38	100	85.0	60.1	8.3	3.4	46	96
10	7.92	7.35	232	150	187	31	45	119	69.7	48.9	13.6	7.8	41	98
11	7.96	7.63	227	160	182	52	45	108	81.8	56.9	5.8	4.4	43	85
12	7.68	7.85	248	190	198	85	50	105	77.0	60.9	11.2	8.3	41	88
13	7.89	7.69	242	180	201	81	41	99	83.4	59.3	8.3	7.8	42	87
14	8.16	7.61	262	175	225	63	37	112	85.0	65.7	12.6	5.3	46	89
15	8.14	7.56	254	172	223	60	31	112	65.7	56.9	22.8	8.3	45	88
16	8.16	7.58	253	152	211	38	42	114	93.0	52.9	5.8	3.9	44	83
17	8.17	7.41	251	169	212	59	39	110	89.0	59.3	8.3	3.4	43	84
18	8.14	7.61	251	151	204	40	47	111	88.2	57.7	7.0	2.0	40	82
19	8.30	7.74	251	157	202	44	49	113	90.6	58.5	6.3	2.4	39	82
20	8.51	7.62	254	147	195	45	59	102	88.2	49.7	8.7	2.6	41	78
21	8.28	7.60	243	154	203	59	40	95	80.2	54.5	10.7	4.4	42	81
22	8.24	7.54	246	162	198	62	48	100	89.0	58.5	6.3	3.4	42	71
23	8.00	7.78	244	162	198	80	46	82	84.2	53.7	7.8	5.3	39	68
24	7.87	7.75	241	175	199	74	42	101	90.6	61.7	3.9	4.4	40	74
25	7.92	7.88	242	169	198	68	44	101	85.8	60.9	7.3	4.9	40	71
26	8.31	7.94	241	178	199	73	42	105	89.0	63.3	4.9	6.3	42	79
27	8.25	7.60	241	183	199	80	42	103	92.2	62.5	8.3	5.8	45	83
28	8.13	7.56	237	176	200	77	37	99	57.7	57.7	7.3	7.3	82	82
29	8.09	7.55	243	181	198	80	45	101	89.8	67.3	8.7	2.0	41	79
30	8.11	7.47	236	172	200	76	36	96	89.9	67.3	2.9	1.0	42	73
31	8.19	7.68	240	166	194	68	46	98	90.6	64.1	3.9	2.4	41	76
Avg.	8.13	7.62	249	169	199	62	49	107	85.1	59.5	8.8	4.8	44	84
Max.	8.51	7.94	273	193	226	85	234	144	95.4	68.1	22.8	8.3	82	101
Min.	7.68	7.35	227	147	24	31	31	82	57.7	48.9	2.9	1	39	68

205 Ave
182 min

Bacteriological & Physical Parameters | City of Flint Water Treatment Plant | **WSSN: 2310** | July 2014 | Page 6

Date	Total Coliform						Standard Plate Count (Simplate MPN)		Conductivity (mS)	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap		Raw	Raw	Tap	Raw	Tap
1	1	39726	12	0	1	0	10140	< 2	0.50	25.4				
2	1	5510	12	0	1	0	1940	< 2	0.50	25.2				
3	1	4764	12	0	1	0	1600	< 2	0.60	25.4				
4	1	4564	12	0	1	0	8280	< 2	0.60	25.4				
5	1	3316	12	0	1	0	7440	< 2	0.60	24.3				
6	1	2752	12	0	1	0	3540	< 2	0.50	26.1				
7	1	14540	12	0	1	0	2080	< 2	0.60	24.6				
8	1	4962	12	0	1	0	2480	< 2	0.60	24.8				
9	1	9222	12	0	1	0	14760	< 2	0.50	24.3				
10	1	15402	12	0	1	0	14760	< 2	0.50	23.8				
11	1	3130	12	1	1	0	4460	2	0.50	24.0				
12	1	3700	12	1	1	0	4620	< 2	0.60	24.0				
13	1	6152	12	0	1	0	7440	< 2	0.60	24.4				
14	1	5446	12	0	1	0	3780	< 2	0.42	24.6				
15	1	7746	12	0	1	0	5980	< 2	0.50	24.6				
16	1	5226	12	0	1	0	14760	< 2	0.50	24.0				
17	1	6152	12	0	1	0	2160	< 2	0.50	23.7				
18	1	3578	12	0	1	0	7440	< 2	0.50	23.0				
19	1	5206	12	0	1	0	2640	< 2	0.50	23.2				
20	1	4764	12	0	1	0	7100	< 2	0.50	24.3				
21	1	4978	12	0	1	0	1180	< 2	0.42	23.9				
22	1	3316	12	0	1	0	14760	< 2	0.50	24.5				
23	1	1866	12	0	1	0	14760	< 2	0.50	25.0				
24	1	10950	12	0	1	0	10140	< 2	0.50	24.5				
25	1	48329	12	0	1	0	14760	< 2	0.50	24.8				
26	1	4620	12	0	1	0	6780	< 2	0.50	25.3				
27	1	5510	12	0	1	0	7100	< 2	0.60	24.2				
28	1	16328	12	0	1	0	4460	< 2	0.47	23.3				
29	1	15402	12	0	1	0	4180	< 2	0.50	23.6				
30	1	7746	12	0	1	0	4620	< 2	0.50	22.7				
31	1	5818	12	0	1	0	14760	< 2	0.50	22.4				
Avg.									0.52	24.3				
Max.							14760	2	0.60	26.1				
Min.									0.42	22.4				

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1									0.6	0.5	2
2	1.0	1.3	0.5	0.5	0.3	0.9	0.4	1.4	0.2	1.4	10
3	0.9	1.4	0.8	0.8	0.1	1.2	0.3	1.6			8
4											0
5											0
6											0
7									0.9	1.5	2
8									3.0	1.8	2
9	1.4	1.6	1.1	1.2	0.4	1.2	0.8	1.1	0.9	1.0	10
10	1.3	1.5	1.1	1.4	0.8	1.1	0.9	1.7	1.0	1.0	10
11									0.9	1.1	2
12											0
13											0
14									0.5	1.1	2
15	1.1	1.3	0.9	1.1	0.3	0.6	0.5	1.5	1.0	0.2	10
16	0.8	1.1	0.7	0.1	0.1	0.9	0.4	1.6	0.1	0.5	10
17	0.8	1.3	0.6	0.2	0.2	0.9	0.4	1.5	0.1	0.9	10
18									0.3	0.1	2
19											0
20											0
21									0.3	0.1	2
22									0.1	1.1	2
23	0.8	1.3	0.8	0.9	0.1	0.7	0.3	1.6	0.8	0.1	10
24	0.8	0.6	0.7	0.8	0.1	0.8	0.3	1.3	1.3	0.0	10
25									0.5	1.2	2
26											0
27											0
28									0.5	0.0	2
29	0.2	1.1	0.4	0.7	0.1	0.6	0.2	1.3	0.3	1.0	10
30	0.5	0.8	0.5	0.3	0.0	0.3	0.2	1.2	0.1	0.0	10
31											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	128
Total # of routine distribution samples required	100

Distribution Disinfectant Free Residual Summary	
Percent samples with a detectable disinfectant residual	98%
Average disinfectant residual this month	0.8

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	2
Percent of routine distribution samples positive	2%

Positive Distribution Samples					
Date	Monitoring Station	Date	Repeat Monitorong Stations	Residual	Positive or Negative
7/22/2014	Cedar Street Reservoir	7/23/2014	Cedar Street Reservoir	0.8 / 1.2	Negative
	1100 Cedar St.	7/23/2014	1035 Ann Arbour St.	0.4 / 0.7	Negative
		7/23/2014	705 W. 12th St.	0.1 / 0.3	Negative
7/30/2014	University Market	7/31/2014	Unversity Market	0.1 / 0.3	Negative
	2501 Flushing Rd.	7/31/2014	1117 N. Chevrolet	0.0 / 0.1	Negative
		7/31/2014	1128 N. Chevrolet	0.0 / 0.1	Negative

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1									0.9	0.8	2
2	1.3	1.7	0.8	0.8	0.6	1.3	0.6	1.6	0.3	0.8	10
3	1.1	1.7	1.0	1.2	0.3	1.8	0.5	2.0			8
4											0
5											0
6											0
7									1.1	1.8	2
8									3.4	2.2	2
9	1.6	1.9	1.4	1.6	0.7	1.8	1.0	1.4	1.2	1.3	10
10	1.7	2.0	1.4	1.6	1.1	1.5	1.1	2.0	1.5	1.3	10
11									1.1	1.3	2
12											0
13											0
14									0.8	1.4	2
15	1.5	1.7	1.3	1.4	0.5	1.0	0.7	1.8	1.5	0.3	10
16	1.1	1.4	1.2	0.3	0.2	1.3	0.8	1.6	0.3	0.7	10
17	0.9	1.6	0.9	0.3	0.3	1.3	0.6	1.8	0.3	1.3	10
18									0.4	0.2	2
19											0
20											0
21									0.5	0.3	2
22									0.2	1.4	2
23	1.0	1.6	0.9	1.1	0.1	0.9	0.5	2.0	1.2	0.2	10
24	1.2	1.1	1.1	1.0	0.2	1.2	0.6	1.8	1.7	0.1	10
25									0.7	1.6	2
26											0
27											0
28									0.7	0.2	2
29	0.4	1.4	0.6	1.0	0.3	0.8	0.8	1.6	0.5	1.3	10
30	0.7	1.1	0.7	0.6	0.1	0.4	0.2	1.4	0.1	0.1	10
31											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.0

003469

2310

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow
Operator-in-Charge

June 2014
Month/Year

F-1R, F-2
Certification of Operator-in-Charge

F-1
Water Plant Classification

DEQ
RESOURCE MANAGEMENT DIVISION
JUL 28 2014
LANSING DISTRICT

Michael Glasgow
Signature of Operator-in-Charge

Genesee
County

Treatment Rate and Filter Data

Maximum Treatment Rate:	25	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	74	Hours
Average Head Loss:	*	Feet *(filter head loss meters not operational)
Average Filtration Rate:	2.5	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.5	Gallons Per Square Feet per Minute
Average Wash Water Use:	3.6%	Percent of Treated Water

Chemical Data

Chlorine on hand:	24000	lb.	Est. supply:	20	days
Primary Coagulant (Ferric Chloride) on hand:	63450	lb.	Est. supply:	10	days
Lime (CaO) on hand:	169	tons	Est. supply:	18	days
Fluoride on Hand:	9064	lb.	Est. supply:	16	days
Cost of All Chemicals per Million Gallons:	*	dollars			
Total Power Cost per Million Gallons:	*	dollars			

Remarks

	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	0	0
Number of filter confluence samples collected:	180	180
Percent of filter confluence samples > 0.3 NTU:	0.00%	0.00%
Number of filter confluence samples > 1 NTU	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? **NO**
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? **NO**
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? **YES**
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? **NO**
If yes, indicate date(s) and duration on a separate sheet.

COMPLETED

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant **WSSN: 2310** June 2014

Date	Million Gallons Treated	Ferric as Fe^{3+} mg/L	Lime Dosage (mg/L)	PW-340 Catioinc Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
						Raw			Plate Settler	Applied
						Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	20.2	16.9	46.8	2.2	0.06	6	2.70	4.10	0.38	4.51
2	21.7	14.5	45.8	2.2	0.06	6	2.70	5.90	0.52	3.37
3	20.8	14.4	39.5	1.9	0.05	6	6.70	9.20	0.58	3.50
4	20.6	14.7	55.4	2.0	0.05	6	11.3	30.2	0.48	3.33
5	23.1	14.9	63.7	1.8	0.04	6	6.00	6.70	0.74	4.15
6	23.3	16.2	42.4	1.9	0.05	6	5.30	5.90	0.51	4.52
7	21.1	15.2	0.0	0.0	0.00	6	4.30	5.60	0.38	0.95
8	20.0	15.6	0.0	0.0	0.00	6	2.80	3.90	0.37	0.75
9	20.1	14.7	0.0	0.0	0.00	6	2.60	5.30	0.32	0.56
10	18.5	16.6	120.7	1.9	0.05	6	4.30	5.50	0.32	7.62
11	21.4	18.5	136.0	1.9	0.05	6	3.30	5.20	0.27	2.61
12	24.2	18.1	122.2	1.8	0.05	6	4.70	5.60	0.28	7.06
13	23.4	15.8	113.9	1.8	0.05	6	3.90	4.20	0.41	7.51
14	22.7	14.9	109.3	1.8	0.05	6	4.40	5.00	0.45	4.09
15	24.4	15.1	140.7	1.8	0.05	6	4.60	5.70	0.41	2.34
16	24.3	15.2	137.1	1.8	0.05	6	5.10	7.10	0.37	1.63
17	21.8	17.0	155.0	2.0	0.05	6	4.30	5.50	0.27	2.55
18	20.8	19.2	168.0	2.2	0.05	6	4.90	7.20	0.26	2.15
19	20.5	18.4	152.9	2.1	0.05	6	2.70	4.30	0.24	1.23
20	23.0	18.7	144.3	2.2	0.05	6	6.60	39.4	0.29	1.14
21	22.4	18.0	147.6	2.2	0.06	6	3.40	12.0	0.31	1.20
22	21.4	18.3	122.5	2.2	0.06	6	5.10	26.2	0.29	1.82
23	21.2	18.2	147.6	2.2	0.06	6	3.10	6.70	0.27	1.02
24	21.0	19.4	161.8	2.3	0.06	6	3.60	8.20	0.27	1.55
25	21.5	19.7	175.1	2.4	0.06	6	3.60	10.6	0.24	2.93
26	21.6	18.9	143.9	2.4	0.06	6	2.40	3.60	0.26	2.67
27	16.1	19.0	149.8	2.4	0.06	6	1.90	2.70	0.29	1.91
28	18.3	19.1	137.8	2.2	0.06	6	5.80	12.2	0.33	2.56
29	20.4	19.6	115.1	1.8	0.05	6	8.20	19.5	0.44	1.87
30	21.0	19.2	116.8	1.8	0.05	6	6.20	10.5	0.51	2.74
Avg.	21.4	17.1	107.1	1.8	0.05	6	4.55			2.86
Max.	24.4	19.7	175.1	2.4	0.06	6	11.3	39.4	0.74	7.62
Min.	16.1	14.4	0.0	0.0	0.00	6	1.90			0.56
Total	640.5									

Filter turbiditiy

City of Flint Water Treatment Plant
WSSN: 2310

June 2014

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	6	0.09	0.12	6	0	0	6	0.09	0.11	6	0	0	0.07
2	6	0.11	0.16	6	0	0	6	0.10	0.14	6	0	0	0.09
3	6	0.14	0.23	6	0	0	6	0.12	0.19	6	0	0	0.11
4	6	0.14	0.19	6	0	0	6	0.09	0.11	6	0	0	0.10
5	6	0.18	0.24	6	0	0	6	0.15	0.22	6	0	0	0.15
6	6	0.13	0.15	6	0	0	6	0.12	0.16	6	0	0	0.12
7	6	0.14	0.18	6	0	0	6	0.12	0.14	6	0	0	0.12
8	6	0.12	0.20	6	0	0	6	0.15	0.20	6	0	0	0.12
9	6	0.15	0.25	6	0	0	6	0.14	0.22	6	0	0	0.11
10	6	0.21	0.26	6	0	0	6	0.14	0.23	6	0	0	0.14
11	6	0.11	0.16	6	0	0	6	0.12	0.23	6	0	0	0.16
12	6	0.11	0.13	6	0	0	6	0.10	0.13	6	0	0	0.09
13	6	0.09	0.12	6	0	0	6	0.09	0.11	6	0	0	0.08
14	6	0.11	0.13	6	0	0	6	0.09	0.12	6	0	0	0.10
15	6	0.11	0.18	6	0	0	6	0.10	0.15	6	0	0	0.10
16	6	0.11	0.14	6	0	0	6	0.09	0.10	6	0	0	0.09
17	6	0.09	0.13	6	0	0	6	0.07	0.13	6	0	0	0.07
18	6	0.09	0.13	6	0	0	6	0.08	0.20	6	0	0	0.08
19	6	0.08	0.14	6	0	0	6	0.09	0.17	6	0	0	0.08
20	6	0.08	0.10	6	0	0	6	0.07	0.09	6	0	0	0.16
21	6	0.07	0.08	6	0	0	6	0.08	0.20	6	0	0	0.08
22	6	0.08	0.11	6	0	0	6	0.09	0.12	6	0	0	0.08
23	6	0.08	0.10	6	0	0	6	0.08	0.11	6	0	0	0.07
24	6	0.09	0.14	6	0	0	6	0.10	0.26	6	0	0	0.13
25	6	0.07	0.14	6	0	0	6	0.08	0.19	6	0	0	0.09
26	6	0.08	0.10	6	0	0	6	0.08	0.10	6	0	0	0.09
27	6	0.09	0.11	6	0	0	6	0.08	0.10	6	0	0	0.09
28	6	0.08	0.10	6	0	0	6	0.09	0.10	6	0	0	0.10
29	6	0.10	0.14	6	0	0	6	0.09	0.12	6	0	0	0.11
30	6	0.10	0.11	6	0	0	6	0.09	0.14	6	0	0	0.15
Avg.	6	0.11	0.15	6	0	0	6	0.10	0.15	6	0	0	
Max.	6	0.21	0.26	6	0	0	6	0.15	0.26	6	0	0	0.16
Min.	6	0.07	0.08	6	0	0	6	0.07	0.09	6	0	0	

Fluoridation & Chlorination City of Flint Water Treatment Plant **WSSN: 2310** June 2014

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.00	0.15	0.17		4.8	1.5	6.3	1.3	1.6	1.5	2.0	1.2	1.7
2	0.00	0.16	0.17		4.7	1.7	6.4	1.1	1.5	1.6	2.0	1.3	1.5
3	0.00	0.16	0.16		5.4	1.8	7.2	1.0	1.5	1.5	2.0	1.3	1.7
4	0.50	0.18	0.20		5.3	2.0	7.3	1.4	1.8	1.8	2.1	1.7	2.0
5	0.50	0.14	0.45	0.25	4.5	2.0	6.5	0.9	1.2	1.6	1.9	1.3	1.7
6	0.00	0.15	0.16		4.7	2.4	7.1	0.7	1.0	1.6	1.9	1.4	1.7
7	0.00	0.14	0.18		5.5	2.8	8.3	0.7	1.0	1.6	2.0	1.3	1.6
8	0.00	0.17	0.19		5.2	2.7	7.9	0.7	0.9	1.5	1.9	1.3	1.7
9	0.00	0.17	0.18		5.1	2.7	7.8	0.5	0.9	1.7	2.1	1.3	1.8
10	0.00	0.16	0.18		4.8	2.5	7.3	0.3	0.6	1.4	1.8	1.2	1.6
11	0.00	0.17	0.14		4.8	3.1	7.9	0.9	1.2	1.7	2.2	1.6	1.9
12	0.00	0.14	0.13	0.18	4.2	2.9	7.1	0.8	1.2	2.0	2.4	1.9	2.3
13	0.00	0.16	0.14		4.4	3.4	7.8	0.6	0.8	2.4	2.8	2.1	2.4
14	0.00	0.16	0.14		4.2	3.5	7.7	0.7	1.0	2.4	2.8	2.0	2.4
15	0.00	0.16	0.13		4.1	3.5	7.6	0.4	0.8	2.3	2.9	1.7	2.0
16	0.00	0.16	0.13		4.2	3.5	7.7	0.8	1.0	2.6	3.1	2.1	2.5
17	0.00	0.15	0.13		4.6	3.1	7.7	1.1	1.5	2.5	2.9	2.2	2.5
18	0.00	0.16	0.13		5.0	2.6	7.6	1.3	1.5	2.5	3.0	2.0	2.5
19	0.00	0.14	0.13	0.18	5.0	2.9	7.9	1.4	1.6	2.7	3.1	2.1	2.4
20	0.00	0.16	0.13		5.0	3.1	8.1	1.3	1.5	2.3	2.8	1.7	2.1
21	0.00	0.16	0.13		5.0	4.0	9.0	1.1	1.4	2.3	2.8	2.0	2.2
22	0.00	0.17	0.13		4.9	4.0	8.9	0.8	1.0	2.4	3.0	2.1	2.4
23	0.00	0.16	0.13		4.7	2.6	7.3	1.4	1.7	2.5	2.8	2.2	2.7
24	0.00	0.16	0.13		4.8	2.9	7.7	1.3	1.5	2.5	2.9	2.7	3.0
25	0.00	0.16	0.13		4.7	2.9	7.6	1.2	1.5	2.5	2.9	2.0	2.4
26	0.00	0.17	0.12	0.15	3.9	3.0	6.9	1.0	1.4	2.2	2.6	2.5	3.0
27	0.00	0.16	0.13		4.9	2.7	7.6	1.2	1.5	2.9	3.2	2.1	2.5
28	0.00	0.16	0.14		4.6	3.0	7.6	1.5	1.8	2.3	3.0	2.4	3.0
29	0.00	0.15	0.14		3.8	3.5	7.3	0.8	1.2	2.3	2.8	1.9	2.3
30	0.00	0.15	0.13		4.1	3.2	7.3	0.6	0.9	2.5	3.3	1.8	2.1
Avg.	0.03	0.16	0.16	0.19	4.7	2.9	7.5	1.0	1.3	2.1	2.6	1.8	2.2
Max.	0.50	0.18	0.45	0.25	5.5	4.0	9.0	1.5	1.8	2.9	3.3	2.7	3.0
Min.	0.00	0.14	0.12	0.15	3.8	1.5	6.3	0.3	0.6	1.4	1.8	1.2	1.5

Chemical Analyses City of Flint Water Treatment Plant June 2014 Page 5

WSSN: 2310

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.28	7.81	270	234	216	132	54	102	85.8	84.2	13.6	5.8	41	87
2	8.02	7.58	262	236	218	132	44	104	84.2	82.6	12.6	7.3	40	83
3	8.17	7.39	278	248	218	140	60	108	93.0	77.8	6.3	13.1	43	75
4	8.25	7.49	276	238	220	144	56	94	80.2	79.4	18.5	9.2	41	79
5	8.26	7.49	274	236	220	148	54	88	89.0	79.4	12.6	9.2	44	80
6	8.16	7.52	262	234	216	146	46	88	85.0	77.0	12.2	10.2	43	93
7	8.21	7.27	268	260	226	172	42	88	87.4	85.0	12.2	11.7	42	80
8	8.26	7.36	260	262	222	170	38	92	81.0	82.6	13.6	12.2	43	80
9	8.17	7.36	268	266	220	164	48	102	93.0	85.8	8.3	10.2	44	79
10	8.18	7.21	270	260	226	172	44	88	96.2	94.6	4.9	5.8	45	78
11	8.10	7.38	266	192	220	100	46	92	83.4	64.1	14.1	7.8	43	86
12	8.11	7.44	268	192	222	100	46	92	84.2	64.1	14.1	7.8	42	80
13	8.01	7.56	264	218	218	110	46	108	85.8	70.5	12.2	10.2	42	81
14	7.94	7.65	272	210	216	114	56	96	90.6	68.1	11.2	9.7	40	78
15	8.27	7.57	268	188	226	100	42	88	85.8	67.3	13.1	4.9	43	79
16	8.34	7.75	266	186	220	94	46	92	84.2	64.9	13.1	5.8	44	80
17	8.12	7.66	262	190	222	92	40	98	90.6	68.9	7.3	4.4	43	80
18	8.24	7.24	268	184	230	94	38	90	87.4	66.5	12.2	3.4	40	81
19	8.13	7.61	272	182	228	88	44	94	91.4	62.5	8.3	6.3	42	81
20	8.01	7.33	264	180	222	88	42	92	89.0	60.9	10.2	8.7	42	83
21	7.98	7.35	252	182	226	82	26	100	86.6	64.1	9.0	5.3	43	84
22	8.00	7.45	264	180	224	84	40	96	87.4	59.3	11.2	7.8	42	81
23	7.98	7.00	260	168	224	74	36	94	89.8	53.7	8.7	8.3	46	88
24	7.92	7.60	274	194	222	82	52	112	89.0	60.9	10.7	10.2	45	87
25	7.98	7.68	276	168	228	70	48	98	91.4	58.5	11.7	5.3	43	90
26	7.88	7.72	280	186	226	80	54	106	86.6	65.7	15.6	5.3	46	90
27	7.92	7.12	254	176	224	66	30	110	89.8	67.3	7.3	1.9	39	92
28	7.97	7.64	272	176	230	74	42	102	85.0	64.1	14.6	3.9	43	85
29	8.26	7.49	276	178	232	76	44	102	87.4	55.3	12.2	9.7	40	90
30	7.94	7.70	268	156	230	66	38	90	92.2	56.9	9.2	3.4	44	91
Avg.	8.10	7.48	268	205	223	108	45	97	87.7	69.7	11.4	7.5	43	83
Max.	8.34	7.81	280	266	232	172	60	112	96.2	94.6	18.5	13.1	46	93
Min.	7.88	7.00	252	156	216	66	26	88	80.2	53.7	4.9	1.94	39	75

Bacteriological & Physical Parameters | City of Flint Water Treatment Plant | **WSSN: 2310** | June 2014 | Page 6

Date	Total Coliform						Standard Plate Count (Simplate MPN)		Wind Direction	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap		Raw	Raw	Tap	Raw	Tap
1	1	320	12	1	1	0	3020	<2		21.7				
2	1	62	12	0	1	0	7840	<2		20.5				
3	1	1710	12	0	1	0	4180	<2		22.4				
4	1	3232	12	0	1	0	5980	<2		22.1				
5	1	3232	12	0	1	0	1368	<2		21.5				
6	1	4286	12	2	1	0	1540	<2		22.2				
7	1	4374	12	0	1	0	11100	<2		22.5				
8	1	3328	12	0	1	0	7840	<2		21.7				
9	1	1768	12	0	1	0	9400	<2		21.5				
10	1	6152	12	0	1	0	11100	<2		23.9				
11	1	12262	12	0	1	0	3660	<2		23.4				
12	1	8704	12	0	1	0	12460	<2		22.9				
13	1	4978	12	0	1	0	1720	<2		22.3				
14	1	4092	12	0	1	0	1240	<2		20.9				
15	1	3912	12	0	1	0	1660	<2		21.7				
16	1	3440	12	0	1	0	1940	<2		22.7				
17	1	2748	12	0	1	0	1600	<2		23.3				
18	1	2338	12	0	1	0	2080	<2		23.3				
19	1	1542	12	0	1	0	7840	<2		22.8				
20	1	1678	12	0	1	0	1180	<2		22.4				
21	1	1672	12	0	1	0	960	<2		21.8				
22	1	7308	12	0	1	0	7440	<2		22.0				
23	1	4028	12	0	1	0	3900	<2		21.6				
24	1	1234	12	0	1	0	3780	<2		22.5				
25	1	2100	12	0	1	0	2240	<2		22.5				
26	1	2396	12	0	1	0	5140	<2		22.0				
27	1	1968	12	0	1	0	2000	<2		22.9				
28	1	1976	12	0	1	0	11100	<2		22.9				
29	1	2802	12	0	1	0	6780	<2		25.8				
30	1	9572	12	0	1	0	2560	<2		24.8				
Avg.										22.5				
Max.							12460	0		25.8				
Min.										20.5				

Distribution System Monitoring City of Flint Water Treatment Plant **WSSN: 2310** June 2014

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1											0
2									0.5	0.0	2
3									0.2	0.0	2
4	0.5	0.9	0.5	0.5	0.2	0.5	0.4	0.9	0.2	0.0	10
5	0.4	0.2	0.5	0.4	0.1	0.6	0.3	0.9	0.1	0.0	10
6									0.1	0.0	2
7											0
8											0
9									0.1	0.0	2
10	0.6	1.1	0.4	0.6	0.2	0.6	0.3	0.7	0.3	0.0	10
11									0.0	0.0	2
12	1.2	1.8	0.9	1.3	0.6	0.9	0.5	1.8	1.4	0.0	10
13									0.1	0.0	2
14											0
15											0
16									1.2	0.0	2
17	1.3	1.5	1.0	0.5	0.7	1.5	0.9	2.0	0.2	0.3	10
18	1.4	1.1	1.2	1.1	0.3	1.2	0.9	1.4	0.6	0.1	10
19									0.2	0.1	2
20											0
21											0
22											0
23											0
24											0
25	1.3	1.3	1.1	1.0	0.3	0.8	1.0	1.5	0.9	0.4	10
26	1.1	1.4	0.9	0.0	0.0	1.4	0.8	2.1	0.9	0.6	10
27									0.7	1.1	2
28											0
29											0
30									0.6	1.3	2

Distribution Sample Summary	
Total # of routine distribution samples analyzed	100
Total # of routine distribution samples required	100

Distribution Disinfectant Free Residual Summary	
Percent samples with a detectable disinfectant residual	86%
Average disinfectant residual this month	0.7

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	2
Percent of routine distribution samples positive	2%

Positive Distribution Samples					
Date	Monitoring Station	Date	Repeat Monitorong Stations	Residual	Positive or Negative
6/10/2014	WEST SIDE	6/11/2014	WS UPSTREAM	.10/.30	ABSENT
		6/11/2014	WS DOWNSTREAM	.10/.30	ABSENT
		6/11/2014	WEST SIDE	0/.10	ABSENT
6/11/2014	CEDAR STREET	6/12/2014	CS UPSTREAM	0.2/0.4	ABSENT
		6/12/2014	CS DOWNSTREAM	0.2/0.3	ABSENT
		6/12/2014	CEDAR STREET	1.4/1.8	ABSENT

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1											0
2									0.8	0.2	2
3									0.3	0.2	2
4	1.0	1.3	0.8	0.9	0.3	1.0	0.6	1.1	0.3	0.2	10
5	0.8	0.6	0.8	0.6	0.3	0.8	0.6	1.1	0.3	0.2	10
6									0.3	0.2	2
7											0
8											0
9									0.2	0.2	2
10	1.0	1.6	0.7	1.1	0.6	1.2	0.7	1.2	0.5	0.2	10
11									0.2	0.1	2
12	1.7	2.5	1.3	1.7	0.9	1.2	0.9	2.3	1.8	0.1	10
13									0.3	0.2	2
14											0
15											0
16									1.6	0.2	2
17	1.9	1.9	1.3	0.7	1.0	2.0	1.3	2.9	0.3	0.5	10
18	2.0	1.5	1.8	1.5	0.6	1.6	1.4	2.1	0.9	0.3	10
19									0.3	0.3	2
20											0
21											0
22											0
23											0
24											0
25	1.8	1.9	1.6	1.4	0.5	1.1	1.4	2.0	1.1	0.7	10
26	1.5	1.9	1.3	0.1	0.1	1.8	1.1	2.5	1.1	0.8	10
27									1.0	1.5	2
28											0
29											0
30									0.9	1.3	2

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.0

MONTHLY OPERATION REPORT OF WATER TREATMENT PLANT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow
Operator-in-Charge

May 2014
Month/Year

F-1R, F-2
Certification of Operator-in-Charge

F-1
Water Plant Classification

Signature of Operator-in-Charge

Genesee
County

Treatment Rate and Filter Data

Maximum Treatment Rate:	26.9	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	101	Hours
Average Head Loss:	*	Feet
Average Filtration Rate:	2.6	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.8	Gallons Per Square Feet per Minute
Average Wash Water Use:	2	Percent of Treated Water

Chemical Data

Chlorine on hand:	22000	lb.	Est. supply:	20 days
Primary Coagulant (Ferric Chloride) on hand:	83765	lb.	Est. supply:	14 days
Cost of All Chemicals per Million Gallons:	*	dollars		
Total Power Cost per Million Gallons:	*	dollars		

Remarks

Number of filter confluence samples > 0.3 NTU:	3
Number of filter confluence samples collected:	350
Percent of filter confluence samples > 0.3 NTU:	0.86%
Number of filter confluence samples > 1 NTU	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? NO
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? NO
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? YES
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? YES*
If yes, indicate date(s) and duration on a separate sheet.

Coagulation Parameters

City of Flint Water Treatment Plant
WSSN: 2310

May 2014

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Turbidity, Units																
			Raw			Applied	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
			Number of Samples	Avg.	Max.	Applied Avg.	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	15.1	10.9	6	9.60	12.7	5.04	6	0.10	0.19	6	0	0	6	0.07	0.08	6	0	0	0.09
2	14.7	11.3	6	10.1	10.7	7.12	6	0.06	0.07	6	0	0	6	0.07	0.10	6	0	0	0.09
3	21.4	12.3	6	11.2	12.6	7.40	6	0.15	0.18	6	0	0	6	0.11	0.15	6	0	0	0.11
4	21.4	11.8	6	26.2	31.2	8.65	6	0.11	0.13	6	0	0	6	0.10	0.11	6	0	0	0.12
5	21.6	12.3	6	12.6	14.5	5.80	6	0.16	0.23	6	0	0	6	0.14	0.18	6	0	0	0.12
6	22.3	12.1	6	15.0	20.3	4.53	6	0.21	0.27	6	0	0	6	0.18	0.21	6	0	0	0.19
7	21.9	12.1	6	15.5	14.8	5.23	6	0.13	0.16	6	0	0	6	0.12	0.17	6	0	0	0.11
8	22.7	11.7	6	12.6	15.5	4.74	6	0.16	0.25	6	0	0	6	0.11	0.13	6	0	0	0.16
9	22.2	12.0	6	9.30	9.60	4.33	6	0.12	0.15	6	0	0	6	0.11	0.16	6	0	0	0.14
10	21.8	12.2	6	13.2	15.3	5.60	6	0.11	0.18	6	0	0	6	0.09	0.10	6	0	0	0.09
11	19.1	13.8	6	12.6	14.1	6.43	6	0.19	0.29	6	0	0	6	0.08	0.09	6	0	0	0.09
12	8.5	15.3	2	12.0	13.9	8.46	1	0.09	0.09	1	0	0	1	0.07	0.07	1	0	0	0.08
13	0.0	12.9	2	11.3	14.1	n/a	0	n/a	n/a	0	n/a	n/a	0	n/a	n/a	0	n/a	n/a	0.10
14	22.2	12.3	6	30.8	71.7	11.8	6	0.24	0.37	6	1	1	6	0.23	0.31	6	1	1	0.16
15	16.6	20.6	6	45.2	63.0	5.68	6	0.21	0.28	6	0	0	6	0.24	0.28	6	0	0	0.22
16	20.2	18.7	6	28.2	37.3	5.21	6	0.21	0.38	6	1	1	6	0.22	0.45	6	1	1	0.22
17	21.0	20.0	6	14.3	19.3	4.90	6	0.12	0.22	6	0	0	6	0.09	0.08	6	0	0	0.11
18	20.8	18.3	6	9.50	10.7	6.03	6	0.14	0.28	6	0	0	6	0.08	0.09	6	0	0	0.09
19	22.0	18.2	6	9.20	11.3	4.59	6	0.12	0.17	6	0	0	6	0.07	0.10	6	0	0	0.09
20	22.1	18.0	6	7.20	8.40	4.63	6	0.11	0.11	6	0	0	6	0.09	0.11	6	0	0	0.09
21	21.0	19.4	6	7.80	8.90	6.27	6	0.11	0.18	6	0	0	6	0.08	0.08	6	0	0	0.09
22	21.0	18.6	6	9.40	11.3	6.50	6	0.11	0.16	6	0	0	6	0.07	0.09	6	0	0	0.08
23	21.0	18.9	6	9.10	10.4	6.24	6	0.11	0.13	6	0	0	6	0.08	0.09	6	0	0	0.08
24	20.8	17.9	6	7.10	8.30	5.38	6	0.12	0.18	6	0	0	6	0.08	0.09	6	0	0	0.09
25	21.0	18.3	6	6.00	7.30	5.62	6	0.14	0.22	6	0	0	6	0.18	0.25	6	0	0	0.10
26	22.0	18.0	6	5.20	5.60	3.23	6	0.12	0.14	6	0	0	6	0.10	0.13	6	0	0	0.11
27	20.6	19.4	6	5.70	7.30	2.78	6	0.13	0.18	6	0	0	6	0.12	0.14	6	0	0	0.10
28	20.1	20.0	6	4.20	5.30	3.52	6	0.11	0.13	6	0	0	6	0.08	0.08	6	0	0	0.08
29	19.7	20.0	6	5.20	10.3	3.72	6	0.09	0.12	6	0	0	6	0.07	0.08	6	0	0	0.06
30	19.3	16.1	6	3.50	5.30	3.54	6	0.11	0.16	6	0	0	6	0.07	0.07	6	0	0	0.06
31	18.0	17.6	6	3.50	4.40	2.23	6	0.09	0.12	6	0	0	6	0.08	0.09	6	0	0	0.08
Avg.	19.4	15.8	6	12.3		5.51	6	0.13	0.19	6	0	0	6	0.11	0.14	6	0	0	
Max.	22.7	20.6	6	45.2	71.7	11.8	6	0.24	0.38	6	1	1	6	0.24	0.45	6	1	1	0.22
Min.	0.0	10.9	2	3.50		2.23	0	0.06	0.07	0	0	0	0	0.07	0.07	0	0	0	
Total	602.1																		

Fluoridation & Chlorination — City of Flint Water Treatment Plant — May 2014 — Page 3

WSSN: 2310

Date	Fluoride Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0	0.14	0.19		3.4	0.0	3.4	1.4	1.6	1.4	1.6	1.2	1.5
2	0	0.15	0.34		4.0	0.0	4.0	1.2	1.3	1.6	2.0	1.3	1.6
3	0	0.14	0.16		4.0	0.0	4.0	1.8	2.2	1.7	2.0	1.5	1.7
4	0	0.15	0.24		4.4	0.0	4.4	2.2	2.6	1.5	1.7	1.8	2.2
5	0	0.14	0.13		4.7	0.0	4.7	1.9	2.2	1.8	2.1	1.2	1.4
6	0	0.14	0.13		4.9	0.0	4.9	1.9	2.3	1.7	1.9	1.2	1.5
7	0	0.15	0.14		4.9	0.0	4.9	1.8	2.2	2.0	2.3	1.9	2.2
8	0	0.15	0.14	0.17	4.7	0.0	4.7	1.8	2.3	1.8	2.2	1.7	2.1
9	0	0.15	0.13		5.1	0.0	5.1	1.5	1.9	1.7	2.0	1.5	1.9
10	0	0.15	0.14		5.2	0.0	5.2	2.0	2.5	1.7	2.1	1.5	2.0
11	0	0.16	0.14		5.6	0.0	5.6	2.1	2.6	2.0	2.6	1.7	2.1
12	0	0.15	0.13		6.9	0.0	6.9	1.8	2.4	1.7	2.2	1.4	2.0
13	0	0.15	0.25		5.0	0.0	5.0	n/a	n/a	1.7	2.0	1.5	1.8
14	0	0.15	0.13	0.23	4.9	0.0	4.9	1.9	2.3	1.5	1.9	1.5	1.8
15	0	0.14	0.14		6.2	0.0	6.2	2.0	2.4	2.0	2.5	2.2	2.6
16	0	0.14	0.13		5.3	0.0	5.3	1.9	2.3	1.6	2.0	1.4	1.7
17	0	0.16	0.14		5.1	0.6	5.7	1.7	2.1	1.6	1.9	1.6	2.0
18	0	0.16	0.15		5.1	0.6	5.7	1.5	1.9	1.6	1.9	1.4	1.7
19	0	0.15	0.14		4.7	0.2	4.9	1.6	1.8	1.9	2.3	1.5	1.7
20	0	0.15	0.15		5.0	0.5	5.5	1.9	2.3	2.1	2.6	1.6	1.9
21	0	0.15	0.16		4.9	0.4	5.3	1.8	2.3	2.0	2.4	1.8	2.3
22	0	0.15	0.14		5.0	0.2	5.2	1.7	2.1	2.1	2.5	1.5	1.8
23	0	0.14	0.13		4.9	0.4	5.3	1.5	1.8	1.8	2.3	1.6	2.1
24	0	0.15	0.15		5.0	0.9	5.9	1.5	2.0	1.5	2.0	1.3	1.7
25	0	0.15	0.14		5.0	1.0	6.0	1.4	1.8	1.6	2.0	1.5	1.9
26	0	0.15	0.16		5.0	0.9	5.9	1.5	1.8	1.7	2.3	1.7	2.0
27	0	0.16	0.17		5.3	0.9	6.2	1.5	1.7	1.8	2.2	1.5	1.7
28	0	0.15	0.16	0.19	5.7	1.0	6.7	1.6	2.0	1.9	2.3	1.6	2.0
29	0	0.16	0.16		5.1	0.8	5.9	1.5	1.8	1.8	2.1	1.2	1.4
30	0	0.16	0.17		5.1	1.1	6.2	1.4	1.7	1.6	1.8	1.4	1.7
31	0	0.15	0.16		5.4	1.4	6.8	1.4	1.7	1.6	2.0	1.2	1.6
Avg.	0	0.15	0.16	0.20	5.0	0.4	5.4	1.7	2.1	1.7	2.1	1.5	1.9
Max.	0	0.16	0.34	0.23	6.9	1.4	6.9	2.2	2.6	2.1	2.6	2.2	2.6
Min.	0	0.14	0.13	0.17	3.4	0.0	3.4	1.2	1.3	1.4	1.6	1.2	1.4

Chemical Analyses

City of Flint Water Treatment Plant
WSSN: 2310

May 2014

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.44	7.71	246	146	196	66	50	80	56.7	48.1	20.9	7.8	43.0	67.0
2	8.27	7.07	250	162	196	80	54	82	83.4	48.1	10.2	10.2	44.0	41.0
3	8.26	7.47	260	132	200	60	50	72	82.6	42.6	10.7	6.3	40.0	60.0
4	8.39	7.50	256	120	196	70	60	50	86.6	60.9	6.3	6.3	47.0	60.0
5	8.39	7.41	232	152	204	76	28	76	78.6	54.5	8.7	3.9	45.0	75.0
6	8.25	7.21	240	160	202	90	38	70	80.2	54.5	9.7	7.3	53.0	71.0
7	8.24	7.24	266	210	212	130	54	80	71.3	66.5	21.4	10.7	51.0	76.0
8	8.33	7.13	272	218	210	128	62	90	86.6	84.2	10.7	2.4	n/a	n/a
9	8.29	7.22	264	224	210	130	54	94	86.6	75.4	11.7	8.7	50.0	80.0
10	8.38	7.36	260	216	214	122	46	94	81.8	73.7	13.6	7.8	48.0	80.0
11	8.35	7.46	286	230	216	126	70	104	81.0	73.7	20.4	11.2	46.0	82.0
12	8.33	7.43	266	218	208	120	58	98	99.4	72.1	4.4	9.2	45.0	76.0
13	8.28	7.24	278	202	216	114	62	88	85.8	59.3	15.6	13.1	48.0	66.0
14	8.23	7.30	264	220	208	138	56	82	68.9	68.1	22.4	12.2	45.0	72.0
15	8.06	7.42	242	206	184	122	58	84	66.5	65.7	16.5	10.2	43.0	73.0
16	8.05	7.12	234	214	196	118	38	96	81.0	69.7	7.8	9.7	41.0	90.0
17	8.16	7.21	246	206	200	98	46	108	85.8	66.7	7.8	10.2	41.0	85.0
18	8.29	7.27	280	212	206	116	74	96	77.0	64.9	14.6	12.2	47.0	80.0
19	8.24	7.27	266	214	214	120	52	94	85.8	69.7	12.6	9.7	43.0	78.0
20	8.22	7.44	254	220	212	124	42	96	85.8	70.5	9.7	10.7	43.0	80.0
21	8.23	7.42	246	226	208	118	38	108	77.8	74.5	12.6	9.7	45.0	85.0
22	8.33	7.50	244	216	208	118	36	98	79.4	72.1	11.2	8.7	42.0	85.0
23	8.22	7.49	248	222	208	114	40	108	82.6	72.9	10.2	9.7	48.0	87.0
24	8.24	7.52	258	228	208	118	50	110	78.6	72.9	15.1	11.2	42.0	80.0
25	8.30	7.49	240	228	208	124	32	104	8.6	75.4	9.7	11.2	42.0	82.0
26	8.28	7.30	248	220	208	120	40	100	84.2	81.0	9.2	4.4	41.0	80.0
27	8.21	7.55	242	226	208	126	34	100	78.6	77.0	11.2	8.3	41.0	84.0
28	8.28	7.46	242	240	208	126	34	114	82.6	80.2	8.8	9.7	43.0	87.0
29	8.23	7.46	254	224	210	114	44	110	83.4	78.6	11.2	6.8	42.0	88.0
30	8.33	7.49	256	230	216	132	40	98	83.4	79.4	11.7	7.8	42.0	88.0
31	8.32	7.41	248	242	212	130	36	112	77.8	74.5	13.1	13.6	40.0	78.0
Avg.	8.27	7.37	254	206	207	113	48	93	78.3	68.6	12.3	9.1	44.4	77.2
Max.	8.44	7.71	286	242	216	138	74	114	99.4	84.2	22.4	13.6	53	90
Min.	8.05	7.07	232	120	184	60	28	50	8.6	42.5	4.4	2.4	40	41

Bacteriological & Physical Parameters | City of Flint Water Treatment Plant | **WSSN: 2310** | May 2014 | Page 5

Date	Total Coliform						Standard Plate Count		Wind Direction	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap		Raw	Raw	Tap	Raw	Tap
1	1	1166	12	0	1	0	14760	<2		12.6				
2	1	864	12	0	1	0	800	<2		13.2				
3	1	930	12	0	1	0	1300	<2		12.0				
4	1	974	12	0	1	0	>14760	<2		13.6				
5	1	882	12	0	1	0	>14760	<2		12.5				
6	1	618	12	0	1	0	12460	<2		14.9				
7	1	728	12	0	1	0	>14760	<2		14.3				
8	1	426	12	0	1	0	9400	<2		13.4				
9	1	342	12	0	1	0	>14760	<2		16.6				
10	1	610	12	0	1	0	>14760	2		17.6				
11	1	220	12	0	1	0	>14760	2		18.1				
12	1	218	12	0	1	0	>14760	<2		18.3				
13	1	126	12	0	1	0	11100	<2		19.5				
14	1	2910	12	0	1	0	>14760	<2		19.6				
15	1	16328	12	0	1	0	14760	<2		17.4				
16	1	12588	12	0	1	0	5980	<2		13.2				
17	1	3720	12	1	1	0	3320	2		14.3				
18	1	1618	12	0	1	0	7840	<2		16.7				
19	1	4494	12	0	1	0	16.1	<2		16.1				
20	1	1816	12	0	1	0	860	<2		17.2				
21	1	4764	12	0	1	0	14760	<2		18.2				
22	1	2934	12	0	1	0	7440	<2		19.0				
23	1	960	12	0	1	0	7840	<2		18.0				
24	1	682	12	0	1	0	3780	<2		18.3				
25	1	398	12	0	1	0	14760	2		18.7				
26	1	482	12	0	1	0	>14760	<2		21.4				
27	1	2034	12	0	1	0	1600	<2		20.6				
28	1	2028	12	0	1	0	7440	<2		21.1				
29	1	918	12	0	1	0	5740	<2		20.6				
30	1	852	12	0	1	0	2160	<2		22.3				
31	1	1166	12	0	1	0	3320	<2		22.7				
Avg.										17.2				
Max.							> 14760	2		22.7				
Min.										12.0				

Distribution System Monitoring | City of Flint Water Treatment Plant **WSSN: 2310** | May 2014 |

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1									0.6	0.8	2
2									0.6	0.8	2
3											0
4											0
5									0.7	0.6	2
6									1.1	1.4	2
7	1.0	1.3	0.9	1.0	0.9	0.9	0.9	1.3	0.4	0.6	10
8	1.1	1.3	1.0	1.4	0.9	1.1	0.9	1.4	0.8	0.6	10
9									0.7	0.6	2
10											0
11											0
12									0.3	0.4	2
13									0.3	0.4	2
14	1.0	0.7	1.0	1.0	0.7	0.7	0.9	0.7	0.3	0.4	10
15	0.6	0.5	0.5	0.3	0.2	0.3	0.2	0.4	0.2		9
16									0.3		1
17											0
18											0
19									0.4	0.3	2
20									0.3	0.3	2
21	0.3	1.2	0.7	0.8	0.5	1.0	0.7	1.2	0.3	0.3	10
22	0.8	0.9	0.7	0.4					0.3	0.2	6
23									0.3	0.2	2
24											0
25											0
26									0.3	0.1	2
27									0.2	0.0	2
28	0.7	0.9	0.6	0.1	0.5	0.6	0.5	1.0	0.2	0.1	10
29	0.7	1.1	0.6	0.9	0.3	0.9	0.9	1.1	0.3	0.1	10
30											0
31											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	100
Total # of routine distribution samples required	100

Distribution Disinfectant Free Residual Summary	
Percent samples with a detectable disinfectant residual	99
Average disinfectant residual this month	0.7

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	0
Percent of routine distribution samples positive	0

Positive Distribution Samples					
Date	Monitoring Station	Date	Repeat Monitorong Stations	Residual	Positive or Negative

Distribution System Monitoring City of Flint Water Treatment Plant **WSSN: 2310** May 2014

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Sample
1									0.7	1.0	2
2									0.7	0.8	2
3											0
4											0
5									1.0	0.8	2
6									1.9	0.9	2
7	1.5	1.7	1.4	1.4	1.1	1.1	1.1	1.7	0.6	0.9	10
8	1.6	1.9	1.2	1.7	1.3	1.7	1.3	1.7	0.9	1.1	10
9									0.9	0.8	2
10											0
11											0
12									0.4	0.6	2
13									0.4	0.7	2
14	1.3	1.0	1.4	1.3	1.0	1.1	1.2	0.9	0.4	0.7	10
15	0.8	0.7	1.0	0.6	0.5	0.7	0.7	0.7	0.3		9
16									0.4		1
17											0
18											0
19									0.5	0.5	2
20									0.4	0.5	2
21	0.4	1.9	1.2	1.3	1.0	1.5	1.1	1.6	0.4	0.4	10
22	1.2	1.5	1.0	1.7					0.5	0.3	6
23									0.4	0.3	2
24											0
25											0
26											0
27									0.4	0.2	2
28	1.1	1.2	1.0	0.3	0.8	1.1	0.9	1.4	0.3	0.2	10
29	1.1	1.5	1.1	1.1	0.5	1.1	1.1	1.2	0.6	0.3	10
30											0
31											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residua	100
Average disinfectant residual this month	1.0

Cover Page Notes:

1. Filter head loss meters are not operational on our SCADA. They will be operational after our SCADA upgrades are complete. The SCADA upgrades are out for bid at the moment.

2. No cost analysis done for chemicals or power. An accurate chemical cost could not be determined due to polymer usage. We were given significant quantities (4-5 days) of polymer to use as a trial on two different occasions. No power cost was determined because I am trying to gain access to the correct monthly power cost.

3. POE continuous chlorine residual monitoring equipment has not been installed. We plan to move the continuous chlorine analyzer from the 3MG Well to the discharge side of the high service pumps. At this time we are taking residuals in the 3MG well, and using our lab tap to represent POE.

Report Notes:

1. Plant operations were shut down on 5/12 until 5/14. This was done to drain a softening clarifier and change plant set-up to test a new polymer. Storage reservoirs were utilized during this time.

MONTHLY OPERATION REPORT OF WATER TREATMENT PLANT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow	May 2014
Operator-in-Charge	Month/Year
F-1R, F-2	F-1
Certification of Operator-in-Charge	Water Plant Classification
Michael Glasgow	Genesee
Signature of Operator-in-Charge	County

Treatment Rate and Filter Data

Maximum Treatment Rate:	26.9	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	101	Hours
Average Head Loss:	*	Feet
Average Filtration Rate:	2.6	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.8	Gallons Per Square Feet per Minute
Average Wash Water Use:	2	Percent of Treated Water

Chemical Data

Chlorine on hand:	22000	lb.	Est. supply: 20	days
Primary Coagulant (Ferric Chloride) on hand:	83765	lb.	Est. supply: 14	days
Cost of All Chemicals per Million Gallons:	*	dollars		
Total Power Cost per Million Gallons:	*	dollars		

Remarks

Number of filter confluence samples > 0.3 NTU:	3
Number of filter confluence samples collected:	350
Percent of filter confluence samples > 0.3 NTU:	0.86%
Number of filter confluence samples > 1 NTU	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? NO
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? NO
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? YES
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? YES*
If yes, indicate date(s) and duration on a separate sheet.

Coagulation Parameters

City of Flint Water Treatment Plant
WSSN: 2310

May 2014

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Turbidity, Units																
			Raw			Applied	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
			Number of Samples	Avg.	Max.	Applied Avg.	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	15.1	10.9	6	9.60	12.7	5.04	6	0.10	0.19	6	0	0	6	0.07	0.08	6	0	0	0.09
2	14.7	11.3	6	10.1	10.7	7.12	6	0.06	0.07	6	0	0	6	0.07	0.10	6	0	0	0.09
3	21.4	12.3	6	11.2	12.6	7.40	6	0.15	0.18	6	0	0	6	0.11	0.15	6	0	0	0.11
4	21.4	11.8	6	26.2	31.2	8.65	6	0.11	0.13	6	0	0	6	0.10	0.11	6	0	0	0.12
5	21.6	12.3	6	12.6	14.5	5.80	6	0.16	0.23	6	0	0	6	0.14	0.18	6	0	0	0.12
6	22.3	12.1	6	15.0	20.3	4.53	6	0.21	0.27	6	0	0	6	0.18	0.21	6	0	0	0.19
7	21.9	12.1	6	15.5	14.8	5.23	6	0.13	0.16	6	0	0	6	0.12	0.17	6	0	0	0.11
8	22.7	11.7	6	12.6	15.5	4.74	6	0.16	0.25	6	0	0	6	0.11	0.13	6	0	0	0.16
9	22.2	12.0	6	9.30	9.60	4.33	6	0.12	0.15	6	0	0	6	0.11	0.16	6	0	0	0.14
10	21.8	12.2	6	13.2	15.3	5.60	6	0.11	0.18	6	0	0	6	0.09	0.10	6	0	0	0.09
11	19.1	13.8	6	12.6	14.1	6.43	6	0.19	0.29	6	0	0	6	0.08	0.09	6	0	0	0.09
12	8.5	15.3	2	12.0	13.9	8.46	1	0.09	0.09	1	0	0	1	0.07	0.07	1	0	0	0.08
13	0.0	12.9	2	11.3	14.1	n/a	0	n/a	n/a	0	n/a	n/a	0	n/a	n/a	0	n/a	n/a	0.10
14	22.2	12.3	6	30.8	71.7	11.8	6	0.24	0.37	6	1	1	6	0.23	0.31	6	1	1	0.16
15	16.6	20.6	6	45.2	63.0	5.68	6	0.21	0.28	6	0	0	6	0.24	0.28	6	0	0	0.22
16	20.2	18.7	6	28.2	37.3	5.21	6	0.21	0.38	6	1	1	6	0.22	0.45	6	1	1	0.22
17	21.0	20.0	6	14.3	19.3	4.90	6	0.12	0.22	6	0	0	6	0.09	0.08	6	0	0	0.11
18	20.8	18.3	6	9.50	10.7	6.03	6	0.14	0.28	6	0	0	6	0.08	0.09	6	0	0	0.09
19	22.0	18.2	6	9.20	11.3	4.59	6	0.12	0.17	6	0	0	6	0.07	0.10	6	0	0	0.09
20	22.1	18.0	6	7.20	8.40	4.63	6	0.11	0.11	6	0	0	6	0.09	0.11	6	0	0	0.09
21	21.0	19.4	6	7.80	8.90	6.27	6	0.11	0.18	6	0	0	6	0.08	0.08	6	0	0	0.09
22	21.0	18.6	6	9.40	11.3	6.50	6	0.11	0.16	6	0	0	6	0.07	0.09	6	0	0	0.08
23	21.0	18.9	6	9.10	10.4	6.24	6	0.11	0.13	6	0	0	6	0.08	0.09	6	0	0	0.08
24	20.8	17.9	6	7.10	8.30	5.38	6	0.12	0.18	6	0	0	6	0.08	0.09	6	0	0	0.09
25	21.0	18.3	6	6.00	7.30	5.62	6	0.14	0.22	6	0	0	6	0.18	0.25	6	0	0	0.10
26	22.0	18.0	6	5.20	5.60	3.23	6	0.12	0.14	6	0	0	6	0.10	0.13	6	0	0	0.11
27	20.6	19.4	6	5.70	7.30	2.78	6	0.13	0.18	6	0	0	6	0.12	0.14	6	0	0	0.10
28	20.1	20.0	6	4.20	5.30	3.52	6	0.11	0.13	6	0	0	6	0.08	0.08	6	0	0	0.08
29	19.7	20.0	6	5.20	10.3	3.72	6	0.09	0.12	6	0	0	6	0.07	0.08	6	0	0	0.06
30	19.3	16.1	6	3.60	5.30	3.54	6	0.11	0.16	6	0	0	6	0.07	0.07	6	0	0	0.06
31	18.0	17.6	6	3.50	4.40	2.23	6	0.09	0.12	6	0	0	6	0.08	0.09	6	0	0	0.08
Avg.	19.4	15.8	6	12.3		5.51	6	0.13	0.19	6	0	0	6	0.11	0.14	6	0	0	
Max.	22.7	20.6	6	45.2	71.7	11.8	6	0.24	0.38	6	1	1	6	0.24	0.45	6	1	1	0.22
Min.	0.0	10.9	2	3.50		2.23	0	0.06	0.07	0	0	0	0	0.07	0.07	0	0	0	
Total	602.1																		

Fluoridation & Chlorination — City of Flint Water Treatment Plant — May 2014 — Page 3

WSSN: 2310

Date	Fluoride Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0	0.14	0.19		3.4	0.0	3.4	1.4	1.6	1.4	1.6	1.2	1.5
2	0	0.15	0.34		4.0	0.0	4.0	1.2	1.3	1.6	2.0	1.3	1.6
3	0	0.14	0.18		4.0	0.0	4.0	1.8	2.2	1.7	2.0	1.5	1.7
4	0	0.15	0.24		4.4	0.0	4.4	2.2	2.6	1.5	1.7	1.8	2.2
5	0	0.14	0.13		4.7	0.0	4.7	1.9	2.2	1.8	2.1	1.2	1.4
6	0	0.14	0.13		4.9	0.0	4.9	1.9	2.3	1.7	1.9	1.2	1.5
7	0	0.15	0.14		4.9	0.0	4.9	1.8	2.2	2.0	2.3	1.9	2.2
8	0	0.15	0.14	0.17	4.7	0.0	4.7	1.8	2.3	1.8	2.2	1.7	2.1
9	0	0.15	0.13		5.1	0.0	5.1	1.5	1.9	1.7	2.0	1.5	1.9
10	0	0.15	0.14		5.2	0.0	5.2	2.0	2.5	1.7	2.1	1.5	2.0
11	0	0.16	0.14		5.6	0.0	5.6	2.1	2.6	2.0	2.6	1.7	2.1
12	0	0.15	0.13		6.9	0.0	6.9	1.8	2.4	1.7	2.2	1.4	2.0
13	0	0.15	0.25		5.0	0.0	5.0	n/a	n/a	1.7	2.0	1.5	1.8
14	0	0.15	0.13	0.23	4.9	0.0	4.9	1.9	2.3	1.5	1.9	1.5	1.8
15	0	0.14	0.14		6.2	0.0	6.2	2.0	2.4	2.0	2.5	2.2	2.6
16	0	0.14	0.13		5.3	0.0	5.3	1.9	2.3	1.6	2.0	1.4	1.7
17	0	0.15	0.14		5.1	0.6	5.7	1.7	2.1	1.6	1.9	1.6	2.0
18	0	0.16	0.15		5.1	0.6	5.7	1.5	1.9	1.6	1.9	1.4	1.7
19	0	0.15	0.14		4.7	0.2	4.9	1.6	1.8	1.9	2.3	1.5	1.7
20	0	0.15	0.15		5.0	0.5	5.5	1.9	2.3	2.1	2.6	1.6	1.9
21	0	0.15	0.16		4.9	0.4	5.3	1.8	2.3	2.0	2.4	1.8	2.3
22	0	0.15	0.14		5.0	0.2	5.2	1.7	2.1	2.1	2.5	1.5	1.8
23	0	0.14	0.13		4.9	0.4	5.3	1.5	1.8	1.8	2.3	1.6	2.1
24	0	0.15	0.15		5.0	0.9	5.9	1.5	2.0	1.5	2.0	1.3	1.7
25	0	0.15	0.14		5.0	1.0	6.0	1.4	1.8	1.6	2.0	1.5	1.9
26	0	0.15	0.16		5.0	0.9	5.9	1.5	1.8	1.7	2.3	1.7	2.0
27	0	0.16	0.17		5.3	0.9	6.2	1.5	1.7	1.8	2.2	1.5	1.7
28	0	0.15	0.16	0.19	5.7	1.0	6.7	1.6	2.0	1.9	2.3	1.6	2.0
29	0	0.16	0.16		5.1	0.8	5.9	1.5	1.8	1.8	2.1	1.2	1.4
30	0	0.16	0.17		5.1	1.1	6.2	1.4	1.7	1.6	1.8	1.4	1.7
31	0	0.15	0.16		5.4	1.4	6.8	1.4	1.7	1.6	2.0	1.2	1.6
Avg.	0	0.15	0.16	0.20	5.0	0.4	5.4	1.7	2.1	1.7	2.1	1.5	1.9
Max.	0	0.16	0.34	0.23	6.9	1.4	6.9	2.2	2.6	2.1	2.6	2.2	2.6
Min.	0	0.14	0.13	0.17	3.4	0.0	3.4	1.2	1.3	1.4	1.6	1.2	1.4

Chemical Analyses | City of Flint Water Treatment Plant | May 2014 | Page 4

WSSN: 2310

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.44	7.71	246	146	196	66	50	80	56.7	48.1	20.9	7.8	43.0	67.0
2	8.27	7.07	250	162	196	80	54	82	83.4	48.1	10.2	10.2	44.0	41.0
3	8.26	7.47	250	132	200	60	50	72	82.6	42.5	10.7	6.3	40.0	60.0
4	8.39	7.50	256	120	196	70	60	50	86.6	60.9	6.3	6.3	47.0	60.0
5	8.39	7.41	232	152	204	76	28	76	78.6	54.5	8.7	3.9	45.0	75.0
6	8.25	7.21	240	160	202	90	38	70	80.2	54.5	9.7	7.3	53.0	71.0
7	8.24	7.24	266	210	212	130	54	80	71.3	66.5	21.4	10.7	51.0	76.0
8	8.33	7.13	272	218	210	128	62	90	86.6	84.2	10.7	2.4	n/a	n/a
9	8.29	7.22	264	224	210	130	54	94	86.6	75.4	11.7	8.7	50.0	80.0
10	8.38	7.36	260	216	214	122	46	94	81.8	73.7	13.6	7.8	48.0	80.0
11	8.35	7.46	286	230	216	126	70	104	81.0	73.7	20.4	11.2	46.0	82.0
12	8.33	7.43	266	218	208	120	58	98	99.4	72.1	4.4	9.2	45.0	76.0
13	8.28	7.24	278	202	216	114	62	88	85.8	59.3	15.6	13.1	48.0	66.0
14	8.23	7.30	264	220	208	138	56	82	68.9	68.1	22.4	12.2	45.0	72.0
15	8.06	7.42	242	206	184	122	58	84	66.5	65.7	18.5	10.2	43.0	73.0
16	8.05	7.12	234	214	196	118	38	96	81.0	69.7	7.8	9.7	41.0	90.0
17	8.16	7.21	246	206	200	98	46	108	85.8	65.7	7.8	10.2	41.0	85.0
18	8.29	7.27	280	212	206	116	74	96	77.0	64.9	14.6	12.2	47.0	80.0
19	8.24	7.27	266	214	214	120	52	94	85.8	69.7	12.6	9.7	43.0	78.0
20	8.22	7.44	254	220	212	124	42	96	85.8	70.5	9.7	10.7	43.0	80.0
21	8.23	7.42	246	226	208	118	38	108	77.8	74.5	12.6	9.7	45.0	85.0
22	8.33	7.50	244	216	208	118	36	98	79.4	72.1	11.2	8.7	42.0	86.0
23	8.22	7.49	248	222	208	114	40	108	82.6	72.9	10.2	9.7	48.0	87.0
24	8.24	7.52	258	228	208	118	50	110	78.6	72.9	15.1	11.2	42.0	80.0
25	8.30	7.49	240	228	208	124	32	104	8.6	75.4	9.7	11.2	42.0	82.0
26	8.28	7.30	248	220	208	120	40	100	84.2	81.0	9.2	4.4	41.0	80.0
27	8.21	7.55	242	226	208	126	34	100	78.6	77.0	11.2	8.3	41.0	84.0
28	8.28	7.46	242	240	208	126	34	114	82.6	80.2	8.8	9.7	43.0	87.0
29	8.23	7.46	254	224	210	114	44	110	83.4	78.6	11.2	6.8	42.0	88.0
30	8.33	7.49	256	230	216	132	40	98	83.4	79.4	11.7	7.8	42.0	88.0
31	8.32	7.41	248	242	212	130	36	112	77.8	74.5	13.1	13.6	40.0	78.0
Avg.	8.27	7.37	254	206	207	113	48	93	78.3	68.6	12.3	9.1	44.4	77.2
Max.	8.44	7.71	286	242	216	138	74	114	99.4	84.2	22.4	13.6	53	90
Min.	8.05	7.07	232	120	184	60	28	50	8.6	42.5	4.4	2.4	40	41

Bacteriological & Physical Parameters | City of Flint Water Treatment Plant | **WSSN: 2310** | May 2014 | Page 5

Date	Total Coliform						Standard Plate Count		Wind Direction	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap		Raw	Raw	Tap	Raw	Tap
1	1	1166	12	0	1	0	14760	<2		12.6				
2	1	864	12	0	1	0	800	<2		13.2				
3	1	930	12	0	1	0	1300	<2		12.0				
4	1	974	12	0	1	0	>14760	<2		13.6				
5	1	882	12	0	1	0	>14760	<2		12.5				
6	1	618	12	0	1	0	12460	<2		14.9				
7	1	728	12	0	1	0	>14760	<2		14.3				
8	1	426	12	0	1	0	9400	<2		13.4				
9	1	342	12	0	1	0	>14760	<2		16.6				
10	1	610	12	0	1	0	>14760	2		17.6				
11	1	220	12	0	1	0	>14760	2		18.1				
12	1	218	12	0	1	0	>14760	<2		18.3				
13	1	126	12	0	1	0	11100	<2		18.5				
14	1	2910	12	0	1	0	>14760	<2		19.6				
15	1	16328	12	0	1	0	14760	<2		17.4				
16	1	12588	12	0	1	0	5980	<2		13.2				
17	1	3720	12	1	1	0	3320	2		14.3				
18	1	1618	12	0	1	0	7840	<2		16.7				
19	1	4494	12	0	1	0	16.1	<2		16.1				
20	1	1816	12	0	1	0	860	<2		17.2				
21	1	4764	12	0	1	0	14760	<2		18.2				
22	1	2934	12	0	1	0	7440	<2		19.0				
23	1	960	12	0	1	0	7840	<2		18.0				
24	1	682	12	0	1	0	3760	<2		18.3				
25	1	398	12	0	1	0	14760	2		18.7				
26	1	482	12	0	1	0	>14760	<2		21.4				
27	1	2034	12	0	1	0	1600	<2		20.6				
28	1	2028	12	0	1	0	7440	<2		21.1				
29	1	918	12	0	1	0	5740	<2		20.6				
30	1	852	12	0	1	0	2160	<2		22.3				
31	1	1166	12	0	1	0	3320	<2		22.7				
Avg.										17.2				
Max.							> 14760	2		22.7				
Min.										12.0				

Distribution System Monitoring City of Flint Water Treatment Plant **WSSN: 2310** May 2014

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1									0.6	0.8	2
2									0.6	0.8	2
3											0
4											0
5									0.7	0.6	2
6									1.1	1.4	2
7	1.0	1.3	0.9	1.0	0.9	0.9	0.9	1.3	0.4	0.6	10
8	1.1	1.3	1.0	1.4	0.9	1.1	0.9	1.4	0.8	0.6	10
9									0.7	0.6	2
10											0
11											0
12									0.3	0.4	2
13									0.3	0.4	2
14	1.0	0.7	1.0	1.0	0.7	0.7	0.9	0.7	0.3	0.4	10
15	0.6	0.5	0.5	0.3	0.2	0.3	0.2	0.4	0.2		9
16									0.3		1
17											0
18											0
19									0.4	0.3	2
20									0.3	0.3	2
21	0.3	1.2	0.7	0.8	0.5	1.0	0.7	1.2	0.3	0.3	10
22	0.8	0.9	0.7	0.4					0.3	0.2	6
23									0.3	0.2	2
24											0
25											0
26									0.3	0.1	2
27									0.2	0.0	2
28	0.7	0.9	0.6	0.1	0.5	0.6	0.5	1.0	0.2	0.1	10
29	0.7	1.1	0.6	0.9	0.3	0.9	0.9	1.1	0.3	0.1	10
30											0
31											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	100
Total # of routine distribution samples required	100

Distribution Disinfectant Free Residual Summary	
Percent samples with a detectable disinfectant residual	99
Average disinfectant residual this month	0.7

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	0
Percent of routine distribution samples positive	0

Positive Distribution Samples					
Date	Monitoring Station	Date	Repeat Monitorong Stations	Residual	Positive or Negative

Distribution System Monitoring | City of Flint Water Treatment Plant **WSSN: 2310** | May 2014 |

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Sample
1									0.7	1.0	2
2									0.7	0.8	2
3											0
4											0
5									1.0	0.8	2
6									1.9	0.9	2
7	1.5	1.7	1.4	1.4	1.1	1.1	1.1	1.7	0.6	0.9	10
8	1.6	1.9	1.2	1.7	1.3	1.7	1.3	1.7	0.9	1.1	10
9									0.9	0.8	2
10											0
11											0
12									0.4	0.6	2
13									0.4	0.7	2
14	1.3	1.0	1.4	1.3	1.0	1.1	1.2	0.9	0.4	0.7	10
15	0.8	0.7	1.0	0.6	0.5	0.7	0.7	0.7	0.3		9
16									0.4		1
17											0
18											0
19									0.5	0.5	2
20									0.4	0.5	2
21	0.4	1.9	1.2	1.3	1.0	1.5	1.1	1.6	0.4	0.4	10
22	1.2	1.5	1.0	1.7					0.5	0.3	6
23									0.4	0.3	2
24											0
25											0
26											0
27									0.4	0.2	2
28	1.1	1.2	1.0	0.3	0.8	1.1	0.9	1.4	0.3	0.2	10
29	1.1	1.5	1.1	1.1	0.5	1.1	1.1	1.2	0.5	0.3	10
30											0
31											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residua	100
Average disinfectant residual this month	1.0

Cover Page Notes:

1. Filter head loss meters are not operational on our SCADA. They will be operational after our SCADA upgrades are complete. The SCADA upgrades are out for bid at the moment.

2. No cost analysis done for chemicals or power. An accurate chemical cost could not be determined due to polymer usage. We were given significant quantities (4-5 days) of polymer to use as a trial on two different occasions. No power cost was determined because I am trying to gain access to the correct monthly power cost.

3. POE continuous chlorine residual monitoring equipment has not been installed. We plan to move the continuous chlorine analyzer from the 3MG Well to the discharge side of the high service pumps. At this time we are taking residuals in the 3MG well, and using our lab tap to represent POE.

Report Notes:

1. Plant operations were shut down on 5/12 until 5/14. This was done to drain a softening clarifier and change plant set-up to test a new polymer. Storage reservoirs were utilized during this time.

2310

MONTHLY OPERATION REPORT OF WATER TREATMENT PLANT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow — Operator-in-Charge
May 2014 — Month/Year

F-1R, F-2 — Certification of Operator-in-Charge
F-1 — Water Plant Classification

Michael Glasgow — Signature of Operator-in-Charge
Genesee — County

Treatment Rate and Filter Data

Maximum Treatment Rate:	26.9	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	101	Hours
Average Head Loss:	*	Feet
Average Filtration Rate:	2.6	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.8	Gallons Per Square Feet per Minute
Average Wash Water Use:	2	Percent of Treated Water

Chemical Data

Chlorine on hand:	22000	lb.	Est. supply:	20 days
Primary Coagulant (Ferric Chloride) on hand:	83765	lb.	Est. supply:	14 days
Cost of All Chemicals per Million Gallons:	*	dollars		
Total Power Cost per Million Gallons:	*	dollars		

Remarks

Number of filter confluence samples > 0.3 NTU:	3
Number of filter confluence samples collected:	350
Percent of filter confluence samples > 0.3 NTU:	0.86%
Number of filter confluence samples > 1 NTU	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? NO
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? NO
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? YES
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? YES*
If yes, indicate date(s) and duration on a separate sheet.

# of CFE samples per 4 HR Compl. period?

Very High!

can we get turbs off plants?

now got

start - 4 issues MW both 5 days but 5 of them only one 5 ntu

Coagulation Parameters

City of Flint Water Treatment Plant
WSSN: 2310

May 2014

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Turbidity, Units																Point of Entry
			Raw			Applied	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						
			Number of Samples	Avg.	Max.	Applied Avg.	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	15.1	10.9	6	9.80	12.7	6.04	6	0.10	0.19	6	0	0	6	0.07	0.08	6	0	0	0.09
2	14.7	11.3	6	10.1	10.7	7.12	6	0.06	0.07	6	0	0	6	0.07	0.10	6	0	0	0.09
3	21.4	12.3	6	11.2	12.6	7.40	6	0.15	0.18	6	0	0	6	0.11	0.15	6	0	0	0.11
4	21.4	11.8	6	26.2	31.2	8.65	6	0.11	0.13	6	0	0	6	0.10	0.11	6	0	0	0.12
5	21.6	12.3	6	12.6	14.5	5.60	6	0.16	0.23	6	0	0	6	0.14	0.18	6	0	0	0.12
6	22.3	12.1	6	15.0	20.3	4.53	6	0.21	0.27	6	0	0	6	0.18	0.21	6	0	0	0.19
7	21.9	12.1	6	15.5	14.8	5.23	6	0.13	0.16	6	0	0	6	0.12	0.17	6	0	0	0.11
8	22.7	11.7	6	12.6	15.5	4.74	6	0.16	0.25	6	0	0	6	0.11	0.13	6	0	0	0.16
9	22.2	12.0	6	9.30	9.60	4.33	6	0.12	0.15	6	0	0	6	0.11	0.16	6	0	0	0.14
10	21.8	12.2	6	13.2	15.3	5.60	6	0.11	0.16	6	0	0	6	0.09	0.10	6	0	0	0.09
11	19.1	13.8	6	12.6	14.1	6.43	6	0.19	0.29	6	0	0	6	0.08	0.09	6	0	0	0.09
12	8.5	15.3	2	12.0	13.9	8.46	1	0.09	0.09	1	0	0	1	0.07	0.07	1	0	0	0.08
13	0.0	12.9	2	11.3	14.1	n/a	0	n/a	n/a	0	n/a	n/a	0	n/a	n/a	0	n/a	n/a	0.10
14	22.2	12.3	6	30.8	71.7	11.8	6	0.24	0.37	6	1	1	6	0.23	0.31	6	1	1	0.16
15	16.6	20.6	6	45.2	63.0	5.68	6	0.21	0.28	6	0	0	6	0.24	0.28	6	0	0	0.22
16	20.2	18.7	6	26.2	37.3	5.21	6	0.21	0.38	6	1	1	6	0.22	0.45	6	1	1	0.22
17	21.0	20.0	6	14.3	19.3	4.90	6	0.12	0.22	6	0	0	6	0.09	0.08	6	0	0	0.11
18	20.8	18.3	6	9.50	10.7	6.03	6	0.14	0.28	6	0	0	6	0.08	0.09	6	0	0	0.09
19	22.0	18.2	6	9.20	11.3	4.59	6	0.12	0.17	6	0	0	6	0.07	0.10	6	0	0	0.09
20	22.1	18.0	6	7.20	6.40	4.63	6	0.11	0.11	6	0	0	6	0.09	0.11	6	0	0	0.09
21	21.0	19.4	6	7.80	8.90	5.27	6	0.11	0.16	6	0	0	6	0.08	0.08	6	0	0	0.09
22	21.0	18.6	6	9.40	11.3	6.50	6	0.11	0.16	6	0	0	6	0.07	0.09	6	0	0	0.08
23	21.0	18.9	6	9.10	10.4	6.24	6	0.11	0.13	6	0	0	6	0.08	0.09	6	0	0	0.08
24	20.8	17.9	6	7.10	6.30	5.38	6	0.12	0.18	6	0	0	6	0.08	0.09	6	0	0	0.09
25	21.0	18.3	6	6.00	7.30	5.82	6	0.14	0.22	6	0	0	6	0.18	0.25	6	0	0	0.10
26	22.0	18.0	6	5.20	5.60	3.23	6	0.12	0.14	6	0	0	6	0.10	0.13	6	0	0	0.11
27	20.6	19.4	6	5.70	7.30	2.78	6	0.13	0.18	6	0	0	6	0.12	0.14	6	0	0	0.10
28	20.1	20.0	6	4.20	5.30	3.52	6	0.11	0.13	6	0	0	6	0.08	0.08	6	0	0	0.09
29	19.7	20.0	6	5.20	10.3	3.72	6	0.09	0.12	6	0	0	6	0.07	0.08	6	0	0	0.06
30	19.3	16.1	6	3.50	5.30	3.54	6	0.11	0.16	6	0	0	6	0.07	0.07	6	0	0	0.06
31	18.0	17.6	6	3.50	4.40	2.23	6	0.09	0.12	6	0	0	6	0.08	0.09	6	0	0	0.08
Avg.	19.4	15.8	6	12.3		5.51	6	0.13	0.19	6	0	0	6	0.11	0.14	6	0	0	
Max.	22.7	20.6	6	45.2	71.7	11.8	6	0.24	0.38	6	1	1	6	0.24	0.45	6	1	1	0.22
Min.	0.0	10.9	2	3.50		2.23	0	0.06	0.07	0	0	0	0	0.07	0.07	0	0	0	
Total	602.1																		

teams would do better

for lead & Cu 2-6 ppm/pt

= 1.7 ppm/pt

inactivo

can do ↑ would like one filter for backup

? 16

USING WATER FROM DORT WHEN WAS ON DWSD water

Fluoridation & Chlorination — City of Flint Water Treatment Plant — WSSN: 2310 — May 2014 — Page 3

Date	Fluoride Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0	0.14	0.19		3.4	0.0	3.4	1.4	1.6	1.4	1.6	1.2	1.5
2	0	0.15	0.34		4.0	0.0	4.0	1.2	1.3	1.6	2.0	1.3	1.6
3	0	0.14	0.18		4.0	0.0	4.0	1.8	2.2	1.7	2.0	1.5	1.7
4	0	0.15	0.24		4.4	0.0	4.4	2.2	2.6	1.5	1.7	1.8	2.2
5	0	0.14	0.13		4.7	0.0	4.7	1.9	2.2	1.8	2.1	1.2	1.4
6	0	0.14	0.13		4.9	0.0	4.9	1.9	2.3	1.7	1.9	1.2	1.5
7	0	0.15	0.14		4.9	0.0	4.9	1.8	2.2	2.0	2.3	1.9	2.2
8	0	0.15	0.14	0.17	4.7	0.0	4.7	1.8	2.3	1.8	2.2	1.7	2.1
9	0	0.15	0.13		5.1	0.0	5.1	1.5	1.9	1.7	2.0	1.5	1.9
10	0	0.15	0.14		5.2	0.0	5.2	2.0	2.5	1.7	2.1	1.5	2.0
11	0	0.16	0.14		5.6	0.0	5.6	2.1	2.6	2.0	2.6	1.7	2.1
12	0	0.15	0.13		6.9	0.0	6.9	1.8	2.4	1.7	2.2	1.4	2.0
13	0	0.15	0.25		5.0	0.0	5.0	n/a	n/a	1.7	2.0	1.5	1.8
14	0	0.15	0.13	0.23	4.9	0.0	4.9	1.9	2.3	1.5	1.9	1.5	1.8
15	0	0.14	0.14		6.2	0.0	6.2	2.0	2.4	2.0	2.5	2.2	2.6
16	0	0.14	0.13		5.3	0.0	5.3	1.9	2.3	1.6	2.0	1.4	1.7
17	0	0.15	0.14		5.1	0.6	5.7	1.7	2.1	1.6	1.9	1.6	2.0
18	0	0.16	0.15		5.1	0.6	5.7	1.5	1.9	1.6	1.9	1.4	1.7
19	0	0.15	0.14		4.7	0.2	4.9	1.6	1.8	1.9	2.3	1.5	1.7
20	0	0.15	0.15		5.0	0.5	5.5	1.9	2.3	2.1	2.6	1.6	1.9
21	0	0.15	0.16		4.9	0.4	5.3	1.8	2.3	2.0	2.4	1.8	2.3
22	0	0.15	0.14		5.0	0.2	5.2	1.7	2.1	2.1	2.5	1.5	1.8
23	0	0.14	0.13		4.9	0.4	5.3	1.5	1.8	1.8	2.3	1.6	2.1
24	0	0.15	0.15		5.0	0.9	5.9	1.5	2.0	1.5	2.0	1.3	1.7
25	0	0.15	0.14		5.0	1.0	6.0	1.4	1.8	1.6	2.0	1.5	1.9
26	0	0.15	0.16		5.0	0.9	5.9	1.5	1.8	1.7	2.3	1.7	2.0
27	0	0.16	0.17		5.3	0.9	6.2	1.5	1.7	1.8	2.2	1.5	1.7
28	0	0.15	0.16	0.19	5.7	1.0	6.7	1.6	2.0	1.9	2.3	1.6	2.0
29	0	0.16	0.16		5.1	0.8	5.9	1.5	1.8	1.8	2.1	1.2	1.4
30	0	0.16	0.17		5.1	1.1	6.2	1.4	1.7	1.6	1.8	1.4	1.7
31	0	0.15	0.16		5.4	1.4	6.8	1.4	1.7	1.6	2.0	1.2	1.6
Avg.	0	0.15	0.16	0.20	5.0	0.4	5.4	1.7	2.1	1.7	2.1	1.5	1.9
Max.	0	0.16	0.34	0.23	6.9	1.4	6.9	2.2	2.6	2.1	2.6	2.2	2.6
Min.	0	0.14	0.13	0.17	3.4	0.0	3.4	1.2	1.3	1.4	1.6	1.2	1.4

INST. FL STARTED 3rd/4th joints
Feed line leaks — shut-down
Maint staff — plastic welded
needs to be repaired 03
Anti — end of Mo. or soon
to replace leaks or change out piping

2X IN DAY during ↑ 1/4 HRS
OP
2x per shift

Seems like softening post-carb dropped off around 6th/7th

split treatment due to flow out of balance

use soft. mg

15 mgd 4-5 Mgd to softening

Chemical Analyses — City of Flint Water Treatment Plant — WSSN: 2310 — May 2014 — Page 4

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.44	7.71	246	146	196	66	50	80	58.7	48.1	20.9	7.8	43.0	67.0
2	8.27	7.07	250	162	196	80	54	82	83.4	48.1	10.2	10.2	44.0	41.0
3	8.26	7.47	260	132	200	80	60	72	82.6	42.5	10.7	6.3	40.0	60.0
4	8.39	7.50	256	120	196	70	60	50	88.6	60.9	6.3	6.3	47.0	60.0
5	8.39	7.41	232	152	204	76	28	76	78.6	64.5	8.7	3.9	45.0	75.0
6	8.25	7.21	240	160	202	90	38	70	80.2	54.5	9.7	7.3	53.0	71.0
7	8.24	7.24	266	210	212	130	54	80	71.3	66.5	21.4	10.7	51.0	76.0
8	8.33	7.13	272	218	210	128	62	90	86.6	84.2	10.7	2.4	n/a	n/a
9	8.29	7.22	264	224	210	130	54	94	86.6	75.4	11.7	8.7	50.0	80.0
10	8.38	7.36	260	216	214	122	46	94	81.8	73.7	13.6	7.8	48.0	80.0
11	8.35	7.46	266	230	216	126	70	104	81.0	73.7	20.4	11.2	48.0	82.0
12	8.33	7.43	256	218	208	120	58	98	99.4	72.1	4.4	9.2	45.0	76.0
13	8.28	7.24	278	202	216	114	62	88	85.8	59.3	15.6	13.1	48.0	66.0
14	8.23	7.30	264	220	208	138	56	82	68.9	68.1	22.4	12.2	45.0	72.0
15	8.06	7.42	242	206	184	122	58	84	66.5	65.7	16.5	10.2	43.0	73.0
16	8.05	7.12	234	214	196	118	38	96	81.0	69.7	7.8	9.7	41.0	90.0
17	8.16	7.21	246	208	200	98	46	108	85.8	65.7	7.8	10.2	41.0	85.0
18	8.29	7.27	260	212	206	116	74	96	77.0	64.9	14.6	12.2	47.0	80.0
19	8.24	7.27	268	214	214	120	52	94	85.8	69.7	12.6	9.7	43.0	78.0
20	8.22	7.44	254	220	212	124	42	96	85.8	70.5	9.7	10.7	43.0	80.0
21	8.23	7.42	246	226	208	118	38	108	77.8	74.5	12.8	9.7	45.0	85.0
22	8.33	7.50	244	216	208	118	36	98	79.4	72.1	11.2	8.7	42.0	85.0
23	8.22	7.49	248	222	208	114	40	108	82.6	72.9	10.2	9.7	46.0	87.0
24	8.24	7.52	258	228	208	118	50	110	78.6	72.9	15.1	11.2	42.0	80.0
25	8.30	7.49	240	228	208	124	32	104	8.6	75.4	9.7	11.2	42.0	82.0
26	8.28	7.30	248	220	208	120	40	100	84.2	81.0	9.2	4.4	41.0	80.0
27	8.21	7.55	242	226	208	126	34	100	78.6	77.0	11.2	8.3	41.0	84.0
28	8.28	7.46	242	240	208	126	34	114	82.6	80.2	8.8	9.7	43.0	87.0
29	8.23	7.46	254	224	210	114	44	110	83.4	78.6	11.2	6.8	42.0	88.0
30	8.33	7.49	258	230	216	132	40	98	83.4	79.4	11.7	7.8	42.0	88.0
31	8.32	7.41	248	242	212	130	36	112	77.8	74.5	13.1	13.8	40.0	78.0
Avg.	8.27	7.37	254	206	207	113	48	93	78.3	68.6	12.3	9.1	44.4	77.2
Max.	8.44	7.71	266	242	216	138	74	114	99.4	84.2	22.4	13.6	53	90
Min.	8.05	7.07	232	120	184	60	28	50	8.6	42.5	4.4	2.4	40	41

Where?

Softening?

Diff. bt Non-Carb & Alk =

Want to add CMB Appears to be Battery cost Final adjust → Bicarb

Hard - Alk = N. Carb Hardness

003497

verify >, <, = to

diff. lab techs?

>14760 ← 84 wells

Doing 1/20th dilutions to get #s

Fluorescent ~~Fluorent~~ test disk. has # wells

83 wells 14760

Following Methods 2-single well Fluorent

<2 No wells Fluorent

Bacteriological & Physical Parameters

City of Flint Water Treatment Plant
WSSN: 2310

May 2014

Page 5

Date	Total Coliform						Standard Plate Count		Wind Direction	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap		Raw	Raw	Tap	Raw	Tap
1	1	1166	12	0	1	0	14760	<2		12.6				
2	1	864	12	0	1	0	800	<2		13.2				
3	1	930	12	0	1	0	1300	<2		12.0				
4	1	974	12	0	1	0	>14760	<2		13.6				
5	1	882	12	0	1	0	>14760	<2		12.5				
6	1	618	12	0	1	0	12460	<2		14.9				
7	1	728	12	0	1	0	>14760	<2		14.3				
8	1	426	12	0	1	0	9400	<2		13.4				
9	1	342	12	0	1	0	>14760	<2		16.6				
10	1	610	12	0	1	0	>14760	2		17.6				
11	1	220	12	0	1	0	>14760	2		18.1				
12	1	218	12	0	1	0	>14760	<2		18.3				
13	1	126	12	0	1	0	11100	<2		19.5				
14	1	2910	12	0	1	0	>14760	<2		19.6				
15	1	16328	12	0	1	0	14760	<2		17.4				
16	1	12588	12	0	1	0	5980	<2		13.2				
17	1	3720	12	1	1	0	3320	2		14.3				
18	1	1618	12	0	1	0	7840	<2		16.7				
19	1	4494	12	0	1	0	16.1	<2		16.1				
20	1	1816	12	0	1	0	860	<2		17.2				
21	1	4764	12	0	1	0	14760	<2		18.2				
22	1	2934	12	0	1	0	7440	<2		19.0				
23	1	980	12	0	1	0	7840	<2		18.0				
24	1	682	12	0	1	0	3780	<2		18.3				
25	1	398	12	0	1	0	14760	2		18.7				
26	1	482	12	0	1	0	>14760	<2		21.4				
27	1	2034	12	0	1	0	1600	<2		20.6				
28	1	2028	12	0	1	0	7440	<2		21.1				
29	1	918	12	0	1	0	5740	<2		20.6				
30	1	852	12	0	1	0	2160	<2		22.3				
31	1	1166	12	0	1	0	3320	<2		22.7				
Avg.										17.2				
Max.							> 14760	2		22.7				
Min.										12.0				

Balcony Act

- Turn-over @ Reservoirs
- Mixing
- THM formation – stagnation?

Distribution System Monitoring | City of Flint Water Treatment Plant WSSN: 2310 | May 2014 |

Date	Free Chlorine Residual at Bacteriological Monitoring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1									0.6	0.8	2
2									0.6	0.8	2
3											0
4											0
5									0.7	0.6	2
6									1.1	1.4	2
7	1.0	1.3	0.9	1.0	0.9	0.9	0.9	1.3	0.4	0.6	10
8	1.1	1.3	1.0	1.4	0.9	1.1	0.9	1.4	0.8	0.6	10
9									0.7	0.6	2
10											0
11											0
12									0.3	0.4	2
13									0.3	0.4	2
14	1.0	0.7	1.0	1.0	0.7	0.7	0.9	0.7	0.3	0.4	10
15	0.6	0.5	0.5	0.3	0.2	0.3	0.2	0.4	0.2		9
16									0.3		1
17											0
18											0
19									0.4	0.3	2
20									0.3	0.3	2
21	0.3	1.2	0.7	0.8	0.5	1.0	0.7	1.2	0.3	0.3	10
22	0.8	0.9	0.7	0.4					0.3	0.2	6
23									0.3	0.2	2
24											0
25											0
26									0.3	0.1	2
27									0.2	0.0	2
28	0.7	0.9	0.6	0.1	0.5	0.6	0.5	1.0	0.2	0.1	10
29	0.7	1.1	0.6	0.9	0.3	0.9	0.9	1.1	0.3	0.1	10
30											0
31											0

Correlation of location of RES. w/ high THM's

HPC? Yes — give us the results

Distribution Sample Summary	
Total # of routine distribution samples analyzed	100
Total # of routine distribution samples required	100

Distribution Disinfectant Free Residual Summary	
Percent samples with a detectable disinfectant residual	99
Average disinfectant residual this month	0.7

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	0
Percent of routine distribution samples positive	0

Positive Distribution Samples					
Date	Monitoring Station	Date	Repeat Monitorong Stations	Residual	Positive or Negative

until flushing

Cl2 on CWR Filling to Reservoir

1 mg/L (1ppm)

helps

.4 - .6 F T

Adding Portable Cl2 @ WR

Calcium Hypo's that used to be my used @ the WTP int.

Distance? More Residuals?

Distribution System Monitoring | City of Flint Water Treatment Plant WSSN: 2310 | May 2014 | Page 7

Date	Total Chlorine Residual at Bacteriological Monitoring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Sample
1									0.7	1.0	2
2									0.7	0.8	2
3											0
4											0
5									1.0	0.8	2
6									1.9	0.9	2
7	1.5	1.7	1.4	1.4	1.1	1.1	1.1	1.7	0.6	0.9	10
8	1.6	1.9	1.2	1.7	1.3	1.7	1.3	1.7	0.9	1.1	10
9									0.9	0.8	2
10											0
11											0
12									0.4	0.6	2
13									0.4	0.7	2
14	1.3	1.0	1.4	1.3	1.0	1.1	1.2	0.9	0.4	0.7	10
15	0.8	0.7	1.0	0.6	0.5	0.7	0.7	0.7	0.3		9
16									0.4		1
17											0
18											0
19									0.5	0.5	2
20									0.4	0.5	2
21	0.4	1.9	1.2	1.3	1.0	1.5	1.1	1.6	0.4	0.4	10
22	1.2	1.5	1.0	1.7					0.5	0.3	6
23									0.4	0.3	2
24											0
25											0
26											0
27									0.4	0.2	2
28	1.1	1.2	1.0	0.3	0.8	1.1	0.9	1.4	0.3	0.2	10
29	1.1	1.5	1.1	1.1	0.5	1.1	1.1	1.2	0.5	0.3	10
30											0
31											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residua	100
Average disinfectant residual this month	1.0

Cover Page Notes:

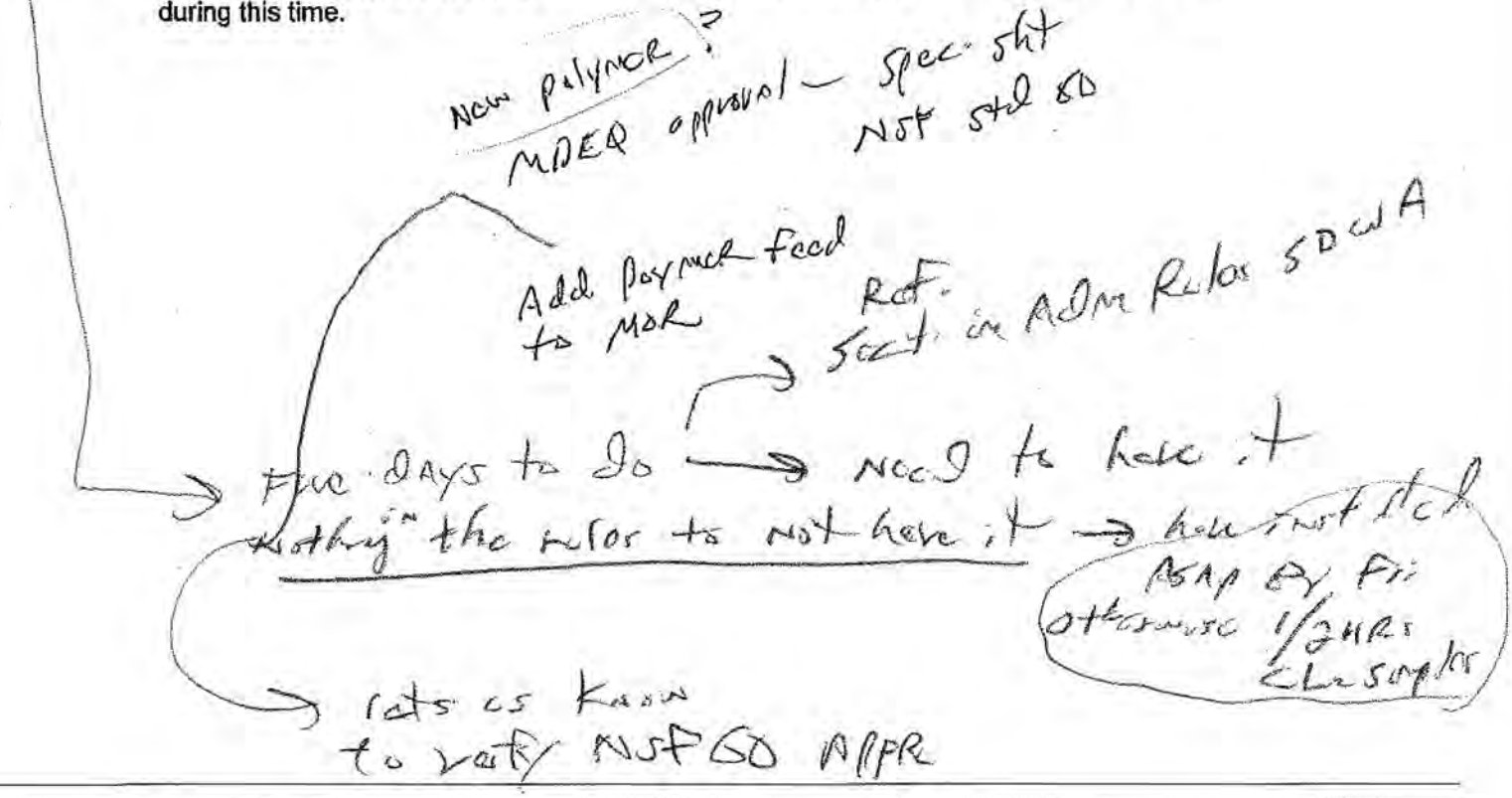
1. Filter head loss meters are not operational on our SCADA. They will be operational after our SCADA upgrades are complete. The SCADA upgrades are out for bid at the moment.

2. No cost analysis done for chemicals or power. An accurate chemical cost could not be determined due to polymer usage. We were given significant quantities (4-5 days) of polymer to use as a trial on two different occasions. No power cost was determined because I am trying to gain access to the correct monthly power cost.

3. POE continuous chlorine residual monitoring equipment has not been installed. We plan to move the continuous chlorine analyzer from the 3MG Well to the discharge side of the high service pumps. At this time we are taking residuals in the 3MG well, and using our lab tap to represent POE.

Report Notes:

1. Plant operations were shut down on 5/12 until 5/14. This was done to drain a softening clarifier and change plant set-up to test a new polymer. Storage reservoirs were utilized during this time.



Coagulation Parameters

City of Flint Water Treatment Plant
WSSN: 2310

April 2014

Date	Million Gallons Treated	Ferric as Fe3+ mg/L	Turbidity, Units																
			Raw			Applied	Confluence Point. No.1 (N) South						Confluence Point. No.2 (S) South						Point of Entry
			Number of Samples	Avg.	Max.	Applied Avg.	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
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15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			
25	12.0	11.0	2	10.2	11.8	3.00	6	0.09	0.12	6	0	0	6	0.07	0.09	0	0	0	0.13
26	12.4	10.9	2	11.4	13.4	2.20	6	0.05	0.07	6	0	0	6	0.06	0.11	0	0	0	0.07
27	12.8	11.9	2	11.4	13.7	3.90	6	0.05	0.06	6	0	0	6	0.06	0.11	0	0	0	0.07
28	8.2	12.3	2	14.6	15.6	8.20	4	0.08	0.19	4	0	0	4	0.07	0.10	0	0	0	0.05
29	0	0	2	11.3	13.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.07
30	8.1	11.4	2	10.5	11.1	4.60	2	0.22	0.28	2	0	0	2	0.18	0.20	0	0	0	0.25
Avg.	8.9	9.6	2	11.6		4.38	5	0.10	0.14	4.8	0	0	5	0.09	0.12	0	0	0	
Max.	12.8	12.3	2	14.6	15.6	8.20	6	0.22	0.28	6	0	0	6	0.18	0.20	0	0	0	0.25
Min.	0	0	2	10.2		2.20	2	0.05	0.06	2	0	0	2	0.06	0.09	0	0	0	
Total	53.5																		

Fluoridation & Chlorination | City of Flint Water Treatment Plant | **WSSN: 2310** | April 2014 | Page 3 | **Chemical Analyses**

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)						Date	pH (S.U.)	
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap				
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total		Raw	Tap
1														1		
2														2		
3														3		
4														4		
5														5		
6														6		
7														7		
8														8		
9														9		
10														10		
11														11		
12														12		
13														13		
14														14		
15														15		
16														16		
17														17		
18														18		
19														19		
20														20		
21														21		
22														22		
23														23		
24														24		
25	0	0.14	0.59		3.5	0	3.5	1.8	2.1			0.8	1.0	25		7.39
26	0	0.14	0.53		3.5	0	3.5	1.7	1.9			0.9	1.1	26	8.31	7.28
27	0	0.13	0.53		3.6	0	3.6	1.7	1.9	1.5	1.8	1.0	1.1	27	8.34	7.32
28	0	0.13	0.19		3.7	0	3.7	1.7	1.9	1.4	1.8	0.9	1.0	28	8.39	8.46
29	0	0.15	0.58	0.43	3.7	0	3.7	n/a	n/a	n/a	n/a	0.9	1.1	29	8.46	7.35
30	0	0.15	0.62		3.5	0	3.5	1.7	2.0	1.5	1.8	1.0	1.1	30	8.41	7.30
Avg.	0	0.14	0.51	0.43	3.6	0	3.6	1.7	2.0	1.5	1.8	0.9	1.1	Avg.	8.38	7.52
Max.	0	0.15	0.62	0.43	3.7	0	3.7	1.8	2.1	1.5	1.8	1.0	1.1	Max.	8.46	8.46
Min.	0	0.13	0.19	0.43	3.5	0	3.5	1.7	1.9	1.4	1.8	0.8	1.0	Min.	8.31	7.28

WSSN: 2310

Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	96		75		21		29.7		5.3		
255	98	200	73	55	25	77.9	29.7	13.6	5.8	48	24
249	98	199	70	50	28	75.4	30.5	14.6	5.8	42	32
247	92	205	60	42	32	82.6	46.5	9.8	8.3	43	68
230	98	190	70	40	28	76.2	30.5	9.7	5.3		
248	98	208	73	40	25	72.1	29.7	17.5	5.8	45	17
246	97	200	70	45	27	76.8	32.8	13.0	6.1	45	35
255	98	208	75	55	32	82.6	46.5	17.5	8.3	48	68
230	92	190	60	40	21	72.1	29.7	9.7	5.3	42	17

Bacteriological & Physical Parameters | City of Flint Water Treatment Plant | **WSSN: 2310** | April 2014 | Page 5

Date	Total Coliform						Standard Plate Count		Wind Direction	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap		Raw	Raw	Tap	Raw	Tap
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25	1		12	0	1	0		< 2		11.0				
26	1		12	0	1	0	> 1476	< 2		11.4				
27	1		12	0	1	0	142	< 2		11.1				
28	1		8	0	1	0	532	< 2		11.5				
29	1		0	0	1	0		< 2		12.1				
30	1		4	0	1	0	1246	< 2		13.5				
Avg.							n/a	< 2		11.8				
Max.							> 1476	< 2		13.5				
Min.							142	< 2		11.0				

Distribution System Monitoring City of Flint Water Treatment Plant **WSSN: 2310** April 2014

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1											0
2											0
3											0
4											0
5											0
6											0
7											0
8											0
9											0
10											0
11											0
12											0
13											0
14											0
15											0
16											0
17											0
18											0
19											0
20											0
21											0
22											0
23											0
24											0
25											0
26											0
27											0
28											0
29	1.0	0.8	1.0	0.7	0.8	0.8	1.1	0.8	0.7	0.9	10
30											0
31											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	115
Total # of routine distribution samples required	100

Distribution Disinfectant Residual Summary	
Percent samples with a detectable disinfectant residual	100
Average disinfectant residual this month	0.9

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	0
Percent of routine distribution samples positive	0

Positive Distribution Samples					
Date	Monitoring Station	Date	Repeat Monitorong Stations	Residual	Positive or Negative

Distribution System Monitoring

City of Flint Water Treatment Plant
WSSN: 2310

April 2014

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WR	Number of Samples
1											0
2											0
3											0
4											0
5											0
6											0
7											0
8											0
9											0
10											0
11											0
12											0
13											0
14											0
15											0
16											0
17											0
18											0
19											0
20											0
21											0
22											0
23											0
24											0
25											0
26											0
27											0
28											0
29	1.0	0.8	1.0	0.7	0.8	0.8	1.1	0.8	0.7	0.9	10
30											0
31											0

003507

RAW & PT TURBS 1/4 HRS = 6 PER DAY

2310

Total # of TURB. SAMPLES taken ?

Applied ?

CFE TURBS ?

YES → 1/4 HRS

CFE column

FLINT WATER PLANT & FACILITIES

Coagulation Parameters **WSSN 2310** **Apr-14**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1		0.00									3	0.12	0.18
2		0.00									3	0.08	0.08
3		0.00									3	0.07	0.08
4		0.00									3	0.08	0.08
5		0.00									3	0.07	0.08
6		0.00									3	0.07	0.08
7		0.00									2	0.08	0.10
8		0.00									3	0.08	0.08
9		0.00									3	0.08	0.10
10		0.00									3	0.07	0.08
11		0.00									3	0.06	0.07
12		0.00									3	0.08	0.08
13		0.00									3	0.06	0.06
14		0.00									1	0.09	0.09
15		0.00									1	0.11	0.11
16		0.00									0	n.s	n.s
17		0.00									3	0.07	0.08
18		0.00									3	0.06	0.07
19		0.00									3	0.06	0.07
20		0.00									0	n.s	n.s
21		0.00									3	0.08	0.08
22		0.00									3	0.07	0.08
23		0.00									3	0.07	0.07
24		0.00									3	0.07	0.08
25		0.00					2	10.2	11.8		1	0.10	0.10
26		0.00					2	11.4	13.4		2	0.08	0.10
27		0.00					2	11.4	13.7		2	0.07	0.08
28		0.00					2	14.6	15.6		2	0.07	0.07
29		0.00					2	11.3	13.2		2	0.06	0.07
30		0.00					2	10.5	11.1		2	0.08	0.10
AVG	#DIV/0!	0.00	######				2	11.6	13.1		2	0.08	0.08
MAX	0.00	0.00	0.00				2	14.6	15.6		3	0.12	0.18
MIN	0.00	0.00	0.00				2	10.2	11.1		0	0.06	0.06
Total	0.00	0.00	0.00										

END. V. FILTER TURBS ?

YES

OPS REC. 1/HR

SCADA upgrade NEEDED

CAN

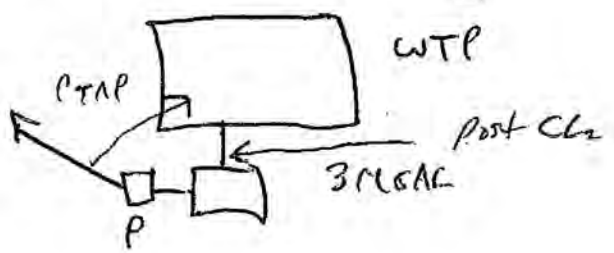
CAN PULL UP ON BLUEEN

BUILDS NEW WK

PRODUCTION ?

FERRIC ? mg/L

30 3 US FERRIC as IRON



Applied → Chlorine ? Post ?

Residual
Applied – F.T ?
Filtered – F.T ?
TAP – Total ?

Continuous

CFE Applied Cl2 ? Filtered ? Continuous ?

1/4 HRS

FLINT WATER PLANT & FACILITIES

Flouridation & Chlorination **WSSN 2310** **Apr-14**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well			Tap	
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.59					0.8	0.9	0.9	0.9			0.9	
2			0.58					1.0	1.0	0.9	0.9			0.9	
3			0.63					0.8	1.1	1.0	0.9			0.9	
4			0.65					1.0	1.1	0.9	1.0			1.0	
5			0.66					1.0	1.1	1.1	1.0			1.1	
6			0.65					1.0	1.0	1.0	1.0			0.9	
7			0.71					n.s	n.s	n.s	n.s			1.0	
8			0.68					0.8	1.0	0.9	0.9			0.9	
9			0.64					1.0	1.0	0.9	0.9			0.8	
10			0.68					0.9	1.0	0.9	0.9			0.8	
11			0.64					1.0	1.2	1.0	1.0			1.0	
12			0.63					0.8	0.9	0.8	0.8			1.0	
13			0.67					0.9	1.0	0.9	0.8			0.9	
14			0.62					0.9	1.0	1.0	0.9			1.0	
15			0.54					0.9	1.1	1.0	n/a			1.0	
16			0.54					0.9	1.0	0.9	n/a			0.8	
17			0.59					0.8	1.1	0.9	n/a			0.9	
18			0.54					0.9	1.0	1.0	n/a			1.0	
19			0.57					0.8	1.0	0.9	n/a			1.0	
20			n/a					n.s	n.s	n.s	n/a			n.s	
21			0.61					0.9	1.0	0.9	n/a			1.0	
22			0.66					0.8	1.1	0.9	n/a			1.0	
23			0.61					0.8	1.0	0.9	n/a			0.8	
24			0.61					n.s	1.0	0.9	n/a			0.9	
25		0.14	0.59			3.5		n.s	n/a	n.s	1.7			0.8	
26		0.14	0.53			3.5		n.s	n/a	n.s	1.6			0.9	
27		0.13	0.53			3.6		n.s	n/a	n.s	1.5			1.0	
28		0.13	0.19			3.7		n.s	n/a	n.s	1.4			0.9	
29		0.15	0.58			3.7		n.s	n/a	n.s	1.5			0.9	
30		0.15	0.62			3.5		n.s	n/a	n.s	1.7			0.8	
AVG		0.14	0.60			3.6		0.9	1.0	0.9	1.1			0.9	
MAX		0.15	0.71			3.7		1.0	1.2	1.1	1.7			1.1	
MIN		0.13	0.19			3.5		0.8	0.9	0.8	0.8			0.8	

n.s. = no sample collected/tested

PDE Needs Cont. Cl2 Mon.

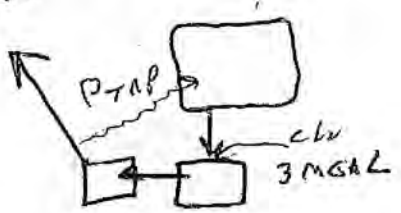
H.S. Disch. Needs Contin. Cl2 Mon.

Post ?

CT ?

CFEs Monitored

Dist



Chemical Analyses **WSSN 2310** **Apr-14**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.57		98		74		24				30.5		5.3		
2		7.36		98		73		25				29.7		5.8		
3		7.33		98		74		24				30.5		5.3		
4		7.32		100		75		25				32.1		4.9		
5		7.44		100		76		24				30.5		5.8		
6		7.32		98		74		24				28.9		6.3		
7		7.41		100		73		27				31.3		5.3		
8		7.62		98		69		29				28.9		6.3		
9		7.46		98		72		26				29.7		5.8		
10		7.39		98		71		27				28.9		6.3		
11		7.34		100		75		25				31.3		5.3		
12		7.56		102		71		31				28.1		7.8		
13		7.37		96		64		32				28.9		5.8		
14		7.32		96		75		21				28.9		5.8		
15		7.46		98		73		25				28.9		6.3		
16		7.47		96		66		30				28.9		5.8		
17		7.32		96		71		25				29.7		5.3		
18		7.30		98		73		25				31.3		4.9		
19		7.28		100		72		28				28.9		6.8		
20		n.s		n.s		n.s		n.s				n.s		n.s		
21		7.34		98		74		24				29.7		5.8		
22		7.26		98		72		26				29.7		5.8		
23		7.25		98		71		27				29.7		5.8		
24		7.46		96		71		25				29.7		5.3		
25		7.39		96		75	0	21				29.7		5.3		
26	8.31	7.28	255	98	200	73	55	25			77.9	29.7	13.6	5.8	48	24
27	8.34	7.32	249	98	199	70	50	28			75.4	30.5	14.6	5.8	42	32
28	8.39	8.46	247	92	205	60	42	32			82.6	46.5	9.8	8.3	43	68
29	8.46	7.35	230	98	190	70	40	28			76.2	30.5	9.7	5.3		
30	8.41	7.30	248	98	208	73	40	25			72.1	29.7	17.5	5.8	45	17
AVG		7.42		98		72		26				30.4		5.9		
MAX		8.46		102		76		32				46.5		8.3		
MIN		7.25		92		60		21				28.1		4.9		

n.s. = no sample collected/tested

T. Coliform RAW ?

FLINT WATER PLANT & FACILITIES

Bacteriological & Physical Parameters **WSSN 2310** **Apr-14**

DATE	Total Coliform Plant Tap							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	B&P	C.F.E.	Dort	3MG Well	C.S. #2	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					10.1				
2	1/0		2/0	2/0	2/0	2/0					10.1				
3	1/0		2/0	2/0	2/0	2/0					11.7				
4	1/0		2/0	2/0	2/0	2/0					11.7				
5	1/0		2/0	2/0	2/0	2/0					10.9				
6	1/0		2/0	2/0	2/0	2/0					10.7				
7	0/0		0/0	0/0	0/0	2/0					11.3				
8	1/0		2/0	2/0	2/0	2/0					9.9				
9	1/0		2/0	2/0	2/0	2/0					10.2				
10	1/0		2/0	2/0	2/0	2/0			< 2		8.8				
11	1/0		2/0	2/0	2/0	2/0					9.1				
12	1/0		2/0	2/0	2/0	2/0					10.1				
13	1/0		2/0	2/0	2/0	2/0					9.8				
14	1/0		2/0	2/0	2/0	2/0					9.9				
15	1/0		2/0	2/0	2/0	2/0					8.9				
16	1/0		2/0	2/0	2/0	2/0					10.6				
17	1/0		2/0	0/0	2/0	2/0					9.4				
18	1/0		1/0	0/0	1/0	2/0					9.2				
19	1/0		2/0	0/0	2/0	2/0					8.3				
20	0/0		0/0	0/0	0/0	0/0					n.s				
21	1/0		2/0	0/0	2/0	2/0					8.1				
22	1/0		2/0	0/0	2/0	2/0					7.7				
23	1/0		2/0	0/0	2/0	2/0					9.3				
24	1/0		2/0	2/0	2/0	2/0					8.7				
25	1/0	10/0	0/0	1/0	n/a	1/0			< 2		8.7				
26	1/0	12/0	0/0	1/0	n/a	1/0		> 1476	< 2		9.0				
27	1/0	12/0	0/0	1/0	n/a	1/0		142	< 2		8.8				
28	1/0	12/0	0/0	1/0	n/a	1/0		532	< 2		7.9				
29	1/0	4/0	0/0	1/0	n/a	1/0			< 2		8.5				
30	1/0	6/0	0/0	1/0	n/a	1/0		1246	< 2		10.3				
											9.6				
C.F.E. = Combined Filter Effluent											11.7				
											7.7				

n.s. = no sample collected/tested

6 = 1/4 HRS
4

FLINT
WATER PLANT & FACILITIES

Distribution System Monitoring WSSN 2310 Apr-14

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.9	1.0	0.9	0.9	4
2	1.0	0.8	0.9	0.8	0.8	0.9	0.9	1.1	0.9	1.1	0.9	1.0	12
3									0.9	1.1	1.0	1.1	4
4									0.9	1.0	1.1	1.1	4
5											1.1	1.1	2
6											0.9	1.0	2
7													0
8									0.8	1.0	1.0	0.9	4
9	0.9	0.9	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.9	1.0	0.9	12
10	1.2	1.1	1.1	0.9	0.9	0.5	0.8	1.0	0.8	1.0	1.0	0.9	12
11									0.8	0.9	1.2	1.1	4
12											0.8	0.9	2
13											1.0	1.0	2
14									0.8	0.9	1.0	1.0	4
15											1.0	1.1	2
16	1.1	0.9	1.0	0.9	1.0	1.0	1.1	1.0	0.8	0.9	1.0	0.9	12
17											1.0	1.1	2
18											1.0		1
19											1.0	0.9	2
20													0
21											1.0	1.0	2
22											1.1	1.0	2
23									0.8		1.0	1.0	3
24	1.0	0.8	1.0	0.8	0.8	0.9	0.8	1.0			1.0	1.0	10
25													0
26													0
27													0
28													0
29	1.0	0.8	1.0	0.7	0.8	0.8	1.1	0.8	0.7	0.9			10
30													0

Monthly Cl_2 Avg.	**0.939**
Quarterly Cl_2 Avg.	**0.873**
Yearly Cl_2 Avg.	**0.756**
Total Samples	**114**

FLINT
WATER PLANT & FACILITIES

Distribution System Monitoring **WSSN 2310** **Apr-14**

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									1.1	1.3	1.0	1.1	4
2	1.2	1.0	1.1	1.0	1.0	1.1	1.1	1.2	1.1	1.3	1.2	1.2	12
3									1.1	1.3	1.2	1.3	4
4									1.0	1.2	1.3	1.2	4
5											1.3	1.2	2
6											1.1	1.1	2
7													0
8									1.0	1.2	1.1	1.1	4
9	1.1	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.1	12
10	1.3	1.2	1.3	1.0	1.2	0.8	1.0	1.2	1.0	1.2	1.2	1.0	12
11									1.0	1.1	1.3	1.3	4
12											1.0	1.1	2
13											1.1	1.1	2
14									1.0	1.1	1.3	1.1	4
15											1.2	1.2	2
16	1.3	1.1	1.1	1.0	1.1	1.1	1.2	1.1	1.0	1.1	1.2	1.1	12
17											1.1	1.2	2
18											1.2		1
19											1.2	1.1	2
20													0
21											1.2	1.2	2
22											1.2	1.1	2
23									1.0		1.1	1.1	3
24	1.2	1.0	1.1	1.0	1.0	1.1	1.0	1.1			1.1	1.1	10
25													0
26													0
27													0
28													0
29	1.2	1.0	1.2	0.9	0.9	0.9	1.3	0.9	0.8	1.0			10
30													0

Monthly Cl_2 Avg.	**1.11**
Quarterly Cl_2 Avg.	**1.042**
Yearly Cl_2 Avg.	**0.919**
Total Samples	**114**

FLINT
WATER PLANT & FACILITIES

ROUTINE POSITIVE DISTRIBUTION SAMPLES Apr-14

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform

Total number of routine distribution samples analyzed:	114
Total number of routine distribution samples required:	100

2310

DEQ
RESOURCE MANAGEMENT DIVISION

MAY 15 2014

LANSING DISTRICT

FLINT
WATER PLANT & FACILITIES

Coagulation Parameters **WSSN 2310** **Apr-14**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1		0.00									3	0.12	0.18
2		0.00									3	0.08	0.08
3		0.00									3	0.07	0.08
4		0.00									3	0.08	0.08
5		0.00									3	0.07	0.08
6		0.00									3	0.07	0.08
7		0.00									2	0.08	0.10
8		0.00									3	0.08	0.08
9		0.00									3	0.08	0.10
10		0.00									3	0.07	0.08
11		0.00									3	0.06	0.07
12		0.00									3	0.08	0.08
13		0.00									3	0.06	0.06
14		0.00									1	0.09	0.09
15		0.00									1	0.11	0.11
16		0.00									0	n.s	n.s
17		0.00									3	0.07	0.08
18		0.00									3	0.06	0.07
19		0.00									3	0.06	0.07
20		0.00									0	n.s	n.s
21		0.00									3	0.08	0.08
22		0.00									3	0.07	0.08
23		0.00									3	0.07	0.07
24		0.00									3	0.07	0.08
25		0.00					2	10.2	11.8		1	0.10	0.10
26		0.00					2	11.4	13.4		2	0.08	0.10
27		0.00					2	11.4	13.7		2	0.07	0.08
28		0.00					2	14.6	15.6		2	0.07	0.07
29		0.00					2	11.3	13.2		2	0.06	0.07
30		0.00					2	10.5	11.1		2	0.08	0.10
AVG	#DIV/0!	0.00	######				2	11.6	13.1		2	0.08	0.08
MAX	0.00	0.00	0.00				2	14.6	15.6		3	0.12	0.18
MIN	0.00	0.00	0.00				2	10.2	11.1		0	0.06	0.06
Total	0.00	0.00	0.00										

COMPLETED

Flouridation & Chlorination WSSN 2310 Apr-14

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.59					0.8	0.9	0.9	0.9			0.9	
2			0.58					1.0	1.0	0.9	0.9			0.9	
3			0.63					0.8	1.1	1.0	0.9			0.9	
4			0.65					1.0	1.1	0.9	1.0			1.0	
5			0.66					1.0	1.1	1.1	1.0			1.1	
6			0.65					1.0	1.0	1.0	1.0			0.9	
7			0.71					n.s	n.s	n.s	n.s			1.0	
8			0.68					0.8	1.0	0.9	0.9			0.9	
9			0.64					1.0	1.0	0.9	0.9			0.8	
10			0.68					0.9	1.0	0.9	0.9			0.8	
11			0.64					1.0	1.2	1.0	1.0			1.0	
12			0.63					0.8	0.9	0.8	0.8			1.0	
13			0.67					0.9	1.0	0.9	0.8			0.9	
14			0.62					0.9	1.0	1.0	0.9			1.0	
15			0.54					0.9	1.1	1.0	n/a			1.0	
16			0.54					0.9	1.0	0.9	n/a			0.8	
17			0.59					0.8	1.1	0.9	n/a			0.9	
18			0.54					0.9	1.0	1.0	n/a			1.0	
19			0.57					0.8	1.0	0.9	n/a			1.0	
20			n/a					n.s	n.s	n.s	n/a			n.s	
21			0.61					0.9	1.0	0.9	n/a			1.0	
22			0.66					0.8	1.1	0.9	n/a			1.0	
23			0.61					0.8	1.0	0.9	n/a			0.8	
24			0.61					n.s	1.0	0.9	n/a			0.9	
25		0.14	0.59			3.5		n.s	n/a	n.s	1.7			0.8	
26		0.14	0.53			3.5		n.s	n/a	n.s	1.6			0.9	
27		0.13	0.53			3.6		n.s	n/a	n.s	1.5			1.0	
28		0.13	0.19			3.7		n.s	n/a	n.s	1.4			0.9	
29		0.15	0.58			3.7		n.s	n/a	n.s	1.5			0.9	
30		0.15	0.62			3.5		n.s	n/a	n.s	1.7			0.8	
AVG		0.14	0.60			3.6		0.9	1.0	0.9	1.1			0.9	
MAX		0.15	0.71			3.7		1.0	1.2	1.1	1.7			1.1	
MIN		0.13	0.19			3.5		0.8	0.9	0.8	0.8			0.8	

n.s. = no sample collected/tested

Chemical Analyses **WSSN 2310** **Apr-14**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.57		98		74		24				30.5		5.3		
2		7.36		98		73		25				29.7		5.8		
3		7.33		98		74		24				30.5		5.3		
4		7.32		100		75		25				32.1		4.9		
5		7.44		100		76		24				30.5		5.8		
6		7.32		98		74		24				28.9		6.3		
7		7.41		100		73		27				31.3		5.3		
8		7.62		98		69		29				28.9		6.3		
9		7.46		98		72		26				29.7		5.8		
10		7.39		98		71		27				28.9		6.3		
11		7.34		100		75		25				31.3		5.3		
12		7.56		102		71		31				28.1		7.8		
13		7.37		96		64		32				28.9		5.8		
14		7.32		96		75		21				28.9		5.8		
15		7.46		98		73		25				28.9		6.3		
16		7.47		96		66		30				28.9		5.8		
17		7.32		96		71		25				29.7		5.3		
18		7.30		98		73		25				31.3		4.9		
19		7.28		100		72		28				28.9		6.8		
20		n.s		n.s		n.s		n.s				n.s		n.s		
21		7.34		98		74		24				29.7		5.8		
22		7.26		98		72		26				29.7		5.8		
23		7.25		98		71		27				29.7		5.8		
24		7.46		96		71		25				29.7		5.3		
25		7.39		96		75	0	21				29.7		5.3		
26	8.31	7.28	255	98	200	73	55	25			77.9	29.7	13.6	5.8	48	24
27	8.34	7.32	249	98	199	70	50	28			75.4	30.5	14.6	5.8	42	32
28	8.39	8.46	247	92	205	60	42	32			82.6	46.5	9.8	8.3	43	68
29	8.46	7.35	230	98	190	70	40	28			76.2	30.5	9.7	5.3		
30	8.41	7.30	248	98	208	73	40	25			72.1	29.7	17.5	5.8	45	17
AVG		7.42		98		72		26				30.4		5.9		
MAX		8.46		102		76		32				46.5		8.3		
MIN		7.25		92		60		21				28.1		4.9		

n.s. = no sample collected/tested

Bacteriological & Physical Parameters WSSN 2310 Apr-14

DATE	Total Coliform Plant Tap							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	B&P	C.F.E.	Dort	3MG Well	C.S. #2	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					10.1				
2	1/0		2/0	2/0	2/0	2/0					10.1				
3	1/0		2/0	2/0	2/0	2/0					11.7				
4	1/0		2/0	2/0	2/0	2/0					11.7				
5	1/0		2/0	2/0	2/0	2/0					10.9				
6	1/0		2/0	2/0	2/0	2/0					10.7				
7	0/0		0/0	0/0	0/0	2/0					11.3				
8	1/0		2/0	2/0	2/0	2/0					9.9				
9	1/0		2/0	2/0	2/0	2/0					10.2				
10	1/0		2/0	2/0	2/0	2/0			< 2		8.8				
11	1/0		2/0	2/0	2/0	2/0					9.1				
12	1/0		2/0	2/0	2/0	2/0					10.1				
13	1/0		2/0	2/0	2/0	2/0					9.8				
14	1/0		2/0	2/0	2/0	2/0					9.9				
15	1/0		2/0	2/0	2/0	2/0					8.9				
16	1/0		2/0	2/0	2/0	2/0					10.6				
17	1/0		2/0	0/0	2/0	2/0					9.4				
18	1/0		1/0	0/0	1/0	2/0					9.2				
19	1/0		2/0	0/0	2/0	2/0					8.3				
20	0/0		0/0	0/0	0/0	0/0					n.s				
21	1/0		2/0	0/0	2/0	2/0					8.1				
22	1/0		2/0	0/0	2/0	2/0					7.7				
23	1/0		2/0	0/0	2/0	2/0					9.3				
24	1/0		2/0	2/0	2/0	2/0					8.7				
25	1/0	10/0	0/0	1/0	n/a	1/0			< 2		8.7				
26	1/0	12/0	0/0	1/0	n/a	1/0		> 1476	< 2		9.0				
27	1/0	12/0	0/0	1/0	n/a	1/0		142	< 2		8.8				
28	1/0	12/0	0/0	1/0	n/a	1/0		532	< 2		7.9				
29	1/0	4/0	0/0	1/0	n/a	1/0			< 2		8.5				
30	1/0	6/0	0/0	1/0	n/a	1/0		1246	< 2		10.3				
											9.6				
C.F.E. = Combined Filter Effluent											11.7				
											7.7				

n.s. = no sample collected/tested

FLINT
WATER PLANT & FACILITIES

Distribution System Monitoring WSSN 2310 Apr-14

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									0.9	1.0	0.9	0.9	4
2	1.0	0.8	0.9	0.8	0.8	0.9	0.9	1.1	0.9	1.1	0.9	1.0	12
3									0.9	1.1	1.0	1.1	4
4									0.9	1.0	1.1	1.1	4
5											1.1	1.1	2
6											0.9	1.0	2
7													0
8									0.8	1.0	1.0	0.9	4
9	0.9	0.9	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.9	1.0	0.9	12
10	1.2	1.1	1.1	0.9	0.9	0.5	0.8	1.0	0.8	1.0	1.0	0.9	12
11									0.8	0.9	1.2	1.1	4
12											0.8	0.9	2
13											1.0	1.0	2
14									0.8	0.9	1.0	1.0	4
15											1.0	1.1	2
16	1.1	0.9	1.0	0.9	1.0	1.0	1.1	1.0	0.8	0.9	1.0	0.9	12
17											1.0	1.1	2
18											1.0		1
19											1.0	0.9	2
20													0
21											1.0	1.0	2
22											1.1	1.0	2
23									0.8		1.0	1.0	3
24	1.0	0.8	1.0	0.8	0.8	0.9	0.8	1.0			1.0	1.0	10
25													0
26													0
27													0
28													0
29	1.0	0.8	1.0	0.7	0.8	0.8	1.1	0.8	0.7	0.9			10
30													0

Monthly Cl_2 Avg.	**0.939**
Quarterly Cl_2 Avg.	**0.873**
Yearly Cl_2 Avg.	**0.756**
Total Samples	**114**

FLINT
WATER PLANT & FACILITIES

Distribution System Monitoring WSSN 2310 Apr-14

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1									1.1	1.3	1.0	1.1	4
2	1.2	1.0	1.1	1.0	1.0	1.1	1.1	1.2	1.1	1.3	1.2	1.2	12
3									1.1	1.3	1.2	1.3	4
4									1.0	1.2	1.3	1.2	4
5											1.3	1.2	2
6											1.1	1.1	2
7													0
8									1.0	1.2	1.1	1.1	4
9	1.1	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.1	12
10	1.3	1.2	1.3	1.0	1.2	0.8	1.0	1.2	1.0	1.2	1.2	1.0	12
11									1.0	1.1	1.3	1.3	4
12											1.0	1.1	2
13											1.1	1.1	2
14									1.0	1.1	1.3	1.1	4
15											1.2	1.2	2
16	1.3	1.1	1.1	1.0	1.1	1.1	1.2	1.1	1.0	1.1	1.2	1.1	12
17											1.1	1.2	2
18											1.2		1
19											1.2	1.1	2
20													0
21											1.2	1.2	2
22											1.2	1.1	2
23									1.0		1.1	1.1	3
24	1.2	1.0	1.1	1.0	1.0	1.1	1.0	1.1			1.1	1.1	10
25													0
26													0
27													0
28													0
29	1.2	1.0	1.2	0.9	0.9	0.9	1.3	0.9	0.8	1.0			10
30													0

Monthly Cl_2 Avg.	**1.11**
Quarterly Cl_2 Avg.	**1.042**
Yearly Cl_2 Avg.	**0.919**
Total Samples	**114**

FLINT
WATER PLANT & FACILITIES

ROUTINE POSITIVE DISTRIBUTION SAMPLES Apr-14

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				114			
Total number of routine distribution samples required:				100			

003521

D-5a 1/86
Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

For Month of March 2014

Flint Water Plant — NAME OF WATER SYSTEM
2310 — WSSN
Genesee — COUNTY

Michael Glasgow — CERTIFIED OPERATOR
F-1R S-3 — CLASSIFICATION

Michael Glasgow — SIGNATURE OF APPROPRIATE OFFICIAL

DEQ
RESOURCE MANAGEMENT DIVISION
APR 14 2014
LANSING DISTRICT

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

Coagulation Parameters **WSSN 2310** **Mar-14**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	34.37	10.40	23.97								3	0.26	0.31
2	33.65	10.55	23.10								3	0.23	0.46
3	33.76	11.75	22.01								3	0.10	0.10
4	35.78	11.62	24.16								3	0.17	0.19
5	35.08	10.62	24.46								3	0.18	0.19
6	33.39	9.26	24.13								3	0.17	0.22
7	33.81	9.37	24.44								3	0.17	0.24
8	33.05	8.99	24.06								3	0.19	0.23
9	29.24	8.67	20.58								3	0.10	0.11
10	31.58	9.33	22.26								3	0.10	0.13
11	32.52	9.50	23.03								3	0.09	0.10
12	30.94	8.58	22.36								3	0.07	0.08
13	32.34	9.14	23.20								3	0.09	0.09
14	32.60	9.43	23.17								3	0.10	0.11
15	34.03	9.95	24.08								3	0.09	0.10
16	32.20	9.92	22.28								3	0.09	0.10
17	32.25	9.26	22.99								3	0.08	0.09
18	32.76	9.32	23.44								3	0.08	0.10
19	31.34	8.96	22.38								3	0.09	0.09
20	30.69	8.64	22.05								3	0.08	0.08
21	30.47	8.43	22.04								3	0.07	0.07
22	30.55	8.99	21.57								3	0.07	0.08
23	30.60	8.96	21.64								3	0.08	0.09
24	31.21	9.73	21.48								3	0.08	0.08
25	29.90	8.75	21.14								3	0.08	0.09
26	31.07	8.75	22.32								3	0.09	0.11
27	29.48	8.46	21.03								3	0.08	0.08
28	28.28	5.65	22.64								3	0.07	0.08
29	27.65	7.54	20.12								3	0.07	0.08
30	27.04	7.33	19.71								3	0.08	0.10
31	28.55	7.89	20.66								3	0.08	0.09
AVG	31.62	9.15	22.47								3	0.11	0.13
MAX	35.78	11.75	24.46								3	0.26	0.46
MIN	27.04	5.65	19.71								3	0.07	0.07
Total	980.17	283.69	696.48										

Flouridation & Chlorination **WSSN 2310** **Mar-14**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.48					0.7	1.2	0.9	0.9			0.9	
2			0.51					0.8	1.0	0.9	0.8			0.9	
3			0.49					0.8	1.0	0.9	0.8			1.0	
4			0.51					0.9	1.0	1.0	0.9			1.0	
5			0.52					0.9	1.0	0.9	0.9			0.8	
6			0.53					0.7	1.0	1.0	0.9			1.0	
7			0.52					0.9	1.0	0.9	0.9			1.0	
8			0.52					0.9	1.1	1.0	1.0			1.1	
9			0.49					0.7	1.0	0.9	0.8			0.8	
10			0.51					0.8	0.9	0.9	0.9			1.0	
11			0.52					0.9	1.0	0.9	0.8			1.0	
12			0.51					0.9	1.0	1.0	0.9			0.9	
13			0.49					0.8	1.2	0.9	0.8			0.9	
14			0.48					0.9	1.0	1.0	0.9			1.0	
15			0.43					0.9	1.0	0.9	0.8			1.0	
16			0.48					0.8	1.1	0.9	0.8			1.1	
17			0.53					0.9	1.0	0.9	0.9			0.9	
18			0.54					0.8	1.1	1.0	0.9			0.9	
19			0.54					0.9	1.2	1.0	0.9			1.0	
20			0.52					0.8	1.0	0.9	0.9			1.0	
21			0.52					1.0	1.2	1.0	0.9			1.1	
22			0.54					0.8	1.1	1.0	1.0			1.0	
23			0.58					0.8	1.0	0.9	0.9			1.0	
24			0.50					0.9	1.1	1.1	1.0			1.0	
25			0.53					0.9	1.1	1.0	1.0			1.1	
26			0.53					0.9	1.2	0.9	0.9			0.9	
27			0.54					0.9	1.1	1.0	1.1			1.1	
28			0.54					1.0	1.2	1.0	0.9			1.0	
29			0.61					0.9	1.0	0.8	0.9			1.0	
30			0.58					0.8	1.2	0.9	0.9			1.0	
31			0.55					0.8	1.0	0.9	0.9			1.0	
AVG			0.52					0.9	1.1	0.9	0.9			1.0	
MAX			0.61					1.0	1.2	1.1	1.1			1.1	
MIN			0.43					0.7	0.9	0.8	0.8			0.8	

n.s. = no sample collected/tested

Chemical Analyses **WSSN 2310** **Mar-14**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.35		98		71		27				29.7		5.8		
2		7.36		98		65		33				28.9		6.3		
3		7.36		98		71		27				29.7		5.8		
4		7.37		98		73		25				28.9		6.3		
5		7.56		100		75		25				29.7		6.3		
6		7.41		98		71		27				29.7		5.8		
7		7.36		98		75		23				30.5		5.3		
8		7.49		98		70		28				28.1		6.8		
9		7.32		98		64		34				29.7		5.8		
10		7.36		96		74		22				31.3		4.4		
11		7.45		98		72		26				29.7		5.8		
12		7.39		98		72		26				29.7		5.8		
13		7.45		98		72		26				29.7		5.8		
14		7.34		98		74		24				30.9		5.1		
15		7.40		98		69		29				29.7		5.8		
16		7.33		98		65		33				29.7		5.8		
17		7.40		98		65		33				29.7		5.8		
18		7.30		98		74		24				29.7		5.8		
19		7.41		98		75		23				29.7		5.8		
20		7.44		98		70		28				29.7		5.8		
21		7.38		98		74		24				29.7		5.8		
22		7.42		98		72		26				28.1		6.8		
23		7.31		98		72		26				29.7		5.8		
24		7.41		98		75		23				32.1		3.6		
25		7.44		98		74		24				31.3		4.9		
26		7.45		98		73		25				28.9		6.3		
27		7.41		102		77		25				30.5		6.3		
28		7.47		102		77		25				31.3		5.8		
29		7.33		98		74		24				29.7		5.8		
30		7.22		98		70		28				29.7		5.8		
31		7.35		100		74		26				29.7		6.3		
AVG		7.39		98		72		26				29.8		5.8		
MAX		7.56		102		77		34				32.1		6.8		
MIN		7.22		96		64		22				28.1		3.6		

n.s. = no sample collected/tested

Bacteriological & Physical Parameters **WSSN 2310** **Mar-14**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					11.4				
2	1/0		2/0	2/0	2/0	2/0					11.8				
3	1/0		2/0	2/0	2/0	2/0					12.1				
4	1/0		2/0	2/0	2/0	2/0					11.1				
5	1/0		2/0	2/0	2/0	2/0			< 2		13.3				
6	1/0		2/0	2/0	2/0	2/0					11.1				
7	1/0		2/0	2/0	2/0	2/0					11.4				
8	1/0		2/0	2/0	2/0	2/0					10.7				
9	1/0		2/0	2/0	2/0	2/0					13.1				
10	1/0		2/0	2/0	2/0	2/0					10.5				
11	1/0		2/0	2/0	2/0	2/0					11.7				
12	1/0		2/0	2/0	2/0	2/0					11.6				
13	1/0		2/0	2/0	2/0	2/0					12.2				
14	1/0		2/0	2/0	2/0	2/0					11.7				
15	1/0		2/0	2/0	2/0	2/0					11.9				
16	1/0		2/0	2/0	2/0	2/0					11.3				
17	1/0		2/0	2/0	2/0	2/0					11.1				
18	1/0		2/0	2/0	2/0	2/0					10.5				
19	1/0		2/0	2/0	2/0	2/0					10.0				
20	1/0		2/0	2/0	2/0	2/0					10.6				
21	1/0		2/0	2/0	2/0	2/0					13.1				
22	1/0		2/0	2/0	2/0	2/0					11.7				
23	1/0		2/0	2/0	2/0	2/0					12.1				
24	1/0		2/0	2/0	2/0	2/0					11.7				
25	1/0		2/0	2/0	2/0	2/0					10.6				
26	1/0		2/0	2/0	2/0	2/0					10.8				
27	1/0		2/0	2/0	2/0	2/0					11.1				
28	1/0		2/0	2/0	2/0	2/0					12.7				
29	1/0		2/0	2/0	2/0	2/0					12.9				
30	1/0		2/0	2/0	2/0	2/0					12.6				
31	1/0		2/0	2/0	2/0	2/0					10.6				
											11.6				
											13.3				
											10.0				

n.s. = no sample collected/tested

Distribution System Monitoring **WSSN 2310** **Mar-14**

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.3	1.0	2
2											1.0	1.0	2
3											1.0	0.9	2
4									0.8	0.9	1.0	1.0	4
5	1.0	0.9	0.9	0.8	0.8	1.0	0.9	1.0	0.7	0.8	1.1	0.9	12
6	1.2	1.1	1.0	1.0	0.9	0.8	1.1	0.9	0.8	0.8	1.0	1.0	12
7										0.8	1.1	0.9	3
8											1.1	1.0	2
9											0.9	1.0	2
10									0.9	0.9	0.9	0.9	4
11									0.8	0.9	1.0	1.0	4
12	1.0	0.8	1.0	0.8	0.8	cl	n/a	0.8	0.7	0.8	1.1	0.9	10
13	1.2	1.0	1.1	1.0	1.0	0.7	1.0	0.9	0.6	0.8	1.1	1.2	12
14									0.7	0.8	1.1	0.9	4
15											0.9	1.1	2
16											1.0	1.1	2
17											1.0	1.0	2
18									1.0	0.9	1.0	1.1	4
19	1.0	0.9	0.8	0.8	0.9	1.0	0.8	0.9	0.7	0.9	1.2	1.1	12
20									0.8	0.9	1.0	1.0	4
21									0.8	0.8	1.2	1.2	4
22											1.0	1.1	2
23											1.0	1.0	2
24									0.9	1.0	1.1	1.1	4
25									0.9	1.0	1.1	1.1	4
26	1.0	0.9	0.9	0.8	0.9	1.0	0.9	1.0	0.7	0.9	1.1	1.2	12
27	1.3	0.7	1.0	1.1	1.0	0.7	1.1	1.1	0.8	1.0	1.1	1.0	12
28									0.7	1.0	1.2	1.1	4
29											1.0	1.0	2
30											1.2	1.1	2
31									1.2	1.1	1.0	1.0	4

Monthly Cl_2 Avg.	**0.961**
Quarterly Cl_2 Avg.	**0.879**
Yearly Cl_2 Avg.	**0.758**
Total Samples	**153**

Distribution System Monitoring WSSN 2310 Mar-14

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.5	1.1	2
2											1.1	1.1	2
3											1.1	1.1	2
4									0.9	1.1	1.2	1.2	4
5	1.3	1.1	1.1	1.0	1.0	1.1	1.0	1.2	0.9	1.0	1.3	1.0	12
6	1.4	1.2	1.2	1.2	1.1	0.9	1.3	1.1	1.0	1.1	1.2	1.2	12
7										1.0	1.3	1.1	3
8											1.4	1.2	2
9											1.1	1.1	2
10									1.0	1.2	1.1	1.0	4
11									1.0	1.1	1.1	1.1	4
12	1.2	1.0	1.1	1.0	1.0	cl	n/a	1.0	0.9	1.0	1.3	1.1	10
13	1.3	1.2	1.3	1.0	1.2	0.8	1.2	1.2	0.8	1.0	1.2	1.4	12
14									0.9	0.9	1.3	1.1	4
15											1.0	1.3	2
16											1.1	1.2	2
17											1.1	1.1	2
18									1.2	1.1	1.2	1.2	4
19	1.2	1.1	1.0	1.0	1.1	1.3	1.0	1.1	0.9	1.1	1.3	1.2	12
20									0.9	1.1	1.1	1.2	4
21									1.0	1.1	1.3	1.4	4
22											1.4	1.4	2
23											1.2	1.2	2
24									1.0	1.2	1.3	1.3	4
25									1.0	1.2	1.3	1.2	4
26	1.2	1.0	1.1	1.0	1.1	1.2	1.1	1.1	1.0	1.1	1.3	1.4	12
27	1.4	0.8	1.2	1.3	1.2	0.8	1.3	1.2	1.0	1.2	1.3	1.2	12
28									0.9	1.2	1.3	1.3	4
29											1.1	1.2	2
30											1.3	1.3	2
31									1.3	1.3	1.1	1.1	4

Monthly Cl_2 Avg.	**1.14**
Quarterly Cl_2 Avg.	**1.050**
Yearly Cl_2 Avg.	**0.922**
Total Samples	**153**

ROUTINE POSITIVE DISTRIBUTION SAMPLES Mar-14

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				153			
Total number of routine distribution samples required:				100			

D-5a 4/88
Authority: Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

For Month of February 2014

Flint Water Plant — 2310 — Genesee
NAME OF WATER SYSTEM — WSSN — COUNTY

Michael Glasgow — F-1R S-3
CERTIFIED OPERATOR — CLASSIFICATION

Michael Glasgow
SIGNATURE OF APPROPRIATE OFFICIAL

DEQ
RESOURCE MANAGEMENT DIVISION

MAR 13 2014

LANSING DISTRICT

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

MP

FLINT
WATER PLANT & FACILITIES

Coagulation Parameters **WSSN 2310** **Feb-14**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	31.70	12.74	18.96								3	0.08	0.09
2	31.73	11.33	20.40								3	0.10	0.10
3	31.70	10.81	20.89								3	0.14	0.14
4	30.57	10.58	19.99								3	0.09	0.10
5	29.73	10.72	19.01								3	0.12	0.14
6	29.84	10.32	19.52								3	0.11	0.12
7	28.87	10.09	18.78								3	0.12	0.14
8	29.80	10.01	19.78								3	0.08	0.09
9	30.37	10.77	19.60								3	0.09	0.11
10	30.63	11.20	19.43								3	0.09	0.09
11	29.63	11.03	18.60								3	0.11	0.12
12	31.55	11.04	20.50								3	0.12	0.14
13	31.43	11.34	20.10								3	0.10	0.11
14	30.83	11.43	19.40								3	0.10	0.11
15	31.02	10.77	20.25								3	0.10	0.14
16	30.77	10.54	20.23								3	0.09	0.10
17	32.58	10.70	21.89								3	0.09	0.10
18	31.61	10.69	20.93								3	0.09	0.10
19	31.44	10.66	20.78								3	0.07	0.08
20	32.06	10.88	21.18								3	0.10	0.11
21	32.12	10.62	21.50								3	0.09	0.10
22	32.91	11.91	21.00								3	0.09	0.10
23	32.88	11.47	21.40								3	0.13	0.18
24	32.66	11.33	21.33								3	0.08	0.09
25	32.23	10.86	21.37								3	0.10	0.11
26	32.09	10.78	21.31								3	0.09	0.10
27	32.47	10.33	22.14								3	0.12	0.14
28	33.48	10.37	23.11								3	0.13	0.15
AVG	31.38	10.90	20.48								3	0.10	0.11
MAX	33.48	12.74	23.11								3	0.14	0.18
MIN	28.87	10.01	18.60								3	0.07	0.08
Total	878.69	305.33	573.37										

Flouridation & Chlorination **WSSN 2310** **Feb-14**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.50					1.1	1.2	0.8	0.8			1.0	
2			0.49					0.8	1.0	0.9	0.9			0.9	
3			0.51					0.9	1.0	1.0	0.9			1.0	
4			0.52					0.9	1.0	1.0	0.9			1.0	
5			0.52					1.0	1.1	1.0	1.0			1.1	
6			0.50					0.9	1.0	0.9	0.9			0.9	
7			0.54					0.8	1.0	1.0	0.9			1.0	
8			0.54					1.0	1.1	1.0	1.0			1.1	
9			0.57					0.8	1.0	1.0	0.9			0.9	
10			0.59					1.1	1.1	1.0	0.9			0.9	
11			0.58					0.9	1.1	1.1	1.0			1.1	
12			0.56					0.9	1.2	1.1	1.0			1.0	
13			0.54					0.9	1.2	1.0	1.0			0.9	
14			0.57					1.0	1.2	1.0	1.0			1.0	
15			0.56					0.9	1.1	1.0	1.0			1.1	
16			0.54					0.8	1.0	1.0	0.9			1.0	
17			0.48					1.1	1.2	1.0	0.9			0.9	
18			0.51					1.0	1.0	1.0	1.0			0.9	
19			0.51					1.1	1.3	1.1	1.0			1.1	
20			0.51					0.9	1.1	1.0	1.0			1.0	
21			0.51					0.9	1.1	1.1	1.0			1.0	
22			0.48					0.8	1.0	0.9	0.9			1.0	
23			0.47					0.8	1.1	1.0	0.9			0.9	
24			0.52					0.8	0.9	0.9	0.8			0.9	
25			0.49					0.7	1.0	0.9	0.8			1.0	
26			0.50					0.9	1.1	1.0	0.9			1.0	
27			0.51					0.9	1.1	1.0	0.9			1.0	
28			0.51					0.9	1.1	1.0	0.9			1.0	
AVG			0.52					0.9	1.1	1.0	0.9			1.0	
MAX			0.59					1.1	1.3	1.1	1.0			1.1	
MIN			0.47					0.7	0.9	0.8	0.8			0.9	

FLINT
WATER PLANT & FACILITIES

Chemical Analyses **WSSN 2310** **Feb-14**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.30		98		72		26				28.9		6.3		
2		7.26		98		69		29				28.1		6.8		
3		7.38		98		69		29				28.9		6.3		
4		7.36		96		74		22				32.9		3.4		
5		7.24		98		70		28				29.7		5.8		
6		7.43		96		70		26				28.9		5.8		
7		7.37		98		72		26				29.7		5.8		
8		7.44		96		74		22				29.7		5.3		
9		7.40		96		68		28				28.9		5.8		
10		7.40		98		71		27				29.7		5.8		
11		7.43		98		74		24				31.3		4.9		
12		7.32		96		74		22				31.3		4.4		
13		7.30		98		69		29				29.7		5.8		
14		7.30		96		74		22				30.5		4.9		
15		7.35		96		73		23				30.5		4.9		
16		7.25		98		71		27				28.9		6.3		
17		7.34		96		70		26				29.7		5.3		
18		7.24		98		70		28				29.7		5.8		
19		7.40		98		69		29				30.5		5.3		
20		7.34		98		70		28				30.5		5.3		
21		7.39		98		74		24				30.5		5.3		
22		7.29		98		71		27				28.9		6.3		
23		7.43		98		69		29				29.7		5.8		
24		7.32		96		69		27				30.5		4.9		
25		7.39		96		71		25				29.7		5.3		
26		7.39		98		73		25				30.5		5.3		
27		7.35		96		73		23				31.3		4.4		
28		7.37		98		72		26				30.5		5.3		
AVG		7.35		97		71		26				30.0		5.5		
MAX		7.44		98		74		29				32.9		6.8		
MIN		7.24		96		68		22				28.1		3.4		

FLINT WATER PLANT & FACILITIES

Bacteriological & Physical Parameters **WSSN 2310** **Feb-14**

DATE	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap														
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					12.9				
2	1/0		2/0	2/0	2/0	2/0					11.2				
3	1/0		2/0	2/0	2/0	2/0					11.3				
4	1/0		2/0	2/0	2/0	2/0					12.7				
5	1/0		2/0	2/0	2/0	2/0					11.8				
6	1/0		2/0	2/0	2/0	2/0					13.0				
7	1/0		2/0	2/0	2/0	2/0					13.2				
8	1/0		2/0	2/0	2/0	2/0					12.5				
9	1/0		2/0	2/0	2/0	2/0					12.8				
10	1/0		2/0	2/0	2/0	2/0					13.7				
11	1/0		2/0	2/0	2/0	2/0					13.6				
12	1/0		2/0	2/0	2/0	2/0			< 2		13.1				
13	1/0		2/0	2/0	2/0	2/0					12.7				
14	1/0		2/0	2/0	2/0	2/0					13.5				
15	1/0		2/0	2/0	2/0	2/0					13.7				
16	1/0		2/0	2/0	2/0	2/0					14.8				
17	1/0		2/0	2/0	2/0	2/0					11.2				
18	1/0		2/0	2/0	2/0	2/0					11.7				
19	1/0		2/0	2/0	2/0	2/0					11.7				
20	1/0		2/0	2/0	2/0	2/0					12.3				
21	1/0		2/0	2/0	2/0	2/0					12.3				
22	1/0		2/0	2/0	2/0	2/0					11.3				
23	1/0		2/0	2/0	2/0	2/0					9.3				
24	1/0		2/0	2/0	2/0	2/0					11.9				
25	1/0		2/0	2/0	2/0	2/0					11.3				
26	1/0		2/0	2/0	2/0	2/0					12.7				
27	1/0		2/0	2/0	2/0	2/0					12.1				
28	1/0		2/0	2/0	2/0	2/0					11.0				
											12.3				
											14.8				
											9.3				

FLINT WATER PLANT & FACILITIES

Distribution System Monitoring **WSSN 2310** **Feb-14**

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.1	1.2	2
2											0.9	1.1	2
3									0.5	0.7	1.1	0.9	4
4									0.7	0.8	1.0	1.0	4
5									0.5	0.6	1.1	1.1	4
6	1.2	1.1	0.9	1.0	0.9	0.6	1.1	1.1	0.5	0.6	1.1	0.9	12
7									0.5	0.7	1.0	1.0	4
8											1.1	1.1	2
9											0.9	1.0	2
10									0.6	0.6	1.2	0.9	4
11									0.6	0.8	1.1	1.1	4
12	1.2	1.1	1.0	1.0	1.0	0.9	1.0	1.1	0.6	0.7	1.2	1.1	12
13	1.2	1.1	1.0	1.1	1.1	0.8	0.8	1.0	0.5	0.8	1.2	1.1	12
14									0.6	0.8	1.2	1.1	4
15											1.1	1.1	2
16											1.0	1.0	2
17									0.6	0.9	1.2	1.1	4
18									0.6	0.8	1.1	0.9	4
19	0.6	0.9	0.9	0.6	0.9	0.8	0.7	1.0	0.5	0.8	1.3	1.3	12
20	1.2	1.1	1.0	1.1	0.9	0.8	0.9	1.0	0.6	0.9	1.1	1.0	12
21									0.6	0.9	1.1	1.1	4
22											1.0	1.0	2
23											1.0	1.1	2
24											0.9	0.9	2
25									0.7	0.9	0.9	1.0	4
26									0.6	0.8	1.1	1.1	4
27	1.2	1.0	0.9	1.1	0.8	0.6	1.1	1.0	0.6	0.8	1.1	1.0	12
28									0.5	0.9	1.1	1.0	4

Monthly Cl_2 Avg.	**0.926**
Quarterly Cl_2 Avg.	**0.798**
Yearly Cl_2 Avg.	**0.749**
Total Samples	**142**

Distribution System Monitoring WSSN 2310 Feb-14

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.3	1.3	2
2											1.1	1.2	2
3									0.7	0.9	1.3	1.1	4
4									0.8	0.9	1.3	1.2	4
5									0.7	0.9	1.3	1.3	4
6	1.4	1.3	1.1	1.1	1.1	0.7	1.3	1.3	0.7	0.8	1.3	1.1	12
7									0.7	0.9	1.3	1.2	4
8											1.5	1.4	2
9											1.0	1.3	2
10									0.7	0.8	1.4	1.2	4
11									0.7	1.0	1.4	1.3	4
12	1.4	1.2	1.2	1.2	1.1	1.0	1.2	1.2	0.8	1.0	1.4	1.2	12
13	1.4	1.2	1.2	1.3	1.3	0.9	1.0	1.2	0.7	1.0	1.4	1.3	12
14									0.7	1.0	1.4	1.3	4
15											1.3	1.3	2
16											1.1	1.1	2
17									0.8	1.1	1.3	1.4	4
18									0.8	1.1	1.3	1.1	4
19	0.7	1.1	1.1	0.8	1.1	1.0	0.9	1.2	0.7	1.0	1.4	1.5	12
20	1.3	1.3	1.2	1.2	1.1	0.9	1.2	1.2	0.8	1.1	1.2	1.1	12
21									0.8	1.1	1.3	1.3	4
22											1.1	1.1	2
23											1.1	1.3	2
24											1.1	1.1	2
25									0.9	1.1	1.1	1.1	4
26									0.8	1.0	1.3	1.2	4
27	1.4	1.1	1.1	1.2	1.0	0.7	1.3	1.2	0.8	1.0	1.3	1.2	12
28									0.8	1.1	1.3	1.1	4

Monthly Cl_2 Avg.	**1.11**
Quarterly Cl_2 Avg.	**0.961**
Yearly Cl_2 Avg.	**0.915**
Total Samples	**142**

FLINT
WATER PLANT & FACILITIES

ROUTINE POSITIVE DISTRIBUTION SAMPLES Feb-14

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				142			
Total number of routine distribution samples required:				100			

003537

D-5a'1/86
Authority; Act 399, P.A. 1976

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

2310

MONTHLY OPERATION REPORT
OF
WATER TREATMENT PLANT

For Month of January 2014

Flint Water Plant — 2310 — Genesee
NAME OF WATER SYSTEM — WSSN — COUNTY

Michael Glasgow — F-1R S-3
CERTIFIED OPERATOR — CLASSIFICATION

Michael Glasgow
SIGNATURE OF APPROPRIATE OFFICIAL

TREATMENT RATE AND FILTER DATA

1. Treatment Rate, Maximum____ Million Gallons Per Day
2. Treatment Rate, Approved Rated Plant Capacity____Million Gallons per Day
3. Average Filter Run___ Hours, Average Head Loss _____Feet
4. Average Filtration Rate _____ Gallons per Square Ft. per Minute
5. Maximum Filtration Rate _____ Gallons per Square Ft. per Minute
6. Average Wash Water Use _____ percent of Treated Water

CHEMICAL DATA

7. Chlorine on hand _____ lbs.: Estimated supply _____ days
8. Lime (CaO) on hand _____ lbs.: Estimated supply _____ days
9. Alum (Al3+) on hand _____ lbs.: Estimated supply _____ days
10. Cost of All Chemicals per Million Gallons
11. Total Power Cost per Million Gallons

Remarks:

Submit to: Mike Prysby, P.E.
MDEQ-Water Division-Lansing District
P.O. Box 30242
Lansing, MI 48909

Failure to complete this form is a violation of Act 399, P.A. 1976 and is subject to penalties as outlined in the Act.

Coagulation Parameters **WSSN 2310** **Jan-14**

DATE	Total Million Gallons Purchased	Million Gallons to County	Million Gallons to Flint			Ferric Chloride as Fe 3+ mg/l	Turbidity, NTU units						
							Raw				Plant Tap		
							# of Samples	Avg.	Max		# of Samples	Avg.	Max
	1	1A	1B	4	5	6	7	8	9	10	11	12	13
1	23.19	10.32	12.87								3	0.07	0.08
2	22.83	9.72	13.11								3	0.07	0.09
3	22.70	9.74	12.96								3	0.07	0.07
4	23.31	9.84	13.47								3	0.08	0.09
5	23.72	9.69	14.04								3	0.10	0.11
6	24.40	12.68	11.72								3	0.08	0.09
7	26.88	11.74	15.13								3	0.07	0.07
8	26.38	12.22	14.16								3	0.09	0.10
9	27.12	13.03	14.09								3	0.09	0.09
10	27.63	11.53	16.10								3	0.09	0.09
11	25.34	10.28	15.06								3	0.08	0.09
12	25.96	9.91	16.05								3	0.07	0.08
13	26.93	10.63	16.30								3	0.07	0.07
14	27.31	11.17	16.14								3	0.06	0.07
15	27.76	11.98	15.78								3	0.07	0.08
16	28.29	11.76	16.53								3	0.08	0.09
17	26.25	10.28	15.97								3	0.07	0.08
18	24.40	9.21	15.19								3	0.06	0.08
19	23.08	8.82	14.26								3	0.09	0.14
20	23.13	8.31	14.82								3	0.07	0.09
21	25.85	10.30	15.55								3	0.06	0.08
22	27.40	11.75	15.65								3	0.07	0.07
23	26.91	10.96	15.95								3	0.07	0.08
24	27.04	9.72	17.31								3	0.10	0.16
25	25.43	9.71	15.72								3	0.09	0.12
26	27.79	12.10	15.69								3	0.06	0.08
27	27.57	10.97	16.61								3	0.08	0.08
28	27.77	11.33	16.44								3	0.11	0.14
29	28.62	11.18	17.44								3	0.15	0.19
30	30.98	12.39	18.58								3	0.16	0.18
31	30.76	12.93	17.83								3	0.08	0.09
AVG	26.22	10.84	15.37								3	0.08	0.10
MAX	30.98	13.03	18.58								3	0.16	0.19
MIN	22.70	8.31	11.72								3	0.06	0.07
Total	812.70	336.17	476.53										

FLINT WATER PLANT & FACILITIES

Flouridation & Chlorination **WSSN 2310** **Jan-14**

DATE	Fluoride Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCl-	Post Chlorine mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Raw	Tap	Dist				Free	Free	Free	Free			Free	
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1			0.51					0.8	0.9	0.8	0.8			0.9	
2			0.47					0.7	0.9	0.8	0.8			0.9	
3			0.48					0.8	0.9	0.8	0.8			0.9	
4			0.51					0.6	1.0	0.8	0.8			0.9	
5			0.48					0.7	1.0	0.9	0.9			0.8	
6			0.49					n.s.	1.0	0.8	0.8			1.1	
7			0.50					0.9	1.0	0.8	0.8			0.9	
8			0.52					0.9	1.0	0.8	0.8			0.9	
9			0.45					0.7	1.0	0.8	0.8			0.8	
10			0.51					1.0	1.1	0.8	0.8			0.9	
11			0.48					0.8	0.9	0.9	0.8			1.0	
12			0.49					0.7	0.9	0.8	0.8			0.9	
13			0.46					0.9	1.0	0.9	0.8			0.9	
14			0.47					0.80	1.00	0.90	0.90			0.9	
15			0.47					0.9	1.0	0.9	0.9			0.9	
16			0.46					0.7	1.0	0.9	0.9			0.9	
17			0.45					0.9	1.1	0.9	0.9			1.0	
18			0.40					0.8	1.0	0.9	0.9			0.9	
19			0.45					0.5	0.9	0.9	0.9			0.9	
20			0.45					0.8	1.0	0.9	0.8			1.0	
21			0.49					0.8	1.0	0.9	0.8			0.9	
22			0.52					1.0	1.1	0.9	0.9			1.0	
23			0.50					0.9	1.1	0.9	0.9			1.0	
24			0.49					1.0	1.1	0.9	0.9			1.0	
25			0.49					0.9	1.2	1.1	1.0			1.0	
26			0.53					0.8	1.0	0.8	0.8			0.9	
27			0.54					0.8	1.0	0.9	0.9			0.9	
28			0.50					0.7	1.0	1.0	0.9			1.0	
29			0.53					0.9	1.1	0.9	0.9			0.9	
30			0.47					0.9	1.0	0.9	0.9			0.9	
31			0.51					1.0	1.1	0.9	0.8			1.0	
AVG			0.49					0.8	1.0	0.9	0.9			0.9	
MAX			0.54					1.0	1.2	1.1	1.0			1.1	
MIN			0.40					0.5	0.9	0.8	0.8			0.8	

n.s. = no sample collected/tested

Chemical Analyses **WSSN 2310** **Jan-14**

DATE	pH		Total Hard as $CaCO_3$ mg/l		Total Alk as $CaCO_3$ mg/l		NonCarbonate Hardness as $CaCO_3$ mg/l				Calcium Ca ++ mg/l		Magnesium as Mg ++ mg/l		Chloride as Cl - mg/l	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1		7.32		98		62		36				28.9		6.3		
2		7.20		98		73		25				30.5		5.8		
3		7.35		100		73		27				28.9		6.8		
4		7.44		98		70		28				28.9		6.3		
5		7.39		98		70		28				29.7		5.8		
6		7.29		98		62		36				27.3		7.3		
7		7.33		102		65		37				31.3		5.8		
8		7.36		96		71		25				28.9		5.8		
9		7.25		100		68		32				29.7		6.3		
10		7.24		100		71		29				31.3		5.3		
11		7.30		96		66		30				28.9		5.8		
12		7.31		98		67		31				28.9		6.3		
13		7.40		98		69		29				28.1		6.8		
14		7.37		98		65		33				28.9		6.3		
15		7.35		98		68		30				28.9		6.3		
16		7.29		98		68		30				28.1		6.8		
17		7.26		96		69		27				32.1		3.9		
18		7.36		98		71		27				28.9		6.3		
19		7.47		96		63		33				28.9		5.8		
20		7.22		96		67		29				28.1		6.3		
21		7.28		98		67		31				28.9		6.3		
22		7.29		94		72		22				30.5		4.4		
23		7.38		94		72		22				32.1		3.4		
24		7.34		94		70		24				32.1		3.4		
25		7.38		96		71		25				28.9		5.8		
26		7.29		96		69		27				28.1		6.3		
27		7.34		98		68		30				28.1		6.8		
28		7.35		98		68		30				28.9		6.3		
29		7.34		98		68		30				28.1		6.8		
30		7.24		98		69		29				28.1		6.8		
31		7.32		96		73		23				28.9		5.8		
AVG		7.32		97		69		29				29.3		5.9		
MAX		7.47		102		73		37				32.1		7.3		
MIN		7.20		94		62		22				27.3		3.4		

n.s. = no sample collected/tested

Bacteriological & Physical Parameters **WSSN 2310** **Jan-14**

DATE	Total Coliform Plant Tap							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	B&P		Dort	3MG Well	Pump	Lab Tap		Raw	Tap			Raw	Tap	Raw	Tap
	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
1	1/0		2/0	2/0	2/0	2/0					13.1				
2	1/0		2/0	2/0	2/0	2/0					12.4				
3	1/0		2/0	2/0	2/0	2/0					12.5				
4	1/0		2/0	2/0	2/0	2/0					11.7				
5	1/0		2/0	2/0	2/0	2/0					13.2				
6	0/0		2/0	2/0	2/0	2/0					11.7				
7	1/0		2/0	2/0	2/0	2/0					11.3				
8	1/0		2/0	2/0	2/0	2/0					14.2				
9	1/0		2/0	2/0	2/0	2/0					11.3				
10	1/0		2/0	2/0	2/0	2/0					13.3				
11	1/0		2/0	2/0	2/0	2/0					12.7				
12	1/0		2/0	2/0	2/0	2/0					12.7				
13	1/0		2/0	2/0	2/0	2/0					13.4				
14	1/0		2/0	2/0	2/0	2/0					14.2				
15	1/0		2/0	2/0	2/0	2/0					13.6				
16	1/0		2/0	2/0	2/0	2/0			<2		12.4				
17	1/0		2/0	2/0	2/0	2/0					14.0				
18	1/0		2/0	2/0	2/0	2/0					14.6				
19	1/0		2/0	2/0	2/0	2/0					13.5				
20	1/0		2/0	2/0	2/0	2/0					14.0				
21	1/0		2/0	2/0	2/0	2/0					14.3				
22	1/0		2/0	2/0	2/0	2/0					13.1				
23	1/0		2/0	2/0	2/0	2/0					13.4				
24	1/0		2/0	2/0	2/0	2/0					12.5				
25	1/0		2/0	2/0	2/0	2/0					11.3				
26	1/0		2/0	2/0	2/0	2/0					12.5				
27	1/0		2/0	2/0	2/0	2/0					12.9				
28	1/0		2/0	2/0	2/0	2/0					12.4				
29	1/0		2/0	2/0	2/0	2/0					12.7				
30	1/0		2/0	2/0	2/0	2/0					12.5				
31	1/0		2/0	2/0	2/0	2/0					14.3				
											13.0				
											14.6				
											11.3				

n.s. = no sample collected/tested

FLINT WATER PLANT & FACILITIES

Distribution System Monitoring WSSN 2310 Jan-14

DATE	Free Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											0.9	0.9	2
2											0.9	0.9	2
3											0.9	0.9	2
4											1.0	1.0	2
5											1.0	0.9	2
6											1.0	1.0	2
7									0.5	0.6	1.0	0.9	4
8	0.9		0.9	0.5	0.9						1.1	0.9	6
9	1.1	0.8	0.9	0.8	0.8	0.8	0.8	0.9	0.4	0.7	1.0	0.9	12
10									0.4	0.7	1.1	1.0	4
11											0.9	0.9	2
12											0.9	0.9	2
13									0.5	0.7	1.0	0.9	4
14											1.0	0.9	2
15		0.8				0.9	0.9	0.9			1.1	0.9	6
16	1.1	0.8	0.7	0.8	0.7	0.6	0.8	0.9	0.5	0.6	1.0	1.0	12
17									0.4	0.7	1.0	1.1	4
18											1.0	1.0	2
19											0.9	0.9	2
20											0.9	1.0	2
21											1.0	0.9	2
22									0.4	0.6	1.1	1.1	4
23	1.1	0.8	0.8	1.0	0.8	0.8	0.9	0.9	0.5	0.7	1.1	1.1	12
24									0.5	0.6	1.1	1.0	4
25											1.2	1.2	2
26											0.9	1.1	2
27									0.3	0.7	1.1	0.9	4
28											0.9	1.0	2
29	0.9	0.8	1.0	0.6	0.7	0.9	0.9	0.9	0.5	0.6	1.0	1.1	12
30	1.1	0.9	1.0	1.0	0.9	0.8	0.9	1.0	0.4	0.6	1.1	0.9	12
31									0.5	0.6	1.1	1.0	4

Monthly Cl_2 Avg.	**0.860**
Quarterly Cl_2 Avg.	**0.706**
Yearly Cl_2 Avg.	**0.738**
Total Samples	**136**

FLINT WATER PLANT & FACILITIES

Distribution System Monitoring WSSN 2310 Jan-14

DATE	Total Chlorine Residual at Bacteriological Montioring Stations mg/l												
	1	2	3	4	5	6	7	8	CS	WR	STA II AM	STA II PM	Number of Samples
1											1.1	1.1	2
2											1.0	1.0	2
3											1.1	1.1	2
4											1.1	1.1	2
5											1.1	1.0	2
6											1.2	1.2	2
7									0.7	0.7	1.2	1.2	4
8	1.0		1.0	0.7	1.0						1.3	1.1	6
9	1.2	0.9	1.1	1.0	1.0	0.9	1.0	1.1	0.6	0.8	1.2	1.1	12
10									0.5	0.9	1.3	1.2	4
11											1.1	1.1	2
12											1.1	1.1	2
13									0.7	0.9	1.2	1.1	4
14											1.2	1.1	2
15		1.0				1.0	1.0	1.0			1.3	1.1	6
16	1.3	0.9	0.9	0.9	0.9	0.7	1.0	1.1	0.6	0.8	1.2	1.1	12
17									0.5	0.9	1.2	1.3	4
18											1.1	1.2	2
19											1.0	1.1	2
20											1.0	1.1	2
21											1.2	1.1	2
22									0.6	0.8	1.3	1.3	4
23	1.3	1.1	1.1	1.1	1.0	0.9	1.2	1.1	0.7	0.9	1.2	1.2	12
24									0.7	0.8	1.3	1.2	4
25											1.5	1.5	2
26											1.1	1.2	2
27									0.5	0.8	1.2	1.1	4
28											1.0	1.2	2
29	1.0	1.0	1.2	0.7	0.9	1.1	1.0	1.0	0.6	0.8	1.2	1.3	12
30	1.3	1.0	1.2	1.1	1.1	0.9	1.1	1.2	0.6	0.7	1.3	1.2	12
31									0.7	0.8	1.3	1.3	4

Monthly Cl_2 Avg.	**1.03**
Quarterly Cl_2 Avg.	**0.861**
Yearly Cl_2 Avg.	**0.904**
Total Samples	**136**

FLINT
WATER PLANT & FACILITIES

ROUTINE POSITIVE DISTRIBUTION SAMPLES Jan-14

Total number of positive routine samples:				Total Coliform: 0		Fecal Coliform: 0	
Date	Monitoring Station	Total Coliform	Fecal Coliform	Date	Retest of Station, Upstream & Downstream	Total Coliform	Fecal Coliform
Total number of routine distribution samples analyzed:				136			
Total number of routine distribution samples required:				100			

Flint WTP Start-up

On April 25, 2014 the Flint Water Treatment Plant (WTP), for the first time since 1967, began distributing drinking water to city residents with treated water from the Flint River. This accomplishment was made in part by a collaborative effort between the city of Flint, their consultants, and staff from the Office of Drinking Water and Municipal Assistance (ODWMA) and the Office of Waste Management and Radiological Protection (OWMRP) programs. This included rehabilitation of the WTP necessary for full-time operation, addressing problems with the disposal of treatment plant residuals, and oversight of plant operation and compliance monitoring.

ODWMA staff worked diligently with the city and their consultants discussing water plant design parameters and treatment requirements to helps assure an acceptable design. Staff was also aware of the city's concern over the expiration of their water service contract with Detroit and expedited comments/questions pertaining to the Act 399 permit submittals in a timely manner. Major rehabilitation components included upgrading treated water pumping capabilities, improving mid-treatment disinfection, upgrading electrical transformers and switchgear, and adding provisions for stand-by power generation. An Act 399 construction permit was issued on April 9, 2014 authorizing the city to proceed with the necessary improvements.

ODWMA staff also worked with staff from the OWMRP on establishing a path towards correcting un-resolved violations at the Bray Road sludge lagoon. Although, the existing sludge lagoon was the WTP's best alternative for temporary storage of lime sludge, the site historically fell victim to unauthorized disposal of solid waste (concrete debris and street sweepings) which resulted in the issuance of several violation notices from OWMRP. Separation the unauthorized disposal area from the sludge lagoon area, correction of an un-authorized discharge to a local surface water stream, and construction a new decant structure with discharge to the sanitary sewer were necessary to allow the WTP to discharge lime sludge at this location. The effort put forth by staff from both programs resulted in the issuance of a separate Act 399 permit for the specific improvements at the Bray Road sludge lagoon.

Continued oversight of the WTP leading up to the April 25th start-up confirmed adequate operation and compliance with the drinking water standards.

The WTP continues to maintain compliance with the drinking water standards and operating requirements. Both WTP operators and ODWMA staff maintain frequent contact concerning WTP operation and treated water quality. Monthly operation reports that convey important treatment plant operating parameters, including the microbial integrity of the treated water, are reviewed by ODWMA to assure compliance. Additional WTP inspections have been conducted to review and discuss the monthly reports and to observe the treatment process. ODWMA also worked the WTP operators on establishing a new water quality monitoring schedule based upon the change in the source of water supply. The new schedule will assist WTP operators in maintaining compliance with the monitoring requirements established in the Michigan Safe Drinking Water Act.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LF19432

Official Laboratory Report

Report To: MICHAEL GLASGOW
4500 N DORT HWY
FLINT MI 48505

System Name/Owner:	CITY OF FLINT/ WATER PLANT	WSSN/Pool ID:	2310
Collection Address:	4500 N DORT HWY,FLINT	Source:	TYPE I
Collected By:	MICHAEL GLASGOW	Site Code:	RAW
Township/Well#/Section:	//	Collector:	Public Water Supply Operator
County:	Genesee	Date Collected:	05/22/2014 08:30
Sample Point:	SINK	Date Received:	05/22/2014 13:20
Water System:	Treated Public Distribution System	Purpose:	Routine Monitoring

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Total Organic Carbon	10.3	05/22/2014	0.5		SM 5310C	TOC-00-C

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminant Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LF19431

Official Laboratory Report

Report To: MICHAEL GLASGOW
4500 N DORT HWY
FLINT MI 48505

System Name/Owner:	CITY OF FLINT - WATER PLANT	WSSN/Pool ID:	2310
Collection Address:	4500 N DORT HWY,FLINT	Source:	TYPE I
Collected By:	MICHAEL GLASGOW	Site Code:	PS4
Township/Well#/Section:	//	Collector:	Public Water Supply Operator
County:	Genesee	Date Collected:	05/22/2014 08:30
Sample Point:	SINK	Date Received:	05/22/2014 13:20
Water System:	Treated Public Distribution System	Purpose:	Routine Monitoring

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Total Organic Carbon	4.57	05/22/2014	0.5		SM 5310C	TOC-00-C

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

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630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminant Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LF19430

Official Laboratory Report

Report To: MICHAEL GLASGOW
4500 N DORT HWY
FLINT MI 48505

System Name/Owner:	CITY OF FLINT -WATER PLANT	WSSN/Pool ID:	2310
Collection Address:	4500 N DORT HWY,FLINT	Source:	TYPE I
Collected By:	MICHAEL GLASGOW	Site Code:	LAB TAP
Township/Well#/Section:	//	Collector:	Public Water Supply Operator
County:	Genesee	Date Collected:	05/22/2014 08:30
Sample Point:	PLANT LAB TAP	Date Received:	05/22/2014 13:19
Water System:	Treated Public Distribution System	Purpose:	Routine Monitoring

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Antimony	Not detected	05/23/2014	0.0006	0.006	EPA 200.8	7440-36-0
Arsenic	Not detected	05/23/2014	0.002	0.010	EPA 200.8	7440-38-2
Barium	0.03	05/23/2014	0.01	2	EPA 200.8	7440-39-3
Beryllium	Not detected	05/23/2014	0.0004	0.004	EPA 200.8	7440-41-7
Cadmium	Not detected	05/23/2014	0.0003	0.005	EPA 200.8	7440-43-9
Chloride	79	05/22/2014	4		SM 4500-Cl E	7647-14-5
Chromium	Not detected	05/23/2014	0.01	0.1	EPA 200.8	7440-47-3
Cyanide-Available	Not Detected	05/27/2014	0.02	0.2	OIA-1677	57-12-5
Fluoride	0.16	05/22/2014	0.1	4.0	SM 4500 FC	16984-48-8
Hardness as CaCO3	209	05/22/2014	20		SM 2340 C	HARD-00-C
Iron (automated)	Not detected	05/22/2014	0.1		SM 3500 FeB	7439-89-6
Lead	Not detected	05/23/2014	0.001	0.015	EPA 200.8	7439-92-1
Mercury	Not detected	05/23/2014	0.0001	0.002	EPA 200.8	7439-97-6
Nickel	Not detected	05/23/2014	0.01	0.1	EPA 200.8	7440-02-0
Nitrate as N	0.4	05/22/2014	0.4	10	10-107-04-2-B	14797-55-8
Nitrite as N	Not detected	05/22/2014	0.05	1	10-107-04-2-B	14797-65-0
Selenium	Not Detected	05/23/2014	0.001	0.05	EPA 200.8	7782-49-2
Sodium (automated)	15	05/22/2014	5		SM 3500 NaB	7440-23-5
Sulfate	25	05/22/2014	10		SM 4500 SO4E	14808-79-8
Thallium	Not detected	05/23/2014	0.0002	0.002	EPA 200.8	7440-28-0

Carbamates by HPLC

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminant Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

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5185	401 Bishop Ave., E.
5186	405 Bishop Ave., E.
5187	406 Bishop Ave., E.
5188	409 Bishop Ave., E.
5189	410 Bishop Ave., E.
5190	414 Bishop Ave., E.
5191	415 Bishop Ave., E.
5192	418 Bishop Ave., E.
5193	419 Bishop Ave., E.
5194	421 Bishop Ave., E.
5195	501 Bishop Ave., E.
5196	505 Bishop Ave., E.
5197	506 Bishop Ave., E.
5198	509 Bishop Ave., E.
5199	510 Bishop Ave., E.
5200	513 Bishop Ave., E.
5201	514 Bishop Ave., E.
5202	518 Bishop Ave., E.
5203	601 Bishop Ave., E.
5204	602 Bishop Ave., E.
5205	605 Bishop Ave., E.
5206	606 Bishop Ave., E.
5207	610 Bishop Ave., E.
5208	611 Bishop Ave., E.
5209	613 Bishop Ave., E.
5210	614 Bishop Ave., E.
5211	617 Bishop Ave., E.
5212	618 Bishop Ave., E.
5213	623 Bishop Ave., E.
5214	625 Bishop Ave., E.
5215	626 Bishop Ave., E.
5216	629 Bishop Ave., E.
5217	630 Bishop Ave., E.
5218	633 Bishop Ave., E.
5219	634 Bishop Ave., E.
5220	637 Bishop Ave., E.
5221	638 Bishop Ave., E.
5222	641 Bishop Ave., E.
5223	642 Bishop Ave., E.
5224	649 Bishop Ave., E.
5225	650 Bishop Ave., E.
5226	651 Bishop Ave., E.
5227	110 Bishop Ave., W.
5228	111 Bishop Ave., W.
5229	114 Bishop Ave., W.
5230	115 Bishop Ave., W.
5231	121 Bishop Ave., W.
5232	122 Bishop Ave., W.

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5233	125 Bishop Ave., W.
5234	126 Bishop Ave., W.
5235	129 Bishop Ave., W.
5236	201 Bishop Ave., W.
5237	202 Bishop Ave., W.
5238	205 Bishop Ave., W.
5239	206 Bishop Ave., W.
5240	210 Bishop Ave., W.
5241	213 Bishop Ave., W.
5242	214 Bishop Ave., W.
5243	219 Bishop Ave., W.
5244	221 Bishop Ave., W.
5245	222 Bishop Ave., W.
5246	225 Bishop Ave., W.
5247	226 Bishop Ave., W.
5248	229 Bishop Ave., W.
5249	230 Bishop Ave., W.
5250	301 Bishop Ave., W.
5251	302 Bishop Ave., W.
5252	305 Bishop Ave., W.
5253	306 Bishop Ave., W.
5254	309 Bishop Ave., W.
5255	310 Bishop Ave., W.
5256	313 Bishop Ave., W.
5257	314 Bishop Ave., W.
5258	317 Bishop Ave., W.
5259	324 Bishop Ave., W.
5260	325 Bishop Ave., W.
5261	328 Bishop Ave., W.
5262	331 Bishop Ave., W.
5263	332 Bishop Ave., W.
5264	401 Bishop Ave., W.
5265	402 Bishop Ave., W.
5266	405 Bishop Ave., W.
5267	406 Bishop Ave., W.
5268	409 Bishop Ave., W.
5269	410 Bishop Ave., W.
5270	413 Bishop Ave., W.
5271	414 Bishop Ave., W.
5272	417 Bishop Ave., W.
5273	418 Bishop Ave., W.
5274	421 Bishop Ave., W.
5275	425 Bishop Ave., W.
5276	426 Bishop Ave., W.
5277	429 Bishop Ave., W.
5278	430 Bishop Ave., W.
5279	502 Bishop Ave., W.
5280	506 Bishop Ave., W.

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5281	510 Bishop Ave., W.
5282	513 Bishop Ave., W.
5283	518 Bishop Ave., W.
5284	519 Bishop Ave., W.
5285	522 Bishop Ave., W.
5286	525 Bishop Ave., W.
5287	534 Bishop Ave., W.
5288	537 Bishop Ave., W.
5289	538 Bishop Ave., W.
5290	542 Bishop Ave., W.
5291	546 Bishop Ave., W.
5292	553 Bishop Ave., W.
5293	554 Bishop Ave., W.
5294	601 Bishop Ave., W.
5295	602 Bishop Ave., W.
5296	606 Bishop Ave., W.
5297	610 Bishop Ave., W.
5298	613 Bishop Ave., W.
5299	618 Bishop Ave., W.
5300	621 Bishop Ave., W.
5301	622 Bishop Ave., W.
5302	625 Bishop Ave., W.
5303	629 Bishop Ave., W.
5304	630 Bishop Ave., W.
5305	633 Bishop Ave., W.
5306	634 Bishop Ave., W.
5307	637 Bishop Ave., W.
5308	641 Bishop Ave., W.
5309	645 Bishop Ave., W.
5310	718 Black Ave.
5311	729 Black Ave.
5312	733 Black Ave.
5313	734 Black Ave.
5314	737 Black Ave.
5315	738 Black Ave.
5316	741 Black Ave.
5317	742 Black Ave.
5318	750 Black Ave.
5319	753 Black Ave.
5320	754 Black Ave.
5321	757 Black Ave.
5322	758 Black Ave.
5323	761 Black Ave.
5324	767 Black Ave.
5325	801 Black Ave.
5326	802 Black Ave.
5327	805 Black Ave.
5328	806 Black Ave.

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5329	809 Black Ave.
5330	813 Black Ave.
5331	814 Black Ave.
5332	818 Black Ave.
5333	902 Black Ave.
5334	906 Black Ave.
5335	907 Black Ave.
5336	909 Black Ave.
5337	910 Black Ave.
5338	914 Black Ave.
5339	915 Black Ave.
5340	917 Black Ave.
5341	918 Black Ave.
5342	953 Black Ave.
5343	956 Black Ave.
5344	960 Black Ave.
5345	961 Black Ave.
5346	965 Black Ave.
5347	1052 Black Ave.
5348	1056 Black Ave.
5349	1060 Black Ave.
5350	1401 Blackberry Ln.
5351	1402 Blackberry Ln.
5352	1407 Blackberry Ln.
5353	1408 Blackberry Ln.
5354	1412 Blackberry Ln.
5355	1413 Blackberry Ln.
5356	1416 Blackberry Ln.
5357	1419 Blackberry Ln.
5358	1420 Blackberry Ln.
5359	1423 Blackberry Ln.
5360	1424 Blackberry Ln.
5361	1427 Blackberry Ln.
5362	1428 Blackberry Ln.
5363	1433 Blackberry Ln.
5364	1602 Blackberry Ln.
5365	1608 Blackberry Ln.
5366	1609 Blackberry Ln.
5367	1612 Blackberry Ln.
5368	1615 Blackberry Ln.
5369	1616 Blackberry Ln.
5370	1620 Blackberry Ln.
5371	1621 Blackberry Ln.
5372	1624 Blackberry Ln.
5373	1627 Blackberry Ln.
5374	1628 Blackberry Ln.
5375	1631 Blackberry Ln.
5376	1632 Blackberry Ln.

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5377	1636 Blackberry Ln.
5378	3415 Blackington Ave.
5379	3415 Blackington Ave.
5380	3501 Blackington Ave.
5381	3501 Blackington Ave.
5382	3623 Blackington Ave.
5383	3623 Blackington Ave.
5384	3801 Blackington Ave.
5385	3805 Blackington Ave.
5386	3809 Blackington Ave.
5387	3813 Blackington Ave.
5388	3816 Blackington Ave.
5389	3901 Blackington Ave.
5390	3906 Blackington Ave.
5391	3911 Blackington Ave.
5392	3914 Blackington Ave.
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5394	3918 Blackington Ave.
5395	3919 Blackington Ave.
5396	3923 Blackington Ave.
5397	3927 Blackington Ave.
5398	3930 Blackington Ave.
5399	3931 Blackington Ave.
5400	4006 Blackington Ave.
5401	4010 Blackington Ave.
5402	4013 Blackington Ave.
5403	4014 Blackington Ave.
5404	4017 Blackington Ave.
5405	4021 Blackington Ave.
5406	4025 Blackington Ave.
5407	4026 Blackington Ave.
5408	4029 Blackington Ave.
5409	4030 Blackington Ave.
5410	4034 Blackington Ave.
5411	4038 Blackington Ave.
5412	4042 Blackington Ave.
5413	2002 Blades Ave.
5414	2003 Blades Ave.
5415	2005 Blades Ave.
5416	2010 Blades Ave.
5417	2013 Blades Ave.
5418	2014 Blades Ave.
5419	2017 Blades Ave.
5420	2020 Blades Ave.
5421	2021 Blades Ave.
5422	2022 Blades Ave.
5423	2025 Blades Ave.
5424	2034 Blades Ave.

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5425	2037 Blades Ave.
5426	2038 Blades Ave.
5427	2039 Blades Ave.
5428	2041 Blades Ave.
5429	2042 Blades Ave.
5430	2045 Blades Ave.
5431	2046 Blades Ave.
5432	2050 Blades Ave.
5433	2103 Blades Ave.
5434	2107 Blades Ave.
5435	2109 Blades Ave.
5436	2110 Blades Ave.
5437	2113 Blades Ave.
5438	2114 Blades Ave.
5439	2117 Blades Ave.
5440	2118 Blades Ave.
5441	2122 Blades Ave.
5442	2126 Blades Ave.
5443	2129 Blades Ave.
5444	2130 Blades Ave.
5445	2210 Blades Ave.
5446	2218 Blades Ave.
5447	2226 Blades Ave.
5448	2228 Blades Ave.
5449	2261 Blades Ave.
5450	2301 Blades Ave.
5451	2306 Blades Ave.
5452	2310 Blades Ave.
5453	701 Blair St.
5454	712 Blair St.
5455	815 Blair St.
5456	819 Blair St.
5457	901 Blair St.
5458	902 Blair St.
5459	904 Blair St.
5460	905 Blair St.
5461	908 Blair St.
5462	909 Blair St.
5463	912 Blair St.
5464	913 Blair St.
5465	1102 Blair St.
5466	702 Blanchard Ave.
5467	711 Blanchard Ave.
5468	717 Blanchard Ave.
5469	720 Blanchard Ave.
5470	721 Blanchard Ave.
5471	724 Blanchard Ave.
5472	725 Blanchard Ave.

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5473	801 Blanchard Ave.
5474	802 Blanchard Ave.
5475	805 Blanchard Ave.
5476	806 Blanchard Ave.
5477	809 Blanchard Ave.
5478	813 Blanchard Ave.
5479	814 Blanchard Ave.
5480	901 Blanchard Ave.
5481	914 Blanchard Ave.
5482	915 Blanchard Ave.
5483	918 Blanchard Ave.
5484	919 Blanchard Ave.
5485	922 Blanchard Ave.
5486	923 Blanchard Ave.
5487	926 Blanchard Ave.
5488	927 Blanchard Ave.
5489	930 Blanchard Ave.
5490	931 Blanchard Ave.
5491	1001 Blanchard Ave.
5492	1002 Blanchard Ave.
5493	1005 Blanchard Ave.
5494	1009 Blanchard Ave.
5495	1010 Blanchard Ave.
5496	1013 Blanchard Ave.
5497	1014 Blanchard Ave.
5498	1017 Blanchard Ave.
5499	1018 Blanchard Ave.
5500	1021 Blanchard Ave.
5501	1022 Blanchard Ave.
5502	1025 Blanchard Ave.
5503	1026 Blanchard Ave.
5504	1101 Blanchard Ave.
5505	1105 Blanchard Ave.
5506	1106 Blanchard Ave.
5507	1110 Blanchard Ave.
5508	1113 Blanchard Ave.
5509	1117 Blanchard Ave.
5510	1118 Blanchard Ave.
5511	1201 Blanchard Ave.
5512	1202 Blanchard Ave.
5513	1205 Blanchard Ave.
5514	1206 Blanchard Ave.
5515	1209 Blanchard Ave.
5516	1210 Blanchard Ave.
5517	1213 Blanchard Ave.
5518	1214 Blanchard Ave.
5519	1218 Blanchard Ave.
5520	1301 Blanchard Ave.

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5521	1302 Blanchard Ave.
5522	1305 Blanchard Ave.
5523	1306 Blanchard Ave.
5524	1309 Blanchard Ave.
5525	1310 Blanchard Ave.
5526	1317 Blanchard Ave.
5527	1318 Blanchard Ave.
5528	600 Bloor Ave.
5529	620 Bloor Ave.
5530	725 Bloor Ave.
5531	729 Bloor Ave.
5532	733 Bloor Ave.
5533	737 Bloor Ave.
5534	749 Bloor Ave.
5535	808 Bloor Ave.
5536	811 Bloor Ave.
5537	815 Bloor Ave.
5538	816 Bloor Ave.
5539	819 Bloor Ave.
5540	820 Bloor Ave.
5541	823 Bloor Ave.
5542	824 Bloor Ave.
5543	827 Bloor Ave.
5544	828 Bloor Ave.
5545	832 Bloor Ave.
5546	835 Bloor Ave.
5547	836 Bloor Ave.
5548	839 Bloor Ave.
5549	840 Bloor Ave.
5550	843 Bloor Ave.
5551	844 Bloor Ave.
5552	847 Bloor Ave.
5553	851 Bloor Ave.
5554	901 Bloor Ave.
5555	902 Bloor Ave.
5556	905 Bloor Ave.
5557	908 Bloor Ave.
5558	913 Bloor Ave.
5559	916 Bloor Ave.
5560	917 Bloor Ave.
5561	920 Bloor Ave.
5562	923 Bloor Ave.
5563	924 Bloor Ave.
5564	925 Bloor Ave.
5565	926 Bloor Ave.
5566	929 Bloor Ave.
5567	930 Bloor Ave.
5568	936 Bloor Ave.

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5569	937 Bloor Ave.
5570	939 Bloor Ave.
5571	940 Bloor Ave.
5572	941 Bloor Ave.
5573	942 Bloor Ave.
5574	1013 Bloor Ave.
5575	1014 Bloor Ave.
5576	1017 Bloor Ave.
5577	1021 Bloor Ave.
5578	1022 Bloor Ave.
5579	1029 Bloor Ave.
5580	1030 Bloor Ave.
5581	1033 Bloor Ave.
5582	1101 Bloor Ave.
5583	1102 Bloor Ave.
5584	1104 Bloor Ave.
5585	1105 Bloor Ave.
5586	1108 Bloor Ave.
5587	1109 Bloor Ave.
5588	1112 Bloor Ave.
5589	1116 Bloor Ave.
5590	1120 Bloor Ave.
5591	1124 Bloor Ave.
5592	1125 Bloor Ave.
5593	1128 Bloor Ave.
5594	1132 Bloor Ave.
5595	1133 Bloor Ave.
5596	1136 Bloor Ave.
5597	1137 Bloor Ave.
5598	1401 Blueberry Ln.
5599	1402 Blueberry Ln.
5600	1406 Blueberry Ln.
5601	1407 Blueberry Ln.
5602	1410 Blueberry Ln.
5603	1413 Blueberry Ln.
5604	1414 Blueberry Ln.
5605	1418 Blueberry Ln.
5606	1419 Blueberry Ln.
5607	1422 Blueberry Ln.
5608	1423 Blueberry Ln.
5609	1426 Blueberry Ln.
5610	1427 Blueberry Ln.
5611	1501 Blueberry Ln.
5612	1502 Blueberry Ln.
5613	1505 Blueberry Ln.
5614	1506 Blueberry Ln.
5615	1509 Blueberry Ln.
5616	1510 Blueberry Ln.

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5617	1513 Blueberry Ln.
5618	1514 Blueberry Ln.
5619	1518 Blueberry Ln.
5620	1519 Blueberry Ln.
5621	1522 Blueberry Ln.
5622	1526 Blueberry Ln.
5623	1621 Bluff St.
5624	1301 Bolan Dr.
5625	1302 Bolan Dr.
5626	1305 Bolan Dr.
5627	1307 Bolan Dr.
5628	1311 Bolan Dr.
5629	1315 Bolan Dr.
5630	1319 Bolan Dr.
5631	1401 Bolan Dr.
5632	1405 Bolan Dr.
5633	1409 Bolan Dr.
5634	2005 Bonbright St.
5635	2009 Bonbright St.
5636	2013 Bonbright St.
5637	2019 Bonbright St.
5638	2025 Bonbright St.
5639	2102 Bonbright St.
5640	2105 Bonbright St.
5641	2106 Bonbright St.
5642	2109 Bonbright St.
5643	2112 Bonbright St.
5644	2113 Bonbright St.
5645	2116 Bonbright St.
5646	2117 Bonbright St.
5647	2121 Bonbright St.
5648	2125 Bonbright St.
5649	2209 Bonbright St.
5650	2217 Bonbright St.
5651	2221 Bonbright St.
5652	2225 Bonbright St.
5653	2303 Bonbright St.
5654	2309 Bonbright St.
5655	2321 Bonbright St.
5656	2325 Bonbright St.
5657	2401 Bonbright St.
5658	2405 Bonbright St.
5659	2412 Bonbright St.
5660	2412 Bonbright St.
5661	2513 Bonbright St.
5662	2519 Bonbright St.
5663	2525 Bonbright St.
5664	2551 Bonbright St.

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5665	2555 Bonbright St.
5666	2559 Bonbright St.
5667	2567 Bonbright St.
5668	2570 Bonbright St.
5669	2573 Bonbright St.
5670	2576 Bonbright St.
5671	2601 Bonbright St.
5672	2625 Bonbright St.
5673	2627 Bonbright St.
5674	2701 Bonbright St.
5675	2705 Bonbright St.
5676	2709 Bonbright St.
5677	2713 Bonbright St.
5678	2720 Bonbright St.
5679	2723 Bonbright St.
5680	2801 Bonbright St.
5681	2805 Bonbright St.
5682	2809 Bonbright St.
5683	2819 Bonbright St.
5684	2821 Bonbright St.
5685	2905 Bonbright St.
5686	2909 Bonbright St.
5687	2913 Bonbright St.
5688	2917 Bonbright St.
5689	2919 Bonbright St.
5690	2927 Bonbright St.
5691	1101 Boston Ave.
5692	1116 Boston Ave.
5693	1118 Boston Ave.
5694	1119 Boston Ave.
5695	1122 Boston Ave.
5696	1124 Boston Ave.
5697	1125 Boston Ave.
5698	1128 Boston Ave.
5699	1201 Boston Ave.
5700	1202 Boston Ave.
5701	1205 Boston Ave.
5702	1208 Boston Ave.
5703	1209 Boston Ave.
5704	1212 Boston Ave.
5705	1213 Boston Ave.
5706	1216 Boston Ave.
5707	1217 Boston Ave.
5708	1220 Boston Ave.
5709	1221 Boston Ave.
5710	1224 Boston Ave.
5711	1225 Boston Ave.
5712	1228 Boston Ave.

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5713	1229 Boston Ave.
5714	1232 Boston Ave.
5715	1239 Boston Ave.
5716	202 Boulevard Dr., E.
5717	250 Boulevard Dr., E.
5718	250 Boulevard Dr., E.
5719	420 Boulevard Dr., E.
5720	420 Boulevard Dr., E.
5721	420 Boulevard Dr., E.
5722	420 Boulevard Dr., E.
5723	936 Boulevard Dr., E.
5724	1010 Boulevard Dr., E.
5725	1014 Boulevard Dr., E.
5726	1018 Boulevard Dr., E.
5727	1022 Boulevard Dr., E.
5728	1114 Boulevard Dr., E.
5729	1118 Boulevard Dr., E.
5730	1122 Boulevard Dr., E.
5731	1806 Boulevard Dr., E.
5732	1910 Boulevard Dr., E.
5733	1910 Boulevard Dr., E.
5734	1910 Boulevard Dr., E.
5735	3801 Boulevard Dr., W.
5736	4975 Boulevard Dr., W.
5737	5001 Boulevard Dr., W.
5738	5135 Boulevard Dr., W.
5739	5155 Boulevard Dr., W.
5740	6901 Boulevard Dr., W.
5741	1114 Brabyn St.
5742	1401 Brabyn St.
5743	1402 Brabyn St.
5744	1405 Brabyn St.
5745	1406 Brabyn St.
5746	1408 Brabyn St.
5747	1409 Brabyn St.
5748	1412 Brabyn St.
5749	1413 Brabyn St.
5750	1416 Brabyn St.
5751	1417 Brabyn St.
5752	1420 Brabyn St.
5753	1421 Brabyn St.
5754	1424 Brabyn St.
5755	1425 Brabyn St.
5756	1429 Brabyn St.
5757	1430 Brabyn St.
5758	1433 Brabyn St.
5759	1437 Brabyn St.
5760	322 Bradley Ave.

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5761	352 Bradley Ave.
5762	402 Bradley Ave.
5763	408 Bradley Ave.
5764	601 Bradley Ave.
5765	605 Bradley Ave.
5766	609 Bradley Ave.
5767	612 Bradley Ave.
5768	613 Bradley Ave.
5769	617 Bradley Ave.
5770	621 Bradley Ave.
5771	701 Bradley Ave.
5772	705 Bradley Ave.
5773	709 Bradley Ave.
5774	801 Bradley Ave.
5775	807 Bradley Ave.
5776	811 Bradley Ave.
5777	815 Bradley Ave.
5778	911 Bradley Ave.
5779	915 Bradley Ave.
5780	916 Bradley Ave.
5781	919 Bradley Ave.
5782	920 Bradley Ave.
5783	924 Bradley Ave.
5784	925 Bradley Ave.
5785	928 Bradley Ave.
5786	931 Bradley Ave.
5787	932 Bradley Ave.
5788	936 Bradley Ave.
5789	943 Bradley Ave.
5790	944 Bradley Ave.
5791	951 Bradley Ave.
5792	959 Bradley Ave.
5793	965 Bradley Ave.
5794	969 Bradley Ave.
5795	972 Bradley Ave.
5796	974 Bradley Ave.
5797	981 Bradley Ave.
5798	982 Bradley Ave.
5799	986 Bradley Ave.
5800	989 Bradley Ave.
5801	993 Bradley Ave.
5802	1001 Bradley Ave.
5803	1002 Bradley Ave.
5804	1007 Bradley Ave.
5805	1011 Bradley Ave.
5806	1019 Bradley Ave.
5807	1023 Bradley Ave.
5808	1311 Bradley Ave.

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5809	1317 Bradley Ave.
5810	1402 Bradley Ave.
5811	1410 Bradley Ave.
5812	1411 Bradley Ave.
5813	1414 Bradley Ave.
5814	1420 Bradley Ave.
5815	1509 Bradley Ave.
5816	1513 Bradley Ave.
5817	1517 Bradley Ave.
5818	1522 Bradley Ave.
5819	1525 Bradley Ave.
5820	1529 Bradley Ave.
5821	1533 Bradley Ave.
5822	1537 Bradley Ave.
5823	1549 Bradley Ave.
5824	1555 Bradley Ave.
5825	1559 Bradley Ave.
5826	1563 Bradley Ave.
5827	1567 Bradley Ave.
5828	1610 Bradley Ave.
5829	2002 Branch Rd.
5830	2008 Branch Rd.
5831	2012 Branch Rd.
5832	2016 Branch Rd.
5833	2053 Branch Rd.
5834	2058 Branch Rd.
5835	2062 Branch Rd.
5836	2112 Branch Rd.
5837	2115 Branch Rd.
5838	2115 Branch Rd.
5839	2116 Branch Rd.
5840	2201 Branch Rd.
5841	2201 Branch Rd.
5842	2208 Branch Rd.
5843	2212 Branch Rd.
5844	2302 Branch Rd.
5845	2305 Branch Rd.
5846	2305 Branch Rd.
5847	2320 Branch Rd.
5848	2321 Branch Rd.
5849	2321 Branch Rd.
5850	2402 Branch Rd.
5851	2408 Branch Rd.
5852	2420 Branch Rd.
5853	2421 Branch Rd.
5854	2421 Branch Rd.
5855	2421 Branch Rd.
5856	2421 Branch Rd.

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5857	2421.5 Branch Rd.
5858	2427 Branch Rd.
5859	2502 Branch Rd.
5860	2508 Branch Rd.
5861	2514 Branch Rd.
5862	2519 Branch Rd.
5863	2519 Branch Rd.
5864	2520 Branch Rd.
5865	2602 Branch Rd.
5866	2620 Branch Rd.
5867	2701 Branch Rd.
5868	2701 Branch Rd.
5869	2710 Branch Rd.
5870	2714 Branch Rd.
5871	2715 Branch Rd.
5872	2718 Branch Rd.
5873	2719 Branch Rd.
5874	2801 Branch Rd.
5875	2805 Branch Rd.
5876	2808 Branch Rd.
5877	2813 Branch Rd.
5878	2814 Branch Rd.
5879	2820 Branch Rd.
5880	2901 Branch Rd.
5881	2902 Branch Rd.
5882	2905 Branch Rd.
5883	2906 Branch Rd.
5884	2909 Branch Rd.
5885	2910 Branch Rd.
5886	2913 Branch Rd.
5887	2914 Branch Rd.
5888	2924 Branch Rd.
5889	3002 Branch Rd.
5890	3011 Branch Rd.
5891	3201 Branch Rd.
5892	3207 Branch Rd.
5893	3213 Branch Rd.
5894	3219 Branch Rd.
5895	3301 Branch Rd.
5896	3307 Branch Rd.
5897	3310 Branch Rd.
5898	3313 Branch Rd.
5899	3314 Branch Rd.
5900	3319 Branch Rd.
5901	3401 Branch Rd.
5902	3402 Branch Rd.
5903	3405 Branch Rd.
5904	3406 Branch Rd.

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5905	3609 Branch Rd.
5906	2423 Branch Rd.
5907	3602 Branch Rd.
5908	3608 Branch Rd.
5909	3611 Branch Rd.
5910	3612 Branch Rd.
5911	3614 Branch Rd.
5912	3615 Branch Rd.
5913	3618 Branch Rd.
5914	3622 Branch Rd.
5915	3701 Branch Rd.
5916	3702 Branch Rd.
5917	3706 Branch Rd.
5918	3710 Branch Rd.
5919	3711 Branch Rd.
5920	3718 Branch Rd.
5921	3801 Branch Rd.
5922	3806 Branch Rd.
5923	3807 Branch Rd.
5924	3810 Branch Rd.
5925	3811 Branch Rd.
5926	3814 Branch Rd.
5927	3818 Branch Rd.
5928	3902 Branch Rd.
5929	3906 Branch Rd.
5930	3910 Branch Rd.
5931	3913 Branch Rd.
5932	3914 Branch Rd.
5933	3918 Branch Rd.
5934	3921 Branch Rd.
5935	4002 Branch Rd.
5936	4005 Branch Rd.
5937	4119 Branch Rd.
5938	4123 Branch Rd.
5939	4127 Branch Rd.
5940	4143 Branch Rd.
5941	4147 Branch Rd.
5942	4151 Branch Rd.
5943	4205 Branch Rd.
5944	4213 Branch Rd.
5945	4225 Branch Rd.
5946	4801 Branch Rd.
5947	4813 Branch Rd.
5948	4817 Branch Rd.
5949	4821 Branch Rd.
5950	4901 Branch Rd.
5951	4907 Branch Rd.
5952	4911 Branch Rd.

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5953	4915 Branch Rd.
5954	5001 Branch Rd.
5955	5007 Branch Rd.
5956	5011 Branch Rd.
5957	5015 Branch Rd.
5958	5019 Branch Rd.
5959	5023 Branch Rd.
5960	5027 Branch Rd.
5961	5031 Branch Rd.
5962	5101 Branch Rd.
5963	5201 Branch Rd.
5964	5205 Branch Rd.
5965	5213 Branch Rd.
5966	5217 Branch Rd.
5967	5301 Branch Rd.
5968	5305 Branch Rd.
5969	5309 Branch Rd.
5970	5313 Branch Rd.
5971	5317 Branch Rd.
5972	5401 Branch Rd.
5973	5405 Branch Rd.
5974	5413 Branch Rd.
5975	5501 Branch Rd.
5976	5509 Branch Rd.
5977	5605 Branch Rd.
5978	5613 Branch Rd.
5979	5617 Branch Rd.
5980	5701 Branch Rd.
5981	5705 Branch Rd.
5982	5709 Branch Rd.
5983	5713 Branch Rd.
5984	5717 Branch Rd.
5985	5801 Branch Rd.
5986	5805 Branch Rd.
5987	5809 Branch Rd.
5988	5813 Branch Rd.
5989	5817 Branch Rd.
5990	5821 Branch Rd.
5991	5825 Branch Rd.
5992	6211 Branch Rd.
5993	6315 Branch Rd.
5994	6325 Branch Rd.
5995	6481 Branch Rd.
5996	6507 Branch Rd.
5997	6511 Branch Rd.
5998	6537 Branch Rd.
5999	6541 Branch Rd.
6000	6645 Branch Rd.

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6001	6649 Branch Rd.
6002	6701 Branch Rd.
6003	6717 Branch Rd.
6004	6729 Branch Rd.
6005	6829 Branch Rd.
6006	6843 Branch Rd.
6007	2702 Brandon St.
6008	2709 Brandon St.
6009	2713 Brandon St.
6010	2714 Brandon St.
6011	2717 Brandon St.
6012	2718 Brandon St.
6013	2721 Brandon St.
6014	2722 Brandon St.
6015	2725 Brandon St.
6016	2726 Brandon St.
6017	2729 Brandon St.
6018	2730 Brandon St.
6019	2733 Brandon St.
6020	2734 Brandon St.
6021	2737 Brandon St.
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6023	2741 Brandon St.
6024	2742 Brandon St.
6025	2745 Brandon St.
6026	2746 Brandon St.
6027	2750 Brandon St.
6028	2754 Brandon St.
6029	2761 Brandon St.
6030	2765 Brandon St.
6031	2769 Brandon St.
6032	2801 Brandon St.
6033	2802 Brandon St.
6034	2805 Brandon St.
6035	2808 Brandon St.
6036	2809 Brandon St.
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6039	2817 Brandon St.
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6044	2829 Brandon St.
6045	2830 Brandon St.
6046	2833 Brandon St.
6047	2837 Brandon St.
6048	2838 Brandon St.

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6049	2841 Brandon St.
6050	2844 Brandon St.
6051	2902 Brandon St.
6052	2905 Brandon St.
6053	2906 Brandon St.
6054	2909 Brandon St.
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6056	2913 Brandon St.
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6058	2917 Brandon St.
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6060	2921 Brandon St.
6061	2922 Brandon St.
6062	2925 Brandon St.
6063	2926 Brandon St.
6064	3001 Brandon St.
6065	3002 Brandon St.
6066	3006 Brandon St.
6067	3009 Brandon St.
6068	3010 Brandon St.
6069	3013 Brandon St.
6070	3014 Brandon St.
6071	3017 Brandon St.
6072	3018 Brandon St.
6073	3021 Brandon St.
6074	3022 Brandon St.
6075	3101 Brandon St.
6076	3102 Brandon St.
6077	3105 Brandon St.
6078	3109 Brandon St.
6079	3110 Brandon St.
6080	3113 Brandon St.
6081	3114 Brandon St.
6082	3117 Brandon St.
6083	3118 Brandon St.
6084	3201 Brandon St.
6085	3202 Brandon St.
6086	3205 Brandon St.
6087	3206 Brandon St.
6088	3209 Brandon St.
6089	3210 Brandon St.
6090	3213 Brandon St.
6091	3214 Brandon St.
6092	3217 Brandon St.
6093	3218 Brandon St.
6094	3221 Brandon St.
6095	3222 Brandon St.
6096	3226 Brandon St.

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6097	3301 Brandon St.
6098	3305 Brandon St.
6099	3306 Brandon St.
6100	3309 Brandon St.
6101	3310 Brandon St.
6102	3313 Brandon St.
6103	3314 Brandon St.
6104	3317 Brandon St.
6105	3318 Brandon St.
6106	3321 Brandon St.
6107	3322 Brandon St.
6108	3401 Brandon St.
6109	3402 Brandon St.
6110	3405 Brandon St.
6111	3406 Brandon St.
6112	3409 Brandon St.
6113	3410 Brandon St.
6114	3413 Brandon St.
6115	3417 Brandon St.
6116	3418 Brandon St.
6117	3501 Brandon St.
6118	3502 Brandon St.
6119	3505 Brandon St.
6120	3507 Brandon St.
6121	3510 Brandon St.
6122	3513 Brandon St.
6123	3514 Brandon St.
6124	3518 Brandon St.
6125	3521 Brandon St.
6126	3529 Brandon St.
6127	3401 Brent Ave.
6128	3402 Brent Ave.
6129	3405 Brent Ave.
6130	3406 Brent Ave.
6131	3409 Brent Ave.
6132	3410 Brent Ave.
6133	3413 Brent Ave.
6134	3414 Brent Ave.
6135	3417 Brent Ave.
6136	3418 Brent Ave.
6137	3421 Brent Ave.
6138	3422 Brent Ave.
6139	3425 Brent Ave.
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6141	3429 Brent Ave.
6142	3432 Brent Ave.
6143	3433 Brent Ave.
6144	3436 Brent Ave.

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6145	3437 Brent Ave.
6146	3440 Brent Ave.
6147	3444 Brent Ave.
6148	3502 Brent Ave.
6149	3506 Brent Ave.
6150	3109 Brentwood Dr.
6151	3117 Brentwood Dr.
6152	3201 Brentwood Dr.
6153	3202 Brentwood Dr.
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6162	3318 Brentwood Dr.
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6219	3422 Brewster Ave.
6220	3426 Brewster Ave.
6221	3430 Brewster Ave.
6222	3434 Brewster Ave.
6223	2010 Briar Hill Rd.
6224	2011 Briar Hill Rd.
6225	2021 Briar Hill Rd.
6226	2041 Briar Hill Rd.
6227	2122 Briar Hill Rd.
6228	2125 Briar Hill Rd.
6229	2130 Briar Hill Rd.
6230	2142 Briar Hill Rd.
6231	1701 Briarwood Dr.
6232	1711 Briarwood Dr.
6233	1712 Briarwood Dr.
6234	1716 Briarwood Dr.
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6312	3456 Brimfield Dr.
6313	2238 Bristol Rd., W.
6314	2238 Bristol Rd., W.
6315	2238 Bristol Rd., W.
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6317	3025 Bristol Rd., W.
6318	3101 Bristol Rd., W.
6319	3375 Bristol Rd., W.
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6326	3425 Bristol Rd., W.
6327	3425 Bristol Rd., W.
6328	3425 Bristol Rd., W.
6329	3493 Bristol Rd., W.
6330	3501 Bristol Rd., W.
6331	3501 Bristol Rd., W.
6332	3509 Bristol Rd., W.
6333	4007 Bristol Rd., W.
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6336	4007 Bristol Rd., W.

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6337	4007 Bristol Rd., W.
6338	2100 Bristol Rd., W.
6339	3025 Bristol Rd., W.
6340	3025 Bristol Rd., W.
6341	3493 Bristol Rd., W.
6342	3501 Bristol Rd., W.
6343	3509 Bristol Rd., W.
6344	1601 Broad Ct.
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6484	902 Brookhollow Ct.
6485	2017 Brooks St.
6486	2020 Brooks St.
6487	2021 Brooks St.
6488	2025 Brooks St.
6489	2032 Brooks St.
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6492	2104 Brooks St.
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6496	2122 Brooks St.
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6872	4030 Brownell Blvd.
6873	4101 Brownell Blvd.
6874	4102 Brownell Blvd.
6875	4105 Brownell Blvd.
6876	4110 Brownell Blvd.
6877	4113 Brownell Blvd.
6878	4114 Brownell Blvd.
6879	4117 Brownell Blvd.
6880	4122 Brownell Blvd.
6881	4125 Brownell Blvd.
6882	4130 Brownell Blvd.
6883	4133 Brownell Blvd.
6884	4134 Brownell Blvd.
6885	4201 Brownell Blvd.
6886	4202 Brownell Blvd.
6887	4205 Brownell Blvd.
6888	4210 Brownell Blvd.
6889	4213 Brownell Blvd.
6890	4217 Brownell Blvd.
6891	4218 Brownell Blvd.
6892	4221 Brownell Blvd.
6893	4222 Brownell Blvd.
6894	4225 Brownell Blvd.
6895	4226 Brownell Blvd.
6896	4229 Brownell Blvd.
6897	4230 Brownell Blvd.
6898	4233 Brownell Blvd.
6899	4236 Brownell Blvd.
6900	201 Browning Ave.
6901	202 Browning Ave.
6902	209 Browning Ave.
6903	212 Browning Ave.
6904	215 Browning Ave.
6905	216 Browning Ave.
6906	221 Browning Ave.
6907	224 Browning Ave.
6908	225 Browning Ave.
6909	232 Browning Ave.
6910	233 Browning Ave.
6911	237 Browning Ave.
6912	240 Browning Ave.

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6913	246 Browning Ave.
6914	301 Browning Ave.
6915	315 Browning Ave.
6916	318 Browning Ave.
6917	322 Browning Ave.
6918	323 Browning Ave.
6919	326 Browning Ave.
6920	329 Browning Ave.
6921	330 Browning Ave.
6922	334 Browning Ave.
6923	338 Browning Ave.
6924	341 Browning Ave.
6925	342 Browning Ave.
6926	346 Browning Ave.
6927	347 Browning Ave.
6928	353 Browning Ave.
6929	354 Browning Ave.
6930	359 Browning Ave.
6931	365 Browning Ave.
6932	110 Bruce St.
6933	112 Bruce St.
6934	116 Bruce St.
6935	117 Bruce St.
6936	120 Bruce St.
6937	121 Bruce St.
6938	124 Bruce St.
6939	125 Bruce St.
6940	130 Bruce St.
6941	131 Bruce St.
6942	132 Bruce St.
6943	136 Bruce St.
6944	139 Bruce St.
6945	140 Bruce St.
6946	143 Bruce St.
6947	144 Bruce St.
6948	145 Bruce St.
6949	151 Bruce St.
6950	2401 Brunswick Ave.
6951	2405 Brunswick Ave.
6952	2501 Brunswick Ave.
6953	2502 Brunswick Ave.
6954	2509 Brunswick Ave.
6955	2510 Brunswick Ave.
6956	2514 Brunswick Ave.
6957	2602 Brunswick Ave.
6958	2605 Brunswick Ave.
6959	2610 Brunswick Ave.
6960	2613 Brunswick Ave.

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6961	2614 Brunswick Ave.
6962	2621 Brunswick Ave.
6963	2622 Brunswick Ave.
6964	2702 Brunswick Ave.
6965	2706 Brunswick Ave.
6966	3301 Brunswick Ave.
6967	3305 Brunswick Ave.
6968	3313 Brunswick Ave.
6969	3401 Brunswick Ave.
6970	3402 Brunswick Ave.
6971	3405 Brunswick Ave.
6972	3410 Brunswick Ave.
6973	3413 Brunswick Ave.
6974	3417 Brunswick Ave.
6975	3418 Brunswick Ave.
6976	3501 Brunswick Ave.
6977	3506 Brunswick Ave.
6978	3509 Brunswick Ave.
6979	3510 Brunswick Ave.
6980	3513 Brunswick Ave.
6981	3514 Brunswick Ave.
6982	3517 Brunswick Ave.
6983	3518 Brunswick Ave.
6984	3601 Brunswick Ave.
6985	3602 Brunswick Ave.
6986	3605 Brunswick Ave.
6987	3609 Brunswick Ave.
6988	3610 Brunswick Ave.
6989	3617 Brunswick Ave.
6990	3618 Brunswick Ave.
6991	3702 Brunswick Ave.
6992	3705 Brunswick Ave.
6993	3706 Brunswick Ave.
6994	3709 Brunswick Ave.
6995	3710 Brunswick Ave.
6996	3801 Brunswick Ave.
6997	3802 Brunswick Ave.
6998	3805 Brunswick Ave.
6999	3809 Brunswick Ave.
7000	3810 Brunswick Ave.
7001	3813 Brunswick Ave.
7002	3817 Brunswick Ave.
7003	3902 Brunswick Ave.
7004	3905 Brunswick Ave.
7005	3906 Brunswick Ave.
7006	3909 Brunswick Ave.
7007	3913 Brunswick Ave.
7008	3918 Brunswick Ave.

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7009	4001 Brunswick Ave.
7010	4005 Brunswick Ave.
7011	4006 Brunswick Ave.
7012	4009 Brunswick Ave.
7013	4018 Brunswick Ave.
7014	4101 Brunswick Ave.
7015	4105 Brunswick Ave.
7016	4109 Brunswick Ave.
7017	4117 Brunswick Ave.
7018	4118 Brunswick Ave.
7019	4201 Brunswick Ave.
7020	4202 Brunswick Ave.
7021	4205 Brunswick Ave.
7022	4206 Brunswick Ave.
7023	4209 Brunswick Ave.
7024	4210 Brunswick Ave.
7025	4214 Brunswick Ave.
7026	4217 Brunswick Ave.
7027	4218 Brunswick Ave.
7028	4301 Brunswick Ave.
7029	4401 Brunswick Ave.
7030	4405 Brunswick Ave.
7031	4410 Brunswick Ave.
7032	4414 Brunswick Ave.
7033	4418 Brunswick Ave.
7034	4506 Brunswick Ave.
7035	4509 Brunswick Ave.
7036	4514 Brunswick Ave.
7037	4517 Brunswick Ave.
7038	4518 Brunswick Ave.
7039	4602 Brunswick Ave.
7040	4610 Brunswick Ave.
7041	4613 Brunswick Ave.
7042	4614 Brunswick Ave.
7043	4618 Brunswick Ave.
7044	4619 Brunswick Ave.
7045	521 Brush Alley.
7046	521 Brush Alley.
7047	710 Bryan Pl.
7048	714 Bryan Pl.
7049	718 Bryan Pl.
7050	719 Bryan Pl.
7051	723 Bryan Pl.
7052	4520 Bryant St.
7053	4526 Bryant St.
7054	4614 Bryant St.
7055	4625 Bryant St.
7056	4626 Bryant St.

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7057	3101 Bryn Mawr Pl.
7058	3110 Bryn Mawr Pl.
7059	3111 Bryn Mawr Pl.
7060	3114 Bryn Mawr Pl.
7061	3115 Bryn Mawr Pl.
7062	3118 Bryn Mawr Pl.
7063	3119 Bryn Mawr Pl.
7064	3122 Bryn Mawr Pl.
7065	3123 Bryn Mawr Pl.
7066	3201 Bryn Mawr Pl.
7067	3202 Bryn Mawr Pl.
7068	3205 Bryn Mawr Pl.
7069	3206 Bryn Mawr Pl.
7070	510 Buckham Alley.
7071	515 Buckham Alley.
7072	522 Buckham Alley.
7073	522 Buckham Alley.
7074	207 Buckingham Ave.
7075	301 Buckingham Ave.
7076	302 Buckingham Ave.
7077	312 Buckingham Ave.
7078	313 Buckingham Ave.
7079	317 Buckingham Ave.
7080	318 Buckingham Ave.
7081	324 Buckingham Ave.
7082	328 Buckingham Ave.
7083	332 Buckingham Ave.
7084	333 Buckingham Ave.
7085	336 Buckingham Ave.
7086	337 Buckingham Ave.
7087	340 Buckingham Ave.
7088	341 Buckingham Ave.
7089	344 Buckingham Ave.
7090	345 Buckingham Ave.
7091	349 Buckingham Ave.
7092	352 Buckingham Ave.
7093	353 Buckingham Ave.
7094	356 Buckingham Ave.
7095	357 Buckingham Ave.
7096	360 Buckingham Ave.
7097	361 Buckingham Ave.
7098	364 Buckingham Ave.
7099	365 Buckingham Ave.
7100	368 Buckingham Ave.
7101	369 Buckingham Ave.
7102	402 Buckingham Ave.
7103	407 Buckingham Ave.
7104	408 Buckingham Ave.

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7105	411 Buckingham Ave.
7106	412 Buckingham Ave.
7107	415 Buckingham Ave.
7108	416 Buckingham Ave.
7109	420 Buckingham Ave.
7110	423 Buckingham Ave.
7111	424 Buckingham Ave.
7112	427 Buckingham Ave.
7113	428 Buckingham Ave.
7114	431 Buckingham Ave.
7115	432 Buckingham Ave.
7116	435 Buckingham Ave.
7117	436 Buckingham Ave.
7118	439 Buckingham Ave.
7119	440 Buckingham Ave.
7120	443 Buckingham Ave.
7121	444 Buckingham Ave.
7122	514 Buckingham Ave.
7123	515 Buckingham Ave.
7124	520 Buckingham Ave.
7125	521 Buckingham Ave.
7126	524 Buckingham Ave.
7127	525 Buckingham Ave.
7128	527 Buckingham Ave.
7129	528 Buckingham Ave.
7130	532 Buckingham Ave.
7131	533 Buckingham Ave.
7132	536 Buckingham Ave.
7133	537 Buckingham Ave.
7134	540 Buckingham Ave.
7135	541 Buckingham Ave.
7136	544 Buckingham Ave.
7137	545 Buckingham Ave.
7138	548 Buckingham Ave.
7139	549 Buckingham Ave.
7140	601 Buckingham Ave.
7141	602 Buckingham Ave.
7142	605 Buckingham Ave.
7143	606 Buckingham Ave.
7144	609 Buckingham Ave.
7145	610 Buckingham Ave.
7146	613 Buckingham Ave.
7147	614 Buckingham Ave.
7148	617 Buckingham Ave.
7149	618 Buckingham Ave.
7150	621 Buckingham Ave.
7151	622 Buckingham Ave.
7152	625 Buckingham Ave.

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7153	626 Buckingham Ave.
7154	629 Buckingham Ave.
7155	630 Buckingham Ave.
7156	704 Buckingham Ave.
7157	713 Buckingham Ave.
7158	714 Buckingham Ave.
7159	717 Buckingham Ave.
7160	718 Buckingham Ave.
7161	721 Buckingham Ave.
7162	725 Buckingham Ave.
7163	801 Buckingham Ave.
7164	807 Buckingham Ave.
7165	811 Buckingham Ave.
7166	815 Buckingham Ave.
7167	901 Buckingham Ave.
7168	905 Buckingham Ave.
7169	909 Buckingham Ave.
7170	916 Buckingham Ave.
7171	917 Buckingham Ave.
7172	3205 Buick St.
7173	3212 Buick St.
7174	3216 Buick St.
7175	3304 Buick St.
7176	3308 Buick St.
7177	3312 Buick St.
7178	3318 Buick St.
7179	3402 Buick St.
7180	3510 Buick St.
7181	3514 Buick St.
7182	3515 Buick St.
7183	3519 Buick St.
7184	3521 Buick St.
7185	3601 Buick St.
7186	3605 Buick St.
7187	3613 Buick St.
7188	3617 Buick St.
7189	3621 Buick St.
7190	3713 Buick St.
7191	3813 Buick St.
7192	3817 Buick St.
7193	3905 Buick St.
7194	3909 Buick St.
7195	3911 Buick St.
7196	3917 Buick St.
7197	4005 Buick St.
7198	4009 Buick St.
7199	4013 Buick St.
7200	4101 Buick St.

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7201	4105 Buick St.
7202	4112 Buick St.
7203	4116 Buick St.
7204	4117 Buick St.
7205	4119 Buick St.
7206	4120 Buick St.
7207	4124 Buick St.
7208	722 Bundy Ave., E.
7209	726 Bundy Ave., E.
7210	729 Bundy Ave., E.
7211	730 Bundy Ave., E.
7212	733 Bundy Ave., E.
7213	734 Bundy Ave., E.
7214	737 Bundy Ave., E.
7215	738 Bundy Ave., E.
7216	742 Bundy Ave., E.
7217	745 Bundy Ave., E.
7218	746 Bundy Ave., E.
7219	749 Bundy Ave., E.
7220	750 Bundy Ave., E.
7221	753 Bundy Ave., E.
7222	754 Bundy Ave., E.
7223	758 Bundy Ave., E.
7224	761 Bundy Ave., E.
7225	762 Bundy Ave., E.
7226	765 Bundy Ave., E.
7227	766 Bundy Ave., E.
7228	773 Bundy Ave., E.
7229	774 Bundy Ave., E.
7230	777 Bundy Ave., E.
7231	778 Bundy Ave., E.
7232	801 Bundy Ave., E.
7233	802 Bundy Ave., E.
7234	806 Bundy Ave., E.
7235	813 Bundy Ave., E.
7236	817 Bundy Ave., E.
7237	820 Bundy Ave., E.
7238	821 Bundy Ave., E.
7239	902 Bundy Ave., E.
7240	906 Bundy Ave., E.
7241	909 Bundy Ave., E.
7242	910 Bundy Ave., E.
7243	913 Bundy Ave., E.
7244	921 Bundy Ave., E.
7245	926 Bundy Ave., E.
7246	929 Bundy Ave., E.
7247	930 Bundy Ave., E.
7248	933 Bundy Ave., E.

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7249	934 Bundy Ave., E.
7250	937 Bundy Ave., E.
7251	938 Bundy Ave., E.
7252	941 Bundy Ave., E.
7253	942 Bundy Ave., E.
7254	945 Bundy Ave., E.
7255	946 Bundy Ave., E.
7256	1002 Bundy Ave., E.
7257	1006 Bundy Ave., E.
7258	1009 Bundy Ave., E.
7259	1010 Bundy Ave., E.
7260	1013 Bundy Ave., E.
7261	1033 Bundy Ave., E.
7262	1034 Bundy Ave., E.
7263	1041 Bundy Ave., E.
7264	1045 Bundy Ave., E.
7265	1053 Bundy Ave., E.
7266	1058 Bundy Ave., E.
7267	1061 Bundy Ave., E.
7268	1069 Bundy Ave., E.
7269	1171 Bundy Ave., E.
7270	1175 Bundy Ave., E.
7271	1179 Bundy Ave., E.
7272	1183 Bundy Ave., E.
7273	1185 Bundy Ave., E.
7274	1194 Bundy Ave., E.
7275	1200 Bundy Ave., E.
7276	1206 Bundy Ave., E.
7277	201 Bundy Ave., W.
7278	202 Bundy Ave., W.
7279	205 Bundy Ave., W.
7280	206 Bundy Ave., W.
7281	209 Bundy Ave., W.
7282	210 Bundy Ave., W.
7283	213 Bundy Ave., W.
7284	216 Bundy Ave., W.
7285	219 Bundy Ave., W.
7286	301 Bundy Ave., W.
7287	302 Bundy Ave., W.
7288	305 Bundy Ave., W.
7289	306 Bundy Ave., W.
7290	310 Bundy Ave., W.
7291	311 Bundy Ave., W.
7292	316 Bundy Ave., W.
7293	317 Bundy Ave., W.
7294	401 Bundy Ave., W.
7295	402 Bundy Ave., W.
7296	405 Bundy Ave., W.

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7297	406 Bundy Ave., W.
7298	410 Bundy Ave., W.
7299	414 Bundy Ave., W.
7300	417 Bundy Ave., W.
7301	421 Bundy Ave., W.
7302	422 Bundy Ave., W.
7303	425 Bundy Ave., W.
7304	426 Bundy Ave., W.
7305	429 Bundy Ave., W.
7306	430 Bundy Ave., W.
7307	501 Bundy Ave., W.
7308	502 Bundy Ave., W.
7309	506 Bundy Ave., W.
7310	509 Bundy Ave., W.
7311	510 Bundy Ave., W.
7312	513 Bundy Ave., W.
7313	517 Bundy Ave., W.
7314	518 Bundy Ave., W.
7315	521 Bundy Ave., W.
7316	522 Bundy Ave., W.
7317	525 Bundy Ave., W.
7318	601 Bundy Ave., W.
7319	602 Bundy Ave., W.
7320	605 Bundy Ave., W.
7321	609 Bundy Ave., W.
7322	610 Bundy Ave., W.
7323	613 Bundy Ave., W.
7324	614 Bundy Ave., W.
7325	617 Bundy Ave., W.
7326	621 Bundy Ave., W.
7327	622 Bundy Ave., W.
7328	625 Bundy Ave., W.
7329	626 Bundy Ave., W.
7330	629 Bundy Ave., W.
7331	630 Bundy Ave., W.
7332	633 Bundy Ave., W.
7333	634 Bundy Ave., W.
7334	637 Bundy Ave., W.
7335	641 Bundy Ave., W.
7336	642 Bundy Ave., W.
7337	707 Bundy Ave., W.
7338	708 Bundy Ave., W.
7339	711 Bundy Ave., W.
7340	712 Bundy Ave., W.
7341	715 Bundy Ave., W.
7342	716 Bundy Ave., W.
7343	719 Bundy Ave., W.
7344	720 Bundy Ave., W.

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7345	723 Bundy Ave., W.
7346	724 Bundy Ave., W.
7347	728 Bundy Ave., W.
7348	732 Bundy Ave., W.
7349	736 Bundy Ave., W.
7350	740 Bundy Ave., W.
7351	3112 Burgess St.
7352	3113 Burgess St.
7353	3117 Burgess St.
7354	3120 Burgess St.
7355	3123 Burgess St.
7356	3124 Burgess St.
7357	3201 Burgess St.
7358	3202 Burgess St.
7359	3205 Burgess St.
7360	3209 Burgess St.
7361	3214 Burgess St.
7362	3215 Burgess St.
7363	3221 Burgess St.
7364	3222 Burgess St.
7365	3225 Burgess St.
7366	3226 Burgess St.
7367	3301 Burgess St.
7368	3306 Burgess St.
7369	3318 Burgess St.
7370	3402 Burgess St.
7371	3411 Burgess St.
7372	3412 Burgess St.
7373	3415 Burgess St.
7374	3416 Burgess St.
7375	3419 Burgess St.
7376	3420 Burgess St.
7377	3502 Burgess St.
7378	3505 Burgess St.
7379	3506 Burgess St.
7380	3509 Burgess St.
7381	3513 Burgess St.
7382	3514 Burgess St.
7383	3517 Burgess St.
7384	3601 Burgess St.
7385	3602 Burgess St.
7386	3605 Burgess St.
7387	3606 Burgess St.
7388	3610 Burgess St.
7389	3613 Burgess St.
7390	3617 Burgess St.
7391	3618 Burgess St.
7392	3621 Burgess St.

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7393	3622 Burgess St.
7394	3625 Burgess St.
7395	3626 Burgess St.
7396	3701 Burgess St.
7397	3702 Burgess St.
7398	3705 Burgess St.
7399	3709 Burgess St.
7400	3713 Burgess St.
7401	3714 Burgess St.
7402	3718 Burgess St.
7403	3721 Burgess St.
7404	3722 Burgess St.
7405	3801 Burgess St.
7406	3802 Burgess St.
7407	3805 Burgess St.
7408	3809 Burgess St.
7409	3810 Burgess St.
7410	3813 Burgess St.
7411	3814 Burgess St.
7412	3901 Burgess St.
7413	3902 Burgess St.
7414	3905 Burgess St.
7415	3906 Burgess St.
7416	3910 Burgess St.
7417	3914 Burgess St.
7418	4005 Burgess St.
7419	4006 Burgess St.
7420	4009 Burgess St.
7421	4010 Burgess St.
7422	4013 Burgess St.
7423	4014 Burgess St.
7424	4017 Burgess St.
7425	4018 Burgess St.
7426	4021 Burgess St.
7427	4022 Burgess St.
7428	4025 Burgess St.
7429	4026 Burgess St.
7430	4029 Burgess St.
7431	4030 Burgess St.
7432	4033 Burgess St.
7433	4034 Burgess St.
7434	815 Burlington Dr.
7435	815 Burlington Dr.
7436	815 Burlington Dr.
7437	815 Burlington Dr.
7438	816 Burlington Dr.
7439	901 Burlington Dr.
7440	902 Burlington Dr.

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7441	909 Burlington Dr.
7442	915 Burlington Dr.
7443	916 Burlington Dr.
7444	921 Burlington Dr.
7445	927 Burlington Dr.
7446	1001 Burlington Dr.
7447	1005 Burlington Dr.
7448	1006 Burlington Dr.
7449	1009 Burlington Dr.
7450	1010 Burlington Dr.
7451	1013 Burlington Dr.
7452	1014 Burlington Dr.
7453	1017 Burlington Dr.
7454	1018 Burlington Dr.
7455	1021 Burlington Dr.
7456	1022 Burlington Dr.
7457	1025 Burlington Dr.
7458	1026 Burlington Dr.
7459	1101 Burlington Dr.
7460	1102 Burlington Dr.
7461	1105 Burlington Dr.
7462	1106 Burlington Dr.
7463	1109 Burlington Dr.
7464	1110 Burlington Dr.
7465	1113 Burlington Dr.
7466	1114 Burlington Dr.
7467	1117 Burlington Dr.
7468	1118 Burlington Dr.
7469	1121 Burlington Dr.
7470	1122 Burlington Dr.
7471	1125 Burlington Dr.
7472	1126 Burlington Dr.
7473	1130 Burlington Dr.
7474	1134 Burlington Dr.
7475	1201 Burlington Dr.
7476	1202 Burlington Dr.
7477	1212 Burlington Dr.
7478	1910 Burns St.
7479	1914 Burns St.
7480	1915 Burns St.
7481	1918 Burns St.
7482	1921 Burns St.
7483	1922 Burns St.
7484	1923 Burns St.
7485	1926 Burns St.
7486	2004 Burns St.
7487	2005 Burns St.
7488	2009 Burns St.

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7489	2010 Burns St.
7490	2013 Burns St.
7491	2017 Burns St.
7492	2022 Burns St.
7493	2024 Burns St.
7494	2025 Burns St.
7495	2205 Burns St.
7496	2212 Burns St.
7497	2219 Burns St.
7498	2301 Burns St.
7499	2305 Burns St.
7500	2311 Burns St.
7501	2315 Burns St.
7502	2319 Burns St.
7503	2321 Burns St.
7504	2401 Burns St.
7505	2402 Burns St.
7506	2409 Burns St.
7507	2411 Burns St.
7508	2412 Burns St.
7509	2413 Burns St.
7510	2416 Burns St.
7511	2417 Burns St.
7512	2421 Burns St.
7513	2424 Burns St.
7514	2425 Burns St.
7515	2429 Burns St.
7516	2436 Burns St.
7517	2501 Burns St.
7518	2505 Burns St.
7519	2509 Burns St.
7520	2513 Burns St.
7521	2601 Burns St.
7522	2605 Burns St.
7523	2609 Burns St.
7524	2613 Burns St.
7525	1901 Burr Blvd.
7526	1905 Burr Blvd.
7527	1909 Burr Blvd.
7528	1913 Burr Blvd.
7529	1925 Burr Blvd.
7530	1933 Burr Blvd.
7531	1937 Burr Blvd.
7532	1941 Burr Blvd.
7533	1950 Burr Blvd.
7534	2001 Burr Blvd.
7535	2002 Burr Blvd.
7536	2005 Burr Blvd.

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7537	2006 Burr Blvd.
7538	2009 Burr Blvd.
7539	2010 Burr Blvd.
7540	2014 Burr Blvd.
7541	2015 Burr Blvd.
7542	2018 Burr Blvd.
7543	2021 Burr Blvd.
7544	2022 Burr Blvd.
7545	2025 Burr Blvd.
7546	2026 Burr Blvd.
7547	2029 Burr Blvd.
7548	2030 Burr Blvd.
7549	2033 Burr Blvd.
7550	2034 Burr Blvd.
7551	2039 Burr Blvd.
7552	2040 Burr Blvd.
7553	2041 Burr Blvd.
7554	2044 Burr Blvd.
7555	2045 Burr Blvd.
7556	2046 Burr Blvd.
7557	2050 Burr Blvd.
7558	301 Burroughs Ave.
7559	308 Burroughs Ave.
7560	309 Burroughs Ave.
7561	313 Burroughs Ave.
7562	317 Burroughs Ave.
7563	320 Burroughs Ave.
7564	321 Burroughs Ave.
7565	325 Burroughs Ave.
7566	326 Burroughs Ave.
7567	329 Burroughs Ave.
7568	330 Burroughs Ave.
7569	333 Burroughs Ave.
7570	334 Burroughs Ave.
7571	337 Burroughs Ave.
7572	338 Burroughs Ave.
7573	341 Burroughs Ave.
7574	342 Burroughs Ave.
7575	345 Burroughs Ave.
7576	348 Burroughs Ave.
7577	349 Burroughs Ave.
7578	401 Burroughs Ave.
7579	402 Burroughs Ave.
7580	409 Burroughs Ave.
7581	410 Burroughs Ave.
7582	413 Burroughs Ave.
7583	416 Burroughs Ave.
7584	417 Burroughs Ave.

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7585	420 Burroughs Ave.
7586	421 Burroughs Ave.
7587	424 Burroughs Ave.
7588	425 Burroughs Ave.
7589	428 Burroughs Ave.
7590	429 Burroughs Ave.
7591	430 Burroughs Ave.
7592	434 Burroughs Ave.
7593	437 Burroughs Ave.
7594	438 Burroughs Ave.
7595	441 Burroughs Ave.
7596	442 Burroughs Ave.
7597	446 Burroughs Ave.
7598	514 Burroughs Ave.
7599	515 Burroughs Ave.
7600	515 Burroughs Ave.
7601	520 Burroughs Ave.
7602	521 Burroughs Ave.
7603	524 Burroughs Ave.
7604	525 Burroughs Ave.
7605	528 Burroughs Ave.
7606	529 Burroughs Ave.
7607	532 Burroughs Ave.
7608	533 Burroughs Ave.
7609	536 Burroughs Ave.
7610	537 Burroughs Ave.
7611	540 Burroughs Ave.
7612	541 Burroughs Ave.
7613	544 Burroughs Ave.
7614	545 Burroughs Ave.
7615	548 Burroughs Ave.
7616	549 Burroughs Ave.
7617	602 Burroughs Ave.
7618	605 Burroughs Ave.
7619	606 Burroughs Ave.
7620	609 Burroughs Ave.
7621	610 Burroughs Ave.
7622	613 Burroughs Ave.
7623	614 Burroughs Ave.
7624	617 Burroughs Ave.
7625	618 Burroughs Ave.
7626	621 Burroughs Ave.
7627	622 Burroughs Ave.
7628	625 Burroughs Ave.
7629	626 Burroughs Ave.
7630	629 Burroughs Ave.
7631	630 Burroughs Ave.
7632	634 Burroughs Ave.

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7633	713 Burroughs Ave.
7634	101 Burton St.
7635	422 Cadillac St.
7636	424 Cadillac St.
7637	428 Cadillac St.
7638	504 Cadillac St.
7639	508 Cadillac St.
7640	512 Cadillac St.
7641	514 Cadillac St.
7642	609 Cadillac St.
7643	635 Cadillac St.
7644	639 Cadillac St.
7645	701 Cadillac St.
7646	705 Cadillac St.
7647	709 Cadillac St.
7648	713 Cadillac St.
7649	717 Cadillac St.
7650	721 Cadillac St.
7651	725 Cadillac St.
7652	729 Cadillac St.
7653	733 Cadillac St.
7654	737 Cadillac St.
7655	741 Cadillac St.
7656	1802 Cadillac St.
7657	1807 Cadillac St.
7658	1808 Cadillac St.
7659	1811 Cadillac St.
7660	1812 Cadillac St.
7661	1815 Cadillac St.
7662	1816 Cadillac St.
7663	1819 Cadillac St.
7664	1900 Cadillac St.
7665	1901 Cadillac St.
7666	1904 Cadillac St.
7667	1905 Cadillac St.
7668	1908 Cadillac St.
7669	1909 Cadillac St.
7670	1912 Cadillac St.
7671	1913 Cadillac St.
7672	1916 Cadillac St.
7673	1917 Cadillac St.
7674	2001 Cadillac St.
7675	2006 Cadillac St.
7676	2007 Cadillac St.
7677	2010 Cadillac St.
7678	2011 Cadillac St.
7679	2014 Cadillac St.
7680	2015 Cadillac St.

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7681	2018 Cadillac St.
7682	2019 Cadillac St.
7683	2022 Cadillac St.
7684	2023 Cadillac St.
7685	2026 Cadillac St.
7686	2027 Cadillac St.
7687	2030 Cadillac St.
7688	2031 Cadillac St.
7689	2034 Cadillac St.
7690	2037 Cadillac St.
7691	2038 Cadillac St.
7692	2042 Cadillac St.
7693	2100 Cadillac St.
7694	2101 Cadillac St.
7695	2104 Cadillac St.
7696	2107 Cadillac St.
7697	2108 Cadillac St.
7698	2111 Cadillac St.
7699	2112 Cadillac St.
7700	2115 Cadillac St.
7701	2200 Cadillac St.
7702	2201 Cadillac St.
7703	2204 Cadillac St.
7704	2205 Cadillac St.
7705	2208 Cadillac St.
7706	2209 Cadillac St.
7707	2212 Cadillac St.
7708	2213 Cadillac St.
7709	2216 Cadillac St.
7710	2217 Cadillac St.
7711	2221 Cadillac St.
7712	1007 Caldwell Ave.
7713	1101 Caldwell Ave.
7714	1202 Caldwell Ave.
7715	1206 Caldwell Ave.
7716	1207 Caldwell Ave.
7717	1210 Caldwell Ave.
7718	1215 Caldwell Ave.
7719	1218 Caldwell Ave.
7720	1223 Caldwell Ave.
7721	1230 Caldwell Ave.
7722	1231 Caldwell Ave.
7723	1235 Caldwell Ave.
7724	1238 Caldwell Ave.
7725	1306 Caldwell Ave.
7726	1309 Caldwell Ave.
7727	1310 Caldwell Ave.
7728	1314 Caldwell Ave.

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7729	1317 Caldwell Ave.
7730	1318 Caldwell Ave.
7731	1321 Caldwell Ave.
7732	1322 Caldwell Ave.
7733	1326 Caldwell Ave.
7734	1330 Caldwell Ave.
7735	1334 Caldwell Ave.
7736	1335 Caldwell Ave.
7737	1340 Caldwell Ave.
7738	1401 Caldwell Ave.
7739	1406 Caldwell Ave.
7740	1409 Caldwell Ave.
7741	1410 Caldwell Ave.
7742	1411 Calumet St.
7743	1416 Calumet St.
7744	1602 Calumet St.
7745	1616 Calumet St.
7746	2001 Calumet St.
7747	2007 Calumet St.
7748	2008 Calumet St.
7749	2013 Calumet St.
7750	2014 Calumet St.
7751	2017 Calumet St.
7752	2020 Calumet St.
7753	2025 Calumet St.
7754	2026 Calumet St.
7755	2101 Calumet St.
7756	2102 Calumet St.
7757	2107 Calumet St.
7758	2108 Calumet St.
7759	2113 Calumet St.
7760	2116 Calumet St.
7761	2307 Calumet St.
7762	2310 Calumet St.
7763	2311 Calumet St.
7764	2315 Calumet St.
7765	2316 Calumet St.
7766	2319 Calumet St.
7767	2322 Calumet St.
7768	2401 Calumet St.
7769	2402 Calumet St.
7770	2405 Calumet St.
7771	2408 Calumet St.
7772	2409 Calumet St.
7773	2413 Calumet St.
7774	2417 Calumet St.
7775	2421 Calumet St.
7776	1802 Cambridge Ave.

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7777	1810 Cambridge Ave.
7778	1816 Cambridge Ave.
7779	1822 Cambridge Ave.
7780	1901 Cambridge Ave.
7781	1902 Cambridge Ave.
7782	1910 Cambridge Ave.
7783	1911 Cambridge Ave.
7784	1918 Cambridge Ave.
7785	1919 Cambridge Ave.
7786	1926 Cambridge Ave.
7787	1934 Cambridge Ave.
7788	2002 Cambridge Ave.
7789	2010 Cambridge Ave.
7790	2426 Camden Ave.
7791	2502 Camden Ave.
7792	2510 Camden Ave.
7793	2514 Camden Ave.
7794	2518 Camden Ave.
7795	2522 Camden Ave.
7796	2602 Camden Ave.
7797	2701 Camden Ave.
7798	2801 Camden Ave.
7799	2802 Camden Ave.
7800	2806 Camden Ave.
7801	2807 Camden Ave.
7802	2813 Camden Ave.
7803	2819 Camden Ave.
7804	2902 Camden Ave.
7805	2910 Camden Ave.
7806	3009 Camden Ave.
7807	3101 Camden Ave.
7808	3106 Camden Ave.
7809	3107 Camden Ave.
7810	3108 Camden Ave.
7811	3115 Camden Ave.
7812	3116 Camden Ave.
7813	3119 Camden Ave.
7814	3202 Camden Ave.
7815	3203 Camden Ave.
7816	3207 Camden Ave.
7817	3208 Camden Ave.
7818	3602 Camden Ave.
7819	4501 Camden Ave.
7820	4602 Camden Ave.
7821	1240 Campau Ave.
7822	511 Campbell St.
7823	515 Campbell St.
7824	519 Campbell St.

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7825	523 Campbell St.
7826	611 Campbell St.
7827	612 Campbell St.
7828	615 Campbell St.
7829	616 Campbell St.
7830	620 Campbell St.
7831	621 Campbell St.
7832	624 Campbell St.
7833	627 Campbell St.
7834	631 Campbell St.
7835	632 Campbell St.
7836	636 Campbell St.
7837	637 Campbell St.
7838	640 Campbell St.
7839	643 Campbell St.
7840	644 Campbell St.
7841	650 Campbell St.
7842	701 Campbell St.
7843	702 Campbell St.
7844	706 Campbell St.
7845	709 Campbell St.
7846	710 Campbell St.
7847	713 Campbell St.
7848	714 Campbell St.
7849	717 Campbell St.
7850	718 Campbell St.
7851	721 Campbell St.
7852	722 Campbell St.
7853	725 Campbell St.
7854	726 Campbell St.
7855	729 Campbell St.
7856	730 Campbell St.
7857	733 Campbell St.
7858	734 Campbell St.
7859	737 Campbell St.
7860	738 Campbell St.
7861	741 Campbell St.
7862	742 Campbell St.
7863	745 Campbell St.
7864	746 Campbell St.
7865	749 Campbell St.
7866	750 Campbell St.
7867	801 Campbell St.
7868	802 Campbell St.
7869	805 Campbell St.
7870	806 Campbell St.
7871	809 Campbell St.
7872	810 Campbell St.

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7873	814 Campbell St.
7874	817 Campbell St.
7875	822 Campbell St.
7876	825 Campbell St.
7877	826 Campbell St.
7878	829 Campbell St.
7879	830 Campbell St.
7880	833 Campbell St.
7881	834 Campbell St.
7882	841 Campbell St.
7883	842 Campbell St.
7884	845 Campbell St.
7885	846 Campbell St.
7886	849 Campbell St.
7887	854 Campbell St.
7888	857 Campbell St.
7889	902 Campbell St.
7890	915 Campbell St.
7891	920 Campbell St.
7892	923 Campbell St.
7893	924 Campbell St.
7894	927 Campbell St.
7895	934 Campbell St.
7896	939 Campbell St.
7897	940 Campbell St.
7898	944 Campbell St.
7899	947 Campbell St.
7900	952 Campbell St.
7901	1011 Campbell St.
7902	1015 Campbell St.
7903	1023 Campbell St.
7904	1028 Campbell St.
7905	1031 Campbell St.
7906	1032 Campbell St.
7907	1035 Campbell St.
7908	1040 Campbell St.
7909	1043 Campbell St.
7910	1044 Campbell St.
7911	1102 Campbell St.
7912	1109 Campbell St.
7913	1113 Campbell St.
7914	1114 Campbell St.
7915	1117 Campbell St.
7916	1210 Campbell St.
7917	1211 Campbell St.
7918	1213 Campbell St.
7919	1216 Campbell St.
7920	1220 Campbell St.

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7921	1223 Campbell St.
7922	1224 Campbell St.
7923	1227 Campbell St.
7924	1228 Campbell St.
7925	1231 Campbell St.
7926	1232 Campbell St.
7927	1237 Campbell St.
7928	1301 Campbell St.
7929	1302 Campbell St.
7930	1305 Campbell St.
7931	1306 Campbell St.
7932	1309 Campbell St.
7933	1311 Canniff St.
7934	1313 Canniff St.
7935	1401 Canniff St.
7936	1402 Canniff St.
7937	1405 Canniff St.
7938	1409 Canniff St.
7939	1414 Canniff St.
7940	1417 Canniff St.
7941	1421 Canniff St.
7942	1501 Canniff St.
7943	1502 Canniff St.
7944	1505 Canniff St.
7945	1506 Canniff St.
7946	1509 Canniff St.
7947	1510 Canniff St.
7948	1604 Canniff St.
7949	1620 Canniff St.
7950	1624 Canniff St.
7951	1628 Canniff St.
7952	1702 Canniff St.
7953	1706 Canniff St.
7954	1710 Canniff St.
7955	1805 Canniff St.
7956	1806 Canniff St.
7957	1809 Canniff St.
7958	1901 Canniff St.
7959	1902 Canniff St.
7960	1907 Canniff St.
7961	1908 Canniff St.
7962	1912 Canniff St.
7963	1913 Canniff St.
7964	1916 Canniff St.
7965	1917 Canniff St.
7966	1920 Canniff St.
7967	1921 Canniff St.
7968	2001 Canniff St.

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7969	2002 Canniff St.
7970	2005 Canniff St.
7971	2006 Canniff St.
7972	2009 Canniff St.
7973	2010 Canniff St.
7974	2013 Canniff St.
7975	2014 Canniff St.
7976	2018 Canniff St.
7977	2105 Canniff St.
7978	2106 Canniff St.
7979	2109 Canniff St.
7980	2110 Canniff St.
7981	2113 Canniff St.
7982	2114 Canniff St.
7983	2117 Canniff St.
7984	2118 Canniff St.
7985	2121 Canniff St.
7986	2122 Canniff St.
7987	2201 Canniff St.
7988	2202 Canniff St.
7989	2205 Canniff St.
7990	2206 Canniff St.
7991	2209 Canniff St.
7992	2210 Canniff St.
7993	2213 Canniff St.
7994	2214 Canniff St.
7995	2217 Canniff St.
7996	2218 Canniff St.
7997	2221 Canniff St.
7998	2222 Canniff St.
7999	2225 Canniff St.
8000	2301 Canniff St.
8001	2302 Canniff St.
8002	2305 Canniff St.
8003	2308 Canniff St.
8004	2309 Canniff St.
8005	2313 Canniff St.
8006	2317 Canniff St.
8007	2320 Canniff St.
8008	2321 Canniff St.
8009	2013 Canterbury Ln.
8010	4701 Canterbury Ln.
8011	4702 Canterbury Ln.
8012	4707 Canterbury Ln.
8013	4713 Canterbury Ln.
8014	4717 Canterbury Ln.
8015	4718 Canterbury Ln.
8016	4722 Canterbury Ln.

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8017	4723 Canterbury Ln.
8018	4726 Canterbury Ln.
8019	4729 Canterbury Ln.
8020	4730 Canterbury Ln.
8021	4734 Canterbury Ln.
8022	4801 Canterbury Ln.
8023	4802 Canterbury Ln.
8024	4806 Canterbury Ln.
8025	4807 Canterbury Ln.
8026	4810 Canterbury Ln.
8027	4813 Canterbury Ln.
8028	4814 Canterbury Ln.
8029	4818 Canterbury Ln.
8030	4819 Canterbury Ln.
8031	4901 Canterbury Ln.
8032	4902 Canterbury Ln.
8033	4905 Canterbury Ln.
8034	4906 Canterbury Ln.
8035	4911 Canterbury Ln.
8036	4912 Canterbury Ln.
8037	4918 Canterbury Ln.
8038	4924 Canterbury Ln.
8039	4209 Carlton St.
8040	4213 Carlton St.
8041	4214 Carlton St.
8042	4301 Carlton St.
8043	4302 Carlton St.
8044	4307 Carlton St.
8045	4309 Carlton St.
8046	4310 Carlton St.
8047	4313 Carlton St.
8048	4317 Carlton St.
8049	4318 Carlton St.
8050	4401 Carlton St.
8051	4405 Carlton St.
8052	4511 Carlton St.
8053	4516 Carlton St.
8054	4519 Carlton St.
8055	4520 Carlton St.
8056	4523 Carlton St.
8057	4524 Carlton St.
8058	4602 Carlton St.
8059	4605 Carlton St.
8060	4606 Carlton St.
8061	4609 Carlton St.
8062	1701 Carmanbrook Pkwy.
8063	1709 Carmanbrook Pkwy.
8064	1713 Carmanbrook Pkwy.

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8065	1717 Carmanbrook Pkwy.
8066	1723 Carmanbrook Pkwy.
8067	1729 Carmanbrook Pkwy.
8068	1735 Carmanbrook Pkwy.
8069	1736 Carmanbrook Pkwy.
8070	1741 Carmanbrook Pkwy.
8071	1744 Carmanbrook Pkwy.
8072	1747 Carmanbrook Pkwy.
8073	1748 Carmanbrook Pkwy.
8074	1801 Carmanbrook Pkwy.
8075	1802 Carmanbrook Pkwy.
8076	1806 Carmanbrook Pkwy.
8077	1807 Carmanbrook Pkwy.
8078	1810 Carmanbrook Pkwy.
8079	1813 Carmanbrook Pkwy.
8080	1814 Carmanbrook Pkwy.
8081	1818 Carmanbrook Pkwy.
8082	1819 Carmanbrook Pkwy.
8083	1822 Carmanbrook Pkwy.
8084	1825 Carmanbrook Pkwy.
8085	1901 Carmanbrook Pkwy.
8086	1902 Carmanbrook Pkwy.
8087	1906 Carmanbrook Pkwy.
8088	1907 Carmanbrook Pkwy.
8089	1910 Carmanbrook Pkwy.
8090	1911 Carmanbrook Pkwy.
8091	1914 Carmanbrook Pkwy.
8092	1915 Carmanbrook Pkwy.
8093	1918 Carmanbrook Pkwy.
8094	1919 Carmanbrook Pkwy.
8095	1922 Carmanbrook Pkwy.
8096	1923 Carmanbrook Pkwy.
8097	1927 Carmanbrook Pkwy.
8098	1930 Carmanbrook Pkwy.
8099	1931 Carmanbrook Pkwy.
8100	1935 Carmanbrook Pkwy.
8101	1939 Carmanbrook Pkwy.
8102	1943 Carmanbrook Pkwy.
8103	124 Carpenter Rd., E.
8104	134 Carpenter Rd., E.
8105	140 Carpenter Rd., E.
8106	202 Carpenter Rd., E.
8107	210 Carpenter Rd., E.
8108	222 Carpenter Rd., E.
8109	226 Carpenter Rd., E.
8110	254 Carpenter Rd., E.
8111	302 Carpenter Rd., E.
8112	308 Carpenter Rd., E.

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8113	312 Carpenter Rd., E.
8114	318 Carpenter Rd., E.
8115	322 Carpenter Rd., E.
8116	328 Carpenter Rd., E.
8117	332 Carpenter Rd., E.
8118	336 Carpenter Rd., E.
8119	342 Carpenter Rd., E.
8120	346 Carpenter Rd., E.
8121	352 Carpenter Rd., E.
8122	358 Carpenter Rd., E.
8123	402 Carpenter Rd., E.
8124	408 Carpenter Rd., E.
8125	414 Carpenter Rd., E.
8126	528 Carpenter Rd., E.
8127	608 Carpenter Rd., E.
8128	608 Carpenter Rd., E.
8129	634 Carpenter Rd., E.
8130	670 Carpenter Rd., E.
8131	742 Carpenter Rd., E.
8132	746 Carpenter Rd., E.
8133	750 Carpenter Rd., E.
8134	754 Carpenter Rd., E.
8135	762 Carpenter Rd., E.
8136	766 Carpenter Rd., E.
8137	770 Carpenter Rd., E.
8138	774 Carpenter Rd., E.
8139	802 Carpenter Rd., E.
8140	806 Carpenter Rd., E.
8141	814 Carpenter Rd., E.
8142	818 Carpenter Rd., E.
8143	822 Carpenter Rd., E.
8144	906 Carpenter Rd., E.
8145	914 Carpenter Rd., E.
8146	926 Carpenter Rd., E.
8147	930 Carpenter Rd., E.
8148	942 Carpenter Rd., E.
8149	946 Carpenter Rd., E.
8150	1066 Carpenter Rd., E.
8151	1312 Carpenter Rd., E.
8152	1510 Carpenter Rd., E.
8153	1720 Carpenter Rd., E.
8154	3162 Carpenter Rd., E.
8155	1006 Carpenter Rd., E.
8156	1050 Carpenter Rd., E.
8157	1066 Carpenter Rd., E.
8158	1162 Carpenter Rd., E.
8159	1166 Carpenter Rd., E.
8160	1170 Carpenter Rd., E.

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8161	1186 Carpenter Rd., E.
8162	1190 Carpenter Rd., E.
8163	1210 Carpenter Rd., E.
8164	1214 Carpenter Rd., E.
8165	1226 Carpenter Rd., E.
8166	1246 Carpenter Rd., E.
8167	1302 Carpenter Rd., E.
8168	1306 Carpenter Rd., E.
8169	1310 Carpenter Rd., E.
8170	1420 Carpenter Rd., E.
8171	1510 Carpenter Rd., E.
8172	1514 Carpenter Rd., E.
8173	1518 Carpenter Rd., E.
8174	1520 Carpenter Rd., E.
8175	1602 Carpenter Rd., E.
8176	1716 Carpenter Rd., E.
8177	1720 Carpenter Rd., E.
8178	1828 Carpenter Rd., E.
8179	1902 Carpenter Rd., E.
8180	1906 Carpenter Rd., E.
8181	1910 Carpenter Rd., E.
8182	1914 Carpenter Rd., E.
8183	1918 Carpenter Rd., E.
8184	1926 Carpenter Rd., E.
8185	1930 Carpenter Rd., E.
8186	2014 Carpenter Rd., E.
8187	2102 Carpenter Rd., E.
8188	2106 Carpenter Rd., E.
8189	2114 Carpenter Rd., E.
8190	2118 Carpenter Rd., E.
8191	2122 Carpenter Rd., E.
8192	2202 Carpenter Rd., E.
8193	2206 Carpenter Rd., E.
8194	3052 Carpenter Rd., E.
8195	3162 Carpenter Rd., E.
8196	3170 Carpenter Rd., E.
8197	3180 Carpenter Rd., E.
8198	101 Carpenter Rd., W.
8199	201 Carpenter Rd., W.
8200	203 Carpenter Rd., W.
8201	301 Carpenter Rd., W.
8202	321 Carpenter Rd., W.
8203	325 Carpenter Rd., W.
8204	401 Carpenter Rd., W.
8205	409 Carpenter Rd., W.
8206	413 Carpenter Rd., W.
8207	511 Carpenter Rd., W.
8208	511 Carpenter Rd., W.

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8209	517 Carpenter Rd., W.
8210	517 Carpenter Rd., W.
8211	523 Carpenter Rd., W.
8212	523 Carpenter Rd., W.
8213	601 Carpenter Rd., W.
8214	605 Carpenter Rd., W.
8215	609 Carpenter Rd., W.
8216	613 Carpenter Rd., W.
8217	617 Carpenter Rd., W.
8218	629 Carpenter Rd., W.
8219	641 Carpenter Rd., W.
8220	641 Carpenter Rd., W.
8221	705 Carpenter Rd., W.
8222	815 Carpenter Rd., W.
8223	911 Carpenter Rd., W.
8224	923 Carpenter Rd., W.
8225	1001 Carpenter Rd., W.
8226	1015 Carpenter Rd., W.
8227	1101 Carpenter Rd., W.
8228	1213 Carpenter Rd., W.
8229	1411 Carpenter Rd., W.
8230	1601 Carpenter Rd., W.
8231	1735 Carpenter Rd., W.
8232	1851 Carpenter Rd., W.
8233	2001 Carpenter Rd., W.
8234	2021 Carpenter Rd., W.
8235	2138 Carpenter Rd., W.
8236	2201 Carpenter Rd., W.
8237	2201 Carpenter Rd., W.
8238	2201 Carpenter Rd., W.
8239	2229 Carpenter Rd., W.
8240	2329 Carpenter Rd., W.
8241	2481 Carpenter Rd., W.
8242	2732 Carr St.
8243	2812 Carr St.
8244	2902 Carr St.
8245	2914 Carr St.
8246	2920 Carr St.
8247	2926 Carr St.
8248	2952 Carr St.
8249	2957 Carr St.
8250	2958 Carr St.
8251	2964 Carr St.
8252	3002 Carr St.
8253	3005 Carr St.
8254	3008 Carr St.
8255	3014 Carr St.
8256	509 Carrill Ct.

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8257	516 Carrill Ct.
8258	519 Carrill Ct.
8259	608 Carrill Ct.
8260	609 Carrill Ct.
8261	612 Carrill Ct.
8262	613 Carrill Ct.
8263	615 Carrill Ct.
8264	616 Carrill Ct.
8265	617 Carrill Ct.
8266	621 Carrill Ct.
8267	1010 Carson Ct.
8268	1902 Cartier St.
8269	1908 Cartier St.
8270	1911 Cartier St.
8271	1912 Cartier St.
8272	1915 Cartier St.
8273	1916 Cartier St.
8274	1919 Cartier St.
8275	1920 Cartier St.
8276	1924 Cartier St.
8277	1928 Cartier St.
8278	2001 Cartier St.
8279	2002 Cartier St.
8280	2007 Cartier St.
8281	2008 Cartier St.
8282	2011 Cartier St.
8283	2014 Cartier St.
8284	2015 Cartier St.
8285	2019 Cartier St.
8286	2020 Cartier St.
8287	2023 Cartier St.
8288	2026 Cartier St.
8289	2029 Cartier St.
8290	2030 Cartier St.
8291	2034 Cartier St.
8292	2038 Cartier St.
8293	2039 Cartier St.
8294	2042 Cartier St.
8295	2046 Cartier St.
8296	2050 Cartier St.
8297	2054 Cartier St.
8298	2058 Cartier St.
8299	2062 Cartier St.
8300	2066 Cartier St.
8301	2070 Cartier St.
8302	2106 Cartier St.
8303	2110 Cartier St.
8304	2111 Cartier St.

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8305	2115 Cartier St.
8306	2116 Cartier St.
8307	2121 Cartier St.
8308	2122 Cartier St.
8309	2125 Cartier St.
8310	2128 Cartier St.
8311	2129 Cartier St.
8312	2133 Cartier St.
8313	2201 Cartier St.
8314	2205 Cartier St.
8315	2209 Cartier St.
8316	2213 Cartier St.
8317	401 Carton St.
8318	402 Carton St.
8319	406 Carton St.
8320	410 Carton St.
8321	414 Carton St.
8322	417 Carton St.
8323	418 Carton St.
8324	420 Carton St.
8325	423 Carton St.
8326	425 Carton St.
8327	426 Carton St.
8328	501 Carton St.
8329	502 Carton St.
8330	505 Carton St.
8331	506 Carton St.
8332	509 Carton St.
8333	514 Carton St.
8334	517 Carton St.
8335	518 Carton St.
8336	525 Carton St.
8337	601 Carton St.
8338	602 Carton St.
8339	606 Carton St.
8340	607 Carton St.
8341	609 Carton St.
8342	613 Carton St.
8343	614 Carton St.
8344	617 Carton St.
8345	618 Carton St.
8346	622 Carton St.
8347	623 Carton St.
8348	625 Carton St.
8349	626 Carton St.
8350	633 Carton St.
8351	638 Carton St.
8352	641 Carton St.

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8353	711 Carton St.
8354	712 Carton St.
8355	715 Carton St.
8356	716 Carton St.
8357	719 Carton St.
8358	720 Carton St.
8359	723 Carton St.
8360	724 Carton St.
8361	727 Carton St.
8362	728 Carton St.
8363	731 Carton St.
8364	732 Carton St.
8365	735 Carton St.
8366	736 Carton St.
8367	739 Carton St.
8368	740 Carton St.
8369	743 Carton St.
8370	744 Carton St.
8371	747 Carton St.
8372	748 Carton St.
8373	751 Carton St.
8374	754 Carton St.
8375	755 Carton St.
8376	756 Carton St.
8377	759 Carton St.
8378	760 Carton St.
8379	763 Carton St.
8380	764 Carton St.
8381	767 Carton St.
8382	768 Carton St.
8383	801 Carton St.
8384	802 Carton St.
8385	806 Carton St.
8386	809 Carton St.
8387	810 Carton St.
8388	813 Carton St.
8389	814 Carton St.
8390	816 Carton St.
8391	817 Carton St.
8392	821 Carton St.
8393	822 Carton St.
8394	825 Carton St.
8395	826 Carton St.
8396	829 Carton St.
8397	830 Carton St.
8398	836 Carton St.
8399	839 Carton St.
8400	901 Carton St.

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8401	902 Carton St.
8402	905 Carton St.
8403	909 Carton St.
8404	910 Carton St.
8405	913 Carton St.
8406	914 Carton St.
8407	917 Carton St.
8408	918 Carton St.
8409	921 Carton St.
8410	922 Carton St.
8411	926 Carton St.
8412	929 Carton St.
8413	3409 Cassius St.
8414	3410 Cassius St.
8415	3414 Cassius St.
8416	3415 Cassius St.
8417	3417 Cassius St.
8418	3418 Cassius St.
8419	3421 Cassius St.
8420	3422 Cassius St.
8421	3501 Cassius St.
8422	3502 Cassius St.
8423	3505 Cassius St.
8424	3506 Cassius St.
8425	3509 Cassius St.
8426	3510 Cassius St.
8427	3513 Cassius St.
8428	3517 Cassius St.
8429	3601 Cassius St.
8430	3602 Cassius St.
8431	3605 Cassius St.
8432	3606 Cassius St.
8433	3609 Cassius St.
8434	3610 Cassius St.
8435	3613 Cassius St.
8436	3614 Cassius St.
8437	3617 Cassius St.
8438	3618 Cassius St.
8439	3621 Cassius St.
8440	3625 Cassius St.
8441	3701 Cassius St.
8442	3702 Cassius St.
8443	3705 Cassius St.
8444	3706 Cassius St.
8445	3709 Cassius St.
8446	3710 Cassius St.
8447	3718 Cassius St.
8448	1901 Castle Ln.

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8449	1905 Castle Ln.
8450	1906 Castle Ln.
8451	1909 Castle Ln.
8452	1910 Castle Ln.
8453	1913 Castle Ln.
8454	1914 Castle Ln.
8455	1917 Castle Ln.
8456	1918 Castle Ln.
8457	1921 Castle Ln.
8458	1922 Castle Ln.
8459	1925 Castle Ln.
8460	1926 Castle Ln.
8461	2001 Castle Ln.
8462	2002 Castle Ln.
8463	2005 Castle Ln.
8464	2006 Castle Ln.
8465	2009 Castle Ln.
8466	2010 Castle Ln.
8467	2013 Castle Ln.
8468	2014 Castle Ln.
8469	2017 Castle Ln.
8470	2018 Castle Ln.
8471	2021 Castle Ln.
8472	2022 Castle Ln.
8473	2101 Castle Ln.
8474	2102 Castle Ln.
8475	2105 Castle Ln.
8476	2109 Castle Ln.
8477	2110 Castle Ln.
8478	2113 Castle Ln.
8479	2117 Castle Ln.
8480	2118 Castle Ln.
8481	6302 Cecil Dr.
8482	6305 Cecil Dr.
8483	6309 Cecil Dr.
8484	6310 Cecil Dr.
8485	6313 Cecil Dr.
8486	6314 Cecil Dr.
8487	6317 Cecil Dr.
8488	6401 Cecil Dr.
8489	6402 Cecil Dr.
8490	6405 Cecil Dr.
8491	6406 Cecil Dr.
8492	6410 Cecil Dr.
8493	6414 Cecil Dr.
8494	6501 Cecil Dr.
8495	6502 Cecil Dr.
8496	6506 Cecil Dr.

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8497	6509 Cecil Dr.
8498	6513 Cecil Dr.
8499	6514 Cecil Dr.
8500	6517 Cecil Dr.
8501	6521 Cecil Dr.
8502	6601 Cecil Dr.
8503	6602 Cecil Dr.
8504	6605 Cecil Dr.
8505	6606 Cecil Dr.
8506	6609 Cecil Dr.
8507	6610 Cecil Dr.
8508	6613 Cecil Dr.
8509	6614 Cecil Dr.
8510	6617 Cecil Dr.
8511	6618 Cecil Dr.
8512	6621 Cecil Dr.
8513	6622 Cecil Dr.
8514	6701 Cecil Dr.
8515	6702 Cecil Dr.
8516	6705 Cecil Dr.
8517	6706 Cecil Dr.
8518	6714 Cecil Dr.
8519	6722 Cecil Dr.
8520	6723 Cecil Dr.
8521	6727 Cecil Dr.
8522	6731 Cecil Dr.
8523	6735 Cecil Dr.
8524	6738 Cecil Dr.
8525	6739 Cecil Dr.
8526	6743 Cecil Dr.
8527	6801 Cecil Dr.
8528	6807 Cecil Dr.
8529	6808 Cecil Dr.
8530	6814 Cecil Dr.
8531	6819 Cecil Dr.
8532	6825 Cecil Dr.
8533	6831 Cecil Dr.
8534	6837 Cecil Dr.
8535	6902 Cecil Dr.
8536	6906 Cecil Dr.
8537	6907 Cecil Dr.
8538	6910 Cecil Dr.
8539	6913 Cecil Dr.
8540	6916 Cecil Dr.
8541	6919 Cecil Dr.
8542	6924 Cecil Dr.
8543	6928 Cecil Dr.
8544	7001 Cecil Dr.

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8545	7002 Cecil Dr.
8546	7005 Cecil Dr.
8547	7006 Cecil Dr.
8548	7009 Cecil Dr.
8549	7010 Cecil Dr.
8550	7013 Cecil Dr.
8551	7014 Cecil Dr.
8552	7017 Cecil Dr.
8553	7018 Cecil Dr.
8554	7021 Cecil Dr.
8555	7022 Cecil Dr.
8556	7025 Cecil Dr.
8557	7026 Cecil Dr.
8558	7029 Cecil Dr.
8559	7030 Cecil Dr.
8560	909 Cedar St.
8561	912 Cedar St.
8562	917 Cedar St.
8563	918 Cedar St.
8564	921 Cedar St.
8565	924 Cedar St.
8566	927 Cedar St.
8567	931 Cedar St.
8568	937 Cedar St.
8569	944 Cedar St.
8570	1007 Cedar St.
8571	1011 Cedar St.
8572	1013 Cedar St.
8573	1017 Cedar St.
8574	1401 Center Rd., N.
8575	1431 Center Rd., N.
8576	1511 Center Rd., N.
8577	1521 Center Rd., N.
8578	1601 Center Rd., N.
8579	1635 Center Rd., N.
8580	1701 Center Rd., N.
8581	1711 Center Rd., N.
8582	1731 Center Rd., N.
8583	1811 Center Rd., N.
8584	2001 Center Rd., N.
8585	2111 Center Rd., N.
8586	2211 Center Rd., N.
8587	2801 Center Rd., N.
8588	2803 Center Rd., N.
8589	2805 Center Rd., N.
8590	2905 Center Rd., N.
8591	2917 Center Rd., N.
8592	3011 Center Rd., N.

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8593	3011 Center Rd., N.
8594	3011 Center Rd., N.
8595	3109 Center Rd., N.
8596	3123 Center Rd., N.
8597	3217 Center Rd., N.
8598	3221 Center Rd., N.
8599	3301 Center Rd., N.
8600	3311 Center Rd., N.
8601	3401 Center Rd., N.
8602	3421 Center Rd., N.
8603	3435 Center Rd., N.
8604	3445 Center Rd., N.
8605	3511 Center Rd., N.
8606	3523 Center Rd., N.
8607	3609 Center Rd., N.
8608	3615 Center Rd., N.
8609	3703 Center Rd., N.
8610	3807 Center Rd., N.
8611	120 Center Rd., S.
8612	120 Center Rd., S.
8613	120 Center Rd., S.
8614	406 Center Rd., S.
8615	408 Center Rd., S.
8616	524 Center Rd., S.
8617	530 Center Rd., S.
8618	530 Center Rd., S.
8619	680 Center Rd., S.
8620	680 Center Rd., S.
8621	750 Center Rd., S.
8622	750 Center Rd., S.
8623	750 Center Rd., S.
8624	750 Center Rd., S.
8625	808 Center Rd., S.
8626	808 Center Rd., S.
8627	808 Center Rd., S.
8628	808 Center Rd., S.
8629	922 Center Rd., S.
8630	932 Center Rd., S.
8631	1700 Center Rd., S.
8632	1700 Center Rd., S.
8633	2020 Center Rd., S.
8634	2020 Center Rd., S.
8635	2040 Center Rd., S.
8636	401 Chalmers St.
8637	410 Chalmers St.
8638	413 Chalmers St.
8639	414 Chalmers St.
8640	418 Chalmers St.

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8641	421 Chalmers St.
8642	422 Chalmers St.
8643	425 Chalmers St.
8644	426 Chalmers St.
8645	433 Chalmers St.
8646	434 Chalmers St.
8647	505 Chalmers St.
8648	514 Chalmers St.
8649	515 Chalmers St.
8650	518 Chalmers St.
8651	519 Chalmers St.
8652	522 Chalmers St.
8653	523 Chalmers St.
8654	529 Chalmers St.
8655	532 Chalmers St.
8656	533 Chalmers St.
8657	601 Chalmers St.
8658	604 Chalmers St.
8659	607 Chalmers St.
8660	610 Chalmers St.
8661	611 Chalmers St.
8662	614 Chalmers St.
8663	615 Chalmers St.
8664	618 Chalmers St.
8665	621 Chalmers St.
8666	622 Chalmers St.
8667	3201 Chambers St.
8668	3206 Chambers St.
8669	3207 Chambers St.
8670	3211 Chambers St.
8671	3214 Chambers St.
8672	3215 Chambers St.
8673	3218 Chambers St.
8674	3219 Chambers St.
8675	3222 Chambers St.
8676	3301 Chambers St.
8677	3305 Chambers St.
8678	3306 Chambers St.
8679	3309 Chambers St.
8680	3310 Chambers St.
8681	3314 Chambers St.
8682	3317 Chambers St.
8683	3318 Chambers St.
8684	3322 Chambers St.
8685	3325 Chambers St.
8686	3326 Chambers St.
8687	3401 Chambers St.
8688	3402 Chambers St.

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8689	3406 Chambers St.
8690	3409 Chambers St.
8691	3410 Chambers St.
8692	3414 Chambers St.
8693	3501 Chambers St.
8694	3509 Chambers St.
8695	3513 Chambers St.
8696	3517 Chambers St.
8697	3521 Chambers St.
8698	3525 Chambers St.
8699	3529 Chambers St.
8700	3530 Chambers St.
8701	3606 Chambers St.
8702	3617 Chambers St.
8703	3634 Chambers St.
8704	3634 Chambers St.
8705	201 Chandler Ave.
8706	202 Chandler Ave.
8707	207 Chandler Ave.
8708	208 Chandler Ave.
8709	212 Chandler Ave.
8710	213 Chandler Ave.
8711	216 Chandler Ave.
8712	219 Chandler Ave.
8713	301 Chandler Ave.
8714	302 Chandler Ave.
8715	305 Chandler Ave.
8716	306 Chandler Ave.
8717	310 Chandler Ave.
8718	411 Chandler Ave.
8719	412 Chandler Ave.
8720	416 Chandler Ave.
8721	419 Chandler Ave.
8722	420 Chandler Ave.
8723	423 Chandler Ave.
8724	424 Chandler Ave.
8725	432 Chandler Ave.
8726	511 Chandler Ave.
8727	514 Chandler Ave.
8728	515 Chandler Ave.
8729	518 Chandler Ave.
8730	519 Chandler Ave.
8731	522 Chandler Ave.
8732	523 Chandler Ave.
8733	526 Chandler Ave.
8734	527 Chandler Ave.
8735	530 Chandler Ave.
8736	601 Chandler Ave.

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8737	605 Chandler Ave.
8738	606 Chandler Ave.
8739	609 Chandler Ave.
8740	610 Chandler Ave.
8741	613 Chandler Ave.
8742	614 Chandler Ave.
8743	617 Chandler Ave.
8744	618 Chandler Ave.
8745	410 Chase St.
8746	512 Chase St.
8747	516 Chase St.
8748	520 Chase St.
8749	2005 Chateau Dr.
8750	2009 Chateau Dr.
8751	2010 Chateau Dr.
8752	2013 Chateau Dr.
8753	2017 Chateau Dr.
8754	2101 Chateau Dr.
8755	2102 Chateau Dr.
8756	2105 Chateau Dr.
8757	2109 Chateau Dr.
8758	2110 Chateau Dr.
8759	2113 Chateau Dr.
8760	2117 Chateau Dr.
8761	2201 Chateau Dr.
8762	2202 Chateau Dr.
8763	2205 Chateau Dr.
8764	2210 Chateau Dr.
8765	2301 Chateau Dr.
8766	702 Chatham Dr.
8767	707 Chatham Dr.
8768	711 Chatham Dr.
8769	714 Chatham Dr.
8770	715 Chatham Dr.
8771	719 Chatham Dr.
8772	801 Chatham Dr.
8773	807 Chatham Dr.
8774	808 Chatham Dr.
8775	813 Chatham Dr.
8776	814 Chatham Dr.
8777	817 Chatham Dr.
8778	821 Chatham Dr.
8779	825 Chatham Dr.
8780	826 Chatham Dr.
8781	829 Chatham Dr.
8782	1210 Chatham Dr.
8783	1211 Chatham Dr.
8784	1215 Chatham Dr.

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8785	1301 Chatham Dr.
8786	1305 Chatham Dr.
8787	1306 Chatham Dr.
8788	1311 Chatham Dr.
8789	1314 Chatham Dr.
8790	1315 Chatham Dr.
8791	1318 Chatham Dr.
8792	1319 Chatham Dr.
8793	1322 Chatham Dr.
8794	1323 Chatham Dr.
8795	1326 Chatham Dr.
8796	1327 Chatham Dr.
8797	1330 Chatham Dr.
8798	1401 Chatham Dr.
8799	1402 Chatham Dr.
8800	1409 Chatham Dr.
8801	1410 Chatham Dr.
8802	1415 Chatham Dr.
8803	1416 Chatham Dr.
8804	1419 Chatham Dr.
8805	1420 Chatham Dr.
8806	1423 Chatham Dr.
8807	1424 Chatham Dr.
8808	1427 Chatham Dr.
8809	1431 Chatham Dr.
8810	1801 Chelan St.
8811	1802 Chelan St.
8812	1815 Chelan St.
8813	1818 Chelan St.
8814	1819 Chelan St.
8815	1822 Chelan St.
8816	1823 Chelan St.
8817	1826 Chelan St.
8818	1827 Chelan St.
8819	1830 Chelan St.
8820	1831 Chelan St.
8821	1834 Chelan St.
8822	1835 Chelan St.
8823	1838 Chelan St.
8824	1842 Chelan St.
8825	1843 Chelan St.
8826	1846 Chelan St.
8827	1850 Chelan St.
8828	1851 Chelan St.
8829	1902 Chelan St.
8830	1905 Chelan St.
8831	1913 Chelan St.
8832	1914 Chelan St.

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8833	1917 Chelan St.
8834	1918 Chelan St.
8835	1925 Chelan St.
8836	1929 Chelan St.
8837	1930 Chelan St.
8838	1933 Chelan St.
8839	1936 Chelan St.
8840	1937 Chelan St.
8841	2007 Chelan St.
8842	2008 Chelan St.
8843	2013 Chelan St.
8844	2014 Chelan St.
8845	2017 Chelan St.
8846	2018 Chelan St.
8847	2021 Chelan St.
8848	2022 Chelan St.
8849	2025 Chelan St.
8850	2031 Chelan St.
8851	2032 Chelan St.
8852	2035 Chelan St.
8853	2036 Chelan St.
8854	2039 Chelan St.
8855	2040 Chelan St.
8856	2043 Chelan St.
8857	2047 Chelan St.
8858	2048 Chelan St.
8859	2051 Chelan St.
8860	2052 Chelan St.
8861	2057 Chelan St.
8862	2058 Chelan St.
8863	1615 Chelsea Cir.
8864	1701 Chelsea Cir.
8865	1702 Chelsea Cir.
8866	1706 Chelsea Cir.
8867	1710 Chelsea Cir.
8868	1713 Chelsea Cir.
8869	1718 Chelsea Cir.
8870	1721 Chelsea Cir.
8871	1724 Chelsea Cir.
8872	1801 Chelsea Cir.
8873	1802 Chelsea Cir.
8874	1805 Chelsea Cir.
8875	1810 Chelsea Cir.
8876	1819 Chelsea Cir.
8877	1820 Chelsea Cir.
8878	1825 Chelsea Cir.
8879	2814 Cherokee Ave.
8880	2818 Cherokee Ave.

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8881	2822 Cherokee Ave.
8882	2902 Cherokee Ave.
8883	2909 Cherokee Ave.
8884	2910 Cherokee Ave.
8885	2913 Cherokee Ave.
8886	2914 Cherokee Ave.
8887	2917 Cherokee Ave.
8888	2918 Cherokee Ave.
8889	3001 Cherokee Ave.
8890	3002 Cherokee Ave.
8891	3005 Cherokee Ave.
8892	3006 Cherokee Ave.
8893	3009 Cherokee Ave.
8894	3010 Cherokee Ave.
8895	3013 Cherokee Ave.
8896	3014 Cherokee Ave.
8897	3017 Cherokee Ave.
8898	3018 Cherokee Ave.
8899	3101 Cherokee Ave.
8900	3102 Cherokee Ave.
8901	3105 Cherokee Ave.
8902	3106 Cherokee Ave.
8903	3109 Cherokee Ave.
8904	3110 Cherokee Ave.
8905	3113 Cherokee Ave.
8906	3114 Cherokee Ave.
8907	3117 Cherokee Ave.
8908	3118 Cherokee Ave.
8909	3201 Cherokee Ave.
8910	3202 Cherokee Ave.
8911	3205 Cherokee Ave.
8912	3206 Cherokee Ave.
8913	3209 Cherokee Ave.
8914	3210 Cherokee Ave.
8915	3213 Cherokee Ave.
8916	3214 Cherokee Ave.
8917	3301 Cherokee Ave.
8918	3302 Cherokee Ave.
8919	3305 Cherokee Ave.
8920	3306 Cherokee Ave.
8921	3309 Cherokee Ave.
8922	3310 Cherokee Ave.
8923	3313 Cherokee Ave.
8924	3314 Cherokee Ave.
8925	3401 Cherokee Ave.
8926	3402 Cherokee Ave.
8927	3405 Cherokee Ave.
8928	3406 Cherokee Ave.

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8929	3409 Cherokee Ave.
8930	3410 Cherokee Ave.
8931	3413 Cherokee Ave.
8932	3414 Cherokee Ave.
8933	3417 Cherokee Ave.
8934	3418 Cherokee Ave.
8935	3501 Cherokee Ave.
8936	3502 Cherokee Ave.
8937	3505 Cherokee Ave.
8938	3506 Cherokee Ave.
8939	3509 Cherokee Ave.
8940	3510 Cherokee Ave.
8941	3513 Cherokee Ave.
8942	3514 Cherokee Ave.
8943	3517 Cherokee Ave.
8944	3518 Cherokee Ave.
8945	3521 Cherokee Ave.
8946	3601 Cherokee Ave.
8947	3602 Cherokee Ave.
8948	3605 Cherokee Ave.
8949	3606 Cherokee Ave.
8950	3609 Cherokee Ave.
8951	3610 Cherokee Ave.
8952	3613 Cherokee Ave.
8953	3614 Cherokee Ave.
8954	3617 Cherokee Ave.
8955	3618 Cherokee Ave.
8956	3701 Cherokee Ave.
8957	3702 Cherokee Ave.
8958	3705 Cherokee Ave.
8959	3706 Cherokee Ave.
8960	3709 Cherokee Ave.
8961	3710 Cherokee Ave.
8962	3807 Cherokee Ave.
8963	3808 Cherokee Ave.
8964	3813 Cherokee Ave.
8965	3814 Cherokee Ave.
8966	3817 Cherokee Ave.
8967	3821 Cherokee Ave.
8968	3901 Cherokee Ave.
8969	3905 Cherokee Ave.
8970	3908 Cherokee Ave.
8971	3914 Cherokee Ave.
8972	3918 Cherokee Ave.
8973	1414 Cherry St.
8974	1418 Cherry St.
8975	1504 Cherry St.
8976	1802 Cherrylawn Dr.

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8977	1805 Cherrylawn Dr.
8978	1806 Cherrylawn Dr.
8979	1809 Cherrylawn Dr.
8980	1810 Cherrylawn Dr.
8981	1813 Cherrylawn Dr.
8982	1814 Cherrylawn Dr.
8983	1817 Cherrylawn Dr.
8984	1818 Cherrylawn Dr.
8985	1821 Cherrylawn Dr.
8986	1822 Cherrylawn Dr.
8987	1825 Cherrylawn Dr.
8988	1826 Cherrylawn Dr.
8989	1829 Cherrylawn Dr.
8990	1830 Cherrylawn Dr.
8991	1901 Cherrylawn Dr.
8992	1902 Cherrylawn Dr.
8993	1905 Cherrylawn Dr.
8994	1906 Cherrylawn Dr.
8995	1909 Cherrylawn Dr.
8996	1910 Cherrylawn Dr.
8997	1913 Cherrylawn Dr.
8998	1914 Cherrylawn Dr.
8999	1917 Cherrylawn Dr.
9000	1918 Cherrylawn Dr.
9001	1921 Cherrylawn Dr.
9002	1922 Cherrylawn Dr.
9003	300 Chevrolet Ave., N.
9004	300 Chevrolet Ave., N.
9005	300 Chevrolet Ave., N.
9006	300 Chevrolet Ave., N.
9007	300 Chevrolet Ave., N.
9008	402 Chevrolet Ave., N.
9009	406 Chevrolet Ave., N.
9010	500 Chevrolet Ave., N.
9011	501 Chevrolet Ave., N.
9012	508 Chevrolet Ave., N.
9013	620 Chevrolet Ave., N.
9014	626 Chevrolet Ave., N.
9015	632 Chevrolet Ave., N.
9016	638 Chevrolet Ave., N.
9017	644 Chevrolet Ave., N.
9018	650 Chevrolet Ave., N.
9019	702 Chevrolet Ave., N.
9020	706 Chevrolet Ave., N.
9021	710 Chevrolet Ave., N.
9022	714 Chevrolet Ave., N.
9023	718 Chevrolet Ave., N.
9024	722 Chevrolet Ave., N.

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9025	726 Chevrolet Ave., N.
9026	730 Chevrolet Ave., N.
9027	734 Chevrolet Ave., N.
9028	750 Chevrolet Ave., N.
9029	751 Chevrolet Ave., N.
9030	756 Chevrolet Ave., N.
9031	757 Chevrolet Ave., N.
9032	760 Chevrolet Ave., N.
9033	761 Chevrolet Ave., N.
9034	764 Chevrolet Ave., N.
9035	765 Chevrolet Ave., N.
9036	768 Chevrolet Ave., N.
9037	769 Chevrolet Ave., N.
9038	772 Chevrolet Ave., N.
9039	773 Chevrolet Ave., N.
9040	777 Chevrolet Ave., N.
9041	800 Chevrolet Ave., N.
9042	801 Chevrolet Ave., N.
9043	804 Chevrolet Ave., N.
9044	805 Chevrolet Ave., N.
9045	808 Chevrolet Ave., N.
9046	809 Chevrolet Ave., N.
9047	812 Chevrolet Ave., N.
9048	813 Chevrolet Ave., N.
9049	816 Chevrolet Ave., N.
9050	817 Chevrolet Ave., N.
9051	820 Chevrolet Ave., N.
9052	821 Chevrolet Ave., N.
9053	824 Chevrolet Ave., N.
9054	825 Chevrolet Ave., N.
9055	829 Chevrolet Ave., N.
9056	850 Chevrolet Ave., N.
9057	853 Chevrolet Ave., N.
9058	854 Chevrolet Ave., N.
9059	857 Chevrolet Ave., N.
9060	858 Chevrolet Ave., N.
9061	861 Chevrolet Ave., N.
9062	862 Chevrolet Ave., N.
9063	865 Chevrolet Ave., N.
9064	866 Chevrolet Ave., N.
9065	869 Chevrolet Ave., N.
9066	870 Chevrolet Ave., N.
9067	874 Chevrolet Ave., N.
9068	878 Chevrolet Ave., N.
9069	901 Chevrolet Ave., N.
9070	902 Chevrolet Ave., N.
9071	906 Chevrolet Ave., N.
9072	907 Chevrolet Ave., N.

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9073	910 Chevrolet Ave., N.
9074	911 Chevrolet Ave., N.
9075	914 Chevrolet Ave., N.
9076	915 Chevrolet Ave., N.
9077	918 Chevrolet Ave., N.
9078	919 Chevrolet Ave., N.
9079	923 Chevrolet Ave., N.
9080	950 Chevrolet Ave., N.
9081	951 Chevrolet Ave., N.
9082	954 Chevrolet Ave., N.
9083	955 Chevrolet Ave., N.
9084	958 Chevrolet Ave., N.
9085	959 Chevrolet Ave., N.
9086	962 Chevrolet Ave., N.
9087	963 Chevrolet Ave., N.
9088	966 Chevrolet Ave., N.
9089	967 Chevrolet Ave., N.
9090	971 Chevrolet Ave., N.
9091	1001 Chevrolet Ave., N.
9092	1005 Chevrolet Ave., N.
9093	1009 Chevrolet Ave., N.
9094	1013 Chevrolet Ave., N.
9095	1017 Chevrolet Ave., N.
9096	1021 Chevrolet Ave., N.
9097	1025 Chevrolet Ave., N.
9098	1029 Chevrolet Ave., N.
9099	1033 Chevrolet Ave., N.
9100	1037 Chevrolet Ave., N.
9101	1041 Chevrolet Ave., N.
9102	1045 Chevrolet Ave., N.
9103	1049 Chevrolet Ave., N.
9104	1050 Chevrolet Ave., N.
9105	1053 Chevrolet Ave., N.
9106	1054 Chevrolet Ave., N.
9107	1057 Chevrolet Ave., N.
9108	1058 Chevrolet Ave., N.
9109	1062 Chevrolet Ave., N.
9110	1101 Chevrolet Ave., N.
9111	1107 Chevrolet Ave., N.
9112	1107 Chevrolet Ave., N.
9113	1111 Chevrolet Ave., N.
9114	1113 Chevrolet Ave., N.
9115	1113 Chevrolet Ave., N.
9116	1115 Chevrolet Ave., N.
9117	1117 Chevrolet Ave., N.
9118	1117 Chevrolet Ave., N.
9119	1120 Chevrolet Ave., N.
9120	1125 Chevrolet Ave., N.

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9121	1128 Chevrolet Ave., N.
9122	1129 Chevrolet Ave., N.
9123	1135 Chevrolet Ave., N.
9124	1151 Chevrolet Ave., N.
9125	1152 Chevrolet Ave., N.
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9128	1166 Chevrolet Ave., N.
9129	1201 Chevrolet Ave., N.
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9134	1260 Chevrolet Ave., N.
9135	1266 Chevrolet Ave., N.
9136	1310 Chevrolet Ave., N.
9137	1316 Chevrolet Ave., N.
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9143	1401 Chevrolet Ave., N.
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9151	1414 Chevrolet Ave., N.
9152	1418 Chevrolet Ave., N.
9153	1420 Chevrolet Ave., N.
9154	1422 Chevrolet Ave., N.
9155	1422 Chevrolet Ave., N.
9156	1426 Chevrolet Ave., N.
9157	1426 Chevrolet Ave., N.
9158	1430 Chevrolet Ave., N.
9159	1437 Chevrolet Ave., N.
9160	1438 Chevrolet Ave., N.
9161	1443 Chevrolet Ave., N.
9162	1444 Chevrolet Ave., N.
9163	1451 Chevrolet Ave., N.
9164	1457 Chevrolet Ave., N.
9165	1460 Chevrolet Ave., N.
9166	1463 Chevrolet Ave., N.
9167	1466 Chevrolet Ave., N.
9168	1501 Chevrolet Ave., N.

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9169	1502 Chevrolet Ave., N.
9170	1509 Chevrolet Ave., N.
9171	1510 Chevrolet Ave., N.
9172	1514 Chevrolet Ave., N.
9173	1515 Chevrolet Ave., N.
9174	1551 Chevrolet Ave., N.
9175	1556 Chevrolet Ave., N.
9176	1559 Chevrolet Ave., N.
9177	1562 Chevrolet Ave., N.
9178	1565 Chevrolet Ave., N.
9179	1601 Chevrolet Ave., N.
9180	1602 Chevrolet Ave., N.
9181	1609 Chevrolet Ave., N.
9182	1610 Chevrolet Ave., N.
9183	1615 Chevrolet Ave., N.
9184	1616 Chevrolet Ave., N.
9185	1651 Chevrolet Ave., N.
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9187	1652 Chevrolet Ave., N.
9188	1665 Chevrolet Ave., N.
9189	1680 Chevrolet Ave., N.
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9191	1710 Chevrolet Ave., N.
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9195	1718 Chevrolet Ave., N.
9196	1721 Chevrolet Ave., N.
9197	1722 Chevrolet Ave., N.
9198	1801 Chevrolet Ave., N.
9199	1802 Chevrolet Ave., N.
9200	1805 Chevrolet Ave., N.
9201	1809 Chevrolet Ave., N.
9202	1916 Chevrolet Ave., N.
9203	1919 Chevrolet Ave., N.
9204	1920 Chevrolet Ave., N.
9205	2001 Chevrolet Ave., N.
9206	2002 Chevrolet Ave., N.
9207	2005 Chevrolet Ave., N.
9208	2006 Chevrolet Ave., N.
9209	2009 Chevrolet Ave., N.
9210	2010 Chevrolet Ave., N.
9211	2013 Chevrolet Ave., N.
9212	2014 Chevrolet Ave., N.
9213	2017 Chevrolet Ave., N.
9214	2018 Chevrolet Ave., N.
9215	2101 Chevrolet Ave., N.
9216	2102 Chevrolet Ave., N.

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9217	2105 Chevrolet Ave., N.
9218	2106 Chevrolet Ave., N.
9219	2109 Chevrolet Ave., N.
9220	2110 Chevrolet Ave., N.
9221	2113 Chevrolet Ave., N.
9222	2114 Chevrolet Ave., N.
9223	2117 Chevrolet Ave., N.
9224	2118 Chevrolet Ave., N.
9225	2151 Chevrolet Ave., N.
9226	2152 Chevrolet Ave., N.
9227	2155 Chevrolet Ave., N.
9228	2156 Chevrolet Ave., N.
9229	2213 Chevrolet Ave., N.
9230	2214 Chevrolet Ave., N.
9231	2217 Chevrolet Ave., N.
9232	2218 Chevrolet Ave., N.
9233	2221 Chevrolet Ave., N.
9234	2224 Chevrolet Ave., N.
9235	2225 Chevrolet Ave., N.
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9237	2229 Chevrolet Ave., N.
9238	2230 Chevrolet Ave., N.
9239	2233 Chevrolet Ave., N.
9240	2234 Chevrolet Ave., N.
9241	2301 Chevrolet Ave., N.
9242	2302 Chevrolet Ave., N.
9243	2305 Chevrolet Ave., N.
9244	2306 Chevrolet Ave., N.
9245	2309 Chevrolet Ave., N.
9246	2310 Chevrolet Ave., N.
9247	2313 Chevrolet Ave., N.
9248	2314 Chevrolet Ave., N.
9249	2400 Chevrolet Ave., N.
9250	2401 Chevrolet Ave., N.
9251	2405 Chevrolet Ave., N.
9252	2408 Chevrolet Ave., N.
9253	2409 Chevrolet Ave., N.
9254	2413 Chevrolet Ave., N.
9255	2416 Chevrolet Ave., N.
9256	2502 Chevrolet Ave., N.
9257	2505 Chevrolet Ave., N.
9258	2506 Chevrolet Ave., N.
9259	2510 Chevrolet Ave., N.
9260	2514 Chevrolet Ave., N.
9261	2517 Chevrolet Ave., N.
9262	2518 Chevrolet Ave., N.
9263	2521 Chevrolet Ave., N.
9264	2522 Chevrolet Ave., N.

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9265	2525 Chevrolet Ave., N.
9266	2526 Chevrolet Ave., N.
9267	2529 Chevrolet Ave., N.
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9279	2721 Chevrolet Ave., N.
9280	2722 Chevrolet Ave., N.
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9282	2726 Chevrolet Ave., N.
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9289	2905 Chevrolet Ave., N.
9290	2907 Chevrolet Ave., N.
9291	2909 Chevrolet Ave., N.
9292	2910 Chevrolet Ave., N.
9293	2913 Chevrolet Ave., N.
9294	3001 Chevrolet Ave., N.
9295	3002 Chevrolet Ave., N.
9296	3005 Chevrolet Ave., N.
9297	3008 Chevrolet Ave., N.
9298	3012 Chevrolet Ave., N.
9299	3013 Chevrolet Ave., N.
9300	3017 Chevrolet Ave., N.
9301	420 Chevrolet Ave., S.
9302	420 Chevrolet Ave., S.
9303	2909 Cheyenne Ave.
9304	2910 Cheyenne Ave.
9305	2913 Cheyenne Ave.
9306	2914 Cheyenne Ave.
9307	2917 Cheyenne Ave.
9308	2918 Cheyenne Ave.
9309	3001 Cheyenne Ave.
9310	3002 Cheyenne Ave.
9311	3005 Cheyenne Ave.
9312	3006 Cheyenne Ave.

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9313	3009 Cheyenne Ave.
9314	3010 Cheyenne Ave.
9315	3013 Cheyenne Ave.
9316	3014 Cheyenne Ave.
9317	3017 Cheyenne Ave.
9318	3018 Cheyenne Ave.
9319	3101 Cheyenne Ave.
9320	3102 Cheyenne Ave.
9321	3105 Cheyenne Ave.
9322	3106 Cheyenne Ave.
9323	3109 Cheyenne Ave.
9324	3110 Cheyenne Ave.
9325	3113 Cheyenne Ave.
9326	3114 Cheyenne Ave.
9327	3117 Cheyenne Ave.
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9341	3814 Cheyenne Ave.
9342	3901 Cheyenne Ave.
9343	3902 Cheyenne Ave.
9344	3905 Cheyenne Ave.
9345	3906 Cheyenne Ave.
9346	3909 Cheyenne Ave.
9347	3912 Cheyenne Ave.
9348	3913 Cheyenne Ave.
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9353	4307 Cheyenne Ave.
9354	4310 Cheyenne Ave.
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9356	4314 Cheyenne Ave.
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9358	4318 Cheyenne Ave.
9359	4319 Cheyenne Ave.
9360	4322 Cheyenne Ave.

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9361	4323 Cheyenne Ave.
9362	4326 Cheyenne Ave.
9363	4401 Cheyenne Ave.
9364	4402 Cheyenne Ave.
9365	4407 Cheyenne Ave.
9366	4408 Cheyenne Ave.
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9374	4424 Cheyenne Ave.
9375	4427 Cheyenne Ave.
9376	4428 Cheyenne Ave.
9377	4501 Cheyenne Ave.
9378	4502 Cheyenne Ave.
9379	4505 Cheyenne Ave.
9380	4506 Cheyenne Ave.
9381	4509 Cheyenne Ave.
9382	4510 Cheyenne Ave.
9383	2402 Chicago Blvd.
9384	2409 Chicago Blvd.
9385	2412 Chicago Blvd.
9386	2415 Chicago Blvd.
9387	2421 Chicago Blvd.
9388	2424 Chicago Blvd.
9389	2425 Chicago Blvd.
9390	2431 Chicago Blvd.
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9392	2502 Chicago Blvd.
9393	2515 Chicago Blvd.
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9397	2646 Chicago Blvd.
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9399	2707 Chicago Blvd.
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9401	2719 Chicago Blvd.
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9408	2765 Chicago Blvd.

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9409	2773 Chicago Blvd.
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9417	2825 Chicago Blvd.
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9431	3001 Chicago Blvd.
9432	3006 Chicago Blvd.
9433	3007 Chicago Blvd.
9434	3013 Chicago Blvd.
9435	3019 Chicago Blvd.
9436	3023 Chicago Blvd.
9437	3027 Chicago Blvd.
9438	3105 Chicago Blvd.
9439	3109 Chicago Blvd.
9440	3117 Chicago Blvd.
9441	3121 Chicago Blvd.
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9443	3205 Chicago Blvd.
9444	3206 Chicago Blvd.
9445	3209 Chicago Blvd.
9446	3213 Chicago Blvd.
9447	3217 Chicago Blvd.
9448	3301 Chicago Blvd.
9449	3302 Chicago Blvd.
9450	3305 Chicago Blvd.
9451	3309 Chicago Blvd.
9452	3312 Chicago Blvd.
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9454	3316 Chicago Blvd.
9455	3322 Chicago Blvd.
9456	3405 Chicago Blvd.

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9457	3413 Chicago Blvd.
9458	3417 Chicago Blvd.
9459	3420 Chicago Blvd.
9460	3501 Chicago Blvd.
9461	3506 Chicago Blvd.
9462	3509 Chicago Blvd.
9463	3514 Chicago Blvd.
9464	3517 Chicago Blvd.
9465	3520 Chicago Blvd.
9466	3525 Chicago Blvd.
9467	1013 Chippewa St.
9468	1014 Chippewa St.
9469	1025 Chippewa St.
9470	1025 Chippewa St.
9471	1121 Chippewa St.
9472	1201 Chippewa St.
9473	1209 Chippewa St.
9474	1216 Chippewa St.
9475	1219 Chippewa St.
9476	1322 Chippewa St.
9477	1404 Chippewa St.
9478	1405 Chippewa St.
9479	1601 Chippewa St.
9480	1715 Chippewa St.
9481	1728 Chippewa St.
9482	1913 Chippewa St.
9483	1917 Chippewa St.
9484	1921 Chippewa St.
9485	1925 Chippewa St.
9486	2001 Chippewa St.
9487	2207 Chippewa St.
9488	2211 Chippewa St.
9489	2215 Chippewa St.
9490	2217 Chippewa St.
9491	2221 Chippewa St.
9492	2222 Chippewa St.
9493	2224 Chippewa St.
9494	2225 Chippewa St.
9495	2228 Chippewa St.
9496	2229 Chippewa St.
9497	2510 Chippewa St.
9498	2714 Chippewa St.
9499	1009 Christopher St.
9500	1010 Christopher St.
9501	1013 Christopher St.
9502	1014 Christopher St.
9503	1017 Christopher St.
9504	1018 Christopher St.

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9505	1021 Christopher St.
9506	1022 Christopher St.
9507	1101 Christopher St.
9508	1104 Christopher St.
9509	1105 Christopher St.
9510	1109 Christopher St.
9511	1110 Christopher St.
9512	1113 Christopher St.
9513	1114 Christopher St.
9514	444 Church St.
9515	444 Church St.
9516	444 Church St.
9517	444 Church St.
9518	502 Church St.
9519	602 Church St.
9520	701 Church St.
9521	701 Church St.
9522	702 Church St.
9523	702 Church St.
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9531	720 Church St.
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9536	720 Church St.
9537	726 Church St.
9538	809 Church St.
9539	809 Church St.
9540	912 Church St.
9541	914 Church St.
9542	924 Church St.
9543	924 Church St.
9544	928 Church St.
9545	934 Church St.
9546	934 Church St.
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9551	1003 Church St.
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9553	1003 Church St.
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9571	1106 Church St.
9572	1111 Church St.
9573	1114 Church St.
9574	1114 Church St.
9575	1115 Church St.
9576	1118 Church St.
9577	1121 Church St.
9578	1121 Church St.
9579	1121 Church St.
9580	1122 Church St.
9581	1202 Church St.
9582	1202 Church St.
9583	1208 Church St.
9584	1212 Church St.
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9586	1218 Church St.
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9596	1521 Church St.
9597	1523 Church St.
9598	1530 Church St.
9599	1601 Church St.
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9601	1604 Church St.
9602	1615 Church St.
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9610	1636 Church St.
9611	1638 Church St.
9612	1639 Church St.
9613	1642 Church St.
9614	2001 Church St.
9615	2008 Church St.
9616	2009 Church St.
9617	2013 Church St.
9618	2024 Church St.
9619	2025 Church St.
9620	2034 Church St.
9621	2035 Church St.
9622	2037 Church St.
9623	2038 Church St.
9624	2041 Church St.
9625	2102 Church St.
9626	2103 Church St.
9627	2106 Church St.
9628	2109 Church St.
9629	2110 Church St.
9630	2114 Church St.
9631	2405 Churchill Ave.
9632	2409 Churchill Ave.
9633	2410 Churchill Ave.
9634	2414 Churchill Ave.
9635	2417 Churchill Ave.
9636	2418 Churchill Ave.
9637	2421 Churchill Ave.
9638	2422 Churchill Ave.
9639	2501 Churchill Ave.
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9641	2509 Churchill Ave.
9642	2510 Churchill Ave.
9643	2513 Churchill Ave.
9644	2514 Churchill Ave.
9645	2517 Churchill Ave.
9646	2518 Churchill Ave.
9647	2521 Churchill Ave.
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9649	2528 Churchill Ave.
9650	2530 Churchill Ave.
9651	2602 Churchill Ave.
9652	2606 Churchill Ave.
9653	2610 Churchill Ave.
9654	2613 Churchill Ave.
9655	2614 Churchill Ave.
9656	2618 Churchill Ave.
9657	2621 Churchill Ave.
9658	2700 Churchill Ave.
9659	3115 Churchill Ave.
9660	3116 Churchill Ave.
9661	3119 Churchill Ave.
9662	3124 Churchill Ave.
9663	3127 Churchill Ave.
9664	3202 Churchill Ave.
9665	3207 Churchill Ave.
9666	3208 Churchill Ave.
9667	3211 Churchill Ave.
9668	3212 Churchill Ave.
9669	3216 Churchill Ave.
9670	3223 Churchill Ave.
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9673	3236 Churchill Ave.
9674	3302 Churchill Ave.
9675	3312 Churchill Ave.
9676	3315 Churchill Ave.
9677	3316 Churchill Ave.
9678	3319 Churchill Ave.
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9680	3320 Churchill Ave.
9681	3323 Churchill Ave.
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9687	3413 Churchill Ave.
9688	3414 Churchill Ave.
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9691	3422 Churchill Ave.
9692	3505 Churchill Ave.
9693	3506 Churchill Ave.
9694	3509 Churchill Ave.
9695	3510 Churchill Ave.
9696	3517 Churchill Ave.

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9697	3520 Churchill Ave.
9698	3521 Churchill Ave.
9699	3525 Churchill Ave.
9700	3526 Churchill Ave.
9701	3540 Churchill Ave.
9702	3605 Churchill Ave.
9703	3606 Churchill Ave.
9704	3609 Churchill Ave.
9705	3610 Churchill Ave.
9706	3613 Churchill Ave.
9707	3614 Churchill Ave.
9708	3617 Churchill Ave.
9709	3622 Churchill Ave.
9710	2601 Circle Dr.
9711	2602 Circle Dr.
9712	2607 Circle Dr.
9713	2615 Circle Dr.
9714	2626 Circle Dr.
9715	2701 Circle Dr.
9716	2717 Circle Dr.
9717	2722 Circle Dr.
9718	2727 Circle Dr.
9719	2800 Circle Dr.
9720	2801 Circle Dr.
9721	2821 Circle Dr.
9722	2822 Circle Dr.
9723	2902 Circle Dr.
9724	2911 Circle Dr.
9725	2912 Circle Dr.
9726	2921 Circle Dr.
9727	2922 Circle Dr.
9728	2930 Circle Dr.
9729	2938 Circle Dr.
9730	2946 Circle Dr.
9731	3001 Circle Dr.
9732	3002 Circle Dr.
9733	3009 Circle Dr.
9734	3010 Circle Dr.
9735	3018 Circle Dr.
9736	3019 Circle Dr.
9737	3029 Circle Dr.
9738	3030 Circle Dr.
9739	3101 Circle Dr.
9740	3102 Circle Dr.
9741	3114 Circle Dr.
9742	3115 Circle Dr.
9743	3122 Circle Dr.
9744	3123 Circle Dr.

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9745	3201 Circle Dr.
9746	3202 Circle Dr.
9747	3215 Circle Dr.
9748	3216 Circle Dr.
9749	3224 Circle Dr.
9750	3301 Circle Dr.
9751	3306 Circle Dr.
9752	3309 Circle Dr.
9753	3314 Circle Dr.
9754	3317 Circle Dr.
9755	3325 Circle Dr.
9756	3401 Circle Dr.
9757	3402 Circle Dr.
9758	3412 Circle Dr.
9759	3417 Circle Dr.
9760	3418 Circle Dr.
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9762	3502 Circle Dr.
9763	3509 Circle Dr.
9764	3512 Circle Dr.
9765	3601 Circle Dr.
9766	3602 Circle Dr.
9767	3606 Circle Dr.
9768	3611 Circle Dr.
9769	3612 Circle Dr.
9770	3617 Circle Dr.
9771	3618 Circle Dr.
9772	3625 Circle Dr.
9773	3626 Circle Dr.
9774	3701 Circle Dr.
9775	3702 Circle Dr.
9776	3704 Circle Dr.
9777	3708 Circle Dr.
9778	3709 Circle Dr.
9779	3714 Circle Dr.
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9781	3720 Circle Dr.
9782	3721 Circle Dr.
9783	3726 Circle Dr.
9784	3732 Circle Dr.
9785	3802 Circle Dr.
9786	3813 Circle Dr.
9787	3814 Circle Dr.
9788	3817 Circle Dr.
9789	3818 Circle Dr.
9790	3901 Circle Dr.
9791	3902 Circle Dr.
9792	3907 Circle Dr.

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9793	3910 Circle Dr.
9794	3911 Circle Dr.
9795	3912 Circle Dr.
9796	3916 Circle Dr.
9797	4001 Circle Dr.
9798	4002 Circle Dr.
9799	4007 Circle Dr.
9800	4008 Circle Dr.
9801	4011 Circle Dr.
9802	4016 Circle Dr.
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9804	4024 Circle Dr.
9805	4101 Circle Dr.
9806	4102 Circle Dr.
9807	4110 Circle Dr.
9808	4122 Circle Dr.
9809	4126 Circle Dr.
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9811	4130 Circle Dr.
9812	4133 Circle Dr.
9813	4133 Circle Dr.
9814	4201 Circle Dr.
9815	4202 Circle Dr.
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9817	4213 Circle Dr.
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9824	4231 Circle Dr.
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9829	4315 Circle Dr.
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9832	4402 Circle Dr.
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9834	4418 Circle Dr.
9835	3201 Clairmont St.
9836	3202 Clairmont St.
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9840	3214 Clairmont St.

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9841	3217 Clairmont St.
9842	3218 Clairmont St.
9843	3301 Clairmont St.
9844	3302 Clairmont St.
9845	3305 Clairmont St.
9846	3309 Clairmont St.
9847	3310 Clairmont St.
9848	3313 Clairmont St.
9849	3314 Clairmont St.
9850	3317 Clairmont St.
9851	3318 Clairmont St.
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9853	3322 Clairmont St.
9854	3401 Clairmont St.
9855	3405 Clairmont St.
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9857	3409 Clairmont St.
9858	3410 Clairmont St.
9859	3413 Clairmont St.
9860	3414 Clairmont St.
9861	3417 Clairmont St.
9862	3421 Clairmont St.
9863	3422 Clairmont St.
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9887	3705 Clairmont St.
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9936	1222 Clancy Ave.

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10013	2313 Clement St.
10014	2314 Clement St.
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10116	3018 Clement St.
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10121	3029 Clement St.
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10126	3107 Clement St.
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10128	3113 Clement St.

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10129	3117 Clement St.
10130	3118 Clement St.
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10134	3214 Clement St.
10135	3216 Clement St.
10136	3221 Clement St.
10137	3222 Clement St.
10138	3226 Clement St.
10139	3302 Clement St.
10140	3305 Clement St.
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10144	3320 Clement St.
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10176	1367 Cleveland Ave.

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10177	1368 Cleveland Ave.
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10189	1391 Cleveland Ave.
10190	1816 Clifford St.
10191	1915 Clifford St.
10192	1915 Clifford St.
10193	1919 Clifford St.
10194	2010 Clifford St.
10195	2012 Clifford St.
10196	2015 Clifford St.
10197	2016 Clifford St.
10198	2018 Clifford St.
10199	2019 Clifford St.
10200	2022 Clifford St.
10201	2023 Clifford St.
10202	2027 Clifford St.
10203	2030 Clifford St.
10204	2032 Clifford St.
10205	2039 Clifford St.
10206	2039 Clifford St.
10207	2046 Clifford St.
10208	1919 Clifford St.
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10214	520 Clinton St.
10215	523 Clinton St.
10216	524 Clinton St.
10217	611 Clinton St.
10218	612 Clinton St.
10219	615 Clinton St.
10220	619 Clinton St.
10221	620 Clinton St.
10222	623 Clinton St.
10223	624 Clinton St.
10224	627 Clinton St.

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10225	630 Clinton St.
10226	631 Clinton St.
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10228	635 Clinton St.
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10230	639 Clinton St.
10231	643 Clinton St.
10232	644 Clinton St.
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10235	651 Clinton St.
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10237	701 Clinton St.
10238	702 Clinton St.
10239	705 Clinton St.
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10241	709 Clinton St.
10242	710 Clinton St.
10243	713 Clinton St.
10244	714 Clinton St.
10245	717 Clinton St.
10246	718 Clinton St.
10247	721 Clinton St.
10248	722 Clinton St.
10249	725 Clinton St.
10250	726 Clinton St.
10251	729 Clinton St.
10252	733 Clinton St.
10253	734 Clinton St.
10254	737 Clinton St.
10255	738 Clinton St.
10256	740 Clinton St.
10257	741 Clinton St.
10258	742 Clinton St.
10259	745 Clinton St.
10260	749 Clinton St.
10261	752 Clinton St.
10262	802 Clinton St.
10263	805 Clinton St.
10264	806 Clinton St.
10265	813 Clinton St.
10266	814 Clinton St.
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10268	818 Clinton St.
10269	821 Clinton St.
10270	822 Clinton St.
10271	829 Clinton St.
10272	830 Clinton St.

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10273	837 Clinton St.
10274	838 Clinton St.
10275	842 Clinton St.
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10277	846 Clinton St.
10278	849 Clinton St.
10279	850 Clinton St.
10280	911 Clinton St.
10281	914 Clinton St.
10282	915 Clinton St.
10283	920 Clinton St.
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10285	927 Clinton St.
10286	930 Clinton St.
10287	931 Clinton St.
10288	940 Clinton St.
10289	943 Clinton St.
10290	944 Clinton St.
10291	945 Clinton St.
10292	952 Clinton St.
10293	2500 Clio Rd.
10294	2500 Clio Rd.
10295	2501 Clio Rd.
10296	2501 Clio Rd.
10297	2512 Clio Rd.
10298	2512 Clio Rd.
10299	2518 Clio Rd.
10300	2523 Clio Rd.
10301	2524 Clio Rd.
10302	2602 Clio Rd.
10303	2620 Clio Rd.
10304	2625 Clio Rd.
10305	2626 Clio Rd.
10306	2637 Clio Rd.
10307	2638 Clio Rd.
10308	2643 Clio Rd.
10309	2644 Clio Rd.
10310	2644 Clio Rd.
10311	2649 Clio Rd.
10312	2708 Clio Rd.
10313	2713 Clio Rd.
10314	2719 Clio Rd.
10315	2719 Clio Rd.
10316	2731 Clio Rd.
10317	2732 Clio Rd.
10318	2732 Clio Rd.
10319	2734 Clio Rd.
10320	2734 Clio Rd.

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10321	2777 Clio Rd.
10322	2801 Clio Rd.
10323	2801 Clio Rd.
10324	2802 Clio Rd.
10325	2812 Clio Rd.
10326	2812 Clio Rd.
10327	2817 Clio Rd.
10328	2817 Clio Rd.
10329	3001 Clio Rd.
10330	3001 Clio Rd.
10331	3009 Clio Rd.
10332	3014 Clio Rd.
10333	3051 Clio Rd.
10334	3101 Clio Rd.
10335	3101 Clio Rd.
10336	3117 Clio Rd.
10337	3122 Clio Rd.
10338	3209 Clio Rd.
10339	3212 Clio Rd.
10340	3212 Clio Rd.
10341	3221 Clio Rd.
10342	3405 Clio Rd.
10343	3405 Clio Rd.
10344	3412 Clio Rd.
10345	3412 Clio Rd.
10346	3416 Clio Rd.
10347	3420 Clio Rd.
10348	3420 Clio Rd.
10349	3505 Clio Rd.
10350	3505 Clio Rd.
10351	3506 Clio Rd.
10352	3506 Clio Rd.
10353	3510 Clio Rd.
10354	3510 Clio Rd.
10355	3521 Clio Rd.
10356	3521 Clio Rd.
10357	3602 Clio Rd.
10358	3610 Clio Rd.
10359	3610 Clio Rd.
10360	3613 Clio Rd.
10361	3622 Clio Rd.
10362	3622 Clio Rd.
10363	3701 Clio Rd.
10364	3702 Clio Rd.
10365	3706 Clio Rd.
10366	3710 Clio Rd.
10367	3710 Clio Rd.
10368	3713 Clio Rd.

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10369	3713 Clio Rd.
10370	3718 Clio Rd.
10371	3801 Clio Rd.
10372	3801 Clio Rd.
10373	3809 Clio Rd.
10374	3809 Clio Rd.
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10376	3821 Clio Rd.
10377	3822 Clio Rd.
10378	3901 Clio Rd.
10379	3905 Clio Rd.
10380	3906 Clio Rd.
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10382	3910 Clio Rd.
10383	3919 Clio Rd.
10384	3919 Clio Rd.
10385	3922 Clio Rd.
10386	4006 Clio Rd.
10387	4006 Clio Rd.
10388	4009 Clio Rd.
10389	4009 Clio Rd.
10390	4020 Clio Rd.
10391	4020 Clio Rd.
10392	4023 Clio Rd.
10393	4023 Clio Rd.
10394	4029 Clio Rd.
10395	4029 Clio Rd.
10396	4090 Clio Rd.
10397	4090 Clio Rd.
10398	4117 Clio Rd.
10399	4117 Clio Rd.
10400	4122 Clio Rd.
10401	4122 Clio Rd.
10402	4124 Clio Rd.
10403	4125 Clio Rd.
10404	4125 Clio Rd.
10405	4128 Clio Rd.
10406	4130 Clio Rd.
10407	4203 Clio Rd.
10408	4204 Clio Rd.
10409	4210 Clio Rd.
10410	4213 Clio Rd.
10411	4217 Clio Rd.
10412	4217 Clio Rd.
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10414	4220 Clio Rd.
10415	4221 Clio Rd.
10416	4221 Clio Rd.

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10417	4233 Clio Rd.
10418	4233 Clio Rd.
10419	4305 Clio Rd.
10420	4305 Clio Rd.
10421	4601 Clio Rd.
10422	4810 Clio Rd.
10423	4810 Clio Rd.
10424	4814 Clio Rd.
10425	4815 Clio Rd.
10426	4818 Clio Rd.
10427	4847 Clio Rd.
10428	4849 Clio Rd.
10429	4901 Clio Rd.
10430	4902 Clio Rd.
10431	4902 Clio Rd.
10432	4905 Clio Rd.
10433	4915 Clio Rd.
10434	4918 Clio Rd.
10435	4918 Clio Rd.
10436	4921 Clio Rd.
10437	4925 Clio Rd.
10438	4929 Clio Rd.
10439	4930 Clio Rd.
10440	4934 Clio Rd.
10441	4939 Clio Rd.
10442	4945 Clio Rd.
10443	5010 Clio Rd.
10444	5010 Clio Rd.
10445	5014 Clio Rd.
10446	5018 Clio Rd.
10447	5206 Clio Rd.
10448	5206 Clio Rd.
10449	5402 Clio Rd.
10450	5406 Clio Rd.
10451	5408 Clio Rd.
10452	5408 Clio Rd.
10453	5510 Clio Rd.
10454	5710 Clio Rd.
10455	5928 Clio Rd.
10456	5928 Clio Rd.
10457	6016 Clio Rd.
10458	6016 Clio Rd.
10459	6040 Clio Rd.
10460	6040 Clio Rd.
10461	6048 Clio Rd.
10462	6052 Clio Rd.
10463	6052 Clio Rd.
10464	6056 Clio Rd.

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10465	6056 Clio Rd.
10466	6060 Clio Rd.
10467	6302 Clio Rd.
10468	6318 Clio Rd.
10469	6328 Clio Rd.
10470	6420 Clio Rd.
10471	6440 Clio Rd.
10472	6500 Clio Rd.
10473	6502 Clio Rd.
10474	6602 Clio Rd.
10475	6706 Clio Rd.
10476	6706 Clio Rd.
10477	6710 Clio Rd.
10478	6710 Clio Rd.
10479	6730 Clio Rd.
10480	6820 Clio Rd.
10481	6820 Clio Rd.
10482	6900 Clio Rd.
10483	6902 Clio Rd.
10484	6910 Clio Rd.
10485	6960 Clio Rd.
10486	7002 Clio Rd.
10487	7014 Clio Rd.
10488	4813 Clio Rd.
10489	6062 Clio Rd.
10490	6062 Clio Rd.
10491	6062 Clio Rd.
10492	313 Cloverdale Pl.
10493	320 Cloverdale Pl.
10494	321 Cloverdale Pl.
10495	324 Cloverdale Pl.
10496	325 Cloverdale Pl.
10497	328 Cloverdale Pl.
10498	332 Cloverdale Pl.
10499	333 Cloverdale Pl.
10500	337 Cloverdale Pl.
10501	340 Cloverdale Pl.
10502	4401 Cloverlawn Dr.
10503	4402 Cloverlawn Dr.
10504	4405 Cloverlawn Dr.
10505	4406 Cloverlawn Dr.
10506	4409 Cloverlawn Dr.
10507	4410 Cloverlawn Dr.
10508	4413 Cloverlawn Dr.
10509	4414 Cloverlawn Dr.
10510	4417 Cloverlawn Dr.
10511	4418 Cloverlawn Dr.
10512	4423 Cloverlawn Dr.

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10513	4424 Cloverlawn Dr.
10514	4501 Cloverlawn Dr.
10515	4502 Cloverlawn Dr.
10516	4517 Cloverlawn Dr.
10517	4518 Cloverlawn Dr.
10518	4601 Cloverlawn Dr.
10519	4606 Cloverlawn Dr.
10520	4610 Cloverlawn Dr.
10521	4617 Cloverlawn Dr.
10522	4701 Cloverlawn Dr.
10523	4702 Cloverlawn Dr.
10524	4705 Cloverlawn Dr.
10525	4708 Cloverlawn Dr.
10526	4709 Cloverlawn Dr.
10527	4713 Cloverlawn Dr.
10528	4714 Cloverlawn Dr.
10529	4717 Cloverlawn Dr.
10530	4801 Cloverlawn Dr.
10531	4802 Cloverlawn Dr.
10532	4808 Cloverlawn Dr.
10533	4809 Cloverlawn Dr.
10534	4813 Cloverlawn Dr.
10535	4817 Cloverlawn Dr.
10536	4821 Cloverlawn Dr.
10537	4901 Cloverlawn Dr.
10538	4905 Cloverlawn Dr.
10539	4908 Cloverlawn Dr.
10540	4909 Cloverlawn Dr.
10541	4912 Cloverlawn Dr.
10542	5005 Cloverlawn Dr.
10543	5006 Cloverlawn Dr.
10544	5014 Cloverlawn Dr.
10545	5106 Cloverlawn Dr.
10546	5407 Cloverlawn Dr.
10547	5420 Cloverlawn Dr.
10548	5421 Cloverlawn Dr.
10549	5501 Cloverlawn Dr.
10550	5505 Cloverlawn Dr.
10551	5506 Cloverlawn Dr.
10552	5509 Cloverlawn Dr.
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10554	5511 Cloverlawn Dr.
10555	5513 Cloverlawn Dr.
10556	5514 Cloverlawn Dr.
10557	5517 Cloverlawn Dr.
10558	5601 Cloverlawn Dr.
10559	5602 Cloverlawn Dr.
10560	5605 Cloverlawn Dr.

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10561	5606 Cloverlawn Dr.
10562	5609 Cloverlawn Dr.
10563	5610 Cloverlawn Dr.
10564	5613 Cloverlawn Dr.
10565	5614 Cloverlawn Dr.
10566	5617 Cloverlawn Dr.
10567	5618 Cloverlawn Dr.
10568	5702 Cloverlawn Dr.
10569	5705 Cloverlawn Dr.
10570	5706 Cloverlawn Dr.
10571	5709 Cloverlawn Dr.
10572	5713 Cloverlawn Dr.
10573	5714 Cloverlawn Dr.
10574	5717 Cloverlawn Dr.
10575	5718 Cloverlawn Dr.
10576	5801 Cloverlawn Dr.
10577	5802 Cloverlawn Dr.
10578	5805 Cloverlawn Dr.
10579	5806 Cloverlawn Dr.
10580	5809 Cloverlawn Dr.
10581	5810 Cloverlawn Dr.
10582	5813 Cloverlawn Dr.
10583	5814 Cloverlawn Dr.
10584	5818 Cloverlawn Dr.
10585	5901 Cloverlawn Dr.
10586	5902 Cloverlawn Dr.
10587	5905 Cloverlawn Dr.
10588	5906 Cloverlawn Dr.
10589	5909 Cloverlawn Dr.
10590	5910 Cloverlawn Dr.
10591	5913 Cloverlawn Dr.
10592	5914 Cloverlawn Dr.
10593	6001 Cloverlawn Dr.
10594	6002 Cloverlawn Dr.
10595	6005 Cloverlawn Dr.
10596	6006 Cloverlawn Dr.
10597	6009 Cloverlawn Dr.
10598	6010 Cloverlawn Dr.
10599	6013 Cloverlawn Dr.
10600	6014 Cloverlawn Dr.
10601	6017 Cloverlawn Dr.
10602	6018 Cloverlawn Dr.
10603	3901 Coggins Ave.
10604	3902 Coggins Ave.
10605	3906 Coggins Ave.
10606	3907 Coggins Ave.
10607	3910 Coggins Ave.
10608	3911 Coggins Ave.

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10609	3915 Coggins Ave.
10610	3922 Coggins Ave.
10611	4001 Coggins Ave.
10612	4006 Coggins Ave.
10613	4007 Coggins Ave.
10614	4119 Coggins Ave.
10615	4120 Coggins Ave.
10616	4123 Coggins Ave.
10617	4124 Coggins Ave.
10618	4127 Coggins Ave.
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10620	4131 Coggins Ave.
10621	4132 Coggins Ave.
10622	4135 Coggins Ave.
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10625	4142 Coggins Ave.
10626	4143 Coggins Ave.
10627	4147 Coggins Ave.
10628	4148 Coggins Ave.
10629	4151 Coggins Ave.
10630	4210 Coggins Ave.
10631	4214 Coggins Ave.
10632	2601 Colby St.
10633	2602 Colby St.
10634	2605 Colby St.
10635	2606 Colby St.
10636	2609 Colby St.
10637	2610 Colby St.
10638	2613 Colby St.
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10645	2626 Colby St.
10646	2629 Colby St.
10647	2630 Colby St.
10648	2633 Colby St.
10649	2634 Colby St.
10650	1802 Colchester Rd.
10651	1811 Colchester Rd.
10652	1812 Colchester Rd.
10653	1821 Colchester Rd.
10654	1822 Colchester Rd.
10655	1831 Colchester Rd.
10656	1901 Colchester Rd.

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10657	1902 Colchester Rd.
10658	1910 Colchester Rd.
10659	1911 Colchester Rd.
10660	1920 Colchester Rd.
10661	1921 Colchester Rd.
10662	1930 Colchester Rd.
10663	1931 Colchester Rd.
10664	1940 Colchester Rd.
10665	1941 Colchester Rd.
10666	1950 Colchester Rd.
10667	2001 Colchester Rd.
10668	2015 Colchester Rd.
10669	116 Coleridge St.
10670	2211 Colfax Ave.
10671	2212 Colfax Ave.
10672	2216 Colfax Ave.
10673	2222 Colfax Ave.
10674	2223 Colfax Ave.
10675	2114 Colladay Ct.
10676	2115 Colladay Ct.
10677	2116 Colladay Ct.
10678	2119 Colladay Ct.
10679	2123 Colladay Ct.
10680	2126 Colladay Ct.
10681	2131 Colladay Ct.
10682	6201 College St.
10683	6502 College St.
10684	6510 College St.
10685	6802 College St.
10686	6810 College St.
10687	7002 College St.
10688	3001 Collingwood Pkwy.
10689	3004 Collingwood Pkwy.
10690	3006 Collingwood Pkwy.
10691	3014 Collingwood Pkwy.
10692	3102 Collingwood Pkwy.
10693	3202 Collingwood Pkwy.
10694	3206 Collingwood Pkwy.
10695	3218 Collingwood Pkwy.
10696	3302 Collingwood Pkwy.
10697	3310 Collingwood Pkwy.
10698	3314 Collingwood Pkwy.
10699	3402 Collingwood Pkwy.
10700	3414 Collingwood Pkwy.
10701	1912 Colon St.
10702	1915 Colon St.
10703	1916 Colon St.
10704	1919 Colon St.

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10705	1923 Colon St.
10706	1924 Colon St.
10707	1927 Colon St.
10708	1928 Colon St.
10709	2001 Colon St.
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10711	2010 Colon St.
10712	2014 Colon St.
10713	2018 Colon St.
10714	2022 Colon St.
10715	6605 Colonial Dr.
10716	6606 Colonial Dr.
10717	6609 Colonial Dr.
10718	6610 Colonial Dr.
10719	6613 Colonial Dr.
10720	6614 Colonial Dr.
10721	6617 Colonial Dr.
10722	6618 Colonial Dr.
10723	6621 Colonial Dr.
10724	6622 Colonial Dr.
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10726	6626 Colonial Dr.
10727	6701 Colonial Dr.
10728	6705 Colonial Dr.
10729	6706 Colonial Dr.
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10731	6710 Colonial Dr.
10732	6714 Colonial Dr.
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10734	6718 Colonial Dr.
10735	6721 Colonial Dr.
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10737	6801 Colonial Dr.
10738	6802 Colonial Dr.
10739	6805 Colonial Dr.
10740	6806 Colonial Dr.
10741	6809 Colonial Dr.
10742	6810 Colonial Dr.
10743	6813 Colonial Dr.
10744	6814 Colonial Dr.
10745	6901 Colonial Dr.
10746	6902 Colonial Dr.
10747	6905 Colonial Dr.
10748	6909 Colonial Dr.
10749	6910 Colonial Dr.
10750	6913 Colonial Dr.
10751	6914 Colonial Dr.
10752	1410 Colorado Ave.

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10753	1414 Colorado Ave.
10754	1501 Colorado Ave.
10755	1502 Colorado Ave.
10756	1505 Colorado Ave.
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10758	1509 Colorado Ave.
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10797	1652 Colorado Ave.
10798	1655 Colorado Ave.
10799	1701 Colorado Ave.
10800	1702 Colorado Ave.

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10801	1705 Colorado Ave.
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10803	1709 Colorado Ave.
10804	1710 Colorado Ave.
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10806	1714 Colorado Ave.
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10817	1738 Colorado Ave.
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10846	2913 Colorado Ave.
10847	2914 Colorado Ave.
10848	2917 Colorado Ave.

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10849	2918 Colorado Ave.
10850	2921 Colorado Ave.
10851	2922 Colorado Ave.
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10854	3001 Colorado Ave.
10855	3002 Colorado Ave.
10856	3005 Colorado Ave.
10857	3006 Colorado Ave.
10858	3009 Colorado Ave.
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10863	3018 Colorado Ave.
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10894	3205 Colorado Ave.
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10896	3209 Colorado Ave.

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10897	3210 Colorado Ave.
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10911	3238 Colorado Ave.
10912	3241 Colorado Ave.
10913	3242 Colorado Ave.
10914	802 Columbia Cir.
10915	806 Columbia Cir.
10916	810 Columbia Cir.
10917	813 Columbia Cir.
10918	1301 Columbia Cir.
10919	1302 Columbia Cir.
10920	1305 Columbia Cir.
10921	1306 Columbia Cir.
10922	701 Columbia Dr.
10923	705 Columbia Dr.
10924	709 Columbia Dr.
10925	713 Columbia Dr.
10926	717 Columbia Dr.
10927	721 Columbia Dr.
10928	725 Columbia Dr.
10929	729 Columbia Dr.
10930	737 Columbia Dr.
10931	741 Columbia Dr.
10932	745 Columbia Dr.
10933	805 Columbia Dr.
10934	809 Columbia Dr.
10935	1401 Columbia Dr.
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10937	1409 Columbia Dr.
10938	1413 Columbia Dr.
10939	1501 Columbia Dr.
10940	1505 Columbia Dr.
10941	1509 Columbia Dr.
10942	702 Columbia Ln.
10943	706 Columbia Ln.
10944	710 Columbia Ln.

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10945	714 Columbia Ln.
10946	718 Columbia Ln.
10947	722 Columbia Ln.
10948	1301 Columbia Ln.
10949	1302 Columbia Ln.
10950	1305 Columbia Ln.
10951	2813 Comanche Ave.
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10958	2833 Comanche Ave.
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10967	2914 Comanche Ave.
10968	2917 Comanche Ave.
10969	3001 Comanche Ave.
10970	3002 Comanche Ave.
10971	3007 Comanche Ave.
10972	3008 Comanche Ave.
10973	3013 Comanche Ave.
10974	3014 Comanche Ave.
10975	3019 Comanche Ave.
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10987	3125 Comanche Ave.
10988	3126 Comanche Ave.
10989	3201 Comanche Ave.
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10992	3208 Comanche Ave.

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10993	3213 Comanche Ave.
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11005	3317 Comanche Ave.
11006	3318 Comanche Ave.
11007	3401 Comanche Ave.
11008	3402 Comanche Ave.
11009	3405 Comanche Ave.
11010	3406 Comanche Ave.
11011	3409 Comanche Ave.
11012	3410 Comanche Ave.
11013	3413 Comanche Ave.
11014	3414 Comanche Ave.
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11018	3502 Comanche Ave.
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11040	3701 Comanche Ave.

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11048	3717 Comanche Ave.
11049	3718 Comanche Ave.
11050	201 Commerce St.
11051	204 Commerce St.
11052	131 Commonwealth Ave.
11053	134 Commonwealth Ave.
11054	135 Commonwealth Ave.
11055	138 Commonwealth Ave.
11056	139 Commonwealth Ave.
11057	144 Commonwealth Ave.
11058	147 Commonwealth Ave.
11059	148 Commonwealth Ave.
11060	151 Commonwealth Ave.
11061	152 Commonwealth Ave.
11062	155 Commonwealth Ave.
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11064	205 Commonwealth Ave.
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11066	209 Commonwealth Ave.
11067	210 Commonwealth Ave.
11068	213 Commonwealth Ave.
11069	214 Commonwealth Ave.
11070	217 Commonwealth Ave.
11071	222 Commonwealth Ave.
11072	230 Commonwealth Ave.
11073	231 Commonwealth Ave.
11074	234 Commonwealth Ave.
11075	235 Commonwealth Ave.
11076	238 Commonwealth Ave.
11077	239 Commonwealth Ave.
11078	242 Commonwealth Ave.
11079	246 Commonwealth Ave.
11080	302 Commonwealth Ave.
11081	308 Commonwealth Ave.
11082	311 Commonwealth Ave.
11083	314 Commonwealth Ave.
11084	320 Commonwealth Ave.
11085	321 Commonwealth Ave.
11086	351 Commonwealth Ave.
11087	352 Commonwealth Ave.
11088	358 Commonwealth Ave.

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11089	359 Commonwealth Ave.
11090	363 Commonwealth Ave.
11091	364 Commonwealth Ave.
11092	370 Commonwealth Ave.
11093	401 Commonwealth Ave.
11094	411 Commonwealth Ave.
11095	425 Commonwealth Ave.
11096	440 Commonwealth Ave.
11097	450 Commonwealth Ave.
11098	456 Commonwealth Ave.
11099	462 Commonwealth Ave.
11100	468 Commonwealth Ave.
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11103	516 Commonwealth Ave.
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11105	601 Commonwealth Ave.
11106	602 Commonwealth Ave.
11107	606 Commonwealth Ave.
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11113	623 Commonwealth Ave.
11114	626 Commonwealth Ave.
11115	712 Commonwealth Ave.
11116	720 Commonwealth Ave.
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11118	803 Commonwealth Ave.
11119	808 Commonwealth Ave.
11120	809 Commonwealth Ave.
11121	814 Commonwealth Ave.
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11123	823 Commonwealth Ave.
11124	3306 Comstock Ave.
11125	3411 Comstock Ave.
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11211	4236 Comstock Ave.
11212	1514 Concord St.
11213	1518 Concord St.
11214	1526 Concord St.
11215	1529 Concord St.
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11217	1535 Concord St.
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11248	1929 Concord St.
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11250	1933 Concord St.
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11262	2021 Concord St.
11263	2101 Concord St.
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11267	2109 Concord St.
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11271	2215 Concord St.
11272	2218 Concord St.
11273	2219 Concord St.
11274	2222 Concord St.
11275	2223 Concord St.
11276	2226 Concord St.
11277	2227 Concord St.
11278	2230 Concord St.
11279	2301 Concord St.
11280	2302 Concord St.

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11404	3310 Concord St.
11405	3315 Concord St.
11406	3401 Concord St.
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11408	3412 Concord St.
11409	3413 Concord St.
11410	3420 Concord St.
11411	3421 Concord St.
11412	3422 Concord St.
11413	3425 Concord St.
11414	3433 Concord St.
11415	4405 Continental Dr.
11416	4405 Continental Dr.
11417	4405 Continental Dr.
11418	2600 Cook St.
11419	2604 Cook St.
11420	2608 Cook St.
11421	2612 Cook St.
11422	2616 Cook St.
11423	2620 Cook St.
11424	2714 Cook St.

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11425	2801 Cook St.
11426	2314 Cooper Ave.
11427	503 Copeman Blvd.
11428	510 Copeman Blvd.
11429	511 Copeman Blvd.
11430	514 Copeman Blvd.
11431	515 Copeman Blvd.
11432	521 Copeman Blvd.
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11435	531 Copeman Blvd.
11436	535 Copeman Blvd.
11437	539 Copeman Blvd.
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11448	612 Copeman Blvd.
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11454	634 Copeman Blvd.
11455	707 Copeman Blvd.
11456	711 Copeman Blvd.
11457	714 Copeman Blvd.
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11459	719 Copeman Blvd.
11460	720 Copeman Blvd.
11461	723 Copeman Blvd.
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11466	802 Copeman Blvd.
11467	805 Copeman Blvd.
11468	806 Copeman Blvd.
11469	809 Copeman Blvd.
11470	810 Copeman Blvd.
11471	813 Copeman Blvd.
11472	814 Copeman Blvd.

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11473	817 Copeman Blvd.
11474	911 Copeman Blvd.
11475	912 Copeman Blvd.
11476	915 Copeman Blvd.
11477	916 Copeman Blvd.
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11480	923 Copeman Blvd.
11481	924 Copeman Blvd.
11482	927 Copeman Blvd.
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11485	932 Copeman Blvd.
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11490	943 Copeman Blvd.
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11493	951 Copeman Blvd.
11494	1001 Copeman Blvd.
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11497	1012 Copeman Blvd.
11498	1013 Copeman Blvd.
11499	1016 Copeman Blvd.
11500	1017 Copeman Blvd.
11501	1020 Copeman Blvd.
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11512	1201 Copeman Blvd.
11513	1202 Copeman Blvd.
11514	1205 Copeman Blvd.
11515	1211 Copeman Blvd.
11516	1301 Copeman Blvd.
11517	1315 Copeman Blvd.
11518	1316 Copeman Blvd.
11519	1321 Copeman Blvd.
11520	1322 Copeman Blvd.

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11568	1928 Copeman Blvd.

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11571	2001 Copeman Blvd.
11572	2002 Copeman Blvd.
11573	2007 Copeman Blvd.
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11581	2031 Copeman Blvd.
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11583	2038 Copeman Blvd.
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11590	2120 Copeman Blvd.
11591	2125 Copeman Blvd.
11592	2126 Copeman Blvd.
11593	2131 Copeman Blvd.
11594	2132 Copeman Blvd.
11595	2138 Copeman Blvd.
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11611	2314 Copeman Blvd.
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11615	2326 Copeman Blvd.
11616	2331 Copeman Blvd.

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11617	2332 Copeman Blvd.
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11623	2352 Copeman Blvd.
11624	2355 Copeman Blvd.
11625	2402 Copeman Blvd.
11626	2407 Copeman Blvd.
11627	1901 Corunna Rd.
11628	1912 Corunna Rd.
11629	1912 Corunna Rd.
11630	1919 Corunna Rd.
11631	1919 Corunna Rd.
11632	1926 Corunna Rd.
11633	1926 Corunna Rd.
11634	2000 Corunna Rd.
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11637	2003 Corunna Rd.
11638	2009 Corunna Rd.
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11654	2211 Corunna Rd.
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11664	2237 Corunna Rd.

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11711	2602 Corunna Rd.
11712	2605 Corunna Rd.

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11713	2605 Corunna Rd.
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11760	3001 Corunna Rd.

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11761	3001 Corunna Rd.
11762	3002 Corunna Rd.
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11777	3111 Corunna Rd.
11778	3112 Corunna Rd.
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11780	3113 Corunna Rd.
11781	3116 Corunna Rd.
11782	3116 Corunna Rd.
11783	3201 Corunna Rd.
11784	3205 Corunna Rd.
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11790	3217 Corunna Rd.
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11793	3302 Corunna Rd.
11794	3302 Corunna Rd.
11795	3306 Corunna Rd.
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11797	3310 Corunna Rd.
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11800	3402 Corunna Rd.
11801	3409 Corunna Rd.
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11807	3413 Corunna Rd.
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11809	3417 Corunna Rd.
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11814	3521 Corunna Rd.
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11844	3833 Corunna Rd.
11845	3833 Corunna Rd.
11846	3902 Corunna Rd.
11847	3910 Corunna Rd.
11848	3930 Corunna Rd.
11849	3930 Corunna Rd.
11850	4002 Corunna Rd.
11851	4002 Corunna Rd.
11852	4014 Corunna Rd.
11853	4014 Corunna Rd.
11854	4018 Corunna Rd.
11855	4018 Corunna Rd.
11856	4108 Corunna Rd.

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11857	4108 Corunna Rd.
11858	4108 Corunna Rd.
11859	419 Cottage Grove Ave.
11860	420 Cottage Grove Ave.
11861	421 Cottage Grove Ave.
11862	423 Cottage Grove Ave.
11863	424 Cottage Grove Ave.
11864	502 Cottage Grove Ave.
11865	508 Cottage Grove Ave.
11866	509 Cottage Grove Ave.
11867	510 Cottage Grove Ave.
11868	512 Cottage Grove Ave.
11869	513 Cottage Grove Ave.
11870	515 Cottage Grove Ave.
11871	519 Cottage Grove Ave.
11872	520 Cottage Grove Ave.
11873	521 Cottage Grove Ave.
11874	522 Cottage Grove Ave.
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11876	531 Cottage Grove Ave.
11877	609 Cottage Grove Ave.
11878	613 Cottage Grove Ave.
11879	617 Cottage Grove Ave.
11880	621 Cottage Grove Ave.
11881	622 Cottage Grove Ave.
11882	625 Cottage Grove Ave.
11883	626 Cottage Grove Ave.
11884	629 Cottage Grove Ave.
11885	701 Cottage Grove Ave.
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11887	708 Cottage Grove Ave.
11888	709 Cottage Grove Ave.
11889	713 Cottage Grove Ave.
11890	714 Cottage Grove Ave.
11891	717 Cottage Grove Ave.
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11894	722 Cottage Grove Ave.
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11896	726 Cottage Grove Ave.
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11898	730 Cottage Grove Ave.
11899	733 Cottage Grove Ave.
11900	734 Cottage Grove Ave.
11901	737 Cottage Grove Ave.
11902	801 Cottage Grove Ave.
11903	804 Cottage Grove Ave.
11904	808 Cottage Grove Ave.

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11905	812 Cottage Grove Ave.
11906	813 Cottage Grove Ave.
11907	816 Cottage Grove Ave.
11908	817 Cottage Grove Ave.
11909	820 Cottage Grove Ave.
11910	825 Cottage Grove Ave.
11911	828 Cottage Grove Ave.
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11913	901 Cottage Grove Ave.
11914	902 Cottage Grove Ave.
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11918	908 Cottage Grove Ave.
11919	910 Cottage Grove Ave.
11920	911 Cottage Grove Ave.
11921	913 Cottage Grove Ave.
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11924	921 Cottage Grove Ave.
11925	922 Cottage Grove Ave.
11926	925 Cottage Grove Ave.
11927	926 Cottage Grove Ave.
11928	929 Cottage Grove Ave.
11929	707 Country Club Ln.
11930	714 Country Club Ln.
11931	715 Country Club Ln.
11932	111 Court St., E.
11933	111 Court St., E.
11934	111 Court St., E.
11935	111 Court St., E.
11936	111 Court St., E.
11937	111 Court St., E.
11938	111 Court St., E.
11939	124 Court St., E.
11940	224 Court St., E.
11941	302 Court St., E.
11942	302 Court St., E.
11943	307 Court St., E.
11944	307 Court St., E.
11945	307 Court St., E.
11946	307 Court St., E.
11947	310 Court St., E.
11948	310 Court St., E.
11949	310 Court St., E.
11950	310 Court St., E.
11951	311 Court St., E.
11952	314 Court St., E.

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11953	315 Court St., E.
11954	315 Court St., E.
11955	318 Court St., E.
11956	318 Court St., E.
11957	319 Court St., E.
11958	402 Court St., E.
11959	402 Court St., E.
11960	405 Court St., E.
11961	409 Court St., E.
11962	410 Court St., E.
11963	410 Court St., E.
11964	621 Court St., E.
11965	625 Court St., E.
11966	629 Court St., E.
11967	700 Court St., E.
11968	703 Court St., E.
11969	703 Court St., E.
11970	703 Court St., E.
11971	713 Court St., E.
11972	800 Court St., E.
11973	801 Court St., E.
11974	809 Court St., E.
11975	821 Court St., E.
11976	902 Court St., E.
11977	902 Court St., E.
11978	903 Court St., E.
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11980	915 Court St., E.
11981	915 Court St., E.
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11986	915 Court St., E.
11987	915 Court St., E.
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11989	915 Court St., E.
11990	915 Court St., E.
11991	915 Court St., E.
11992	915 Court St., E.
11993	915 Court St., E.
11994	915 Court St., E.
11995	915 Court St., E.
11996	915 Court St., E.
11997	915 Court St., E.
11998	915 Court St., E.
11999	915 Court St., E.
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12001	915 Court St., E.
12002	915 Court St., E.
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12006	915 Court St., E.
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12015	1216 Court St., E.
12016	1302 Court St., E.
12017	1312 Court St., E.
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12019	1330 Court St., E.
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12043	1720 Court St., E.
12044	1801 Court St., E.
12045	1802 Court St., E.
12046	1806 Court St., E.
12047	1809 Court St., E.
12048	1810 Court St., E.

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12049	1814 Court St., E.
12050	1818 Court St., E.
12051	1821 Court St., E.
12052	1826 Court St., E.
12053	1835 Court St., E.
12054	1835 Court St., E.
12055	1909 Court St., E.
12056	1909 Court St., E.
12057	1909 Court St., E.
12058	1913 Court St., E.
12059	1917 Court St., E.
12060	2001 Court St., E.
12061	2002 Court St., E.
12062	2008 Court St., E.
12063	2009 Court St., E.
12064	2013 Court St., E.
12065	2017 Court St., E.
12066	2018 Court St., E.
12067	2021 Court St., E.
12068	2022 Court St., E.
12069	2025 Court St., E.
12070	2026 Court St., E.
12071	2030 Court St., E.
12072	2034 Court St., E.
12073	2101 Court St., E.
12074	2102 Court St., E.
12075	2105 Court St., E.
12076	2108 Court St., E.
12077	2109 Court St., E.
12078	2110 Court St., E.
12079	2113 Court St., E.
12080	2114 Court St., E.
12081	2118 Court St., E.
12082	2201 Court St., E.
12083	2202 Court St., E.
12084	2205 Court St., E.
12085	2209 Court St., E.
12086	2212 Court St., E.
12087	2213 Court St., E.
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12089	2217 Court St., E.
12090	2220 Court St., E.
12091	2221 Court St., E.
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12094	2302 Court St., E.
12095	2309 Court St., E.
12096	2310 Court St., E.

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12097	2313 Court St., E.
12098	2314 Court St., E.
12099	2317 Court St., E.
12100	2318 Court St., E.
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12144	2846 Court St., E.

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12192	3805 Court St., E.

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12215	322 Court St., W.
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12223	414 Court St., W.
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12226	418 Court St., W.
12227	421 Court St., W.
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12240	603 Court St., W.

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12288	1422 Court St., W.

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12316	1805 Court St., W.
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12320	1834 Court St., W.
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12332	1936 Court St., W.
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12334	2006 Court St., W.
12335	2007 Court St., W.
12336	2010 Court St., W.

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12337	2011 Court St., W.
12338	2015 Court St., W.
12339	2016 Court St., W.
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12378	2668 Court St., W.
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12382	2710 Court St., W.
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12384	2710 Court St., W.

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12410	3201 Court St., W.
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12412	3205 Court St., W.
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12417	3301 Court St., W.
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12419	3512 Court St., W.
12420	3605 Court St., W.
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12422	3610 Court St., W.
12423	3614 Court St., W.
12424	3615 Court St., W.
12425	3701 Court St., W.
12426	3702 Court St., W.
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12429	3713 Court St., W.
12430	3714 Court St., W.
12431	3720 Court St., W.
12432	3801 Court St., W.

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12455	3933 Court St., W.
12456	4001 Court St., W.
12457	4002 Court St., W.
12458	4009 Court St., W.
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12460	4015 Court St., W.
12461	4017 Court St., W.
12462	4018 Court St., W.
12463	4024 Court St., W.
12464	4025 Court St., W.
12465	4029 Court St., W.
12466	4033 Court St., W.
12467	4041 Court St., W.
12468	2707 Coventry Ct.
12469	2714 Coventry Ct.
12470	2715 Coventry Ct.
12471	2718 Coventry Ct.
12472	2721 Coventry Ct.
12473	2722 Coventry Ct.
12474	2727 Coventry Ct.
12475	2730 Coventry Ct.
12476	3501 Craig Dr.
12477	3502 Craig Dr.
12478	3510 Craig Dr.
12479	3511 Craig Dr.
12480	3516 Craig Dr.

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12481	3522 Craig Dr.
12482	3528 Craig Dr.
12483	3533 Craig Dr.
12484	3534 Craig Dr.
12485	3537 Craig Dr.
12486	3541 Craig Dr.
12487	3602 Craig Dr.
12488	3605 Craig Dr.
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12491	3622 Craig Dr.
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12506	3722 Craig Dr.
12507	3725 Craig Dr.
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12509	3729 Craig Dr.
12510	3730 Craig Dr.
12511	3733 Craig Dr.
12512	3734 Craig Dr.
12513	3737 Craig Dr.
12514	3738 Craig Dr.
12515	3801 Craig Dr.
12516	3802 Craig Dr.
12517	3805 Craig Dr.
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12520	3810 Craig Dr.
12521	3813 Craig Dr.
12522	3814 Craig Dr.
12523	3817 Craig Dr.
12524	3818 Craig Dr.
12525	3821 Craig Dr.
12526	3822 Craig Dr.
12527	3825 Craig Dr.
12528	3826 Craig Dr.

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12529	3829 Craig Dr.
12530	3830 Craig Dr.
12531	3834 Craig Dr.
12532	3838 Craig Dr.
12533	3842 Craig Dr.
12534	112 Craighton Ct.
12535	116 Craighton Ct.
12536	122 Craighton Ct.
12537	124 Craighton Ct.
12538	126 Craighton Ct.
12539	134 Craighton Ct.
12540	3201 Cranbrook Cir.
12541	3202 Cranbrook Cir.
12542	3205 Cranbrook Cir.
12543	3208 Cranbrook Cir.
12544	3209 Cranbrook Cir.
12545	3215 Cranbrook Cir.
12546	3216 Cranbrook Cir.
12547	3220 Cranbrook Cir.
12548	6919 Cranwood Ct.
12549	6923 Cranwood Ct.
12550	6927 Cranwood Ct.
12551	6931 Cranwood Ct.
12552	6935 Cranwood Ct.
12553	6939 Cranwood Ct.
12554	6507 Cranwood Dr.
12555	6508 Cranwood Dr.
12556	6511 Cranwood Dr.
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12567	6602 Cranwood Dr.
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12576	6621 Cranwood Dr.

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12577	6622 Cranwood Dr.
12578	6701 Cranwood Dr.
12579	6702 Cranwood Dr.
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12581	6706 Cranwood Dr.
12582	6710 Cranwood Dr.
12583	6714 Cranwood Dr.
12584	6802 Cranwood Dr.
12585	6806 Cranwood Dr.
12586	6810 Cranwood Dr.
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12589	6818 Cranwood Dr.
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12594	6908 Cranwood Dr.
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12596	6912 Cranwood Dr.
12597	6915 Cranwood Dr.
12598	6918 Cranwood Dr.
12599	6924 Cranwood Dr.
12600	6930 Cranwood Dr.
12601	7001 Cranwood Dr.
12602	7002 Cranwood Dr.
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12604	7006 Cranwood Dr.
12605	7009 Cranwood Dr.
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12607	7013 Cranwood Dr.
12608	7014 Cranwood Dr.
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12610	7018 Cranwood Dr.
12611	7021 Cranwood Dr.
12612	7025 Cranwood Dr.
12613	228 Crapo St.
12614	232 Crapo St.
12615	416 Crapo St.
12616	420 Crapo St.
12617	424 Crapo St.
12618	428 Crapo St.
12619	502 Crapo St.
12620	506 Crapo St.
12621	510 Crapo St.
12622	514 Crapo St.
12623	518 Crapo St.
12624	522 Crapo St.

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12625	526 Crapo St.
12626	601 Crapo St.
12627	606 Crapo St.
12628	612 Crapo St.
12629	616 Crapo St.
12630	710 Crapo St.
12631	810 Crapo St.
12632	508 Crawford St.
12633	511 Crawford St.
12634	515 Crawford St.
12635	516 Crawford St.
12636	519 Crawford St.
12637	520 Crawford St.
12638	521 Crawford St.
12639	524 Crawford St.
12640	611 Crawford St.
12641	612 Crawford St.
12642	615 Crawford St.
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12644	619 Crawford St.
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12647	624 Crawford St.
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12649	628 Crawford St.
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12651	632 Crawford St.
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12654	639 Crawford St.
12655	640 Crawford St.
12656	643 Crawford St.
12657	644 Crawford St.
12658	647 Crawford St.
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12660	651 Crawford St.
12661	652 Crawford St.
12662	701 Crawford St.
12663	702 Crawford St.
12664	705 Crawford St.
12665	706 Crawford St.
12666	709 Crawford St.
12667	713 Crawford St.
12668	714 Crawford St.
12669	717 Crawford St.
12670	718 Crawford St.
12671	721 Crawford St.
12672	722 Crawford St.

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12673	725 Crawford St.
12674	726 Crawford St.
12675	729 Crawford St.
12676	730 Crawford St.
12677	733 Crawford St.
12678	734 Crawford St.
12679	737 Crawford St.
12680	738 Crawford St.
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12683	745 Crawford St.
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12685	750 Crawford St.
12686	801 Crawford St.
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12688	805 Crawford St.
12689	809 Crawford St.
12690	810 Crawford St.
12691	816 Crawford St.
12692	817 Crawford St.
12693	822 Crawford St.
12694	830 Crawford St.
12695	830 Crawford St.
12696	833 Crawford St.
12697	834 Crawford St.
12698	837 Crawford St.
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12700	841 Crawford St.
12701	841 Crawford St.
12702	842 Crawford St.
12703	850 Crawford St.
12704	853 Crawford St.
12705	854 Crawford St.
12706	858 Crawford St.
12707	862 Crawford St.
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12709	911 Crawford St.
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12719	943 Crawford St.
12720	951 Crawford St.

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12721	1012 Crawford St.
12722	1016 Crawford St.
12723	1019 Crawford St.
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12726	1028 Crawford St.
12727	1031 Crawford St.
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12729	1035 Crawford St.
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12731	1039 Crawford St.
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12744	1228 Crawford St.
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12746	1232 Crawford St.
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12750	1301 Crawford St.
12751	1305 Crawford St.
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12753	1310 Crawford St.
12754	1313 Crawford St.
12755	1314 Crawford St.
12756	1603 Crescent Dr.
12757	1610 Crescent Dr.
12758	1611 Crescent Dr.
12759	1612 Crescent Dr.
12760	1616 Crescent Dr.
12761	1621 Crescent Dr.
12762	1703 Crescent Dr.
12763	1704 Crescent Dr.
12764	1715 Crescent Dr.
12765	1725 Crescent Dr.
12766	1731 Crescent Dr.
12767	1732 Crescent Dr.
12768	1401 Crestbrook Ln.

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12769	1402 Crestbrook Ln.
12770	1411 Crestbrook Ln.
12771	1412 Crestbrook Ln.
12772	1415 Crestbrook Ln.
12773	1419 Crestbrook Ln.
12774	1420 Crestbrook Ln.
12775	1423 Crestbrook Ln.
12776	1426 Crestbrook Ln.
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12778	1431 Crestbrook Ln.
12779	1501 Crestbrook Ln.
12780	1502 Crestbrook Ln.
12781	1505 Crestbrook Ln.
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12783	1509 Crestbrook Ln.
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12785	1513 Crestbrook Ln.
12786	1514 Crestbrook Ln.
12787	1517 Crestbrook Ln.
12788	1601 Crestbrook Ln.
12789	1602 Crestbrook Ln.
12790	1605 Crestbrook Ln.
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12792	1609 Crestbrook Ln.
12793	1613 Crestbrook Ln.
12794	1617 Crestbrook Ln.
12795	1701 Crestbrook Ln.
12796	1705 Crestbrook Ln.
12797	1708 Crestbrook Ln.
12798	1709 Crestbrook Ln.
12799	1713 Crestbrook Ln.
12800	1717 Crestbrook Ln.
12801	1801 Crestbrook Ln.
12802	1805 Crestbrook Ln.
12803	1808 Crestbrook Ln.
12804	1809 Crestbrook Ln.
12805	1813 Crestbrook Ln.
12806	1814 Crestbrook Ln.
12807	1817 Crestbrook Ln.
12808	1821 Crestbrook Ln.
12809	1901 Crestbrook Ln.
12810	1902 Crestbrook Ln.
12811	1907 Crestbrook Ln.
12812	1908 Crestbrook Ln.
12813	1913 Crestbrook Ln.
12814	1914 Crestbrook Ln.
12815	1920 Crestbrook Ln.
12816	2000 Crestbrook Ln.

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12817	2001 Crestbrook Ln.
12818	2003 Crestbrook Ln.
12819	2004 Crestbrook Ln.
12820	2005 Crestbrook Ln.
12821	2007 Crestbrook Ln.
12822	2008 Crestbrook Ln.
12823	2009 Crestbrook Ln.
12824	2011 Crestbrook Ln.
12825	2012 Crestbrook Ln.
12826	2015 Crestbrook Ln.
12827	2016 Crestbrook Ln.
12828	2017 Crestbrook Ln.
12829	2019 Crestbrook Ln.
12830	2020 Crestbrook Ln.
12831	2021 Crestbrook Ln.
12832	2023 Crestbrook Ln.
12833	2025 Crestbrook Ln.
12834	2110 Crestbrook Ln.
12835	2111 Crestbrook Ln.
12836	2113 Crestbrook Ln.
12837	2115 Crestbrook Ln.
12838	2117 Crestbrook Ln.
12839	2119 Crestbrook Ln.
12840	2121 Crestbrook Ln.
12841	2140 Crestbrook Ln.
12842	2141 Crestbrook Ln.
12843	2206 Crestbrook Ln.
12844	2305 Crestbrook Ln.
12845	2306 Crestbrook Ln.
12846	2309 Crestbrook Ln.
12847	2310 Crestbrook Ln.
12848	2314 Crestbrook Ln.
12849	2315 Crestbrook Ln.
12850	4701 Crestbrook Ln.
12851	4702 Crestbrook Ln.
12852	4705 Crestbrook Ln.
12853	4706 Crestbrook Ln.
12854	4709 Crestbrook Ln.
12855	4710 Crestbrook Ln.
12856	4714 Crestbrook Ln.
12857	4722 Crestbrook Ln.
12858	2701 Crestwood Dr.
12859	2708 Crestwood Dr.
12860	2714 Crestwood Dr.
12861	2717 Crestwood Dr.
12862	2720 Crestwood Dr.
12863	2725 Crestwood Dr.
12864	2728 Crestwood Dr.

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12865	2729 Crestwood Dr.
12866	2732 Crestwood Dr.
12867	2733 Crestwood Dr.
12868	2737 Crestwood Dr.
12869	2741 Crestwood Dr.
12870	2801 Crestwood Dr.
12871	2802 Crestwood Dr.
12872	2809 Crestwood Dr.
12873	2812 Crestwood Dr.
12874	2910 Crestwood Dr.
12875	4214 Crissman St.
12876	4302 Crissman St.
12877	4306 Crissman St.
12878	4309 Crissman St.
12879	4314 Crissman St.
12880	4317 Crissman St.
12881	4318 Crissman St.
12882	4401 Crissman St.
12883	4402 Crissman St.
12884	4405 Crissman St.
12885	4406 Crissman St.
12886	4511 Crissman St.
12887	4512 Crissman St.
12888	4515 Crissman St.
12889	4518 Crissman St.
12890	4520 Crissman St.
12891	4522 Crissman St.
12892	4523 Crissman St.
12893	4605 Crissman St.
12894	4610 Crissman St.
12895	1953 Crocker Ave.
12896	1963 Crocker Ave.
12897	1964 Crocker Ave.
12898	1968 Crocker Ave.
12899	1971 Crocker Ave.
12900	1972 Crocker Ave.
12901	1978 Crocker Ave.
12902	1979 Crocker Ave.
12903	1980 Crocker Ave.
12904	2005 Crocker Ave.
12905	2006 Crocker Ave.
12906	2009 Crocker Ave.
12907	2010 Crocker Ave.
12908	2013 Crocker Ave.
12909	2014 Crocker Ave.
12910	2018 Crocker Ave.
12911	2021 Crocker Ave.
12912	2022 Crocker Ave.

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12913	2025 Crocker Ave.
12914	2026 Crocker Ave.
12915	2029 Crocker Ave.
12916	2030 Crocker Ave.
12917	2033 Crocker Ave.
12918	2036 Crocker Ave.
12919	2037 Crocker Ave.
12920	2038 Crocker Ave.
12921	2041 Crocker Ave.
12922	2042 Crocker Ave.
12923	2045 Crocker Ave.
12924	2046 Crocker Ave.
12925	2049 Crocker Ave.
12926	2052 Crocker Ave.
12927	2110 Crocker Ave.
12928	2111 Crocker Ave.
12929	2114 Crocker Ave.
12930	2117 Crocker Ave.
12931	2118 Crocker Ave.
12932	2122 Crocker Ave.
12933	2123 Crocker Ave.
12934	2125 Crocker Ave.
12935	2126 Crocker Ave.
12936	2127 Crocker Ave.
12937	2202 Crocker Ave.
12938	2205 Crocker Ave.
12939	2206 Crocker Ave.
12940	2209 Crocker Ave.
12941	2210 Crocker Ave.
12942	2213 Crocker Ave.
12943	2217 Crocker Ave.
12944	2224 Crocker Ave.
12945	2225 Crocker Ave.
12946	1521 Cromwell Ave.
12947	1601 Cromwell Ave.
12948	1607 Cromwell Ave.
12949	1608 Cromwell Ave.
12950	1611 Cromwell Ave.
12951	1615 Cromwell Ave.
12952	1616 Cromwell Ave.
12953	1620 Cromwell Ave.
12954	1628 Cromwell Ave.
12955	1634 Cromwell Ave.
12956	1635 Cromwell Ave.
12957	1306 Cronk Ave.
12958	1310 Cronk Ave.
12959	1314 Cronk Ave.
12960	1318 Cronk Ave.

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12961	1400 Cronk Ave.
12962	1401 Cronk Ave.
12963	1402 Cronk Ave.
12964	1406 Cronk Ave.
12965	1410 Cronk Ave.
12966	1413 Cronk Ave.
12967	1414 Cronk Ave.
12968	1416 Cronk Ave.
12969	1419 Cronk Ave.
12970	1506 Cronk Ave.
12971	1510 Cronk Ave.
12972	1514 Cronk Ave.
12973	1518 Cronk Ave.
12974	1522 Cronk Ave.
12975	1526 Cronk Ave.
12976	1602 Cronk Ave.
12977	1606 Cronk Ave.
12978	1702 Cronk Ave.
12979	1708 Cronk Ave.
12980	1709 Cronk Ave.
12981	1710 Cronk Ave.
12982	1714 Cronk Ave.
12983	1722 Cronk Ave.
12984	1726 Cronk Ave.
12985	1800 Cronk Ave.
12986	2002 Crooked Ln.
12987	2007 Crooked Ln.
12988	2015 Crooked Ln.
12989	2020 Crooked Ln.
12990	2023 Crooked Ln.
12991	2031 Crooked Ln.
12992	2038 Crooked Ln.
12993	2039 Crooked Ln.
12994	2046 Crooked Ln.
12995	2054 Crooked Ln.
12996	213 Crosby St.
12997	217 Crosby St.
12998	221 Crosby St.
12999	225 Crosby St.
13000	229 Crosby St.
13001	300 Crosby St.
13002	308 Crosby St.
13003	310 Crosby St.
13004	311 Crosby St.
13005	318 Crosby St.
13006	321 Crosby St.
13007	325 Crosby St.
13008	326 Crosby St.

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13009	330 Crosby St.
13010	336 Crosby St.
13011	337 Crosby St.
13012	341 Crosby St.
13013	214 Cross Ct.
13014	215 Cross Ct.
13015	222 Cross Ct.
13016	224 Cross Ct.
13017	225 Cross Ct.
13018	227 Cross Ct.
13019	229 Cross Ct.
13020	1001 Cumberland St., N.
13021	1105 Cumberland St., N.
13022	1701 Cumberland St., N.
13023	1709 Cumberland St., N.
13024	1714 Cumberland St., N.
13025	1717 Cumberland St., N.
13026	1721 Cumberland St., N.
13027	1722 Cumberland St., N.
13028	121 Cumberland St.
13029	202 Cumberland St.
13030	203 Cumberland St.
13031	209 Cumberland St.
13032	213 Cumberland St.
13033	214 Cumberland St.
13034	218 Cumberland St.
13035	221 Cumberland St.
13036	2010 Cumings Ave.
13037	2014 Cumings Ave.
13038	2016 Cumings Ave.
13039	2108 Cumings Ave.
13040	2112 Cumings Ave.
13041	2114 Cumings Ave.
13042	2118 Cumings Ave.
13043	2122 Cumings Ave.
13044	2202 Cumings Ave.
13045	2206 Cumings Ave.
13046	2210 Cumings Ave.
13047	2214 Cumings Ave.
13048	2215 Cumings Ave.
13049	2218 Cumings Ave.
13050	2222 Cumings Ave.
13051	2301 Cumings Ave.
13052	2302 Cumings Ave.
13053	2314 Cumings Ave.
13054	2318 Cumings Ave.
13055	2322 Cumings Ave.
13056	2328 Cumings Ave.

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13057	2402 Cumings Ave.
13058	2406 Cumings Ave.
13059	2410 Cumings Ave.
13060	2411 Cumings Ave.
13061	2414 Cumings Ave.
13062	2418 Cumings Ave.
13063	2419 Cumings Ave.
13064	2502 Cumings Ave.
13065	2506 Cumings Ave.
13066	2506 Cumings Ave.
13067	2514 Cumings Ave.
13068	2518 Cumings Ave.
13069	2522 Cumings Ave.
13070	2526 Cumings Ave.
13071	2530 Cumings Ave.
13072	2534 Cumings Ave.
13073	2538 Cumings Ave.
13074	2542 Cumings Ave.
13075	2548 Cumings Ave.
13076	2602 Cumings Ave.
13077	2608 Cumings Ave.
13078	2612 Cumings Ave.
13079	2618 Cumings Ave.
13080	2624 Cumings Ave.
13081	2628 Cumings Ave.
13082	2632 Cumings Ave.
13083	2640 Cumings Ave.
13084	2645 Cumings Ave.
13085	2702 Cumings Ave.
13086	2706 Cumings Ave.
13087	2707 Cumings Ave.
13088	2710 Cumings Ave.
13089	2714 Cumings Ave.
13090	2722 Cumings Ave.
13091	2726 Cumings Ave.
13092	2730 Cumings Ave.
13093	2734 Cumings Ave.
13094	1911 Curry St.
13095	2112 Curry St.
13096	2214 Curry St.
13097	3815 Custer Ave.
13098	4102 Custer Ave.
13099	4110 Custer Ave.
13100	4117 Custer Ave.
13101	4118 Custer Ave.
13102	4123 Custer Ave.
13103	4126 Custer Ave.
13104	4127 Custer Ave.

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13105	4130 Custer Ave.
13106	4131 Custer Ave.
13107	4133 Custer Ave.
13108	4134 Custer Ave.
13109	4201 Custer Ave.
13110	4202 Custer Ave.
13111	4205 Custer Ave.
13112	4206 Custer Ave.
13113	4209 Custer Ave.
13114	4210 Custer Ave.
13115	4213 Custer Ave.
13116	4217 Custer Ave.
13117	4218 Custer Ave.
13118	4221 Custer Ave.
13119	4222 Custer Ave.
13120	4225 Custer Ave.
13121	4229 Custer Ave.
13122	4230 Custer Ave.
13123	4234 Custer Ave.
13124	4301 Custer Ave.
13125	4305 Custer Ave.
13126	4306 Custer Ave.
13127	4309 Custer Ave.
13128	4310 Custer Ave.
13129	4313 Custer Ave.
13130	4321 Custer Ave.
13131	4325 Custer Ave.
13132	3815 Cuthbertson St.
13133	3819 Cuthbertson St.
13134	3901 Cuthbertson St.
13135	3902 Cuthbertson St.
13136	3905 Cuthbertson St.
13137	3909 Cuthbertson St.
13138	3912 Cuthbertson St.
13139	3913 Cuthbertson St.
13140	3921 Cuthbertson St.
13141	4002 Cuthbertson St.
13142	4005 Cuthbertson St.
13143	4009 Cuthbertson St.
13144	4012 Cuthbertson St.
13145	4017 Cuthbertson St.
13146	4021 Cuthbertson St.
13147	4101 Cuthbertson St.
13148	4102 Cuthbertson St.
13149	4109 Cuthbertson St.
13150	4116 Cuthbertson St.
13151	4121 Cuthbertson St.
13152	4201 Cuthbertson St.

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13153	4205 Cuthbertson St.
13154	4208 Cuthbertson St.
13155	4209 Cuthbertson St.
13156	4212 Cuthbertson St.
13157	4213 Cuthbertson St.
13158	4216 Cuthbertson St.
13159	4217 Cuthbertson St.
13160	4221 Cuthbertson St.
13161	4301 Cuthbertson St.
13162	4305 Cuthbertson St.
13163	4309 Cuthbertson St.
13164	4312 Cuthbertson St.
13165	4313 Cuthbertson St.
13166	4316 Cuthbertson St.
13167	4401 Cuthbertson St.
13168	4402 Cuthbertson St.
13169	4405 Cuthbertson St.
13170	4408 Cuthbertson St.
13171	4409 Cuthbertson St.
13172	4412 Cuthbertson St.
13173	4413 Cuthbertson St.
13174	4417 Cuthbertson St.
13175	1408 Dakota Ave.
13176	1412 Dakota Ave.
13177	1416 Dakota Ave.
13178	1417 Dakota Ave.
13179	1420 Dakota Ave.
13180	1421 Dakota Ave.
13181	1425 Dakota Ave.
13182	1428 Dakota Ave.
13183	1429 Dakota Ave.
13184	1432 Dakota Ave.
13185	1433 Dakota Ave.
13186	1436 Dakota Ave.
13187	1437 Dakota Ave.
13188	1440 Dakota Ave.
13189	1441 Dakota Ave.
13190	1444 Dakota Ave.
13191	1445 Dakota Ave.
13192	1448 Dakota Ave.
13193	1449 Dakota Ave.
13194	1452 Dakota Ave.
13195	1501 Dakota Ave.
13196	1502 Dakota Ave.
13197	1505 Dakota Ave.
13198	1506 Dakota Ave.
13199	1509 Dakota Ave.
13200	1510 Dakota Ave.

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13201	1513 Dakota Ave.
13202	1514 Dakota Ave.
13203	1517 Dakota Ave.
13204	1518 Dakota Ave.
13205	1521 Dakota Ave.
13206	1522 Dakota Ave.
13207	1525 Dakota Ave.
13208	1526 Dakota Ave.
13209	1529 Dakota Ave.
13210	1530 Dakota Ave.
13211	1531 Dakota Ave.
13212	1534 Dakota Ave.
13213	1537 Dakota Ave.
13214	1538 Dakota Ave.
13215	1541 Dakota Ave.
13216	1542 Dakota Ave.
13217	1545 Dakota Ave.
13218	1546 Dakota Ave.
13219	1602 Dakota Ave.
13220	1603 Dakota Ave.
13221	1606 Dakota Ave.
13222	1607 Dakota Ave.
13223	1610 Dakota Ave.
13224	1611 Dakota Ave.
13225	1614 Dakota Ave.
13226	1615 Dakota Ave.
13227	1618 Dakota Ave.
13228	1619 Dakota Ave.
13229	1622 Dakota Ave.
13230	1623 Dakota Ave.
13231	1626 Dakota Ave.
13232	1627 Dakota Ave.
13233	1631 Dakota Ave.
13234	1632 Dakota Ave.
13235	1634 Dakota Ave.
13236	1635 Dakota Ave.
13237	1638 Dakota Ave.
13238	1639 Dakota Ave.
13239	1642 Dakota Ave.
13240	1643 Dakota Ave.
13241	1646 Dakota Ave.
13242	1647 Dakota Ave.
13243	1650 Dakota Ave.
13244	1654 Dakota Ave.
13245	1655 Dakota Ave.
13246	1701 Dakota Ave.
13247	1706 Dakota Ave.
13248	1709 Dakota Ave.

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13249	1712 Dakota Ave.
13250	1714 Dakota Ave.
13251	1716 Dakota Ave.
13252	1717 Dakota Ave.
13253	1721 Dakota Ave.
13254	1722 Dakota Ave.
13255	1725 Dakota Ave.
13256	1726 Dakota Ave.
13257	1729 Dakota Ave.
13258	1730 Dakota Ave.
13259	1801 Dakota Ave.
13260	1802 Dakota Ave.
13261	1806 Dakota Ave.
13262	1808 Dakota Ave.
13263	1813 Dakota Ave.
13264	1814 Dakota Ave.
13265	1817 Dakota Ave.
13266	1821 Dakota Ave.
13267	1822 Dakota Ave.
13268	1824 Dakota Ave.
13269	1825 Dakota Ave.
13270	1826 Dakota Ave.
13271	1829 Dakota Ave.
13272	1830 Dakota Ave.
13273	1911 Dakota Ave.
13274	1915 Dakota Ave.
13275	1916 Dakota Ave.
13276	1918 Dakota Ave.
13277	1919 Dakota Ave.
13278	2001 Dakota Ave.
13279	2002 Dakota Ave.
13280	2005 Dakota Ave.
13281	2006 Dakota Ave.
13282	2010 Dakota Ave.
13283	2013 Dakota Ave.
13284	2014 Dakota Ave.
13285	2017 Dakota Ave.
13286	2018 Dakota Ave.
13287	2021 Dakota Ave.
13288	2022 Dakota Ave.
13289	2101 Dakota Ave.
13290	2102 Dakota Ave.
13291	2105 Dakota Ave.
13292	2106 Dakota Ave.
13293	2109 Dakota Ave.
13294	2110 Dakota Ave.
13295	2113 Dakota Ave.
13296	2117 Dakota Ave.

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13297	2118 Dakota Ave.
13298	2202 Dakota Ave.
13299	2205 Dakota Ave.
13300	2210 Dakota Ave.
13301	2213 Dakota Ave.
13302	2214 Dakota Ave.
13303	2217 Dakota Ave.
13304	2218 Dakota Ave.
13305	2221 Dakota Ave.
13306	2222 Dakota Ave.
13307	2301 Dakota Ave.
13308	2302 Dakota Ave.
13309	2305 Dakota Ave.
13310	2306 Dakota Ave.
13311	2309 Dakota Ave.
13312	2310 Dakota Ave.
13313	2313 Dakota Ave.
13314	2314 Dakota Ave.
13315	2317 Dakota Ave.
13316	2318 Dakota Ave.
13317	2321 Dakota Ave.
13318	2322 Dakota Ave.
13319	2401 Dakota Ave.
13320	2402 Dakota Ave.
13321	2405 Dakota Ave.
13322	2406 Dakota Ave.
13323	2409 Dakota Ave.
13324	2413 Dakota Ave.
13325	2414 Dakota Ave.
13326	2417 Dakota Ave.
13327	2418 Dakota Ave.
13328	2422 Dakota Ave.
13329	2425 Dakota Ave.
13330	2426 Dakota Ave.
13331	2429 Dakota Ave.
13332	2433 Dakota Ave.
13333	2434 Dakota Ave.
13334	2501 Dakota Ave.
13335	2502 Dakota Ave.
13336	2505 Dakota Ave.
13337	2506 Dakota Ave.
13338	2509 Dakota Ave.
13339	2510 Dakota Ave.
13340	2514 Dakota Ave.
13341	2518 Dakota Ave.
13342	2601 Dakota Ave.
13343	2602 Dakota Ave.
13344	2606 Dakota Ave.

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13345	2609 Dakota Ave.
13346	2613 Dakota Ave.
13347	2614 Dakota Ave.
13348	2617 Dakota Ave.
13349	2618 Dakota Ave.
13350	2622 Dakota Ave.
13351	2701 Dakota Ave.
13352	2702 Dakota Ave.
13353	2705 Dakota Ave.
13354	2706 Dakota Ave.
13355	2709 Dakota Ave.
13356	2710 Dakota Ave.
13357	2714 Dakota Ave.
13358	2901 Dakota Ave.
13359	2902 Dakota Ave.
13360	2907 Dakota Ave.
13361	2910 Dakota Ave.
13362	2917 Dakota Ave.
13363	2918 Dakota Ave.
13364	2921 Dakota Ave.
13365	2922 Dakota Ave.
13366	2925 Dakota Ave.
13367	2929 Dakota Ave.
13368	2930 Dakota Ave.
13369	2934 Dakota Ave.
13370	3001 Dakota Ave.
13371	3002 Dakota Ave.
13372	3006 Dakota Ave.
13373	3009 Dakota Ave.
13374	3010 Dakota Ave.
13375	3011 Dakota Ave.
13376	3015 Dakota Ave.
13377	3018 Dakota Ave.
13378	3019 Dakota Ave.
13379	3025 Dakota Ave.
13380	3027 Dakota Ave.
13381	3030 Dakota Ave.
13382	3109 Dakota Ave.
13383	3113 Dakota Ave.
13384	3119 Dakota Ave.
13385	3120 Dakota Ave.
13386	3125 Dakota Ave.
13387	3126 Dakota Ave.
13388	3131 Dakota Ave.
13389	3132 Dakota Ave.
13390	3137 Dakota Ave.
13391	3138 Dakota Ave.
13392	3143 Dakota Ave.

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13393	3144 Dakota Ave.
13394	3149 Dakota Ave.
13395	3150 Dakota Ave.
13396	3155 Dakota Ave.
13397	3156 Dakota Ave.
13398	3161 Dakota Ave.
13399	3162 Dakota Ave.
13400	3201 Dakota Ave.
13401	3202 Dakota Ave.
13402	3207 Dakota Ave.
13403	3208 Dakota Ave.
13404	3213 Dakota Ave.
13405	3214 Dakota Ave.
13406	3219 Dakota Ave.
13407	3220 Dakota Ave.
13408	3225 Dakota Ave.
13409	3226 Dakota Ave.
13410	3231 Dakota Ave.
13411	3232 Dakota Ave.
13412	3237 Dakota Ave.
13413	3238 Dakota Ave.
13414	3243 Dakota Ave.
13415	3244 Dakota Ave.
13416	3249 Dakota Ave.
13417	3301 Dakota Ave.
13418	3302 Dakota Ave.
13419	3307 Dakota Ave.
13420	3308 Dakota Ave.
13421	3313 Dakota Ave.
13422	3314 Dakota Ave.
13423	3319 Dakota Ave.
13424	3320 Dakota Ave.
13425	3325 Dakota Ave.
13426	3326 Dakota Ave.
13427	3401 Dakota Ave.
13428	3402 Dakota Ave.
13429	3407 Dakota Ave.
13430	3408 Dakota Ave.
13431	3413 Dakota Ave.
13432	3414 Dakota Ave.
13433	3419 Dakota Ave.
13434	3420 Dakota Ave.
13435	3425 Dakota Ave.
13436	3426 Dakota Ave.
13437	3501 Dakota Ave.
13438	3502 Dakota Ave.
13439	3507 Dakota Ave.
13440	3508 Dakota Ave.

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13441	3513 Dakota Ave.
13442	3514 Dakota Ave.
13443	3519 Dakota Ave.
13444	3520 Dakota Ave.
13445	3525 Dakota Ave.
13446	3526 Dakota Ave.
13447	3601 Dakota Ave.
13448	3602 Dakota Ave.
13449	3607 Dakota Ave.
13450	3608 Dakota Ave.
13451	3613 Dakota Ave.
13452	3614 Dakota Ave.
13453	3619 Dakota Ave.
13454	3620 Dakota Ave.
13455	3701 Dakota Ave.
13456	3702 Dakota Ave.
13457	3707 Dakota Ave.
13458	3708 Dakota Ave.
13459	3711 Dakota Ave.
13460	3712 Dakota Ave.
13461	3715 Dakota Ave.
13462	3716 Dakota Ave.
13463	3719 Dakota Ave.
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13465	3723 Dakota Ave.
13466	3724 Dakota Ave.
13467	3727 Dakota Ave.
13468	3728 Dakota Ave.
13469	3731 Dakota Ave.
13470	3732 Dakota Ave.
13471	3735 Dakota Ave.
13472	3736 Dakota Ave.
13473	3739 Dakota Ave.
13474	3740 Dakota Ave.
13475	3743 Dakota Ave.
13476	3744 Dakota Ave.
13477	3747 Dakota Ave.
13478	3748 Dakota Ave.
13479	3751 Dakota Ave.
13480	3755 Dakota Ave.
13481	3111 Dale Ave.
13482	3115 Dale Ave.
13483	3116 Dale Ave.
13484	3119 Dale Ave.
13485	3120 Dale Ave.
13486	3123 Dale Ave.
13487	3127 Dale Ave.
13488	3128 Dale Ave.

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13489	3201 Dale Ave.
13490	3202 Dale Ave.
13491	3205 Dale Ave.
13492	3209 Dale Ave.
13493	3212 Dale Ave.
13494	3213 Dale Ave.
13495	3216 Dale Ave.
13496	3224 Dale Ave.
13497	3225 Dale Ave.
13498	3228 Dale Ave.
13499	3229 Dale Ave.
13500	3232 Dale Ave.
13501	3236 Dale Ave.
13502	3311 Dale Ave.
13503	3312 Dale Ave.
13504	3315 Dale Ave.
13505	3316 Dale Ave.
13506	3319 Dale Ave.
13507	3320 Dale Ave.
13508	3323 Dale Ave.
13509	3324 Dale Ave.
13510	3401 Dale Ave.
13511	3402 Dale Ave.
13512	3405 Dale Ave.
13513	3406 Dale Ave.
13514	3409 Dale Ave.
13515	3410 Dale Ave.
13516	3413 Dale Ave.
13517	3414 Dale Ave.
13518	3417 Dale Ave.
13519	3418 Dale Ave.
13520	3422 Dale Ave.
13521	3505 Dale Ave.
13522	3506 Dale Ave.
13523	3509 Dale Ave.
13524	3510 Dale Ave.
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13527	3517 Dale Ave.
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13531	3525 Dale Ave.
13532	3526 Dale Ave.
13533	3601 Dale Ave.
13534	3602 Dale Ave.
13535	3605 Dale Ave.
13536	3606 Dale Ave.

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13537	3609 Dale Ave.
13538	3610 Dale Ave.
13539	3614 Dale Ave.
13540	3617 Dale Ave.
13541	101 Damon St.
13542	111 Damon St.
13543	112 Damon St.
13544	115 Damon St.
13545	120 Damon St.
13546	123 Damon St.
13547	124 Damon St.
13548	127 Damon St.
13549	131 Damon St.
13550	132 Damon St.
13551	139 Damon St.
13552	140 Damon St.
13553	143 Damon St.
13554	144 Damon St.
13555	148 Damon St.
13556	151 Damon St.
13557	152 Damon St.
13558	201 Damon St.
13559	202 Damon St.
13560	205 Damon St.
13561	206 Damon St.
13562	209 Damon St.
13563	210 Damon St.
13564	213 Damon St.
13565	214 Damon St.
13566	217 Damon St.
13567	218 Damon St.
13568	221 Damon St.
13569	226 Damon St.
13570	302 Damon St.
13571	305 Damon St.
13572	309 Damon St.
13573	310 Damon St.
13574	317 Damon St.
13575	318 Damon St.
13576	321 Damon St.
13577	322 Damon St.
13578	361 Damon St.
13579	362 Damon St.
13580	368 Damon St.
13581	372 Damon St.
13582	376 Damon St.
13583	401 Damon St.
13584	402 Damon St.

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13585	405 Damon St.
13586	406 Damon St.
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13589	414 Damon St.
13590	418 Damon St.
13591	421 Damon St.
13592	422 Damon St.
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13595	502 Damon St.
13596	506 Damon St.
13597	520 Damon St.
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13615	734 Damon St.
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13618	747 Damon St.
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13639	909 Damon St.
13640	910 Damon St.
13641	913 Damon St.
13642	914 Damon St.
13643	917 Damon St.
13644	918 Damon St.
13645	921 Damon St.
13646	6701 Dana Ln.
13647	6709 Dana Ln.
13648	6710 Dana Ln.
13649	6801 Dana Ln.
13650	6802 Dana Ln.
13651	6805 Dana Ln.
13652	6806 Dana Ln.
13653	6809 Dana Ln.
13654	6810 Dana Ln.
13655	6805 Daniel Dr.
13656	6808 Daniel Dr.
13657	6809 Daniel Dr.
13658	6813 Daniel Dr.
13659	6814 Daniel Dr.
13660	6817 Daniel Dr.
13661	6818 Daniel Dr.
13662	6901 Daniel Dr.
13663	6902 Daniel Dr.
13664	6905 Daniel Dr.
13665	6906 Daniel Dr.
13666	6909 Daniel Dr.
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13670	6918 Daniel Dr.
13671	7001 Daniel Dr.
13672	7002 Daniel Dr.
13673	7006 Daniel Dr.
13674	7010 Daniel Dr.
13675	7020 Daniel Dr.
13676	3601 Darcey Ln.
13677	3602 Darcey Ln.
13678	3605 Darcey Ln.
13679	3606 Darcey Ln.
13680	3609 Darcey Ln.

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13681	3610 Darcey Ln.
13682	3613 Darcey Ln.
13683	3614 Darcey Ln.
13684	3618 Darcey Ln.
13685	3701 Darcey Ln.
13686	3702 Darcey Ln.
13687	3705 Darcey Ln.
13688	3706 Darcey Ln.
13689	3709 Darcey Ln.
13690	3710 Darcey Ln.
13691	3713 Darcey Ln.
13692	3714 Darcey Ln.
13693	3718 Darcey Ln.
13694	3722 Darcey Ln.
13695	952 Darling St.
13696	957 Darling St.
13697	960 Darling St.
13698	963 Darling St.
13699	964 Darling St.
13700	967 Darling St.
13701	968 Darling St.
13702	975 Darling St.
13703	1002 Darling St.
13704	1005 Darling St.
13705	1008 Darling St.
13706	1010 Darling St.
13707	1011 Darling St.
13708	1015 Darling St.
13709	1021 Darling St.
13710	1025 Darling St.
13711	1045 Darling St.
13712	111 Dartmouth St., E.
13713	112 Dartmouth St., E.
13714	115 Dartmouth St., E.
13715	116 Dartmouth St., E.
13716	119 Dartmouth St., E.
13717	126 Dartmouth St., E.
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13720	131 Dartmouth St., E.
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13722	135 Dartmouth St., E.
13723	201 Dartmouth St., E.
13724	202 Dartmouth St., E.
13725	205 Dartmouth St., E.
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13727	210 Dartmouth St., E.
13728	214 Dartmouth St., E.

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13729	218 Dartmouth St., E.
13730	221 Dartmouth St., E.
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13733	229 Dartmouth St., E.
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13736	234 Dartmouth St., E.
13737	237 Dartmouth St., E.
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13740	307 Dartmouth St., E.
13741	309 Dartmouth St., E.
13742	311 Dartmouth St., E.
13743	314 Dartmouth St., E.
13744	317 Dartmouth St., E.
13745	318 Dartmouth St., E.
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13754	337 Dartmouth St., E.
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13757	342 Dartmouth St., E.
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13759	402 Dartmouth St., E.
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13763	410 Dartmouth St., E.
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13765	414 Dartmouth St., E.
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13767	418 Dartmouth St., E.
13768	421 Dartmouth St., E.
13769	422 Dartmouth St., E.
13770	425 Dartmouth St., E.
13771	426 Dartmouth St., E.
13772	429 Dartmouth St., E.
13773	430 Dartmouth St., E.
13774	437 Dartmouth St., E.
13775	504 Dartmouth St., E.
13776	505 Dartmouth St., E.

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13777	506 Dartmouth St., E.
13778	509 Dartmouth St., E.
13779	510 Dartmouth St., E.
13780	514 Dartmouth St., E.
13781	515 Dartmouth St., E.
13782	519 Dartmouth St., E.
13783	520 Dartmouth St., E.
13784	523 Dartmouth St., E.
13785	528 Dartmouth St., E.
13786	530 Dartmouth St., E.
13787	602 Dartmouth St., E.
13788	608 Dartmouth St., E.
13789	610 Dartmouth St., E.
13790	614 Dartmouth St., E.
13791	618 Dartmouth St., E.
13792	619 Dartmouth St., E.
13793	623 Dartmouth St., E.
13794	626 Dartmouth St., E.
13795	630 Dartmouth St., E.
13796	713 Dartmouth St., E.
13797	768 Dartmouth St., E.
13798	768 Dartmouth St., E.
13799	768 Dartmouth St., E.
13800	768 Dartmouth St., E.
13801	112 Dartmouth St., W.
13802	113 Dartmouth St., W.
13803	117 Dartmouth St., W.
13804	120 Dartmouth St., W.
13805	121 Dartmouth St., W.
13806	124 Dartmouth St., W.
13807	125 Dartmouth St., W.
13808	128 Dartmouth St., W.
13809	129 Dartmouth St., W.
13810	132 Dartmouth St., W.
13811	133 Dartmouth St., W.
13812	200 Dartmouth St., W.
13813	201 Dartmouth St., W.
13814	204 Dartmouth St., W.
13815	205 Dartmouth St., W.
13816	208 Dartmouth St., W.
13817	209 Dartmouth St., W.
13818	213 Dartmouth St., W.
13819	216 Dartmouth St., W.
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13821	220 Dartmouth St., W.
13822	224 Dartmouth St., W.
13823	227 Dartmouth St., W.
13824	230 Dartmouth St., W.

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13825	231 Dartmouth St., W.
13826	311 Dartmouth St., W.
13827	312 Dartmouth St., W.
13828	316 Dartmouth St., W.
13829	320 Dartmouth St., W.
13830	324 Dartmouth St., W.
13831	325 Dartmouth St., W.
13832	401 Dartmouth St., W.
13833	406 Dartmouth St., W.
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13835	410 Dartmouth St., W.
13836	413 Dartmouth St., W.
13837	414 Dartmouth St., W.
13838	418 Dartmouth St., W.
13839	422 Dartmouth St., W.
13840	425 Dartmouth St., W.
13841	426 Dartmouth St., W.
13842	432 Dartmouth St., W.
13843	713 Dartmouth St., W.
13844	714 Dartmouth St., W.
13845	717 Dartmouth St., W.
13846	718 Dartmouth St., W.
13847	721 Dartmouth St., W.
13848	722 Dartmouth St., W.
13849	725 Dartmouth St., W.
13850	726 Dartmouth St., W.
13851	729 Dartmouth St., W.
13852	730 Dartmouth St., W.
13853	733 Dartmouth St., W.
13854	734 Dartmouth St., W.
13855	801 Dartmouth St., W.
13856	802 Dartmouth St., W.
13857	806 Dartmouth St., W.
13858	809 Dartmouth St., W.
13859	813 Dartmouth St., W.
13860	814 Dartmouth St., W.
13861	817 Dartmouth St., W.
13862	818 Dartmouth St., W.
13863	821 Dartmouth St., W.
13864	822 Dartmouth St., W.
13865	825 Dartmouth St., W.
13866	826 Dartmouth St., W.
13867	1101 Dartmouth St., W.
13868	1102 Dartmouth St., W.
13869	1105 Dartmouth St., W.
13870	1106 Dartmouth St., W.
13871	1109 Dartmouth St., W.
13872	1110 Dartmouth St., W.

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13873	1114 Dartmouth St., W.
13874	1201 Dartmouth St., W.
13875	1202 Dartmouth St., W.
13876	1206 Dartmouth St., W.
13877	1209 Dartmouth St., W.
13878	1210 Dartmouth St., W.
13879	1214 Dartmouth St., W.
13880	1218 Dartmouth St., W.
13881	1222 Dartmouth St., W.
13882	1301 Dartmouth St., W.
13883	1302 Dartmouth St., W.
13884	1305 Dartmouth St., W.
13885	1306 Dartmouth St., W.
13886	1309 Dartmouth St., W.
13887	1310 Dartmouth St., W.
13888	1313 Dartmouth St., W.
13889	1314 Dartmouth St., W.
13890	1317 Dartmouth St., W.
13891	1318 Dartmouth St., W.
13892	1322 Dartmouth St., W.
13893	1326 Dartmouth St., W.
13894	1401 Dartmouth St., W.
13895	1402 Dartmouth St., W.
13896	1405 Dartmouth St., W.
13897	1406 Dartmouth St., W.
13898	1409 Dartmouth St., W.
13899	1410 Dartmouth St., W.
13900	1501 Dartmouth St., W.
13901	1502 Dartmouth St., W.
13902	1505 Dartmouth St., W.
13903	1506 Dartmouth St., W.
13904	1509 Dartmouth St., W.
13905	1510 Dartmouth St., W.
13906	1513 Dartmouth St., W.
13907	1514 Dartmouth St., W.
13908	1517 Dartmouth St., W.
13909	1518 Dartmouth St., W.
13910	1521 Dartmouth St., W.
13911	1522 Dartmouth St., W.
13912	1525 Dartmouth St., W.
13913	1526 Dartmouth St., W.
13914	1529 Dartmouth St., W.
13915	1530 Dartmouth St., W.
13916	1533 Dartmouth St., W.
13917	1534 Dartmouth St., W.
13918	1601 Dartmouth St., W.
13919	1602 Dartmouth St., W.
13920	1605 Dartmouth St., W.

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13921	1606 Dartmouth St., W.
13922	1609 Dartmouth St., W.
13923	1610 Dartmouth St., W.
13924	1613 Dartmouth St., W.
13925	1614 Dartmouth St., W.
13926	1701 Dartmouth St., W.
13927	1702 Dartmouth St., W.
13928	1707 Dartmouth St., W.
13929	1708 Dartmouth St., W.
13930	1713 Dartmouth St., W.
13931	1714 Dartmouth St., W.
13932	1719 Dartmouth St., W.
13933	1720 Dartmouth St., W.
13934	1725 Dartmouth St., W.
13935	1726 Dartmouth St., W.
13936	1801 Dartmouth St., W.
13937	1802 Dartmouth St., W.
13938	1807 Dartmouth St., W.
13939	1808 Dartmouth St., W.
13940	1813 Dartmouth St., W.
13941	1814 Dartmouth St., W.
13942	1819 Dartmouth St., W.
13943	1820 Dartmouth St., W.
13944	1825 Dartmouth St., W.
13945	1826 Dartmouth St., W.
13946	1901 Dartmouth St., W.
13947	1902 Dartmouth St., W.
13948	1907 Dartmouth St., W.
13949	1908 Dartmouth St., W.
13950	2012 Dartmouth St., W.
13951	2012 Dartmouth St., W.
13952	2013 Dartmouth St., W.
13953	2101 Dartmouth St., W.
13954	2102 Dartmouth St., W.
13955	2105 Dartmouth St., W.
13956	2108 Dartmouth St., W.
13957	2111 Dartmouth St., W.
13958	2112 Dartmouth St., W.
13959	2202 Dartmouth St., W.
13960	2301 Dartmouth St., W.
13961	2302 Dartmouth St., W.
13962	2312 Dartmouth St., W.
13963	2401 Dartmouth St., W.
13964	2402 Dartmouth St., W.
13965	2409 Dartmouth St., W.
13966	2508 Dartmouth St., W.
13967	6505 Daryll Dr.
13968	6506 Daryll Dr.

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13969	6509 Daryll Dr.
13970	6510 Daryll Dr.
13971	6513 Daryll Dr.
13972	6514 Daryll Dr.
13973	6517 Daryll Dr.
13974	6518 Daryll Dr.
13975	6521 Daryll Dr.
13976	6522 Daryll Dr.
13977	6525 Daryll Dr.
13978	6526 Daryll Dr.
13979	6601 Daryll Dr.
13980	6602 Daryll Dr.
13981	6605 Daryll Dr.
13982	6606 Daryll Dr.
13983	6610 Daryll Dr.
13984	6611 Daryll Dr.
13985	6614 Daryll Dr.
13986	6617 Daryll Dr.
13987	6618 Daryll Dr.
13988	6621 Daryll Dr.
13989	6622 Daryll Dr.
13990	6625 Daryll Dr.
13991	6626 Daryll Dr.
13992	6629 Daryll Dr.
13993	6630 Daryll Dr.
13994	6633 Daryll Dr.
13995	6634 Daryll Dr.
13996	6637 Daryll Dr.
13997	6638 Daryll Dr.
13998	6641 Daryll Dr.
13999	6642 Daryll Dr.
14000	6645 Daryll Dr.
14001	6648 Daryll Dr.
14002	6701 Daryll Dr.
14003	6702 Daryll Dr.
14004	6705 Daryll Dr.
14005	6706 Daryll Dr.
14006	6709 Daryll Dr.
14007	6713 Daryll Dr.
14008	6801 Daryll Dr.
14009	6802 Daryll Dr.
14010	6805 Daryll Dr.
14011	6806 Daryll Dr.
14012	6809 Daryll Dr.
14013	6810 Daryll Dr.
14014	6813 Daryll Dr.
14015	6901 Daryll Dr.
14016	6902 Daryll Dr.

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14017	6905 Daryll Dr.
14018	6906 Daryll Dr.
14019	6909 Daryll Dr.
14020	6910 Daryll Dr.
14021	6913 Daryll Dr.
14022	6914 Daryll Dr.
14023	7001 Daryll Dr.
14024	7002 Daryll Dr.
14025	7005 Daryll Dr.
14026	7006 Daryll Dr.
14027	7009 Daryll Dr.
14028	7010 Daryll Dr.
14029	7013 Daryll Dr.
14030	7014 Daryll Dr.
14031	7017 Daryll Dr.
14032	7018 Daryll Dr.
14033	7021 Daryll Dr.
14034	7022 Daryll Dr.
14035	3157 David St.
14036	909 Davis St.
14037	910 Davis St.
14038	913 Davis St.
14039	914 Davis St.
14040	921 Davis St.
14041	922 Davis St.
14042	925 Davis St.
14043	1238 Davison Rd.
14044	1246 Davison Rd.
14045	1250 Davison Rd.
14046	1254 Davison Rd.
14047	1258 Davison Rd.
14048	1262 Davison Rd.
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14050	1266 Davison Rd.
14051	1267 Davison Rd.
14052	1271 Davison Rd.
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14054	1278 Davison Rd.
14055	1304 Davison Rd.
14056	1351 Davison Rd.
14057	1355 Davison Rd.
14058	1359 Davison Rd.
14059	1402 Davison Rd.
14060	1405 Davison Rd.
14061	1410 Davison Rd.
14062	1417 Davison Rd.
14063	1421 Davison Rd.
14064	1422 Davison Rd.

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14065	1426 Davison Rd.
14066	1427 Davison Rd.
14067	1433 Davison Rd.
14068	1441 Davison Rd.
14069	1444 Davison Rd.
14070	1444 Davison Rd.
14071	1445 Davison Rd.
14072	1445.5 Davison Rd.
14073	1450 Davison Rd.
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14075	1458 Davison Rd.
14076	1501 Davison Rd.
14077	1502 Davison Rd.
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14079	1512 Davison Rd.
14080	1522 Davison Rd.
14081	1526 Davison Rd.
14082	1530 Davison Rd.
14083	1534 Davison Rd.
14084	1538 Davison Rd.
14085	1542 Davison Rd.
14086	1546 Davison Rd.
14087	1550 Davison Rd.
14088	1558 Davison Rd.
14089	1616 Davison Rd.
14090	1616 Davison Rd.
14091	1616 Davison Rd.
14092	1621 Davison Rd.
14093	1625 Davison Rd.
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14095	1638 Davison Rd.
14096	1646 Davison Rd.
14097	1652 Davison Rd.
14098	1653 Davison Rd.
14099	1656 Davison Rd.
14100	1660 Davison Rd.
14101	1701 Davison Rd.
14102	1702 Davison Rd.
14103	1702 Davison Rd.
14104	1707 Davison Rd.
14105	1713 Davison Rd.
14106	1717 Davison Rd.
14107	1720 Davison Rd.
14108	1720 Davison Rd.
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14111	1729 Davison Rd.
14112	1733 Davison Rd.

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14113	1734 Davison Rd.
14114	1736 Davison Rd.
14115	1737 Davison Rd.
14116	1741 Davison Rd.
14117	1815 Davison Rd.
14118	1816 Davison Rd.
14119	1816 Davison Rd.
14120	1906 Davison Rd.
14121	1907 Davison Rd.
14122	1907 Davison Rd.
14123	1909 Davison Rd.
14124	1909 Davison Rd.
14125	1916 Davison Rd.
14126	1917 Davison Rd.
14127	1917 Davison Rd.
14128	2005 Davison Rd.
14129	2005 Davison Rd.
14130	2005 Davison Rd.
14131	2017 Davison Rd.
14132	2017 Davison Rd.
14133	2100 Davison Rd.
14134	2100 Davison Rd.
14135	2107 Davison Rd.
14136	2111 Davison Rd.
14137	2112 Davison Rd.
14138	2112 Davison Rd.
14139	2112 Davison Rd.
14140	2125 Davison Rd.
14141	2125 Davison Rd.
14142	2128 Davison Rd.
14143	2132 Davison Rd.
14144	2209 Davison Rd.
14145	2209 Davison Rd.
14146	2215 Davison Rd.
14147	2215 Davison Rd.
14148	2221 Davison Rd.
14149	2232 Davison Rd.
14150	2232 Davison Rd.
14151	2301 Davison Rd.
14152	2301 Davison Rd.
14153	2302 Davison Rd.
14154	2306 Davison Rd.
14155	2307 Davison Rd.
14156	2311 Davison Rd.
14157	2315 Davison Rd.
14158	2319 Davison Rd.
14159	2319 Davison Rd.
14160	2320 Davison Rd.

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14161	2400 Davison Rd.
14162	2400 Davison Rd.
14163	2401 Davison Rd.
14164	2406 Davison Rd.
14165	2408 Davison Rd.
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14167	2409 Davison Rd.
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14175	2420 Davison Rd.
14176	2502 Davison Rd.
14177	2505 Davison Rd.
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14179	2506 Davison Rd.
14180	2507 Davison Rd.
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14185	2522 Davison Rd.
14186	2522 Davison Rd.
14187	2535 Davison Rd.
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14197	2622 Davison Rd.
14198	2625 Davison Rd.
14199	2625 Davison Rd.
14200	2705 Davison Rd.
14201	2705 Davison Rd.
14202	2709 Davison Rd.
14203	2709 Davison Rd.
14204	2815 Davison Rd.
14205	2815 Davison Rd.
14206	2845 Davison Rd.
14207	2905 Davison Rd.
14208	2929 Davison Rd.

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14209	2929 Davison Rd.
14210	2929 Davison Rd.
14211	2929 Davison Rd.
14212	2945 Davison Rd.
14213	2945 Davison Rd.
14214	2945 Davison Rd.
14215	2945 Davison Rd.
14216	2945 Davison Rd.
14217	2945 Davison Rd.
14218	2945 Davison Rd.
14219	2945 Davison Rd.
14220	3001 Davison Rd.
14221	3101 Davison Rd.
14222	3137 Davison Rd.
14223	3137 Davison Rd.
14224	3155 Davison Rd.
14225	3201 Davison Rd.
14226	3201 Davison Rd.
14227	3207 Davison Rd.
14228	3207 Davison Rd.
14229	3213 Davison Rd.
14230	3213 Davison Rd.
14231	3239 Davison Rd.
14232	3239 Davison Rd.
14233	3301 Davison Rd.
14234	3302 Davison Rd.
14235	3302 Davison Rd.
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14237	3315 Davison Rd.
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14239	3322 Davison Rd.
14240	3322 Davison Rd.
14241	3323 Davison Rd.
14242	3327 Davison Rd.
14243	3401 Davison Rd.
14244	3402 Davison Rd.
14245	3402 Davison Rd.
14246	3402 Davison Rd.
14247	3405 Davison Rd.
14248	3409 Davison Rd.
14249	3413 Davison Rd.
14250	3417 Davison Rd.
14251	3421 Davison Rd.
14252	3424 Davison Rd.
14253	3424 Davison Rd.
14254	3430 Davison Rd.
14255	3430 Davison Rd.
14256	3432 Davison Rd.

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14257	3434 Davison Rd.
14258	3501 Davison Rd.
14259	3507 Davison Rd.
14260	3509 Davison Rd.
14261	3510 Davison Rd.
14262	3510 Davison Rd.
14263	3513 Davison Rd.
14264	3514 Davison Rd.
14265	3517 Davison Rd.
14266	3521 Davison Rd.
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14268	3526 Davison Rd.
14269	3526 Davison Rd.
14270	3600 Davison Rd.
14271	3600 Davison Rd.
14272	3601 Davison Rd.
14273	3605 Davison Rd.
14274	3606 Davison Rd.
14275	3606 Davison Rd.
14276	3609 Davison Rd.
14277	3612 Davison Rd.
14278	3613 Davison Rd.
14279	3617 Davison Rd.
14280	3621 Davison Rd.
14281	3702 Davison Rd.
14282	3707 Davison Rd.
14283	3710 Davison Rd.
14284	3710 Davison Rd.
14285	3718 Davison Rd.
14286	3718 Davison Rd.
14287	3719 Davison Rd.
14288	3719 Davison Rd.
14289	3724 Davison Rd.
14290	3724 Davison Rd.
14291	3725 Davison Rd.
14292	3725 Davison Rd.
14293	3735 Davison Rd.
14294	3735 Davison Rd.
14295	3735 Davison Rd.
14296	3741 Davison Rd.
14297	3741 Davison Rd.
14298	3742 Davison Rd.
14299	3742 Davison Rd.
14300	3802 Davison Rd.
14301	3802 Davison Rd.
14302	3816 Davison Rd.
14303	3825 Davison Rd.
14304	3826 Davison Rd.

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14305	3826 Davison Rd.
14306	3828 Davison Rd.
14307	3832 Davison Rd.
14308	3835 Davison Rd.
14309	3835 Davison Rd.
14310	3836 Davison Rd.
14311	3836 Davison Rd.
14312	3836 Davison Rd.
14313	3837 Davison Rd.
14314	3837 Davison Rd.
14315	3837 Davison Rd.
14316	3849 Davison Rd.
14317	3851 Davison Rd.
14318	3855 Davison Rd.
14319	3855 Davison Rd.
14320	3857 Davison Rd.
14321	3857 Davison Rd.
14322	3860 Davison Rd.
14323	3860 Davison Rd.
14324	3860 Davison Rd.
14325	2945 Davison Rd.
14326	2945 Davison Rd.
14327	2607 Dawson St.
14328	2613 Dawson St.
14329	113 Dayton St., E.
14330	117 Dayton St., E.
14331	203 Dayton St., E.
14332	213 Dayton St., E.
14333	217 Dayton St., E.
14334	313 Dayton St., E.
14335	315 Dayton St., E.
14336	354 Dayton St., E.
14337	356 Dayton St., E.
14338	357 Dayton St., E.
14339	358 Dayton St., E.
14340	362 Dayton St., E.
14341	365 Dayton St., E.
14342	377 Dayton St., E.
14343	380 Dayton St., E.
14344	381 Dayton St., E.
14345	382 Dayton St., E.
14346	389 Dayton St., E.
14347	406 Dayton St., E.
14348	410 Dayton St., E.
14349	414 Dayton St., E.
14350	420 Dayton St., E.
14351	502 Dayton St., E.
14352	503 Dayton St., E.

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14353	506 Dayton St., E.
14354	510 Dayton St., E.
14355	522 Dayton St., E.
14356	534 Dayton St., E.
14357	538 Dayton St., E.
14358	605 Dayton St., E.
14359	609 Dayton St., E.
14360	610 Dayton St., E.
14361	614 Dayton St., E.
14362	619 Dayton St., E.
14363	621 Dayton St., E.
14364	622 Dayton St., E.
14365	625 Dayton St., E.
14366	626 Dayton St., E.
14367	629 Dayton St., E.
14368	633 Dayton St., E.
14369	118 Dayton St., W.
14370	119 Dayton St., W.
14371	122 Dayton St., W.
14372	123 Dayton St., W.
14373	126 Dayton St., W.
14374	127 Dayton St., W.
14375	130 Dayton St., W.
14376	131 Dayton St., W.
14377	133 Dayton St., W.
14378	134 Dayton St., W.
14379	135 Dayton St., W.
14380	136 Dayton St., W.
14381	139 Dayton St., W.
14382	200 Dayton St., W.
14383	201 Dayton St., W.
14384	204 Dayton St., W.
14385	205 Dayton St., W.
14386	212 Dayton St., W.
14387	221 Dayton St., W.
14388	225 Dayton St., W.
14389	232 Dayton St., W.
14390	236 Dayton St., W.
14391	311 Dayton St., W.
14392	312 Dayton St., W.
14393	315 Dayton St., W.
14394	316 Dayton St., W.
14395	319 Dayton St., W.
14396	320 Dayton St., W.
14397	323 Dayton St., W.
14398	324 Dayton St., W.
14399	327 Dayton St., W.
14400	331 Dayton St., W.

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14401	332 Dayton St., W.
14402	401 Dayton St., W.
14403	402 Dayton St., W.
14404	405 Dayton St., W.
14405	406 Dayton St., W.
14406	409 Dayton St., W.
14407	410 Dayton St., W.
14408	414 Dayton St., W.
14409	417 Dayton St., W.
14410	418 Dayton St., W.
14411	422 Dayton St., W.
14412	426 Dayton St., W.
14413	702 Dayton St., W.
14414	706 Dayton St., W.
14415	710 Dayton St., W.
14416	711 Dayton St., W.
14417	713 Dayton St., W.
14418	714 Dayton St., W.
14419	717 Dayton St., W.
14420	718 Dayton St., W.
14421	721 Dayton St., W.
14422	722 Dayton St., W.
14423	801 Dayton St., W.
14424	802 Dayton St., W.
14425	806 Dayton St., W.
14426	807 Dayton St., W.
14427	810 Dayton St., W.
14428	814 Dayton St., W.
14429	815 Dayton St., W.
14430	819 Dayton St., W.
14431	913 Dayton St., W.
14432	917 Dayton St., W.
14433	1001 Dayton St., W.
14434	1002 Dayton St., W.
14435	1005 Dayton St., W.
14436	1006 Dayton St., W.
14437	1009 Dayton St., W.
14438	1010 Dayton St., W.
14439	1101 Dayton St., W.
14440	1102 Dayton St., W.
14441	1105 Dayton St., W.
14442	1106 Dayton St., W.
14443	1109 Dayton St., W.
14444	1110 Dayton St., W.
14445	1113 Dayton St., W.
14446	1114 Dayton St., W.
14447	1201 Dayton St., W.
14448	1202 Dayton St., W.

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14449	1205 Dayton St., W.
14450	1206 Dayton St., W.
14451	1206 Dayton St., W.
14452	1209 Dayton St., W.
14453	1210 Dayton St., W.
14454	1214 Dayton St., W.
14455	1216 Dayton St., W.
14456	1301 Dayton St., W.
14457	1313 Dayton St., W.
14458	1313 Dayton St., W.
14459	1325 Dayton St., W.
14460	1325 Dayton St., W.
14461	1333 Dayton St., W.
14462	1401 Dayton St., W.
14463	1402 Dayton St., W.
14464	1510 Dayton St., W.
14465	1514 Dayton St., W.
14466	1518 Dayton St., W.
14467	1602 Dayton St., W.
14468	1606 Dayton St., W.
14469	1702 Dayton St., W.
14470	1708 Dayton St., W.
14471	1714 Dayton St., W.
14472	1808 Dayton St., W.
14473	1814 Dayton St., W.
14474	1902 Dayton St., W.
14475	1908 Dayton St., W.
14476	1914 Dayton St., W.
14477	2008 Dayton St., W.
14478	2009 Dayton St., W.
14479	2014 Dayton St., W.
14480	2015 Dayton St., W.
14481	2020 Dayton St., W.
14482	2101 Dayton St., W.
14483	2102 Dayton St., W.
14484	2107 Dayton St., W.
14485	2108 Dayton St., W.
14486	2113 Dayton St., W.
14487	2114 Dayton St., W.
14488	2201 Dayton St., W.
14489	2202 Dayton St., W.
14490	2207 Dayton St., W.
14491	2208 Dayton St., W.
14492	2213 Dayton St., W.
14493	2214 Dayton St., W.
14494	2302 Dayton St., W.
14495	2308 Dayton St., W.
14496	2314 Dayton St., W.

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14497	2402 Dayton St., W.
14498	2402 Dayton St., W.
14499	2407 Dayton St., W.
14500	2415 Dayton St., W.
14501	2800 Dearborn St.
14502	2802 Dearborn St.
14503	2806 Dearborn St.
14504	2809 Dearborn St.
14505	2810 Dearborn St.
14506	2884 Dearborn St.
14507	2889 Dearborn St.
14508	2901 Dearborn St.
14509	2902 Dearborn St.
14510	2907 Dearborn St.
14511	2908 Dearborn St.
14512	2913 Dearborn St.
14513	2914 Dearborn St.
14514	2919 Dearborn St.
14515	3001 Dearborn St.
14516	3002 Dearborn St.
14517	3007 Dearborn St.
14518	3013 Dearborn St.
14519	3018 Dearborn St.
14520	3019 Dearborn St.
14521	3025 Dearborn St.
14522	3026 Dearborn St.
14523	3101 Dearborn St.
14524	3102 Dearborn St.
14525	3106 Dearborn St.
14526	3107 Dearborn St.
14527	3112 Dearborn St.
14528	3113 Dearborn St.
14529	3118 Dearborn St.
14530	3119 Dearborn St.
14531	3125 Dearborn St.
14532	3126 Dearborn St.
14533	3201 Dearborn St.
14534	3202 Dearborn St.
14535	3207 Dearborn St.
14536	3210 Dearborn St.
14537	3219 Dearborn St.
14538	3301 Dearborn St.
14539	3307 Dearborn St.
14540	3313 Dearborn St.
14541	3314 Dearborn St.
14542	3319 Dearborn St.
14543	3323 Dearborn St.
14544	3401 Dearborn St.

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14545	3402 Dearborn St.
14546	3406 Dearborn St.
14547	3409 Dearborn St.
14548	3410 Dearborn St.
14549	3414 Dearborn St.
14550	3415 Dearborn St.
14551	3420 Dearborn St.
14552	3421 Dearborn St.
14553	3501 Dearborn St.
14554	3502 Dearborn St.
14555	3503 Dearborn St.
14556	3506 Dearborn St.
14557	3507 Dearborn St.
14558	3513 Dearborn St.
14559	3514 Dearborn St.
14560	3601 Dearborn St.
14561	3602 Dearborn St.
14562	3607 Dearborn St.
14563	3610 Dearborn St.
14564	3613 Dearborn St.
14565	3616 Dearborn St.
14566	3619 Dearborn St.
14567	3622 Dearborn St.
14568	3626 Dearborn St.
14569	3629 Dearborn St.
14570	3630 Dearborn St.
14571	3701 Dearborn St.
14572	3702 Dearborn St.
14573	3707 Dearborn St.
14574	3708 Dearborn St.
14575	3715 Dearborn St.
14576	1007 Decker St.
14577	1011 Decker St.
14578	1016 Decker St.
14579	1018 Decker St.
14580	1104 Decker St.
14581	1106 Decker St.
14582	1108 Decker St.
14583	1112 Decker St.
14584	1113 Decker St.
14585	1118 Decker St.
14586	1122 Decker St.
14587	1126 Decker St.
14588	1202 Decker St.
14589	1206 Decker St.
14590	1209 Decker St.
14591	1210 Decker St.
14592	1214 Decker St.

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14593	1216 Decker St.
14594	1220 Decker St.
14595	1224 Decker St.
14596	1307 DeFreest St.
14597	1321 DeFreest St.
14598	1401 DeFreest St.
14599	1405 DeFreest St.
14600	1409 DeFreest St.
14601	1413 DeFreest St.
14602	1417 DeFreest St.
14603	1401 Delaware Ave.
14604	1402 Delaware Ave.
14605	1402 Delaware Ave.
14606	1405 Delaware Ave.
14607	1406 Delaware Ave.
14608	1409 Delaware Ave.
14609	1410 Delaware Ave.
14610	1414 Delaware Ave.
14611	1417 Delaware Ave.
14612	1418 Delaware Ave.
14613	1421 Delaware Ave.
14614	1422 Delaware Ave.
14615	1426 Delaware Ave.
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14617	1433 Delaware Ave.
14618	1434 Delaware Ave.
14619	1437 Delaware Ave.
14620	1438 Delaware Ave.
14621	1441 Delaware Ave.
14622	1442 Delaware Ave.
14623	1445 Delaware Ave.
14624	1446 Delaware Ave.
14625	1449 Delaware Ave.
14626	1450 Delaware Ave.
14627	1454 Delaware Ave.
14628	1457 Delaware Ave.
14629	1458 Delaware Ave.
14630	1501 Delaware Ave.
14631	1505 Delaware Ave.
14632	1506 Delaware Ave.
14633	1509 Delaware Ave.
14634	1510 Delaware Ave.
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14636	1514 Delaware Ave.
14637	1517 Delaware Ave.
14638	1518 Delaware Ave.
14639	1522 Delaware Ave.
14640	1525 Delaware Ave.

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14641	1528 Delaware Ave.
14642	1530 Delaware Ave.
14643	1533 Delaware Ave.
14644	1534 Delaware Ave.
14645	1537 Delaware Ave.
14646	1538 Delaware Ave.
14647	1542 Delaware Ave.
14648	1546 Delaware Ave.
14649	1550 Delaware Ave.
14650	1553 Delaware Ave.
14651	1554 Delaware Ave.
14652	1601 Delaware Ave.
14653	1602 Delaware Ave.
14654	1605 Delaware Ave.
14655	1609 Delaware Ave.
14656	1610 Delaware Ave.
14657	1614 Delaware Ave.
14658	1615 Delaware Ave.
14659	1617 Delaware Ave.
14660	1618 Delaware Ave.
14661	1621 Delaware Ave.
14662	1622 Delaware Ave.
14663	1625 Delaware Ave.
14664	1626 Delaware Ave.
14665	1629 Delaware Ave.
14666	1630 Delaware Ave.
14667	1633 Delaware Ave.
14668	1634 Delaware Ave.
14669	1637 Delaware Ave.
14670	1638 Delaware Ave.
14671	1641 Delaware Ave.
14672	1642 Delaware Ave.
14673	1645 Delaware Ave.
14674	1646 Delaware Ave.
14675	1647 Delaware Ave.
14676	1650 Delaware Ave.
14677	1653 Delaware Ave.
14678	1654 Delaware Ave.
14679	1657 Delaware Ave.
14680	1658 Delaware Ave.
14681	1700 Delaware Ave.
14682	1701 Delaware Ave.
14683	1705 Delaware Ave.
14684	1706 Delaware Ave.
14685	1710 Delaware Ave.
14686	1713 Delaware Ave.
14687	1714 Delaware Ave.
14688	1717 Delaware Ave.

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14689	1718 Delaware Ave.
14690	1721 Delaware Ave.
14691	1722 Delaware Ave.
14692	1725 Delaware Ave.
14693	1726 Delaware Ave.
14694	1729 Delaware Ave.
14695	1730 Delaware Ave.
14696	1733 Delaware Ave.
14697	1734 Delaware Ave.
14698	1801 Delaware Ave.
14699	1802 Delaware Ave.
14700	1805 Delaware Ave.
14701	1806 Delaware Ave.
14702	1809 Delaware Ave.
14703	1810 Delaware Ave.
14704	1813 Delaware Ave.
14705	1814 Delaware Ave.
14706	1817 Delaware Ave.
14707	1820 Delaware Ave.
14708	1826 Delaware Ave.
14709	1829 Delaware Ave.
14710	1909 Delaware Ave.
14711	1917 Delaware Ave.
14712	1923 Delaware Ave.
14713	2001 Delaware Ave.
14714	2005 Delaware Ave.
14715	2009 Delaware Ave.
14716	2013 Delaware Ave.
14717	2017 Delaware Ave.
14718	2018 Delaware Ave.
14719	2021 Delaware Ave.
14720	2025 Delaware Ave.
14721	2029 Delaware Ave.
14722	2115 Delaware Ave.
14723	2117 Delaware Ave.
14724	2119 Delaware Ave.
14725	2121 Delaware Ave.
14726	2123 Delaware Ave.
14727	2205 Delaware Ave.
14728	2209 Delaware Ave.
14729	2213 Delaware Ave.
14730	2217 Delaware Ave.
14731	2221 Delaware Ave.
14732	2301 Delaware Ave.
14733	2305 Delaware Ave.
14734	2309 Delaware Ave.
14735	2313 Delaware Ave.
14736	2401 Delaware Ave.

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14737	2405 Delaware Ave.
14738	2406 Delaware Ave.
14739	2409 Delaware Ave.
14740	2410 Delaware Ave.
14741	2413 Delaware Ave.
14742	2414 Delaware Ave.
14743	2417 Delaware Ave.
14744	2421 Delaware Ave.
14745	2425 Delaware Ave.
14746	2429 Delaware Ave.
14747	2501 Delaware Ave.
14748	2509 Delaware Ave.
14749	2513 Delaware Ave.
14750	2517 Delaware Ave.
14751	2518 Delaware Ave.
14752	2602 Delaware Ave.
14753	2609 Delaware Ave.
14754	2613 Delaware Ave.
14755	2614 Delaware Ave.
14756	2617 Delaware Ave.
14757	2621 Delaware Ave.
14758	2625 Delaware Ave.
14759	2701 Delaware Ave.
14760	2705 Delaware Ave.
14761	2713 Delaware Ave.
14762	3109 Delaware Ave.
14763	3111 Delaware Ave.
14764	3116 Delaware Ave.
14765	3120 Delaware Ave.
14766	3123 Delaware Ave.
14767	3127 Delaware Ave.
14768	3131 Delaware Ave.
14769	3132 Delaware Ave.
14770	3135 Delaware Ave.
14771	3136 Delaware Ave.
14772	3143 Delaware Ave.
14773	3144 Delaware Ave.
14774	3147 Delaware Ave.
14775	3148 Delaware Ave.
14776	3151 Delaware Ave.
14777	3152 Delaware Ave.
14778	3155 Delaware Ave.
14779	3156 Delaware Ave.
14780	3201 Delaware Ave.
14781	3207 Delaware Ave.
14782	3208 Delaware Ave.
14783	3211 Delaware Ave.
14784	3212 Delaware Ave.

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14785	3219 Delaware Ave.
14786	3223 Delaware Ave.
14787	3224 Delaware Ave.
14788	3227 Delaware Ave.
14789	3228 Delaware Ave.
14790	3232 Delaware Ave.
14791	3236 Delaware Ave.
14792	3240 Delaware Ave.
14793	3701 Delaware Ave.
14794	3702 Delaware Ave.
14795	3705 Delaware Ave.
14796	3706 Delaware Ave.
14797	3709 Delaware Ave.
14798	3710 Delaware Ave.
14799	3713 Delaware Ave.
14800	3714 Delaware Ave.
14801	3717 Delaware Ave.
14802	3718 Delaware Ave.
14803	3721 Delaware Ave.
14804	3722 Delaware Ave.
14805	3725 Delaware Ave.
14806	3726 Delaware Ave.
14807	3729 Delaware Ave.
14808	3730 Delaware Ave.
14809	3733 Delaware Ave.
14810	3734 Delaware Ave.
14811	3737 Delaware Ave.
14812	3738 Delaware Ave.
14813	3741 Delaware Ave.
14814	3742 Delaware Ave.
14815	3745 Delaware Ave.
14816	3746 Delaware Ave.
14817	3749 Delaware Ave.
14818	3801 Delaware Ave.
14819	3802 Delaware Ave.
14820	3805 Delaware Ave.
14821	3806 Delaware Ave.
14822	3809 Delaware Ave.
14823	3810 Delaware Ave.
14824	3813 Delaware Ave.
14825	3814 Delaware Ave.
14826	3817 Delaware Ave.
14827	3818 Delaware Ave.
14828	3821 Delaware Ave.
14829	3822 Delaware Ave.
14830	3825 Delaware Ave.
14831	3826 Delaware Ave.
14832	3829 Delaware Ave.

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14833	3830 Delaware Ave.
14834	3833 Delaware Ave.
14835	3834 Delaware Ave.
14836	3837 Delaware Ave.
14837	3838 Delaware Ave.
14838	3841 Delaware Ave.
14839	3842 Delaware Ave.
14840	300 Delia St.
14841	305 Delia St.
14842	309 Delia St.
14843	310 Delia St.
14844	310 Delia St.
14845	313 Delia St.
14846	317 Delia St.
14847	321 Delia St.
14848	322 Delia St.
14849	325 Delia St.
14850	326 Delia St.
14851	329 Delia St.
14852	334 Delia St.
14853	401 Delia St.
14854	405 Delia St.
14855	408 Delia St.
14856	409 Delia St.
14857	412 Delia St.
14858	415 Delia St.
14859	417 Delia St.
14860	425 Delia St.
14861	428 Delia St.
14862	429 Delia St.
14863	430 Delia St.
14864	433 Delia St.
14865	434 Delia St.
14866	437 Delia St.
14867	438 Delia St.
14868	441 Delia St.
14869	447 Delia St.
14870	451 Delia St.
14871	401 Dell Ave.
14872	407 Dell Ave.
14873	416 Dell Ave.
14874	417 Dell Ave.
14875	426 Dell Ave.
14876	430 Dell Ave.
14877	501 Dell Ave.
14878	502 Dell Ave.
14879	506 Dell Ave.
14880	510 Dell Ave.

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14881	514 Dell Ave.
14882	518 Dell Ave.
14883	522 Dell Ave.
14884	526 Dell Ave.
14885	530 Dell Ave.
14886	534 Dell Ave.
14887	535 Dell Ave.
14888	541 Dell Ave.
14889	542 Dell Ave.
14890	544 Dell Ave.
14891	546 Dell Ave.
14892	547 Dell Ave.
14893	552 Dell Ave.
14894	554 Dell Ave.
14895	558 Dell Ave.
14896	562 Dell Ave.
14897	601 Dell Ave.
14898	607 Dell Ave.
14899	613 Dell Ave.
14900	710 Dell Ave.
14901	711 Dell Ave.
14902	714 Dell Ave.
14903	715 Dell Ave.
14904	718 Dell Ave.
14905	719 Dell Ave.
14906	722 Dell Ave.
14907	723 Dell Ave.
14908	801 Dell Ave.
14909	802 Dell Ave.
14910	805 Dell Ave.
14911	806 Dell Ave.
14912	809 Dell Ave.
14913	810 Dell Ave.
14914	813 Dell Ave.
14915	814 Dell Ave.
14916	817 Dell Ave.
14917	818 Dell Ave.
14918	901 Dell Ave.
14919	902 Dell Ave.
14920	905 Dell Ave.
14921	906 Dell Ave.
14922	909 Dell Ave.
14923	910 Dell Ave.
14924	913 Dell Ave.
14925	914 Dell Ave.
14926	917 Dell Ave.
14927	918 Dell Ave.
14928	1001 Dell Ave.

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14929	1002 Dell Ave.
14930	1005 Dell Ave.
14931	1006 Dell Ave.
14932	1009 Dell Ave.
14933	1010 Dell Ave.
14934	1013 Dell Ave.
14935	1014 Dell Ave.
14936	1018 Dell Ave.
14937	1019 Dell Ave.
14938	2301 Delmar Ave.
14939	2302 Delmar Ave.
14940	2305 Delmar Ave.
14941	2306 Delmar Ave.
14942	2309 Delmar Ave.
14943	2310 Delmar Ave.
14944	2313 Delmar Ave.
14945	2314 Delmar Ave.
14946	2317 Delmar Ave.
14947	2318 Delmar Ave.
14948	2321 Delmar Ave.
14949	2322 Delmar Ave.
14950	2325 Delmar Ave.
14951	2326 Delmar Ave.
14952	2329 Delmar Ave.
14953	2330 Delmar Ave.
14954	2333 Delmar Ave.
14955	2334 Delmar Ave.
14956	2337 Delmar Ave.
14957	2338 Delmar Ave.
14958	2401 Delmar Ave.
14959	2402 Delmar Ave.
14960	2405 Delmar Ave.
14961	2406 Delmar Ave.
14962	2409 Delmar Ave.
14963	2410 Delmar Ave.
14964	2413 Delmar Ave.
14965	2414 Delmar Ave.
14966	4902 Delta Dr.
14967	4907 Delta Dr.
14968	4908 Delta Dr.
14969	4911 Delta Dr.
14970	4912 Delta Dr.
14971	5007 Delta Dr.
14972	5008 Delta Dr.
14973	5011 Delta Dr.
14974	5012 Delta Dr.
14975	5016 Delta Dr.
14976	5020 Delta Dr.

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14977	5024 Delta Dr.
14978	117 Dewey St., E.
14979	121 Dewey St., E.
14980	125 Dewey St., E.
14981	126 Dewey St., E.
14982	129 Dewey St., E.
14983	130 Dewey St., E.
14984	430 Dewey St., E.
14985	433 Dewey St., E.
14986	434 Dewey St., E.
14987	437 Dewey St., E.
14988	438 Dewey St., E.
14989	443 Dewey St., E.
14990	501 Dewey St., E.
14991	502 Dewey St., E.
14992	505 Dewey St., E.
14993	506 Dewey St., E.
14994	509 Dewey St., E.
14995	510 Dewey St., E.
14996	513 Dewey St., E.
14997	514 Dewey St., E.
14998	517 Dewey St., E.
14999	518 Dewey St., E.
15000	521 Dewey St., E.
15001	522 Dewey St., E.
15002	526 Dewey St., E.
15003	529 Dewey St., E.
15004	530 Dewey St., E.
15005	533 Dewey St., E.
15006	534 Dewey St., E.
15007	537 Dewey St., E.
15008	538 Dewey St., E.
15009	541 Dewey St., E.
15010	542 Dewey St., E.
15011	546 Dewey St., E.
15012	601 Dewey St., E.
15013	602 Dewey St., E.
15014	605 Dewey St., E.
15015	606 Dewey St., E.
15016	609 Dewey St., E.
15017	613 Dewey St., E.
15018	614 Dewey St., E.
15019	617 Dewey St., E.
15020	618 Dewey St., E.
15021	621 Dewey St., E.
15022	625 Dewey St., E.
15023	629 Dewey St., E.
15024	630 Dewey St., E.

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15025	728 Dewey St., E.
15026	760 Dewey St., E.
15027	768 Dewey St., E.
15028	772 Dewey St., E.
15029	814 Dewey St., E.
15030	815 Dewey St., E.
15031	818 Dewey St., E.
15032	821 Dewey St., E.
15033	830 Dewey St., E.
15034	834 Dewey St., E.
15035	838 Dewey St., E.
15036	901 Dewey St., E.
15037	902 Dewey St., E.
15038	906 Dewey St., E.
15039	912 Dewey St., E.
15040	110 Dewey St., W.
15041	116 Dewey St., W.
15042	120 Dewey St., W.
15043	121 Dewey St., W.
15044	124 Dewey St., W.
15045	125 Dewey St., W.
15046	128 Dewey St., W.
15047	129 Dewey St., W.
15048	132 Dewey St., W.
15049	133 Dewey St., W.
15050	200 Dewey St., W.
15051	201 Dewey St., W.
15052	202 Dewey St., W.
15053	205 Dewey St., W.
15054	208 Dewey St., W.
15055	209 Dewey St., W.
15056	212 Dewey St., W.
15057	213 Dewey St., W.
15058	216 Dewey St., W.
15059	217 Dewey St., W.
15060	220 Dewey St., W.
15061	221 Dewey St., W.
15062	225 Dewey St., W.
15063	226 Dewey St., W.
15064	228 Dewey St., W.
15065	231 Dewey St., W.
15066	302 Dewey St., W.
15067	312 Dewey St., W.
15068	315 Dewey St., W.
15069	316 Dewey St., W.
15070	319 Dewey St., W.
15071	320 Dewey St., W.
15072	321 Dewey St., W.

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15073	324 Dewey St., W.
15074	325 Dewey St., W.
15075	328 Dewey St., W.
15076	401 Dewey St., W.
15077	402 Dewey St., W.
15078	405 Dewey St., W.
15079	406 Dewey St., W.
15080	409 Dewey St., W.
15081	410 Dewey St., W.
15082	413 Dewey St., W.
15083	417 Dewey St., W.
15084	418 Dewey St., W.
15085	421 Dewey St., W.
15086	422 Dewey St., W.
15087	425 Dewey St., W.
15088	426 Dewey St., W.
15089	441 Dewey St., W.
15090	442 Dewey St., W.
15091	513 Dewey St., W.
15092	514 Dewey St., W.
15093	517 Dewey St., W.
15094	518 Dewey St., W.
15095	521 Dewey St., W.
15096	522 Dewey St., W.
15097	525 Dewey St., W.
15098	526 Dewey St., W.
15099	530 Dewey St., W.
15100	601 Dewey St., W.
15101	602 Dewey St., W.
15102	605 Dewey St., W.
15103	609 Dewey St., W.
15104	610 Dewey St., W.
15105	614 Dewey St., W.
15106	620 Dewey St., W.
15107	711 Dewey St., W.
15108	715 Dewey St., W.
15109	721 Dewey St., W.
15110	723 Dewey St., W.
15111	727 Dewey St., W.
15112	728 Dewey St., W.
15113	801 Dewey St., W.
15114	811 Dewey St., W.
15115	815 Dewey St., W.
15116	819 Dewey St., W.
15117	823 Dewey St., W.
15118	901 Dewey St., W.
15119	905 Dewey St., W.
15120	909 Dewey St., W.

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15121	1402 Dexter St., N.
15122	1421 Dexter St., N.
15123	1505 Dexter St., N.
15124	1511 Dexter St., N.
15125	1613 Dexter St., N.
15126	1701 Dexter St., N.
15127	1705 Dexter St., N.
15128	2002 Dexter St., N.
15129	2010 Dexter St., N.
15130	2017 Dexter St., N.
15131	2020 Dexter St., N.
15132	2052 Dexter St., N.
15133	2070 Dexter St., N.
15134	2110 Dexter St., N.
15135	2120 Dexter St., N.
15136	2202 Dexter St., N.
15137	2809 Dexter St., N.
15138	2914 Dexter St., N.
15139	2920 Dexter St., N.
15140	2925 Dexter St., N.
15141	2926 Dexter St., N.
15142	2929 Dexter St., N.
15143	3117 Dexter St., N.
15144	3125 Dexter St., N.
15145	3201 Dexter St., N.
15146	3202 Dexter St., N.
15147	3205 Dexter St., N.
15148	3206 Dexter St., N.
15149	3209 Dexter St., N.
15150	3213 Dexter St., N.
15151	610 Dexter St., S.
15152	2015 Dexter St., S.
15153	2016 Dexter St., S.
15154	2021 Dexter St., S.
15155	2022 Dexter St., S.
15156	2027 Dexter St., S.
15157	2028 Dexter St., S.
15158	2035 Dexter St., S.
15159	2036 Dexter St., S.
15160	2047 Dexter St., S.
15161	615 Dickinson St.
15162	616 Dickinson St.
15163	619 Dickinson St.
15164	620 Dickinson St.
15165	623 Dickinson St.
15166	624 Dickinson St.
15167	627 Dickinson St.
15168	628 Dickinson St.

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15169	631 Dickinson St.
15170	632 Dickinson St.
15171	701 Dickinson St.
15172	702 Dickinson St.
15173	705 Dickinson St.
15174	706 Dickinson St.
15175	709 Dickinson St.
15176	710 Dickinson St.
15177	713 Dickinson St.
15178	714 Dickinson St.
15179	717 Dickinson St.
15180	718 Dickinson St.
15181	721 Dickinson St.
15182	722 Dickinson St.
15183	725 Dickinson St.
15184	726 Dickinson St.
15185	729 Dickinson St.
15186	730 Dickinson St.
15187	733 Dickinson St.
15188	734 Dickinson St.
15189	801 Dickinson St.
15190	802 Dickinson St.
15191	805 Dickinson St.
15192	809 Dickinson St.
15193	813 Dickinson St.
15194	817 Dickinson St.
15195	821 Dickinson St.
15196	825 Dickinson St.
15197	829 Dickinson St.
15198	833 Dickinson St.
15199	837 Dickinson St.
15200	841 Dickinson St.
15201	845 Dickinson St.
15202	849 Dickinson St.
15203	3610 Dolphaine Ln.
15204	3702 Dolphaine Ln.
15205	3710 Dolphaine Ln.
15206	3718 Dolphaine Ln.
15207	3722 Dolphaine Ln.
15208	3726 Dolphaine Ln.
15209	3730 Dolphaine Ln.
15210	3732 Dolphaine Ln.
15211	3738 Dolphaine Ln.
15212	3742 Dolphaine Ln.
15213	3746 Dolphaine Ln.
15214	3750 Dolphaine Ln.
15215	3824 Dolphaine Ln.
15216	3830 Dolphaine Ln.

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15217	3701 Dolphaine Ln.
15218	3725 Dolphaine Ln.
15219	3745 Dolphaine Ln.
15220	3813 Dolphaine Ln.
15221	3819 Dolphaine Ln.
15222	3823 Dolphaine Ln.
15223	3825 Dolphaine Ln.
15224	3831 Dolphaine Ln.
15225	3845 Dolphaine Ln.
15226	1511 Donald St.
15227	1525 Donald St.
15228	1609 Donald St.
15229	1610 Donald St.
15230	1613 Donald St.
15231	1614 Donald St.
15232	1617 Donald St.
15233	1623 Donald St.
15234	1703 Donald St.
15235	1707 Donald St.
15236	1710 Donald St.
15237	1711 Donald St.
15238	1712 Donald St.
15239	1713 Donald St.
15240	1714 Donald St.
15241	1716 Donald St.
15242	1721 Donald St.
15243	1807 Donald St.
15244	1810 Donald St.
15245	1811 Donald St.
15246	1813 Donald St.
15247	1111 Donaldson St.
15248	1115 Donaldson St.
15249	1119 Donaldson St.
15250	1123 Donaldson St.
15251	1127 Donaldson St.
15252	1133 Donaldson St.
15253	1152 Donaldson St.
15254	1156 Donaldson St.
15255	1159 Donaldson St.
15256	1160 Donaldson St.
15257	1163 Donaldson St.
15258	1167 Donaldson St.
15259	1201 Donaldson St.
15260	1202 Donaldson St.
15261	1205 Donaldson St.
15262	1206 Donaldson St.
15263	1209 Donaldson St.
15264	1210 Donaldson St.

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15265	1213 Donaldson St.
15266	1214 Donaldson St.
15267	1217 Donaldson St.
15268	1218 Donaldson St.
15269	1252 Donaldson St.
15270	1255 Donaldson St.
15271	1256 Donaldson St.
15272	1259 Donaldson St.
15273	1263 Donaldson St.
15274	1267 Donaldson St.
15275	1301 Donaldson St.
15276	1305 Donaldson St.
15277	1309 Donaldson St.
15278	1313 Donaldson St.
15279	1317 Donaldson St.
15280	1359 Donaldson St.
15281	1360 Donaldson St.
15282	1363 Donaldson St.
15283	1367 Donaldson St.
15284	1368 Donaldson St.
15285	1401 Donaldson St.
15286	3413 Donnelly St.
15287	3417 Donnelly St.
15288	3420 Donnelly St.
15289	3421 Donnelly St.
15290	3422 Donnelly St.
15291	3501 Donnelly St.
15292	3502 Donnelly St.
15293	3505 Donnelly St.
15294	3506 Donnelly St.
15295	3509 Donnelly St.
15296	3510 Donnelly St.
15297	3513 Donnelly St.
15298	3514 Donnelly St.
15299	3517 Donnelly St.
15300	3518 Donnelly St.
15301	3601 Donnelly St.
15302	3602 Donnelly St.
15303	3605 Donnelly St.
15304	3606 Donnelly St.
15305	3609 Donnelly St.
15306	3610 Donnelly St.
15307	3613 Donnelly St.
15308	3614 Donnelly St.
15309	3701 Donnelly St.
15310	3702 Donnelly St.
15311	3705 Donnelly St.
15312	3706 Donnelly St.

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15313	3709 Donnelly St.
15314	3710 Donnelly St.
15315	3713 Donnelly St.
15316	3714 Donnelly St.
15317	3801 Donnelly St.
15318	3802 Donnelly St.
15319	3805 Donnelly St.
15320	3806 Donnelly St.
15321	3809 Donnelly St.
15322	3810 Donnelly St.
15323	3813 Donnelly St.
15324	3814 Donnelly St.
15325	3817 Donnelly St.
15326	3818 Donnelly St.
15327	3901 Donnelly St.
15328	3902 Donnelly St.
15329	3906 Donnelly St.
15330	3909 Donnelly St.
15331	3910 Donnelly St.
15332	3913 Donnelly St.
15333	3914 Donnelly St.
15334	3917 Donnelly St.
15335	3918 Donnelly St.
15336	4001 Donnelly St.
15337	4002 Donnelly St.
15338	4005 Donnelly St.
15339	4006 Donnelly St.
15340	4009 Donnelly St.
15341	4010 Donnelly St.
15342	4013 Donnelly St.
15343	4014 Donnelly St.
15344	4017 Donnelly St.
15345	4021 Donnelly St.
15346	4025 Donnelly St.
15347	4026 Donnelly St.
15348	4029 Donnelly St.
15349	4030 Donnelly St.
15350	4033 Donnelly St.
15351	4034 Donnelly St.
15352	4101 Donnelly St.
15353	4102 Donnelly St.
15354	4105 Donnelly St.
15355	4109 Donnelly St.
15356	4110 Donnelly St.
15357	4113 Donnelly St.
15358	4114 Donnelly St.
15359	4118 Donnelly St.
15360	4121 Donnelly St.

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15361	4122 Donnelly St.
15362	4126 Donnelly St.
15363	4129 Donnelly St.
15364	4130 Donnelly St.
15365	4133 Donnelly St.
15366	4134 Donnelly St.
15367	4137 Donnelly St.
15368	1711 Dorothy Dr.
15369	1717 Dorothy Dr.
15370	1718 Dorothy Dr.
15371	1723 Dorothy Dr.
15372	1724 Dorothy Dr.
15373	1730 Dorothy Dr.
15374	902 Dort Hwy., N.
15375	999 Dort Hwy., N.
15376	999 Dort Hwy., N.
15377	1001 Dort Hwy., N.
15378	1109 Dort Hwy., N.
15379	1109 Dort Hwy., N.
15380	1119 Dort Hwy., N.
15381	1141 Dort Hwy., N.
15382	1141 Dort Hwy., N.
15383	1201 Dort Hwy., N.
15384	1201 Dort Hwy., N.
15385	1205 Dort Hwy., N.
15386	1235 Dort Hwy., N.
15387	1300 Dort Hwy., N.
15388	1300 Dort Hwy., N.
15389	1300 Dort Hwy., N.
15390	1300 Dort Hwy., N.
15391	1300 Dort Hwy., N.
15392	1300 Dort Hwy., N.
15393	1300 Dort Hwy., N.
15394	1401 Dort Hwy., N.
15395	1401 Dort Hwy., N.
15396	1415 Dort Hwy., N.
15397	1415 Dort Hwy., N.
15398	1419 Dort Hwy., N.
15399	1517 Dort Hwy., N.
15400	1517 Dort Hwy., N.
15401	1535 Dort Hwy., N.
15402	1535 Dort Hwy., N.
15403	1617 Dort Hwy., N.
15404	1617 Dort Hwy., N.
15405	1701 Dort Hwy., N.
15406	1701 Dort Hwy., N.
15407	1701 Dort Hwy., N.
15408	1717 Dort Hwy., N.

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15409	1717 Dort Hwy., N.
15410	1901 Dort Hwy., N.
15411	1901 Dort Hwy., N.
15412	1913 Dort Hwy., N.
15413	1913 Dort Hwy., N.
15414	1914 Dort Hwy., N.
15415	1914 Dort Hwy., N.
15416	1918 Dort Hwy., N.
15417	1918 Dort Hwy., N.
15418	2010 Dort Hwy., N.
15419	2010 Dort Hwy., N.
15420	2010 Dort Hwy., N.
15421	2015 Dort Hwy., N.
15422	2015 Dort Hwy., N.
15423	2033 Dort Hwy., N.
15424	2033 Dort Hwy., N.
15425	2041 Dort Hwy., N.
15426	2057 Dort Hwy., N.
15427	2109 Dort Hwy., N.
15428	2109 Dort Hwy., N.
15429	2109 Dort Hwy., N.
15430	2149 Dort Hwy., N.
15431	2149 Dort Hwy., N.
15432	2150 Dort Hwy., N.
15433	2150 Dort Hwy., N.
15434	2200 Dort Hwy., N.
15435	2201 Dort Hwy., N.
15436	2201 Dort Hwy., N.
15437	2315 Dort Hwy., N.
15438	2315 Dort Hwy., N.
15439	2402 Dort Hwy., N.
15440	2402 Dort Hwy., N.
15441	2415 Dort Hwy., N.
15442	2415 Dort Hwy., N.
15443	2429 Dort Hwy., N.
15444	2429 Dort Hwy., N.
15445	2430 Dort Hwy., N.
15446	2430 Dort Hwy., N.
15447	2433 Dort Hwy., N.
15448	2501 Dort Hwy., N.
15449	2505 Dort Hwy., N.
15450	2505 Dort Hwy., N.
15451	2507 Dort Hwy., N.
15452	2509 Dort Hwy., N.
15453	2610 Dort Hwy., N.
15454	2617 Dort Hwy., N.
15455	2617 Dort Hwy., N.
15456	2700 Dort Hwy., N.

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15457	2700 Dort Hwy., N.
15458	2700 Dort Hwy., N.
15459	2700 Dort Hwy., N.
15460	2701 Dort Hwy., N.
15461	2809 Dort Hwy., N.
15462	2809 Dort Hwy., N.
15463	2901 Dort Hwy., N.
15464	2901 Dort Hwy., N.
15465	2921 Dort Hwy., N.
15466	2921 Dort Hwy., N.
15467	3001 Dort Hwy., N.
15468	3001 Dort Hwy., N.
15469	3015 Dort Hwy., N.
15470	3015 Dort Hwy., N.
15471	3141 Dort Hwy., N.
15472	3201 Dort Hwy., N.
15473	3201 Dort Hwy., N.
15474	3220 Dort Hwy., N.
15475	3221 Dort Hwy., N.
15476	3221 Dort Hwy., N.
15477	3401 Dort Hwy., N.
15478	3401 Dort Hwy., N.
15479	3502 Dort Hwy., N.
15480	3502 Dort Hwy., N.
15481	3508 Dort Hwy., N.
15482	3560 Dort Hwy., N.
15483	3560 Dort Hwy., N.
15484	3610 Dort Hwy., N.
15485	4011 Dort Hwy., N.
15486	4011 Dort Hwy., N.
15487	4020 Dort Hwy., N.
15488	4025 Dort Hwy., N.
15489	4026 Dort Hwy., N.
15490	4030 Dort Hwy., N.
15491	4068 Dort Hwy., N.
15492	4072 Dort Hwy., N.
15493	4072 Dort Hwy., N.
15494	4083 Dort Hwy., N.
15495	4101 Dort Hwy., N.
15496	4111 Dort Hwy., N.
15497	4111 Dort Hwy., N.
15498	4710 Dort Hwy., N.
15499	5032 Dort Hwy., N.
15500	5125 Dort Hwy., N.
15501	5130 Dort Hwy., N.
15502	5200 Dort Hwy., N.
15503	5201 Dort Hwy., N.
15504	5201 Dort Hwy., N.

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15505	5806 Dort Hwy., N.
15506	5806 Dort Hwy., N.
15507	5809 Dort Hwy., N.
15508	5910 Dort Hwy., N.
15509	6025 Dort Hwy., N.
15510	6200 Dort Hwy., N.
15511	6201 Dort Hwy., N.
15512	6226 Dort Hwy., N.
15513	6301 Dort Hwy., N.
15514	6301 Dort Hwy., N.
15515	6312 Dort Hwy., N.
15516	6512 Dort Hwy., N.
15517	6515 Dort Hwy., N.
15518	6515 Dort Hwy., N.
15519	6550 Dort Hwy., N.
15520	6576 Dort Hwy., N.
15521	6800 Dort Hwy., N.
15522	7030 Dort Hwy., N.
15523	7039 Dort Hwy., N.
15524	7039 Dort Hwy., N.
15525	7045 Dort Hwy., N.
15526	2700 Dort Hwy., N.
15527	3610 Dort Hwy., N.
15528	3705 Dort Hwy., N.
15529	3800 Dort Hwy., N.
15530	4011 Dort Hwy., N.
15531	4020 Dort Hwy., N.
15532	4025 Dort Hwy., N.
15533	4026 Dort Hwy., N.
15534	4030 Dort Hwy., N.
15535	4040 Dort Hwy., N.
15536	4043 Dort Hwy., N.
15537	4051 Dort Hwy., N.
15538	4068 Dort Hwy., N.
15539	4072 Dort Hwy., N.
15540	4083 Dort Hwy., N.
15541	4084 Dort Hwy., N.
15542	4090 Dort Hwy., N.
15543	4096 Dort Hwy., N.
15544	4101 Dort Hwy., N.
15545	4115 Dort Hwy., N.
15546	4140 Dort Hwy., N.
15547	4710 Dort Hwy., N.
15548	4900 Dort Hwy., N.
15549	5000 Dort Hwy., N.
15550	5022 Dort Hwy., N.
15551	5030 Dort Hwy., N.
15552	5122 Dort Hwy., N.

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15553	5125 Dort Hwy., N.
15554	5130 Dort Hwy., N.
15555	5145 Dort Hwy., N.
15556	5200 Dort Hwy., N.
15557	5201 Dort Hwy., N.
15558	5201 Dort Hwy., N.
15559	5806 Dort Hwy., N.
15560	5809 Dort Hwy., N.
15561	5901 Dort Hwy., N.
15562	5910 Dort Hwy., N.
15563	6000 Dort Hwy., N.
15564	6002 Dort Hwy., N.
15565	6025 Dort Hwy., N.
15566	6120 Dort Hwy., N.
15567	6200 Dort Hwy., N.
15568	6201 Dort Hwy., N.
15569	6226 Dort Hwy., N.
15570	6301 Dort Hwy., N.
15571	6312 Dort Hwy., N.
15572	6512 Dort Hwy., N.
15573	6550 Dort Hwy., N.
15574	6576 Dort Hwy., N.
15575	6604 Dort Hwy., N.
15576	6648 Dort Hwy., N.
15577	6702 Dort Hwy., N.
15578	6800 Dort Hwy., N.
15579	7030 Dort Hwy., N.
15580	7039 Dort Hwy., N.
15581	7045 Dort Hwy., N.
15582	101 Dort Hwy., S.
15583	101 Dort Hwy., S.
15584	111 Dort Hwy., S.
15585	113 Dort Hwy., S.
15586	113 Dort Hwy., S.
15587	201 Dort Hwy., S.
15588	205 Dort Hwy., S.
15589	205 Dort Hwy., S.
15590	206 Dort Hwy., S.
15591	400 Dort Hwy., S.
15592	400 Dort Hwy., S.
15593	400 Dort Hwy., S.
15594	405 Dort Hwy., S.
15595	405 Dort Hwy., S.
15596	414 Dort Hwy., S.
15597	414 Dort Hwy., S.
15598	422 Dort Hwy., S.
15599	425 Dort Hwy., S.
15600	425 Dort Hwy., S.

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15601	425 Dort Hwy., S.
15602	429 Dort Hwy., S.
15603	430 Dort Hwy., S.
15604	430 Dort Hwy., S.
15605	433 Dort Hwy., S.
15606	433 Dort Hwy., S.
15607	509 Dort Hwy., S.
15608	509 Dort Hwy., S.
15609	512 Dort Hwy., S.
15610	512 Dort Hwy., S.
15611	519 Dort Hwy., S.
15612	519 Dort Hwy., S.
15613	520 Dort Hwy., S.
15614	521 Dort Hwy., S.
15615	529 Dort Hwy., S.
15616	529 Dort Hwy., S.
15617	530 Dort Hwy., S.
15618	560 Dort Hwy., S.
15619	560 Dort Hwy., S.
15620	573 Dort Hwy., S.
15621	573 Dort Hwy., S.
15622	600 Dort Hwy., S.
15623	610 Dort Hwy., S.
15624	617 Dort Hwy., S.
15625	617 Dort Hwy., S.
15626	625 Dort Hwy., S.
15627	625 Dort Hwy., S.
15628	629 Dort Hwy., S.
15629	629 Dort Hwy., S.
15630	705 Dort Hwy., S.
15631	706 Dort Hwy., S.
15632	706 Dort Hwy., S.
15633	726 Dort Hwy., S.
15634	730 Dort Hwy., S.
15635	810 Dort Hwy., S.
15636	822 Dort Hwy., S.
15637	822 Dort Hwy., S.
15638	822 Dort Hwy., S.
15639	822 Dort Hwy., S.
15640	902 Dort Hwy., S.
15641	902 Dort Hwy., S.
15642	905 Dort Hwy., S.
15643	910 Dort Hwy., S.
15644	915 Dort Hwy., S.
15645	915 Dort Hwy., S.
15646	915 Dort Hwy., S.
15647	915 Dort Hwy., S.
15648	915 Dort Hwy., S.

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15649	915 Dort Hwy., S.
15650	915 Dort Hwy., S.
15651	925 Dort Hwy., S.
15652	1101 Dort Hwy., S.
15653	1115 Dort Hwy., S.
15654	1115 Dort Hwy., S.
15655	1405 Dort Hwy., S.
15656	1407 Dort Hwy., S.
15657	1502 Dort Hwy., S.
15658	1502 Dort Hwy., S.
15659	1512 Dort Hwy., S.
15660	1512 Dort Hwy., S.
15661	1514 Dort Hwy., S.
15662	1717 Dort Hwy., S.
15663	1717 Dort Hwy., S.
15664	1717 Dort Hwy., S.
15665	1740 Dort Hwy., S.
15666	1740 Dort Hwy., S.
15667	1765 Dort Hwy., S.
15668	1765 Dort Hwy., S.
15669	1780 Dort Hwy., S.
15670	1780 Dort Hwy., S.
15671	1801 Dort Hwy., S.
15672	1801 Dort Hwy., S.
15673	1802 Dort Hwy., S.
15674	1802 Dort Hwy., S.
15675	1809 Dort Hwy., S.
15676	1819 Dort Hwy., S.
15677	1822 Dort Hwy., S.
15678	1826 Dort Hwy., S.
15679	1826 Dort Hwy., S.
15680	1830 Dort Hwy., S.
15681	1830 Dort Hwy., S.
15682	1831 Dort Hwy., S.
15683	1831 Dort Hwy., S.
15684	1838 Dort Hwy., S.
15685	1844 Dort Hwy., S.
15686	1844 Dort Hwy., S.
15687	1850 Dort Hwy., S.
15688	1850 Dort Hwy., S.
15689	1860 Dort Hwy., S.
15690	1860 Dort Hwy., S.
15691	1871 Dort Hwy., S.
15692	1901 Dort Hwy., S.
15693	1901 Dort Hwy., S.
15694	1902 Dort Hwy., S.
15695	1911 Dort Hwy., S.
15696	1911 Dort Hwy., S.

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15697	1919 Dort Hwy., S.
15698	1919 Dort Hwy., S.
15699	1928 Dort Hwy., S.
15700	1938 Dort Hwy., S.
15701	1938 Dort Hwy., S.
15702	1938 Dort Hwy., S.
15703	1938 Dort Hwy., S.
15704	1940 Dort Hwy., S.
15705	1942 Dort Hwy., S.
15706	1945 Dort Hwy., S.
15707	1945 Dort Hwy., S.
15708	2002 Dort Hwy., S.
15709	2002 Dort Hwy., S.
15710	2031 Dort Hwy., S.
15711	2031 Dort Hwy., S.
15712	2051 Dort Hwy., S.
15713	2052 Dort Hwy., S.
15714	2053 Dort Hwy., S.
15715	2054 Dort Hwy., S.
15716	2054 Dort Hwy., S.
15717	2056 Dort Hwy., S.
15718	2057 Dort Hwy., S.
15719	2057 Dort Hwy., S.
15720	2058 Dort Hwy., S.
15721	2060 Dort Hwy., S.
15722	2060 Dort Hwy., S.
15723	2061 Dort Hwy., S.
15724	2061 Dort Hwy., S.
15725	2101 Dort Hwy., S.
15726	2102 Dort Hwy., S.
15727	2102 Dort Hwy., S.
15728	2105 Dort Hwy., S.
15729	2105 Dort Hwy., S.
15730	2120 Dort Hwy., S.
15731	2130 Dort Hwy., S.
15732	2130 Dort Hwy., S.
15733	2175 Dort Hwy., S.
15734	2175 Dort Hwy., S.
15735	2201 Dort Hwy., S.
15736	2201 Dort Hwy., S.
15737	2210 Dort Hwy., S.
15738	2210 Dort Hwy., S.
15739	2211 Dort Hwy., S.
15740	2211 Dort Hwy., S.
15741	2215 Dort Hwy., S.
15742	2215 Dort Hwy., S.
15743	2250 Dort Hwy., S.
15744	2250 Dort Hwy., S.

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15745	2260 Dort Hwy., S.
15746	2260 Dort Hwy., S.
15747	2302 Dort Hwy., S.
15748	2302 Dort Hwy., S.
15749	2320 Dort Hwy., S.
15750	2320 Dort Hwy., S.
15751	2325 Dort Hwy., S.
15752	2325 Dort Hwy., S.
15753	2330 Dort Hwy., S.
15754	2330 Dort Hwy., S.
15755	2341 Dort Hwy., S.
15756	2341 Dort Hwy., S.
15757	2345 Dort Hwy., S.
15758	2401 Dort Hwy., S.
15759	2402 Dort Hwy., S.
15760	2402 Dort Hwy., S.
15761	2402 Dort Hwy., S.
15762	2402 Dort Hwy., S.
15763	2420 Dort Hwy., S.
15764	2420 Dort Hwy., S.
15765	2478 Dort Hwy., S.
15766	2480 Dort Hwy., S.
15767	2501 Dort Hwy., S.
15768	2501 Dort Hwy., S.
15769	2502 Dort Hwy., S.
15770	2512 Dort Hwy., S.
15771	2512 Dort Hwy., S.
15772	2520 Dort Hwy., S.
15773	2525 Dort Hwy., S.
15774	2525 Dort Hwy., S.
15775	2701 Dort Hwy., S.
15776	2701 Dort Hwy., S.
15777	2730 Dort Hwy., S.
15778	2730 Dort Hwy., S.
15779	2801 Dort Hwy., S.
15780	2801 Dort Hwy., S.
15781	2802 Dort Hwy., S.
15782	2802 Dort Hwy., S.
15783	2810 Dort Hwy., S.
15784	2810 Dort Hwy., S.
15785	2817 Dort Hwy., S.
15786	2817 Dort Hwy., S.
15787	2833 Dort Hwy., S.
15788	2833 Dort Hwy., S.
15789	2840 Dort Hwy., S.
15790	2902 Dort Hwy., S.
15791	2912 Dort Hwy., S.
15792	2913 Dort Hwy., S.

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15793	2913 Dort Hwy., S.
15794	2916 Dort Hwy., S.
15795	2918 Dort Hwy., S.
15796	2918 Dort Hwy., S.
15797	2920 Dort Hwy., S.
15798	2920 Dort Hwy., S.
15799	3001 Dort Hwy., S.
15800	3001 Dort Hwy., S.
15801	3001 Dort Hwy., S.
15802	3006 Dort Hwy., S.
15803	3006 Dort Hwy., S.
15804	3021 Dort Hwy., S.
15805	3021 Dort Hwy., S.
15806	3096 Dort Hwy., S.
15807	3101 Dort Hwy., S.
15808	3101 Dort Hwy., S.
15809	3102 Dort Hwy., S.
15810	3104 Dort Hwy., S.
15811	3108 Dort Hwy., S.
15812	3108 Dort Hwy., S.
15813	3110 Dort Hwy., S.
15814	3111 Dort Hwy., S.
15815	3111 Dort Hwy., S.
15816	3118 Dort Hwy., S.
15817	3118 Dort Hwy., S.
15818	3119 Dort Hwy., S.
15819	3119 Dort Hwy., S.
15820	3124 Dort Hwy., S.
15821	3124 Dort Hwy., S.
15822	3124 Dort Hwy., S.
15823	3201 Dort Hwy., S.
15824	3206 Dort Hwy., S.
15825	3208 Dort Hwy., S.
15826	3208 Dort Hwy., S.
15827	3210 Dort Hwy., S.
15828	3218 Dort Hwy., S.
15829	3301 Dort Hwy., S.
15830	3301 Dort Hwy., S.
15831	3301 Dort Hwy., S.
15832	3302 Dort Hwy., S.
15833	3302 Dort Hwy., S.
15834	3316 Dort Hwy., S.
15835	3316 Dort Hwy., S.
15836	3316 Dort Hwy., S.
15837	3316 Dort Hwy., S.
15838	3316 Dort Hwy., S.
15839	3316 Dort Hwy., S.
15840	3335 Dort Hwy., S.

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15841	3335 Dort Hwy., S.
15842	3406 Dort Hwy., S.
15843	3539 Dort Hwy., S.
15844	3539 Dort Hwy., S.
15845	3539 Dort Hwy., S.
15846	3549 Dort Hwy., S.
15847	3549 Dort Hwy., S.
15848	3549 Dort Hwy., S.
15849	3549 Dort Hwy., S.
15850	3549 Dort Hwy., S.
15851	3552 Dort Hwy., S.
15852	3552 Dort Hwy., S.
15853	3553 Dort Hwy., S.
15854	3553 Dort Hwy., S.
15855	3553 Dort Hwy., S.
15856	3559 Dort Hwy., S.
15857	3559 Dort Hwy., S.
15858	3600 Dort Hwy., S.
15859	3600 Dort Hwy., S.
15860	3600 Dort Hwy., S.
15861	3600 Dort Hwy., S.
15862	3600 Dort Hwy., S.
15863	3600 Dort Hwy., S.
15864	3600 Dort Hwy., S.
15865	3600 Dort Hwy., S.
15866	3600 Dort Hwy., S.
15867	3600 Dort Hwy., S.
15868	3600 Dort Hwy., S.
15869	3600 Dort Hwy., S.
15870	3600 Dort Hwy., S.
15871	3600 Dort Hwy., S.
15872	3600 Dort Hwy., S.
15873	3600 Dort Hwy., S.
15874	3600 Dort Hwy., S.
15875	3625 Dort Hwy., S.
15876	3625 Dort Hwy., S.
15877	3753 Dort Hwy., S.
15878	3753 Dort Hwy., S.
15879	3754 Dort Hwy., S.
15880	3756 Dort Hwy., S.
15881	3756 Dort Hwy., S.
15882	3760 Dort Hwy., S.
15883	3760 Dort Hwy., S.
15884	3760 Dort Hwy., S.
15885	3760 Dort Hwy., S.
15886	3908 Dort Hwy., S.
15887	4002 Dort Hwy., S.
15888	4002 Dort Hwy., S.

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15889	4002 Dort Hwy., S.
15890	4202 Dort Hwy., S.
15891	4270 Dort Hwy., S.
15892	4300 Dort Hwy., S.
15893	4304 Dort Hwy., S.
15894	4410 Dort Hwy., S.
15895	4410 Dort Hwy., S.
15896	4410 Dort Hwy., S.
15897	4416 Dort Hwy., S.
15898	4502 Dort Hwy., S.
15899	4510 Dort Hwy., S.
15900	4510 Dort Hwy., S.
15901	4646 Dort Hwy., S.
15902	4646 Dort Hwy., S.
15903	1405 Dort Hwy., S.
15904	1405 Dort Hwy., S.
15905	3301 Dort Hwy., S.
15906	4270 Dort Hwy., S.
15907	402 Dougherty Pl.
15908	412 Dougherty Pl.
15909	418 Dougherty Pl.
15910	424 Dougherty Pl.
15911	430 Dougherty Pl.
15912	436 Dougherty Pl.
15913	442 Dougherty Pl.
15914	448 Dougherty Pl.
15915	454 Dougherty Pl.
15916	460 Dougherty Pl.
15917	502 Dougherty Pl.
15918	510 Dougherty Pl.
15919	618 Dougherty Pl.
15920	624 Dougherty Pl.
15921	630 Dougherty Pl.
15922	701 Dougherty Pl.
15923	702 Dougherty Pl.
15924	708 Dougherty Pl.
15925	709 Dougherty Pl.
15926	714 Dougherty Pl.
15927	717 Dougherty Pl.
15928	720 Dougherty Pl.
15929	726 Dougherty Pl.
15930	732 Dougherty Pl.
15931	738 Dougherty Pl.
15932	2908 Douglas Ave.
15933	2920 Douglas Ave.
15934	3001 Douglas Ave.
15935	3601 Douglas Ave.
15936	3602 Douglas Ave.

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15937	3605 Douglas Ave.
15938	3612 Douglas Ave.
15939	3615 Douglas Ave.
15940	3616 Douglas Ave.
15941	3712 Douglas Ave.
15942	3716 Douglas Ave.
15943	3717 Douglas Ave.
15944	3807 Douglas Ave.
15945	3808 Douglas Ave.
15946	3811 Douglas Ave.
15947	3816 Douglas Ave.
15948	3819 Douglas Ave.
15949	3901 Douglas Ave.
15950	3902 Douglas Ave.
15951	3905 Douglas Ave.
15952	3908 Douglas Ave.
15953	3912 Douglas Ave.
15954	3913 Douglas Ave.
15955	3917 Douglas Ave.
15956	3923 Douglas Ave.
15957	4001 Douglas Ave.
15958	4002 Douglas Ave.
15959	4009 Douglas Ave.
15960	4115 Douglas Ave.
15961	4119 Douglas Ave.
15962	4124 Douglas Ave.
15963	4127 Douglas Ave.
15964	4128 Douglas Ave.
15965	4131 Douglas Ave.
15966	4132 Douglas Ave.
15967	4136 Douglas Ave.
15968	4139 Douglas Ave.
15969	4140 Douglas Ave.
15970	4144 Douglas Ave.
15971	4147 Douglas Ave.
15972	911 Downey St.
15973	914 Downey St.
15974	962 Downey St.
15975	966 Downey St.
15976	1002 Downey St.
15977	1005 Downey St.
15978	1006 Downey St.
15979	1010 Downey St.
15980	1016 Downey St.
15981	1052 Downey St.
15982	1211 Downey St.
15983	1301 Downey St.
15984	1302 Downey St.

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15985	1404 Downey St.
15986	1407 Downey St.
15987	1408 Downey St.
15988	1411 Downey St.
15989	1412 Downey St.
15990	1415 Downey St.
15991	1416 Downey St.
15992	1419 Downey St.
15993	1420 Downey St.
15994	1423 Downey St.
15995	1424 Downey St.
15996	1427 Downey St.
15997	1428 Downey St.
15998	1501 Downey St.
15999	1502 Downey St.
16000	1505 Downey St.
16001	1506 Downey St.
16002	1510 Downey St.
16003	1511 Downey St.
16004	613 Dupont St.
16005	617 Dupont St.
16006	621 Dupont St.
16007	625 Dupont St.
16008	629 Dupont St.
16009	701 Dupont St.
16010	751 Dupont St.
16011	755 Dupont St.
16012	759 Dupont St.
16013	763 Dupont St.
16014	802 Dupont St.
16015	806 Dupont St.
16016	807 Dupont St.
16017	811 Dupont St.
16018	814 Dupont St.
16019	815 Dupont St.
16020	818 Dupont St.
16021	819 Dupont St.
16022	902 Dupont St.
16023	904 Dupont St.
16024	907 Dupont St.
16025	908 Dupont St.
16026	911 Dupont St.
16027	912 Dupont St.
16028	915 Dupont St.
16029	916 Dupont St.
16030	919 Dupont St.
16031	920 Dupont St.
16032	924 Dupont St.

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16033	928 Dupont St.
16034	1000 Dupont St.
16035	1001 Dupont St.
16036	1004 Dupont St.
16037	1007 Dupont St.
16038	1008 Dupont St.
16039	1011 Dupont St.
16040	1012 Dupont St.
16041	1015 Dupont St.
16042	1016 Dupont St.
16043	1019 Dupont St.
16044	1020 Dupont St.
16045	1024 Dupont St.
16046	1025 Dupont St.
16047	1028 Dupont St.
16048	1032 Dupont St.
16049	1036 Dupont St.
16050	1151 Dupont St.
16051	1160 Dupont St.
16052	1210 Dupont St.
16053	1230 Dupont St.
16054	1245 Dupont St.
16055	1302 Dupont St.
16056	1302 Dupont St.
16057	1330 Dupont St.
16058	1340 Dupont St.
16059	1341 Dupont St.
16060	1343 Dupont St.
16061	1356 Dupont St.
16062	1360 Dupont St.
16063	1360 Dupont St.
16064	1361 Dupont St.
16065	1413 Dupont St.
16066	1420 Dupont St.
16067	1430 Dupont St.
16068	1430 Dupont St.
16069	1439 Dupont St.
16070	1448 Dupont St.
16071	1451 Dupont St.
16072	1459 Dupont St.
16073	1460 Dupont St.
16074	1501 Dupont St.
16075	1508 Dupont St.
16076	1511 Dupont St.
16077	1512 Dupont St.
16078	1516 Dupont St.
16079	1552 Dupont St.
16080	1559 Dupont St.

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16081	1572 Dupont St.
16082	1590 Dupont St.
16083	1601 Dupont St.
16084	1609 Dupont St.
16085	1612 Dupont St.
16086	1613 Dupont St.
16087	1618 Dupont St.
16088	1621 Dupont St.
16089	1622 Dupont St.
16090	1626 Dupont St.
16091	1630 Dupont St.
16092	1640 Dupont St.
16093	1670 Dupont St.
16094	1670 Dupont St.
16095	1702 Dupont St.
16096	1706 Dupont St.
16097	1709 Dupont St.
16098	1713 Dupont St.
16099	1716 Dupont St.
16100	1716 Dupont St.
16101	1717 Dupont St.
16102	1718 Dupont St.
16103	1718 Dupont St.
16104	1721 Dupont St.
16105	1801 Dupont St.
16106	1802 Dupont St.
16107	1805 Dupont St.
16108	1808 Dupont St.
16109	1812 Dupont St.
16110	1816 Dupont St.
16111	1913 Dupont St.
16112	1917 Dupont St.
16113	2001 Dupont St.
16114	2004 Dupont St.
16115	2005 Dupont St.
16116	2008 Dupont St.
16117	2009 Dupont St.
16118	2013 Dupont St.
16119	2017 Dupont St.
16120	2020 Dupont St.
16121	2101 Dupont St.
16122	2105 Dupont St.
16123	2109 Dupont St.
16124	2113 Dupont St.
16125	2117 Dupont St.
16126	2151 Dupont St.
16127	2155 Dupont St.
16128	2162 Dupont St.

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16129	2208 Dupont St.
16130	2212 Dupont St.
16131	2213 Dupont St.
16132	2217 Dupont St.
16133	2221 Dupont St.
16134	2224 Dupont St.
16135	2225 Dupont St.
16136	2229 Dupont St.
16137	2230 Dupont St.
16138	2233 Dupont St.
16139	2301 Dupont St.
16140	2302 Dupont St.
16141	2305 Dupont St.
16142	2308 Dupont St.
16143	2309 Dupont St.
16144	2312 Dupont St.
16145	2313 Dupont St.
16146	2401 Dupont St.
16147	2407 Dupont St.
16148	2407 Dupont St.
16149	2409 Dupont St.
16150	2411 Dupont St.
16151	2414 Dupont St.
16152	2414 Dupont St.
16153	2431 Dupont St.
16154	2437 Dupont St.
16155	2500 Dupont St.
16156	2500 Dupont St.
16157	2502 Dupont St.
16158	2502 Dupont St.
16159	2513 Dupont St.
16160	2517 Dupont St.
16161	2518 Dupont St.
16162	2520 Dupont St.
16163	2521 Dupont St.
16164	2525 Dupont St.
16165	2529 Dupont St.
16166	2533 Dupont St.
16167	2612 Dupont St.
16168	2614 Dupont St.
16169	2615 Dupont St.
16170	2701 Dupont St.
16171	2702 Dupont St.
16172	2707 Dupont St.
16173	2710 Dupont St.
16174	2713 Dupont St.
16175	2714 Dupont St.
16176	2718 Dupont St.

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16177	2719 Dupont St.
16178	2722 Dupont St.
16179	2725 Dupont St.
16180	2801 Dupont St.
16181	2806 Dupont St.
16182	2809 Dupont St.
16183	2816 Dupont St.
16184	2817 Dupont St.
16185	2901 Dupont St.
16186	2902 Dupont St.
16187	2921 Dupont St.
16188	2925 Dupont St.
16189	3007 Dupont St.
16190	3011 Dupont St.
16191	3020 Dupont St.
16192	3021 Dupont St.
16193	3101 Dupont St.
16194	3102 Dupont St.
16195	3111 Dupont St.
16196	3112 Dupont St.
16197	3117 Dupont St.
16198	3120 Dupont St.
16199	3201 Dupont St.
16200	3202 Dupont St.
16201	3205 Dupont St.
16202	3208 Dupont St.
16203	3212 Dupont St.
16204	3213 Dupont St.
16205	3216 Dupont St.
16206	3217 Dupont St.
16207	3220 Dupont St.
16208	3301 Dupont St.
16209	3307 Dupont St.
16210	3313 Dupont St.
16211	3413 Dupont St.
16212	3421 Dupont St.
16213	3501 Dupont St.
16214	3505 Dupont St.
16215	3513 Dupont St.
16216	3517 Dupont St.
16217	3521 Dupont St.
16218	3601 Dupont St.
16219	3605 Dupont St.
16220	3606 Dupont St.
16221	3609 Dupont St.
16222	3613 Dupont St.
16223	3617 Dupont St.
16224	3701 Dupont St.

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16225	3705 Dupont St.
16226	3709 Dupont St.
16227	3713 Dupont St.
16228	3717 Dupont St.
16229	3807 Dupont St.
16230	3815 Dupont St.
16231	3821 Dupont St.
16232	3901 Dupont St.
16233	3907 Dupont St.
16234	3913 Dupont St.
16235	3921 Dupont St.
16236	4001 Dupont St.
16237	4005 Dupont St.
16238	4009 Dupont St.
16239	4011 Dupont St.
16240	4013 Dupont St.
16241	4017 Dupont St.
16242	4019 Dupont St.
16243	4021 Dupont St.
16244	4043 Dupont St.
16245	4101 Dupont St.
16246	4105 Dupont St.
16247	4109 Dupont St.
16248	4113 Dupont St.
16249	4117 Dupont St.
16250	4121 Dupont St.
16251	4125 Dupont St.
16252	4129 Dupont St.
16253	4137 Dupont St.
16254	4301 Dupont St.
16255	4301 Dupont St.
16256	4301 Dupont St.
16257	4311 Dupont St.
16258	4413 Dupont St.
16259	4504 Dupont St.
16260	4511 Dupont St.
16261	4512 Dupont St.
16262	4515 Dupont St.
16263	4519 Dupont St.
16264	4521 Dupont St.
16265	4601 Dupont St.
16266	4605 Dupont St.
16267	4609 Dupont St.
16268	4613 Dupont St.
16269	4617 Dupont St.
16270	4701 Dupont St.
16271	4705 Dupont St.
16272	4713 Dupont St.

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16273	4802 Dupont St.
16274	4811 Dupont St.
16275	4815 Dupont St.
16276	4901 Dupont St.
16277	4909 Dupont St.
16278	4913 Dupont St.
16279	5011 Dupont St.
16280	5015 Dupont St.
16281	5019 Dupont St.
16282	5023 Dupont St.
16283	5101 Dupont St.
16284	5105 Dupont St.
16285	5109 Dupont St.
16286	5202 Dupont St.
16287	5206 Dupont St.
16288	5210 Dupont St.
16289	5214 Dupont St.
16290	5218 Dupont St.
16291	5301 Dupont St.
16292	5302 Dupont St.
16293	5305 Dupont St.
16294	5306 Dupont St.
16295	5309 Dupont St.
16296	5312 Dupont St.
16297	5313 Dupont St.
16298	5316 Dupont St.
16299	5317 Dupont St.
16300	5321 Dupont St.
16301	5401 Dupont St.
16302	5402 Dupont St.
16303	5405 Dupont St.
16304	5406 Dupont St.
16305	5409 Dupont St.
16306	5412 Dupont St.
16307	5413 Dupont St.
16308	5416 Dupont St.
16309	5417 Dupont St.
16310	5501 Dupont St.
16311	5502 Dupont St.
16312	5505 Dupont St.
16313	5506 Dupont St.
16314	5509 Dupont St.
16315	5512 Dupont St.
16316	5513 Dupont St.
16317	5516 Dupont St.
16318	5517 Dupont St.
16319	5601 Dupont St.
16320	5605 Dupont St.

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16321	5609 Dupont St.
16322	5612 Dupont St.
16323	5613 Dupont St.
16324	5617 Dupont St.
16325	5618 Dupont St.
16326	5701 Dupont St.
16327	5704 Dupont St.
16328	5705 Dupont St.
16329	5709 Dupont St.
16330	5710 Dupont St.
16331	5713 Dupont St.
16332	5716 Dupont St.
16333	5717 Dupont St.
16334	5721 Dupont St.
16335	5722 Dupont St.
16336	5801 Dupont St.
16337	5802 Dupont St.
16338	5805 Dupont St.
16339	5809 Dupont St.
16340	5813 Dupont St.
16341	5817 Dupont St.
16342	5901 Dupont St.
16343	5902 Dupont St.
16344	5905 Dupont St.
16345	5906 Dupont St.
16346	5909 Dupont St.
16347	5913 Dupont St.
16348	5917 Dupont St.
16349	6014 Dupont St.
16350	6025 Dupont St.
16351	6031 Dupont St.
16352	6102 Dupont St.
16353	6108 Dupont St.
16354	6114 Dupont St.
16355	6202 Dupont St.
16356	6409 Dupont St.
16357	6507 Dupont St.
16358	6511 Dupont St.
16359	6514 Dupont St.
16360	6515 Dupont St.
16361	6519 Dupont St.
16362	6525 Dupont St.
16363	6529 Dupont St.
16364	6601 Dupont St.
16365	6605 Dupont St.
16366	6609 Dupont St.
16367	6613 Dupont St.
16368	6617 Dupont St.

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16369	6621 Dupont St.
16370	6701 Dupont St.
16371	6702 Dupont St.
16372	6705 Dupont St.
16373	6706 Dupont St.
16374	6709 Dupont St.
16375	6715 Dupont St.
16376	6801 Dupont St.
16377	6802 Dupont St.
16378	6807 Dupont St.
16379	6810 Dupont St.
16380	6811 Dupont St.
16381	6815 Dupont St.
16382	6819 Dupont St.
16383	6901 Dupont St.
16384	6905 Dupont St.
16385	6910 Dupont St.
16386	6911 Dupont St.
16387	6915 Dupont St.
16388	7001 Dupont St.
16389	7006 Dupont St.
16390	2500 Dupont St.
16391	2500 Dupont St.
16392	2500 Dupont St.
16393	908 Durand St.
16394	914 Durand St.
16395	917 Durand St.
16396	918 Durand St.
16397	920 Durand St.
16398	921 Durand St.
16399	924 Durand St.
16400	925 Durand St.
16401	928 Durand St.
16402	1001 Durand St.
16403	1002 Durand St.
16404	1005 Durand St.
16405	1006 Durand St.
16406	1101 Durand St.
16407	1105 Durand St.
16408	1109 Durand St.
16409	1113 Durand St.
16410	1114 Durand St.
16411	1117 Durand St.
16412	1120 Durand St.
16413	1121 Durand St.
16414	1203 Durand St.
16415	1205 Durand St.
16416	1209 Durand St.

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16417	1213 Durand St.
16418	1214 Durand St.
16419	1217 Durand St.
16420	1301 Durand St.
16421	1402 Durand St.
16422	1404 Durand St.
16423	1408 Durand St.
16424	1409 Durand St.
16425	1412 Durand St.
16426	1415 Durand St.
16427	1416 Durand St.
16428	1419 Durand St.
16429	1420 Durand St.
16430	1423 Durand St.
16431	1427 Durand St.
16432	1431 Durand St.
16433	1435 Durand St.
16434	1500 Durand St.
16435	1501 Durand St.
16436	1504 Durand St.
16437	1505 Durand St.
16438	1511 Durand St.
16439	1615 Durand St.
16440	1616 Durand St.
16441	1701 Durand St.
16442	2000 Dwight Ave.
16443	2001 Dwight Ave.
16444	2005 Dwight Ave.
16445	2006 Dwight Ave.
16446	2007 Dwight Ave.
16447	2008 Dwight Ave.
16448	2009 Dwight Ave.
16449	2015 Dwight Ave.
16450	2019 Dwight Ave.
16451	2021 Dwight Ave.
16452	2022 Dwight Ave.
16453	2023 Dwight Ave.
16454	2026 Dwight Ave.
16455	2027 Dwight Ave.
16456	2029 Dwight Ave.
16457	2030 Dwight Ave.
16458	2033 Dwight Ave.
16459	2034 Dwight Ave.
16460	2037 Dwight Ave.
16461	2038 Dwight Ave.
16462	2042 Dwight Ave.
16463	2043 Dwight Ave.
16464	2046 Dwight Ave.

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16465	2050 Dwight Ave.
16466	2051 Dwight Ave.
16467	2054 Dwight Ave.
16468	2109 Dwight Ave.
16469	2110 Dwight Ave.
16470	2113 Dwight Ave.
16471	2114 Dwight Ave.
16472	2118 Dwight Ave.
16473	2121 Dwight Ave.
16474	1309 Earlmoor Blvd.
16475	1312 Earlmoor Blvd.
16476	1318 Earlmoor Blvd.
16477	1321 Earlmoor Blvd.
16478	1324 Earlmoor Blvd.
16479	1329 Earlmoor Blvd.
16480	1330 Earlmoor Blvd.
16481	1401 Earlmoor Blvd.
16482	1402 Earlmoor Blvd.
16483	1408 Earlmoor Blvd.
16484	1414 Earlmoor Blvd.
16485	1420 Earlmoor Blvd.
16486	1501 Earlmoor Blvd.
16487	1513 Earlmoor Blvd.
16488	1517 Earlmoor Blvd.
16489	1601 Earlmoor Blvd.
16490	1602 Earlmoor Blvd.
16491	1610 Earlmoor Blvd.
16492	1611 Earlmoor Blvd.
16493	1702 Earlmoor Blvd.
16494	1710 Earlmoor Blvd.
16495	1717 Earlmoor Blvd.
16496	1801 Earlmoor Blvd.
16497	1802 Earlmoor Blvd.
16498	1807 Earlmoor Blvd.
16499	911 East Fork Dr.
16500	917 East Fork Dr.
16501	920 East Fork Dr.
16502	923 East Fork Dr.
16503	926 East Fork Dr.
16504	1001 East Fork Dr.
16505	1007 East Fork Dr.
16506	1013 East Fork Dr.
16507	1019 East Fork Dr.
16508	503 East St.
16509	503 East St.
16510	515 East St.
16511	515 East St.
16512	523 East St.

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16513	607 East St.
16514	615 East St.
16515	619 East St.
16516	625 East St.
16517	705 East St.
16518	709 East St.
16519	715 East St.
16520	721 East St.
16521	722 East St.
16522	724 East St.
16523	727 East St.
16524	803 East St.
16525	807 East St.
16526	815 East St.
16527	819 East St.
16528	3426 Easthampton Dr.
16529	3437 Easthampton Dr.
16530	3507 Easthampton Dr.
16531	3508 Easthampton Dr.
16532	3512 Easthampton Dr.
16533	3607 Easthampton Dr.
16534	3608 Easthampton Dr.
16535	3611 Easthampton Dr.
16536	3612 Easthampton Dr.
16537	3615 Easthampton Dr.
16538	3616 Easthampton Dr.
16539	3620 Easthampton Dr.
16540	3626 Easthampton Dr.
16541	3701 Easthampton Dr.
16542	3702 Easthampton Dr.
16543	3707 Easthampton Dr.
16544	3708 Easthampton Dr.
16545	3711 Easthampton Dr.
16546	3715 Easthampton Dr.
16547	3716 Easthampton Dr.
16548	3719 Easthampton Dr.
16549	3723 Easthampton Dr.
16550	3727 Easthampton Dr.
16551	2617 Eastlawn Dr.
16552	2621 Eastlawn Dr.
16553	2625 Eastlawn Dr.
16554	2651 Eastlawn Dr.
16555	2655 Eastlawn Dr.
16556	2659 Eastlawn Dr.
16557	2663 Eastlawn Dr.
16558	2664 Eastlawn Dr.
16559	2667 Eastlawn Dr.
16560	2671 Eastlawn Dr.

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16561	2675 Eastlawn Dr.
16562	6601 Eastmont Dr.
16563	6605 Eastmont Dr.
16564	6606 Eastmont Dr.
16565	6609 Eastmont Dr.
16566	6610 Eastmont Dr.
16567	6613 Eastmont Dr.
16568	6614 Eastmont Dr.
16569	6617 Eastmont Dr.
16570	6618 Eastmont Dr.
16571	6621 Eastmont Dr.
16572	6622 Eastmont Dr.
16573	6625 Eastmont Dr.
16574	6626 Eastmont Dr.
16575	6629 Eastmont Dr.
16576	6630 Eastmont Dr.
16577	6633 Eastmont Dr.
16578	6634 Eastmont Dr.
16579	6701 Eastmont Dr.
16580	6702 Eastmont Dr.
16581	6705 Eastmont Dr.
16582	6706 Eastmont Dr.
16583	6709 Eastmont Dr.
16584	6714 Eastmont Dr.
16585	6715 Eastmont Dr.
16586	2701 Eaton Pl.
16587	2706 Eaton Pl.
16588	2710 Eaton Pl.
16589	2711 Eaton Pl.
16590	2714 Eaton Pl.
16591	2715 Eaton Pl.
16592	2718 Eaton Pl.
16593	2719 Eaton Pl.
16594	2722 Eaton Pl.
16595	2723 Eaton Pl.
16596	2726 Eaton Pl.
16597	2727 Eaton Pl.
16598	2730 Eaton Pl.
16599	2734 Eaton Pl.
16600	2735 Eaton Pl.
16601	2738 Eaton Pl.
16602	2739 Eaton Pl.
16603	2742 Eaton Pl.
16604	2801 Eaton Pl.
16605	2802 Eaton Pl.
16606	2807 Eaton Pl.
16607	2808 Eaton Pl.
16608	2813 Eaton Pl.

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16609	2814 Eaton Pl.
16610	2819 Eaton Pl.
16611	2825 Eaton Pl.
16612	2831 Eaton Pl.
16613	2832 Eaton Pl.
16614	2837 Eaton Pl.
16615	2901 Eaton Pl.
16616	2902 Eaton Pl.
16617	2907 Eaton Pl.
16618	2908 Eaton Pl.
16619	2914 Eaton Pl.
16620	2919 Eaton Pl.
16621	2920 Eaton Pl.
16622	2932 Eaton Pl.
16623	2937 Eaton Pl.
16624	1802 Eckley Ave.
16625	1807 Eckley Ave.
16626	1813 Eckley Ave.
16627	1819 Eckley Ave.
16628	1825 Eckley Ave.
16629	1828 Eckley Ave.
16630	1831 Eckley Ave.
16631	1836 Eckley Ave.
16632	1842 Eckley Ave.
16633	1843 Eckley Ave.
16634	1848 Eckley Ave.
16635	1849 Eckley Ave.
16636	1854 Eckley Ave.
16637	1855 Eckley Ave.
16638	1860 Eckley Ave.
16639	1861 Eckley Ave.
16640	1908 Eckley Ave.
16641	1919 Eckley Ave.
16642	1923 Eckley Ave.
16643	1927 Eckley Ave.
16644	1931 Eckley Ave.
16645	1932 Eckley Ave.
16646	1936 Eckley Ave.
16647	1937 Eckley Ave.
16648	1940 Eckley Ave.
16649	1943 Eckley Ave.
16650	1944 Eckley Ave.
16651	1949 Eckley Ave.
16652	1950 Eckley Ave.
16653	2001 Eckley Ave.
16654	2002 Eckley Ave.
16655	2007 Eckley Ave.
16656	2008 Eckley Ave.

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16657	2009 Eckley Ave.
16658	2013 Eckley Ave.
16659	2019 Eckley Ave.
16660	2020 Eckley Ave.
16661	2025 Eckley Ave.
16662	2026 Eckley Ave.
16663	2031 Eckley Ave.
16664	2032 Eckley Ave.
16665	130 Eddington Ave., E.
16666	134 Eddington Ave., E.
16667	138 Eddington Ave., E.
16668	141 Eddington Ave., E.
16669	142 Eddington Ave., E.
16670	145 Eddington Ave., E.
16671	146 Eddington Ave., E.
16672	149 Eddington Ave., E.
16673	150 Eddington Ave., E.
16674	201 Eddington Ave., E.
16675	202 Eddington Ave., E.
16676	205 Eddington Ave., E.
16677	206 Eddington Ave., E.
16678	209 Eddington Ave., E.
16679	210 Eddington Ave., E.
16680	213 Eddington Ave., E.
16681	214 Eddington Ave., E.
16682	216 Eddington Ave., E.
16683	217 Eddington Ave., E.
16684	219 Eddington Ave., E.
16685	221 Eddington Ave., E.
16686	222 Eddington Ave., E.
16687	223 Eddington Ave., E.
16688	226 Eddington Ave., E.
16689	228 Eddington Ave., E.
16690	233 Eddington Ave., E.
16691	234 Eddington Ave., E.
16692	237 Eddington Ave., E.
16693	238 Eddington Ave., E.
16694	241 Eddington Ave., E.
16695	242 Eddington Ave., E.
16696	246 Eddington Ave., E.
16697	247 Eddington Ave., E.
16698	116 Eddington Ave., W.
16699	119 Eddington Ave., W.
16700	123 Eddington Ave., W.
16701	124 Eddington Ave., W.
16702	201 Eddington Ave., W.
16703	202 Eddington Ave., W.
16704	205 Eddington Ave., W.

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16705	206 Eddington Ave., W.
16706	209 Eddington Ave., W.
16707	210 Eddington Ave., W.
16708	213 Eddington Ave., W.
16709	214 Eddington Ave., W.
16710	217 Eddington Ave., W.
16711	218 Eddington Ave., W.
16712	221 Eddington Ave., W.
16713	222 Eddington Ave., W.
16714	225 Eddington Ave., W.
16715	226 Eddington Ave., W.
16716	911 Eddy St.
16717	912 Eddy St.
16718	914 Eddy St.
16719	915 Eddy St.
16720	920 Eddy St.
16721	924 Eddy St.
16722	5701 Edgar Holt Dr.
16723	325 Edgemont Ave.
16724	335 Edgemont Ave.
16725	419 Edgemont Ave.
16726	507 Edgemont Ave.
16727	412 Edgewood Ave.
16728	413 Edgewood Ave.
16729	417 Edgewood Ave.
16730	418 Edgewood Ave.
16731	420 Edgewood Ave.
16732	421 Edgewood Ave.
16733	424 Edgewood Ave.
16734	428 Edgewood Ave.
16735	1010 Edith Ave.
16736	1011 Edith Ave.
16737	1015 Edith Ave.
16738	1018 Edith Ave.
16739	1019 Edith Ave.
16740	1026 Edith Ave.
16741	1027 Edith Ave.
16742	1030 Edith Ave.
16743	1034 Edith Ave.
16744	1035 Edith Ave.
16745	1039 Edith Ave.
16746	1102 Edith Ave.
16747	1105 Edith Ave.
16748	1113 Edith Ave.
16749	1119 Edith Ave.
16750	1124 Edith Ave.
16751	1129 Edith Ave.
16752	1132 Edith Ave.

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16753	1133 Edith Ave.
16754	1136 Edith Ave.
16755	1141 Edith Ave.
16756	1145 Edith Ave.
16757	1146 Edith Ave.
16758	106 Edmund St.
16759	111 Edmund St.
16760	114 Edmund St.
16761	115 Edmund St.
16762	119 Edmund St.
16763	123 Edmund St.
16764	130 Edmund St.
16765	131 Edmund St.
16766	134 Edmund St.
16767	139 Edmund St.
16768	143 Edmund St.
16769	146 Edmund St.
16770	150 Edmund St.
16771	151 Edmund St.
16772	202 Edmund St.
16773	205 Edmund St.
16774	209 Edmund St.
16775	213 Edmund St.
16776	214 Edmund St.
16777	215 Edmund St.
16778	218 Edmund St.
16779	222 Edmund St.
16780	225 Edmund St.
16781	301 Edmund St.
16782	302 Edmund St.
16783	305 Edmund St.
16784	306 Edmund St.
16785	309 Edmund St.
16786	310 Edmund St.
16787	313 Edmund St.
16788	314 Edmund St.
16789	317 Edmund St.
16790	318 Edmund St.
16791	321 Edmund St.
16792	322 Edmund St.
16793	362 Edmund St.
16794	401 Edmund St.
16795	402 Edmund St.
16796	405 Edmund St.
16797	406 Edmund St.
16798	409 Edmund St.
16799	410 Edmund St.
16800	413 Edmund St.

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16801	414 Edmund St.
16802	418 Edmund St.
16803	421 Edmund St.
16804	422 Edmund St.
16805	425 Edmund St.
16806	426 Edmund St.
16807	501 Edmund St.
16808	502 Edmund St.
16809	505 Edmund St.
16810	506 Edmund St.
16811	510 Edmund St.
16812	514 Edmund St.
16813	517 Edmund St.
16814	524 Edmund St.
16815	604 Edmund St.
16816	605 Edmund St.
16817	606 Edmund St.
16818	609 Edmund St.
16819	617 Edmund St.
16820	618 Edmund St.
16821	621 Edmund St.
16822	622 Edmund St.
16823	625 Edmund St.
16824	628 Edmund St.
16825	630 Edmund St.
16826	634 Edmund St.
16827	637 Edmund St.
16828	642 Edmund St.
16829	712 Edmund St.
16830	713 Edmund St.
16831	716 Edmund St.
16832	717 Edmund St.
16833	720 Edmund St.
16834	723 Edmund St.
16835	725 Edmund St.
16836	728 Edmund St.
16837	729 Edmund St.
16838	732 Edmund St.
16839	735 Edmund St.
16840	736 Edmund St.
16841	741 Edmund St.
16842	744 Edmund St.
16843	745 Edmund St.
16844	748 Edmund St.
16845	749 Edmund St.
16846	752 Edmund St.
16847	753 Edmund St.
16848	758 Edmund St.

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16849	760 Edmund St.
16850	810 Edmund St.
16851	813 Edmund St.
16852	814 Edmund St.
16853	818 Edmund St.
16854	821 Edmund St.
16855	822 Edmund St.
16856	825 Edmund St.
16857	826 Edmund St.
16858	830 Edmund St.
16859	833 Edmund St.
16860	834 Edmund St.
16861	901 Edmund St.
16862	902 Edmund St.
16863	905 Edmund St.
16864	906 Edmund St.
16865	909 Edmund St.
16866	910 Edmund St.
16867	913 Edmund St.
16868	914 Edmund St.
16869	918 Edmund St.
16870	922 Edmund St.
16871	4511 Edwards Ave.
16872	4515 Edwards Ave.
16873	4517 Edwards Ave.
16874	4520 Edwards Ave.
16875	4521 Edwards Ave.
16876	4524 Edwards Ave.
16877	4601 Edwards Ave.
16878	4602 Edwards Ave.
16879	4606 Edwards Ave.
16880	4609 Edwards Ave.
16881	4610 Edwards Ave.
16882	4613 Edwards Ave.
16883	4614 Edwards Ave.
16884	4617 Edwards Ave.
16885	4618 Edwards Ave.
16886	4701 Edwards Ave.
16887	4702 Edwards Ave.
16888	4705 Edwards Ave.
16889	4706 Edwards Ave.
16890	4802 Edwards Ave.
16891	4808 Edwards Ave.
16892	4812 Edwards Ave.
16893	4815 Edwards Ave.
16894	4816 Edwards Ave.
16895	4820 Edwards Ave.
16896	4901 Edwards Ave.

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16897	4906 Edwards Ave.
16898	4909 Edwards Ave.
16899	4910 Edwards Ave.
16900	4914 Edwards Ave.
16901	5011 Edwards Ave.
16902	5012 Edwards Ave.
16903	5015 Edwards Ave.
16904	5016 Edwards Ave.
16905	5019 Edwards Ave.
16906	5020 Edwards Ave.
16907	5101 Edwards Ave.
16908	5105 Edwards Ave.
16909	5106 Edwards Ave.
16910	5109 Edwards Ave.
16911	5110 Edwards Ave.
16912	5302 Edwards Ave.
16913	5305 Edwards Ave.
16914	5306 Edwards Ave.
16915	5309 Edwards Ave.
16916	5310 Edwards Ave.
16917	5313 Edwards Ave.
16918	5314 Edwards Ave.
16919	5317 Edwards Ave.
16920	5318 Edwards Ave.
16921	5321 Edwards Ave.
16922	5322 Edwards Ave.
16923	5401 Edwards Ave.
16924	5402 Edwards Ave.
16925	5405 Edwards Ave.
16926	5406 Edwards Ave.
16927	5409 Edwards Ave.
16928	5410 Edwards Ave.
16929	5413 Edwards Ave.
16930	5414 Edwards Ave.
16931	5417 Edwards Ave.
16932	5418 Edwards Ave.
16933	5501 Edwards Ave.
16934	5502 Edwards Ave.
16935	5505 Edwards Ave.
16936	5506 Edwards Ave.
16937	5509 Edwards Ave.
16938	5510 Edwards Ave.
16939	5513 Edwards Ave.
16940	5514 Edwards Ave.
16941	5517 Edwards Ave.
16942	5518 Edwards Ave.
16943	5601 Edwards Ave.
16944	5602 Edwards Ave.

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16945	5605 Edwards Ave.
16946	5606 Edwards Ave.
16947	5609 Edwards Ave.
16948	5610 Edwards Ave.
16949	5613 Edwards Ave.
16950	5614 Edwards Ave.
16951	5617 Edwards Ave.
16952	5618 Edwards Ave.
16953	5701 Edwards Ave.
16954	5702 Edwards Ave.
16955	5705 Edwards Ave.
16956	5706 Edwards Ave.
16957	5709 Edwards Ave.
16958	5710 Edwards Ave.
16959	5713 Edwards Ave.
16960	5714 Edwards Ave.
16961	5714 Edwards Ave.
16962	5717 Edwards Ave.
16963	5718 Edwards Ave.
16964	5721 Edwards Ave.
16965	5722 Edwards Ave.
16966	5801 Edwards Ave.
16967	5802 Edwards Ave.
16968	5805 Edwards Ave.
16969	5806 Edwards Ave.
16970	5809 Edwards Ave.
16971	5810 Edwards Ave.
16972	5813 Edwards Ave.
16973	5814 Edwards Ave.
16974	5817 Edwards Ave.
16975	5818 Edwards Ave.
16976	5901 Edwards Ave.
16977	5902 Edwards Ave.
16978	5905 Edwards Ave.
16979	5906 Edwards Ave.
16980	5909 Edwards Ave.
16981	5910 Edwards Ave.
16982	5913 Edwards Ave.
16983	5914 Edwards Ave.
16984	5917 Edwards Ave.
16985	5918 Edwards Ave.
16986	115 Edwin Ave.
16987	116 Edwin Ave.
16988	119 Edwin Ave.
16989	123 Edwin Ave.
16990	124 Edwin Ave.
16991	127 Edwin Ave.
16992	128 Edwin Ave.

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16993	131 Edwin Ave.
16994	134 Edwin Ave.
16995	135 Edwin Ave.
16996	136 Edwin Ave.
16997	139 Edwin Ave.
16998	140 Edwin Ave.
16999	143 Edwin Ave.
17000	144 Edwin Ave.
17001	147 Edwin Ave.
17002	148 Edwin Ave.
17003	151 Edwin Ave.
17004	201 Edwin Ave.
17005	205 Edwin Ave.
17006	213 Edwin Ave.
17007	214 Edwin Ave.
17008	218 Edwin Ave.
17009	221 Edwin Ave.
17010	222 Edwin Ave.
17011	226 Edwin Ave.
17012	227 Edwin Ave.
17013	301 Edwin Ave.
17014	302 Edwin Ave.
17015	310 Edwin Ave.
17016	313 Edwin Ave.
17017	318 Edwin Ave.
17018	321 Edwin Ave.
17019	326 Edwin Ave.
17020	306 Eighth Ave.
17021	309 Eighth Ave.
17022	310 Eighth Ave.
17023	314 Eighth Ave.
17024	411 Eighth Ave.
17025	412 Eighth Ave.
17026	421 Eighth Ave.
17027	432 Eighth Ave.
17028	436 Eighth Ave.
17029	501 Eighth Ave.
17030	810 Eighth Ave.
17031	814 Eighth Ave.
17032	818 Eighth Ave.
17033	902 Eighth Ave.
17034	906 Eighth Ave.
17035	910 Eighth Ave.
17036	916 Eighth Ave.
17037	920 Eighth Ave.
17038	1006 Eighth Ave.
17039	1013 Eighth Ave.
17040	1016 Eighth Ave.

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17041	1112 Eighth Ave.
17042	1113 Eighth Ave.
17043	1116 Eighth Ave.
17044	1118 Eighth Ave.
17045	1122 Eighth Ave.
17046	1125 Eighth Ave.
17047	1127 Eighth Ave.
17048	1128 Eighth Ave.
17049	809 Eighth St., E.
17050	810 Eighth St., E.
17051	815 Eighth St., E.
17052	816 Eighth St., E.
17053	817 Eighth St., E.
17054	818 Eighth St., E.
17055	821 Eighth St., E.
17056	822 Eighth St., E.
17057	826 Eighth St., E.
17058	827 Eighth St., E.
17059	830 Eighth St., E.
17060	831 Eighth St., E.
17061	833 Eighth St., E.
17062	834 Eighth St., E.
17063	837 Eighth St., E.
17064	838 Eighth St., E.
17065	841 Eighth St., E.
17066	842 Eighth St., E.
17067	845 Eighth St., E.
17068	846 Eighth St., E.
17069	849 Eighth St., E.
17070	850 Eighth St., E.
17071	853 Eighth St., E.
17072	901 Eighth St., E.
17073	902 Eighth St., E.
17074	905 Eighth St., E.
17075	906 Eighth St., E.
17076	909 Eighth St., E.
17077	910 Eighth St., E.
17078	914 Eighth St., E.
17079	915 Eighth St., E.
17080	917 Eighth St., E.
17081	918 Eighth St., E.
17082	921 Eighth St., E.
17083	922 Eighth St., E.
17084	925 Eighth St., E.
17085	926 Eighth St., E.
17086	931 Eighth St., E.
17087	310 Eighth St., W.
17088	318 Eighth St., W.

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17089	320 Eighth St., W.
17090	326 Eighth St., W.
17091	332 Eighth St., W.
17092	711 Eldon Baker Dr.
17093	712 Eldon Baker Dr.
17094	1110 Eldon Baker Dr.
17095	1110 Eldon Baker Dr.
17096	1201 Eldon Baker Dr.
17097	1217 Eldon Baker Dr.
17098	1301 Eldon Baker Dr.
17099	1161 Eldorado Dr.
17100	1165 Eldorado Dr.
17101	1201 Eldorado Dr.
17102	1205 Eldorado Dr.
17103	1209 Eldorado Dr.
17104	1210 Eldorado Dr.
17105	1213 Eldorado Dr.
17106	1214 Eldorado Dr.
17107	1217 Eldorado Dr.
17108	1218 Eldorado Dr.
17109	1221 Eldorado Dr.
17110	1222 Eldorado Dr.
17111	1225 Eldorado Dr.
17112	1301 Eldorado Dr.
17113	1305 Eldorado Dr.
17114	1306 Eldorado Dr.
17115	1309 Eldorado Dr.
17116	1313 Eldorado Dr.
17117	1314 Eldorado Dr.
17118	1317 Eldorado Dr.
17119	1320 Eldorado Dr.
17120	1321 Eldorado Dr.
17121	1325 Eldorado Dr.
17122	1326 Eldorado Dr.
17123	1329 Eldorado Dr.
17124	1330 Eldorado Dr.
17125	1401 Eldorado Dr.
17126	1409 Eldorado Dr.
17127	1410 Eldorado Dr.
17128	1417 Eldorado Dr.
17129	1421 Eldorado Dr.
17130	1422 Eldorado Dr.
17131	1425 Eldorado Dr.
17132	1426 Eldorado Dr.
17133	1430 Eldorado Dr.
17134	1433 Eldorado Dr.
17135	1434 Eldorado Dr.
17136	109 Eldridge Ave., E.

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17137	110 Eldridge Ave., E.
17138	113 Eldridge Ave., E.
17139	116 Eldridge Ave., E.
17140	117 Eldridge Ave., E.
17141	118 Eldridge Ave., E.
17142	124 Eldridge Ave., E.
17143	125 Eldridge Ave., E.
17144	126 Eldridge Ave., E.
17145	127 Eldridge Ave., E.
17146	129 Eldridge Ave., E.
17147	130 Eldridge Ave., E.
17148	133 Eldridge Ave., E.
17149	137 Eldridge Ave., E.
17150	138 Eldridge Ave., E.
17151	142 Eldridge Ave., E.
17152	143 Eldridge Ave., E.
17153	145 Eldridge Ave., E.
17154	149 Eldridge Ave., E.
17155	150 Eldridge Ave., E.
17156	153 Eldridge Ave., E.
17157	154 Eldridge Ave., E.
17158	157 Eldridge Ave., E.
17159	158 Eldridge Ave., E.
17160	161 Eldridge Ave., E.
17161	162 Eldridge Ave., E.
17162	165 Eldridge Ave., E.
17163	166 Eldridge Ave., E.
17164	201 Eldridge Ave., E.
17165	202 Eldridge Ave., E.
17166	205 Eldridge Ave., E.
17167	206 Eldridge Ave., E.
17168	209 Eldridge Ave., E.
17169	210 Eldridge Ave., E.
17170	213 Eldridge Ave., E.
17171	214 Eldridge Ave., E.
17172	217 Eldridge Ave., E.
17173	221 Eldridge Ave., E.
17174	222 Eldridge Ave., E.
17175	225 Eldridge Ave., E.
17176	226 Eldridge Ave., E.
17177	301 Eldridge Ave., E.
17178	302 Eldridge Ave., E.
17179	305 Eldridge Ave., E.
17180	306 Eldridge Ave., E.
17181	310 Eldridge Ave., E.
17182	313 Eldridge Ave., E.
17183	318 Eldridge Ave., E.
17184	321 Eldridge Ave., E.

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17185	322 Eldridge Ave., E.
17186	325 Eldridge Ave., E.
17187	326 Eldridge Ave., E.
17188	351 Eldridge Ave., E.
17189	352 Eldridge Ave., E.
17190	355 Eldridge Ave., E.
17191	356 Eldridge Ave., E.
17192	360 Eldridge Ave., E.
17193	368 Eldridge Ave., E.
17194	402 Eldridge Ave., E.
17195	406 Eldridge Ave., E.
17196	409 Eldridge Ave., E.
17197	413 Eldridge Ave., E.
17198	417 Eldridge Ave., E.
17199	418 Eldridge Ave., E.
17200	421 Eldridge Ave., E.
17201	502 Eldridge Ave., E.
17202	503 Eldridge Ave., E.
17203	506 Eldridge Ave., E.
17204	510 Eldridge Ave., E.
17205	511 Eldridge Ave., E.
17206	514 Eldridge Ave., E.
17207	517 Eldridge Ave., E.
17208	518 Eldridge Ave., E.
17209	601 Eldridge Ave., E.
17210	602 Eldridge Ave., E.
17211	605 Eldridge Ave., E.
17212	606 Eldridge Ave., E.
17213	609 Eldridge Ave., E.
17214	610 Eldridge Ave., E.
17215	613 Eldridge Ave., E.
17216	614 Eldridge Ave., E.
17217	617 Eldridge Ave., E.
17218	618 Eldridge Ave., E.
17219	621 Eldridge Ave., E.
17220	622 Eldridge Ave., E.
17221	626 Eldridge Ave., E.
17222	629 Eldridge Ave., E.
17223	630 Eldridge Ave., E.
17224	634 Eldridge Ave., E.
17225	637 Eldridge Ave., E.
17226	638 Eldridge Ave., E.
17227	641 Eldridge Ave., E.
17228	642 Eldridge Ave., E.
17229	645 Eldridge Ave., E.
17230	646 Eldridge Ave., E.
17231	649 Eldridge Ave., E.
17232	653 Eldridge Ave., E.

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17233	654 Eldridge Ave., E.
17234	106 Eldridge Ave., W.
17235	109 Eldridge Ave., W.
17236	110 Eldridge Ave., W.
17237	113 Eldridge Ave., W.
17238	114 Eldridge Ave., W.
17239	117 Eldridge Ave., W.
17240	118 Eldridge Ave., W.
17241	121 Eldridge Ave., W.
17242	122 Eldridge Ave., W.
17243	126 Eldridge Ave., W.
17244	127 Eldridge Ave., W.
17245	201 Eldridge Ave., W.
17246	202 Eldridge Ave., W.
17247	205 Eldridge Ave., W.
17248	206 Eldridge Ave., W.
17249	209 Eldridge Ave., W.
17250	213 Eldridge Ave., W.
17251	214 Eldridge Ave., W.
17252	218 Eldridge Ave., W.
17253	221 Eldridge Ave., W.
17254	225 Eldridge Ave., W.
17255	226 Eldridge Ave., W.
17256	229 Eldridge Ave., W.
17257	301 Eldridge Ave., W.
17258	302 Eldridge Ave., W.
17259	305 Eldridge Ave., W.
17260	306 Eldridge Ave., W.
17261	309 Eldridge Ave., W.
17262	313 Eldridge Ave., W.
17263	314 Eldridge Ave., W.
17264	317 Eldridge Ave., W.
17265	318 Eldridge Ave., W.
17266	321 Eldridge Ave., W.
17267	322 Eldridge Ave., W.
17268	325 Eldridge Ave., W.
17269	329 Eldridge Ave., W.
17270	401 Eldridge Ave., W.
17271	402 Eldridge Ave., W.
17272	405 Eldridge Ave., W.
17273	406 Eldridge Ave., W.
17274	409 Eldridge Ave., W.
17275	410 Eldridge Ave., W.
17276	413 Eldridge Ave., W.
17277	414 Eldridge Ave., W.
17278	417 Eldridge Ave., W.
17279	418 Eldridge Ave., W.
17280	422 Eldridge Ave., W.

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17281	425 Eldridge Ave., W.
17282	429 Eldridge Ave., W.
17283	430 Eldridge Ave., W.
17284	501 Eldridge Ave., W.
17285	504 Eldridge Ave., W.
17286	506 Eldridge Ave., W.
17287	509 Eldridge Ave., W.
17288	513 Eldridge Ave., W.
17289	514 Eldridge Ave., W.
17290	517 Eldridge Ave., W.
17291	518 Eldridge Ave., W.
17292	521 Eldridge Ave., W.
17293	526 Eldridge Ave., W.
17294	529 Eldridge Ave., W.
17295	533 Eldridge Ave., W.
17296	538 Eldridge Ave., W.
17297	539 Eldridge Ave., W.
17298	540 Eldridge Ave., W.
17299	544 Eldridge Ave., W.
17300	545 Eldridge Ave., W.
17301	548 Eldridge Ave., W.
17302	549 Eldridge Ave., W.
17303	553 Eldridge Ave., W.
17304	602 Eldridge Ave., W.
17305	605 Eldridge Ave., W.
17306	610 Eldridge Ave., W.
17307	613 Eldridge Ave., W.
17308	617 Eldridge Ave., W.
17309	618 Eldridge Ave., W.
17310	625 Eldridge Ave., W.
17311	633 Eldridge Ave., W.
17312	634 Eldridge Ave., W.
17313	638 Eldridge Ave., W.
17314	639 Eldridge Ave., W.
17315	642 Eldridge Ave., W.
17316	645 Eldridge Ave., W.
17317	646 Eldridge Ave., W.
17318	120 Eleventh Ave.
17319	121 Eleventh Ave.
17320	214 Eleventh Ave.
17321	311 Eleventh Ave.
17322	314 Eleventh Ave.
17323	321 Eleventh Ave.
17324	408 Eleventh Ave.
17325	411 Eleventh Ave.
17326	413 Eleventh Ave.
17327	6501 Elmridge Dr.
17328	6502 Elmridge Dr.

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17329	6509 Elmridge Dr.
17330	6510 Elmridge Dr.
17331	6513 Elmridge Dr.
17332	6517 Elmridge Dr.
17333	6521 Elmridge Dr.
17334	6601 Elmridge Dr.
17335	6602 Elmridge Dr.
17336	6605 Elmridge Dr.
17337	6606 Elmridge Dr.
17338	6609 Elmridge Dr.
17339	6610 Elmridge Dr.
17340	6613 Elmridge Dr.
17341	6614 Elmridge Dr.
17342	6617 Elmridge Dr.
17343	6618 Elmridge Dr.
17344	6621 Elmridge Dr.
17345	6622 Elmridge Dr.
17346	6625 Elmridge Dr.
17347	6626 Elmridge Dr.
17348	6701 Elmridge Dr.
17349	6702 Elmridge Dr.
17350	6705 Elmridge Dr.
17351	6706 Elmridge Dr.
17352	6709 Elmridge Dr.
17353	6710 Elmridge Dr.
17354	6714 Elmridge Dr.
17355	6715 Elmridge Dr.
17356	3124 Emerson St.
17357	3206 Emerson St.
17358	3210 Emerson St.
17359	3213 Emerson St.
17360	3217 Emerson St.
17361	3218 Emerson St.
17362	3228 Emerson St.
17363	3301 Emerson St.
17364	3306 Emerson St.
17365	3309 Emerson St.
17366	3310 Emerson St.
17367	3317 Emerson St.
17368	3318 Emerson St.
17369	3322 Emerson St.
17370	3326 Emerson St.
17371	2702 Epsilon Tr.
17372	2706 Epsilon Tr.
17373	2707 Epsilon Tr.
17374	2710 Epsilon Tr.
17375	2711 Epsilon Tr.
17376	2714 Epsilon Tr.

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17377	2715 Epsilon Tr.
17378	2718 Epsilon Tr.
17379	2719 Epsilon Tr.
17380	2722 Epsilon Tr.
17381	2723 Epsilon Tr.
17382	2726 Epsilon Tr.
17383	2727 Epsilon Tr.
17384	2730 Epsilon Tr.
17385	2731 Epsilon Tr.
17386	2801 Epsilon Tr.
17387	2802 Epsilon Tr.
17388	2805 Epsilon Tr.
17389	2806 Epsilon Tr.
17390	2809 Epsilon Tr.
17391	2810 Epsilon Tr.
17392	2813 Epsilon Tr.
17393	2814 Epsilon Tr.
17394	2817 Epsilon Tr.
17395	2818 Epsilon Tr.
17396	2821 Epsilon Tr.
17397	2822 Epsilon Tr.
17398	2825 Epsilon Tr.
17399	2826 Epsilon Tr.
17400	2829 Epsilon Tr.
17401	2830 Epsilon Tr.
17402	2901 Epsilon Tr.
17403	2902 Epsilon Tr.
17404	2905 Epsilon Tr.
17405	2906 Epsilon Tr.
17406	2909 Epsilon Tr.
17407	2910 Epsilon Tr.
17408	2913 Epsilon Tr.
17409	2914 Epsilon Tr.
17410	2917 Epsilon Tr.
17411	2918 Epsilon Tr.
17412	2921 Epsilon Tr.
17413	2922 Epsilon Tr.
17414	2926 Epsilon Tr.
17415	2927 Epsilon Tr.
17416	2930 Epsilon Tr.
17417	2934 Epsilon Tr.
17418	2938 Epsilon Tr.
17419	800 Erie St.
17420	800 Erie St.
17421	800 Erie St.
17422	900 Erie St.
17423	901 Erie St.
17424	904 Erie St.

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17425	905 Erie St.
17426	918 Erie St.
17427	951 Erie St.
17428	960 Erie St.
17429	3411 Esther St.
17430	3412 Esther St.
17431	3413 Esther St.
17432	3414 Esther St.
17433	3417 Esther St.
17434	3502 Esther St.
17435	3503 Esther St.
17436	3505 Esther St.
17437	3506 Esther St.
17438	3509 Esther St.
17439	3510 Esther St.
17440	3513 Esther St.
17441	3514 Esther St.
17442	3517 Esther St.
17443	3521 Esther St.
17444	3522 Esther St.
17445	3601 Esther St.
17446	3602 Esther St.
17447	3605 Esther St.
17448	3606 Esther St.
17449	3609 Esther St.
17450	3612 Esther St.
17451	3613 Esther St.
17452	3614 Esther St.
17453	3618 Esther St.
17454	3621 Esther St.
17455	3622 Esther St.
17456	3701 Esther St.
17457	3702 Esther St.
17458	3705 Esther St.
17459	3706 Esther St.
17460	3709 Esther St.
17461	3710 Esther St.
17462	3713 Esther St.
17463	3714 Esther St.
17464	3809 Esther St.
17465	1601 Euclid Ave.
17466	1606 Euclid Ave.
17467	1607 Euclid Ave.
17468	1612 Euclid Ave.
17469	1613 Euclid Ave.
17470	1616 Euclid Ave.
17471	1620 Euclid Ave.
17472	1623 Euclid Ave.

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17473	1626 Euclid Ave.
17474	1627 Euclid Ave.
17475	1629 Euclid Ave.
17476	1632 Euclid Ave.
17477	1633 Euclid Ave.
17478	1636 Euclid Ave.
17479	1637 Euclid Ave.
17480	1640 Euclid Ave.
17481	1641 Euclid Ave.
17482	1644 Euclid Ave.
17483	1645 Euclid Ave.
17484	1648 Euclid Ave.
17485	1649 Euclid Ave.
17486	1652 Euclid Ave.
17487	1653 Euclid Ave.
17488	1656 Euclid Ave.
17489	1657 Euclid Ave.
17490	1660 Euclid Ave.
17491	1665 Euclid Ave.
17492	4000 Euston St.
17493	2402 Evelyn Ct.
17494	2406 Evelyn Ct.
17495	2410 Evelyn Ct.
17496	2509 Evelyn Ct.
17497	2513 Evelyn Ct.
17498	705 Evergreen Ave.
17499	709 Evergreen Ave.
17500	710 Evergreen Ave.
17501	714 Evergreen Ave.
17502	715 Evergreen Ave.
17503	718 Evergreen Ave.
17504	724 Evergreen Ave.
17505	725 Evergreen Ave.
17506	729 Evergreen Ave.
17507	731 Evergreen Ave.
17508	736 Evergreen Ave.
17509	740 Evergreen Ave.
17510	3456 Evergreen Pkwy.
17511	3457 Evergreen Pkwy.
17512	3461 Evergreen Pkwy.
17513	3462 Evergreen Pkwy.
17514	3467 Evergreen Pkwy.
17515	3468 Evergreen Pkwy.
17516	3501 Evergreen Pkwy.
17517	3502 Evergreen Pkwy.
17518	3507 Evergreen Pkwy.
17519	3508 Evergreen Pkwy.
17520	3511 Evergreen Pkwy.

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17521	3514 Evergreen Pkwy.
17522	3519 Evergreen Pkwy.
17523	3520 Evergreen Pkwy.
17524	3526 Evergreen Pkwy.
17525	3531 Evergreen Pkwy.
17526	3532 Evergreen Pkwy.
17527	3538 Evergreen Pkwy.
17528	3539 Evergreen Pkwy.
17529	3601 Evergreen Pkwy.
17530	3602 Evergreen Pkwy.
17531	3608 Evergreen Pkwy.
17532	3609 Evergreen Pkwy.
17533	3615 Evergreen Pkwy.
17534	3616 Evergreen Pkwy.
17535	3621 Evergreen Pkwy.
17536	3624 Evergreen Pkwy.
17537	3630 Evergreen Pkwy.
17538	3637 Evergreen Pkwy.
17539	3645 Evergreen Pkwy.
17540	3650 Evergreen Pkwy.
17541	3651 Evergreen Pkwy.
17542	3656 Evergreen Pkwy.
17543	3662 Evergreen Pkwy.
17544	3666 Evergreen Pkwy.
17545	3667 Evergreen Pkwy.
17546	3688 Evergreen Pkwy.
17547	3701 Evergreen Pkwy.
17548	3702 Evergreen Pkwy.
17549	3705 Evergreen Pkwy.
17550	3708 Evergreen Pkwy.
17551	3709 Evergreen Pkwy.
17552	3713 Evergreen Pkwy.
17553	3714 Evergreen Pkwy.
17554	3718 Evergreen Pkwy.
17555	3719 Evergreen Pkwy.
17556	3725 Evergreen Pkwy.
17557	3726 Evergreen Pkwy.
17558	3730 Evergreen Pkwy.
17559	3731 Evergreen Pkwy.
17560	3736 Evergreen Pkwy.
17561	3737 Evergreen Pkwy.
17562	3743 Evergreen Pkwy.
17563	3749 Evergreen Pkwy.
17564	3802 Evergreen Pkwy.
17565	3807 Evergreen Pkwy.
17566	3812 Evergreen Pkwy.
17567	3822 Evergreen Pkwy.
17568	3831 Evergreen Pkwy.

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17569	3834 Evergreen Pkwy.
17570	3844 Evergreen Pkwy.
17571	3845 Evergreen Pkwy.
17572	3848 Evergreen Pkwy.
17573	3849 Evergreen Pkwy.
17574	810 Fairbanks Ave.
17575	811 Fairbanks Ave.
17576	1012 Fairfax St.
17577	1021 Fairfax St.
17578	1022 Fairfax St.
17579	1026 Fairfax St.
17580	1042 Fairfax St.
17581	1046 Fairfax St.
17582	1050 Fairfax St.
17583	1074 Fairfax St.
17584	1082 Fairfax St.
17585	1083 Fairfax St.
17586	1114 Fairfax St.
17587	1118 Fairfax St.
17588	1125 Fairfax St.
17589	1133 Fairfax St.
17590	518 Fairlane St.
17591	523 Fairlane St.
17592	529 Fairlane St.
17593	602 Fairlane St.
17594	4201 Fairway View.
17595	4202 Fairway View.
17596	4207 Fairway View.
17597	4208 Fairway View.
17598	4213 Fairway View.
17599	4219 Fairway View.
17600	4220 Fairway View.
17601	4225 Fairway View.
17602	4226 Fairway View.
17603	4232 Fairway View.
17604	3002 Farley St.
17605	902 Farnum Ave.
17606	911 Farnum Ave.
17607	958 Farnum Ave.
17608	962 Farnum Ave.
17609	971 Farnum Ave.
17610	974 Farnum Ave.
17611	975 Farnum Ave.
17612	982 Farnum Ave.
17613	983 Farnum Ave.
17614	986 Farnum Ave.
17615	1011 Farnum Ave.
17616	1012 Farnum Ave.

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17617	1015 Farnum Ave.
17618	1019 Farnum Ave.
17619	702 Father Dukette Blvd.
17620	702 Father Dukette Blvd.
17621	1908 Fenmore Dr.
17622	1914 Fenmore Dr.
17623	1915 Fenmore Dr.
17624	2007 Fenmore Dr.
17625	2008 Fenmore Dr.
17626	2014 Fenmore Dr.
17627	2021 Fenmore Dr.
17628	2022 Fenmore Dr.
17629	709 Fenton Rd.
17630	713 Fenton Rd.
17631	713 Fenton Rd.
17632	714 Fenton Rd.
17633	722 Fenton Rd.
17634	727 Fenton Rd.
17635	731 Fenton Rd.
17636	733 Fenton Rd.
17637	737 Fenton Rd.
17638	741 Fenton Rd.
17639	744 Fenton Rd.
17640	807 Fenton Rd.
17641	1552 Fenton Rd.
17642	1563 Fenton Rd.
17643	1609 Fenton Rd.
17644	1701 Fenton Rd.
17645	1708 Fenton Rd.
17646	1709 Fenton Rd.
17647	1802 Fenton Rd.
17648	1902 Fenton Rd.
17649	1902 Fenton Rd.
17650	1910 Fenton Rd.
17651	1940 Fenton Rd.
17652	1940 Fenton Rd.
17653	1942 Fenton Rd.
17654	1945 Fenton Rd.
17655	1945 Fenton Rd.
17656	2001 Fenton Rd.
17657	2002 Fenton Rd.
17658	2009 Fenton Rd.
17659	2014 Fenton Rd.
17660	2017 Fenton Rd.
17661	2018 Fenton Rd.
17662	2103 Fenton Rd.
17663	2104 Fenton Rd.
17664	2105 Fenton Rd.

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17665	2108 Fenton Rd.
17666	2112 Fenton Rd.
17667	2119 Fenton Rd.
17668	2205 Fenton Rd.
17669	2206 Fenton Rd.
17670	2207 Fenton Rd.
17671	2212 Fenton Rd.
17672	2302 Fenton Rd.
17673	2309 Fenton Rd.
17674	2403 Fenton Rd.
17675	2413 Fenton Rd.
17676	2417 Fenton Rd.
17677	2452 Fenton Rd.
17678	2505 Fenton Rd.
17679	2505 Fenton Rd.
17680	2510 Fenton Rd.
17681	2510 Fenton Rd.
17682	2521 Fenton Rd.
17683	2532 Fenton Rd.
17684	2602 Fenton Rd.
17685	2605 Fenton Rd.
17686	2605 Fenton Rd.
17687	2606 Fenton Rd.
17688	2613 Fenton Rd.
17689	2615 Fenton Rd.
17690	2622 Fenton Rd.
17691	2626 Fenton Rd.
17692	2702 Fenton Rd.
17693	2702 Fenton Rd.
17694	2715 Fenton Rd.
17695	2722 Fenton Rd.
17696	2722 Fenton Rd.
17697	2802 Fenton Rd.
17698	2802 Fenton Rd.
17699	2809 Fenton Rd.
17700	2809 Fenton Rd.
17701	2810 Fenton Rd.
17702	2822 Fenton Rd.
17703	2829 Fenton Rd.
17704	2829 Fenton Rd.
17705	2901 Fenton Rd.
17706	2901 Fenton Rd.
17707	2902 Fenton Rd.
17708	2902 Fenton Rd.
17709	2916 Fenton Rd.
17710	2917 Fenton Rd.
17711	2920 Fenton Rd.
17712	3004 Fenton Rd.

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17713	3004 Fenton Rd.
17714	3005 Fenton Rd.
17715	3017 Fenton Rd.
17716	3017 Fenton Rd.
17717	3024 Fenton Rd.
17718	3024 Fenton Rd.
17719	3024 Fenton Rd.
17720	3102 Fenton Rd.
17721	3102 Fenton Rd.
17722	3122 Fenton Rd.
17723	3122 Fenton Rd.
17724	3201 Fenton Rd.
17725	3206 Fenton Rd.
17726	3210 Fenton Rd.
17727	3210 Fenton Rd.
17728	3301 Fenton Rd.
17729	3301 Fenton Rd.
17730	3302 Fenton Rd.
17731	3302 Fenton Rd.
17732	3318 Fenton Rd.
17733	3320 Fenton Rd.
17734	3401 Fenton Rd.
17735	3401 Fenton Rd.
17736	3409 Fenton Rd.
17737	3410 Fenton Rd.
17738	3421 Fenton Rd.
17739	3421 Fenton Rd.
17740	3433 Fenton Rd.
17741	3433 Fenton Rd.
17742	3501 Fenton Rd.
17743	3502 Fenton Rd.
17744	3502 Fenton Rd.
17745	3504 Fenton Rd.
17746	3505 Fenton Rd.
17747	3505 Fenton Rd.
17748	3505 Fenton Rd.
17749	3506 Fenton Rd.
17750	3509 Fenton Rd.
17751	3509 Fenton Rd.
17752	3510 Fenton Rd.
17753	3512 Fenton Rd.
17754	3517 Fenton Rd.
17755	3518 Fenton Rd.
17756	3518 Fenton Rd.
17757	3519 Fenton Rd.
17758	3522 Fenton Rd.
17759	3602 Fenton Rd.
17760	3602 Fenton Rd.

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17761	3605 Fenton Rd.
17762	3606 Fenton Rd.
17763	3608 Fenton Rd.
17764	3608 Fenton Rd.
17765	3609 Fenton Rd.
17766	3612 Fenton Rd.
17767	3612 Fenton Rd.
17768	3616 Fenton Rd.
17769	3616 Fenton Rd.
17770	3618 Fenton Rd.
17771	3618 Fenton Rd.
17772	3620 Fenton Rd.
17773	3620 Fenton Rd.
17774	3621 Fenton Rd.
17775	3621 Fenton Rd.
17776	3701 Fenton Rd.
17777	3708 Fenton Rd.
17778	3708 Fenton Rd.
17779	3717 Fenton Rd.
17780	3717 Fenton Rd.
17781	3805 Fenton Rd.
17782	3805 Fenton Rd.
17783	3809 Fenton Rd.
17784	3817 Fenton Rd.
17785	3817 Fenton Rd.
17786	3822 Fenton Rd.
17787	3822 Fenton Rd.
17788	3822 Fenton Rd.
17789	3901 Fenton Rd.
17790	3901 Fenton Rd.
17791	3905 Fenton Rd.
17792	3905 Fenton Rd.
17793	3910 Fenton Rd.
17794	3910 Fenton Rd.
17795	3913 Fenton Rd.
17796	3913 Fenton Rd.
17797	3918 Fenton Rd.
17798	3918 Fenton Rd.
17799	3920 Fenton Rd.
17800	3920 Fenton Rd.
17801	3922 Fenton Rd.
17802	4001 Fenton Rd.
17803	4001 Fenton Rd.
17804	4002 Fenton Rd.
17805	4002 Fenton Rd.
17806	4005 Fenton Rd.
17807	4009 Fenton Rd.
17808	4010 Fenton Rd.

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17809	4014 Fenton Rd.
17810	4022 Fenton Rd.
17811	4101 Fenton Rd.
17812	4103 Fenton Rd.
17813	4106 Fenton Rd.
17814	4109 Fenton Rd.
17815	4118 Fenton Rd.
17816	4126 Fenton Rd.
17817	4201 Fenton Rd.
17818	4202 Fenton Rd.
17819	4202 Fenton Rd.
17820	4205 Fenton Rd.
17821	4211 Fenton Rd.
17822	4211 Fenton Rd.
17823	4214 Fenton Rd.
17824	4218 Fenton Rd.
17825	4301 Fenton Rd.
17826	4302 Fenton Rd.
17827	4306 Fenton Rd.
17828	4306 Fenton Rd.
17829	4317 Fenton Rd.
17830	4317 Fenton Rd.
17831	4401 Fenton Rd.
17832	4402 Fenton Rd.
17833	4402 Fenton Rd.
17834	4405 Fenton Rd.
17835	4409 Fenton Rd.
17836	4412 Fenton Rd.
17837	4412 Fenton Rd.
17838	4413 Fenton Rd.
17839	4417 Fenton Rd.
17840	4420 Fenton Rd.
17841	4420 Fenton Rd.
17842	4501 Fenton Rd.
17843	4501 Fenton Rd.
17844	4506 Fenton Rd.
17845	4517 Fenton Rd.
17846	4517 Fenton Rd.
17847	4522 Fenton Rd.
17848	4601 Fenton Rd.
17849	4601 Fenton Rd.
17850	4606 Fenton Rd.
17851	4606 Fenton Rd.
17852	4609 Fenton Rd.
17853	4617 Fenton Rd.
17854	4617 Fenton Rd.
17855	4619 Fenton Rd.
17856	4619 Fenton Rd.

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17857	4627 Fenton Rd.
17858	4644 Fenton Rd.
17859	4644 Fenton Rd.
17860	4801 Fenton Rd.
17861	4805 Fenton Rd.
17862	4811 Fenton Rd.
17863	4821 Fenton Rd.
17864	4821 Fenton Rd.
17865	4829 Fenton Rd.
17866	4831 Fenton Rd.
17867	4833 Fenton Rd.
17868	4843 Fenton Rd.
17869	4901 Fenton Rd.
17870	4903 Fenton Rd.
17871	4903 Fenton Rd.
17872	4905 Fenton Rd.
17873	4917 Fenton Rd.
17874	4921 Fenton Rd.
17875	4925 Fenton Rd.
17876	5005 Fenton Rd.
17877	5009 Fenton Rd.
17878	5015 Fenton Rd.
17879	5101 Fenton Rd.
17880	5125 Fenton Rd.
17881	3621 Fenwick Cir.
17882	3625 Fenwick Cir.
17883	3629 Fenwick Cir.
17884	3633 Fenwick Cir.
17885	3637 Fenwick Cir.
17886	314 Ferndale Pl.
17887	319 Ferndale Pl.
17888	322 Ferndale Pl.
17889	323 Ferndale Pl.
17890	326 Ferndale Pl.
17891	333 Ferndale Pl.
17892	334 Ferndale Pl.
17893	339 Ferndale Pl.
17894	342 Ferndale Pl.
17895	343 Ferndale Pl.
17896	2002 Ferris Ave.
17897	2007 Ferris Ave.
17898	2009 Ferris Ave.
17899	2010 Ferris Ave.
17900	2017 Ferris Ave.
17901	2018 Ferris Ave.
17902	2023 Ferris Ave.
17903	2026 Ferris Ave.
17904	2027 Ferris Ave.

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17905	2030 Ferris Ave.
17906	2031 Ferris Ave.
17907	2033 Ferris Ave.
17908	2034 Ferris Ave.
17909	2037 Ferris Ave.
17910	2038 Ferris Ave.
17911	2041 Ferris Ave.
17912	2042 Ferris Ave.
17913	2046 Ferris Ave.
17914	2049 Ferris Ave.
17915	2050 Ferris Ave.
17916	2058 Ferris Ave.
17917	2701 Fielding St.
17918	2702 Fielding St.
17919	2706 Fielding St.
17920	2710 Fielding St.
17921	2714 Fielding St.
17922	2718 Fielding St.
17923	2719 Fielding St.
17924	2722 Fielding St.
17925	2725 Fielding St.
17926	2801 Fielding St.
17927	2802 Fielding St.
17928	2806 Fielding St.
17929	2809 Fielding St.
17930	2810 Fielding St.
17931	2814 Fielding St.
17932	2817 Fielding St.
17933	2820 Fielding St.
17934	2902 Fielding St.
17935	2906 Fielding St.
17936	2920 Fielding St.
17937	2924 Fielding St.
17938	2932 Fielding St.
17939	3002 Fielding St.
17940	3006 Fielding St.
17941	3009 Fielding St.
17942	3010 Fielding St.
17943	3014 Fielding St.
17944	3018 Fielding St.
17945	3102 Fielding St.
17946	3106 Fielding St.
17947	3114 Fielding St.
17948	3115 Fielding St.
17949	3118 Fielding St.
17950	3214 Fielding St.
17951	3218 Fielding St.
17952	218 Fifteenth St.

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17953	302 Fifteenth St.
17954	561 Fifth Ave., E.
17955	609 Fifth Ave., E.
17956	855 Fifth Ave., E.
17957	855 Fifth Ave., E.
17958	877 Fifth Ave., E.
17959	877 Fifth Ave., E.
17960	877 Fifth Ave., E.
17961	877 Fifth Ave., E.
17962	877 Fifth Ave., E.
17963	877 Fifth Ave., E.
17964	1011 Fifth Ave., E.
17965	1011 Fifth Ave., E.
17966	109 Fifth Ave., W.
17967	112 Fifth Ave., W.
17968	112 Fifth Ave., W.
17969	115 Fifth Ave., W.
17970	215 Fifth Ave., W.
17971	302 Fifth Ave., W.
17972	309 Fifth Ave., W.
17973	420 Fifth Ave., W.
17974	421 Fifth Ave., W.
17975	425 Fifth Ave., W.
17976	1009 Fifth Ave., W.
17977	1018 Fifth Ave., W.
17978	1113 Fifth Ave., W.
17979	1116 Fifth Ave., W.
17980	1201 Fifth Ave., W.
17981	1206 Fifth Ave., W.
17982	1207 Fifth Ave., W.
17983	1210 Fifth Ave., W.
17984	1213 Fifth Ave., W.
17985	1214 Fifth Ave., W.
17986	1217 Fifth Ave., W.
17987	1221 Fifth Ave., W.
17988	1222 Fifth Ave., W.
17989	1225 Fifth Ave., W.
17990	413 Fifth Ct., W.
17991	419 Fifth Ct., W.
17992	421 Fifth Ct., W.
17993	119 Fifth St., E.
17994	219 Fifth St., E.
17995	225 Fifth St., E.
17996	225 Fifth St., E.
17997	225 Fifth St., E.
17998	225 Fifth St., E.
17999	225 Fifth St., E.
18000	225 Fifth St., E.

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18001	219 Fifth St., W.
18002	221 Fifth St., W.
18003	314 Fifth St., W.
18004	401 Fifth St., W.
18005	407 Fifth St., W.
18006	512 Fifth St., W.
18007	514 Fifth St., W.
18008	522 Fifth St., W.
18009	603 Fifth St., W.
18010	116 First Ave.
18011	213 First Ave.
18012	213 First Ave.
18013	221 First Ave.
18014	301 First Ave.
18015	307 First Ave.
18016	311 First Ave.
18017	314 First Ave.
18018	316 First Ave.
18019	319 First Ave.
18020	322 First Ave.
18021	406 First Ave.
18022	411 First Ave.
18023	412 First Ave.
18024	414 First Ave.
18025	415 First Ave.
18026	418 First Ave.
18027	422 First Ave.
18028	425 First Ave.
18029	428 First Ave.
18030	432 First Ave.
18031	434 First Ave.
18032	435 First Ave.
18033	515 First Ave.
18034	120 First St., E.
18035	120 First St., E.
18036	120 First St., E.
18037	200 First St., E.
18038	200 First St., E.
18039	300 First St., E.
18040	300 First St., E.
18041	300 First St., E.
18042	300 First St., E.
18043	120 First St., W.
18044	120 First St., W.
18045	120 First St., W.
18046	124 First St., W.
18047	125 First St., W.
18048	132 First St., W.

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18049	132 First St., W.
18050	134 First St., W.
18051	210 First St., W.
18052	325 First St., W.
18053	336 First St., W.
18054	336 First St., W.
18055	336 First St., W.
18056	417 First St., W.
18057	425 First St., W.
18058	429 First St., W.
18059	803 Fisk Dr.
18060	806 Fisk Dr.
18061	807 Fisk Dr.
18062	810 Fisk Dr.
18063	811 Fisk Dr.
18064	814 Fisk Dr.
18065	818 Fisk Dr.
18066	6701 Fleetwood Dr.
18067	6705 Fleetwood Dr.
18068	6709 Fleetwood Dr.
18069	6715 Fleetwood Dr.
18070	6721 Fleetwood Dr.
18071	6722 Fleetwood Dr.
18072	6725 Fleetwood Dr.
18073	6726 Fleetwood Dr.
18074	6801 Fleetwood Dr.
18075	6802 Fleetwood Dr.
18076	6805 Fleetwood Dr.
18077	6807 Fleetwood Dr.
18078	6808 Fleetwood Dr.
18079	6812 Fleetwood Dr.
18080	6813 Fleetwood Dr.
18081	6816 Fleetwood Dr.
18082	6817 Fleetwood Dr.
18083	6821 Fleetwood Dr.
18084	6825 Fleetwood Dr.
18085	3101 Fleming Rd.
18086	3102 Fleming Rd.
18087	3111 Fleming Rd.
18088	3112 Fleming Rd.
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18090	3118 Fleming Rd.
18091	3119 Fleming Rd.
18092	3123 Fleming Rd.
18093	3124 Fleming Rd.
18094	3128 Fleming Rd.
18095	3201 Fleming Rd.
18096	3205 Fleming Rd.

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18097	3209 Fleming Rd.
18098	3210 Fleming Rd.
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18126	3626 Fleming Rd.
18127	3701 Fleming Rd.
18128	3702 Fleming Rd.
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18133	3717 Fleming Rd.
18134	3721 Fleming Rd.
18135	3722 Fleming Rd.
18136	3801 Fleming Rd.
18137	3802 Fleming Rd.
18138	3809 Fleming Rd.
18139	3810 Fleming Rd.
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18141	3817 Fleming Rd.
18142	3820 Fleming Rd.
18143	3901 Fleming Rd.
18144	3902 Fleming Rd.

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18145	3905 Fleming Rd.
18146	3917 Fleming Rd.
18147	3918 Fleming Rd.
18148	4001 Fleming Rd.
18149	4002 Fleming Rd.
18150	4005 Fleming Rd.
18151	4006 Fleming Rd.
18152	4010 Fleming Rd.
18153	4014 Fleming Rd.
18154	4017 Fleming Rd.
18155	4018 Fleming Rd.
18156	4021 Fleming Rd.
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18161	4034 Fleming Rd.
18162	4103 Fleming Rd.
18163	4113 Fleming Rd.
18164	4117 Fleming Rd.
18165	4121 Fleming Rd.
18166	4205 Fleming Rd.
18167	4220 Fleming Rd.
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18177	4334 Fleming Rd.
18178	4338 Fleming Rd.
18179	4401 Fleming Rd.
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18190	4513 Fleming Rd.
18191	4522 Fleming Rd.
18192	4528 Fleming Rd.

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18193	4610 Fleming Rd.
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18201	4714 Fleming Rd.
18202	4804 Fleming Rd.
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18211	5116 Fleming Rd.
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18213	5140 Fleming Rd.
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18215	5214 Fleming Rd.
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18229	5406 Fleming Rd.
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18237	5502 Fleming Rd.
18238	5505 Fleming Rd.
18239	5506 Fleming Rd.
18240	5509 Fleming Rd.

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18241	5510 Fleming Rd.
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18254	5805 Fleming Rd.
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18262	5915 Fleming Rd.
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18265	6005 Fleming Rd.
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18285	6501 Fleming Rd.
18286	6502 Fleming Rd.
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18294	6610 Fleming Rd.
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18299	6621 Fleming Rd.
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18301	6702 Fleming Rd.
18302	6706 Fleming Rd.
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18309	6801 Fleming Rd.
18310	6802 Fleming Rd.
18311	6805 Fleming Rd.
18312	6806 Fleming Rd.
18313	6809 Fleming Rd.
18314	6810 Fleming Rd.
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18316	6814 Fleming Rd.
18317	6818 Fleming Rd.
18318	6822 Fleming Rd.
18319	6901 Fleming Rd.
18320	6902 Fleming Rd.
18321	7004 Fleming Rd.
18322	101 Flint Park Blvd., E.
18323	101 Flint Park Blvd., E.
18324	105 Flint Park Blvd., E.
18325	106 Flint Park Blvd., E.
18326	109 Flint Park Blvd., E.
18327	113 Flint Park Blvd., E.
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18329	117 Flint Park Blvd., E.
18330	118 Flint Park Blvd., E.
18331	121 Flint Park Blvd., E.
18332	122 Flint Park Blvd., E.
18333	125 Flint Park Blvd., E.
18334	126 Flint Park Blvd., E.
18335	130 Flint Park Blvd., E.
18336	132 Flint Park Blvd., E.

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18337	133 Flint Park Blvd., E.
18338	137 Flint Park Blvd., E.
18339	141 Flint Park Blvd., E.
18340	142 Flint Park Blvd., E.
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18342	146 Flint Park Blvd., E.
18343	149 Flint Park Blvd., E.
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18345	153 Flint Park Blvd., E.
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18347	158 Flint Park Blvd., E.
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18351	201 Flint Park Blvd., E.
18352	202 Flint Park Blvd., E.
18353	205 Flint Park Blvd., E.
18354	209 Flint Park Blvd., E.
18355	210 Flint Park Blvd., E.
18356	213 Flint Park Blvd., E.
18357	214 Flint Park Blvd., E.
18358	217 Flint Park Blvd., E.
18359	221 Flint Park Blvd., E.
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18375	327 Flint Park Blvd., E.
18376	352 Flint Park Blvd., E.
18377	356 Flint Park Blvd., E.
18378	360 Flint Park Blvd., E.
18379	364 Flint Park Blvd., E.
18380	367 Flint Park Blvd., E.
18381	368 Flint Park Blvd., E.
18382	402 Flint Park Blvd., E.
18383	405 Flint Park Blvd., E.
18384	409 Flint Park Blvd., E.

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18385	410 Flint Park Blvd., E.
18386	413 Flint Park Blvd., E.
18387	414 Flint Park Blvd., E.
18388	417 Flint Park Blvd., E.
18389	418 Flint Park Blvd., E.
18390	421 Flint Park Blvd., E.
18391	422 Flint Park Blvd., E.
18392	501 Flint Park Blvd., E.
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18401	518 Flint Park Blvd., E.
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18410	625 Flint Park Blvd., E.
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18414	633 Flint Park Blvd., E.
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18421	650 Flint Park Blvd., E.
18422	100 Flint Park Blvd., W.
18423	102 Flint Park Blvd., W.
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18431	201 Flint Park Blvd., W.
18432	202 Flint Park Blvd., W.

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18433	205 Flint Park Blvd., W.
18434	209 Flint Park Blvd., W.
18435	210 Flint Park Blvd., W.
18436	213 Flint Park Blvd., W.
18437	217 Flint Park Blvd., W.
18438	220 Flint Park Blvd., W.
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18440	225 Flint Park Blvd., W.
18441	226 Flint Park Blvd., W.
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18444	301 Flint Park Blvd., W.
18445	302 Flint Park Blvd., W.
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18466	426 Flint Park Blvd., W.
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18468	430 Flint Park Blvd., W.
18469	501 Flint Park Blvd., W.
18470	502 Flint Park Blvd., W.
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18472	535 Flint Park Blvd., W.
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18474	539 Flint Park Blvd., W.
18475	542 Flint Park Blvd., W.
18476	547 Flint Park Blvd., W.
18477	550 Flint Park Blvd., W.
18478	554 Flint Park Blvd., W.
18479	555 Flint Park Blvd., W.
18480	601 Flint Park Blvd., W.

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18481	602 Flint Park Blvd., W.
18482	605 Flint Park Blvd., W.
18483	610 Flint Park Blvd., W.
18484	613 Flint Park Blvd., W.
18485	614 Flint Park Blvd., W.
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18490	625 Flint Park Blvd., W.
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18494	638 Flint Park Blvd., W.
18495	647 Flint Park Blvd., W.
18496	702 Flint Park Blvd., W.
18497	711 Flint Park Blvd., W.
18498	718 Flint Park Blvd., W.
18499	906 Flint Park Blvd., W.
18500	906 Flint Park Blvd., W.
18501	883 Floyd Mccree Dr.
18502	901 Floyd McCree Dr.
18503	1116 Flushing Rd.
18504	1120 Flushing Rd.
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18506	1128 Flushing Rd.
18507	1132 Flushing Rd.
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18526	1701 Flushing Rd.
18527	1702 Flushing Rd.
18528	1705 Flushing Rd.

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18543	1934 Flushing Rd.
18544	1937 Flushing Rd.
18545	1938 Flushing Rd.
18546	1941 Flushing Rd.
18547	1945 Flushing Rd.
18548	1949 Flushing Rd.
18549	1953 Flushing Rd.
18550	2001 Flushing Rd.
18551	2002 Flushing Rd.
18552	2005 Flushing Rd.
18553	2006 Flushing Rd.
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18555	2010 Flushing Rd.
18556	2013 Flushing Rd.
18557	2014 Flushing Rd.
18558	2102 Flushing Rd.
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18560	2111 Flushing Rd.
18561	2114 Flushing Rd.
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18563	2122 Flushing Rd.
18564	2126 Flushing Rd.
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18566	2134 Flushing Rd.
18567	2201 Flushing Rd.
18568	2202 Flushing Rd.
18569	2205 Flushing Rd.
18570	2206 Flushing Rd.
18571	2210 Flushing Rd.
18572	2213 Flushing Rd.
18573	2214 Flushing Rd.
18574	2217 Flushing Rd.
18575	2300 Flushing Rd.
18576	2301 Flushing Rd.

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18577	2302 Flushing Rd.
18578	2305 Flushing Rd.
18579	2309 Flushing Rd.
18580	2310 Flushing Rd.
18581	2313 Flushing Rd.
18582	2314 Flushing Rd.
18583	2317 Flushing Rd.
18584	2401 Flushing Rd.
18585	2402 Flushing Rd.
18586	2405 Flushing Rd.
18587	2406 Flushing Rd.
18588	2409 Flushing Rd.
18589	2410 Flushing Rd.
18590	2413 Flushing Rd.
18591	2414 Flushing Rd.
18592	2417 Flushing Rd.
18593	2418 Flushing Rd.
18594	2421 Flushing Rd.
18595	2422 Flushing Rd.
18596	2425 Flushing Rd.
18597	2426 Flushing Rd.
18598	2429 Flushing Rd.
18599	2434 Flushing Rd.
18600	2434 Flushing Rd.
18601	2437 Flushing Rd.
18602	2441 Flushing Rd.
18603	2441 Flushing Rd.
18604	2501 Flushing Rd.
18605	2501 Flushing Rd.
18606	2507 Flushing Rd.
18607	2511 Flushing Rd.
18608	2512 Flushing Rd.
18609	2515 Flushing Rd.
18610	2516 Flushing Rd.
18611	2519 Flushing Rd.
18612	2520 Flushing Rd.
18613	2523 Flushing Rd.
18614	2524 Flushing Rd.
18615	2527 Flushing Rd.
18616	2528 Flushing Rd.
18617	2531 Flushing Rd.
18618	2532 Flushing Rd.
18619	2535 Flushing Rd.
18620	2536 Flushing Rd.
18621	2539 Flushing Rd.
18622	2601 Flushing Rd.
18623	2608 Flushing Rd.
18624	2609 Flushing Rd.

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18625	2612 Flushing Rd.
18626	2613 Flushing Rd.
18627	2616 Flushing Rd.
18628	2617 Flushing Rd.
18629	2620 Flushing Rd.
18630	2620 Flushing Rd.
18631	2621 Flushing Rd.
18632	2625 Flushing Rd.
18633	2638 Flushing Rd.
18634	2638 Flushing Rd.
18635	2652 Flushing Rd.
18636	2656 Flushing Rd.
18637	2702 Flushing Rd.
18638	2712 Flushing Rd.
18639	2732 Flushing Rd.
18640	2732 Flushing Rd.
18641	2740 Flushing Rd.
18642	2740 Flushing Rd.
18643	2744 Flushing Rd.
18644	2744 Flushing Rd.
18645	2764 Flushing Rd.
18646	2765 Flushing Rd.
18647	2768 Flushing Rd.
18648	2776 Flushing Rd.
18649	2802 Flushing Rd.
18650	2822 Flushing Rd.
18651	2822 Flushing Rd.
18652	2918 Flushing Rd.
18653	2918 Flushing Rd.
18654	2922 Flushing Rd.
18655	2922 Flushing Rd.
18656	2950 Flushing Rd.
18657	2970 Flushing Rd.
18658	2976 Flushing Rd.
18659	2976 Flushing Rd.
18660	3006 Flushing Rd.
18661	3006 Flushing Rd.
18662	3026 Flushing Rd.
18663	3026 Flushing Rd.
18664	3042 Flushing Rd.
18665	3042 Flushing Rd.
18666	3061 Flushing Rd.
18667	3102 Flushing Rd.
18668	3102 Flushing Rd.
18669	3102 Flushing Rd.
18670	3114 Flushing Rd.
18671	3116 Flushing Rd.
18672	3120 Flushing Rd.

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18673	3142 Flushing Rd.
18674	3142 Flushing Rd.
18675	3162 Flushing Rd.
18676	3202 Flushing Rd.
18677	3214 Flushing Rd.
18678	3214 Flushing Rd.
18679	3306 Flushing Rd.
18680	3316 Flushing Rd.
18681	3320 Flushing Rd.
18682	3422 Flushing Rd.
18683	3422 Flushing Rd.
18684	1110 Forest Hill Ave.
18685	1114 Forest Hill Ave.
18686	1117 Forest Hill Ave.
18687	1118 Forest Hill Ave.
18688	1151 Forest Hill Ave.
18689	1152 Forest Hill Ave.
18690	1155 Forest Hill Ave.
18691	1158 Forest Hill Ave.
18692	1161 Forest Hill Ave.
18693	1162 Forest Hill Ave.
18694	1169 Forest Hill Ave.
18695	1202 Forest Hill Ave.
18696	1207 Forest Hill Ave.
18697	1208 Forest Hill Ave.
18698	1213 Forest Hill Ave.
18699	1214 Forest Hill Ave.
18700	1219 Forest Hill Ave.
18701	1220 Forest Hill Ave.
18702	1251 Forest Hill Ave.
18703	1252 Forest Hill Ave.
18704	1256 Forest Hill Ave.
18705	1257 Forest Hill Ave.
18706	1263 Forest Hill Ave.
18707	1269 Forest Hill Ave.
18708	1301 Forest Hill Ave.
18709	1304 Forest Hill Ave.
18710	1305 Forest Hill Ave.
18711	1309 Forest Hill Ave.
18712	1310 Forest Hill Ave.
18713	1316 Forest Hill Ave.
18714	1351 Forest Hill Ave.
18715	1352 Forest Hill Ave.
18716	1355 Forest Hill Ave.
18717	1356 Forest Hill Ave.
18718	1359 Forest Hill Ave.
18719	1363 Forest Hill Ave.
18720	1364 Forest Hill Ave.

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18721	1370 Forest Hill Ave.
18722	1371 Forest Hill Ave.
18723	1374 Forest Hill Ave.
18724	1375 Forest Hill Ave.
18725	1378 Forest Hill Ave.
18726	1402 Forest Hill Ave.
18727	1409 Forest Hill Ave.
18728	1410 Forest Hill Ave.
18729	1413 Forest Hill Ave.
18730	1414 Forest Hill Ave.
18731	1430 Forest Hill Ave.
18732	1438 Forest Hill Ave.
18733	1439 Forest Hill Ave.
18734	1445 Forest Hill Ave.
18735	1450 Forest Hill Ave.
18736	1458 Forest Hill Ave.
18737	1459 Forest Hill Ave.
18738	1463 Forest Hill Ave.
18739	1509 Forest Hill Ave.
18740	1510 Forest Hill Ave.
18741	1516 Forest Hill Ave.
18742	1551 Forest Hill Ave.
18743	1558 Forest Hill Ave.
18744	1601 Forest Hill Ave.
18745	1602 Forest Hill Ave.
18746	1609 Forest Hill Ave.
18747	1610 Forest Hill Ave.
18748	1701 Forest Hill Ave.
18749	1702 Forest Hill Ave.
18750	1707 Forest Hill Ave.
18751	1708 Forest Hill Ave.
18752	1901 Forest Hill Ave.
18753	1902 Forest Hill Ave.
18754	1905 Forest Hill Ave.
18755	1906 Forest Hill Ave.
18756	1909 Forest Hill Ave.
18757	1910 Forest Hill Ave.
18758	1913 Forest Hill Ave.
18759	2001 Forest Hill Ave.
18760	2002 Forest Hill Ave.
18761	2005 Forest Hill Ave.
18762	2009 Forest Hill Ave.
18763	2101 Forest Hill Ave.
18764	2105 Forest Hill Ave.
18765	2109 Forest Hill Ave.
18766	2110 Forest Hill Ave.
18767	2113 Forest Hill Ave.
18768	2114 Forest Hill Ave.

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18769	2118 Forest Hill Ave.
18770	2122 Forest Hill Ave.
18771	2152 Forest Hill Ave.
18772	2156 Forest Hill Ave.
18773	2160 Forest Hill Ave.
18774	2164 Forest Hill Ave.
18775	2200 Forest Hill Ave.
18776	2251 Forest Hill Ave.
18777	2301 Forest Hill Ave.
18778	2302 Forest Hill Ave.
18779	2305 Forest Hill Ave.
18780	2306 Forest Hill Ave.
18781	2309 Forest Hill Ave.
18782	2310 Forest Hill Ave.
18783	2313 Forest Hill Ave.
18784	2314 Forest Hill Ave.
18785	2317 Forest Hill Ave.
18786	2318 Forest Hill Ave.
18787	2321 Forest Hill Ave.
18788	2322 Forest Hill Ave.
18789	2325 Forest Hill Ave.
18790	2326 Forest Hill Ave.
18791	2329 Forest Hill Ave.
18792	2330 Forest Hill Ave.
18793	2401 Forest Hill Ave.
18794	2402 Forest Hill Ave.
18795	2405 Forest Hill Ave.
18796	2406 Forest Hill Ave.
18797	2409 Forest Hill Ave.
18798	2410 Forest Hill Ave.
18799	2414 Forest Hill Ave.
18800	2510 Forest Hill Ave.
18801	2514 Forest Hill Ave.
18802	2518 Forest Hill Ave.
18803	2522 Forest Hill Ave.
18804	2610 Forest Hill Ave.
18805	2614 Forest Hill Ave.
18806	2618 Forest Hill Ave.
18807	2622 Forest Hill Ave.
18808	2626 Forest Hill Ave.
18809	2630 Forest Hill Ave.
18810	2634 Forest Hill Ave.
18811	2638 Forest Hill Ave.
18812	2642 Forest Hill Ave.
18813	2646 Forest Hill Ave.
18814	2650 Forest Hill Ave.
18815	2654 Forest Hill Ave.
18816	2913 Forest Hill Ave.

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18817	2916 Forest Hill Ave.
18818	3009 Forest Hill Ave.
18819	3012 Forest Hill Ave.
18820	3016 Forest Hill Ave.
18821	3017 Forest Hill Ave.
18822	3111 Forest Hill Ave.
18823	3119 Forest Hill Ave.
18824	3123 Forest Hill Ave.
18825	3201 Forest Hill Ave.
18826	3202 Forest Hill Ave.
18827	3213 Forest Hill Ave.
18828	3221 Forest Hill Ave.
18829	3225 Forest Hill Ave.
18830	3319 Forest Hill Ave.
18831	3411 Forest Hill Ave.
18832	3412 Forest Hill Ave.
18833	3415 Forest Hill Ave.
18834	3416 Forest Hill Ave.
18835	3419 Forest Hill Ave.
18836	3420 Forest Hill Ave.
18837	3501 Forest Hill Ave.
18838	3505 Forest Hill Ave.
18839	3506 Forest Hill Ave.
18840	3509 Forest Hill Ave.
18841	3513 Forest Hill Ave.
18842	3514 Forest Hill Ave.
18843	3517 Forest Hill Ave.
18844	3601 Forest Hill Ave.
18845	3602 Forest Hill Ave.
18846	3605 Forest Hill Ave.
18847	3606 Forest Hill Ave.
18848	3609 Forest Hill Ave.
18849	3610 Forest Hill Ave.
18850	3613 Forest Hill Ave.
18851	3614 Forest Hill Ave.
18852	3617 Forest Hill Ave.
18853	3618 Forest Hill Ave.
18854	3622 Forest Hill Ave.
18855	3625 Forest Hill Ave.
18856	3626 Forest Hill Ave.
18857	3701 Forest Hill Ave.
18858	3702 Forest Hill Ave.
18859	3705 Forest Hill Ave.
18860	3706 Forest Hill Ave.
18861	3709 Forest Hill Ave.
18862	3710 Forest Hill Ave.
18863	3713 Forest Hill Ave.
18864	3714 Forest Hill Ave.

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18865	3717 Forest Hill Ave.
18866	3718 Forest Hill Ave.
18867	3802 Forest Hill Ave.
18868	3805 Forest Hill Ave.
18869	3806 Forest Hill Ave.
18870	3809 Forest Hill Ave.
18871	3810 Forest Hill Ave.
18872	3813 Forest Hill Ave.
18873	3814 Forest Hill Ave.
18874	3817 Forest Hill Ave.
18875	3902 Forest Hill Ave.
18876	3906 Forest Hill Ave.
18877	3909 Forest Hill Ave.
18878	3910 Forest Hill Ave.
18879	3913 Forest Hill Ave.
18880	3914 Forest Hill Ave.
18881	4005 Forest Hill Ave.
18882	4006 Forest Hill Ave.
18883	4009 Forest Hill Ave.
18884	4010 Forest Hill Ave.
18885	4013 Forest Hill Ave.
18886	4014 Forest Hill Ave.
18887	4017 Forest Hill Ave.
18888	4018 Forest Hill Ave.
18889	4021 Forest Hill Ave.
18890	4022 Forest Hill Ave.
18891	4025 Forest Hill Ave.
18892	4026 Forest Hill Ave.
18893	4029 Forest Hill Ave.
18894	4030 Forest Hill Ave.
18895	4033 Forest Hill Ave.
18896	4034 Forest Hill Ave.
18897	102 Foss Ave., E.
18898	109 Foss Ave., E.
18899	110 Foss Ave., E.
18900	113 Foss Ave., E.
18901	114 Foss Ave., E.
18902	117 Foss Ave., E.
18903	118 Foss Ave., E.
18904	121 Foss Ave., E.
18905	122 Foss Ave., E.
18906	125 Foss Ave., E.
18907	126 Foss Ave., E.
18908	129 Foss Ave., E.
18909	130 Foss Ave., E.
18910	134 Foss Ave., E.
18911	137 Foss Ave., E.
18912	138 Foss Ave., E.

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18913	141 Foss Ave., E.
18914	142 Foss Ave., E.
18915	145 Foss Ave., E.
18916	146 Foss Ave., E.
18917	149 Foss Ave., E.
18918	150 Foss Ave., E.
18919	153 Foss Ave., E.
18920	154 Foss Ave., E.
18921	202 Foss Ave., E.
18922	205 Foss Ave., E.
18923	209 Foss Ave., E.
18924	210 Foss Ave., E.
18925	214 Foss Ave., E.
18926	215 Foss Ave., E.
18927	218 Foss Ave., E.
18928	226 Foss Ave., E.
18929	230 Foss Ave., E.
18930	233 Foss Ave., E.
18931	237 Foss Ave., E.
18932	238 Foss Ave., E.
18933	241 Foss Ave., E.
18934	242 Foss Ave., E.
18935	245 Foss Ave., E.
18936	246 Foss Ave., E.
18937	249 Foss Ave., E.
18938	250 Foss Ave., E.
18939	254 Foss Ave., E.
18940	257 Foss Ave., E.
18941	301 Foss Ave., E.
18942	302 Foss Ave., E.
18943	306 Foss Ave., E.
18944	309 Foss Ave., E.
18945	310 Foss Ave., E.
18946	313 Foss Ave., E.
18947	314 Foss Ave., E.
18948	317 Foss Ave., E.
18949	322 Foss Ave., E.
18950	326 Foss Ave., E.
18951	329 Foss Ave., E.
18952	330 Foss Ave., E.
18953	333 Foss Ave., E.
18954	334 Foss Ave., E.
18955	337 Foss Ave., E.
18956	341 Foss Ave., E.
18957	342 Foss Ave., E.
18958	345 Foss Ave., E.
18959	346 Foss Ave., E.
18960	349 Foss Ave., E.

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18961	353 Foss Ave., E.
18962	354 Foss Ave., E.
18963	357 Foss Ave., E.
18964	402 Foss Ave., E.
18965	405 Foss Ave., E.
18966	406 Foss Ave., E.
18967	409 Foss Ave., E.
18968	410 Foss Ave., E.
18969	413 Foss Ave., E.
18970	414 Foss Ave., E.
18971	417 Foss Ave., E.
18972	418 Foss Ave., E.
18973	421 Foss Ave., E.
18974	422 Foss Ave., E.
18975	425 Foss Ave., E.
18976	426 Foss Ave., E.
18977	429 Foss Ave., E.
18978	430 Foss Ave., E.
18979	501 Foss Ave., E.
18980	502 Foss Ave., E.
18981	505 Foss Ave., E.
18982	506 Foss Ave., E.
18983	509 Foss Ave., E.
18984	510 Foss Ave., E.
18985	514 Foss Ave., E.
18986	517 Foss Ave., E.
18987	518 Foss Ave., E.
18988	521 Foss Ave., E.
18989	525 Foss Ave., E.
18990	526 Foss Ave., E.
18991	601 Foss Ave., E.
18992	602 Foss Ave., E.
18993	609 Foss Ave., E.
18994	610 Foss Ave., E.
18995	613 Foss Ave., E.
18996	614 Foss Ave., E.
18997	618 Foss Ave., E.
18998	621 Foss Ave., E.
18999	622 Foss Ave., E.
19000	626 Foss Ave., E.
19001	629 Foss Ave., E.
19002	630 Foss Ave., E.
19003	633 Foss Ave., E.
19004	638 Foss Ave., E.
19005	641 Foss Ave., E.
19006	642 Foss Ave., E.
19007	645 Foss Ave., E.
19008	646 Foss Ave., E.

	A
19009	717 Foss Ave., E.
19010	721 Foss Ave., E.
19011	724 Foss Ave., E.
19012	725 Foss Ave., E.
19013	726 Foss Ave., E.
19014	729 Foss Ave., E.
19015	733 Foss Ave., E.
19016	734 Foss Ave., E.
19017	737 Foss Ave., E.
19018	741 Foss Ave., E.
19019	745 Foss Ave., E.
19020	749 Foss Ave., E.
19021	761 Foss Ave., E.
19022	765 Foss Ave., E.
19023	801 Foss Ave., E.
19024	805 Foss Ave., E.
19025	809 Foss Ave., E.
19026	813 Foss Ave., E.
19027	825 Foss Ave., E.
19028	901 Foss Ave., E.
19029	902 Foss Ave., E.
19030	905 Foss Ave., E.
19031	914 Foss Ave., E.
19032	922 Foss Ave., E.
19033	925 Foss Ave., E.
19034	933 Foss Ave., E.
19035	934 Foss Ave., E.
19036	937 Foss Ave., E.
19037	941 Foss Ave., E.
19038	942 Foss Ave., E.
19039	946 Foss Ave., E.
19040	1002 Foss Ave., E.
19041	1010 Foss Ave., E.
19042	1014 Foss Ave., E.
19043	1018 Foss Ave., E.
19044	1022 Foss Ave., E.
19045	1034 Foss Ave., E.
19046	1037 Foss Ave., E.
19047	1038 Foss Ave., E.
19048	1041 Foss Ave., E.
19049	1046 Foss Ave., E.
19050	1049 Foss Ave., E.
19051	1053 Foss Ave., E.
19052	1062 Foss Ave., E.
19053	1073 Foss Ave., E.
19054	1074 Foss Ave., E.
19055	1150 Foss Ave., E.
19056	1154 Foss Ave., E.

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19057	1158 Foss Ave., E.
19058	1159 Foss Ave., E.
19059	1162 Foss Ave., E.
19060	1166 Foss Ave., E.
19061	1170 Foss Ave., E.
19062	1174 Foss Ave., E.
19063	1178 Foss Ave., E.
19064	1182 Foss Ave., E.
19065	1186 Foss Ave., E.
19066	1190 Foss Ave., E.
19067	1194 Foss Ave., E.
19068	105 Foss Ave., W.
19069	106 Foss Ave., W.
19070	110 Foss Ave., W.
19071	113 Foss Ave., W.
19072	114 Foss Ave., W.
19073	117 Foss Ave., W.
19074	118 Foss Ave., W.
19075	201 Foss Ave., W.
19076	202 Foss Ave., W.
19077	206 Foss Ave., W.
19078	209 Foss Ave., W.
19079	210 Foss Ave., W.
19080	213 Foss Ave., W.
19081	214 Foss Ave., W.
19082	217 Foss Ave., W.
19083	218 Foss Ave., W.
19084	301 Foss Ave., W.
19085	302 Foss Ave., W.
19086	305 Foss Ave., W.
19087	306 Foss Ave., W.
19088	309 Foss Ave., W.
19089	310 Foss Ave., W.
19090	313 Foss Ave., W.
19091	317 Foss Ave., W.
19092	318 Foss Ave., W.
19093	321 Foss Ave., W.
19094	322 Foss Ave., W.
19095	402 Foss Ave., W.
19096	405 Foss Ave., W.
19097	408 Foss Ave., W.
19098	409 Foss Ave., W.
19099	413 Foss Ave., W.
19100	414 Foss Ave., W.
19101	417 Foss Ave., W.
19102	418 Foss Ave., W.
19103	422 Foss Ave., W.
19104	425 Foss Ave., W.

	A
19105	426 Foss Ave., W.
19106	429 Foss Ave., W.
19107	430 Foss Ave., W.
19108	501 Foss Ave., W.
19109	506 Foss Ave., W.
19110	507 Foss Ave., W.
19111	510 Foss Ave., W.
19112	513 Foss Ave., W.
19113	517 Foss Ave., W.
19114	518 Foss Ave., W.
19115	521 Foss Ave., W.
19116	522 Foss Ave., W.
19117	526 Foss Ave., W.
19118	601 Foss Ave., W.
19119	605 Foss Ave., W.
19120	606 Foss Ave., W.
19121	608 Foss Ave., W.
19122	609 Foss Ave., W.
19123	610 Foss Ave., W.
19124	612 Foss Ave., W.
19125	613 Foss Ave., W.
19126	614 Foss Ave., W.
19127	616 Foss Ave., W.
19128	617 Foss Ave., W.
19129	618 Foss Ave., W.
19130	621 Foss Ave., W.
19131	629 Foss Ave., W.
19132	633 Foss Ave., W.
19133	637 Foss Ave., W.
19134	638 Foss Ave., W.
19135	641 Foss Ave., W.
19136	642 Foss Ave., W.
19137	646 Foss Ave., W.
19138	3509 Foster St.
19139	3511 Foster St.
19140	3514 Foster St.
19141	3525 Foster St.
19142	3710 Foster St.
19143	3802 Foster St.
19144	3915 Foster St.
19145	3918 Foster St.
19146	101 Fourteenth St., E.
19147	102 Fourteenth St., E.
19148	105 Fourteenth St., E.
19149	115 Fourteenth St., E.
19150	310 Fourteenth St., E.
19151	102 Fourth Ave., E.
19152	1009 Fourth Ave., E.

	A
19153	1025 Fourth Ave., E.
19154	116 Fourth Ave., W.
19155	221 Fourth Ave., W.
19156	224 Fourth Ave., W.
19157	229 Fourth Ave., W.
19158	306 Fourth Ave., W.
19159	306 Fourth Ave., W.
19160	307 Fourth Ave., W.
19161	311 Fourth Ave., W.
19162	314 Fourth Ave., W.
19163	315 Fourth Ave., W.
19164	415 Fourth Ave., W.
19165	422 Fourth Ave., W.
19166	427 Fourth Ave., W.
19167	433 Fourth Ave., W.
19168	434 Fourth Ave., W.
19169	612 Fourth Ave., W.
19170	616 Fourth Ave., W.
19171	620 Fourth Ave., W.
19172	1208 Fourth Ave., W.
19173	1209 Fourth Ave., W.
19174	1213 Fourth Ave., W.
19175	1213.5 Fourth Ave., W.
19176	1215 Fourth Ave., W.
19177	1216 Fourth Ave., W.
19178	1224 Fourth Ave., W.
19179	1228 Fourth Ave., W.
19180	1310 Fourth Ave., W.
19181	1314 Fourth Ave., W.
19182	119 Fourth St., E.
19183	314 Fourth St., E.
19184	320 Fourth St., E.
19185	410 Fourth St., E.
19186	416 Fourth St., E.
19187	418 Fourth St., E.
19188	524 Fourth St., E.
19189	218 Fourth St., W.
19190	218 Fourth St., W.
19191	3102 Fox Cir.
19192	603 Fox St.
19193	607 Fox St.
19194	610 Fox St.
19195	614 Fox St.
19196	618 Fox St.
19197	3701 Foxcroft Cir.
19198	3702 Foxcroft Cir.
19199	3707 Foxcroft Cir.
19200	3710 Foxcroft Cir.

	A
19201	3711 Foxcroft Cir.
19202	3801 Foxcroft Ln.
19203	3802 Foxcroft Ln.
19204	1819 Francis Ave.
19205	1901 Francis Ave.
19206	1905 Francis Ave.
19207	1909 Francis Ave.
19208	1913 Francis Ave.
19209	1920 Francis Ave.
19210	1921 Francis Ave.
19211	1924 Francis Ave.
19212	1925 Francis Ave.
19213	1928 Francis Ave.
19214	2001 Francis Ave.
19215	2005 Francis Ave.
19216	2013 Francis Ave.
19217	2017 Francis Ave.
19218	2021 Francis Ave.
19219	2022 Francis Ave.
19220	2025 Francis Ave.
19221	2101 Francis Ave.
19222	2102 Francis Ave.
19223	2105 Francis Ave.
19224	2106 Francis Ave.
19225	2110 Francis Ave.
19226	2113 Francis Ave.
19227	2118 Francis Ave.
19228	2121 Francis Ave.
19229	2122 Francis Ave.
19230	2125 Francis Ave.
19231	2210 Francis Ave.
19232	2213 Francis Ave.
19233	2217 Francis Ave.
19234	2218 Francis Ave.
19235	2221 Francis Ave.
19236	2224 Francis Ave.
19237	2225 Francis Ave.
19238	2229 Francis Ave.
19239	2232 Francis Ave.
19240	2233 Francis Ave.
19241	2237 Francis Ave.
19242	2305 Francis Ave.
19243	2309 Francis Ave.
19244	2310 Francis Ave.
19245	2315 Francis Ave.
19246	2317 Francis Ave.
19247	2400 Francis Ave.
19248	2405 Francis Ave.

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19249	2408 Francis Ave.
19250	2412 Francis Ave.
19251	601 Frank St.
19252	611 Frank St.
19253	612 Frank St.
19254	615 Frank St.
19255	616 Frank St.
19256	619 Frank St.
19257	620 Frank St.
19258	623 Frank St.
19259	624 Frank St.
19260	627 Frank St.
19261	628 Frank St.
19262	701 Frank St.
19263	702 Frank St.
19264	705 Frank St.
19265	706 Frank St.
19266	709 Frank St.
19267	710 Frank St.
19268	713 Frank St.
19269	714 Frank St.
19270	717 Frank St.
19271	718 Frank St.
19272	721 Frank St.
19273	722 Frank St.
19274	725 Frank St.
19275	726 Frank St.
19276	729 Frank St.
19277	730 Frank St.
19278	733 Frank St.
19279	734 Frank St.
19280	801 Frank St.
19281	802 Frank St.
19282	805 Frank St.
19283	806 Frank St.
19284	809 Frank St.
19285	810 Frank St.
19286	813 Frank St.
19287	814 Frank St.
19288	817 Frank St.
19289	818 Frank St.
19290	821 Frank St.
19291	822 Frank St.
19292	825 Frank St.
19293	826 Frank St.
19294	829 Frank St.
19295	830 Frank St.
19296	833 Frank St.

	A
19297	834 Frank St.
19298	837 Frank St.
19299	838 Frank St.
19300	841 Frank St.
19301	842 Frank St.
19302	845 Frank St.
19303	846 Frank St.
19304	849 Frank St.
19305	850 Frank St.
19306	853 Frank St.
19307	854 Frank St.
19308	901 Frank St.
19309	902 Frank St.
19310	906 Frank St.
19311	907 Frank St.
19312	910 Frank St.
19313	913 Frank St.
19314	919 Frank St.
19315	925 Frank St.
19316	915 Franklin Ave., N.
19317	1001 Franklin Ave., N.
19318	1015 Franklin Ave., N.
19319	1101 Franklin Ave., N.
19320	1101 Franklin Ave., N.
19321	1106 Franklin Ave., N.
19322	1212 Franklin Ave., N.
19323	1301 Franklin Ave., N.
19324	1305 Franklin Ave., N.
19325	1306 Franklin Ave., N.
19326	1309 Franklin Ave., N.
19327	1313 Franklin Ave., N.
19328	1314 Franklin Ave., N.
19329	1317 Franklin Ave., N.
19330	1401 Franklin Ave., N.
19331	1402 Franklin Ave., N.
19332	1405 Franklin Ave., N.
19333	1406 Franklin Ave., N.
19334	1409 Franklin Ave., N.
19335	1410 Franklin Ave., N.
19336	1413 Franklin Ave., N.
19337	1417 Franklin Ave., N.
19338	1418 Franklin Ave., N.
19339	1421 Franklin Ave., N.
19340	1422 Franklin Ave., N.
19341	1425 Franklin Ave., N.
19342	1501 Franklin Ave., N.
19343	1502 Franklin Ave., N.
19344	1505 Franklin Ave., N.

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19345	1506 Franklin Ave., N.
19346	1509 Franklin Ave., N.
19347	1510 Franklin Ave., N.
19348	1511 Franklin Ave., N.
19349	1514 Franklin Ave., N.
19350	1517 Franklin Ave., N.
19351	1518 Franklin Ave., N.
19352	1521 Franklin Ave., N.
19353	1522 Franklin Ave., N.
19354	1601 Franklin Ave., N.
19355	1602 Franklin Ave., N.
19356	1605 Franklin Ave., N.
19357	1606 Franklin Ave., N.
19358	1609 Franklin Ave., N.
19359	1613 Franklin Ave., N.
19360	1614 Franklin Ave., N.
19361	1617 Franklin Ave., N.
19362	1620 Franklin Ave., N.
19363	1621 Franklin Ave., N.
19364	1713 Franklin Ave., N.
19365	1807 Franklin Ave., N.
19366	1908 Franklin Ave., N.
19367	1911 Franklin Ave., N.
19368	1912 Franklin Ave., N.
19369	2001 Franklin Ave., N.
19370	2002 Franklin Ave., N.
19371	2008 Franklin Ave., N.
19372	2012 Franklin Ave., N.
19373	2015 Franklin Ave., N.
19374	2016 Franklin Ave., N.
19375	2020 Franklin Ave., N.
19376	2101 Franklin Ave., N.
19377	2102 Franklin Ave., N.
19378	2108 Franklin Ave., N.
19379	2114 Franklin Ave., N.
19380	2202 Franklin Ave., N.
19381	2210 Franklin Ave., N.
19382	2222 Franklin Ave., N.
19383	2301 Franklin Ave., N.
19384	2302 Franklin Ave., N.
19385	2309 Franklin Ave., N.
19386	2309 Franklin Ave., N.
19387	2310 Franklin Ave., N.
19388	2318 Franklin Ave., N.
19389	2320 Franklin Ave., N.
19390	2322 Franklin Ave., N.
19391	2324 Franklin Ave., N.
19392	2402 Franklin Ave., N.

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19393	2406 Franklin Ave., N.
19394	2406 Franklin Ave., N.
19395	2411 Franklin Ave., N.
19396	2418 Franklin Ave., N.
19397	2422 Franklin Ave., N.
19398	2424 Franklin Ave., N.
19399	2426 Franklin Ave., N.
19400	2500 Franklin Ave., N.
19401	2505 Franklin Ave., N.
19402	2601 Franklin Ave., N.
19403	2607 Franklin Ave., N.
19404	2611 Franklin Ave., N.
19405	2617 Franklin Ave., N.
19406	2702 Franklin Ave., N.
19407	2702 Franklin Ave., N.
19408	2708 Franklin Ave., N.
19409	2710 Franklin Ave., N.
19410	2711 Franklin Ave., N.
19411	2712 Franklin Ave., N.
19412	2714 Franklin Ave., N.
19413	2722 Franklin Ave., N.
19414	2802 Franklin Ave., N.
19415	2810 Franklin Ave., N.
19416	2816 Franklin Ave., N.
19417	2816 Franklin Ave., N.
19418	2818 Franklin Ave., N.
19419	2818 Franklin Ave., N.
19420	2901 Franklin Ave., N.
19421	2901 Franklin Ave., N.
19422	2902 Franklin Ave., N.
19423	2906 Franklin Ave., N.
19424	2907 Franklin Ave., N.
19425	2907 Franklin Ave., N.
19426	2918 Franklin Ave., N.
19427	2923 Franklin Ave., N.
19428	2926 Franklin Ave., N.
19429	3002 Franklin Ave., N.
19430	3006 Franklin Ave., N.
19431	3007 Franklin Ave., N.
19432	3007 Franklin Ave., N.
19433	3010 Franklin Ave., N.
19434	3101 Franklin Ave., N.
19435	3102 Franklin Ave., N.
19436	3119 Franklin Ave., N.
19437	3211 Franklin Ave., N.
19438	3311 Franklin Ave., N.
19439	3311 Franklin Ave., N.
19440	3401 Franklin Ave., N.

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19441	3401 Franklin Ave., N.
19442	3415 Franklin Ave., N.
19443	3507 Franklin Ave., N.
19444	3507 Franklin Ave., N.
19445	3509 Franklin Ave., N.
19446	3602 Franklin Ave., N.
19447	3802 Franklin Ave., N.
19448	4016 Franklin Ave., N.
19449	3602 Franklin Ave., N.
19450	3606 Franklin Ave., N.
19451	3610 Franklin Ave., N.
19452	3614 Franklin Ave., N.
19453	3618 Franklin Ave., N.
19454	3702 Franklin Ave., N.
19455	3710 Franklin Ave., N.
19456	3714 Franklin Ave., N.
19457	3718 Franklin Ave., N.
19458	3802 Franklin Ave., N.
19459	3808 Franklin Ave., N.
19460	3810 Franklin Ave., N.
19461	3814 Franklin Ave., N.
19462	3817 Franklin Ave., N.
19463	3818 Franklin Ave., N.
19464	3902 Franklin Ave., N.
19465	3906 Franklin Ave., N.
19466	3910 Franklin Ave., N.
19467	3918 Franklin Ave., N.
19468	4016 Franklin Ave., N.
19469	201 Franklin Ave., S.
19470	211 Franklin Ave., S.
19471	214 Franklin Ave., S.
19472	217 Franklin Ave., S.
19473	220 Franklin Ave., S.
19474	301 Franklin Ave., S.
19475	302 Franklin Ave., S.
19476	307 Franklin Ave., S.
19477	310 Franklin Ave., S.
19478	311 Franklin Ave., S.
19479	314 Franklin Ave., S.
19480	315 Franklin Ave., S.
19481	402 Franklin Ave., S.
19482	403 Franklin Ave., S.
19483	411 Franklin Ave., S.
19484	414 Franklin Ave., S.
19485	415 Franklin Ave., S.
19486	419 Franklin Ave., S.
19487	420 Franklin Ave., S.
19488	423 Franklin Ave., S.

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19489	426 Franklin Ave., S.
19490	434 Franklin Ave., S.
19491	502 Franklin Ave., S.
19492	513 Franklin Ave., S.
19493	514 Franklin Ave., S.
19494	517 Franklin Ave., S.
19495	518 Franklin Ave., S.
19496	521 Franklin Ave., S.
19497	522 Franklin Ave., S.
19498	525 Franklin Ave., S.
19499	526 Franklin Ave., S.
19500	601 Franklin Ave., S.
19501	602 Franklin Ave., S.
19502	605 Franklin Ave., S.
19503	606 Franklin Ave., S.
19504	701 Franklin Ave., S.
19505	708 Franklin Ave., S.
19506	711 Franklin Ave., S.
19507	711 Franklin Ave., S.
19508	712 Franklin Ave., S.
19509	715 Franklin Ave., S.
19510	716 Franklin Ave., S.
19511	719 Franklin Ave., S.
19512	720 Franklin Ave., S.
19513	723 Franklin Ave., S.
19514	724 Franklin Ave., S.
19515	801 Franklin Ave., S.
19516	802 Franklin Ave., S.
19517	806 Franklin Ave., S.
19518	810 Franklin Ave., S.
19519	814 Franklin Ave., S.
19520	901 Franklin Ave., S.
19521	905 Franklin Ave., S.
19522	909 Franklin Ave., S.
19523	913 Franklin Ave., S.
19524	916 Franklin Ave., S.
19525	919 Franklin Ave., S.
19526	920 Franklin Ave., S.
19527	923 Franklin Ave., S.
19528	924 Franklin Ave., S.
19529	927 Franklin Ave., S.
19530	928 Franklin Ave., S.
19531	928 Franklin Ave., S.
19532	931 Franklin Ave., S.
19533	932 Franklin Ave., S.
19534	1001 Franklin Ave., S.
19535	1002 Franklin Ave., S.
19536	1006 Franklin Ave., S.

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19537	1009 Franklin Ave., S.
19538	1010 Franklin Ave., S.
19539	1013 Franklin Ave., S.
19540	1014 Franklin Ave., S.
19541	1017 Franklin Ave., S.
19542	1018 Franklin Ave., S.
19543	1021 Franklin Ave., S.
19544	1022 Franklin Ave., S.
19545	1025 Franklin Ave., S.
19546	1026 Franklin Ave., S.
19547	1101 Franklin Ave., S.
19548	1102 Franklin Ave., S.
19549	1105 Franklin Ave., S.
19550	1106 Franklin Ave., S.
19551	1109 Franklin Ave., S.
19552	1110 Franklin Ave., S.
19553	1113 Franklin Ave., S.
19554	1114 Franklin Ave., S.
19555	1117 Franklin Ave., S.
19556	1118 Franklin Ave., S.
19557	1121 Franklin Ave., S.
19558	1122 Franklin Ave., S.
19559	1125 Franklin Ave., S.
19560	1126 Franklin Ave., S.
19561	1129 Franklin Ave., S.
19562	1130 Franklin Ave., S.
19563	1134 Franklin Ave., S.
19564	1401 Franklin Ave., S.
19565	1409 Franklin Ave., S.
19566	1413 Franklin Ave., S.
19567	1501 Franklin Ave., S.
19568	1502 Franklin Ave., S.
19569	1505 Franklin Ave., S.
19570	1506 Franklin Ave., S.
19571	1509 Franklin Ave., S.
19572	1510 Franklin Ave., S.
19573	1514 Franklin Ave., S.
19574	1517 Franklin Ave., S.
19575	1518 Franklin Ave., S.
19576	1525 Franklin Ave., S.
19577	1526 Franklin Ave., S.
19578	1534 Franklin Ave., S.
19579	1601 Franklin Ave., S.
19580	1602 Franklin Ave., S.
19581	1605 Franklin Ave., S.
19582	1606 Franklin Ave., S.
19583	1609 Franklin Ave., S.
19584	1610 Franklin Ave., S.

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19585	1614 Franklin Ave., S.
19586	1615 Franklin Ave., S.
19587	1618 Franklin Ave., S.
19588	1626 Franklin Ave., S.
19589	3814 Fraser St.
19590	3818 Fraser St.
19591	3821 Fraser St.
19592	3825 Fraser St.
19593	3826 Fraser St.
19594	3901 Fraser St.
19595	3902 Fraser St.
19596	3905 Fraser St.
19597	3906 Fraser St.
19598	3909 Fraser St.
19599	4012 Fraser St.
19600	4016 Fraser St.
19601	4019 Fraser St.
19602	4020 Fraser St.
19603	4023 Fraser St.
19604	4028 Fraser St.
19605	4029 Fraser St.
19606	4033 Fraser St.
19607	4036 Fraser St.
19608	4041 Fraser St.
19609	4044 Fraser St.
19610	4048 Fraser St.
19611	611 Freeman Ave.
19612	612 Freeman Ave.
19613	615 Freeman Ave.
19614	616 Freeman Ave.
19615	619 Freeman Ave.
19616	620 Freeman Ave.
19617	622 Freeman Ave.
19618	623 Freeman Ave.
19619	626 Freeman Ave.
19620	627 Freeman Ave.
19621	630 Freeman Ave.
19622	631 Freeman Ave.
19623	632 Freeman Ave.
19624	635 Freeman Ave.
19625	636 Freeman Ave.
19626	639 Freeman Ave.
19627	640 Freeman Ave.
19628	643 Freeman Ave.
19629	644 Freeman Ave.
19630	647 Freeman Ave.
19631	648 Freeman Ave.
19632	648 Freeman Ave.

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19633	651 Freeman Ave.
19634	655 Freeman Ave.
19635	658 Freeman Ave.
19636	659 Freeman Ave.
19637	701 Freeman Ave.
19638	702 Freeman Ave.
19639	710 Freeman Ave.
19640	713 Freeman Ave.
19641	717 Freeman Ave.
19642	718 Freeman Ave.
19643	721 Freeman Ave.
19644	725 Freeman Ave.
19645	726 Freeman Ave.
19646	729 Freeman Ave.
19647	730 Freeman Ave.
19648	733 Freeman Ave.
19649	734 Freeman Ave.
19650	737 Freeman Ave.
19651	740 Freeman Ave.
19652	741 Freeman Ave.
19653	745 Freeman Ave.
19654	746 Freeman Ave.
19655	749 Freeman Ave.
19656	750 Freeman Ave.
19657	406 Fremont St.
19658	407 Fremont St.
19659	414 Fremont St.
19660	501 Fremont St.
19661	502 Fremont St.
19662	508 Fremont St.
19663	509 Fremont St.
19664	514 Fremont St.
19665	601 Fremont St.
19666	607 Fremont St.
19667	608 Fremont St.
19668	613 Fremont St.
19669	619 Fremont St.
19670	701 Fremont St.
19671	707 Fremont St.
19672	708 Fremont St.
19673	713 Fremont St.
19674	719 Fremont St.
19675	725 Fremont St.
19676	801 Fremont St.
19677	807 Fremont St.
19678	808 Fremont St.
19679	813 Fremont St.
19680	819 Fremont St.

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19681	825 Fremont St.
19682	901 Fremont St.
19683	907 Fremont St.
19684	908 Fremont St.
19685	913 Fremont St.
19686	919 Fremont St.
19687	925 Fremont St.
19688	1002 Fremont St.
19689	1004 Fremont St.
19690	1006 Fremont St.
19691	1008 Fremont St.
19692	1010 Fremont St.
19693	1012 Fremont St.
19694	417 Frost St.
19695	418 Frost St.
19696	421 Frost St.
19697	422 Frost St.
19698	427 Frost St.
19699	428 Frost St.
19700	504 Frost St.
19701	507 Frost St.
19702	508 Frost St.
19703	509 Frost St.
19704	511 Frost St.
19705	512 Frost St.
19706	518 Frost St.
19707	519 Frost St.
19708	608 Frost St.
19709	609 Frost St.
19710	613 Frost St.
19711	614 Frost St.
19712	619 Frost St.
19713	620 Frost St.
19714	621 Frost St.
19715	624 Frost St.
19716	628 Frost St.
19717	701 Frost St.
19718	705 Frost St.
19719	709 Frost St.
19720	713 Frost St.
19721	717 Frost St.
19722	721 Frost St.
19723	725 Frost St.
19724	729 Frost St.
19725	805 Frost St.
19726	806 Frost St.
19727	809 Frost St.
19728	817 Frost St.

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19729	820 Frost St.
19730	821 Frost St.
19731	825 Frost St.
19732	827 Frost St.
19733	906 Frost St.
19734	907 Frost St.
19735	910 Frost St.
19736	911 Frost St.
19737	912 Frost St.
19738	915 Frost St.
19739	917 Frost St.
19740	1013 Frost St.
19741	1016 Frost St.
19742	1017 Frost St.
19743	1018 Frost St.
19744	1024 Frost St.
19745	1025 Frost St.
19746	1026 Frost St.
19747	1033 Frost St.
19748	1034 Frost St.
19749	1037 Frost St.
19750	1103 Frost St.
19751	1105 Frost St.
19752	1109 Frost St.
19753	1117 Frost St.
19754	1118 Frost St.
19755	1125 Frost St.
19756	1114 Fulsom St.
19757	1116 Fulsom St.
19758	1120 Fulsom St.
19759	1123 Fulsom St.
19760	1124 Fulsom St.
19761	1127 Fulsom St.
19762	1131 Fulsom St.
19763	1132 Fulsom St.
19764	4215 Fulton St.
19765	5212 Fulton St.
19766	5707 Fulton St.
19767	6101 Fulton St.
19768	951 Gainey Ave.
19769	955 Gainey Ave.
19770	956 Gainey Ave.
19771	959 Gainey Ave.
19772	960 Gainey Ave.
19773	967 Gainey Ave.
19774	968 Gainey Ave.
19775	971 Gainey Ave.
19776	972 Gainey Ave.

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19777	975 Gainey Ave.
19778	978 Gainey Ave.
19779	982 Gainey Ave.
19780	983 Gainey Ave.
19781	986 Gainey Ave.
19782	1011 Gainey Ave.
19783	1012 Gainey Ave.
19784	1015 Gainey Ave.
19785	1401 Gainey Ave.
19786	1402 Gainey Ave.
19787	1406 Gainey Ave.
19788	1410 Gainey Ave.
19789	1411 Gainey Ave.
19790	1414 Gainey Ave.
19791	1415 Gainey Ave.
19792	1418 Gainey Ave.
19793	1419 Gainey Ave.
19794	1422 Gainey Ave.
19795	1423 Gainey Ave.
19796	1431 Gainey Ave.
19797	1506 Gainey Ave.
19798	1515 Gainey Ave.
19799	1516 Gainey Ave.
19800	1517 Gainey Ave.
19801	1520 Gainey Ave.
19802	1523 Gainey Ave.
19803	1524 Gainey Ave.
19804	1527 Gainey Ave.
19805	1533 Gainey Ave.
19806	1534 Gainey Ave.
19807	1543 Gainey Ave.
19808	2701 Gamma Ln.
19809	2702 Gamma Ln.
19810	2705 Gamma Ln.
19811	2708 Gamma Ln.
19812	2709 Gamma Ln.
19813	2712 Gamma Ln.
19814	2713 Gamma Ln.
19815	2716 Gamma Ln.
19816	2717 Gamma Ln.
19817	2720 Gamma Ln.
19818	2721 Gamma Ln.
19819	2724 Gamma Ln.
19820	2725 Gamma Ln.
19821	2728 Gamma Ln.
19822	2729 Gamma Ln.
19823	2732 Gamma Ln.
19824	2801 Gamma Ln.

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19825	2802 Gamma Ln.
19826	2805 Gamma Ln.
19827	2806 Gamma Ln.
19828	2809 Gamma Ln.
19829	2810 Gamma Ln.
19830	2813 Gamma Ln.
19831	2814 Gamma Ln.
19832	2817 Gamma Ln.
19833	2818 Gamma Ln.
19834	2821 Gamma Ln.
19835	2822 Gamma Ln.
19836	2825 Gamma Ln.
19837	2826 Gamma Ln.
19838	2829 Gamma Ln.
19839	2830 Gamma Ln.
19840	2901 Gamma Ln.
19841	2902 Gamma Ln.
19842	2905 Gamma Ln.
19843	2906 Gamma Ln.
19844	2909 Gamma Ln.
19845	2910 Gamma Ln.
19846	2913 Gamma Ln.
19847	2914 Gamma Ln.
19848	2917 Gamma Ln.
19849	2918 Gamma Ln.
19850	2921 Gamma Ln.
19851	2922 Gamma Ln.
19852	2927 Gamma Ln.
19853	2928 Gamma Ln.
19854	3001 Gamma Ln.
19855	3002 Gamma Ln.
19856	422 Garden St.
19857	426 Garden St.
19858	1010 Garden St.
19859	1014 Garden St.
19860	1018 Garden St.
19861	1022 Garden St.
19862	1026 Garden St.
19863	1030 Garden St.
19864	1034 Garden St.
19865	1227 Garfield Ave.
19866	1227 Garfield Ave.
19867	401 Garland St.
19868	401 Garland St.
19869	402 Garland St.
19870	409 Garland St.
19871	411 Garland St.
19872	413 Garland St.

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19873	421 Garland St.
19874	421 Garland St.
19875	503 Garland St.
19876	519 Garland St.
19877	525 Garland St.
19878	604 Garland St.
19879	605 Garland St.
19880	610 Garland St.
19881	610 Garland St.
19882	618 Garland St.
19883	628 Garland St.
19884	704 Garland St.
19885	705 Garland St.
19886	708 Garland St.
19887	725 Garland St.
19888	725 Garland St.
19889	728 Garland St.
19890	728 Garland St.
19891	804 Garland St.
19892	812 Garland St.
19893	816 Garland St.
19894	820 Garland St.
19895	901 Garland St.
19896	901 Garland St.
19897	916 Garland St.
19898	932 Garland St.
19899	1002 Garland St.
19900	1007 Garland St.
19901	1008 Garland St.
19902	1012 Garland St.
19903	1013 Garland St.
19904	1016 Garland St.
19905	1017 Garland St.
19906	1024 Garland St.
19907	1025 Garland St.
19908	1028 Garland St.
19909	1031 Garland St.
19910	1102 Garland St.
19911	1106 Garland St.
19912	1115 Garland St.
19913	1115 Garland St.
19914	1118 Garland St.
19915	1203 Garland St.
19916	1205 Garland St.
19917	1209 Garland St.
19918	1212 Garland St.
19919	1213 Garland St.
19920	1216 Garland St.

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19921	1217 Garland St.
19922	1220 Garland St.
19923	1221 Garland St.
19924	1224 Garland St.
19925	1228 Garland St.
19926	1303 Garland St.
19927	1305 Garland St.
19928	1306 Garland St.
19929	1310 Garland St.
19930	1313 Garland St.
19931	1314 Garland St.
19932	1326 Garland St.
19933	1327 Garland St.
19934	1329 Garland St.
19935	1403 Garland St.
19936	1408 Garland St.
19937	1409 Garland St.
19938	1413 Garland St.
19939	1415 Garland St.
19940	1419 Garland St.
19941	1424 Garland St.
19942	1427 Garland St.
19943	1428 Garland St.
19944	1503 Garland St.
19945	1510 Garland St.
19946	1511 Garland St.
19947	1513 Garland St.
19948	1517 Garland St.
19949	1521 Garland St.
19950	1525 Garland St.
19951	1529 Garland St.
19952	1538 Garland St.
19953	1539 Garland St.
19954	1540 Garland St.
19955	1545 Garland St.
19956	1546 Garland St.
19957	1550 Garland St.
19958	1603 Garland St.
19959	1606 Garland St.
19960	1607 Garland St.
19961	1609 Garland St.
19962	1610 Garland St.
19963	1611 Garland St.
19964	105 Genesee St., E.
19965	111 Genesee St., E.
19966	112 Genesee St., E.
19967	115 Genesee St., E.
19968	116 Genesee St., E.

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19969	119 Genesee St., E.
19970	120 Genesee St., E.
19971	123 Genesee St., E.
19972	126 Genesee St., E.
19973	127 Genesee St., E.
19974	130 Genesee St., E.
19975	131 Genesee St., E.
19976	134 Genesee St., E.
19977	135 Genesee St., E.
19978	201 Genesee St., E.
19979	202 Genesee St., E.
19980	205 Genesee St., E.
19981	206 Genesee St., E.
19982	209 Genesee St., E.
19983	210 Genesee St., E.
19984	213 Genesee St., E.
19985	214 Genesee St., E.
19986	217 Genesee St., E.
19987	218 Genesee St., E.
19988	221 Genesee St., E.
19989	222 Genesee St., E.
19990	225 Genesee St., E.
19991	226 Genesee St., E.
19992	229 Genesee St., E.
19993	230 Genesee St., E.
19994	233 Genesee St., E.
19995	234 Genesee St., E.
19996	237 Genesee St., E.
19997	238 Genesee St., E.
19998	241 Genesee St., E.
19999	302 Genesee St., E.
20000	305 Genesee St., E.
20001	309 Genesee St., E.
20002	310 Genesee St., E.
20003	313 Genesee St., E.
20004	314 Genesee St., E.
20005	317 Genesee St., E.
20006	318 Genesee St., E.
20007	321 Genesee St., E.
20008	322 Genesee St., E.
20009	325 Genesee St., E.
20010	326 Genesee St., E.
20011	329 Genesee St., E.
20012	330 Genesee St., E.
20013	333 Genesee St., E.
20014	334 Genesee St., E.
20015	337 Genesee St., E.
20016	338 Genesee St., E.

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20017	341 Genesee St., E.
20018	342 Genesee St., E.
20019	401 Genesee St., E.
20020	402 Genesee St., E.
20021	405 Genesee St., E.
20022	406 Genesee St., E.
20023	409 Genesee St., E.
20024	410 Genesee St., E.
20025	413 Genesee St., E.
20026	414 Genesee St., E.
20027	417 Genesee St., E.
20028	418 Genesee St., E.
20029	419 Genesee St., E.
20030	425 Genesee St., E.
20031	426 Genesee St., E.
20032	429 Genesee St., E.
20033	430 Genesee St., E.
20034	433 Genesee St., E.
20035	437 Genesee St., E.
20036	438 Genesee St., E.
20037	442 Genesee St., E.
20038	454 Genesee St., E.
20039	505 Genesee St., E.
20040	507 Genesee St., E.
20041	511 Genesee St., E.
20042	515 Genesee St., E.
20043	516 Genesee St., E.
20044	519 Genesee St., E.
20045	523 Genesee St., E.
20046	524 Genesee St., E.
20047	527 Genesee St., E.
20048	530 Genesee St., E.
20049	531 Genesee St., E.
20050	532 Genesee St., E.
20051	535 Genesee St., E.
20052	536 Genesee St., E.
20053	539 Genesee St., E.
20054	543 Genesee St., E.
20055	601 Genesee St., E.
20056	602 Genesee St., E.
20057	605 Genesee St., E.
20058	609 Genesee St., E.
20059	613 Genesee St., E.
20060	622 Genesee St., E.
20061	629 Genesee St., E.
20062	117 Genesee St., W.
20063	123 Genesee St., W.
20064	124 Genesee St., W.

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20065	125 Genesee St., W.
20066	128 Genesee St., W.
20067	129 Genesee St., W.
20068	132 Genesee St., W.
20069	133 Genesee St., W.
20070	200 Genesee St., W.
20071	201 Genesee St., W.
20072	204 Genesee St., W.
20073	205 Genesee St., W.
20074	208 Genesee St., W.
20075	212 Genesee St., W.
20076	213 Genesee St., W.
20077	217 Genesee St., W.
20078	220 Genesee St., W.
20079	221 Genesee St., W.
20080	224 Genesee St., W.
20081	230 Genesee St., W.
20082	311 Genesee St., W.
20083	312 Genesee St., W.
20084	316 Genesee St., W.
20085	317 Genesee St., W.
20086	320 Genesee St., W.
20087	321 Genesee St., W.
20088	324 Genesee St., W.
20089	325 Genesee St., W.
20090	328 Genesee St., W.
20091	329 Genesee St., W.
20092	401 Genesee St., W.
20093	402 Genesee St., W.
20094	405 Genesee St., W.
20095	409 Genesee St., W.
20096	410 Genesee St., W.
20097	413 Genesee St., W.
20098	414 Genesee St., W.
20099	417 Genesee St., W.
20100	418 Genesee St., W.
20101	421 Genesee St., W.
20102	422 Genesee St., W.
20103	425 Genesee St., W.
20104	426 Genesee St., W.
20105	433 Genesee St., W.
20106	434 Genesee St., W.
20107	702 Genesee St., W.
20108	712 Genesee St., W.
20109	716 Genesee St., W.
20110	721 Genesee St., W.
20111	724 Genesee St., W.
20112	725 Genesee St., W.

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20113	732 Genesee St., W.
20114	733 Genesee St., W.
20115	737 Genesee St., W.
20116	741 Genesee St., W.
20117	742 Genesee St., W.
20118	745 Genesee St., W.
20119	801 Genesee St., W.
20120	802 Genesee St., W.
20121	805 Genesee St., W.
20122	806 Genesee St., W.
20123	809 Genesee St., W.
20124	912 Genesee St., W.
20125	913 Genesee St., W.
20126	916 Genesee St., W.
20127	919 Genesee St., W.
20128	920 Genesee St., W.
20129	924 Genesee St., W.
20130	925 Genesee St., W.
20131	928 Genesee St., W.
20132	929 Genesee St., W.
20133	1001 Genesee St., W.
20134	1006 Genesee St., W.
20135	1009 Genesee St., W.
20136	1215 Genesee St., W.
20137	1216 Genesee St., W.
20138	1219 Genesee St., W.
20139	1220 Genesee St., W.
20140	1301 Genesee St., W.
20141	1302 Genesee St., W.
20142	1305 Genesee St., W.
20143	1306 Genesee St., W.
20144	1310 Genesee St., W.
20145	1313 Genesee St., W.
20146	1314 Genesee St., W.
20147	1317 Genesee St., W.
20148	1318 Genesee St., W.
20149	1326 Genesee St., W.
20150	1401 Genesee St., W.
20151	1402 Genesee St., W.
20152	1412 Genesee St., W.
20153	1505 Genesee St., W.
20154	1508 Genesee St., W.
20155	1511 Genesee St., W.
20156	1512 Genesee St., W.
20157	1516 Genesee St., W.
20158	1601 Genesee St., W.
20159	1602 Genesee St., W.
20160	1606 Genesee St., W.

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20161	1607 Genesee St., W.
20162	1610 Genesee St., W.
20163	1611 Genesee St., W.
20164	1614 Genesee St., W.
20165	1615 Genesee St., W.
20166	1618 Genesee St., W.
20167	1619 Genesee St., W.
20168	1702 Genesee St., W.
20169	1707 Genesee St., W.
20170	1710 Genesee St., W.
20171	1711 Genesee St., W.
20172	1801 Genesee St., W.
20173	1806 Genesee St., W.
20174	1807 Genesee St., W.
20175	1810 Genesee St., W.
20176	1813 Genesee St., W.
20177	1814 Genesee St., W.
20178	1817 Genesee St., W.
20179	1818 Genesee St., W.
20180	1821 Genesee St., W.
20181	1822 Genesee St., W.
20182	1901 Genesee St., W.
20183	1902 Genesee St., W.
20184	1906 Genesee St., W.
20185	1909 Genesee St., W.
20186	1910 Genesee St., W.
20187	1914 Genesee St., W.
20188	1917 Genesee St., W.
20189	1918 Genesee St., W.
20190	2306 Gibson St.
20191	2310 Gibson St.
20192	2314 Gibson St.
20193	2318 Gibson St.
20194	2322 Gibson St.
20195	2409 Gibson St.
20196	2410 Gibson St.
20197	2418 Gibson St.
20198	2421 Gibson St.
20199	2422 Gibson St.
20200	2425 Gibson St.
20201	2430 Gibson St.
20202	2433 Gibson St.
20203	2434 Gibson St.
20204	2437 Gibson St.
20205	2441 Gibson St.
20206	2442 Gibson St.
20207	2445 Gibson St.
20208	2446 Gibson St.

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20209	2449 Gibson St.
20210	2450 Gibson St.
20211	2457 Gibson St.
20212	2458 Gibson St.
20213	2464 Gibson St.
20214	2465 Gibson St.
20215	2466 Gibson St.
20216	2469 Gibson St.
20217	2470 Gibson St.
20218	2473 Gibson St.
20219	2477 Gibson St.
20220	2501 Gibson St.
20221	2502 Gibson St.
20222	2505 Gibson St.
20223	2509 Gibson St.
20224	2510 Gibson St.
20225	2517 Gibson St.
20226	2518 Gibson St.
20227	2521 Gibson St.
20228	2522 Gibson St.
20229	2525 Gibson St.
20230	2529 Gibson St.
20231	2601 Gibson St.
20232	2602 Gibson St.
20233	2605 Gibson St.
20234	2606 Gibson St.
20235	2609 Gibson St.
20236	2610 Gibson St.
20237	2613 Gibson St.
20238	2614 Gibson St.
20239	2615 Gibson St.
20240	2617 Gibson St.
20241	2618 Gibson St.
20242	2622 Gibson St.
20243	2628 Gibson St.
20244	2652 Gibson St.
20245	2657 Gibson St.
20246	2711 Gibson St.
20247	2716 Gibson St.
20248	2717 Gibson St.
20249	2720 Gibson St.
20250	2721 Gibson St.
20251	2801 Gibson St.
20252	2805 Gibson St.
20253	2809 Gibson St.
20254	2810 Gibson St.
20255	2812 Gibson St.
20256	2814 Gibson St.

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20257	2817 Gibson St.
20258	2821 Gibson St.
20259	2822 Gibson St.
20260	2825 Gibson St.
20261	2828 Gibson St.
20262	2901 Gibson St.
20263	2909 Gibson St.
20264	2912 Gibson St.
20265	2913 Gibson St.
20266	160 Gillespie Ave., E.
20267	204 Gillespie Ave., E.
20268	210 Gillespie Ave., E.
20269	355 Gillespie Ave., E.
20270	366 Gillespie Ave., E.
20271	370 Gillespie Ave., E.
20272	402 Gillespie Ave., E.
20273	409 Gillespie Ave., E.
20274	410 Gillespie Ave., E.
20275	413 Gillespie Ave., E.
20276	414 Gillespie Ave., E.
20277	417 Gillespie Ave., E.
20278	418 Gillespie Ave., E.
20279	421 Gillespie Ave., E.
20280	422 Gillespie Ave., E.
20281	425 Gillespie Ave., E.
20282	501 Gillespie Ave., E.
20283	502 Gillespie Ave., E.
20284	505 Gillespie Ave., E.
20285	506 Gillespie Ave., E.
20286	509 Gillespie Ave., E.
20287	510 Gillespie Ave., E.
20288	513 Gillespie Ave., E.
20289	514 Gillespie Ave., E.
20290	517 Gillespie Ave., E.
20291	521 Gillespie Ave., E.
20292	605 Gillespie Ave., E.
20293	606 Gillespie Ave., E.
20294	609 Gillespie Ave., E.
20295	613 Gillespie Ave., E.
20296	614 Gillespie Ave., E.
20297	617 Gillespie Ave., E.
20298	618 Gillespie Ave., E.
20299	621 Gillespie Ave., E.
20300	622 Gillespie Ave., E.
20301	626 Gillespie Ave., E.
20302	637 Gillespie Ave., E.
20303	717 Gillespie Ave., E.
20304	721 Gillespie Ave., E.

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20305	725 Gillespie Ave., E.
20306	732 Gillespie Ave., E.
20307	737 Gillespie Ave., E.
20308	741 Gillespie Ave., E.
20309	744 Gillespie Ave., E.
20310	745 Gillespie Ave., E.
20311	749 Gillespie Ave., E.
20312	751 Gillespie Ave., E.
20313	756 Gillespie Ave., E.
20314	757 Gillespie Ave., E.
20315	761 Gillespie Ave., E.
20316	764 Gillespie Ave., E.
20317	768 Gillespie Ave., E.
20318	769 Gillespie Ave., E.
20319	773 Gillespie Ave., E.
20320	776 Gillespie Ave., E.
20321	805 Gillespie Ave., E.
20322	809 Gillespie Ave., E.
20323	817 Gillespie Ave., E.
20324	818 Gillespie Ave., E.
20325	821 Gillespie Ave., E.
20326	822 Gillespie Ave., E.
20327	825 Gillespie Ave., E.
20328	829 Gillespie Ave., E.
20329	830 Gillespie Ave., E.
20330	832 Gillespie Ave., E.
20331	833 Gillespie Ave., E.
20332	834 Gillespie Ave., E.
20333	902 Gillespie Ave., E.
20334	905 Gillespie Ave., E.
20335	906 Gillespie Ave., E.
20336	910 Gillespie Ave., E.
20337	913 Gillespie Ave., E.
20338	923 Gillespie Ave., E.
20339	927 Gillespie Ave., E.
20340	929 Gillespie Ave., E.
20341	933 Gillespie Ave., E.
20342	113 Gillespie Ave., W.
20343	115 Gillespie Ave., W.
20344	121 Gillespie Ave., W.
20345	1811 Gilmartin St.
20346	1812 Gilmartin St.
20347	1815 Gilmartin St.
20348	1816 Gilmartin St.
20349	1819 Gilmartin St.
20350	1820 Gilmartin St.
20351	1823 Gilmartin St.
20352	1824 Gilmartin St.

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20353	1827 Gilmartin St.
20354	1828 Gilmartin St.
20355	1831 Gilmartin St.
20356	1832 Gilmartin St.
20357	1835 Gilmartin St.
20358	1838 Gilmartin St.
20359	1839 Gilmartin St.
20360	1843 Gilmartin St.
20361	1844 Gilmartin St.
20362	1848 Gilmartin St.
20363	1851 Gilmartin St.
20364	1852 Gilmartin St.
20365	1855 Gilmartin St.
20366	1858 Gilmartin St.
20367	1859 Gilmartin St.
20368	1862 Gilmartin St.
20369	1868 Gilmartin St.
20370	1872 Gilmartin St.
20371	1901 Gilmartin St.
20372	1902 Gilmartin St.
20373	1910 Gilmartin St.
20374	1911 Gilmartin St.
20375	1915 Gilmartin St.
20376	1916 Gilmartin St.
20377	1920 Gilmartin St.
20378	1921 Gilmartin St.
20379	1924 Gilmartin St.
20380	1925 Gilmartin St.
20381	1928 Gilmartin St.
20382	1929 Gilmartin St.
20383	1932 Gilmartin St.
20384	1933 Gilmartin St.
20385	1936 Gilmartin St.
20386	1937 Gilmartin St.
20387	1940 Gilmartin St.
20388	1941 Gilmartin St.
20389	1944 Gilmartin St.
20390	1945 Gilmartin St.
20391	1948 Gilmartin St.
20392	1949 Gilmartin St.
20393	2001 Gilmartin St.
20394	2002 Gilmartin St.
20395	2006 Gilmartin St.
20396	2007 Gilmartin St.
20397	2010 Gilmartin St.
20398	2011 Gilmartin St.
20399	2014 Gilmartin St.
20400	2015 Gilmartin St.

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20401	2016 Gilmartin St.
20402	2020 Gilmartin St.
20403	2108 Gilmartin St.
20404	2111 Gilmartin St.
20405	2112 Gilmartin St.
20406	2116 Gilmartin St.
20407	2120 Gilmartin St.
20408	901 Gladwyn St.
20409	907 Gladwyn St.
20410	911 Gladwyn St.
20411	915 Gladwyn St.
20412	919 Gladwyn St.
20413	923 Gladwyn St.
20414	927 Gladwyn St.
20415	931 Gladwyn St.
20416	939 Gladwyn St.
20417	1001 Gladwyn St.
20418	1005 Gladwyn St.
20419	1009 Gladwyn St.
20420	1013 Gladwyn St.
20421	1017 Gladwyn St.
20422	1021 Gladwyn St.
20423	1025 Gladwyn St.
20424	1029 Gladwyn St.
20425	1033 Gladwyn St.
20426	1037 Gladwyn St.
20427	1041 Gladwyn St.
20428	810 Glenbrook Cir.
20429	1814 Glendale Ave.
20430	1815 Glendale Ave.
20431	1907 Glendale Ave.
20432	1908 Glendale Ave.
20433	1914 Glendale Ave.
20434	1915 Glendale Ave.
20435	1920 Glendale Ave.
20436	1921 Glendale Ave.
20437	2011 Glendale Ave.
20438	2012 Glendale Ave.
20439	2015 Glendale Ave.
20440	2016 Glendale Ave.
20441	2019 Glendale Ave.
20442	2020 Glendale Ave.
20443	2023 Glendale Ave.
20444	2024 Glendale Ave.
20445	2028 Glendale Ave.
20446	2033 Glendale Ave.
20447	2105 Glendale Ave.
20448	2109 Glendale Ave.

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20449	2121 Glendale Ave.
20450	4120 Glenn Ave.
20451	4510 Glenn Ave.
20452	4514 Glenn Ave.
20453	4518 Glenn Ave.
20454	4519 Glenn Ave.
20455	4522 Glenn Ave.
20456	4523 Glenn Ave.
20457	4602 Glenn Ave.
20458	4605 Glenn Ave.
20459	4609 Glenn Ave.
20460	4610 Glenn Ave.
20461	4613 Glenn Ave.
20462	4614 Glenn Ave.
20463	4617 Glenn Ave.
20464	4811 Glenn Ave.
20465	4815 Glenn Ave.
20466	4816 Glenn Ave.
20467	4819 Glenn Ave.
20468	4901 Glenn Ave.
20469	4902 Glenn Ave.
20470	4905 Glenn Ave.
20471	4906 Glenn Ave.
20472	4909 Glenn Ave.
20473	4910 Glenn Ave.
20474	4913 Glenn Ave.
20475	4917 Glenn Ave.
20476	4921 Glenn Ave.
20477	5001 Glenn Ave.
20478	5005 Glenn Ave.
20479	5015 Glenn Ave.
20480	5016 Glenn Ave.
20481	5020 Glenn Ave.
20482	5101 Glenn Ave.
20483	5102 Glenn Ave.
20484	5105 Glenn Ave.
20485	5106 Glenn Ave.
20486	5109 Glenn Ave.
20487	5110 Glenn Ave.
20488	5309 Glenn Ave.
20489	5310 Glenn Ave.
20490	5313 Glenn Ave.
20491	5314 Glenn Ave.
20492	5317 Glenn Ave.
20493	5318 Glenn Ave.
20494	5321 Glenn Ave.
20495	5322 Glenn Ave.
20496	5401 Glenn Ave.

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20497	5402 Glenn Ave.
20498	5405 Glenn Ave.
20499	5406 Glenn Ave.
20500	5409 Glenn Ave.
20501	5410 Glenn Ave.
20502	5413 Glenn Ave.
20503	5414 Glenn Ave.
20504	5417 Glenn Ave.
20505	5418 Glenn Ave.
20506	5501 Glenn Ave.
20507	5502 Glenn Ave.
20508	5505 Glenn Ave.
20509	5506 Glenn Ave.
20510	5509 Glenn Ave.
20511	5510 Glenn Ave.
20512	5513 Glenn Ave.
20513	5514 Glenn Ave.
20514	5517 Glenn Ave.
20515	5518 Glenn Ave.
20516	5601 Glenn Ave.
20517	5602 Glenn Ave.
20518	5605 Glenn Ave.
20519	5606 Glenn Ave.
20520	5609 Glenn Ave.
20521	5610 Glenn Ave.
20522	5613 Glenn Ave.
20523	5614 Glenn Ave.
20524	5617 Glenn Ave.
20525	5618 Glenn Ave.
20526	5701 Glenn Ave.
20527	5702 Glenn Ave.
20528	5705 Glenn Ave.
20529	5706 Glenn Ave.
20530	5709 Glenn Ave.
20531	5710 Glenn Ave.
20532	5713 Glenn Ave.
20533	5714 Glenn Ave.
20534	5717 Glenn Ave.
20535	5718 Glenn Ave.
20536	5721 Glenn Ave.
20537	5722 Glenn Ave.
20538	5801 Glenn Ave.
20539	5802 Glenn Ave.
20540	5805 Glenn Ave.
20541	5806 Glenn Ave.
20542	5809 Glenn Ave.
20543	5810 Glenn Ave.
20544	5813 Glenn Ave.

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20545	5814 Glenn Ave.
20546	5817 Glenn Ave.
20547	5818 Glenn Ave.
20548	5901 Glenn Ave.
20549	5902 Glenn Ave.
20550	5905 Glenn Ave.
20551	5906 Glenn Ave.
20552	5909 Glenn Ave.
20553	5910 Glenn Ave.
20554	5913 Glenn Ave.
20555	5914 Glenn Ave.
20556	5917 Glenn Ave.
20557	5918 Glenn Ave.
20558	1209 Glenwood Ave.
20559	1209 Glenwood Ave.
20560	1209 Glenwood Ave.
20561	1219 Glenwood Ave.
20562	1222 Glenwood Ave.
20563	1409 Glenwood Ave.
20564	1417 Glenwood Ave.
20565	1427 Glenwood Ave.
20566	1503 Glenwood Ave.
20567	1509 Glenwood Ave.
20568	1701 Glenwood Ave.
20569	1702 Glenwood Ave.
20570	1702 Glenwood Ave.
20571	1730 Glenwood Ave.
20572	1730 Glenwood Ave.
20573	1730 Glenwood Ave.
20574	1730 Glenwood Ave.
20575	1730 Glenwood Ave.
20576	3511 Gloucester St.
20577	3516 Gloucester St.
20578	3517 Gloucester St.
20579	3520 Gloucester St.
20580	3523 Gloucester St.
20581	3528 Gloucester St.
20582	3529 Gloucester St.
20583	3535 Gloucester St.
20584	3536 Gloucester St.
20585	3544 Gloucester St.
20586	3601 Gloucester St.
20587	3602 Gloucester St.
20588	3606 Gloucester St.
20589	3607 Gloucester St.
20590	3613 Gloucester St.
20591	3619 Gloucester St.
20592	3620 Gloucester St.

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20593	3625 Gloucester St.
20594	3626 Gloucester St.
20595	3631 Gloucester St.
20596	3632 Gloucester St.
20597	3638 Gloucester St.
20598	3707 Gloucester St.
20599	3708 Gloucester St.
20600	3712 Gloucester St.
20601	3713 Gloucester St.
20602	3717 Gloucester St.
20603	3718 Gloucester St.
20604	3721 Gloucester St.
20605	3724 Gloucester St.
20606	3730 Gloucester St.
20607	3731 Gloucester St.
20608	3736 Gloucester St.
20609	3742 Gloucester St.
20610	3743 Gloucester St.
20611	3747 Gloucester St.
20612	3748 Gloucester St.
20613	3801 Gloucester St.
20614	3802 Gloucester St.
20615	3807 Gloucester St.
20616	3812 Gloucester St.
20617	3813 Gloucester St.
20618	3817 Gloucester St.
20619	3820 Gloucester St.
20620	3825 Gloucester St.
20621	3826 Gloucester St.
20622	3831 Gloucester St.
20623	3832 Gloucester St.
20624	3840 Gloucester St.
20625	3841 Gloucester St.
20626	2011 Gold Ave.
20627	2014 Gold Ave.
20628	2015 Gold Ave.
20629	2016 Gold Ave.
20630	2019 Gold Ave.
20631	2023 Gold Ave.
20632	2024 Gold Ave.
20633	2314 Gold Ave.
20634	2315 Gold Ave.
20635	2319 Gold Ave.
20636	2322 Gold Ave.
20637	2325 Gold Ave.
20638	2326 Gold Ave.
20639	2401 Gold Ave.
20640	2402 Gold Ave.

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20641	2406 Gold Ave.
20642	2407 Gold Ave.
20643	2410 Gold Ave.
20644	2413 Gold Ave.
20645	2414 Gold Ave.
20646	2418 Gold Ave.
20647	2419 Gold Ave.
20648	2422 Gold Ave.
20649	2425 Gold Ave.
20650	2426 Gold Ave.
20651	2430 Gold Ave.
20652	2705 Golfside Ln.
20653	2712 Golfside Ln.
20654	2713 Golfside Ln.
20655	2717 Golfside Ln.
20656	2718 Golfside Ln.
20657	2721 Golfside Ln.
20658	2722 Golfside Ln.
20659	2725 Golfside Ln.
20660	2726 Golfside Ln.
20661	2729 Golfside Ln.
20662	2730 Golfside Ln.
20663	2733 Golfside Ln.
20664	2734 Golfside Ln.
20665	2737 Golfside Ln.
20666	2738 Golfside Ln.
20667	2741 Golfside Ln.
20668	2742 Golfside Ln.
20669	2745 Golfside Ln.
20670	2746 Golfside Ln.
20671	2749 Golfside Ln.
20672	2750 Golfside Ln.
20673	2753 Golfside Ln.
20674	2754 Golfside Ln.
20675	2757 Golfside Ln.
20676	2758 Golfside Ln.
20677	2761 Golfside Ln.
20678	2762 Golfside Ln.
20679	2765 Golfside Ln.
20680	2767 Golfside Ln.
20681	2806 Golfside Ln.
20682	2814 Golfside Ln.
20683	2818 Golfside Ln.
20684	2004 Goodrich St.
20685	2005 Goodrich St.
20686	2008 Goodrich St.
20687	2015 Goodrich St.
20688	2016 Goodrich St.

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20689	2017 Goodrich St.
20690	2020 Goodrich St.
20691	2024 Goodrich St.
20692	2025 Goodrich St.
20693	2033 Goodrich St.
20694	3501 Gorey Ave.
20695	3502 Gorey Ave.
20696	3502 Gorey Ave.
20697	3506 Gorey Ave.
20698	3507 Gorey Ave.
20699	3508 Gorey Ave.
20700	3711 Gorey Ave.
20701	3715 Gorey Ave.
20702	3715 Gorey Ave.
20703	3716 Gorey Ave.
20704	3716 Gorey Ave.
20705	3720 Gorey Ave.
20706	3741 Gorey Ave.
20707	3802 Gorey Ave.
20708	3814 Gorey Ave.
20709	3814 Gorey Ave.
20710	3842 Gorey Ave.
20711	3842 Gorey Ave.
20712	110 Grace St.
20713	114 Grace St.
20714	115 Grace St.
20715	118 Grace St.
20716	119 Grace St.
20717	121 Grace St.
20718	122 Grace St.
20719	125 Grace St.
20720	126 Grace St.
20721	130 Grace St.
20722	134 Grace St.
20723	135 Grace St.
20724	139 Grace St.
20725	203 Grace St.
20726	204 Grace St.
20727	207 Grace St.
20728	208 Grace St.
20729	211 Grace St.
20730	212 Grace St.
20731	215 Grace St.
20732	220 Grace St.
20733	223 Grace St.
20734	226 Grace St.
20735	227 Grace St.
20736	231 Grace St.

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20737	237 Grace St.
20738	238 Grace St.
20739	302 Grace St.
20740	306 Grace St.
20741	309 Grace St.
20742	310 Grace St.
20743	311 Grace St.
20744	314 Grace St.
20745	317 Grace St.
20746	318 Grace St.
20747	325 Grace St.
20748	326 Grace St.
20749	329 Grace St.
20750	330 Grace St.
20751	401 Grace St.
20752	405 Grace St.
20753	406 Grace St.
20754	409 Grace St.
20755	410 Grace St.
20756	413 Grace St.
20757	414 Grace St.
20758	417 Grace St.
20759	418 Grace St.
20760	422 Grace St.
20761	425 Grace St.
20762	428 Grace St.
20763	502 Grace St.
20764	507 Grace St.
20765	511 Grace St.
20766	512 Grace St.
20767	515 Grace St.
20768	516 Grace St.
20769	519 Grace St.
20770	520 Grace St.
20771	523 Grace St.
20772	524 Grace St.
20773	601 Grace St.
20774	602 Grace St.
20775	606 Grace St.
20776	609 Grace St.
20777	610 Grace St.
20778	613 Grace St.
20779	614 Grace St.
20780	105 Gracelawn Ave., E.
20781	106 Gracelawn Ave., E.
20782	109 Gracelawn Ave., E.
20783	110 Gracelawn Ave., E.
20784	113 Gracelawn Ave., E.

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20785	116 Gracelawn Ave., E.
20786	117 Gracelawn Ave., E.
20787	120 Gracelawn Ave., E.
20788	121 Gracelawn Ave., E.
20789	125 Gracelawn Ave., E.
20790	126 Gracelawn Ave., E.
20791	129 Gracelawn Ave., E.
20792	131 Gracelawn Ave., E.
20793	134 Gracelawn Ave., E.
20794	138 Gracelawn Ave., E.
20795	141 Gracelawn Ave., E.
20796	142 Gracelawn Ave., E.
20797	145 Gracelawn Ave., E.
20798	146 Gracelawn Ave., E.
20799	149 Gracelawn Ave., E.
20800	154 Gracelawn Ave., E.
20801	157 Gracelawn Ave., E.
20802	202 Gracelawn Ave., E.
20803	204 Gracelawn Ave., E.
20804	205 Gracelawn Ave., E.
20805	209 Gracelawn Ave., E.
20806	210 Gracelawn Ave., E.
20807	213 Gracelawn Ave., E.
20808	214 Gracelawn Ave., E.
20809	217 Gracelawn Ave., E.
20810	218 Gracelawn Ave., E.
20811	221 Gracelawn Ave., E.
20812	222 Gracelawn Ave., E.
20813	225 Gracelawn Ave., E.
20814	226 Gracelawn Ave., E.
20815	229 Gracelawn Ave., E.
20816	230 Gracelawn Ave., E.
20817	231 Gracelawn Ave., E.
20818	234 Gracelawn Ave., E.
20819	237 Gracelawn Ave., E.
20820	238 Gracelawn Ave., E.
20821	241 Gracelawn Ave., E.
20822	242 Gracelawn Ave., E.
20823	245 Gracelawn Ave., E.
20824	246 Gracelawn Ave., E.
20825	249 Gracelawn Ave., E.
20826	253 Gracelawn Ave., E.
20827	257 Gracelawn Ave., E.
20828	258 Gracelawn Ave., E.
20829	301 Gracelawn Ave., E.
20830	305 Gracelawn Ave., E.
20831	306 Gracelawn Ave., E.
20832	309 Gracelawn Ave., E.

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20833	313 Gracelawn Ave., E.
20834	314 Gracelawn Ave., E.
20835	317 Gracelawn Ave., E.
20836	321 Gracelawn Ave., E.
20837	322 Gracelawn Ave., E.
20838	325 Gracelawn Ave., E.
20839	326 Gracelawn Ave., E.
20840	329 Gracelawn Ave., E.
20841	330 Gracelawn Ave., E.
20842	334 Gracelawn Ave., E.
20843	335 Gracelawn Ave., E.
20844	342 Gracelawn Ave., E.
20845	345 Gracelawn Ave., E.
20846	346 Gracelawn Ave., E.
20847	349 Gracelawn Ave., E.
20848	354 Gracelawn Ave., E.
20849	402 Gracelawn Ave., E.
20850	406 Gracelawn Ave., E.
20851	413 Gracelawn Ave., E.
20852	414 Gracelawn Ave., E.
20853	421 Gracelawn Ave., E.
20854	422 Gracelawn Ave., E.
20855	425 Gracelawn Ave., E.
20856	426 Gracelawn Ave., E.
20857	429 Gracelawn Ave., E.
20858	502 Gracelawn Ave., E.
20859	506 Gracelawn Ave., E.
20860	509 Gracelawn Ave., E.
20861	510 Gracelawn Ave., E.
20862	513 Gracelawn Ave., E.
20863	514 Gracelawn Ave., E.
20864	517 Gracelawn Ave., E.
20865	518 Gracelawn Ave., E.
20866	522 Gracelawn Ave., E.
20867	525 Gracelawn Ave., E.
20868	526 Gracelawn Ave., E.
20869	601 Gracelawn Ave., E.
20870	602 Gracelawn Ave., E.
20871	605 Gracelawn Ave., E.
20872	606 Gracelawn Ave., E.
20873	609 Gracelawn Ave., E.
20874	610 Gracelawn Ave., E.
20875	612 Gracelawn Ave., E.
20876	617 Gracelawn Ave., E.
20877	618 Gracelawn Ave., E.
20878	621 Gracelawn Ave., E.
20879	622 Gracelawn Ave., E.
20880	625 Gracelawn Ave., E.

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20881	629 Gracelawn Ave., E.
20882	630 Gracelawn Ave., E.
20883	633 Gracelawn Ave., E.
20884	634 Gracelawn Ave., E.
20885	637 Gracelawn Ave., E.
20886	638 Gracelawn Ave., E.
20887	641 Gracelawn Ave., E.
20888	642 Gracelawn Ave., E.
20889	646 Gracelawn Ave., E.
20890	1179 Gracelawn Ave., E.
20891	1201 Gracelawn Ave., E.
20892	1205 Gracelawn Ave., E.
20893	1206 Gracelawn Ave., E.
20894	1209 Gracelawn Ave., E.
20895	1210 Gracelawn Ave., E.
20896	1213 Gracelawn Ave., E.
20897	1218 Gracelawn Ave., E.
20898	1222 Gracelawn Ave., E.
20899	1225 Gracelawn Ave., E.
20900	112 Gracelawn Ave., W.
20901	126 Gracelawn Ave., W.
20902	201 Gracelawn Ave., W.
20903	202 Gracelawn Ave., W.
20904	208 Gracelawn Ave., W.
20905	211 Gracelawn Ave., W.
20906	212 Gracelawn Ave., W.
20907	224 Gracelawn Ave., W.
20908	225 Gracelawn Ave., W.
20909	228 Gracelawn Ave., W.
20910	301 Gracelawn Ave., W.
20911	302 Gracelawn Ave., W.
20912	306 Gracelawn Ave., W.
20913	313 Gracelawn Ave., W.
20914	314 Gracelawn Ave., W.
20915	318 Gracelawn Ave., W.
20916	401 Gracelawn Ave., W.
20917	402 Gracelawn Ave., W.
20918	408 Gracelawn Ave., W.
20919	411 Gracelawn Ave., W.
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20921	418 Gracelawn Ave., W.
20922	419 Gracelawn Ave., W.
20923	422 Gracelawn Ave., W.
20924	425 Gracelawn Ave., W.
20925	430 Gracelawn Ave., W.
20926	433 Gracelawn Ave., W.
20927	501 Gracelawn Ave., W.
20928	502 Gracelawn Ave., W.

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20929	515 Gracelawn Ave., W.
20930	516 Gracelawn Ave., W.
20931	523 Gracelawn Ave., W.
20932	528 Gracelawn Ave., W.
20933	535 Gracelawn Ave., W.
20934	536 Gracelawn Ave., W.
20935	601 Gracelawn Ave., W.
20936	606 Gracelawn Ave., W.
20937	616 Gracelawn Ave., W.
20938	625 Gracelawn Ave., W.
20939	1602 Grambling Dr.
20940	1606 Grambling Dr.
20941	1610 Grambling Dr.
20942	1614 Grambling Dr.
20943	119 Grand Traverse St., N.
20944	119 Grand Traverse St., N.
20945	119 Grand Traverse St., N.
20946	129 Grand Traverse St., N.
20947	129 Grand Traverse St., N.
20948	129 Grand Traverse St., N.
20949	310 Grand Traverse St., N.
20950	317 Grand Traverse St., N.
20951	320 Grand Traverse St., N.
20952	328 Grand Traverse St., N.
20953	406 Grand Traverse St., N.
20954	409 Grand Traverse St., N.
20955	412 Grand Traverse St., N.
20956	413 Grand Traverse St., N.
20957	504 Grand Traverse St., N.
20958	509 Grand Traverse St., N.
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20960	516 Grand Traverse St., N.
20961	527 Grand Traverse St., N.
20962	527 Grand Traverse St., N.
20963	601 Grand Traverse St., N.
20964	601 Grand Traverse St., N.
20965	621 Grand Traverse St., N.
20966	622 Grand Traverse St., N.
20967	703 Grand Traverse St., N.
20968	712 Grand Traverse St., N.
20969	713 Grand Traverse St., N.
20970	721 Grand Traverse St., N.
20971	722 Grand Traverse St., N.
20972	727 Grand Traverse St., N.
20973	728 Grand Traverse St., N.
20974	908 Grand Traverse St., N.
20975	912 Grand Traverse St., N.
20976	920 Grand Traverse St., N.

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20977	928 Grand Traverse St., N.
20978	1008 Grand Traverse St., N.
20979	1012 Grand Traverse St., N.
20980	1022 Grand Traverse St., N.
20981	1026 Grand Traverse St., N.
20982	1028 Grand Traverse St., N.
20983	1108 Grand Traverse St., N.
20984	1110 Grand Traverse St., N.
20985	1114 Grand Traverse St., N.
20986	1118 Grand Traverse St., N.
20987	1120 Grand Traverse St., N.
20988	1201 Grand Traverse St., N.
20989	1214 Grand Traverse St., N.
20990	1220 Grand Traverse St., N.
20991	1224 Grand Traverse St., N.
20992	1303 Grand Traverse St., N.
20993	1305 Grand Traverse St., N.
20994	1309 Grand Traverse St., N.
20995	1310 Grand Traverse St., N.
20996	1315 Grand Traverse St., N.
20997	1316 Grand Traverse St., N.
20998	1317 Grand Traverse St., N.
20999	1321 Grand Traverse St., N.
21000	1406 Grand Traverse St., N.
21001	1409 Grand Traverse St., N.
21002	1414 Grand Traverse St., N.
21003	1418 Grand Traverse St., N.
21004	1422 Grand Traverse St., N.
21005	1425 Grand Traverse St., N.
21006	1433 Grand Traverse St., N.
21007	1501 Grand Traverse St., N.
21008	1506 Grand Traverse St., N.
21009	1510 Grand Traverse St., N.
21010	1513 Grand Traverse St., N.
21011	1514 Grand Traverse St., N.
21012	1517 Grand Traverse St., N.
21013	1518 Grand Traverse St., N.
21014	1521 Grand Traverse St., N.
21015	1522 Grand Traverse St., N.
21016	1525 Grand Traverse St., N.
21017	1526 Grand Traverse St., N.
21018	1529 Grand Traverse St., N.
21019	1530 Grand Traverse St., N.
21020	1533 Grand Traverse St., N.
21021	1540 Grand Traverse St., N.
21022	1544 Grand Traverse St., N.
21023	1548 Grand Traverse St., N.
21024	1602 Grand Traverse St., N.

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21025	1606 Grand Traverse St., N.
21026	1610 Grand Traverse St., N.
21027	1614 Grand Traverse St., N.
21028	1618 Grand Traverse St., N.
21029	1626 Grand Traverse St., N.
21030	1627 Grand Traverse St., N.
21031	1632 Grand Traverse St., N.
21032	1633 Grand Traverse St., N.
21033	1636 Grand Traverse St., N.
21034	1637 Grand Traverse St., N.
21035	1642 Grand Traverse St., N.
21036	1643 Grand Traverse St., N.
21037	1646 Grand Traverse St., N.
21038	1647 Grand Traverse St., N.
21039	1650 Grand Traverse St., N.
21040	1651 Grand Traverse St., N.
21041	1654 Grand Traverse St., N.
21042	1655 Grand Traverse St., N.
21043	1658 Grand Traverse St., N.
21044	1659 Grand Traverse St., N.
21045	1662 Grand Traverse St., N.
21046	1663 Grand Traverse St., N.
21047	1666 Grand Traverse St., N.
21048	101 Grand Traverse St., S.
21049	416 Grand Traverse St., S.
21050	416 Grand Traverse St., S.
21051	416 Grand Traverse St., S.
21052	416 Grand Traverse St., S.
21053	500 Grand Traverse St., S.
21054	512 Grand Traverse St., S.
21055	520 Grand Traverse St., S.
21056	601 Grand Traverse St., S.
21057	601 Grand Traverse St., S.
21058	614 Grand Traverse St., S.
21059	614 Grand Traverse St., S.
21060	614 Grand Traverse St., S.
21061	617 Grand Traverse St., S.
21062	624 Grand Traverse St., S.
21063	624 Grand Traverse St., S.
21064	624 Grand Traverse St., S.
21065	624 Grand Traverse St., S.
21066	624 Grand Traverse St., S.
21067	624 Grand Traverse St., S.
21068	625 Grand Traverse St., S.
21069	625 Grand Traverse St., S.
21070	702 Grand Traverse St., S.
21071	703 Grand Traverse St., S.
21072	703 Grand Traverse St., S.

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21073	712 Grand Traverse St., S.
21074	716 Grand Traverse St., S.
21075	717 Grand Traverse St., S.
21076	717 Grand Traverse St., S.
21077	717 Grand Traverse St., S.
21078	717 Grand Traverse St., S.
21079	717 Grand Traverse St., S.
21080	717 Grand Traverse St., S.
21081	717 Grand Traverse St., S.
21082	724 Grand Traverse St., S.
21083	727 Grand Traverse St., S.
21084	727 Grand Traverse St., S.
21085	727 Grand Traverse St., S.
21086	727 Grand Traverse St., S.
21087	727 Grand Traverse St., S.
21088	801 Grand Traverse St., S.
21089	807 Grand Traverse St., S.
21090	915 Grand Traverse St., S.
21091	915 Grand Traverse St., S.
21092	916 Grand Traverse St., S.
21093	936 Grand Traverse St., S.
21094	940 Grand Traverse St., S.
21095	940 Grand Traverse St., S.
21096	940 Grand Traverse St., S.
21097	1006 Grand Traverse St., S.
21098	1010 Grand Traverse St., S.
21099	1014 Grand Traverse St., S.
21100	1018 Grand Traverse St., S.
21101	1024 Grand Traverse St., S.
21102	1024 Grand Traverse St., S.
21103	1030 Grand Traverse St., S.
21104	1030 Grand Traverse St., S.
21105	1030 Grand Traverse St., S.
21106	1030 Grand Traverse St., S.
21107	1031 Grand Traverse St., S.
21108	1034 Grand Traverse St., S.
21109	1034 Grand Traverse St., S.
21110	1034 Grand Traverse St., S.
21111	1036 Grand Traverse St., S.
21112	1038 Grand Traverse St., S.
21113	1041 Grand Traverse St., S.
21114	1101 Grand Traverse St., S.
21115	1107 Grand Traverse St., S.
21116	1108 Grand Traverse St., S.
21117	1110 Grand Traverse St., S.
21118	1111 Grand Traverse St., S.
21119	1114 Grand Traverse St., S.
21120	1120 Grand Traverse St., S.

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21121	1121 Grand Traverse St., S.
21122	1121 Grand Traverse St., S.
21123	1201 Grand Traverse St., S.
21124	1202 Grand Traverse St., S.
21125	1206 Grand Traverse St., S.
21126	1209 Grand Traverse St., S.
21127	1210 Grand Traverse St., S.
21128	1215 Grand Traverse St., S.
21129	1216 Grand Traverse St., S.
21130	1220 Grand Traverse St., S.
21131	1225 Grand Traverse St., S.
21132	1229 Grand Traverse St., S.
21133	1401 Grand Traverse St., S.
21134	1711 Grand Traverse St., S.
21135	1732 Grand Traverse St., S.
21136	1733 Grand Traverse St., S.
21137	1736 Grand Traverse St., S.
21138	1737 Grand Traverse St., S.
21139	1806 Grand Traverse St., S.
21140	1901 Grand Traverse St., S.
21141	2001 Grand Traverse St., S.
21142	2008 Grand Traverse St., S.
21143	2106 Grand Traverse St., S.
21144	2110 Grand Traverse St., S.
21145	2202 Grand Traverse St., S.
21146	2208 Grand Traverse St., S.
21147	2302 Grand Traverse St., S.
21148	2308 Grand Traverse St., S.
21149	2314 Grand Traverse St., S.
21150	2420 Grand Traverse St., S.
21151	2420 Grand Traverse St., S.
21152	2435 Grand Traverse St., S.
21153	2435 Grand Traverse St., S.
21154	2500 Grand Traverse St., S.
21155	2540 Grand Traverse St., S.
21156	2540 Grand Traverse St., S.
21157	2540 Grand Traverse St., S.
21158	2540 Grand Traverse St., S.
21159	2545 Grand Traverse St., S.
21160	2545 Grand Traverse St., S.
21161	2555 Grand Traverse St., S.
21162	2560 Grand Traverse St., S.
21163	2610 Grand Traverse St., S.
21164	2630 Grand Traverse St., S.
21165	2630 Grand Traverse St., S.
21166	2902 Grand Traverse St., S.
21167	2906 Grand Traverse St., S.
21168	2910 Grand Traverse St., S.

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21169	2914 Grand Traverse St., S.
21170	2918 Grand Traverse St., S.
21171	2919 Grand Traverse St., S.
21172	2919 Grand Traverse St., S.
21173	2919 Grand Traverse St., S.
21174	3006 Grand Traverse St., S.
21175	3012 Grand Traverse St., S.
21176	3016 Grand Traverse St., S.
21177	3106 Grand Traverse St., S.
21178	3108 Grand Traverse St., S.
21179	3201 Grand Traverse St., S.
21180	3201 Grand Traverse St., S.
21181	3202 Grand Traverse St., S.
21182	3207 Grand Traverse St., S.
21183	3207 Grand Traverse St., S.
21184	3207 Grand Traverse St., S.
21185	3210 Grand Traverse St., S.
21186	3214 Grand Traverse St., S.
21187	3218 Grand Traverse St., S.
21188	3222 Grand Traverse St., S.
21189	3302 Grand Traverse St., S.
21190	3306 Grand Traverse St., S.
21191	3414 Grand Traverse St., S.
21192	3502 Grand Traverse St., S.
21193	3508 Grand Traverse St., S.
21194	3512 Grand Traverse St., S.
21195	3520 Grand Traverse St., S.
21196	3602 Grand Traverse St., S.
21197	3608 Grand Traverse St., S.
21198	3612 Grand Traverse St., S.
21199	3616 Grand Traverse St., S.
21200	3702 Grand Traverse St., S.
21201	3702 Grand Traverse St., S.
21202	3816 Grand Traverse St., S.
21203	3902 Grand Traverse St., S.
21204	3906 Grand Traverse St., S.
21205	3912 Grand Traverse St., S.
21206	3914 Grand Traverse St., S.
21207	4002 Grand Traverse St., S.
21208	4008 Grand Traverse St., S.
21209	4012 Grand Traverse St., S.
21210	4102 Grand Traverse St., S.
21211	4108 Grand Traverse St., S.
21212	4120 Grand Traverse St., S.
21213	4202 Grand Traverse St., S.
21214	4208 Grand Traverse St., S.
21215	4212 Grand Traverse St., S.
21216	4216 Grand Traverse St., S.

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21217	4302 Grand Traverse St., S.
21218	4308 Grand Traverse St., S.
21219	4312 Grand Traverse St., S.
21220	4316 Grand Traverse St., S.
21221	4402 Grand Traverse St., S.
21222	4408 Grand Traverse St., S.
21223	4412 Grand Traverse St., S.
21224	4416 Grand Traverse St., S.
21225	1205 Grandy St.
21226	1213 Grandy St.
21227	1215 Grandy St.
21228	1219 Grandy St.
21229	1225 Grandy St.
21230	4301 Grant St.
21231	4305 Grant St.
21232	4310 Grant St.
21233	4313 Grant St.
21234	4314 Grant St.
21235	4319 Grant St.
21236	4322 Grant St.
21237	4402 Grant St.
21238	4409 Grant St.
21239	4501 Grant St.
21240	4502 Grant St.
21241	4505 Grant St.
21242	4506 Grant St.
21243	4513 Grant St.
21244	4518 Grant St.
21245	4521 Grant St.
21246	4525 Grant St.
21247	4602 Grant St.
21248	4613 Grant St.
21249	4621 Grant St.
21250	4622 Grant St.
21251	5301 Granville Ave.
21252	5302 Granville Ave.
21253	5306 Granville Ave.
21254	5307 Granville Ave.
21255	5310 Granville Ave.
21256	5313 Granville Ave.
21257	5314 Granville Ave.
21258	5318 Granville Ave.
21259	5319 Granville Ave.
21260	5322 Granville Ave.
21261	5401 Granville Ave.
21262	5402 Granville Ave.
21263	5406 Granville Ave.
21264	5407 Granville Ave.

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21265	5410 Granville Ave.
21266	5411 Granville Ave.
21267	5414 Granville Ave.
21268	5415 Granville Ave.
21269	5418 Granville Ave.
21270	5422 Granville Ave.
21271	5501 Granville Ave.
21272	5502 Granville Ave.
21273	5506 Granville Ave.
21274	5507 Granville Ave.
21275	5510 Granville Ave.
21276	5511 Granville Ave.
21277	5514 Granville Ave.
21278	5515 Granville Ave.
21279	5518 Granville Ave.
21280	3221 Gratiot Ave.
21281	3301 Gratiot Ave.
21282	3302 Gratiot Ave.
21283	3305 Gratiot Ave.
21284	3306 Gratiot Ave.
21285	3309 Gratiot Ave.
21286	3310 Gratiot Ave.
21287	3314 Gratiot Ave.
21288	3401 Gratiot Ave.
21289	3406 Gratiot Ave.
21290	3409 Gratiot Ave.
21291	3410 Gratiot Ave.
21292	3413 Gratiot Ave.
21293	3414 Gratiot Ave.
21294	3417 Gratiot Ave.
21295	3418 Gratiot Ave.
21296	3501 Gratiot Ave.
21297	3502 Gratiot Ave.
21298	3505 Gratiot Ave.
21299	3506 Gratiot Ave.
21300	3509 Gratiot Ave.
21301	3510 Gratiot Ave.
21302	3513 Gratiot Ave.
21303	3514 Gratiot Ave.
21304	3601 Gratiot Ave.
21305	3602 Gratiot Ave.
21306	3605 Gratiot Ave.
21307	3606 Gratiot Ave.
21308	3609 Gratiot Ave.
21309	3613 Gratiot Ave.
21310	3614 Gratiot Ave.
21311	3617 Gratiot Ave.
21312	3618 Gratiot Ave.

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21313	3621 Gratiot Ave.
21314	3622 Gratiot Ave.
21315	3701 Gratiot Ave.
21316	3702 Gratiot Ave.
21317	3705 Gratiot Ave.
21318	3709 Gratiot Ave.
21319	3710 Gratiot Ave.
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21323	3718 Gratiot Ave.
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21325	3722 Gratiot Ave.
21326	3725 Gratiot Ave.
21327	3726 Gratiot Ave.
21328	3730 Gratiot Ave.
21329	118 Green St.
21330	119 Green St.
21331	125 Green St.
21332	126 Green St.
21333	129 Green St.
21334	130 Green St.
21335	134 Green St.
21336	139 Green St.
21337	202 Green St.
21338	205 Green St.
21339	209 Green St.
21340	210 Green St.
21341	213 Green St.
21342	214 Green St.
21343	217 Green St.
21344	218 Green St.
21345	221 Green St.
21346	224 Green St.
21347	225 Green St.
21348	226 Green St.
21349	227 Green St.
21350	232 Green St.
21351	233 Green St.
21352	236 Green St.
21353	237 Green St.
21354	238 Green St.
21355	308 Green St.
21356	320 Green St.
21357	331 Green St.
21358	332 Green St.
21359	401 Green St.
21360	405 Green St.

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21361	406 Green St.
21362	409 Green St.
21363	410 Green St.
21364	413 Green St.
21365	414 Green St.
21366	418 Green St.
21367	502 Green St.
21368	506 Green St.
21369	510 Green St.
21370	511 Green St.
21371	514 Green St.
21372	515 Green St.
21373	518 Green St.
21374	519 Green St.
21375	522 Green St.
21376	523 Green St.
21377	601 Green St.
21378	602 Green St.
21379	606 Green St.
21380	607 Green St.
21381	609 Green St.
21382	610 Green St.
21383	614 Green St.
21384	615 Green St.
21385	622 Green St.
21386	1801 Greenbriar Ln.
21387	1802 Greenbriar Ln.
21388	1805 Greenbriar Ln.
21389	1806 Greenbriar Ln.
21390	1809 Greenbriar Ln.
21391	1810 Greenbriar Ln.
21392	1813 Greenbriar Ln.
21393	1814 Greenbriar Ln.
21394	1817 Greenbriar Ln.
21395	1818 Greenbriar Ln.
21396	1821 Greenbriar Ln.
21397	1822 Greenbriar Ln.
21398	1825 Greenbriar Ln.
21399	1826 Greenbriar Ln.
21400	1829 Greenbriar Ln.
21401	1830 Greenbriar Ln.
21402	1833 Greenbriar Ln.
21403	1834 Greenbriar Ln.
21404	1901 Greenbriar Ln.
21405	1902 Greenbriar Ln.
21406	1905 Greenbriar Ln.
21407	1906 Greenbriar Ln.
21408	1909 Greenbriar Ln.

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21409	1913 Greenbriar Ln.
21410	1914 Greenbriar Ln.
21411	1917 Greenbriar Ln.
21412	1918 Greenbriar Ln.
21413	1921 Greenbriar Ln.
21414	1922 Greenbriar Ln.
21415	1925 Greenbriar Ln.
21416	1926 Greenbriar Ln.
21417	1929 Greenbriar Ln.
21418	1930 Greenbriar Ln.
21419	1933 Greenbriar Ln.
21420	1934 Greenbriar Ln.
21421	1502 Greenbrook Ln.
21422	1506 Greenbrook Ln.
21423	1510 Greenbrook Ln.
21424	1514 Greenbrook Ln.
21425	1517 Greenbrook Ln.
21426	1518 Greenbrook Ln.
21427	1522 Greenbrook Ln.
21428	1526 Greenbrook Ln.
21429	1601 Greenbrook Ln.
21430	1602 Greenbrook Ln.
21431	1606 Greenbrook Ln.
21432	1607 Greenbrook Ln.
21433	1610 Greenbrook Ln.
21434	1613 Greenbrook Ln.
21435	1614 Greenbrook Ln.
21436	1617 Greenbrook Ln.
21437	1618 Greenbrook Ln.
21438	1621 Greenbrook Ln.
21439	1701 Greenbrook Ln.
21440	1702 Greenbrook Ln.
21441	1706 Greenbrook Ln.
21442	1707 Greenbrook Ln.
21443	1710 Greenbrook Ln.
21444	1711 Greenbrook Ln.
21445	1714 Greenbrook Ln.
21446	1715 Greenbrook Ln.
21447	1718 Greenbrook Ln.
21448	1722 Greenbrook Ln.
21449	1802 Greenbrook Ln.
21450	1809 Greenbrook Ln.
21451	1810 Greenbrook Ln.
21452	1814 Greenbrook Ln.
21453	1817 Greenbrook Ln.
21454	1818 Greenbrook Ln.
21455	1822 Greenbrook Ln.
21456	1823 Greenbrook Ln.

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21457	1826 Greenbrook Ln.
21458	1830 Greenbrook Ln.
21459	1902 Greenbrook Ln.
21460	1906 Greenbrook Ln.
21461	1914 Greenbrook Ln.
21462	1920 Greenbrook Ln.
21463	3701 Greenbrook Ln.
21464	3702 Greenbrook Ln.
21465	3703 Greenbrook Ln.
21466	3704 Greenbrook Ln.
21467	3705 Greenbrook Ln.
21468	3706 Greenbrook Ln.
21469	3711 Greenbrook Ln.
21470	3712 Greenbrook Ln.
21471	3713 Greenbrook Ln.
21472	3714 Greenbrook Ln.
21473	3715 Greenbrook Ln.
21474	3716 Greenbrook Ln.
21475	3717 Greenbrook Ln.
21476	3718 Greenbrook Ln.
21477	3719 Greenbrook Ln.
21478	3720 Greenbrook Ln.
21479	3721 Greenbrook Ln.
21480	3722 Greenbrook Ln.
21481	3801 Greenbrook Ln.
21482	3802 Greenbrook Ln.
21483	3805 Greenbrook Ln.
21484	3809 Greenbrook Ln.
21485	3901 Greenbrook Ln.
21486	3906 Greenbrook Ln.
21487	3909 Greenbrook Ln.
21488	3913 Greenbrook Ln.
21489	4001 Greenbrook Ln.
21490	4002 Greenbrook Ln.
21491	4005 Greenbrook Ln.
21492	4006 Greenbrook Ln.
21493	4009 Greenbrook Ln.
21494	4010 Greenbrook Ln.
21495	4013 Greenbrook Ln.
21496	4014 Greenbrook Ln.
21497	4017 Greenbrook Ln.
21498	4021 Greenbrook Ln.
21499	4101 Greenbrook Ln.
21500	4106 Greenbrook Ln.
21501	4107 Greenbrook Ln.
21502	4115 Greenbrook Ln.
21503	4201 Greenbrook Ln.
21504	4202 Greenbrook Ln.

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21505	4206 Greenbrook Ln.
21506	4207 Greenbrook Ln.
21507	4210 Greenbrook Ln.
21508	4302 Greenbrook Ln.
21509	4305 Greenbrook Ln.
21510	4306 Greenbrook Ln.
21511	4309 Greenbrook Ln.
21512	4310 Greenbrook Ln.
21513	4314 Greenbrook Ln.
21514	4315 Greenbrook Ln.
21515	4318 Greenbrook Ln.
21516	4322 Greenbrook Ln.
21517	4323 Greenbrook Ln.
21518	4401 Greenbrook Ln.
21519	4402 Greenbrook Ln.
21520	4405 Greenbrook Ln.
21521	4406 Greenbrook Ln.
21522	4409 Greenbrook Ln.
21523	4410 Greenbrook Ln.
21524	4413 Greenbrook Ln.
21525	4414 Greenbrook Ln.
21526	4417 Greenbrook Ln.
21527	4418 Greenbrook Ln.
21528	401 Greenfield Ave.
21529	405 Greenfield Ave.
21530	409 Greenfield Ave.
21531	412 Greenfield Ave.
21532	413 Greenfield Ave.
21533	416 Greenfield Ave.
21534	417 Greenfield Ave.
21535	420 Greenfield Ave.
21536	421 Greenfield Ave.
21537	501 Greenfield Ave.
21538	502 Greenfield Ave.
21539	514 Greenfield Ave.
21540	515 Greenfield Ave.
21541	518 Greenfield Ave.
21542	519 Greenfield Ave.
21543	522 Greenfield Ave.
21544	523 Greenfield Ave.
21545	526 Greenfield Ave.
21546	527 Greenfield Ave.
21547	528 Greenfield Ave.
21548	535 Greenfield Ave.
21549	601 Greenfield Ave.
21550	602 Greenfield Ave.
21551	606 Greenfield Ave.
21552	609 Greenfield Ave.

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21553	610 Greenfield Ave.
21554	614 Greenfield Ave.
21555	615 Greenfield Ave.
21556	618 Greenfield Ave.
21557	621 Greenfield Ave.
21558	701 Greenfield Ave.
21559	711 Greenfield Ave.
21560	2601 Greenhill Ln.
21561	2609 Greenhill Ln.
21562	2610 Greenhill Ln.
21563	2617 Greenhill Ln.
21564	2618 Greenhill Ln.
21565	2625 Greenhill Ln.
21566	2626 Greenhill Ln.
21567	4201 Greenlawn Dr.
21568	4202 Greenlawn Dr.
21569	4207 Greenlawn Dr.
21570	4208 Greenlawn Dr.
21571	4211 Greenlawn Dr.
21572	4212 Greenlawn Dr.
21573	4215 Greenlawn Dr.
21574	4216 Greenlawn Dr.
21575	4219 Greenlawn Dr.
21576	4220 Greenlawn Dr.
21577	4224 Greenlawn Dr.
21578	4301 Greenlawn Dr.
21579	4302 Greenlawn Dr.
21580	4306 Greenlawn Dr.
21581	4307 Greenlawn Dr.
21582	4310 Greenlawn Dr.
21583	4311 Greenlawn Dr.
21584	4314 Greenlawn Dr.
21585	4315 Greenlawn Dr.
21586	4318 Greenlawn Dr.
21587	4319 Greenlawn Dr.
21588	4322 Greenlawn Dr.
21589	4401 Greenlawn Dr.
21590	4402 Greenlawn Dr.
21591	4405 Greenlawn Dr.
21592	4406 Greenlawn Dr.
21593	4409 Greenlawn Dr.
21594	4410 Greenlawn Dr.
21595	4411 Greenlawn Dr.
21596	4414 Greenlawn Dr.
21597	4415 Greenlawn Dr.
21598	4502 Greenlawn Dr.
21599	4505 Greenlawn Dr.
21600	4508 Greenlawn Dr.

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21601	4509 Greenlawn Dr.
21602	4512 Greenlawn Dr.
21603	4513 Greenlawn Dr.
21604	4516 Greenlawn Dr.
21605	4517 Greenlawn Dr.
21606	4520 Greenlawn Dr.
21607	4521 Greenlawn Dr.
21608	4524 Greenlawn Dr.
21609	4525 Greenlawn Dr.
21610	4601 Greenlawn Dr.
21611	4602 Greenlawn Dr.
21612	4605 Greenlawn Dr.
21613	4606 Greenlawn Dr.
21614	4609 Greenlawn Dr.
21615	4610 Greenlawn Dr.
21616	4613 Greenlawn Dr.
21617	4614 Greenlawn Dr.
21618	4617 Greenlawn Dr.
21619	4618 Greenlawn Dr.
21620	4702 Greenlawn Dr.
21621	4705 Greenlawn Dr.
21622	4808 Greenlawn Dr.
21623	4809 Greenlawn Dr.
21624	4812 Greenlawn Dr.
21625	4813 Greenlawn Dr.
21626	4816 Greenlawn Dr.
21627	4817 Greenlawn Dr.
21628	4820 Greenlawn Dr.
21629	4824 Greenlawn Dr.
21630	4827 Greenlawn Dr.
21631	4828 Greenlawn Dr.
21632	4832 Greenlawn Dr.
21633	4901 Greenlawn Dr.
21634	4902 Greenlawn Dr.
21635	4905 Greenlawn Dr.
21636	4906 Greenlawn Dr.
21637	4909 Greenlawn Dr.
21638	4910 Greenlawn Dr.
21639	4914 Greenlawn Dr.
21640	4918 Greenlawn Dr.
21641	5002 Greenlawn Dr.
21642	5006 Greenlawn Dr.
21643	5009 Greenlawn Dr.
21644	5010 Greenlawn Dr.
21645	5017 Greenlawn Dr.
21646	3012 Greenly St.
21647	3016 Greenly St.
21648	3020 Greenly St.

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21649	3102 Greenly St.
21650	3110 Greenly St.
21651	3114 Greenly St.
21652	3118 Greenly St.
21653	1311 Greenway Ave.
21654	1317 Greenway Ave.
21655	1323 Greenway Ave.
21656	1401 Greenway Ave.
21657	1407 Greenway Ave.
21658	1413 Greenway Ave.
21659	1419 Greenway Ave.
21660	1425 Greenway Ave.
21661	1437 Greenway Ave.
21662	1601 Greenway Ave.
21663	1607 Greenway Ave.
21664	1613 Greenway Ave.
21665	1701 Greenway Ave.
21666	1707 Greenway Ave.
21667	1702 Griggs Dr.
21668	1713 Griggs Dr.
21669	1714 Griggs Dr.
21670	1719 Griggs Dr.
21671	1720 Griggs Dr.
21672	1723 Griggs Dr.
21673	1801 Griggs Dr.
21674	1802 Griggs Dr.
21675	1807 Griggs Dr.
21676	1808 Griggs Dr.
21677	1813 Griggs Dr.
21678	1814 Griggs Dr.
21679	1819 Griggs Dr.
21680	5601 Griggs Dr.
21681	5602 Griggs Dr.
21682	5611 Griggs Dr.
21683	5612 Griggs Dr.
21684	5615 Griggs Dr.
21685	5616 Griggs Dr.
21686	5701 Griggs Dr.
21687	5702 Griggs Dr.
21688	5705 Griggs Dr.
21689	5706 Griggs Dr.
21690	5709 Griggs Dr.
21691	5710 Griggs Dr.
21692	5713 Griggs Dr.
21693	5714 Griggs Dr.
21694	5801 Griggs Dr.
21695	5802 Griggs Dr.
21696	5805 Griggs Dr.

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21697	5806 Griggs Dr.
21698	5809 Griggs Dr.
21699	5810 Griggs Dr.
21700	5813 Griggs Dr.
21701	5814 Griggs Dr.
21702	5901 Griggs Dr.
21703	5902 Griggs Dr.
21704	5905 Griggs Dr.
21705	5906 Griggs Dr.
21706	1547 Groveland Ave.
21707	1609 Groveland Ave.
21708	1610 Groveland Ave.
21709	1619 Groveland Ave.
21710	1620 Groveland Ave.
21711	1820 Groveland Ave.
21712	1840 Groveland Ave.
21713	1912 Groveland Ave.
21714	1936 Groveland Ave.
21715	2005 Groveland Ave.
21716	2022 Gunnell Ct.
21717	2023 Gunnell Ct.
21718	650 Hall St.
21719	651 Hall St.
21720	651 Hall St.
21721	651 Hall St.
21722	654 Hall St.
21723	658 Hall St.
21724	662 Hall St.
21725	702 Hall St.
21726	708 Hall St.
21727	710 Hall St.
21728	713 Hall St.
21729	717 Hall St.
21730	720 Hall St.
21731	721 Hall St.
21732	151 Hamilton Ave., E.
21733	152 Hamilton Ave., E.
21734	155 Hamilton Ave., E.
21735	156 Hamilton Ave., E.
21736	159 Hamilton Ave., E.
21737	163 Hamilton Ave., E.
21738	164 Hamilton Ave., E.
21739	167 Hamilton Ave., E.
21740	168 Hamilton Ave., E.
21741	201 Hamilton Ave., E.
21742	205 Hamilton Ave., E.
21743	206 Hamilton Ave., E.
21744	210 Hamilton Ave., E.

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21745	214 Hamilton Ave., E.
21746	215 Hamilton Ave., E.
21747	217 Hamilton Ave., E.
21748	219 Hamilton Ave., E.
21749	301 Hamilton Ave., E.
21750	317 Hamilton Ave., E.
21751	322 Hamilton Ave., E.
21752	501 Hamilton Ave., E.
21753	523 Hamilton Ave., E.
21754	523 Hamilton Ave., E.
21755	525 Hamilton Ave., E.
21756	529 Hamilton Ave., E.
21757	723 Hamilton Ave., E.
21758	731 Hamilton Ave., E.
21759	765 Hamilton Ave., E.
21760	902 Hamilton Ave., E.
21761	902 Hamilton Ave., E.
21762	902 Hamilton Ave., E.
21763	902 Hamilton Ave., E.
21764	902 Hamilton Ave., E.
21765	902 Hamilton Ave., E.
21766	902 Hamilton Ave., E.
21767	902 Hamilton Ave., E.
21768	902 Hamilton Ave., E.
21769	902 Hamilton Ave., E.
21770	902 Hamilton Ave., E.
21771	902 Hamilton Ave., E.
21772	931 Hamilton Ave., E.
21773	1002 Hamilton Ave., E.
21774	1051 Hamilton Ave., E.
21775	1221 Hamilton Ave., E.
21776	1221 Hamilton Ave., E.
21777	1225 Hamilton Ave., E.
21778	1229 Hamilton Ave., E.
21779	1233 Hamilton Ave., E.
21780	1237 Hamilton Ave., E.
21781	1241 Hamilton Ave., E.
21782	1249 Hamilton Ave., E.
21783	1251 Hamilton Ave., E.
21784	1255 Hamilton Ave., E.
21785	1260 Hamilton Ave., E.
21786	1305 Hamilton Ave., E.
21787	1409 Hamilton Ave., E.
21788	1410 Hamilton Ave., E.
21789	1413 Hamilton Ave., E.
21790	1414 Hamilton Ave., E.
21791	1418 Hamilton Ave., E.
21792	1422 Hamilton Ave., E.

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21793	1423 Hamilton Ave., E.
21794	1425 Hamilton Ave., E.
21795	1426 Hamilton Ave., E.
21796	1430 Hamilton Ave., E.
21797	1431 Hamilton Ave., E.
21798	1434 Hamilton Ave., E.
21799	1437 Hamilton Ave., E.
21800	1438 Hamilton Ave., E.
21801	1442 Hamilton Ave., E.
21802	1443 Hamilton Ave., E.
21803	1445 Hamilton Ave., E.
21804	1447 Hamilton Ave., E.
21805	1450 Hamilton Ave., E.
21806	1454 Hamilton Ave., E.
21807	1455 Hamilton Ave., E.
21808	1501 Hamilton Ave., E.
21809	1504 Hamilton Ave., E.
21810	1505 Hamilton Ave., E.
21811	1506 Hamilton Ave., E.
21812	1509 Hamilton Ave., E.
21813	1510 Hamilton Ave., E.
21814	1513 Hamilton Ave., E.
21815	1514 Hamilton Ave., E.
21816	1518 Hamilton Ave., E.
21817	1519 Hamilton Ave., E.
21818	1521 Hamilton Ave., E.
21819	1522 Hamilton Ave., E.
21820	1525 Hamilton Ave., E.
21821	1526 Hamilton Ave., E.
21822	1529 Hamilton Ave., E.
21823	1530 Hamilton Ave., E.
21824	1534 Hamilton Ave., E.
21825	1537 Hamilton Ave., E.
21826	1538 Hamilton Ave., E.
21827	1541 Hamilton Ave., E.
21828	1542 Hamilton Ave., E.
21829	1545 Hamilton Ave., E.
21830	1546 Hamilton Ave., E.
21831	1549 Hamilton Ave., E.
21832	1550 Hamilton Ave., E.
21833	1553 Hamilton Ave., E.
21834	1556 Hamilton Ave., E.
21835	1601 Hamilton Ave., E.
21836	1602 Hamilton Ave., E.
21837	1605 Hamilton Ave., E.
21838	1606 Hamilton Ave., E.
21839	1609 Hamilton Ave., E.
21840	1610 Hamilton Ave., E.

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21841	1614 Hamilton Ave., E.
21842	1615 Hamilton Ave., E.
21843	1617 Hamilton Ave., E.
21844	1618 Hamilton Ave., E.
21845	1621 Hamilton Ave., E.
21846	1622 Hamilton Ave., E.
21847	1625 Hamilton Ave., E.
21848	1626 Hamilton Ave., E.
21849	1629 Hamilton Ave., E.
21850	1630 Hamilton Ave., E.
21851	1634 Hamilton Ave., E.
21852	1635 Hamilton Ave., E.
21853	1637 Hamilton Ave., E.
21854	1638 Hamilton Ave., E.
21855	1641 Hamilton Ave., E.
21856	1645 Hamilton Ave., E.
21857	1646 Hamilton Ave., E.
21858	1649 Hamilton Ave., E.
21859	1653 Hamilton Ave., E.
21860	1657 Hamilton Ave., E.
21861	1701 Hamilton Ave., E.
21862	1702 Hamilton Ave., E.
21863	1705 Hamilton Ave., E.
21864	1706 Hamilton Ave., E.
21865	1709 Hamilton Ave., E.
21866	1710 Hamilton Ave., E.
21867	1714 Hamilton Ave., E.
21868	1715 Hamilton Ave., E.
21869	1717 Hamilton Ave., E.
21870	1718 Hamilton Ave., E.
21871	1721 Hamilton Ave., E.
21872	1722 Hamilton Ave., E.
21873	1725 Hamilton Ave., E.
21874	1726 Hamilton Ave., E.
21875	1729 Hamilton Ave., E.
21876	1730 Hamilton Ave., E.
21877	1734 Hamilton Ave., E.
21878	1735 Hamilton Ave., E.
21879	1801 Hamilton Ave., E.
21880	1802 Hamilton Ave., E.
21881	1805 Hamilton Ave., E.
21882	1806 Hamilton Ave., E.
21883	1809 Hamilton Ave., E.
21884	1810 Hamilton Ave., E.
21885	1813 Hamilton Ave., E.
21886	1814 Hamilton Ave., E.
21887	1817 Hamilton Ave., E.
21888	1818 Hamilton Ave., E.

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21889	1821 Hamilton Ave., E.
21890	1822 Hamilton Ave., E.
21891	109 Hamilton Ave., W.
21892	110 Hamilton Ave., W.
21893	113 Hamilton Ave., W.
21894	114 Hamilton Ave., W.
21895	118 Hamilton Ave., W.
21896	121 Hamilton Ave., W.
21897	125 Hamilton Ave., W.
21898	126 Hamilton Ave., W.
21899	132 Hamilton Ave., W.
21900	136 Hamilton Ave., W.
21901	137 Hamilton Ave., W.
21902	138 Hamilton Ave., W.
21903	201 Hamilton Ave., W.
21904	206 Hamilton Ave., W.
21905	209 Hamilton Ave., W.
21906	210 Hamilton Ave., W.
21907	211 Hamilton Ave., W.
21908	216 Hamilton Ave., W.
21909	220 Hamilton Ave., W.
21910	221 Hamilton Ave., W.
21911	226 Hamilton Ave., W.
21912	227 Hamilton Ave., W.
21913	230 Hamilton Ave., W.
21914	231 Hamilton Ave., W.
21915	235 Hamilton Ave., W.
21916	236 Hamilton Ave., W.
21917	302 Hamilton Ave., W.
21918	309 Hamilton Ave., W.
21919	310 Hamilton Ave., W.
21920	313 Hamilton Ave., W.
21921	317 Hamilton Ave., W.
21922	329 Hamilton Ave., W.
21923	406 Hamilton Ave., W.
21924	409 Hamilton Ave., W.
21925	410 Hamilton Ave., W.
21926	413 Hamilton Ave., W.
21927	417 Hamilton Ave., W.
21928	418 Hamilton Ave., W.
21929	421 Hamilton Ave., W.
21930	425 Hamilton Ave., W.
21931	501 Hamilton Ave., W.
21932	504 Hamilton Ave., W.
21933	510 Hamilton Ave., W.
21934	511 Hamilton Ave., W.
21935	514 Hamilton Ave., W.
21936	515 Hamilton Ave., W.

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21937	519 Hamilton Ave., W.
21938	522 Hamilton Ave., W.
21939	523 Hamilton Ave., W.
21940	601 Hamilton Ave., W.
21941	602 Hamilton Ave., W.
21942	605 Hamilton Ave., W.
21943	606 Hamilton Ave., W.
21944	609 Hamilton Ave., W.
21945	610 Hamilton Ave., W.
21946	614 Hamilton Ave., W.
21947	615 Hamilton Ave., W.
21948	621 Hamilton Ave., W.
21949	624 Hamilton Ave., W.
21950	701 Hamilton Ave., W.
21951	702 Hamilton Ave., W.
21952	705 Hamilton Ave., W.
21953	708 Hamilton Ave., W.
21954	709 Hamilton Ave., W.
21955	713 Hamilton Ave., W.
21956	714 Hamilton Ave., W.
21957	720 Hamilton Ave., W.
21958	722 Hamilton Ave., W.
21959	801 Hamilton Ave., W.
21960	802 Hamilton Ave., W.
21961	805 Hamilton Ave., W.
21962	808 Hamilton Ave., W.
21963	810 Hamilton Ave., W.
21964	813 Hamilton Ave., W.
21965	817 Hamilton Ave., W.
21966	826 Hamilton Ave., W.
21967	901 Hamilton Ave., W.
21968	902 Hamilton Ave., W.
21969	907 Hamilton Ave., W.
21970	908 Hamilton Ave., W.
21971	913 Hamilton Ave., W.
21972	914 Hamilton Ave., W.
21973	919 Hamilton Ave., W.
21974	920 Hamilton Ave., W.
21975	1001 Hamilton Ave., W.
21976	1002 Hamilton Ave., W.
21977	1008 Hamilton Ave., W.
21978	1009 Hamilton Ave., W.
21979	1013 Hamilton Ave., W.
21980	1101 Hamilton Ave., W.
21981	1102 Hamilton Ave., W.
21982	1105 Hamilton Ave., W.
21983	1106 Hamilton Ave., W.
21984	1109 Hamilton Ave., W.

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21985	1110 Hamilton Ave., W.
21986	1113 Hamilton Ave., W.
21987	1114 Hamilton Ave., W.
21988	1201 Hamilton Ave., W.
21989	1202 Hamilton Ave., W.
21990	1205 Hamilton Ave., W.
21991	1206 Hamilton Ave., W.
21992	1209 Hamilton Ave., W.
21993	1213 Hamilton Ave., W.
21994	1902 Hammerberg Rd.
21995	1902 Hammerberg Rd.
21996	3201 Hammerberg Rd.
21997	3900 Hammerberg Rd.
21998	3901 Hammerberg Rd.
21999	4020 Hammerberg Rd.
22000	4020 Hammerberg Rd.
22001	912 Hammond St.
22002	916 Hammond St.
22003	920 Hammond St.
22004	924 Hammond St.
22005	932 Hammond St.
22006	959 Hammond St.
22007	962 Hammond St.
22008	966 Hammond St.
22009	967 Hammond St.
22010	974 Hammond St.
22011	975 Hammond St.
22012	980 Hammond St.
22013	982 Hammond St.
22014	983 Hammond St.
22015	986 Hammond St.
22016	987 Hammond St.
22017	1002 Hammond St.
22018	1006 Hammond St.
22019	1010 Hammond St.
22020	1011 Hammond St.
22021	1014 Hammond St.
22022	1018 Hammond St.
22023	1019 Hammond St.
22024	1802 Hampden Rd.
22025	1820 Hampden Rd.
22026	1830 Hampden Rd.
22027	1831 Hampden Rd.
22028	1840 Hampden Rd.
22029	1851 Hampden Rd.
22030	1860 Hampden Rd.
22031	1901 Hampden Rd.
22032	1902 Hampden Rd.

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22033	1910 Hampden Rd.
22034	1919 Hampden Rd.
22035	1920 Hampden Rd.
22036	2020 Hampden Rd.
22037	2030 Hampden Rd.
22038	2031 Hampden Rd.
22039	2039 Hampden Rd.
22040	2837 Hampstead Dr.
22041	2801 Hampstead Dr.
22042	2802 Hampstead Dr.
22043	2805 Hampstead Dr.
22044	2809 Hampstead Dr.
22045	2810 Hampstead Dr.
22046	2813 Hampstead Dr.
22047	2817 Hampstead Dr.
22048	2818 Hampstead Dr.
22049	2821 Hampstead Dr.
22050	2825 Hampstead Dr.
22051	2828 Hampstead Dr.
22052	2829 Hampstead Dr.
22053	2833 Hampstead Dr.
22054	2836 Hampstead Dr.
22055	2837 Hampstead Dr.
22056	2840 Hampstead Dr.
22057	2841 Hampstead Dr.
22058	2844 Hampstead Dr.
22059	2845 Hampstead Dr.
22060	2849 Hampstead Dr.
22061	2901 Hampstead Dr.
22062	2905 Hampstead Dr.
22063	2909 Hampstead Dr.
22064	2910 Hampstead Dr.
22065	2913 Hampstead Dr.
22066	2914 Hampstead Dr.
22067	2919 Hampstead Dr.
22068	3001 Hampstead Dr.
22069	3002 Hampstead Dr.
22070	3007 Hampstead Dr.
22071	3010 Hampstead Dr.
22072	3013 Hampstead Dr.
22073	3019 Hampstead Dr.
22074	3817 Hargott Ave.
22075	3907 Hargott Ave.
22076	1016 Harmon St.
22077	1020 Harmon St.
22078	1021 Harmon St.
22079	1024 Harmon St.
22080	1106 Harmon St.

	A
22081	1113 Harmon St.
22082	1114 Harmon St.
22083	3212 Harold Ave.
22084	3314 Harold Ave.
22085	204 Harriet St.
22086	208 Harriet St.
22087	215 Harriet St.
22088	301 Harriet St.
22089	305 Harriet St.
22090	309 Harriet St.
22091	310 Harriet St.
22092	314 Harriet St.
22093	315 Harriet St.
22094	318 Harriet St.
22095	330 Harriet St.
22096	334 Harriet St.
22097	402 Harriet St.
22098	406 Harriet St.
22099	410 Harriet St.
22100	417 Harriet St.
22101	421 Harriet St.
22102	428 Harriet St.
22103	429 Harriet St.
22104	433 Harriet St.
22105	437 Harriet St.
22106	445 Harriet St.
22107	501 Harriet St.
22108	506 Harriet St.
22109	509 Harriet St.
22110	510 Harriet St.
22111	513 Harriet St.
22112	517 Harriet St.
22113	518 Harriet St.
22114	521 Harriet St.
22115	524 Harriet St.
22116	550 Harriet St.
22117	551 Harriet St.
22118	554 Harriet St.
22119	555 Harriet St.
22120	558 Harriet St.
22121	559 Harriet St.
22122	562 Harriet St.
22123	563 Harriet St.
22124	564 Harriet St.
22125	567 Harriet St.
22126	571 Harriet St.
22127	572 Harriet St.
22128	606 Harriet St.

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22129	609 Harriet St.
22130	805 Harriet St.
22131	300 Harrison St.
22132	300 Harrison St.
22133	300 Harrison St.
22134	300 Harrison St.
22135	300 Harrison St.
22136	300 Harrison St.
22137	405 Harrison St.
22138	517 Harrison St.
22139	529 Harrison St.
22140	615 Harrison St.
22141	615 Harrison St.
22142	640 Harrison St.
22143	718 Harrison St.
22144	718 Harrison St.
22145	718 Harrison St.
22146	719 Harrison St.
22147	725 Harrison St.
22148	901 Harrison St.
22149	914 Harrison St.
22150	1204 Harrison St.
22151	1208 Harrison St.
22152	1210 Harrison St.
22153	1424 Harrison St.
22154	1519 Harrison St.
22155	1522 Harrison St.
22156	1522 Harrison St.
22157	1534 Harrison St.
22158	1701 Harrison St.
22159	1800 Harrison St.
22160	5818 Harvard St.
22161	5912 Harvard St.
22162	6110 Harvard St.
22163	201 Hastings St.
22164	202 Hastings St.
22165	207 Hastings St.
22166	208 Hastings St.
22167	213 Hastings St.
22168	214 Hastings St.
22169	219 Hastings St.
22170	220 Hastings St.
22171	225 Hastings St.
22172	301 Hastings St.
22173	302 Hastings St.
22174	305 Hastings St.
22175	308 Hastings St.
22176	314 Hastings St.

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22177	408 Hastings St.
22178	6202 Hathaway Dr.
22179	6206 Hathaway Dr.
22180	6209 Hathaway Dr.
22181	6210 Hathaway Dr.
22182	6213 Hathaway Dr.
22183	6214 Hathaway Dr.
22184	6217 Hathaway Dr.
22185	6218 Hathaway Dr.
22186	6221 Hathaway Dr.
22187	6222 Hathaway Dr.
22188	6225 Hathaway Dr.
22189	6230 Hathaway Dr.
22190	6301 Hathaway Dr.
22191	6302 Hathaway Dr.
22192	6305 Hathaway Dr.
22193	6309 Hathaway Dr.
22194	6313 Hathaway Dr.
22195	3006 Hawthorne Dr.
22196	3010 Hawthorne Dr.
22197	3018 Hawthorne Dr.
22198	3026 Hawthorne Dr.
22199	3034 Hawthorne Dr.
22200	3101 Hawthorne Dr.
22201	3102 Hawthorne Dr.
22202	3110 Hawthorne Dr.
22203	3116 Hawthorne Dr.
22204	3202 Hawthorne Dr.
22205	3211 Hawthorne Dr.
22206	3216 Hawthorne Dr.
22207	3301 Hawthorne Dr.
22208	3302 Hawthorne Dr.
22209	3311 Hawthorne Dr.
22210	3312 Hawthorne Dr.
22211	3321 Hawthorne Dr.
22212	3322 Hawthorne Dr.
22213	3330 Hawthorne Dr.
22214	3401 Hawthorne Dr.
22215	3402 Hawthorne Dr.
22216	3411 Hawthorne Dr.
22217	3412 Hawthorne Dr.
22218	3420 Hawthorne Dr.
22219	3421 Hawthorne Dr.
22220	3430 Hawthorne Dr.
22221	3431 Hawthorne Dr.
22222	3440 Hawthorne Dr.
22223	3441 Hawthorne Dr.
22224	3450 Hawthorne Dr.

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22225	3460 Hawthorne Dr.
22226	3470 Hawthorne Dr.
22227	3480 Hawthorne Dr.
22228	3490 Hawthorne Dr.
22229	3501 Hawthorne Dr.
22230	3502 Hawthorne Dr.
22231	3525 Hawthorne Dr.
22232	3540 Hawthorne Dr.
22233	3545 Hawthorne Dr.
22234	3550 Hawthorne Dr.
22235	3602 Hawthorne Dr.
22236	3636 Hawthorne Dr.
22237	503 Hazelton St.
22238	509 Hazelton St.
22239	519 Hazelton St.
22240	523 Hazelton St.
22241	607 Hazelton St.
22242	611 Hazelton St.
22243	615 Hazelton St.
22244	621 Hazelton St.
22245	622 Hazelton St.
22246	625 Hazelton St.
22247	628 Hazelton St.
22248	702 Hazelton St.
22249	703 Hazelton St.
22250	706 Hazelton St.
22251	709 Hazelton St.
22252	710 Hazelton St.
22253	717 Hazelton St.
22254	720 Hazelton St.
22255	721 Hazelton St.
22256	724 Hazelton St.
22257	727 Hazelton St.
22258	802 Hazelton St.
22259	806 Hazelton St.
22260	807 Hazelton St.
22261	812 Hazelton St.
22262	813 Hazelton St.
22263	817 Hazelton St.
22264	126 Hector St.
22265	126 Hector St.
22266	127 Hector St.
22267	130 Hector St.
22268	131 Hector St.
22269	134 Hector St.
22270	137 Hector St.
22271	138 Hector St.
22272	142 Hector St.

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22273	146 Hector St.
22274	2918 Helber St.
22275	2922 Helber St.
22276	2934 Helber St.
22277	2938 Helber St.
22278	2942 Helber St.
22279	2946 Helber St.
22280	2950 Helber St.
22281	2954 Helber St.
22282	2955 Helber St.
22283	2958 Helber St.
22284	3007 Helber St.
22285	3013 Helber St.
22286	3014 Helber St.
22287	3017 Helber St.
22288	3018 Helber St.
22289	3023 Helber St.
22290	3029 Helber St.
22291	3101 Helber St.
22292	3109 Helber St.
22293	3113 Helber St.
22294	3117 Helber St.
22295	3120 Helber St.
22296	3201 Helber St.
22297	3202 Helber St.
22298	3213 Helber St.
22299	3216 Helber St.
22300	3221 Helber St.
22301	3222 Helber St.
22302	3301 Helber St.
22303	3302 Helber St.
22304	3308 Helber St.
22305	3309 Helber St.
22306	3314 Helber St.
22307	3315 Helber St.
22308	209 Hemphill Rd., E.
22309	213 Hemphill Rd., E.
22310	301 Hemphill Rd., E.
22311	317 Hemphill Rd., E.
22312	327 Hemphill Rd., E.
22313	337 Hemphill Rd., E.
22314	347 Hemphill Rd., E.
22315	359 Hemphill Rd., E.
22316	371 Hemphill Rd., E.
22317	401 Hemphill Rd., E.
22318	407 Hemphill Rd., E.
22319	413 Hemphill Rd., E.
22320	421 Hemphill Rd., E.

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22321	425 Hemphill Rd., E.
22322	429 Hemphill Rd., E.
22323	433 Hemphill Rd., E.
22324	617 Hemphill Rd., E.
22325	617 Hemphill Rd., E.
22326	625 Hemphill Rd., E.
22327	633 Hemphill Rd., E.
22328	641 Hemphill Rd., E.
22329	657 Hemphill Rd., E.
22330	665 Hemphill Rd., E.
22331	701 Hemphill Rd., E.
22332	711 Hemphill Rd., E.
22333	719 Hemphill Rd., E.
22334	723 Hemphill Rd., E.
22335	801 Hemphill Rd., E.
22336	805 Hemphill Rd., E.
22337	809 Hemphill Rd., E.
22338	813 Hemphill Rd., E.
22339	817 Hemphill Rd., E.
22340	901 Hemphill Rd., E.
22341	905 Hemphill Rd., E.
22342	909 Hemphill Rd., E.
22343	913 Hemphill Rd., E.
22344	917 Hemphill Rd., E.
22345	1001 Hemphill Rd., E.
22346	1005 Hemphill Rd., E.
22347	1009 Hemphill Rd., E.
22348	1013 Hemphill Rd., E.
22349	1017 Hemphill Rd., E.
22350	1021 Hemphill Rd., E.
22351	1101 Hemphill Rd., E.
22352	1105 Hemphill Rd., E.
22353	1109 Hemphill Rd., E.
22354	1113 Hemphill Rd., E.
22355	1117 Hemphill Rd., E.
22356	802 Hemphill Rd., W.
22357	806 Hemphill Rd., W.
22358	810 Hemphill Rd., W.
22359	814 Hemphill Rd., W.
22360	818 Hemphill Rd., W.
22361	822 Hemphill Rd., W.
22362	826 Hemphill Rd., W.
22363	830 Hemphill Rd., W.
22364	834 Hemphill Rd., W.
22365	838 Hemphill Rd., W.
22366	842 Hemphill Rd., W.
22367	846 Hemphill Rd., W.
22368	850 Hemphill Rd., W.

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22369	922 Hemphill Rd., W.
22370	922 Hemphill Rd., W.
22371	922 Hemphill Rd., W.
22372	950 Hemphill Rd., W.
22373	950 Hemphill Rd., W.
22374	1214 Hemphill Rd., W.
22375	1940 Hemphill Rd., W.
22376	1940 Hemphill Rd., W.
22377	1960 Hemphill Rd., W.
22378	1960 Hemphill Rd., W.
22379	2901 Henry St.
22380	2910 Henry St.
22381	2911 Henry St.
22382	2914 Henry St.
22383	2915 Henry St.
22384	2918 Henry St.
22385	2919 Henry St.
22386	2922 Henry St.
22387	2923 Henry St.
22388	2926 Henry St.
22389	2927 Henry St.
22390	2930 Henry St.
22391	2951 Henry St.
22392	2952 Henry St.
22393	2955 Henry St.
22394	2956 Henry St.
22395	2959 Henry St.
22396	2960 Henry St.
22397	2963 Henry St.
22398	2964 Henry St.
22399	2967 Henry St.
22400	2968 Henry St.
22401	2971 Henry St.
22402	2972 Henry St.
22403	2975 Henry St.
22404	2976 Henry St.
22405	2979 Henry St.
22406	2980 Henry St.
22407	3001 Henry St.
22408	3002 Henry St.
22409	3005 Henry St.
22410	3006 Henry St.
22411	3010 Henry St.
22412	3201 Herrick St.
22413	3202 Herrick St.
22414	3206 Herrick St.
22415	3209 Herrick St.
22416	3210 Herrick St.

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22417	3214 Herrick St.
22418	3217 Herrick St.
22419	3221 Herrick St.
22420	3301 Herrick St.
22421	3302 Herrick St.
22422	3305 Herrick St.
22423	3306 Herrick St.
22424	3313 Herrick St.
22425	3314 Herrick St.
22426	3318 Herrick St.
22427	3322 Herrick St.
22428	3401 Herrick St.
22429	3402 Herrick St.
22430	3410 Herrick St.
22431	3413 Herrick St.
22432	3414 Herrick St.
22433	3417 Herrick St.
22434	3422 Herrick St.
22435	3502 Herrick St.
22436	3505 Herrick St.
22437	3506 Herrick St.
22438	3509 Herrick St.
22439	3510 Herrick St.
22440	3514 Herrick St.
22441	3517 Herrick St.
22442	3518 Herrick St.
22443	3521 Herrick St.
22444	3522 Herrick St.
22445	3605 Herrick St.
22446	3609 Herrick St.
22447	3613 Herrick St.
22448	3614 Herrick St.
22449	3617 Herrick St.
22450	3618 Herrick St.
22451	3621 Herrick St.
22452	3622 Herrick St.
22453	3625 Herrick St.
22454	3626 Herrick St.
22455	3701 Herrick St.
22456	3702 Herrick St.
22457	3705 Herrick St.
22458	3709 Herrick St.
22459	3710 Herrick St.
22460	3713 Herrick St.
22461	3714 Herrick St.
22462	3717 Herrick St.
22463	3720 Herrick St.
22464	3721 Herrick St.

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22465	3801 Herrick St.
22466	3802 Herrick St.
22467	3806 Herrick St.
22468	3809 Herrick St.
22469	3810 Herrick St.
22470	3813 Herrick St.
22471	3814 Herrick St.
22472	3817 Herrick St.
22473	3818 Herrick St.
22474	3821 Herrick St.
22475	3822 Herrick St.
22476	3825 Herrick St.
22477	3826 Herrick St.
22478	3901 Herrick St.
22479	3902 Herrick St.
22480	3905 Herrick St.
22481	3906 Herrick St.
22482	3909 Herrick St.
22483	3910 Herrick St.
22484	3913 Herrick St.
22485	3914 Herrick St.
22486	3917 Herrick St.
22487	3918 Herrick St.
22488	3921 Herrick St.
22489	3922 Herrick St.
22490	3925 Herrick St.
22491	3926 Herrick St.
22492	3929 Herrick St.
22493	3930 Herrick St.
22494	3933 Herrick St.
22495	3934 Herrick St.
22496	2601 Hillcrest Ave.
22497	2602 Hillcrest Ave.
22498	2615 Hillcrest Ave.
22499	2616 Hillcrest Ave.
22500	2621 Hillcrest Ave.
22501	2627 Hillcrest Ave.
22502	2633 Hillcrest Ave.
22503	2701 Hillcrest Ave.
22504	2702 Hillcrest Ave.
22505	2721 Hillcrest Ave.
22506	2722 Hillcrest Ave.
22507	2801 Hillcrest Ave.
22508	2802 Hillcrest Ave.
22509	2818 Hillcrest Ave.
22510	2821 Hillcrest Ave.
22511	2826 Hillcrest Ave.
22512	2841 Hillcrest Ave.

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22513	2901 Hillcrest Ave.
22514	2915 Hillcrest Ave.
22515	2921 Hillcrest Ave.
22516	6202 Hillcroft Dr.
22517	6206 Hillcroft Dr.
22518	6209 Hillcroft Dr.
22519	6210 Hillcroft Dr.
22520	6213 Hillcroft Dr.
22521	6214 Hillcroft Dr.
22522	6217 Hillcroft Dr.
22523	6218 Hillcroft Dr.
22524	6222 Hillcroft Dr.
22525	6301 Hillcroft Dr.
22526	6306 Hillcroft Dr.
22527	6309 Hillcroft Dr.
22528	6310 Hillcroft Dr.
22529	6314 Hillcroft Dr.
22530	6402 Hillcroft Dr.
22531	6406 Hillcroft Dr.
22532	6414 Hillcroft Dr.
22533	6502 Hillcroft Dr.
22534	6506 Hillcroft Dr.
22535	6510 Hillcroft Dr.
22536	6514 Hillcroft Dr.
22537	6518 Hillcroft Dr.
22538	6522 Hillcroft Dr.
22539	6526 Hillcroft Dr.
22540	6530 Hillcroft Dr.
22541	6601 Hillcroft Dr.
22542	6602 Hillcroft Dr.
22543	6605 Hillcroft Dr.
22544	6606 Hillcroft Dr.
22545	6609 Hillcroft Dr.
22546	6610 Hillcroft Dr.
22547	6613 Hillcroft Dr.
22548	6614 Hillcroft Dr.
22549	6617 Hillcroft Dr.
22550	6618 Hillcroft Dr.
22551	6621 Hillcroft Dr.
22552	6622 Hillcroft Dr.
22553	6625 Hillcroft Dr.
22554	6626 Hillcroft Dr.
22555	6629 Hillcroft Dr.
22556	6630 Hillcroft Dr.
22557	6633 Hillcroft Dr.
22558	6634 Hillcroft Dr.
22559	6701 Hillcroft Dr.
22560	6702 Hillcroft Dr.

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22561	6705 Hillcroft Dr.
22562	6706 Hillcroft Dr.
22563	6709 Hillcroft Dr.
22564	6710 Hillcroft Dr.
22565	6714 Hillcroft Dr.
22566	6715 Hillcroft Dr.
22567	2001 Hills St.
22568	2002 Hills St.
22569	2007 Hills St.
22570	2008 Hills St.
22571	2013 Hills St.
22572	2014 Hills St.
22573	2019 Hills St.
22574	2020 Hills St.
22575	2025 Hills St.
22576	2026 Hills St.
22577	2031 Hills St.
22578	2032 Hills St.
22579	2037 Hills St.
22580	2038 Hills St.
22581	2101 Hills St.
22582	2102 Hills St.
22583	2108 Hills St.
22584	2111 Hills St.
22585	2119 Hills St.
22586	2125 Hills St.
22587	2129 Hills St.
22588	2137 Hills St.
22589	2201 Hills St.
22590	2207 Hills St.
22591	2211 Hills St.
22592	2215 Hills St.
22593	2219 Hills St.
22594	2220 Hills St.
22595	2223 Hills St.
22596	2228 Hills St.
22597	2301 Hills St.
22598	2302 Hills St.
22599	2305 Hills St.
22600	2306 Hills St.
22601	2309 Hills St.
22602	2310 Hills St.
22603	2313 Hills St.
22604	2314 Hills St.
22605	2317 Hills St.
22606	2401 Hills St.
22607	2402 Hills St.
22608	2405 Hills St.

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22609	2409 Hills St.
22610	2410 Hills St.
22611	2413 Hills St.
22612	2418 Hills St.
22613	2422 Hills St.
22614	2501 Hills St.
22615	2502 Hills St.
22616	2506 Hills St.
22617	2507 Hills St.
22618	2511 Hills St.
22619	2515 Hills St.
22620	101 Hobson Ave., E.
22621	105 Hobson Ave., E.
22622	109 Hobson Ave., E.
22623	110 Hobson Ave., E.
22624	113 Hobson Ave., E.
22625	114 Hobson Ave., E.
22626	117 Hobson Ave., E.
22627	121 Hobson Ave., E.
22628	122 Hobson Ave., E.
22629	125 Hobson Ave., E.
22630	126 Hobson Ave., E.
22631	134 Hobson Ave., E.
22632	137 Hobson Ave., E.
22633	141 Hobson Ave., E.
22634	142 Hobson Ave., E.
22635	144 Hobson Ave., E.
22636	145 Hobson Ave., E.
22637	154 Hobson Ave., E.
22638	157 Hobson Ave., E.
22639	158 Hobson Ave., E.
22640	201 Hobson Ave., E.
22641	202 Hobson Ave., E.
22642	205 Hobson Ave., E.
22643	209 Hobson Ave., E.
22644	212 Hobson Ave., E.
22645	213 Hobson Ave., E.
22646	217 Hobson Ave., E.
22647	222 Hobson Ave., E.
22648	225 Hobson Ave., E.
22649	226 Hobson Ave., E.
22650	229 Hobson Ave., E.
22651	233 Hobson Ave., E.
22652	234 Hobson Ave., E.
22653	237 Hobson Ave., E.
22654	238 Hobson Ave., E.
22655	241 Hobson Ave., E.
22656	245 Hobson Ave., E.

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22657	246 Hobson Ave., E.
22658	249 Hobson Ave., E.
22659	250 Hobson Ave., E.
22660	254 Hobson Ave., E.
22661	257 Hobson Ave., E.
22662	258 Hobson Ave., E.
22663	301 Hobson Ave., E.
22664	306 Hobson Ave., E.
22665	310 Hobson Ave., E.
22666	313 Hobson Ave., E.
22667	314 Hobson Ave., E.
22668	318 Hobson Ave., E.
22669	320 Hobson Ave., E.
22670	333 Hobson Ave., E.
22671	337 Hobson Ave., E.
22672	338 Hobson Ave., E.
22673	341 Hobson Ave., E.
22674	345 Hobson Ave., E.
22675	346 Hobson Ave., E.
22676	349 Hobson Ave., E.
22677	353 Hobson Ave., E.
22678	354 Hobson Ave., E.
22679	357 Hobson Ave., E.
22680	358 Hobson Ave., E.
22681	406 Hobson Ave., E.
22682	410 Hobson Ave., E.
22683	414 Hobson Ave., E.
22684	418 Hobson Ave., E.
22685	421 Hobson Ave., E.
22686	425 Hobson Ave., E.
22687	426 Hobson Ave., E.
22688	430 Hobson Ave., E.
22689	501 Hobson Ave., E.
22690	502 Hobson Ave., E.
22691	505 Hobson Ave., E.
22692	506 Hobson Ave., E.
22693	510 Hobson Ave., E.
22694	513 Hobson Ave., E.
22695	514 Hobson Ave., E.
22696	517 Hobson Ave., E.
22697	525 Hobson Ave., E.
22698	601 Hobson Ave., E.
22699	602 Hobson Ave., E.
22700	606 Hobson Ave., E.
22701	610 Hobson Ave., E.
22702	611 Hobson Ave., E.
22703	613 Hobson Ave., E.
22704	614 Hobson Ave., E.

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22705	618 Hobson Ave., E.
22706	621 Hobson Ave., E.
22707	622 Hobson Ave., E.
22708	626 Hobson Ave., E.
22709	634 Hobson Ave., E.
22710	637 Hobson Ave., E.
22711	637 Hobson Ave., E.
22712	641 Hobson Ave., E.
22713	645 Hobson Ave., E.
22714	646 Hobson Ave., E.
22715	1167 Hobson Ave., E.
22716	1171 Hobson Ave., E.
22717	1175 Hobson Ave., E.
22718	1202 Hobson Ave., E.
22719	1205 Hobson Ave., E.
22720	1213 Hobson Ave., E.
22721	1217 Hobson Ave., E.
22722	1218 Hobson Ave., E.
22723	1238 Hobson Ave., E.
22724	1707 Hobson Ave., W.
22725	1711 Hobson Ave., W.
22726	1720 Hobson Ave., W.
22727	1721 Hobson Ave., W.
22728	1724 Hobson Ave., W.
22729	1725 Hobson Ave., W.
22730	1728 Hobson Ave., W.
22731	1729 Hobson Ave., W.
22732	1732 Hobson Ave., W.
22733	1736 Hobson Ave., W.
22734	1801 Hobson Ave., W.
22735	1802 Hobson Ave., W.
22736	1806 Hobson Ave., W.
22737	1807 Hobson Ave., W.
22738	1810 Hobson Ave., W.
22739	1811 Hobson Ave., W.
22740	1814 Hobson Ave., W.
22741	1818 Hobson Ave., W.
22742	1901 Hobson Ave., W.
22743	1902 Hobson Ave., W.
22744	1907 Hobson Ave., W.
22745	1910 Hobson Ave., W.
22746	2001 Hobson Ave., W.
22747	2004 Hoff St.
22748	2014 Hoff St.
22749	2017 Hoff St.
22750	2021 Hoff St.
22751	2022 Hoff St.
22752	2025 Hoff St.

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22753	2029 Hoff St.
22754	2030 Hoff St.
22755	2033 Hoff St.
22756	2101 Hoff St.
22757	2102 Hoff St.
22758	2105 Hoff St.
22759	2106 Hoff St.
22760	2110 Hoff St.
22761	2114 Hoff St.
22762	2212 Hoff St.
22763	2213 Hoff St.
22764	2217 Hoff St.
22765	2220 Hoff St.
22766	2224 Hoff St.
22767	2225 Hoff St.
22768	2229 Hoff St.
22769	2237 Hoff St.
22770	2310 Hoff St.
22771	2410 Hoff St.
22772	2414 Hoff St.
22773	2415 Hoff St.
22774	2418 Hoff St.
22775	2419 Hoff St.
22776	2422 Hoff St.
22777	2423 Hoff St.
22778	2426 Hoff St.
22779	2427 Hoff St.
22780	2430 Hoff St.
22781	2501 Hoff St.
22782	2502 Hoff St.
22783	2505 Hoff St.
22784	2506 Hoff St.
22785	2509 Hoff St.
22786	2510 Hoff St.
22787	2513 Hoff St.
22788	2517 Hoff St.
22789	2518 Hoff St.
22790	2521 Hoff St.
22791	2525 Hoff St.
22792	2526 Hoff St.
22793	2602 Hoff St.
22794	2606 Hoff St.
22795	2610 Hoff St.
22796	2614 Hoff St.
22797	2701 Hoff St.
22798	2702 Hoff St.
22799	2806 Hoff St.
22800	3007 Hoff St.

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22801	3402 Hogarth Ave.
22802	3410 Hogarth Ave.
22803	3414 Hogarth Ave.
22804	3418 Hogarth Ave.
22805	3422 Hogarth Ave.
22806	3425 Hogarth Ave.
22807	3501 Hogarth Ave.
22808	3502 Hogarth Ave.
22809	3505 Hogarth Ave.
22810	3506 Hogarth Ave.
22811	3510 Hogarth Ave.
22812	3513 Hogarth Ave.
22813	3521 Hogarth Ave.
22814	3522 Hogarth Ave.
22815	3605 Hogarth Ave.
22816	3606 Hogarth Ave.
22817	3609 Hogarth Ave.
22818	3618 Hogarth Ave.
22819	3621 Hogarth Ave.
22820	3622 Hogarth Ave.
22821	3625 Hogarth Ave.
22822	3701 Hogarth Ave.
22823	3702 Hogarth Ave.
22824	3705 Hogarth Ave.
22825	3709 Hogarth Ave.
22826	3710 Hogarth Ave.
22827	3714 Hogarth Ave.
22828	3717 Hogarth Ave.
22829	3718 Hogarth Ave.
22830	3722 Hogarth Ave.
22831	3801 Hogarth Ave.
22832	3802 Hogarth Ave.
22833	3806 Hogarth Ave.
22834	3809 Hogarth Ave.
22835	3810 Hogarth Ave.
22836	3813 Hogarth Ave.
22837	3814 Hogarth Ave.
22838	3817 Hogarth Ave.
22839	3818 Hogarth Ave.
22840	3821 Hogarth Ave.
22841	3822 Hogarth Ave.
22842	3825 Hogarth Ave.
22843	3826 Hogarth Ave.
22844	3830 Hogarth Ave.
22845	3905 Hogarth Ave.
22846	3906 Hogarth Ave.
22847	3909 Hogarth Ave.
22848	3910 Hogarth Ave.

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22849	3915 Hogarth Ave.
22850	3918 Hogarth Ave.
22851	3921 Hogarth Ave.
22852	3922 Hogarth Ave.
22853	3925 Hogarth Ave.
22854	3926 Hogarth Ave.
22855	3929 Hogarth Ave.
22856	3930 Hogarth Ave.
22857	3934 Hogarth Ave.
22858	3935 Hogarth Ave.
22859	101 Holbrook Ave., E.
22860	102 Holbrook Ave., E.
22861	105 Holbrook Ave., E.
22862	106 Holbrook Ave., E.
22863	109 Holbrook Ave., E.
22864	110 Holbrook Ave., E.
22865	114 Holbrook Ave., E.
22866	117 Holbrook Ave., E.
22867	118 Holbrook Ave., E.
22868	120 Holbrook Ave., E.
22869	121 Holbrook Ave., E.
22870	125 Holbrook Ave., E.
22871	126 Holbrook Ave., E.
22872	129 Holbrook Ave., E.
22873	130 Holbrook Ave., E.
22874	133 Holbrook Ave., E.
22875	134 Holbrook Ave., E.
22876	137 Holbrook Ave., E.
22877	140 Holbrook Ave., E.
22878	141 Holbrook Ave., E.
22879	145 Holbrook Ave., E.
22880	150 Holbrook Ave., E.
22881	157 Holbrook Ave., E.
22882	158 Holbrook Ave., E.
22883	201 Holbrook Ave., E.
22884	202 Holbrook Ave., E.
22885	206 Holbrook Ave., E.
22886	209 Holbrook Ave., E.
22887	210 Holbrook Ave., E.
22888	217 Holbrook Ave., E.
22889	218 Holbrook Ave., E.
22890	221 Holbrook Ave., E.
22891	222 Holbrook Ave., E.
22892	225 Holbrook Ave., E.
22893	226 Holbrook Ave., E.
22894	229 Holbrook Ave., E.
22895	230 Holbrook Ave., E.
22896	233 Holbrook Ave., E.

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22897	234 Holbrook Ave., E.
22898	238 Holbrook Ave., E.
22899	241 Holbrook Ave., E.
22900	242 Holbrook Ave., E.
22901	246 Holbrook Ave., E.
22902	249 Holbrook Ave., E.
22903	250 Holbrook Ave., E.
22904	253 Holbrook Ave., E.
22905	254 Holbrook Ave., E.
22906	257 Holbrook Ave., E.
22907	258 Holbrook Ave., E.
22908	302 Holbrook Ave., E.
22909	309 Holbrook Ave., E.
22910	310 Holbrook Ave., E.
22911	313 Holbrook Ave., E.
22912	314 Holbrook Ave., E.
22913	321 Holbrook Ave., E.
22914	322 Holbrook Ave., E.
22915	325 Holbrook Ave., E.
22916	326 Holbrook Ave., E.
22917	329 Holbrook Ave., E.
22918	330 Holbrook Ave., E.
22919	333 Holbrook Ave., E.
22920	334 Holbrook Ave., E.
22921	337 Holbrook Ave., E.
22922	338 Holbrook Ave., E.
22923	341 Holbrook Ave., E.
22924	342 Holbrook Ave., E.
22925	345 Holbrook Ave., E.
22926	346 Holbrook Ave., E.
22927	349 Holbrook Ave., E.
22928	350 Holbrook Ave., E.
22929	353 Holbrook Ave., E.
22930	354 Holbrook Ave., E.
22931	357 Holbrook Ave., E.
22932	358 Holbrook Ave., E.
22933	401 Holbrook Ave., E.
22934	405 Holbrook Ave., E.
22935	406 Holbrook Ave., E.
22936	409 Holbrook Ave., E.
22937	410 Holbrook Ave., E.
22938	414 Holbrook Ave., E.
22939	417 Holbrook Ave., E.
22940	418 Holbrook Ave., E.
22941	422 Holbrook Ave., E.
22942	425 Holbrook Ave., E.
22943	426 Holbrook Ave., E.
22944	429 Holbrook Ave., E.

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22945	430 Holbrook Ave., E.
22946	502 Holbrook Ave., E.
22947	505 Holbrook Ave., E.
22948	510 Holbrook Ave., E.
22949	513 Holbrook Ave., E.
22950	514 Holbrook Ave., E.
22951	517 Holbrook Ave., E.
22952	518 Holbrook Ave., E.
22953	521 Holbrook Ave., E.
22954	522 Holbrook Ave., E.
22955	525 Holbrook Ave., E.
22956	601 Holbrook Ave., E.
22957	602 Holbrook Ave., E.
22958	606 Holbrook Ave., E.
22959	609 Holbrook Ave., E.
22960	610 Holbrook Ave., E.
22961	613 Holbrook Ave., E.
22962	614 Holbrook Ave., E.
22963	617 Holbrook Ave., E.
22964	618 Holbrook Ave., E.
22965	621 Holbrook Ave., E.
22966	622 Holbrook Ave., E.
22967	625 Holbrook Ave., E.
22968	626 Holbrook Ave., E.
22969	630 Holbrook Ave., E.
22970	633 Holbrook Ave., E.
22971	634 Holbrook Ave., E.
22972	637 Holbrook Ave., E.
22973	638 Holbrook Ave., E.
22974	642 Holbrook Ave., E.
22975	717 Holbrook Ave., E.
22976	718 Holbrook Ave., E.
22977	721 Holbrook Ave., E.
22978	722 Holbrook Ave., E.
22979	725 Holbrook Ave., E.
22980	726 Holbrook Ave., E.
22981	730 Holbrook Ave., E.
22982	738 Holbrook Ave., E.
22983	741 Holbrook Ave., E.
22984	742 Holbrook Ave., E.
22985	746 Holbrook Ave., E.
22986	749 Holbrook Ave., E.
22987	750 Holbrook Ave., E.
22988	753 Holbrook Ave., E.
22989	754 Holbrook Ave., E.
22990	757 Holbrook Ave., E.
22991	758 Holbrook Ave., E.
22992	761 Holbrook Ave., E.

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22993	762 Holbrook Ave., E.
22994	765 Holbrook Ave., E.
22995	766 Holbrook Ave., E.
22996	769 Holbrook Ave., E.
22997	770 Holbrook Ave., E.
22998	773 Holbrook Ave., E.
22999	777 Holbrook Ave., E.
23000	778 Holbrook Ave., E.
23001	801 Holbrook Ave., E.
23002	802 Holbrook Ave., E.
23003	805 Holbrook Ave., E.
23004	809 Holbrook Ave., E.
23005	810 Holbrook Ave., E.
23006	813 Holbrook Ave., E.
23007	822 Holbrook Ave., E.
23008	825 Holbrook Ave., E.
23009	902 Holbrook Ave., E.
23010	905 Holbrook Ave., E.
23011	907 Holbrook Ave., E.
23012	918 Holbrook Ave., E.
23013	923 Holbrook Ave., E.
23014	926 Holbrook Ave., E.
23015	933 Holbrook Ave., E.
23016	941 Holbrook Ave., E.
23017	945 Holbrook Ave., E.
23018	1001 Holbrook Ave., E.
23019	1009 Holbrook Ave., E.
23020	1014 Holbrook Ave., E.
23021	1017 Holbrook Ave., E.
23022	1025 Holbrook Ave., E.
23023	1026 Holbrook Ave., E.
23024	1034 Holbrook Ave., E.
23025	1037 Holbrook Ave., E.
23026	1057 Holbrook Ave., E.
23027	1062 Holbrook Ave., E.
23028	1065 Holbrook Ave., E.
23029	1066 Holbrook Ave., E.
23030	1074 Holbrook Ave., E.
23031	1159 Holbrook Ave., E.
23032	1163 Holbrook Ave., E.
23033	1164 Holbrook Ave., E.
23034	1174 Holbrook Ave., E.
23035	1175 Holbrook Ave., E.
23036	1178 Holbrook Ave., E.
23037	1179 Holbrook Ave., E.
23038	1182 Holbrook Ave., E.
23039	1183 Holbrook Ave., E.
23040	1193 Holbrook Ave., E.

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23041	1201 Holbrook Ave., E.
23042	1202 Holbrook Ave., E.
23043	1205 Holbrook Ave., E.
23044	1225 Holbrook Ave., E.
23045	1226 Holbrook Ave., E.
23046	1230 Holbrook Ave., E.
23047	1305 Holbrook Ave., E.
23048	1313 Holbrook Ave., E.
23049	109 Holbrook Ave., W.
23050	202 Holbrook Ave., W.
23051	209 Holbrook Ave., W.
23052	210 Holbrook Ave., W.
23053	217 Holbrook Ave., W.
23054	218 Holbrook Ave., W.
23055	221 Holbrook Ave., W.
23056	301 Holbrook Ave., W.
23057	302 Holbrook Ave., W.
23058	306 Holbrook Ave., W.
23059	309 Holbrook Ave., W.
23060	317 Holbrook Ave., W.
23061	318 Holbrook Ave., W.
23062	402 Holbrook Ave., W.
23063	404 Holbrook Ave., W.
23064	410 Holbrook Ave., W.
23065	413 Holbrook Ave., W.
23066	414 Holbrook Ave., W.
23067	421 Holbrook Ave., W.
23068	426 Holbrook Ave., W.
23069	430 Holbrook Ave., W.
23070	501 Holbrook Ave., W.
23071	502 Holbrook Ave., W.
23072	505 Holbrook Ave., W.
23073	506 Holbrook Ave., W.
23074	509 Holbrook Ave., W.
23075	510 Holbrook Ave., W.
23076	513 Holbrook Ave., W.
23077	514 Holbrook Ave., W.
23078	517 Holbrook Ave., W.
23079	518 Holbrook Ave., W.
23080	521 Holbrook Ave., W.
23081	522 Holbrook Ave., W.
23082	525 Holbrook Ave., W.
23083	526 Holbrook Ave., W.
23084	601 Holbrook Ave., W.
23085	602 Holbrook Ave., W.
23086	605 Holbrook Ave., W.
23087	609 Holbrook Ave., W.
23088	610 Holbrook Ave., W.

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23089	613 Holbrook Ave., W.
23090	614 Holbrook Ave., W.
23091	617 Holbrook Ave., W.
23092	618 Holbrook Ave., W.
23093	621 Holbrook Ave., W.
23094	622 Holbrook Ave., W.
23095	625 Holbrook Ave., W.
23096	626 Holbrook Ave., W.
23097	629 Holbrook Ave., W.
23098	630 Holbrook Ave., W.
23099	633 Holbrook Ave., W.
23100	634 Holbrook Ave., W.
23101	637 Holbrook Ave., W.
23102	638 Holbrook Ave., W.
23103	641 Holbrook Ave., W.
23104	642 Holbrook Ave., W.
23105	645 Holbrook Ave., W.
23106	3101 Holly Ave.
23107	3102 Holly Ave.
23108	3112 Holly Ave.
23109	3115 Holly Ave.
23110	3116 Holly Ave.
23111	3120 Holly Ave.
23112	3123 Holly Ave.
23113	3124 Holly Ave.
23114	3127 Holly Ave.
23115	3128 Holly Ave.
23116	3201 Holly Ave.
23117	3202 Holly Ave.
23118	3205 Holly Ave.
23119	3208 Holly Ave.
23120	3209 Holly Ave.
23121	3213 Holly Ave.
23122	3217 Holly Ave.
23123	3220 Holly Ave.
23124	3221 Holly Ave.
23125	3225 Holly Ave.
23126	3228 Holly Ave.
23127	3229 Holly Ave.
23128	3232 Holly Ave.
23129	3236 Holly Ave.
23130	3239 Holly Ave.
23131	3311 Holly Ave.
23132	3315 Holly Ave.
23133	3316 Holly Ave.
23134	3319 Holly Ave.
23135	3320 Holly Ave.
23136	3323 Holly Ave.

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23137	3324 Holly Ave.
23138	3401 Holly Ave.
23139	3402 Holly Ave.
23140	3405 Holly Ave.
23141	3406 Holly Ave.
23142	3409 Holly Ave.
23143	3410 Holly Ave.
23144	3413 Holly Ave.
23145	3414 Holly Ave.
23146	3417 Holly Ave.
23147	3418 Holly Ave.
23148	3422 Holly Ave.
23149	3505 Holly Ave.
23150	3506 Holly Ave.
23151	3509 Holly Ave.
23152	3510 Holly Ave.
23153	3513 Holly Ave.
23154	3514 Holly Ave.
23155	3517 Holly Ave.
23156	3518 Holly Ave.
23157	3521 Holly Ave.
23158	3522 Holly Ave.
23159	3525 Holly Ave.
23160	3526 Holly Ave.
23161	3601 Holly Ave.
23162	3602 Holly Ave.
23163	3605 Holly Ave.
23164	3606 Holly Ave.
23165	3609 Holly Ave.
23166	3610 Holly Ave.
23167	3614 Holly Ave.
23168	3617 Holly Ave.
23169	3618 Holly Ave.
23170	3621 Holly Ave.
23171	3622 Holly Ave.
23172	3710 Holly Ave.
23173	3714 Holly Ave.
23174	3715 Holly Ave.
23175	3717 Holly Ave.
23176	3718 Holly Ave.
23177	3719 Holly Ave.
23178	3722 Holly Ave.
23179	3723 Holly Ave.
23180	3726 Holly Ave.
23181	3727 Holly Ave.
23182	3730 Holly Ave.
23183	3733 Holly Ave.
23184	3734 Holly Ave.

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23185	3737 Holly Ave.
23186	3738 Holly Ave.
23187	3741 Holly Ave.
23188	3742 Holly Ave.
23189	3745 Holly Ave.
23190	3748 Holly Ave.
23191	3749 Holly Ave.
23192	3801 Holly Ave.
23193	3802 Holly Ave.
23194	3805 Holly Ave.
23195	3806 Holly Ave.
23196	3809 Holly Ave.
23197	3810 Holly Ave.
23198	3813 Holly Ave.
23199	3814 Holly Ave.
23200	3817 Holly Ave.
23201	3818 Holly Ave.
23202	3821 Holly Ave.
23203	3822 Holly Ave.
23204	3825 Holly Ave.
23205	3826 Holly Ave.
23206	3829 Holly Ave.
23207	3833 Holly Ave.
23208	3837 Holly Ave.
23209	3841 Holly Ave.
23210	102 Home Ave., E.
23211	106 Home Ave., E.
23212	109 Home Ave., E.
23213	110 Home Ave., E.
23214	114 Home Ave., E.
23215	117 Home Ave., E.
23216	118 Home Ave., E.
23217	122 Home Ave., E.
23218	125 Home Ave., E.
23219	126 Home Ave., E.
23220	130 Home Ave., E.
23221	134 Home Ave., E.
23222	138 Home Ave., E.
23223	139 Home Ave., E.
23224	141 Home Ave., E.
23225	142 Home Ave., E.
23226	146 Home Ave., E.
23227	147 Home Ave., E.
23228	150 Home Ave., E.
23229	153 Home Ave., E.
23230	157 Home Ave., E.
23231	201 Home Ave., E.
23232	205 Home Ave., E.

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23233	206 Home Ave., E.
23234	209 Home Ave., E.
23235	210 Home Ave., E.
23236	214 Home Ave., E.
23237	217 Home Ave., E.
23238	218 Home Ave., E.
23239	221 Home Ave., E.
23240	222 Home Ave., E.
23241	225 Home Ave., E.
23242	226 Home Ave., E.
23243	229 Home Ave., E.
23244	233 Home Ave., E.
23245	238 Home Ave., E.
23246	241 Home Ave., E.
23247	246 Home Ave., E.
23248	249 Home Ave., E.
23249	250 Home Ave., E.
23250	253 Home Ave., E.
23251	257 Home Ave., E.
23252	258 Home Ave., E.
23253	301 Home Ave., E.
23254	305 Home Ave., E.
23255	306 Home Ave., E.
23256	309 Home Ave., E.
23257	313 Home Ave., E.
23258	314 Home Ave., E.
23259	317 Home Ave., E.
23260	325 Home Ave., E.
23261	326 Home Ave., E.
23262	330 Home Ave., E.
23263	334 Home Ave., E.
23264	337 Home Ave., E.
23265	338 Home Ave., E.
23266	342 Home Ave., E.
23267	345 Home Ave., E.
23268	346 Home Ave., E.
23269	349 Home Ave., E.
23270	353 Home Ave., E.
23271	354 Home Ave., E.
23272	357 Home Ave., E.
23273	358 Home Ave., E.
23274	401 Home Ave., E.
23275	405 Home Ave., E.
23276	409 Home Ave., E.
23277	413 Home Ave., E.
23278	414 Home Ave., E.
23279	417 Home Ave., E.
23280	418 Home Ave., E.

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23281	421 Home Ave., E.
23282	422 Home Ave., E.
23283	425 Home Ave., E.
23284	429 Home Ave., E.
23285	501 Home Ave., E.
23286	502 Home Ave., E.
23287	505 Home Ave., E.
23288	506 Home Ave., E.
23289	512 Home Ave., E.
23290	513 Home Ave., E.
23291	514 Home Ave., E.
23292	522 Home Ave., E.
23293	525 Home Ave., E.
23294	526 Home Ave., E.
23295	601 Home Ave., E.
23296	602 Home Ave., E.
23297	606 Home Ave., E.
23298	609 Home Ave., E.
23299	610 Home Ave., E.
23300	614 Home Ave., E.
23301	622 Home Ave., E.
23302	625 Home Ave., E.
23303	626 Home Ave., E.
23304	629 Home Ave., E.
23305	632 Home Ave., E.
23306	633 Home Ave., E.
23307	638 Home Ave., E.
23308	1155 Home Ave., E.
23309	1159 Home Ave., E.
23310	1163 Home Ave., E.
23311	1164 Home Ave., E.
23312	1167 Home Ave., E.
23313	1168 Home Ave., E.
23314	1171 Home Ave., E.
23315	1172 Home Ave., E.
23316	1175 Home Ave., E.
23317	1176 Home Ave., E.
23318	1201 Home Ave., E.
23319	1205 Home Ave., E.
23320	1206 Home Ave., E.
23321	1209 Home Ave., E.
23322	1213 Home Ave., E.
23323	1217 Home Ave., E.
23324	1221 Home Ave., E.
23325	1222 Home Ave., E.
23326	1226 Home Ave., E.
23327	1272 Home Ave., E.
23328	112 Home Ave., W.

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23329	116 Home Ave., W.
23330	120 Home Ave., W.
23331	121 Home Ave., W.
23332	124 Home Ave., W.
23333	128 Home Ave., W.
23334	129 Home Ave., W.
23335	201 Home Ave., W.
23336	204 Home Ave., W.
23337	205 Home Ave., W.
23338	209 Home Ave., W.
23339	213 Home Ave., W.
23340	217 Home Ave., W.
23341	218 Home Ave., W.
23342	222 Home Ave., W.
23343	226 Home Ave., W.
23344	301 Home Ave., W.
23345	302 Home Ave., W.
23346	305 Home Ave., W.
23347	306 Home Ave., W.
23348	309 Home Ave., W.
23349	310 Home Ave., W.
23350	313 Home Ave., W.
23351	401 Home Ave., W.
23352	402 Home Ave., W.
23353	402 Home Ave., W.
23354	408 Home Ave., W.
23355	412 Home Ave., W.
23356	413 Home Ave., W.
23357	417 Home Ave., W.
23358	425 Home Ave., W.
23359	426 Home Ave., W.
23360	429 Home Ave., W.
23361	430 Home Ave., W.
23362	433 Home Ave., W.
23363	434 Home Ave., W.
23364	501 Home Ave., W.
23365	505 Home Ave., W.
23366	509 Home Ave., W.
23367	513 Home Ave., W.
23368	517 Home Ave., W.
23369	520 Home Ave., W.
23370	523 Home Ave., W.
23371	527 Home Ave., W.
23372	531 Home Ave., W.
23373	535 Home Ave., W.
23374	536 Home Ave., W.
23375	540 Home Ave., W.
23376	601 Home Ave., W.

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23377	606 Home Ave., W.
23378	610 Home Ave., W.
23379	613 Home Ave., W.
23380	614 Home Ave., W.
23381	619 Home Ave., W.
23382	622 Home Ave., W.
23383	627 Home Ave., W.
23384	628 Home Ave., W.
23385	633 Home Ave., W.
23386	634 Home Ave., W.
23387	638 Home Ave., W.
23388	641 Home Ave., W.
23389	1117 Home Ave., W.
23390	1118 Home Ave., W.
23391	1201 Home Ave., W.
23392	1202 Home Ave., W.
23393	1211 Home Ave., W.
23394	1214 Home Ave., W.
23395	1215 Home Ave., W.
23396	1219 Home Ave., W.
23397	1220 Home Ave., W.
23398	1223 Home Ave., W.
23399	1227 Home Ave., W.
23400	1302 Home Ave., W.
23401	1306 Home Ave., W.
23402	1307 Home Ave., W.
23403	1312 Home Ave., W.
23404	1313 Home Ave., W.
23405	1316 Home Ave., W.
23406	1320 Home Ave., W.
23407	1324 Home Ave., W.
23408	1328 Home Ave., W.
23409	1402 Home Ave., W.
23410	1406 Home Ave., W.
23411	1407 Home Ave., W.
23412	1410 Home Ave., W.
23413	1414 Home Ave., W.
23414	1418 Home Ave., W.
23415	1422 Home Ave., W.
23416	1502 Home Ave., W.
23417	1508 Home Ave., W.
23418	1511 Home Ave., W.
23419	1512 Home Ave., W.
23420	1515 Home Ave., W.
23421	1516 Home Ave., W.
23422	1520 Home Ave., W.
23423	1521 Home Ave., W.
23424	1526 Home Ave., W.

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23425	1527 Home Ave., W.
23426	1601 Home Ave., W.
23427	1606 Home Ave., W.
23428	1610 Home Ave., W.
23429	1611 Home Ave., W.
23430	1614 Home Ave., W.
23431	1615 Home Ave., W.
23432	1618 Home Ave., W.
23433	1622 Home Ave., W.
23434	1701 Home Ave., W.
23435	1702 Home Ave., W.
23436	1705 Home Ave., W.
23437	1706 Home Ave., W.
23438	1709 Home Ave., W.
23439	1710 Home Ave., W.
23440	1713 Home Ave., W.
23441	1714 Home Ave., W.
23442	1801 Home Ave., W.
23443	1802 Home Ave., W.
23444	1805 Home Ave., W.
23445	1806 Home Ave., W.
23446	1809 Home Ave., W.
23447	1810 Home Ave., W.
23448	1813 Home Ave., W.
23449	1814 Home Ave., W.
23450	1901 Home Ave., W.
23451	1902 Home Ave., W.
23452	1905 Home Ave., W.
23453	1906 Home Ave., W.
23454	1909 Home Ave., W.
23455	1910 Home Ave., W.
23456	1914 Home Ave., W.
23457	2006 Home Ave., W.
23458	2010 Home Ave., W.
23459	2014 Home Ave., W.
23460	2102 Home Ave., W.
23461	2106 Home Ave., W.
23462	2110 Home Ave., W.
23463	2114 Home Ave., W.
23464	2118 Home Ave., W.
23465	2122 Home Ave., W.
23466	2130 Home Ave., W.
23467	2134 Home Ave., W.
23468	2202 Home Ave., W.
23469	2206 Home Ave., W.
23470	2210 Home Ave., W.
23471	2214 Home Ave., W.
23472	2222 Home Ave., W.

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23473	116 Horner Ct.
23474	4902 Horton Ave.
23475	4906 Horton Ave.
23476	5002 Horton Ave.
23477	5010 Horton Ave.
23478	5014 Horton Ave.
23479	5017 Horton Ave.
23480	5018 Horton Ave.
23481	5101 Horton Ave.
23482	5103 Horton Ave.
23483	5109 Horton Ave.
23484	5113 Horton Ave.
23485	5117 Horton Ave.
23486	5401 Horton Ave.
23487	5409 Horton Ave.
23488	5501 Horton Ave.
23489	5555 Horton Ave.
23490	5559 Horton Ave.
23491	5563 Horton Ave.
23492	5569 Horton Ave.
23493	1813 Hosler St.
23494	1820 Hosler St.
23495	1821 Hosler St.
23496	1824 Hosler St.
23497	1825 Hosler St.
23498	1828 Hosler St.
23499	1829 Hosler St.
23500	1832 Hosler St.
23501	1835 Hosler St.
23502	1836 Hosler St.
23503	1840 Hosler St.
23504	1841 Hosler St.
23505	1845 Hosler St.
23506	1846 Hosler St.
23507	1849 Hosler St.
23508	1850 Hosler St.
23509	1853 Hosler St.
23510	1856 Hosler St.
23511	1857 Hosler St.
23512	1860 Hosler St.
23513	1863 Hosler St.
23514	1864 Hosler St.
23515	1909 Hosler St.
23516	1910 Hosler St.
23517	1915 Hosler St.
23518	1916 Hosler St.
23519	1921 Hosler St.
23520	1922 Hosler St.

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23521	1925 Hosler St.
23522	1926 Hosler St.
23523	1929 Hosler St.
23524	1930 Hosler St.
23525	1935 Hosler St.
23526	1938 Hosler St.
23527	1941 Hosler St.
23528	1942 Hosler St.
23529	1946 Hosler St.
23530	1947 Hosler St.
23531	1950 Hosler St.
23532	2002 Hosler St.
23533	1917 Howard Ave.
23534	1917 Howard Ave.
23535	1917 Howard Ave.
23536	1940 Howard Ave.
23537	1942 Howard Ave.
23538	1950 Howard Ave.
23539	1954 Howard Ave.
23540	1958 Howard Ave.
23541	1962 Howard Ave.
23542	1966 Howard Ave.
23543	1970 Howard Ave.
23544	1971 Howard Ave.
23545	1974 Howard Ave.
23546	1977 Howard Ave.
23547	1978 Howard Ave.
23548	1986 Howard Ave.
23549	1989 Howard Ave.
23550	2001 Howard Ave.
23551	2002 Howard Ave.
23552	2005 Howard Ave.
23553	2006 Howard Ave.
23554	2009 Howard Ave.
23555	2010 Howard Ave.
23556	2013 Howard Ave.
23557	2017 Howard Ave.
23558	2018 Howard Ave.
23559	2021 Howard Ave.
23560	2022 Howard Ave.
23561	2025 Howard Ave.
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23563	2029 Howard Ave.
23564	2030 Howard Ave.
23565	2033 Howard Ave.
23566	2038 Howard Ave.
23567	2042 Howard Ave.
23568	2045 Howard Ave.

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23569	2046 Howard Ave.
23570	2050 Howard Ave.
23571	2101 Howard Ave.
23572	2109 Howard Ave.
23573	2110 Howard Ave.
23574	2113 Howard Ave.
23575	2118 Howard Ave.
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23577	2121 Howard Ave.
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23579	2126 Howard Ave.
23580	2127 Howard Ave.
23581	2201 Howard Ave.
23582	2202 Howard Ave.
23583	2205 Howard Ave.
23584	2206 Howard Ave.
23585	2209 Howard Ave.
23586	2210 Howard Ave.
23587	2213 Howard Ave.
23588	2214 Howard Ave.
23589	2217 Howard Ave.
23590	2221 Howard Ave.
23591	702 Hubbard Ave.
23592	706 Hubbard Ave.
23593	710 Hubbard Ave.
23594	711 Hubbard Ave.
23595	714 Hubbard Ave.
23596	718 Hubbard Ave.
23597	719 Hubbard Ave.
23598	722 Hubbard Ave.
23599	726 Hubbard Ave.
23600	727 Hubbard Ave.
23601	730 Hubbard Ave.
23602	733 Hubbard Ave.
23603	734 Hubbard Ave.
23604	801 Hubbard Ave.
23605	802 Hubbard Ave.
23606	806 Hubbard Ave.
23607	807 Hubbard Ave.
23608	810 Hubbard Ave.
23609	813 Hubbard Ave.
23610	814 Hubbard Ave.
23611	818 Hubbard Ave.
23612	819 Hubbard Ave.
23613	822 Hubbard Ave.
23614	823 Hubbard Ave.
23615	901 Hubbard Ave.
23616	902 Hubbard Ave.

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23617	910 Hubbard Ave.
23618	913 Hubbard Ave.
23619	916 Hubbard Ave.
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23627	936 Hubbard Ave.
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23631	948 Hubbard Ave.
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23633	951 Hubbard Ave.
23634	952 Hubbard Ave.
23635	955 Hubbard Ave.
23636	956 Hubbard Ave.
23637	959 Hubbard Ave.
23638	960 Hubbard Ave.
23639	963 Hubbard Ave.
23640	964 Hubbard Ave.
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23647	980 Hubbard Ave.
23648	983 Hubbard Ave.
23649	984 Hubbard Ave.
23650	987 Hubbard Ave.
23651	988 Hubbard Ave.
23652	991 Hubbard Ave.
23653	992 Hubbard Ave.
23654	995 Hubbard Ave.
23655	996 Hubbard Ave.
23656	1013 Hubbard Ave.
23657	1068 Hubbard Ave.
23658	1068 Hubbard Ave.
23659	4302 Huckleberry Ln.
23660	4306 Huckleberry Ln.
23661	4310 Huckleberry Ln.
23662	4313 Huckleberry Ln.
23663	4314 Huckleberry Ln.
23664	4317 Huckleberry Ln.

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23665	4318 Huckleberry Ln.
23666	4401 Huckleberry Ln.
23667	4402 Huckleberry Ln.
23668	4405 Huckleberry Ln.
23669	4406 Huckleberry Ln.
23670	4409 Huckleberry Ln.
23671	4410 Huckleberry Ln.
23672	4413 Huckleberry Ln.
23673	4414 Huckleberry Ln.
23674	4417 Huckleberry Ln.
23675	4418 Huckleberry Ln.
23676	4501 Huckleberry Ln.
23677	4502 Huckleberry Ln.
23678	4505 Huckleberry Ln.
23679	4506 Huckleberry Ln.
23680	4509 Huckleberry Ln.
23681	4510 Huckleberry Ln.
23682	4513 Huckleberry Ln.
23683	4514 Huckleberry Ln.
23684	4518 Huckleberry Ln.
23685	4519 Huckleberry Ln.
23686	4522 Huckleberry Ln.
23687	4526 Huckleberry Ln.
23688	3402 Huggins St.
23689	3407 Huggins St.
23690	3408 Huggins St.
23691	3413 Huggins St.
23692	3414 Huggins St.
23693	3419 Huggins St.
23694	3420 Huggins St.
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23697	3501 Huggins St.
23698	3502 Huggins St.
23699	3507 Huggins St.
23700	3508 Huggins St.
23701	3513 Huggins St.
23702	3514 Huggins St.
23703	3519 Huggins St.
23704	3601 Huggins St.
23705	3602 Huggins St.
23706	3607 Huggins St.
23707	3608 Huggins St.
23708	3613 Huggins St.
23709	3614 Huggins St.
23710	3619 Huggins St.
23711	3620 Huggins St.
23712	3702 Huggins St.

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23713	3707 Huggins St.
23714	3708 Huggins St.
23715	3713 Huggins St.
23716	3714 Huggins St.
23717	3719 Huggins St.
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23720	3726 Huggins St.
23721	3801 Huggins St.
23722	3802 Huggins St.
23723	3807 Huggins St.
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23727	3819 Huggins St.
23728	3820 Huggins St.
23729	3901 Huggins St.
23730	3902 Huggins St.
23731	3905 Huggins St.
23732	3907 Huggins St.
23733	3908 Huggins St.
23734	3914 Huggins St.
23735	3919 Huggins St.
23736	3920 Huggins St.
23737	911 Hughes Ave.
23738	912 Hughes Ave.
23739	915 Hughes Ave.
23740	916 Hughes Ave.
23741	919 Hughes Ave.
23742	921 Hughes Ave.
23743	924 Hughes Ave.
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23745	928 Hughes Ave.
23746	931 Hughes Ave.
23747	932 Hughes Ave.
23748	935 Hughes Ave.
23749	938 Hughes Ave.
23750	939 Hughes Ave.
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23753	951 Hughes Ave.
23754	952 Hughes Ave.
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23756	955 Hughes Ave.
23757	959 Hughes Ave.
23758	960 Hughes Ave.
23759	964 Hughes Ave.
23760	1006 Hughes Ave.

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23761	1010 Hughes Ave.
23762	1013 Hughes Ave.
23763	1014 Hughes Ave.
23764	1018 Hughes Ave.
23765	1114 Hughes Ave.
23766	1115 Hughes Ave.
23767	1119 Hughes Ave.
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23769	1123 Hughes Ave.
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23772	1129 Hughes Ave.
23773	1201 Hughes Ave.
23774	1202 Hughes Ave.
23775	1205 Hughes Ave.
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23778	1209 Hughes Ave.
23779	1210 Hughes Ave.
23780	1215 Hughes Ave.
23781	1218 Hughes Ave.
23782	1222 Hughes Ave.
23783	1301 Hughes Ave.
23784	1304 Hughes Ave.
23785	1309 Hughes Ave.
23786	1310 Hughes Ave.
23787	1313 Hughes Ave.
23788	1314 Hughes Ave.
23789	1317 Hughes Ave.
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23798	1401 Hughes Ave.
23799	1405 Hughes Ave.
23800	1409 Hughes Ave.
23801	1410 Hughes Ave.
23802	1414 Hughes Ave.
23803	1415 Hughes Ave.
23804	1418 Hughes Ave.
23805	1421 Hughes Ave.
23806	1422 Hughes Ave.
23807	1425 Hughes Ave.
23808	1501 Hughes Ave.

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23809	1502 Hughes Ave.
23810	1505 Hughes Ave.
23811	1506 Hughes Ave.
23812	1514 Hughes Ave.
23813	1515 Hughes Ave.
23814	1517 Hughes Ave.
23815	1518 Hughes Ave.
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23822	1613 Hughes Ave.
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23824	1618 Hughes Ave.
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23826	1626 Hughes Ave.
23827	2301 Humboldt Ave.
23828	2302 Humboldt Ave.
23829	2305 Humboldt Ave.
23830	2306 Humboldt Ave.
23831	2309 Humboldt Ave.
23832	2310 Humboldt Ave.
23833	2313 Humboldt Ave.
23834	2314 Humboldt Ave.
23835	2317 Humboldt Ave.
23836	2318 Humboldt Ave.
23837	2321 Humboldt Ave.
23838	2322 Humboldt Ave.
23839	2325 Humboldt Ave.
23840	2326 Humboldt Ave.
23841	2329 Humboldt Ave.
23842	2330 Humboldt Ave.
23843	2333 Humboldt Ave.
23844	2334 Humboldt Ave.
23845	2338 Humboldt Ave.
23846	2401 Humboldt Ave.
23847	2402 Humboldt Ave.
23848	2405 Humboldt Ave.
23849	2406 Humboldt Ave.
23850	2409 Humboldt Ave.
23851	2410 Humboldt Ave.
23852	2413 Humboldt Ave.
23853	2414 Humboldt Ave.
23854	2417 Humboldt Ave.
23855	2421 Humboldt Ave.
23856	2425 Humboldt Ave.

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23857	2429 Humboldt Ave.
23858	2433 Humboldt Ave.
23859	2437 Humboldt Ave.
23860	2501 Humboldt Ave.
23861	2505 Humboldt Ave.
23862	2509 Humboldt Ave.
23863	2513 Humboldt Ave.
23864	2601 Humboldt Ave.
23865	2605 Humboldt Ave.
23866	2609 Humboldt Ave.
23867	2613 Humboldt Ave.
23868	2617 Humboldt Ave.
23869	2621 Humboldt Ave.
23870	2625 Humboldt Ave.
23871	218 Hunt Ln.
23872	1 Hurley Plaza.
23873	1 Hurley Plaza.
23874	1 Hurley Plaza.
23875	1 Hurley Plaza.
23876	1 Hurley Plaza.
23877	1 Hurley Plaza.
23878	1 Hurley Plaza.
23879	1 Hurley Plaza.
23880	1 Hurley Plaza.
23881	2 Hurley Plaza.
23882	2 Hurley Plaza.
23883	2 Hurley Plaza.
23884	2 Hurley Plaza.
23885	2 Hurley Plaza.
23886	2 Hurley Plaza.
23887	2 Hurley Plaza.
23888	2 Hurley Plaza.
23889	2 Hurley Plaza.
23890	2 Hurley Plaza.
23891	2 Hurley Plaza.
23892	503 Hurley St.
23893	510 Hurley St.
23894	514 Hurley St.
23895	526 Hurley St.
23896	530 Hurley St.
23897	534 Hurley St.
23898	511 Huron St.
23899	512 Huron St.
23900	515 Huron St.
23901	516 Huron St.
23902	519 Huron St.
23903	520 Huron St.
23904	523 Huron St.

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23905	524 Huron St.
23906	611 Huron St.
23907	612 Huron St.
23908	615 Huron St.
23909	616 Huron St.
23910	620 Huron St.
23911	623 Huron St.
23912	624 Huron St.
23913	627 Huron St.
23914	628 Huron St.
23915	631 Huron St.
23916	632 Huron St.
23917	635 Huron St.
23918	636 Huron St.
23919	639 Huron St.
23920	640 Huron St.
23921	644 Huron St.
23922	647 Huron St.
23923	648 Huron St.
23924	651 Huron St.
23925	652 Huron St.
23926	701 Huron St.
23927	702 Huron St.
23928	705 Huron St.
23929	706 Huron St.
23930	710 Huron St.
23931	711 Huron St.
23932	713 Huron St.
23933	714 Huron St.
23934	717 Huron St.
23935	718 Huron St.
23936	721 Huron St.
23937	722 Huron St.
23938	725 Huron St.
23939	726 Huron St.
23940	729 Huron St.
23941	730 Huron St.
23942	733 Huron St.
23943	734 Huron St.
23944	737 Huron St.
23945	738 Huron St.
23946	741 Huron St.
23947	742 Huron St.
23948	745 Huron St.
23949	746 Huron St.
23950	749 Huron St.
23951	750 Huron St.
23952	801 Huron St.

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23953	802 Huron St.
23954	806 Huron St.
23955	809 Huron St.
23956	813 Huron St.
23957	814 Huron St.
23958	817 Huron St.
23959	818 Huron St.
23960	822 Huron St.
23961	825 Huron St.
23962	829 Huron St.
23963	830 Huron St.
23964	833 Huron St.
23965	834 Huron St.
23966	841 Huron St.
23967	842 Huron St.
23968	845 Huron St.
23969	850 Huron St.
23970	853 Huron St.
23971	858 Huron St.
23972	901 Huron St.
23973	902 Huron St.
23974	911 Huron St.
23975	912 Huron St.
23976	917 Huron St.
23977	920 Huron St.
23978	924 Huron St.
23979	927 Huron St.
23980	928 Huron St.
23981	932 Huron St.
23982	935 Huron St.
23983	936 Huron St.
23984	940 Huron St.
23985	943 Huron St.
23986	944 Huron St.
23987	951 Huron St.
23988	952 Huron St.
23989	956 Huron St.
23990	1014 Huron St.
23991	1016 Huron St.
23992	1023 Huron St.
23993	1024 Huron St.
23994	1027 Huron St.
23995	1032 Huron St.
23996	1035 Huron St.
23997	1039 Huron St.
23998	1044 Huron St.
23999	1102 Huron St.
24000	1105 Huron St.

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24001	1110 Huron St.
24002	1114 Huron St.
24003	1117 Huron St.
24004	1118 Huron St.
24005	1121 Huron St.
24006	1122 Huron St.
24007	1126 Huron St.
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24009	1129 Huron St.
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24013	1206 Huron St.
24014	1210 Huron St.
24015	1211 Huron St.
24016	1214 Huron St.
24017	1215 Huron St.
24018	1219 Huron St.
24019	1222 Huron St.
24020	1225 Huron St.
24021	1226 Huron St.
24022	1229 Huron St.
24023	1231 Huron St.
24024	1234 Huron St.
24025	1238 Huron St.
24026	1241 Huron St.
24027	1302 Huron St.
24028	1305 Huron St.
24029	1310 Huron St.
24030	1311 Huron St.
24031	1315 Huron St.
24032	1322 Huron St.
24033	1324 Huron St.
24034	1325 Huron St.
24035	1328 Huron St.
24036	1329 Huron St.
24037	1001 Ida Ave.
24038	1005 Ida Ave.
24039	1007 Ida Ave.
24040	1009 Ida Ave.
24041	1013 Ida Ave.
24042	1112 Ida Ave.
24043	1114 Ida Ave.
24044	1115 Ida Ave.
24045	1116 Ida Ave.
24046	1117 Ida Ave.
24047	1119 Ida Ave.
24048	1120 Ida Ave.

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24049	1123 Ida Ave.
24050	1124 Ida Ave.
24051	1125 Ida Ave.
24052	1201 Ida Ave.
24053	1202 Ida Ave.
24054	1205 Ida Ave.
24055	1206 Ida Ave.
24056	1208 Ida Ave.
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24059	1301 Ida Ave.
24060	1302 Ida Ave.
24061	1305 Ida Ave.
24062	1308 Ida Ave.
24063	1309 Ida Ave.
24064	1312 Ida Ave.
24065	1315 Ida Ave.
24066	1316 Ida Ave.
24067	1317 Ida Ave.
24068	1320 Ida Ave.
24069	1321 Ida Ave.
24070	1324 Ida Ave.
24071	1401 Ida Ave.
24072	1402 Ida Ave.
24073	1405 Ida Ave.
24074	1409 Ida Ave.
24075	1410 Ida Ave.
24076	1412 Ida Ave.
24077	1416 Ida Ave.
24078	1313 Illinois Ave.
24079	1401 Illinois Ave.
24080	1405 Illinois Ave.
24081	1408 Illinois Ave.
24082	1409 Illinois Ave.
24083	1413 Illinois Ave.
24084	1414 Illinois Ave.
24085	1417 Illinois Ave.
24086	1420 Illinois Ave.
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24090	1431 Illinois Ave.
24091	1433 Illinois Ave.
24092	1437 Illinois Ave.
24093	1501 Illinois Ave.
24094	1502 Illinois Ave.
24095	1504 Illinois Ave.
24096	1507 Illinois Ave.

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24097	1508 Illinois Ave.
24098	1509 Illinois Ave.
24099	1512 Illinois Ave.
24100	1513 Illinois Ave.
24101	1515 Illinois Ave.
24102	1516 Illinois Ave.
24103	1521 Illinois Ave.
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24106	1526 Illinois Ave.
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24119	1601 Illinois Ave.
24120	1605 Illinois Ave.
24121	1609 Illinois Ave.
24122	1610 Illinois Ave.
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24137	1641 Illinois Ave.
24138	1642 Illinois Ave.
24139	1646 Illinois Ave.
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24141	1649 Illinois Ave.
24142	1650 Illinois Ave.
24143	1653 Illinois Ave.
24144	1654 Illinois Ave.

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24145	1657 Illinois Ave.
24146	1658 Illinois Ave.
24147	1701 Illinois Ave.
24148	1702 Illinois Ave.
24149	1705 Illinois Ave.
24150	1709 Illinois Ave.
24151	1710 Illinois Ave.
24152	1713 Illinois Ave.
24153	1714 Illinois Ave.
24154	1717 Illinois Ave.
24155	1721 Illinois Ave.
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24157	1725 Illinois Ave.
24158	1726 Illinois Ave.
24159	1729 Illinois Ave.
24160	1730 Illinois Ave.
24161	1733 Illinois Ave.
24162	1734 Illinois Ave.
24163	1735 Illinois Ave.
24164	1736 Illinois Ave.
24165	1802 Illinois Ave.
24166	1806 Illinois Ave.
24167	1810 Illinois Ave.
24168	1911 Illinois Ave.
24169	2002 Illinois Ave.
24170	2006 Illinois Ave.
24171	2111 Illinois Ave.
24172	2112 Illinois Ave.
24173	2115 Illinois Ave.
24174	2116 Illinois Ave.
24175	2119 Illinois Ave.
24176	2120 Illinois Ave.
24177	2124 Illinois Ave.
24178	2128 Illinois Ave.
24179	2202 Illinois Ave.
24180	2208 Illinois Ave.
24181	2213 Illinois Ave.
24182	2214 Illinois Ave.
24183	2217 Illinois Ave.
24184	2218 Illinois Ave.
24185	2301 Illinois Ave.
24186	2305 Illinois Ave.
24187	2306 Illinois Ave.
24188	2309 Illinois Ave.
24189	2310 Illinois Ave.
24190	2313 Illinois Ave.
24191	2317 Illinois Ave.
24192	2318 Illinois Ave.

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24193	2402 Illinois Ave.
24194	2406 Illinois Ave.
24195	2411 Illinois Ave.
24196	2412 Illinois Ave.
24197	2419 Illinois Ave.
24198	2420 Illinois Ave.
24199	2428 Illinois Ave.
24200	2432 Illinois Ave.
24201	2436 Illinois Ave.
24202	2502 Illinois Ave.
24203	2506 Illinois Ave.
24204	2514 Illinois Ave.
24205	2601 Illinois Ave.
24206	2602 Illinois Ave.
24207	2606 Illinois Ave.
24208	2610 Illinois Ave.
24209	2614 Illinois Ave.
24210	2604 Indian Bow Tr.
24211	2612 Indian Bow Tr.
24212	2613 Indian Bow Tr.
24213	2620 Indian Bow Tr.
24214	2621 Indian Bow Tr.
24215	2712 Indian Bow Tr.
24216	2721 Indian Bow Tr.
24217	1309 Indiana Ave.
24218	1310 Indiana Ave.
24219	1406 Indiana Ave.
24220	1409 Indiana Ave.
24221	1410 Indiana Ave.
24222	1413 Indiana Ave.
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24225	1421 Indiana Ave.
24226	1422 Indiana Ave.
24227	1425 Indiana Ave.
24228	1426 Indiana Ave.
24229	1429 Indiana Ave.
24230	1430 Indiana Ave.
24231	1434 Indiana Ave.
24232	1435 Indiana Ave.
24233	1437 Indiana Ave.
24234	1438 Indiana Ave.
24235	1441 Indiana Ave.
24236	1442 Indiana Ave.
24237	1445 Indiana Ave.
24238	1449 Indiana Ave.
24239	1450 Indiana Ave.
24240	1453 Indiana Ave.

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24241	1454 Indiana Ave.
24242	1458 Indiana Ave.
24243	1459 Indiana Ave.
24244	1501 Indiana Ave.
24245	1502 Indiana Ave.
24246	1506 Indiana Ave.
24247	1507 Indiana Ave.
24248	1509 Indiana Ave.
24249	1510 Indiana Ave.
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24251	1514 Indiana Ave.
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24254	1521 Indiana Ave.
24255	1522 Indiana Ave.
24256	1525 Indiana Ave.
24257	1526 Indiana Ave.
24258	1529 Indiana Ave.
24259	1530 Indiana Ave.
24260	1533 Indiana Ave.
24261	1534 Indiana Ave.
24262	1537 Indiana Ave.
24263	1538 Indiana Ave.
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24265	1542 Indiana Ave.
24266	1546 Indiana Ave.
24267	1547 Indiana Ave.
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24269	1555 Indiana Ave.
24270	1556 Indiana Ave.
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24272	1610 Indiana Ave.
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24280	1638 Indiana Ave.
24281	1641 Indiana Ave.
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24283	1645 Indiana Ave.
24284	1646 Indiana Ave.
24285	1649 Indiana Ave.
24286	1652 Indiana Ave.
24287	1654 Indiana Ave.
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24289	1657 Indiana Ave.
24290	1658 Indiana Ave.
24291	1701 Indiana Ave.
24292	1702 Indiana Ave.
24293	1705 Indiana Ave.
24294	1706 Indiana Ave.
24295	1709 Indiana Ave.
24296	1710 Indiana Ave.
24297	1713 Indiana Ave.
24298	1714 Indiana Ave.
24299	1718 Indiana Ave.
24300	1719 Indiana Ave.
24301	1721 Indiana Ave.
24302	1722 Indiana Ave.
24303	1725 Indiana Ave.
24304	1726 Indiana Ave.
24305	1729 Indiana Ave.
24306	1730 Indiana Ave.
24307	1731 Indiana Ave.
24308	1733 Indiana Ave.
24309	1734 Indiana Ave.
24310	1738 Indiana Ave.
24311	727 Industrial Ave.
24312	1620 Industrial Ave.
24313	2525 Industrial Ave.
24314	3111 Industrial Ave.
24315	3819 Industrial Ave.
24316	4501 Industrial Ave.
24317	4502 Industrial Ave.
24318	4713 Industrial Ave.
24319	5002 Industrial Ave.
24320	5104 Industrial Ave.
24321	3421 Industrial Ave.
24322	3613 Industrial Ave.
24323	3615 Industrial Ave.
24324	3701 Industrial Ave.
24325	3711 Industrial Ave.
24326	3713 Industrial Ave.
24327	3813 Industrial Ave.
24328	3817 Industrial Ave.
24329	3819 Industrial Ave.
24330	3901 Industrial Ave.
24331	3905 Industrial Ave.
24332	3915 Industrial Ave.
24333	3919 Industrial Ave.
24334	3925 Industrial Ave.
24335	4009 Industrial Ave.
24336	4021 Industrial Ave.

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24337	4029 Industrial Ave.
24338	4037 Industrial Ave.
24339	4105 Industrial Ave.
24340	4221 Industrial Ave.
24341	4306 Industrial Ave.
24342	4310 Industrial Ave.
24343	4401 Industrial Ave.
24344	4403 Industrial Ave.
24345	4418 Industrial Ave.
24346	4501 Industrial Ave.
24347	4502 Industrial Ave.
24348	4510 Industrial Ave.
24349	4514 Industrial Ave.
24350	4519 Industrial Ave.
24351	4602 Industrial Ave.
24352	4605 Industrial Ave.
24353	4702 Industrial Ave.
24354	4704 Industrial Ave.
24355	4708 Industrial Ave.
24356	4713 Industrial Ave.
24357	4814 Industrial Ave.
24358	5002 Industrial Ave.
24359	5005 Industrial Ave.
24360	5009 Industrial Ave.
24361	5010 Industrial Ave.
24362	5014 Industrial Ave.
24363	5100 Industrial Ave.
24364	5104 Industrial Ave.
24365	5109 Industrial Ave.
24366	5110 Industrial Ave.
24367	5113 Industrial Ave.
24368	5114 Industrial Ave.
24369	5122 Industrial Ave.
24370	7002 Industrial Ave.
24371	7020 Industrial Ave.
24372	512 Ingleside Ave.
24373	516 Ingleside Ave.
24374	524 Ingleside Ave.
24375	612 Ingleside Ave.
24376	616 Ingleside Ave.
24377	620 Ingleside Ave.
24378	624 Ingleside Ave.
24379	628 Ingleside Ave.
24380	632 Ingleside Ave.
24381	640 Ingleside Ave.
24382	644 Ingleside Ave.
24383	648 Ingleside Ave.
24384	652 Ingleside Ave.

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24385	702 Ingleside Ave.
24386	706 Ingleside Ave.
24387	710 Ingleside Ave.
24388	714 Ingleside Ave.
24389	718 Ingleside Ave.
24390	722 Ingleside Ave.
24391	726 Ingleside Ave.
24392	730 Ingleside Ave.
24393	734 Ingleside Ave.
24394	738 Ingleside Ave.
24395	742 Ingleside Ave.
24396	746 Ingleside Ave.
24397	750 Ingleside Ave.
24398	802 Ingleside Ave.
24399	805 Ingleside Ave.
24400	806 Ingleside Ave.
24401	813 Ingleside Ave.
24402	814 Ingleside Ave.
24403	817 Ingleside Ave.
24404	818 Ingleside Ave.
24405	821 Ingleside Ave.
24406	825 Ingleside Ave.
24407	826 Ingleside Ave.
24408	829 Ingleside Ave.
24409	830 Ingleside Ave.
24410	833 Ingleside Ave.
24411	838 Ingleside Ave.
24412	839 Ingleside Ave.
24413	842 Ingleside Ave.
24414	845 Ingleside Ave.
24415	846 Ingleside Ave.
24416	853 Ingleside Ave.
24417	854 Ingleside Ave.
24418	857 Ingleside Ave.
24419	858 Ingleside Ave.
24420	861 Ingleside Ave.
24421	862 Ingleside Ave.
24422	912 Ingleside Ave.
24423	915 Ingleside Ave.
24424	919 Ingleside Ave.
24425	928 Ingleside Ave.
24426	929 Ingleside Ave.
24427	932 Ingleside Ave.
24428	935 Ingleside Ave.
24429	939 Ingleside Ave.
24430	940 Ingleside Ave.
24431	947 Ingleside Ave.
24432	952 Ingleside Ave.

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24433	1011 Ingleside Ave.
24434	1016 Ingleside Ave.
24435	1020 Ingleside Ave.
24436	1028 Ingleside Ave.
24437	1031 Ingleside Ave.
24438	1035 Ingleside Ave.
24439	1036 Ingleside Ave.
24440	1039 Ingleside Ave.
24441	1040 Ingleside Ave.
24442	1043 Ingleside Ave.
24443	1044 Ingleside Ave.
24444	1102 Ingleside Ave.
24445	1105 Ingleside Ave.
24446	1109 Ingleside Ave.
24447	1110 Ingleside Ave.
24448	1115 Ingleside Ave.
24449	1118 Ingleside Ave.
24450	1122 Ingleside Ave.
24451	1123 Ingleside Ave.
24452	1125 Ingleside Ave.
24453	1126 Ingleside Ave.
24454	1129 Ingleside Ave.
24455	1201 Ingleside Ave.
24456	1202 Ingleside Ave.
24457	1205 Ingleside Ave.
24458	1206 Ingleside Ave.
24459	1209 Ingleside Ave.
24460	1210 Ingleside Ave.
24461	1218 Ingleside Ave.
24462	1221 Ingleside Ave.
24463	1222 Ingleside Ave.
24464	1225 Ingleside Ave.
24465	1229 Ingleside Ave.
24466	1230 Ingleside Ave.
24467	1234 Ingleside Ave.
24468	1241 Ingleside Ave.
24469	1248 Ingleside Ave.
24470	1301 Ingleside Ave.
24471	1306 Ingleside Ave.
24472	1309 Ingleside Ave.
24473	1310 Ingleside Ave.
24474	1313 Ingleside Ave.
24475	1314 Ingleside Ave.
24476	1317 Ingleside Ave.
24477	1318 Ingleside Ave.
24478	1322 Ingleside Ave.
24479	1513 Iowa Ave.
24480	1514 Iowa Ave.

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24481	1517 Iowa Ave.
24482	1518 Iowa Ave.
24483	1602 Iowa Ave.
24484	1606 Iowa Ave.
24485	1611 Iowa Ave.
24486	1612 Iowa Ave.
24487	1616 Iowa Ave.
24488	1708 Iowa Ave.
24489	1712 Iowa Ave.
24490	1716 Iowa Ave.
24491	1922 Iowa Ave.
24492	2115 Iowa Ave.
24493	2208 Iowa Ave.
24494	2212 Iowa Ave.
24495	2411 Iowa Ave.
24496	2511 Iowa Ave.
24497	2517 Iowa Ave.
24498	2611 Iowa Ave.
24499	2708 Iowa Ave.
24500	2908 Iowa Ave.
24501	3216 Iowa Ave.
24502	1401 Irene Ave.
24503	1404 Irene Ave.
24504	1407 Irene Ave.
24505	1408 Irene Ave.
24506	1411 Irene Ave.
24507	1412 Irene Ave.
24508	1415 Irene Ave.
24509	1416 Irene Ave.
24510	1419 Irene Ave.
24511	1422 Irene Ave.
24512	1423 Irene Ave.
24513	1427 Irene Ave.
24514	1431 Irene Ave.
24515	1501 Irene Ave.
24516	1502 Irene Ave.
24517	1506 Irene Ave.
24518	1510 Irene Ave.
24519	1511 Irene Ave.
24520	1515 Irene Ave.
24521	1516 Irene Ave.
24522	1519 Irene Ave.
24523	1520 Irene Ave.
24524	1523 Irene Ave.
24525	1526 Irene Ave.
24526	1532 Irene Ave.
24527	1533 Irene Ave.
24528	1536 Irene Ave.

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24529	1702 Iroquois Ave.
24530	1717 Iroquois Ave.
24531	1811 Iroquois Ave.
24532	1901 Iroquois Ave.
24533	1905 Iroquois Ave.
24534	1911 Iroquois Ave.
24535	1916 Iroquois Ave.
24536	2001 Iroquois Ave.
24537	2007 Iroquois Ave.
24538	2103 Iroquois Ave.
24539	2107 Iroquois Ave.
24540	2157 Iroquois Ave.
24541	2161 Iroquois Ave.
24542	2208 Iroquois Ave.
24543	2209 Iroquois Ave.
24544	2214 Iroquois Ave.
24545	2217 Iroquois Ave.
24546	2236 Iroquois Ave.
24547	2242 Iroquois Ave.
24548	2308 Iroquois Ave.
24549	2513 Iroquois Ave.
24550	2551 Iroquois Ave.
24551	2557 Iroquois Ave.
24552	2558 Iroquois Ave.
24553	2562 Iroquois Ave.
24554	2563 Iroquois Ave.
24555	2566 Iroquois Ave.
24556	2708 Iroquois Ave.
24557	2712 Iroquois Ave.
24558	2802 Iroquois Ave.
24559	2808 Iroquois Ave.
24560	2816 Iroquois Ave.
24561	2901 Iroquois Ave.
24562	2908 Iroquois Ave.
24563	2913 Iroquois Ave.
24564	2914 Iroquois Ave.
24565	2919 Iroquois Ave.
24566	3001 Iroquois Ave.
24567	3007 Iroquois Ave.
24568	3008 Iroquois Ave.
24569	3014 Iroquois Ave.
24570	3015 Iroquois Ave.
24571	3019 Iroquois Ave.
24572	3101 Iroquois Ave.
24573	3107 Iroquois Ave.
24574	3108 Iroquois Ave.
24575	3113 Iroquois Ave.
24576	3114 Iroquois Ave.

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24577	3119 Iroquois Ave.
24578	3207 Iroquois Ave.
24579	3213 Iroquois Ave.
24580	3214 Iroquois Ave.
24581	3221 Iroquois Ave.
24582	3301 Iroquois Ave.
24583	3309 Iroquois Ave.
24584	3310 Iroquois Ave.
24585	3313 Iroquois Ave.
24586	3316 Iroquois Ave.
24587	3319 Iroquois Ave.
24588	3320 Iroquois Ave.
24589	3701 Ivanhoe Ave.
24590	3702 Ivanhoe Ave.
24591	3705 Ivanhoe Ave.
24592	3709 Ivanhoe Ave.
24593	3712 Ivanhoe Ave.
24594	3713 Ivanhoe Ave.
24595	3717 Ivanhoe Ave.
24596	3720 Ivanhoe Ave.
24597	3721 Ivanhoe Ave.
24598	3724 Ivanhoe Ave.
24599	3725 Ivanhoe Ave.
24600	3728 Ivanhoe Ave.
24601	3729 Ivanhoe Ave.
24602	3732 Ivanhoe Ave.
24603	3733 Ivanhoe Ave.
24604	3736 Ivanhoe Ave.
24605	3737 Ivanhoe Ave.
24606	3740 Ivanhoe Ave.
24607	3741 Ivanhoe Ave.
24608	3744 Ivanhoe Ave.
24609	3745 Ivanhoe Ave.
24610	3748 Ivanhoe Ave.
24611	3749 Ivanhoe Ave.
24612	3801 Ivanhoe Ave.
24613	3802 Ivanhoe Ave.
24614	3805 Ivanhoe Ave.
24615	3806 Ivanhoe Ave.
24616	3809 Ivanhoe Ave.
24617	3810 Ivanhoe Ave.
24618	3813 Ivanhoe Ave.
24619	3814 Ivanhoe Ave.
24620	3817 Ivanhoe Ave.
24621	3818 Ivanhoe Ave.
24622	3821 Ivanhoe Ave.
24623	3822 Ivanhoe Ave.
24624	3825 Ivanhoe Ave.

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24625	3826 Ivanhoe Ave.
24626	3829 Ivanhoe Ave.
24627	3833 Ivanhoe Ave.
24628	3837 Ivanhoe Ave.
24629	3838 Ivanhoe Ave.
24630	3841 Ivanhoe Ave.
24631	3842 Ivanhoe Ave.
24632	3845 Ivanhoe Ave.
24633	3846 Ivanhoe Ave.
24634	111 Jackson Ave., E.
24635	112 Jackson Ave., E.
24636	115 Jackson Ave., E.
24637	116 Jackson Ave., E.
24638	117 Jackson Ave., E.
24639	119 Jackson Ave., E.
24640	120 Jackson Ave., E.
24641	123 Jackson Ave., E.
24642	124 Jackson Ave., E.
24643	127 Jackson Ave., E.
24644	128 Jackson Ave., E.
24645	131 Jackson Ave., E.
24646	132 Jackson Ave., E.
24647	136 Jackson Ave., E.
24648	201 Jackson Ave., E.
24649	202 Jackson Ave., E.
24650	205 Jackson Ave., E.
24651	206 Jackson Ave., E.
24652	209 Jackson Ave., E.
24653	210 Jackson Ave., E.
24654	213 Jackson Ave., E.
24655	214 Jackson Ave., E.
24656	217 Jackson Ave., E.
24657	218 Jackson Ave., E.
24658	221 Jackson Ave., E.
24659	222 Jackson Ave., E.
24660	225 Jackson Ave., E.
24661	226 Jackson Ave., E.
24662	229 Jackson Ave., E.
24663	230 Jackson Ave., E.
24664	233 Jackson Ave., E.
24665	234 Jackson Ave., E.
24666	237 Jackson Ave., E.
24667	238 Jackson Ave., E.
24668	301 Jackson Ave., E.
24669	302 Jackson Ave., E.
24670	305 Jackson Ave., E.
24671	306 Jackson Ave., E.
24672	309 Jackson Ave., E.

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24673	310 Jackson Ave., E.
24674	313 Jackson Ave., E.
24675	317 Jackson Ave., E.
24676	319 Jackson Ave., E.
24677	325 Jackson Ave., E.
24678	333 Jackson Ave., E.
24679	337 Jackson Ave., E.
24680	341 Jackson Ave., E.
24681	345 Jackson Ave., E.
24682	349 Jackson Ave., E.
24683	350 Jackson Ave., E.
24684	353 Jackson Ave., E.
24685	358 Jackson Ave., E.
24686	359 Jackson Ave., E.
24687	362 Jackson Ave., E.
24688	363 Jackson Ave., E.
24689	367 Jackson Ave., E.
24690	368 Jackson Ave., E.
24691	410 Jackson Ave., E.
24692	411 Jackson Ave., E.
24693	414 Jackson Ave., E.
24694	418 Jackson Ave., E.
24695	419 Jackson Ave., E.
24696	422 Jackson Ave., E.
24697	101 Jackson Ave., W.
24698	112 Jackson Ave., W.
24699	113 Jackson Ave., W.
24700	116 Jackson Ave., W.
24701	117 Jackson Ave., W.
24702	120 Jackson Ave., W.
24703	121 Jackson Ave., W.
24704	124 Jackson Ave., W.
24705	125 Jackson Ave., W.
24706	129 Jackson Ave., W.
24707	133 Jackson Ave., W.
24708	200 Jackson Ave., W.
24709	201 Jackson Ave., W.
24710	204 Jackson Ave., W.
24711	205 Jackson Ave., W.
24712	208 Jackson Ave., W.
24713	209 Jackson Ave., W.
24714	212 Jackson Ave., W.
24715	213 Jackson Ave., W.
24716	216 Jackson Ave., W.
24717	217 Jackson Ave., W.
24718	220 Jackson Ave., W.
24719	221 Jackson Ave., W.
24720	224 Jackson Ave., W.

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24721	225 Jackson Ave., W.
24722	230 Jackson Ave., W.
24723	231 Jackson Ave., W.
24724	311 Jackson Ave., W.
24725	312 Jackson Ave., W.
24726	315 Jackson Ave., W.
24727	316 Jackson Ave., W.
24728	319 Jackson Ave., W.
24729	320 Jackson Ave., W.
24730	323 Jackson Ave., W.
24731	324 Jackson Ave., W.
24732	327 Jackson Ave., W.
24733	401 Jackson Ave., W.
24734	402 Jackson Ave., W.
24735	405 Jackson Ave., W.
24736	406 Jackson Ave., W.
24737	409 Jackson Ave., W.
24738	410 Jackson Ave., W.
24739	413 Jackson Ave., W.
24740	414 Jackson Ave., W.
24741	417 Jackson Ave., W.
24742	418 Jackson Ave., W.
24743	421 Jackson Ave., W.
24744	422 Jackson Ave., W.
24745	425 Jackson Ave., W.
24746	426 Jackson Ave., W.
24747	431 Jackson Ave., W.
24748	711 Jackson Ave., W.
24749	714 Jackson Ave., W.
24750	715 Jackson Ave., W.
24751	719 Jackson Ave., W.
24752	722 Jackson Ave., W.
24753	730 Jackson Ave., W.
24754	734 Jackson Ave., W.
24755	802 Jackson Ave., W.
24756	806 Jackson Ave., W.
24757	809 Jackson Ave., W.
24758	813 Jackson Ave., W.
24759	814 Jackson Ave., W.
24760	818 Jackson Ave., W.
24761	825 Jackson Ave., W.
24762	1402 Jackson Ave., W.
24763	1406 Jackson Ave., W.
24764	1410 Jackson Ave., W.
24765	1502 Jackson Ave., W.
24766	1506 Jackson Ave., W.
24767	1510 Jackson Ave., W.
24768	1513 Jackson Ave., W.

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24769	1514 Jackson Ave., W.
24770	1518 Jackson Ave., W.
24771	1522 Jackson Ave., W.
24772	1526 Jackson Ave., W.
24773	1530 Jackson Ave., W.
24774	1534 Jackson Ave., W.
24775	1602 Jackson Ave., W.
24776	1606 Jackson Ave., W.
24777	1610 Jackson Ave., W.
24778	1614 Jackson Ave., W.
24779	1618 Jackson Ave., W.
24780	1702 Jackson Ave., W.
24781	1708 Jackson Ave., W.
24782	1714 Jackson Ave., W.
24783	1720 Jackson Ave., W.
24784	1726 Jackson Ave., W.
24785	1802 Jackson Ave., W.
24786	1808 Jackson Ave., W.
24787	1814 Jackson Ave., W.
24788	1820 Jackson Ave., W.
24789	1826 Jackson Ave., W.
24790	1902 Jackson Ave., W.
24791	1908 Jackson Ave., W.
24792	4002 Jacque St.
24793	4010 Jacque St.
24794	4011 Jacque St.
24795	4014 Jacque St.
24796	4015 Jacque St.
24797	4018 Jacque St.
24798	4019 Jacque St.
24799	4022 Jacque St.
24800	4023 Jacque St.
24801	1111 James P. Cole Blvd.
24802	1111 James P. Cole Blvd.
24803	1221 James P. Cole Blvd.
24804	1809 James P. Cole Blvd.
24805	2851 James P. Cole Blvd.
24806	2851 James P. Cole Blvd.
24807	3600 James P. Cole Blvd.
24808	3601 James P. Cole Blvd.
24809	3601 James P. Cole Blvd.
24810	4002 James P. Cole Blvd.
24811	4221 James P. Cole Blvd.
24812	4221 James P. Cole Blvd.
24813	4302 James P. Cole Blvd.
24814	4302 James P. Cole Blvd.
24815	4701 James P. Cole Blvd.
24816	3600 James P. Cole Blvd.

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24817	3601 James P. Cole Blvd.
24818	3901 James P. Cole Blvd.
24819	4002 James P. Cole Blvd.
24820	4221 James P. Cole Blvd.
24821	4701 James P. Cole Blvd.
24822	114 Jamieson St., E.
24823	117 Jamieson St., E.
24824	421 Jamieson St., E.
24825	425 Jamieson St., E.
24826	426 Jamieson St., E.
24827	429 Jamieson St., E.
24828	430 Jamieson St., E.
24829	433 Jamieson St., E.
24830	434 Jamieson St., E.
24831	501 Jamieson St., E.
24832	502 Jamieson St., E.
24833	505 Jamieson St., E.
24834	506 Jamieson St., E.
24835	509 Jamieson St., E.
24836	510 Jamieson St., E.
24837	513 Jamieson St., E.
24838	514 Jamieson St., E.
24839	517 Jamieson St., E.
24840	518 Jamieson St., E.
24841	521 Jamieson St., E.
24842	522 Jamieson St., E.
24843	525 Jamieson St., E.
24844	526 Jamieson St., E.
24845	529 Jamieson St., E.
24846	533 Jamieson St., E.
24847	534 Jamieson St., E.
24848	537 Jamieson St., E.
24849	538 Jamieson St., E.
24850	541 Jamieson St., E.
24851	542 Jamieson St., E.
24852	545 Jamieson St., E.
24853	546 Jamieson St., E.
24854	601 Jamieson St., E.
24855	602 Jamieson St., E.
24856	606 Jamieson St., E.
24857	609 Jamieson St., E.
24858	610 Jamieson St., E.
24859	614 Jamieson St., E.
24860	622 Jamieson St., E.
24861	626 Jamieson St., E.
24862	629 Jamieson St., E.
24863	630 Jamieson St., E.
24864	710 Jamieson St., E.

	A
24865	711 Jamieson St., E.
24866	714 Jamieson St., E.
24867	715 Jamieson St., E.
24868	716 Jamieson St., E.
24869	721 Jamieson St., E.
24870	722 Jamieson St., E.
24871	723 Jamieson St., E.
24872	724 Jamieson St., E.
24873	728 Jamieson St., E.
24874	730 Jamieson St., E.
24875	731 Jamieson St., E.
24876	734 Jamieson St., E.
24877	738 Jamieson St., E.
24878	742 Jamieson St., E.
24879	745 Jamieson St., E.
24880	746 Jamieson St., E.
24881	750 Jamieson St., E.
24882	759 Jamieson St., E.
24883	762 Jamieson St., E.
24884	763 Jamieson St., E.
24885	766 Jamieson St., E.
24886	767 Jamieson St., E.
24887	771 Jamieson St., E.
24888	775 Jamieson St., E.
24889	775 Jamieson St., E.
24890	808 Jamieson St., E.
24891	810 Jamieson St., E.
24892	813 Jamieson St., E.
24893	821 Jamieson St., E.
24894	825 Jamieson St., E.
24895	826 Jamieson St., E.
24896	830 Jamieson St., E.
24897	834 Jamieson St., E.
24898	837 Jamieson St., E.
24899	838 Jamieson St., E.
24900	901 Jamieson St., E.
24901	902 Jamieson St., E.
24902	905 Jamieson St., E.
24903	906 Jamieson St., E.
24904	913 Jamieson St., E.
24905	914 Jamieson St., E.
24906	916 Jamieson St., E.
24907	926 Jamieson St., E.
24908	112 Jamieson St., W.
24909	113 Jamieson St., W.
24910	116 Jamieson St., W.
24911	117 Jamieson St., W.
24912	120 Jamieson St., W.

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24913	121 Jamieson St., W.
24914	124 Jamieson St., W.
24915	125 Jamieson St., W.
24916	128 Jamieson St., W.
24917	129 Jamieson St., W.
24918	132 Jamieson St., W.
24919	133 Jamieson St., W.
24920	200 Jamieson St., W.
24921	201 Jamieson St., W.
24922	205 Jamieson St., W.
24923	206 Jamieson St., W.
24924	208 Jamieson St., W.
24925	209 Jamieson St., W.
24926	212 Jamieson St., W.
24927	213 Jamieson St., W.
24928	216 Jamieson St., W.
24929	217 Jamieson St., W.
24930	220 Jamieson St., W.
24931	221 Jamieson St., W.
24932	224 Jamieson St., W.
24933	227 Jamieson St., W.
24934	228 Jamieson St., W.
24935	311 Jamieson St., W.
24936	312 Jamieson St., W.
24937	315 Jamieson St., W.
24938	316 Jamieson St., W.
24939	319 Jamieson St., W.
24940	320 Jamieson St., W.
24941	323 Jamieson St., W.
24942	324 Jamieson St., W.
24943	327 Jamieson St., W.
24944	328 Jamieson St., W.
24945	401 Jamieson St., W.
24946	402 Jamieson St., W.
24947	405 Jamieson St., W.
24948	409 Jamieson St., W.
24949	412 Jamieson St., W.
24950	413 Jamieson St., W.
24951	417 Jamieson St., W.
24952	418 Jamieson St., W.
24953	421 Jamieson St., W.
24954	425 Jamieson St., W.
24955	426 Jamieson St., W.
24956	433 Jamieson St., W.
24957	434 Jamieson St., W.
24958	502 Jamieson St., W.
24959	513 Jamieson St., W.
24960	514 Jamieson St., W.

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24961	521 Jamieson St., W.
24962	522 Jamieson St., W.
24963	529 Jamieson St., W.
24964	530 Jamieson St., W.
24965	601 Jamieson St., W.
24966	606 Jamieson St., W.
24967	610 Jamieson St., W.
24968	611 Jamieson St., W.
24969	711 Jamieson St., W.
24970	712 Jamieson St., W.
24971	715 Jamieson St., W.
24972	716 Jamieson St., W.
24973	719 Jamieson St., W.
24974	720 Jamieson St., W.
24975	723 Jamieson St., W.
24976	724 Jamieson St., W.
24977	802 Jamieson St., W.
24978	811 Jamieson St., W.
24979	812 Jamieson St., W.
24980	815 Jamieson St., W.
24981	816 Jamieson St., W.
24982	819 Jamieson St., W.
24983	820 Jamieson St., W.
24984	823 Jamieson St., W.
24985	901 Jamieson St., W.
24986	902 Jamieson St., W.
24987	905 Jamieson St., W.
24988	906 Jamieson St., W.
24989	909 Jamieson St., W.
24990	910 Jamieson St., W.
24991	913 Jamieson St., W.
24992	914 Jamieson St., W.
24993	917 Jamieson St., W.
24994	1302 Jane Ave.
24995	1333 Jane Ave.
24996	1334 Jane Ave.
24997	1337 Jane Ave.
24998	1338 Jane Ave.
24999	1340 Jane Ave.
25000	1341 Jane Ave.
25001	1345 Jane Ave.
25002	1409 Jane Ave.
25003	1410 Jane Ave.
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25008	1421 Jane Ave.

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25009	1422 Jane Ave.
25010	1425 Jane Ave.
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25020	1445 Jane Ave.
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25041	1537 Jane Ave.
25042	1538 Jane Ave.
25043	1541 Jane Ave.
25044	1542 Jane Ave.
25045	1545 Jane Ave.
25046	1546 Jane Ave.
25047	1549 Jane Ave.
25048	1550 Jane Ave.
25049	1553 Jane Ave.
25050	1554 Jane Ave.
25051	1602 Jane Ave.
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25054	1609 Jane Ave.
25055	1610 Jane Ave.
25056	1613 Jane Ave.

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25057	1614 Jane Ave.
25058	1617 Jane Ave.
25059	1618 Jane Ave.
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25061	1622 Jane Ave.
25062	1625 Jane Ave.
25063	1626 Jane Ave.
25064	1629 Jane Ave.
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25071	1642 Jane Ave.
25072	1645 Jane Ave.
25073	1646 Jane Ave.
25074	1649 Jane Ave.
25075	1650 Jane Ave.
25076	1653 Jane Ave.
25077	1654 Jane Ave.
25078	1657 Jane Ave.
25079	1658 Jane Ave.
25080	1701 Jane Ave.
25081	1705 Jane Ave.
25082	1706 Jane Ave.
25083	1709 Jane Ave.
25084	1710 Jane Ave.
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25090	1722 Jane Ave.
25091	1725 Jane Ave.
25092	1726 Jane Ave.
25093	1729 Jane Ave.
25094	1730 Jane Ave.
25095	1733 Jane Ave.
25096	1734 Jane Ave.
25097	1737 Jane Ave.
25098	1738 Jane Ave.
25099	1801 Jane Ave.
25100	1802 Jane Ave.
25101	1805 Jane Ave.
25102	1806 Jane Ave.
25103	1809 Jane Ave.
25104	1810 Jane Ave.

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25105	1813 Jane Ave.
25106	1814 Jane Ave.
25107	1817 Jane Ave.
25108	1818 Jane Ave.
25109	1821 Jane Ave.
25110	1822 Jane Ave.
25111	1825 Jane Ave.
25112	2002 Janice Dr.
25113	2005 Janice Dr.
25114	2006 Janice Dr.
25115	2010 Janice Dr.
25116	2014 Janice Dr.
25117	2018 Janice Dr.
25118	2102 Janice Dr.
25119	2105 Janice Dr.
25120	2106 Janice Dr.
25121	2109 Janice Dr.
25122	2110 Janice Dr.
25123	2114 Janice Dr.
25124	2118 Janice Dr.
25125	2202 Janice Dr.
25126	2205 Janice Dr.
25127	2206 Janice Dr.
25128	2209 Janice Dr.
25129	2210 Janice Dr.
25130	2214 Janice Dr.
25131	2218 Janice Dr.
25132	1909 Jarvis St.
25133	1917 Jarvis St.
25134	2001 Jarvis St.
25135	2005 Jarvis St.
25136	2010 Jarvis St.
25137	2111 Jarvis St.
25138	2112 Jarvis St.
25139	2120 Jarvis St.
25140	1812 Jasmine Ave.
25141	1814 Jasmine Ave.
25142	1815 Jasmine Ave.
25143	1818 Jasmine Ave.
25144	1821 Jasmine Ave.
25145	1822 Jasmine Ave.
25146	1825 Jasmine Ave.
25147	1826 Jasmine Ave.
25148	1829 Jasmine Ave.
25149	1901 Jasmine Ave.
25150	1905 Jasmine Ave.
25151	1906 Jasmine Ave.
25152	1908 Jasmine Ave.

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25153	1911 Jasmine Ave.
25154	1912 Jasmine Ave.
25155	1913 Jasmine Ave.
25156	1916 Jasmine Ave.
25157	1917 Jasmine Ave.
25158	1919 Jasmine Ave.
25159	1920 Jasmine Ave.
25160	1925 Jasmine Ave.
25161	1302 Jean Ave.
25162	1308 Jean Ave.
25163	1311 Jean Ave.
25164	1314 Jean Ave.
25165	1322 Jean Ave.
25166	1325 Jean Ave.
25167	1411 Jean Ave.
25168	1412 Jean Ave.
25169	1419 Jean Ave.
25170	1420 Jean Ave.
25171	1426 Jean Ave.
25172	1427 Jean Ave.
25173	1707 Jewell Dr.
25174	1711 Jewell Dr.
25175	1715 Jewell Dr.
25176	1719 Jewell Dr.
25177	1723 Jewell Dr.
25178	1727 Jewell Dr.
25179	1731 Jewell Dr.
25180	1735 Jewell Dr.
25181	1801 Jewell Dr.
25182	1805 Jewell Dr.
25183	1809 Jewell Dr.
25184	1813 Jewell Dr.
25185	1817 Jewell Dr.
25186	1821 Jewell Dr.
25187	1825 Jewell Dr.
25188	1829 Jewell Dr.
25189	1833 Jewell Dr.
25190	1834 Jewell Dr.
25191	1837 Jewell Dr.
25192	3701 Joal Ln.
25193	3702 Joal Ln.
25194	3705 Joal Ln.
25195	3709 Joal Ln.
25196	3713 Joal Ln.
25197	3716 Joal Ln.
25198	3717 Joal Ln.
25199	3721 Joal Ln.
25200	3725 Joal Ln.

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25201	3728 Joal Ln.
25202	3729 Joal Ln.
25203	3732 Joal Ln.
25204	3733 Joal Ln.
25205	3736 Joal Ln.
25206	3737 Joal Ln.
25207	3740 Joal Ln.
25208	3741 Joal Ln.
25209	3745 Joal Ln.
25210	3749 Joal Ln.
25211	3753 Joal Ln.
25212	909 Johnson Ave.
25213	912 Johnson Ave.
25214	913 Johnson Ave.
25215	916 Johnson Ave.
25216	917 Johnson Ave.
25217	920 Johnson Ave.
25218	921 Johnson Ave.
25219	924 Johnson Ave.
25220	928 Johnson Ave.
25221	932 Johnson Ave.
25222	936 Johnson Ave.
25223	939 Johnson Ave.
25224	940 Johnson Ave.
25225	944 Johnson Ave.
25226	945 Johnson Ave.
25227	951 Johnson Ave.
25228	952 Johnson Ave.
25229	955 Johnson Ave.
25230	956 Johnson Ave.
25231	959 Johnson Ave.
25232	960 Johnson Ave.
25233	963 Johnson Ave.
25234	964 Johnson Ave.
25235	968 Johnson Ave.
25236	972 Johnson Ave.
25237	975 Johnson Ave.
25238	976 Johnson Ave.
25239	980 Johnson Ave.
25240	983 Johnson Ave.
25241	984 Johnson Ave.
25242	987 Johnson Ave.
25243	988 Johnson Ave.
25244	992 Johnson Ave.
25245	995 Johnson Ave.
25246	1803 Joliet St.
25247	1806 Joliet St.
25248	1809 Joliet St.

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25249	1817 Joliet St.
25250	1900 Joliet St.
25251	1903 Joliet St.
25252	1904 Joliet St.
25253	1907 Joliet St.
25254	1908 Joliet St.
25255	1911 Joliet St.
25256	1912 Joliet St.
25257	1916 Joliet St.
25258	1917 Joliet St.
25259	1920 Joliet St.
25260	1921 Joliet St.
25261	1924 Joliet St.
25262	1928 Joliet St.
25263	2000 Joliet St.
25264	2001 Joliet St.
25265	2004 Joliet St.
25266	2005 Joliet St.
25267	2008 Joliet St.
25268	2009 Joliet St.
25269	2012 Joliet St.
25270	2013 Joliet St.
25271	2016 Joliet St.
25272	2017 Joliet St.
25273	2020 Joliet St.
25274	2021 Joliet St.
25275	2024 Joliet St.
25276	2025 Joliet St.
25277	2028 Joliet St.
25278	2029 Joliet St.
25279	2102 Joliet St.
25280	2110 Joliet St.
25281	2201 Joliet St.
25282	2202 Joliet St.
25283	2205 Joliet St.
25284	2206 Joliet St.
25285	2209 Joliet St.
25286	2210 Joliet St.
25287	2213 Joliet St.
25288	2214 Joliet St.
25289	2217 Joliet St.
25290	2218 Joliet St.
25291	2221 Joliet St.
25292	2222 Joliet St.
25293	2225 Joliet St.
25294	2226 Joliet St.
25295	2229 Joliet St.
25296	2230 Joliet St.

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25297	2233 Joliet St.
25298	2234 Joliet St.
25299	2237 Joliet St.
25300	2238 Joliet St.
25301	2241 Joliet St.
25302	2245 Joliet St.
25303	2249 Joliet St.
25304	2300 Joliet St.
25305	2301 Joliet St.
25306	2304 Joliet St.
25307	2305 Joliet St.
25308	2308 Joliet St.
25309	2309 Joliet St.
25310	2312 Joliet St.
25311	2313 Joliet St.
25312	2316 Joliet St.
25313	2317 Joliet St.
25314	2320 Joliet St.
25315	2321 Joliet St.
25316	2324 Joliet St.
25317	2325 Joliet St.
25318	2329 Joliet St.
25319	1920 Joseph St.
25320	1926 Joseph St.
25321	1932 Joseph St.
25322	1936 Joseph St.
25323	2002 Joseph St.
25324	2008 Joseph St.
25325	2014 Joseph St.
25326	110 Josephine St.
25327	116 Josephine St.
25328	117 Josephine St.
25329	122 Josephine St.
25330	126 Josephine St.
25331	130 Josephine St.
25332	133 Josephine St.
25333	136 Josephine St.
25334	137 Josephine St.
25335	139 Josephine St.
25336	140 Josephine St.
25337	200 Josephine St.
25338	206 Josephine St.
25339	207 Josephine St.
25340	211 Josephine St.
25341	217 Josephine St.
25342	218 Josephine St.
25343	219 Josephine St.
25344	221 Josephine St.

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25345	224 Josephine St.
25346	225 Josephine St.
25347	228 Josephine St.
25348	231 Josephine St.
25349	234 Josephine St.
25350	236 Josephine St.
25351	239 Josephine St.
25352	301 Josephine St.
25353	305 Josephine St.
25354	309 Josephine St.
25355	310 Josephine St.
25356	313 Josephine St.
25357	314 Josephine St.
25358	317 Josephine St.
25359	318 Josephine St.
25360	321 Josephine St.
25361	322 Josephine St.
25362	325 Josephine St.
25363	326 Josephine St.
25364	330 Josephine St.
25365	401 Josephine St.
25366	402 Josephine St.
25367	405 Josephine St.
25368	406 Josephine St.
25369	409 Josephine St.
25370	410 Josephine St.
25371	413 Josephine St.
25372	414 Josephine St.
25373	417 Josephine St.
25374	418 Josephine St.
25375	421 Josephine St.
25376	422 Josephine St.
25377	426 Josephine St.
25378	501 Josephine St.
25379	511 Josephine St.
25380	512 Josephine St.
25381	515 Josephine St.
25382	516 Josephine St.
25383	520 Josephine St.
25384	523 Josephine St.
25385	524 Josephine St.
25386	601 Josephine St.
25387	602 Josephine St.
25388	605 Josephine St.
25389	606 Josephine St.
25390	609 Josephine St.
25391	610 Josephine St.
25392	613 Josephine St.

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25393	614 Josephine St.
25394	617 Josephine St.
25395	621 Josephine St.
25396	3801 Joyner St.
25397	3802 Joyner St.
25398	3808 Joyner St.
25399	3811 Joyner St.
25400	3812 Joyner St.
25401	3815 Joyner St.
25402	3819 Joyner St.
25403	3820 Joyner St.
25404	3823 Joyner St.
25405	3828 Joyner St.
25406	3901 Joyner St.
25407	3902 Joyner St.
25408	3905 Joyner St.
25409	3906 Joyner St.
25410	3909 Joyner St.
25411	3910 Joyner St.
25412	3913 Joyner St.
25413	3917 Joyner St.
25414	3918 Joyner St.
25415	3921 Joyner St.
25416	3925 Joyner St.
25417	4018 Joyner St.
25418	4019 Joyner St.
25419	4022 Joyner St.
25420	4030 Joyner St.
25421	1627 Kansas Ave.
25422	1628 Kansas Ave.
25423	1702 Kansas Ave.
25424	1706 Kansas Ave.
25425	1710 Kansas Ave.
25426	1711 Kansas Ave.
25427	1714 Kansas Ave.
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25441	1739 Kansas Ave.
25442	1740 Kansas Ave.
25443	1801 Kansas Ave.
25444	1802 Kansas Ave.
25445	1805 Kansas Ave.
25446	1809 Kansas Ave.
25447	1810 Kansas Ave.
25448	1813 Kansas Ave.
25449	1814 Kansas Ave.
25450	1818 Kansas Ave.
25451	1901 Kansas Ave.
25452	1905 Kansas Ave.
25453	1909 Kansas Ave.
25454	1910 Kansas Ave.
25455	1913 Kansas Ave.
25456	1914 Kansas Ave.
25457	1917 Kansas Ave.
25458	1918 Kansas Ave.
25459	1921 Kansas Ave.
25460	1925 Kansas Ave.
25461	1926 Kansas Ave.
25462	2001 Kansas Ave.
25463	2002 Kansas Ave.
25464	2004 Kansas Ave.
25465	2005 Kansas Ave.
25466	2008 Kansas Ave.
25467	2009 Kansas Ave.
25468	2013 Kansas Ave.
25469	2016 Kansas Ave.
25470	2017 Kansas Ave.
25471	2020 Kansas Ave.
25472	2021 Kansas Ave.
25473	2100 Kansas Ave.
25474	2100 Kansas Ave.
25475	2101 Kansas Ave.
25476	2105 Kansas Ave.
25477	2113 Kansas Ave.
25478	2116 Kansas Ave.
25479	2116 Kansas Ave.
25480	2117 Kansas Ave.
25481	2120 Kansas Ave.
25482	2120 Kansas Ave.
25483	2121 Kansas Ave.
25484	2125 Kansas Ave.
25485	2128 Kansas Ave.
25486	2129 Kansas Ave.
25487	2201 Kansas Ave.
25488	2205 Kansas Ave.

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25489	2209 Kansas Ave.
25490	2213 Kansas Ave.
25491	2217 Kansas Ave.
25492	2301 Kansas Ave.
25493	2305 Kansas Ave.
25494	2309 Kansas Ave.
25495	2317 Kansas Ave.
25496	2401 Kansas Ave.
25497	2409 Kansas Ave.
25498	2410 Kansas Ave.
25499	2410 Kansas Ave.
25500	2410 Kansas Ave.
25501	2417 Kansas Ave.
25502	2421 Kansas Ave.
25503	2424 Kansas Ave.
25504	2424 Kansas Ave.
25505	2425 Kansas Ave.
25506	2429 Kansas Ave.
25507	2501 Kansas Ave.
25508	2505 Kansas Ave.
25509	2509 Kansas Ave.
25510	2513 Kansas Ave.
25511	2601 Kansas Ave.
25512	2605 Kansas Ave.
25513	2609 Kansas Ave.
25514	2613 Kansas Ave.
25515	2617 Kansas Ave.
25516	6305 Karen Dr.
25517	6306 Karen Dr.
25518	6309 Karen Dr.
25519	6310 Karen Dr.
25520	6313 Karen Dr.
25521	6314 Karen Dr.
25522	6401 Karen Dr.
25523	6402 Karen Dr.
25524	6405 Karen Dr.
25525	6406 Karen Dr.
25526	6409 Karen Dr.
25527	6410 Karen Dr.
25528	6413 Karen Dr.
25529	6414 Karen Dr.
25530	6417 Karen Dr.
25531	6418 Karen Dr.
25532	6501 Karen Dr.
25533	6502 Karen Dr.
25534	6505 Karen Dr.
25535	6506 Karen Dr.
25536	6513 Karen Dr.

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25537	6514 Karen Dr.
25538	1922 Kathleen St.
25539	1926 Kathleen St.
25540	1928 Kathleen St.
25541	909 Kearsley Park Blvd.
25542	915 Kearsley Park Blvd.
25543	915 Kearsley Park Blvd.
25544	1291 Kearsley Park Blvd.
25545	1295 Kearsley Park Blvd.
25546	1297 Kearsley Park Blvd.
25547	1301 Kearsley Park Blvd.
25548	1305 Kearsley Park Blvd.
25549	1309 Kearsley Park Blvd.
25550	1313 Kearsley Park Blvd.
25551	1317 Kearsley Park Blvd.
25552	1321 Kearsley Park Blvd.
25553	1401 Kearsley Park Blvd.
25554	1405 Kearsley Park Blvd.
25555	1409 Kearsley Park Blvd.
25556	1417 Kearsley Park Blvd.
25557	1421 Kearsley Park Blvd.
25558	1427 Kearsley Park Blvd.
25559	1433 Kearsley Park Blvd.
25560	1437 Kearsley Park Blvd.
25561	1441 Kearsley Park Blvd.
25562	1445 Kearsley Park Blvd.
25563	1501 Kearsley Park Blvd.
25564	1503 Kearsley Park Blvd.
25565	1507 Kearsley Park Blvd.
25566	1511 Kearsley Park Blvd.
25567	1527 Kearsley Park Blvd.
25568	1531 Kearsley Park Blvd.
25569	1535 Kearsley Park Blvd.
25570	1539 Kearsley Park Blvd.
25571	1543 Kearsley Park Blvd.
25572	1551 Kearsley Park Blvd.
25573	1601 Kearsley Park Blvd.
25574	1605 Kearsley Park Blvd.
25575	1609 Kearsley Park Blvd.
25576	1613 Kearsley Park Blvd.
25577	1617 Kearsley Park Blvd.
25578	1701 Kearsley Park Blvd.
25579	1709 Kearsley Park Blvd.
25580	1909 Kearsley Park Blvd.
25581	218 Kearsley St., E.
25582	303 Kearsley St., E.
25583	303 Kearsley St., E.
25584	303 Kearsley St., E.

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25585	624 Kearsley St., E.
25586	700 Kearsley St., E.
25587	716 Kearsley St., E.
25588	724 Kearsley St., E.
25589	814 Kearsley St., E.
25590	817 Kearsley St., E.
25591	817 Kearsley St., E.
25592	817 Kearsley St., E.
25593	817 Kearsley St., E.
25594	817 Kearsley St., E.
25595	902 Kearsley St., E.
25596	904 Kearsley St., E.
25597	906 Kearsley St., E.
25598	908 Kearsley St., E.
25599	910 Kearsley St., E.
25600	912 Kearsley St., E.
25601	914 Kearsley St., E.
25602	918 Kearsley St., E.
25603	923 Kearsley St., E.
25604	1025 Kearsley St., E.
25605	1026 Kearsley St., E.
25606	1220 Kearsley St., E.
25607	1231 Kearsley St., E.
25608	1400 Kearsley St., E.
25609	111 Kearsley St., W.
25610	116 Kearsley St., W.
25611	126 Kearsley St., W.
25612	126 Kearsley St., W.
25613	211 Kearsley St., W.
25614	501 Kearsley St., W.
25615	630 Kearsley St., W.
25616	630 Kearsley St., W.
25617	712 Kearsley St., W.
25618	981 Kearsley St., W.
25619	2213 Kearsley St., W.
25620	2219 Kearsley St., W.
25621	2224 Kearsley St., W.
25622	2228 Kearsley St., W.
25623	2236 Kearsley St., W.
25624	3802 Kearsley St., W.
25625	3807 Kearsley St., W.
25626	3811 Kearsley St., W.
25627	3815 Kearsley St., W.
25628	3816 Kearsley St., W.
25629	3819 Kearsley St., W.
25630	3822 Kearsley St., W.
25631	3826 Kearsley St., W.
25632	3827 Kearsley St., W.

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25633	3902 Kearsley St., W.
25634	3905 Kearsley St., W.
25635	3906 Kearsley St., W.
25636	3909 Kearsley St., W.
25637	3913 Kearsley St., W.
25638	3914 Kearsley St., W.
25639	3917 Kearsley St., W.
25640	3918 Kearsley St., W.
25641	3921 Kearsley St., W.
25642	3925 Kearsley St., W.
25643	4002 Kearsley St., W.
25644	4010 Kearsley St., W.
25645	4013 Kearsley St., W.
25646	4014 Kearsley St., W.
25647	4017 Kearsley St., W.
25648	4018 Kearsley St., W.
25649	4022 Kearsley St., W.
25650	4026 Kearsley St., W.
25651	4501 Keats St.
25652	4504 Keats St.
25653	4505 Keats St.
25654	4512 Keats St.
25655	4513 Keats St.
25656	4516 Keats St.
25657	4521 Keats St.
25658	4525 Keats St.
25659	4529 Keats St.
25660	4533 Keats St.
25661	4537 Keats St.
25662	1301 Keenly Ave.
25663	1323 Keenly Ave.
25664	2310 Kellar Ave.
25665	2316 Kellar Ave.
25666	2322 Kellar Ave.
25667	2327 Kellar Ave.
25668	2328 Kellar Ave.
25669	2334 Kellar Ave.
25670	2337 Kellar Ave.
25671	2340 Kellar Ave.
25672	2401 Kellar Ave.
25673	2402 Kellar Ave.
25674	2407 Kellar Ave.
25675	2408 Kellar Ave.
25676	2413 Kellar Ave.
25677	2414 Kellar Ave.
25678	2419 Kellar Ave.
25679	2420 Kellar Ave.
25680	2425 Kellar Ave.

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25681	2426 Kellar Ave.
25682	2431 Kellar Ave.
25683	2501 Kellar Ave.
25684	2502 Kellar Ave.
25685	2515 Kellar Ave.
25686	2516 Kellar Ave.
25687	2519 Kellar Ave.
25688	2520 Kellar Ave.
25689	2605 Kellar Ave.
25690	2606 Kellar Ave.
25691	2610 Kellar Ave.
25692	2613 Kellar Ave.
25693	2614 Kellar Ave.
25694	2615 Kellar Ave.
25695	2618 Kellar Ave.
25696	2622 Kellar Ave.
25697	2627 Kellar Ave.
25698	2630 Kellar Ave.
25699	2635 Kellar Ave.
25700	2701 Kellar Ave.
25701	2706 Kellar Ave.
25702	2713 Kellar Ave.
25703	2714 Kellar Ave.
25704	2725 Kellar Ave.
25705	2726 Kellar Ave.
25706	2729 Kellar Ave.
25707	2731 Kellar Ave.
25708	2734 Kellar Ave.
25709	2745 Kellar Ave.
25710	2810 Kellar Ave.
25711	2814 Kellar Ave.
25712	2901 Kellar Ave.
25713	2902 Kellar Ave.
25714	2905 Kellar Ave.
25715	2906 Kellar Ave.
25716	2909 Kellar Ave.
25717	2910 Kellar Ave.
25718	2913 Kellar Ave.
25719	2914 Kellar Ave.
25720	3001 Kellar Ave.
25721	3002 Kellar Ave.
25722	3005 Kellar Ave.
25723	3006 Kellar Ave.
25724	3009 Kellar Ave.
25725	3010 Kellar Ave.
25726	3101 Kellar Ave.
25727	3105 Kellar Ave.
25728	3109 Kellar Ave.

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25729	3202 Kellar Ave.
25730	3209 Kellar Ave.
25731	3210 Kellar Ave.
25732	3214 Kellar Ave.
25733	3218 Kellar Ave.
25734	3224 Kellar Ave.
25735	3301 Kellar Ave.
25736	3302 Kellar Ave.
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26178	2609 Kentucky Ave.
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26352	3111 Kirkwood Ln.

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26356	3119 Kirkwood Ln.
26357	3123 Kirkwood Ln.
26358	3201 Kirkwood Ln.
26359	3202 Kirkwood Ln.
26360	3205 Kirkwood Ln.
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26446	972 Knapp Ave.
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26485	1401 Knapp Ave.
26486	1406 Knapp Ave.
26487	1409 Knapp Ave.
26488	1414 Knapp Ave.
26489	1415 Knapp Ave.
26490	1418 Knapp Ave.
26491	1419 Knapp Ave.
26492	1422 Knapp Ave.
26493	1423 Knapp Ave.
26494	1427 Knapp Ave.
26495	1501 Knapp Ave.
26496	1502 Knapp Ave.

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26497	1505 Knapp Ave.
26498	1506 Knapp Ave.
26499	1509 Knapp Ave.
26500	1510 Knapp Ave.
26501	1514 Knapp Ave.
26502	1515 Knapp Ave.
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26505	1602 Knapp Ave.
26506	1605 Knapp Ave.
26507	1606 Knapp Ave.
26508	1609 Knapp Ave.
26509	1610 Knapp Ave.
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26512	1617 Knapp Ave.
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26514	1621 Knapp Ave.
26515	1622 Knapp Ave.
26516	1633 Knapp Ave.
26517	1702 Knapp Ave.
26518	1707 Knapp Ave.
26519	1708 Knapp Ave.
26520	1709 Knapp Ave.
26521	1710 Knapp Ave.
26522	1714 Knapp Ave.
26523	1802 Knapp Ave.
26524	980 Knight Ave.
26525	986 Knight Ave.
26526	1002 Knight Ave.
26527	1114 Knight Ave.
26528	1119 Knight Ave.
26529	1120 Knight Ave.
26530	1122 Knight Ave.
26531	1123 Knight Ave.
26532	1126 Knight Ave.
26533	1127 Knight Ave.
26534	1201 Knight Ave.
26535	1202 Knight Ave.
26536	1205 Knight Ave.
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26539	1210 Knight Ave.
26540	1213 Knight Ave.
26541	1214 Knight Ave.
26542	1217 Knight Ave.
26543	1301 Knight Ave.
26544	1305 Knight Ave.

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26545	1309 Knight Ave.
26546	1313 Knight Ave.
26547	1314 Knight Ave.
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26550	1322 Knight Ave.
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26559	1409 Knight Ave.
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26566	1425 Knight Ave.
26567	1426 Knight Ave.
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26569	1502 Knight Ave.
26570	1505 Knight Ave.
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26574	1513 Knight Ave.
26575	1514 Knight Ave.
26576	1517 Knight Ave.
26577	1518 Knight Ave.
26578	1522 Knight Ave.
26579	1602 Knight Ave.
26580	1611 Knight Ave.
26581	1709 Knight Ave.
26582	1716 Knight Ave.
26583	801 Kummer St.
26584	804 Kummer St.
26585	808 Kummer St.
26586	812 Kummer St.
26587	816 Kummer St.
26588	820 Kummer St.
26589	207 Lafayette St.
26590	214 Lafayette St.
26591	215 Lafayette St.
26592	218 Lafayette St.

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26593	219 Lafayette St.
26594	301 Lafayette St.
26595	302 Lafayette St.
26596	306 Lafayette St.
26597	309 Lafayette St.
26598	310 Lafayette St.
26599	315 Lafayette St.
26600	321 Lafayette St.
26601	401 Lafayette St.
26602	413 Lafayette St.
26603	414 Lafayette St.
26604	419 Lafayette St.
26605	420 Lafayette St.
26606	426 Lafayette St.
26607	431 Lafayette St.
26608	432 Lafayette St.
26609	435 Lafayette St.
26610	444 Lafayette St.
26611	501 Lafayette St.
26612	512 Lafayette St.
26613	513 Lafayette St.
26614	516 Lafayette St.
26615	520 Lafayette St.
26616	521 Lafayette St.
26617	524 Lafayette St.
26618	525 Lafayette St.
26619	601 Lafayette St.
26620	602 Lafayette St.
26621	606 Lafayette St.
26622	607 Lafayette St.
26623	906 Lafayette St.
26624	912 Lafayette St.
26625	918 Lafayette St.
26626	924 Lafayette St.
26627	1002 Lafayette St.
26628	1006 Lafayette St.
26629	1010 Lafayette St.
26630	1018 Lafayette St.
26631	1022 Lafayette St.
26632	1060 Lafayette St.
26633	1064 Lafayette St.
26634	1102 Lafayette St.
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26636	1108 Lafayette St.
26637	1111 Lafayette St.
26638	1112 Lafayette St.
26639	1115 Lafayette St.
26640	1116 Lafayette St.

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26641	1120 Lafayette St.
26642	1130 Lafayette St.
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26644	1401 Lake Forest Dr.
26645	1409 Lake Forest Dr.
26646	1410 Lake Forest Dr.
26647	1413 Lake Forest Dr.
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26649	1418 Lake Forest Dr.
26650	1421 Lake Forest Dr.
26651	1422 Lake Forest Dr.
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26653	1502 Lake Forest Dr.
26654	1505 Lake Forest Dr.
26655	1506 Lake Forest Dr.
26656	1509 Lake Forest Dr.
26657	1510 Lake Forest Dr.
26658	1513 Lake Forest Dr.
26659	1514 Lake Forest Dr.
26660	919 Lakeside Ave.
26661	113 Lakeview Ave., E.
26662	115 Lakeview Ave., E.
26663	116 Lakeview Ave., E.
26664	119 Lakeview Ave., E.
26665	120 Lakeview Ave., E.
26666	123 Lakeview Ave., E.
26667	124 Lakeview Ave., E.
26668	128 Lakeview Ave., E.
26669	129 Lakeview Ave., E.
26670	131 Lakeview Ave., E.
26671	132 Lakeview Ave., E.
26672	137 Lakeview Ave., E.
26673	140 Lakeview Ave., E.
26674	144 Lakeview Ave., E.
26675	202 Lakeview Ave., E.
26676	203 Lakeview Ave., E.
26677	205 Lakeview Ave., E.
26678	206 Lakeview Ave., E.
26679	209 Lakeview Ave., E.
26680	210 Lakeview Ave., E.
26681	213 Lakeview Ave., E.
26682	214 Lakeview Ave., E.
26683	220 Lakeview Ave., E.
26684	222 Lakeview Ave., E.
26685	226 Lakeview Ave., E.
26686	229 Lakeview Ave., E.
26687	230 Lakeview Ave., E.
26688	234 Lakeview Ave., E.

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26689	235 Lakeview Ave., E.
26690	238 Lakeview Ave., E.
26691	242 Lakeview Ave., E.
26692	246 Lakeview Ave., E.
26693	112 Lakeview Ave., W.
26694	117 Lakeview Ave., W.
26695	118 Lakeview Ave., W.
26696	120 Lakeview Ave., W.
26697	124 Lakeview Ave., W.
26698	125 Lakeview Ave., W.
26699	129 Lakeview Ave., W.
26700	132 Lakeview Ave., W.
26701	133 Lakeview Ave., W.
26702	134 Lakeview Ave., W.
26703	136 Lakeview Ave., W.
26704	145 Lakeview Ave., W.
26705	145 Lakeview Ave., W.
26706	2610 Lakewood Ct.
26707	2620 Lakewood Ct.
26708	2629 Lakewood Ct.
26709	2650 Lakewood Ct.
26710	2701 Lakewood Dr.
26711	2710 Lakewood Dr.
26712	2715 Lakewood Dr.
26713	2721 Lakewood Dr.
26714	2745 Lakewood Dr.
26715	2751 Lakewood Dr.
26716	3100 Lakewood Dr.
26717	3100 Lakewood Dr.
26718	3241 Lakewood Dr.
26719	3412 Lakewood Dr.
26720	2501 Landon St.
26721	2510 Landon St.
26722	2511 Landon St.
26723	2516 Landon St.
26724	2517 Landon St.
26725	2522 Landon St.
26726	2523 Landon St.
26727	2528 Landon St.
26728	2529 Landon St.
26729	2601 Landon St.
26730	2602 Landon St.
26731	2607 Landon St.
26732	2608 Landon St.
26733	2613 Landon St.
26734	2614 Landon St.
26735	2619 Landon St.
26736	2620 Landon St.

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26737	2625 Landon St.
26738	2626 Landon St.
26739	2631 Landon St.
26740	2632 Landon St.
26741	2701 Landon St.
26742	2702 Landon St.
26743	2707 Landon St.
26744	2708 Landon St.
26745	2713 Landon St.
26746	2714 Landon St.
26747	2719 Landon St.
26748	2720 Landon St.
26749	1105 Lapeer Rd.
26750	1108 Lapeer Rd.
26751	1109 Lapeer Rd.
26752	1113 Lapeer Rd.
26753	1117 Lapeer Rd.
26754	1201 Lapeer Rd.
26755	1210 Lapeer Rd.
26756	1211 Lapeer Rd.
26757	1211 Lapeer Rd.
26758	1219 Lapeer Rd.
26759	1301 Lapeer Rd.
26760	1305 Lapeer Rd.
26761	1309 Lapeer Rd.
26762	1357 Lapeer Rd.
26763	1361 Lapeer Rd.
26764	1365 Lapeer Rd.
26765	1369 Lapeer Rd.
26766	1405 Lapeer Rd.
26767	1409 Lapeer Rd.
26768	1505 Lapeer Rd.
26769	1511 Lapeer Rd.
26770	1515 Lapeer Rd.
26771	1519 Lapeer Rd.
26772	1702 Lapeer Rd.
26773	1708 Lapeer Rd.
26774	1712 Lapeer Rd.
26775	1718 Lapeer Rd.
26776	1802 Lapeer Rd.
26777	1934 Lapeer Rd.
26778	1934 Lapeer Rd.
26779	1934 Lapeer Rd.
26780	2017 Lapeer Rd.
26781	2100 Lapeer Rd.
26782	2104 Lapeer Rd.
26783	2106 Lapeer Rd.
26784	2110 Lapeer Rd.

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26785	2116 Lapeer Rd.
26786	2200 Lapeer Rd.
26787	2211 Lapeer Rd.
26788	2211 Lapeer Rd.
26789	2211 Lapeer Rd.
26790	2211 Lapeer Rd.
26791	2300 Lapeer Rd.
26792	2300 Lapeer Rd.
26793	2300 Lapeer Rd.
26794	2302 Lapeer Rd.
26795	2302 Lapeer Rd.
26796	2302 Lapeer Rd.
26797	2312 Lapeer Rd.
26798	2316 Lapeer Rd.
26799	2324 Lapeer Rd.
26800	2345 Lapeer Rd.
26801	2345 Lapeer Rd.
26802	2351 Lapeer Rd.
26803	2351 Lapeer Rd.
26804	2355 Lapeer Rd.
26805	2355 Lapeer Rd.
26806	2357 Lapeer Rd.
26807	2363 Lapeer Rd.
26808	2367 Lapeer Rd.
26809	2371 Lapeer Rd.
26810	2371 Lapeer Rd.
26811	2395 Lapeer Rd.
26812	2395 Lapeer Rd.
26813	2401 Lapeer Rd.
26814	2401 Lapeer Rd.
26815	2418 Lapeer Rd.
26816	2502 Lapeer Rd.
26817	2506 Lapeer Rd.
26818	2510 Lapeer Rd.
26819	2514 Lapeer Rd.
26820	2515 Lapeer Rd.
26821	2515 Lapeer Rd.
26822	2603 Lapeer Rd.
26823	2610 Lapeer Rd.
26824	2706 Lapeer Rd.
26825	2710 Lapeer Rd.
26826	2711 Lapeer Rd.
26827	2714 Lapeer Rd.
26828	2801 Lapeer Rd.
26829	2801 Lapeer Rd.
26830	2809 Lapeer Rd.
26831	2809 Lapeer Rd.
26832	2814 Lapeer Rd.

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26833	2818 Lapeer Rd.
26834	2826 Lapeer Rd.
26835	2905 Lapeer Rd.
26836	2906 Lapeer Rd.
26837	2910 Lapeer Rd.
26838	2914 Lapeer Rd.
26839	3002 Lapeer Rd.
26840	3128 Lapeer Rd.
26841	3163 Lapeer Rd.
26842	3201 Lapeer Rd.
26843	3202 Lapeer Rd.
26844	3202 Lapeer Rd.
26845	3210 Lapeer Rd.
26846	3213 Lapeer Rd.
26847	3216 Lapeer Rd.
26848	3217 Lapeer Rd.
26849	3217 Lapeer Rd.
26850	3238 Lapeer Rd.
26851	3245 Lapeer Rd.
26852	3302 Lapeer Rd.
26853	3306 Lapeer Rd.
26854	3306 Lapeer Rd.
26855	3329 Lapeer Rd.
26856	3332 Lapeer Rd.
26857	3335 Lapeer Rd.
26858	3335 Lapeer Rd.
26859	3362 Lapeer Rd.
26860	3401 Lapeer Rd.
26861	3401 Lapeer Rd.
26862	3402 Lapeer Rd.
26863	3416 Lapeer Rd.
26864	3417 Lapeer Rd.
26865	3417 Lapeer Rd.
26866	3419 Lapeer Rd.
26867	3419 Lapeer Rd.
26868	3425 Lapeer Rd.
26869	3430 Lapeer Rd.
26870	3433 Lapeer Rd.
26871	3433 Lapeer Rd.
26872	3440 Lapeer Rd.
26873	3440 Lapeer Rd.
26874	3441 Lapeer Rd.
26875	3441 Lapeer Rd.
26876	3441 Lapeer Rd.
26877	3441 Lapeer Rd.
26878	3501 Lapeer Rd.
26879	3501 Lapeer Rd.
26880	3501 Lapeer Rd.

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26881	3502 Lapeer Rd.
26882	3606 Lapeer Rd.
26883	3701 Lapeer Rd.
26884	3701 Lapeer Rd.
26885	3701 Lapeer Rd.
26886	3711 Lapeer Rd.
26887	3711 Lapeer Rd.
26888	3721 Lapeer Rd.
26889	3725 Lapeer Rd.
26890	3739 Lapeer Rd.
26891	3743 Lapeer Rd.
26892	3753 Lapeer Rd.
26893	3801 Lapeer Rd.
26894	3831 Lapeer Rd.
26895	3837 Lapeer Rd.
26896	3848 Lapeer Rd.
26897	3848 Lapeer Rd.
26898	3855 Lapeer Rd.
26899	3865 Lapeer Rd.
26900	3867 Lapeer Rd.
26901	3869 Lapeer Rd.
26902	3871 Lapeer Rd.
26903	3202 Larchmont St.
26904	3206 Larchmont St.
26905	3210 Larchmont St.
26906	3213 Larchmont St.
26907	3214 Larchmont St.
26908	3217 Larchmont St.
26909	3218 Larchmont St.
26910	3301 Larchmont St.
26911	3302 Larchmont St.
26912	3305 Larchmont St.
26913	3306 Larchmont St.
26914	3310 Larchmont St.
26915	3313 Larchmont St.
26916	3314 Larchmont St.
26917	3317 Larchmont St.
26918	3318 Larchmont St.
26919	3321 Larchmont St.
26920	3322 Larchmont St.
26921	3401 Larchmont St.
26922	3402 Larchmont St.
26923	3405 Larchmont St.
26924	3406 Larchmont St.
26925	3409 Larchmont St.
26926	3410 Larchmont St.
26927	3413 Larchmont St.
26928	3414 Larchmont St.

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26929	3415 Larchmont St.
26930	3416 Larchmont St.
26931	3501 Larchmont St.
26932	3505 Larchmont St.
26933	3506 Larchmont St.
26934	3509 Larchmont St.
26935	3510 Larchmont St.
26936	3513 Larchmont St.
26937	3514 Larchmont St.
26938	3517 Larchmont St.
26939	3518 Larchmont St.
26940	3522 Larchmont St.
26941	3601 Larchmont St.
26942	3605 Larchmont St.
26943	3606 Larchmont St.
26944	3609 Larchmont St.
26945	3614 Larchmont St.
26946	3617 Larchmont St.
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26948	3621 Larchmont St.
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26950	3625 Larchmont St.
26951	3626 Larchmont St.
26952	3701 Larchmont St.
26953	3702 Larchmont St.
26954	3705 Larchmont St.
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26959	3717 Larchmont St.
26960	3718 Larchmont St.
26961	3721 Larchmont St.
26962	3722 Larchmont St.
26963	3801 Larchmont St.
26964	3805 Larchmont St.
26965	3809 Larchmont St.
26966	3810 Larchmont St.
26967	3813 Larchmont St.
26968	3814 Larchmont St.
26969	3817 Larchmont St.
26970	3822 Larchmont St.
26971	3825 Larchmont St.
26972	3826 Larchmont St.
26973	3901 Larchmont St.
26974	3902 Larchmont St.
26975	3905 Larchmont St.
26976	3906 Larchmont St.

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26977	3909 Larchmont St.
26978	3910 Larchmont St.
26979	3913 Larchmont St.
26980	3914 Larchmont St.
26981	3917 Larchmont St.
26982	3918 Larchmont St.
26983	3921 Larchmont St.
26984	3922 Larchmont St.
26985	3925 Larchmont St.
26986	3926 Larchmont St.
26987	3929 Larchmont St.
26988	3930 Larchmont St.
26989	3934 Larchmont St.
26990	3935 Larchmont St.
26991	3409 Las Palmas Ct.
26992	3410 Las Palmas Ct.
26993	3413 Las Palmas Ct.
26994	3418 Las Palmas Ct.
26995	3419 Las Palmas Ct.
26996	1733 Laurel Oak Ct.
26997	1737 Laurel Oak Ct.
26998	1701 Laurel Oak Dr.
26999	1702 Laurel Oak Dr.
27000	1705 Laurel Oak Dr.
27001	1706 Laurel Oak Dr.
27002	1710 Laurel Oak Dr.
27003	1711 Laurel Oak Dr.
27004	1714 Laurel Oak Dr.
27005	1717 Laurel Oak Dr.
27006	1718 Laurel Oak Dr.
27007	1721 Laurel Oak Dr.
27008	1725 Laurel Oak Dr.
27009	1726 Laurel Oak Dr.
27010	1730 Laurel Oak Dr.
27011	1734 Laurel Oak Dr.
27012	1741 Laurel Oak Dr.
27013	1745 Laurel Oak Dr.
27014	1749 Laurel Oak Dr.
27015	1801 Laurel Oak Dr.
27016	1807 Laurel Oak Dr.
27017	1808 Laurel Oak Dr.
27018	1812 Laurel Oak Dr.
27019	1813 Laurel Oak Dr.
27020	1815 Laurel Oak Dr.
27021	1816 Laurel Oak Dr.
27022	1817 Laurel Oak Dr.
27023	1819 Laurel Oak Dr.
27024	1821 Laurel Oak Dr.

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27025	1822 Laurel Oak Dr.
27026	1823 Laurel Oak Dr.
27027	1827 Laurel Oak Dr.
27028	1828 Laurel Oak Dr.
27029	1829 Laurel Oak Dr.
27030	1831 Laurel Oak Dr.
27031	1833 Laurel Oak Dr.
27032	1834 Laurel Oak Dr.
27033	1835 Laurel Oak Dr.
27034	1837 Laurel Oak Dr.
27035	1840 Laurel Oak Dr.
27036	1841 Laurel Oak Dr.
27037	1843 Laurel Oak Dr.
27038	1845 Laurel Oak Dr.
27039	1846 Laurel Oak Dr.
27040	1847 Laurel Oak Dr.
27041	1849 Laurel Oak Dr.
27042	1851 Laurel Oak Dr.
27043	1852 Laurel Oak Dr.
27044	1855 Laurel Oak Dr.
27045	1857 Laurel Oak Dr.
27046	1858 Laurel Oak Dr.
27047	1859 Laurel Oak Dr.
27048	1901 Laurel Oak Dr.
27049	1902 Laurel Oak Dr.
27050	1903 Laurel Oak Dr.
27051	1905 Laurel Oak Dr.
27052	1907 Laurel Oak Dr.
27053	1908 Laurel Oak Dr.
27054	1909 Laurel Oak Dr.
27055	1911 Laurel Oak Dr.
27056	1913 Laurel Oak Dr.
27057	1914 Laurel Oak Dr.
27058	1915 Laurel Oak Dr.
27059	1917 Laurel Oak Dr.
27060	1931 Laurel Oak Dr.
27061	1933 Laurel Oak Dr.
27062	1935 Laurel Oak Dr.
27063	1936 Laurel Oak Dr.
27064	1937 Laurel Oak Dr.
27065	1939 Laurel Oak Dr.
27066	1941 Laurel Oak Dr.
27067	1942 Laurel Oak Dr.
27068	1943 Laurel Oak Dr.
27069	1945 Laurel Oak Dr.
27070	1947 Laurel Oak Dr.
27071	1949 Laurel Oak Dr.
27072	1951 Laurel Oak Dr.

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27073	1953 Laurel Oak Dr.
27074	1955 Laurel Oak Dr.
27075	1957 Laurel Oak Dr.
27076	1959 Laurel Oak Dr.
27077	1961 Laurel Oak Dr.
27078	1963 Laurel Oak Dr.
27079	1965 Laurel Oak Dr.
27080	4901 Laurene St.
27081	4902 Laurene St.
27082	4905 Laurene St.
27083	4914 Laurene St.
27084	5001 Laurene St.
27085	5002 Laurene St.
27086	5005 Laurene St.
27087	5006 Laurene St.
27088	5010 Laurene St.
27089	5013 Laurene St.
27090	5101 Laurene St.
27091	5102 Laurene St.
27092	5105 Laurene St.
27093	5106 Laurene St.
27094	5110 Laurene St.
27095	5113 Laurene St.
27096	5301 Laurene St.
27097	5302 Laurene St.
27098	5305 Laurene St.
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27100	5313 Laurene St.
27101	5314 Laurene St.
27102	5317 Laurene St.
27103	5318 Laurene St.
27104	5321 Laurene St.
27105	5322 Laurene St.
27106	5401 Laurene St.
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27108	5405 Laurene St.
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27112	5413 Laurene St.
27113	5414 Laurene St.
27114	5417 Laurene St.
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27116	5501 Laurene St.
27117	5502 Laurene St.
27118	5505 Laurene St.
27119	5506 Laurene St.
27120	5509 Laurene St.

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27121	5510 Laurene St.
27122	5513 Laurene St.
27123	5514 Laurene St.
27124	5517 Laurene St.
27125	5518 Laurene St.
27126	1114 Lavender Ave.
27127	1115 Lavender Ave.
27128	1120 Lavender Ave.
27129	1123 Lavender Ave.
27130	1156 Lavender Ave.
27131	1159 Lavender Ave.
27132	1164 Lavender Ave.
27133	1165 Lavender Ave.
27134	1201 Lavender Ave.
27135	1202 Lavender Ave.
27136	1205 Lavender Ave.
27137	1206 Lavender Ave.
27138	1209 Lavender Ave.
27139	1212 Lavender Ave.
27140	1216 Lavender Ave.
27141	1217 Lavender Ave.
27142	1252 Lavender Ave.
27143	1255 Lavender Ave.
27144	1256 Lavender Ave.
27145	1260 Lavender Ave.
27146	1263 Lavender Ave.
27147	1264 Lavender Ave.
27148	1268 Lavender Ave.
27149	1271 Lavender Ave.
27150	1301 Lavender Ave.
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27153	1309 Lavender Ave.
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27157	1375 Lavender Ave.
27158	1402 Lavender Ave.
27159	1412 Lavender Ave.
27160	1450 Lavender Ave.
27161	1451 Lavender Ave.
27162	1460 Lavender Ave.
27163	1461 Lavender Ave.
27164	1475 Lavender Ave.
27165	1476 Lavender Ave.
27166	1485 Lavender Ave.
27167	1486 Lavender Ave.
27168	1501 Lavender Ave.

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27169	1502 Lavender Ave.
27170	1515 Lavender Ave.
27171	1516 Lavender Ave.
27172	1551 Lavender Ave.
27173	1552 Lavender Ave.
27174	1561 Lavender Ave.
27175	1562 Lavender Ave.
27176	1601 Lavender Ave.
27177	1602 Lavender Ave.
27178	1611 Lavender Ave.
27179	1612 Lavender Ave.
27180	1651 Lavender Ave.
27181	1652 Lavender Ave.
27182	1658 Lavender Ave.
27183	1805 Lawndale Ave.
27184	1818 Lawndale Ave.
27185	1821 Lawndale Ave.
27186	1822 Lawndale Ave.
27187	1825 Lawndale Ave.
27188	1826 Lawndale Ave.
27189	1830 Lawndale Ave.
27190	1905 Lawndale Ave.
27191	1906 Lawndale Ave.
27192	1909 Lawndale Ave.
27193	1910 Lawndale Ave.
27194	1914 Lawndale Ave.
27195	2001 Lawndale Ave.
27196	2109 Lawndale Ave.
27197	2110 Lawndale Ave.
27198	2113 Lawndale Ave.
27199	2114 Lawndale Ave.
27200	2117 Lawndale Ave.
27201	2118 Lawndale Ave.
27202	2121 Lawndale Ave.
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27386	2713 Layton Blvd.
27387	2713 Layton Blvd.
27388	3410 Le Erda Ave.
27389	3411 Le Erda Ave.
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27450	4030 Le Erda Ave.
27451	4033 Le Erda Ave.
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27455	4113 Le Erda Ave.
27456	4114 Le Erda Ave.

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27457	4117 Le Erda Ave.
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27474	4225 Le Erda Ave.
27475	4226 Le Erda Ave.
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27477	4230 Le Erda Ave.
27478	4233 Le Erda Ave.
27479	4234 Le Erda Ave.
27480	3705 Lee St.
27481	3713 Lee St.
27482	3717 Lee St.
27483	502 Leith St.
27484	512 Leith St.
27485	516 Leith St.
27486	520 Leith St.
27487	524 Leith St.
27488	528 Leith St.
27489	533 Leith St.
27490	536 Leith St.
27491	537 Leith St.
27492	540 Leith St.
27493	544 Leith St.
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27495	605 Leith St.
27496	609 Leith St.
27497	610 Leith St.
27498	611 Leith St.
27499	618 Leith St.
27500	622 Leith St.
27501	623 Leith St.
27502	626 Leith St.
27503	630 Leith St.
27504	632 Leith St.

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27505	727 Leith St.
27506	731 Leith St.
27507	735 Leith St.
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27512	755 Leith St.
27513	763 Leith St.
27514	771 Leith St.
27515	812 Leith St.
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27517	902 Leith St.
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27530	1505 Leith St.
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27548	1545 Leith St.
27549	1546 Leith St.
27550	1602 Leith St.
27551	1607 Leith St.
27552	1611 Leith St.

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27553	1613 Leith St.
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27571	1651 Leith St.
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27573	1701 Leith St.
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27576	1706 Leith St.
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27593	1810 Leith St.
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27595	1817 Leith St.
27596	1818 Leith St.
27597	1821 Leith St.
27598	1822 Leith St.
27599	1825 Leith St.
27600	1900 Leith St.

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27601	1911 Leith St.
27602	1912 Leith St.
27603	1915 Leith St.
27604	1918 Leith St.
27605	1919 Leith St.
27606	1920 Leith St.
27607	2001 Leith St.
27608	2002 Leith St.
27609	2005 Leith St.
27610	2006 Leith St.
27611	2013 Leith St.
27612	2014 Leith St.
27613	2017 Leith St.
27614	2021 Leith St.
27615	2022 Leith St.
27616	2101 Leith St.
27617	2102 Leith St.
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27619	2106 Leith St.
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27621	2110 Leith St.
27622	2113 Leith St.
27623	2117 Leith St.
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27625	2201 Leith St.
27626	2202 Leith St.
27627	2205 Leith St.
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27629	2209 Leith St.
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27633	2222 Leith St.
27634	2301 Leith St.
27635	2302 Leith St.
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27643	2322 Leith St.
27644	2401 Leith St.
27645	2407 Leith St.
27646	2411 Leith St.
27647	2415 Leith St.
27648	2418 Leith St.

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27649	2419 Leith St.
27650	2422 Leith St.
27651	2423 Leith St.
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27653	2427 Leith St.
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27657	2434 Leith St.
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27666	2601 Leith St.
27667	2601 Leith St.
27668	2602 Leith St.
27669	2602 Leith St.
27670	2802 Leith St.
27671	2811 Leith St.
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27674	2910 Leith St.
27675	2914 Leith St.
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27688	2941 Leith St.
27689	3001 Leith St.
27690	3008 Leith St.
27691	3011 Leith St.
27692	3012 Leith St.
27693	3014 Leith St.
27694	3015 Leith St.
27695	3019 Leith St.
27696	3024 Leith St.

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27697	3026 Leith St.
27698	3030 Leith St.
27699	3101 Leith St.
27700	3107 Leith St.
27701	3113 Leith St.
27702	3114 Leith St.
27703	3119 Leith St.
27704	3120 Leith St.
27705	3125 Leith St.
27706	3126 Leith St.
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27711	3143 Leith St.
27712	3144 Leith St.
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27716	3156 Leith St.
27717	3161 Leith St.
27718	3162 Leith St.
27719	3201 Leith St.
27720	3202 Leith St.
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27722	3208 Leith St.
27723	3213 Leith St.
27724	3214 Leith St.
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27728	3226 Leith St.
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27735	3249 Leith St.
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27737	3302 Leith St.
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27740	3313 Leith St.
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27742	3319 Leith St.
27743	3320 Leith St.
27744	3325 Leith St.

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27745	3326 Leith St.
27746	3401 Leith St.
27747	3402 Leith St.
27748	3407 Leith St.
27749	3408 Leith St.
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27787	3750 Leith St.
27788	3801 Leith St.
27789	3802 Leith St.
27790	3809 Leith St.
27791	3817 Leith St.
27792	3827 Leith St.

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27793	3835 Leith St.
27794	1001 Leith St.
27795	508 Leland St.
27796	511 Leland St.
27797	512 Leland St.
27798	515 Leland St.
27799	517 Leland St.
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27801	520 Leland St.
27802	523 Leland St.
27803	524 Leland St.
27804	611 Leland St.
27805	615 Leland St.
27806	616 Leland St.
27807	619 Leland St.
27808	624 Leland St.
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27815	648 Leland St.
27816	649 Leland St.
27817	653 Leland St.
27818	702 Leland St.
27819	705 Leland St.
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27823	714 Leland St.
27824	717 Leland St.
27825	718 Leland St.
27826	721 Leland St.
27827	726 Leland St.
27828	729 Leland St.
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27833	745 Leland St.
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27836	750 Leland St.
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27838	802 Leland St.
27839	805 Leland St.
27840	806 Leland St.

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27841	809 Leland St.
27842	813 Leland St.
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27846	825 Leland St.
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27848	830 Leland St.
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27850	834 Leland St.
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27853	845 Leland St.
27854	846 Leland St.
27855	850 Leland St.
27856	853 Leland St.
27857	854 Leland St.
27858	858 Leland St.
27859	911 Leland St.
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27861	915 Leland St.
27862	916 Leland St.
27863	920 Leland St.
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27865	931 Leland St.
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27867	936 Leland St.
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27871	948 Leland St.
27872	1015 Leland St.
27873	1016 Leland St.
27874	1022 Leland St.
27875	1023 Leland St.
27876	1024 Leland St.
27877	1027 Leland St.
27878	1032 Leland St.
27879	1035 Leland St.
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27888	1211 Leland St.

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27889	1212 Leland St.
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27900	1301 Leland St.
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27905	1314 Leland St.
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27907	5619 Leslie Ct.
27908	5621 Leslie Ct.
27909	5625 Leslie Ct.
27910	5629 Leslie Ct.
27911	5633 Leslie Ct.
27912	5637 Leslie Ct.
27913	5401 Leslie Dr.
27914	5402 Leslie Dr.
27915	5406 Leslie Dr.
27916	5410 Leslie Dr.
27917	5411 Leslie Dr.
27918	5416 Leslie Dr.
27919	5419 Leslie Dr.
27920	5420 Leslie Dr.
27921	5424 Leslie Dr.
27922	5428 Leslie Dr.
27923	5432 Leslie Dr.
27924	5502 Leslie Dr.
27925	5506 Leslie Dr.
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27935	5702 Leslie Dr.
27936	5708 Leslie Dr.

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28032	1706 Levern St.

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28311	809 Lincoln Ave.
28312	813 Lincoln Ave.
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28317	826 Lincoln Ave.
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28319	834 Lincoln Ave.
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28321	842 Lincoln Ave.
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28434	1414 Lincoln Dr.
28435	1417 Lincoln Dr.
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28438	1426 Lincoln Dr.
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28448	1608 Lincoln Dr.
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28455	1915 Lincoln Dr.
28456	1925 Lincoln Dr.
28457	1933 Lincoln Dr.
28458	1939 Lincoln Dr.
28459	1945 Lincoln Dr.
28460	2001 Lincoln Dr.
28461	2009 Lincoln Dr.
28462	2015 Lincoln Dr.
28463	2027 Lincoln Dr.
28464	1220 Lingle Ave.

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28465	1241 Lingle Ave.
28466	1245 Lingle Ave.
28467	1249 Lingle Ave.
28468	1253 Lingle Ave.
28469	1257 Lingle Ave.
28470	1261 Lingle Ave.
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28472	1269 Lingle Ave.
28473	1301 Lingle Ave.
28474	425 Linnaeus Ave.
28475	429 Linnaeus Ave.
28476	505 Linnaeus Ave.
28477	108 Linsey Blvd., E.
28478	112 Linsey Blvd., E.
28479	113 Linsey Blvd., E.
28480	114 Linsey Blvd., E.
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28482	118 Linsey Blvd., E.
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28485	125 Linsey Blvd., E.
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28511	130 Linsey Blvd., W.
28512	201 Linsey Blvd., W.

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28513	202 Linsey Blvd., W.
28514	205 Linsey Blvd., W.
28515	206 Linsey Blvd., W.
28516	209 Linsey Blvd., W.
28517	210 Linsey Blvd., W.
28518	213 Linsey Blvd., W.
28519	214 Linsey Blvd., W.
28520	217 Linsey Blvd., W.
28521	218 Linsey Blvd., W.
28522	223 Linsey Blvd., W.
28523	225 Linsey Blvd., W.
28524	226 Linsey Blvd., W.
28525	228 Linsey Blvd., W.
28526	1417 Linwood Ave.
28527	1502 Linwood Ave.
28528	1507 Linwood Ave.
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28541	1702 Linwood Ave.
28542	1707 Linwood Ave.
28543	1710 Linwood Ave.
28544	410 Lippincott Blvd.
28545	509 Lippincott Blvd.
28546	513 Lippincott Blvd.
28547	603 Lippincott Blvd.
28548	609 Lippincott Blvd.
28549	611 Lippincott Blvd.
28550	615 Lippincott Blvd.
28551	701 Lippincott Blvd.
28552	705 Lippincott Blvd.
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28554	801 Lippincott Blvd.
28555	802 Lippincott Blvd.
28556	805 Lippincott Blvd.
28557	808 Lippincott Blvd.
28558	814 Lippincott Blvd.
28559	821 Lippincott Blvd.
28560	821 Lippincott Blvd.

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28562	901 Lippincott Blvd.
28563	904 Lippincott Blvd.
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28565	913 Lippincott Blvd.
28566	916 Lippincott Blvd.
28567	1005 Lippincott Blvd.
28568	1008 Lippincott Blvd.
28569	1011 Lippincott Blvd.
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28606	1709 Lippincott Blvd.
28607	1801 Lippincott Blvd.
28608	2020 Lippincott Blvd.

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28609	2023.5 Lippincott Blvd.
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28611	2102 Lippincott Blvd.
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28613	2117 Lippincott Blvd.
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28633	2750 Lippincott Blvd.
28634	2751 Lippincott Blvd.
28635	2751 Lippincott Blvd.
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28639	2830 Lippincott Blvd.
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28643	3021 Lippincott Blvd.
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28645	3113 Lippincott Blvd.
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28647	3461 Lippincott Blvd.
28648	3507 Lippincott Blvd.
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28655	3601 Lippincott Blvd.
28656	3607 Lippincott Blvd.

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28660	3625 Lippincott Blvd.
28661	3629 Lippincott Blvd.
28662	3635 Lippincott Blvd.
28663	3707 Lippincott Blvd.
28664	3713 Lippincott Blvd.
28665	3717 Lippincott Blvd.
28666	3721 Lippincott Blvd.
28667	3725 Lippincott Blvd.
28668	3731 Lippincott Blvd.
28669	3735 Lippincott Blvd.
28670	3739 Lippincott Blvd.
28671	3807 Lippincott Blvd.
28672	111 Livingston Dr., E.
28673	115 Livingston Dr., E.
28674	118 Livingston Dr., E.
28675	119 Livingston Dr., E.
28676	123 Livingston Dr., E.
28677	126 Livingston Dr., E.
28678	127 Livingston Dr., E.
28679	131 Livingston Dr., E.
28680	132 Livingston Dr., E.
28681	135 Livingston Dr., E.
28682	136 Livingston Dr., E.
28683	140 Livingston Dr., E.
28684	201 Livingston Dr., E.
28685	202 Livingston Dr., E.
28686	205 Livingston Dr., E.
28687	206 Livingston Dr., E.
28688	209 Livingston Dr., E.
28689	210 Livingston Dr., E.
28690	213 Livingston Dr., E.
28691	214 Livingston Dr., E.
28692	217 Livingston Dr., E.
28693	218 Livingston Dr., E.
28694	219 Livingston Dr., E.
28695	222 Livingston Dr., E.
28696	225 Livingston Dr., E.
28697	226 Livingston Dr., E.
28698	229 Livingston Dr., E.
28699	230 Livingston Dr., E.
28700	233 Livingston Dr., E.
28701	234 Livingston Dr., E.
28702	237 Livingston Dr., E.
28703	238 Livingston Dr., E.
28704	242 Livingston Dr., E.

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28705	245 Livingston Dr., E.
28706	249 Livingston Dr., E.
28707	118 Livingston Dr., W.
28708	125 Livingston Dr., W.
28709	140 Livingston Dr., W.
28710	140 Livingston Dr., W.
28711	1906 Lloyd St.
28712	1912 Lloyd St.
28713	1918 Lloyd St.
28714	1923 Lloyd St.
28715	1924 Lloyd St.
28716	1929 Lloyd St.
28717	1900 Lobdell St.
28718	1911 Lobdell St.
28719	1916 Lobdell St.
28720	1920 Lobdell St.
28721	607 Lochhead Ave.
28722	617 Lochhead Ave.
28723	620 Lochhead Ave.
28724	621 Lochhead Ave.
28725	625 Lochhead Ave.
28726	629 Lochhead Ave.
28727	632 Lochhead Ave.
28728	710 Lochhead Ave.
28729	711 Lochhead Ave.
28730	714 Lochhead Ave.
28731	715 Lochhead Ave.
28732	718 Lochhead Ave.
28733	719 Lochhead Ave.
28734	722 Lochhead Ave.
28735	723 Lochhead Ave.
28736	801 Lochhead Ave.
28737	802 Lochhead Ave.
28738	805 Lochhead Ave.
28739	806 Lochhead Ave.
28740	809 Lochhead Ave.
28741	810 Lochhead Ave.
28742	813 Lochhead Ave.
28743	814 Lochhead Ave.
28744	817 Lochhead Ave.
28745	818 Lochhead Ave.
28746	901 Lochhead Ave.
28747	902 Lochhead Ave.
28748	905 Lochhead Ave.
28749	906 Lochhead Ave.
28750	909 Lochhead Ave.
28751	910 Lochhead Ave.
28752	913 Lochhead Ave.

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28753	914 Lochhead Ave.
28754	1001 Lochhead Ave.
28755	1002 Lochhead Ave.
28756	1005 Lochhead Ave.
28757	1006 Lochhead Ave.
28758	1010 Lochhead Ave.
28759	1011 Lochhead Ave.
28760	1011 Lochhead Ave.
28761	1014 Lochhead Ave.
28762	1101 Lochhead Ave.
28763	1102 Lochhead Ave.
28764	1107 Lochhead Ave.
28765	1110 Lochhead Ave.
28766	1111 Lochhead Ave.
28767	1115 Lochhead Ave.
28768	1116 Lochhead Ave.
28769	1118 Lochhead Ave.
28770	1119 Lochhead Ave.
28771	1121 Lochhead Ave.
28772	716 Lomita Ave.
28773	717 Lomita Ave.
28774	719 Lomita Ave.
28775	722 Lomita Ave.
28776	728 Lomita Ave.
28777	729 Lomita Ave.
28778	732 Lomita Ave.
28779	736 Lomita Ave.
28780	741 Lomita Ave.
28781	744 Lomita Ave.
28782	745 Lomita Ave.
28783	748 Lomita Ave.
28784	756 Lomita Ave.
28785	760 Lomita Ave.
28786	764 Lomita Ave.
28787	772 Lomita Ave.
28788	775 Lomita Ave.
28789	805 Lomita Ave.
28790	806 Lomita Ave.
28791	813 Lomita Ave.
28792	814 Lomita Ave.
28793	818 Lomita Ave.
28794	822 Lomita Ave.
28795	825 Lomita Ave.
28796	826 Lomita Ave.
28797	901 Lomita Ave.
28798	902 Lomita Ave.
28799	906 Lomita Ave.
28800	913 Lomita Ave.

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28801	914 Lomita Ave.
28802	918 Lomita Ave.
28803	921 Lomita Ave.
28804	922 Lomita Ave.
28805	926 Lomita Ave.
28806	932 Lomita Ave.
28807	933 Lomita Ave.
28808	934 Lomita Ave.
28809	945 Lomita Ave.
28810	1101 Lomita Ave.
28811	1013 Lomita Ave.
28812	1017 Lomita Ave.
28813	1022 Lomita Ave.
28814	1034 Lomita Ave.
28815	1037 Lomita Ave.
28816	1053 Lomita Ave.
28817	1054 Lomita Ave.
28818	1063 Lomita Ave.
28819	1070 Lomita Ave.
28820	1075 Lomita Ave.
28821	1078 Lomita Ave.
28822	1082 Lomita Ave.
28823	1101 Lomita Ave.
28824	1104 Lomita Ave.
28825	1106 Lomita Ave.
28826	1110 Lomita Ave.
28827	1114 Lomita Ave.
28828	1118 Lomita Ave.
28829	1122 Lomita Ave.
28830	1126 Lomita Ave.
28831	1129 Lomita Ave.
28832	1130 Lomita Ave.
28833	1136 Lomita Ave.
28834	1181 Lomita Ave.
28835	1182 Lomita Ave.
28836	1201 Lomita Ave.
28837	1202 Lomita Ave.
28838	1205 Lomita Ave.
28839	1206 Lomita Ave.
28840	1213 Lomita Ave.
28841	1214 Lomita Ave.
28842	1218 Lomita Ave.
28843	1222 Lomita Ave.
28844	4701 Longfellow Ave.
28845	5001 Longfellow Ave.
28846	5015 Longfellow Ave.
28847	101 Lorado Ave., E.
28848	105 Lorado Ave., E.

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28849	106 Lorado Ave., E.
28850	113 Lorado Ave., E.
28851	114 Lorado Ave., E.
28852	118 Lorado Ave., E.
28853	121 Lorado Ave., E.
28854	126 Lorado Ave., E.
28855	129 Lorado Ave., E.
28856	130 Lorado Ave., E.
28857	133 Lorado Ave., E.
28858	134 Lorado Ave., E.
28859	137 Lorado Ave., E.
28860	138 Lorado Ave., E.
28861	141 Lorado Ave., E.
28862	142 Lorado Ave., E.
28863	149 Lorado Ave., E.
28864	153 Lorado Ave., E.
28865	157 Lorado Ave., E.
28866	201 Lorado Ave., E.
28867	202 Lorado Ave., E.
28868	205 Lorado Ave., E.
28869	209 Lorado Ave., E.
28870	210 Lorado Ave., E.
28871	213 Lorado Ave., E.
28872	214 Lorado Ave., E.
28873	217 Lorado Ave., E.
28874	221 Lorado Ave., E.
28875	222 Lorado Ave., E.
28876	226 Lorado Ave., E.
28877	229 Lorado Ave., E.
28878	230 Lorado Ave., E.
28879	233 Lorado Ave., E.
28880	234 Lorado Ave., E.
28881	237 Lorado Ave., E.
28882	238 Lorado Ave., E.
28883	241 Lorado Ave., E.
28884	245 Lorado Ave., E.
28885	246 Lorado Ave., E.
28886	253 Lorado Ave., E.
28887	254 Lorado Ave., E.
28888	257 Lorado Ave., E.
28889	258 Lorado Ave., E.
28890	301 Lorado Ave., E.
28891	302 Lorado Ave., E.
28892	305 Lorado Ave., E.
28893	306 Lorado Ave., E.
28894	309 Lorado Ave., E.
28895	310 Lorado Ave., E.
28896	313 Lorado Ave., E.

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28897	314 Lorado Ave., E.
28898	317 Lorado Ave., E.
28899	321 Lorado Ave., E.
28900	322 Lorado Ave., E.
28901	325 Lorado Ave., E.
28902	326 Lorado Ave., E.
28903	329 Lorado Ave., E.
28904	331 Lorado Ave., E.
28905	332 Lorado Ave., E.
28906	338 Lorado Ave., E.
28907	344 Lorado Ave., E.
28908	345 Lorado Ave., E.
28909	348 Lorado Ave., E.
28910	349 Lorado Ave., E.
28911	353 Lorado Ave., E.
28912	402 Lorado Ave., E.
28913	409 Lorado Ave., E.
28914	410 Lorado Ave., E.
28915	413 Lorado Ave., E.
28916	414 Lorado Ave., E.
28917	417 Lorado Ave., E.
28918	418 Lorado Ave., E.
28919	421 Lorado Ave., E.
28920	425 Lorado Ave., E.
28921	501 Lorado Ave., E.
28922	502 Lorado Ave., E.
28923	505 Lorado Ave., E.
28924	506 Lorado Ave., E.
28925	509 Lorado Ave., E.
28926	510 Lorado Ave., E.
28927	513 Lorado Ave., E.
28928	514 Lorado Ave., E.
28929	517 Lorado Ave., E.
28930	518 Lorado Ave., E.
28931	521 Lorado Ave., E.
28932	522 Lorado Ave., E.
28933	525 Lorado Ave., E.
28934	526 Lorado Ave., E.
28935	605 Lorado Ave., E.
28936	606 Lorado Ave., E.
28937	610 Lorado Ave., E.
28938	613 Lorado Ave., E.
28939	617 Lorado Ave., E.
28940	618 Lorado Ave., E.
28941	621 Lorado Ave., E.
28942	625 Lorado Ave., E.
28943	626 Lorado Ave., E.
28944	629 Lorado Ave., E.

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28945	630 Lorado Ave., E.
28946	634 Lorado Ave., E.
28947	637 Lorado Ave., E.
28948	638 Lorado Ave., E.
28949	641 Lorado Ave., E.
28950	642 Lorado Ave., E.
28951	646 Lorado Ave., E.
28952	714 Lorado Ave., E.
28953	718 Lorado Ave., E.
28954	722 Lorado Ave., E.
28955	725 Lorado Ave., E.
28956	729 Lorado Ave., E.
28957	733 Lorado Ave., E.
28958	734 Lorado Ave., E.
28959	901 Lorado Ave., E.
28960	906 Lorado Ave., E.
28961	909 Lorado Ave., E.
28962	917 Lorado Ave., E.
28963	921 Lorado Ave., E.
28964	925 Lorado Ave., E.
28965	926 Lorado Ave., E.
28966	929 Lorado Ave., E.
28967	935 Lorado Ave., E.
28968	936 Lorado Ave., E.
28969	938 Lorado Ave., E.
28970	941 Lorado Ave., E.
28971	942 Lorado Ave., E.
28972	1001 Lorado Ave., E.
28973	1002 Lorado Ave., E.
28974	1006 Lorado Ave., E.
28975	1010 Lorado Ave., E.
28976	1013 Lorado Ave., E.
28977	1014 Lorado Ave., E.
28978	1017 Lorado Ave., E.
28979	1021 Lorado Ave., E.
28980	1026 Lorado Ave., E.
28981	1029 Lorado Ave., E.
28982	1030 Lorado Ave., E.
28983	1034 Lorado Ave., E.
28984	1037 Lorado Ave., E.
28985	1038 Lorado Ave., E.
28986	1041 Lorado Ave., E.
28987	1042 Lorado Ave., E.
28988	1046 Lorado Ave., E.
28989	1049 Lorado Ave., E.
28990	1053 Lorado Ave., E.
28991	1054 Lorado Ave., E.
28992	1061 Lorado Ave., E.

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28993	1062 Lorado Ave., E.
28994	1066 Lorado Ave., E.
28995	1069 Lorado Ave., E.
28996	1151 Lorado Ave., E.
28997	1154 Lorado Ave., E.
28998	1158 Lorado Ave., E.
28999	1159 Lorado Ave., E.
29000	1162 Lorado Ave., E.
29001	1167 Lorado Ave., E.
29002	1170 Lorado Ave., E.
29003	1171 Lorado Ave., E.
29004	1174 Lorado Ave., E.
29005	1175 Lorado Ave., E.
29006	1178 Lorado Ave., E.
29007	1179 Lorado Ave., E.
29008	1183 Lorado Ave., E.
29009	1186 Lorado Ave., E.
29010	1187 Lorado Ave., E.
29011	1190 Lorado Ave., E.
29012	1191 Lorado Ave., E.
29013	1194 Lorado Ave., E.
29014	1195 Lorado Ave., E.
29015	1198 Lorado Ave., E.
29016	1199 Lorado Ave., E.
29017	105 Lorado Ave., W.
29018	106 Lorado Ave., W.
29019	109 Lorado Ave., W.
29020	110 Lorado Ave., W.
29021	113 Lorado Ave., W.
29022	114 Lorado Ave., W.
29023	117 Lorado Ave., W.
29024	118 Lorado Ave., W.
29025	202 Lorado Ave., W.
29026	206 Lorado Ave., W.
29027	209 Lorado Ave., W.
29028	210 Lorado Ave., W.
29029	214 Lorado Ave., W.
29030	218 Lorado Ave., W.
29031	221 Lorado Ave., W.
29032	306 Lorado Ave., W.
29033	307 Lorado Ave., W.
29034	314 Lorado Ave., W.
29035	315 Lorado Ave., W.
29036	317 Lorado Ave., W.
29037	318 Lorado Ave., W.
29038	322 Lorado Ave., W.
29039	401 Lorado Ave., W.
29040	402 Lorado Ave., W.

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29041	405 Lorado Ave., W.
29042	406 Lorado Ave., W.
29043	409 Lorado Ave., W.
29044	410 Lorado Ave., W.
29045	413 Lorado Ave., W.
29046	414 Lorado Ave., W.
29047	417 Lorado Ave., W.
29048	418 Lorado Ave., W.
29049	426 Lorado Ave., W.
29050	429 Lorado Ave., W.
29051	501 Lorado Ave., W.
29052	502 Lorado Ave., W.
29053	505 Lorado Ave., W.
29054	506 Lorado Ave., W.
29055	509 Lorado Ave., W.
29056	510 Lorado Ave., W.
29057	514 Lorado Ave., W.
29058	517 Lorado Ave., W.
29059	518 Lorado Ave., W.
29060	521 Lorado Ave., W.
29061	522 Lorado Ave., W.
29062	524 Lorado Ave., W.
29063	525 Lorado Ave., W.
29064	601 Lorado Ave., W.
29065	605 Lorado Ave., W.
29066	606 Lorado Ave., W.
29067	610 Lorado Ave., W.
29068	613 Lorado Ave., W.
29069	614 Lorado Ave., W.
29070	617 Lorado Ave., W.
29071	618 Lorado Ave., W.
29072	621 Lorado Ave., W.
29073	622 Lorado Ave., W.
29074	625 Lorado Ave., W.
29075	626 Lorado Ave., W.
29076	629 Lorado Ave., W.
29077	633 Lorado Ave., W.
29078	634 Lorado Ave., W.
29079	637 Lorado Ave., W.
29080	638 Lorado Ave., W.
29081	641 Lorado Ave., W.
29082	642 Lorado Ave., W.
29083	645 Lorado Ave., W.
29084	646 Lorado Ave., W.
29085	3701 Lorraine Ave.
29086	3702 Lorraine Ave.
29087	3706 Lorraine Ave.
29088	3707 Lorraine Ave.

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29089	3711 Lorraine Ave.
29090	3712 Lorraine Ave.
29091	3714 Lorraine Ave.
29092	3715 Lorraine Ave.
29093	3719 Lorraine Ave.
29094	3720 Lorraine Ave.
29095	3723 Lorraine Ave.
29096	3724 Lorraine Ave.
29097	3727 Lorraine Ave.
29098	3728 Lorraine Ave.
29099	3731 Lorraine Ave.
29100	3732 Lorraine Ave.
29101	3735 Lorraine Ave.
29102	3736 Lorraine Ave.
29103	3739 Lorraine Ave.
29104	3740 Lorraine Ave.
29105	3743 Lorraine Ave.
29106	3744 Lorraine Ave.
29107	3747 Lorraine Ave.
29108	3751 Lorraine Ave.
29109	3752 Lorraine Ave.
29110	3801 Lorraine Ave.
29111	3802 Lorraine Ave.
29112	3805 Lorraine Ave.
29113	3806 Lorraine Ave.
29114	3810 Lorraine Ave.
29115	3813 Lorraine Ave.
29116	3814 Lorraine Ave.
29117	3817 Lorraine Ave.
29118	3818 Lorraine Ave.
29119	3821 Lorraine Ave.
29120	3822 Lorraine Ave.
29121	3825 Lorraine Ave.
29122	3826 Lorraine Ave.
29123	3829 Lorraine Ave.
29124	3830 Lorraine Ave.
29125	3833 Lorraine Ave.
29126	3834 Lorraine Ave.
29127	3837 Lorraine Ave.
29128	3838 Lorraine Ave.
29129	3841 Lorraine Ave.
29130	3842 Lorraine Ave.
29131	3846 Lorraine Ave.
29132	520 Louisa St.
29133	524 Louisa St.
29134	559 Louisa St.
29135	575 Louisa St.
29136	615 Louisa St.

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29137	4515 Lowell Blvd.
29138	702 Loyola Dr.
29139	706 Loyola Dr.
29140	710 Loyola Dr.
29141	714 Loyola Dr.
29142	718 Loyola Dr.
29143	722 Loyola Dr.
29144	726 Loyola Dr.
29145	730 Loyola Dr.
29146	1501 Loyola Dr.
29147	1505 Loyola Dr.
29148	1509 Loyola Dr.
29149	1513 Loyola Dr.
29150	1528 Loyola Dr.
29151	1602 Loyola Dr.
29152	1606 Loyola Dr.
29153	1610 Loyola Dr.
29154	701 Loyola Ln.
29155	705 Loyola Ln.
29156	709 Loyola Ln.
29157	713 Loyola Ln.
29158	717 Loyola Ln.
29159	1502 Loyola Ln.
29160	1506 Loyola Ln.
29161	1510 Loyola Ln.
29162	1907 Lyman St.
29163	2105 Lyman St.
29164	2109 Lyman St.
29165	2110 Lyman St.
29166	2111 Lyman St.
29167	2114 Lyman St.
29168	2115 Lyman St.
29169	2211 Lyman St.
29170	2212 Lyman St.
29171	2216 Lyman St.
29172	2217 Lyman St.
29173	2218 Lyman St.
29174	2220 Lyman St.
29175	2221 Lyman St.
29176	2309 Lyman St.
29177	2313 Lyman St.
29178	2314 Lyman St.
29179	2315 Lyman St.
29180	2317 Lyman St.
29181	2321 Lyman St.
29182	2325 Lyman St.
29183	2409 Lyman St.
29184	1701 Lynbrook Dr.

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29185	1702 Lynbrook Dr.
29186	1705 Lynbrook Dr.
29187	1706 Lynbrook Dr.
29188	1709 Lynbrook Dr.
29189	1710 Lynbrook Dr.
29190	1713 Lynbrook Dr.
29191	1714 Lynbrook Dr.
29192	1717 Lynbrook Dr.
29193	1718 Lynbrook Dr.
29194	1721 Lynbrook Dr.
29195	1722 Lynbrook Dr.
29196	1725 Lynbrook Dr.
29197	1726 Lynbrook Dr.
29198	1729 Lynbrook Dr.
29199	1730 Lynbrook Dr.
29200	1734 Lynbrook Dr.
29201	1749 Lynbrook Dr.
29202	1750 Lynbrook Dr.
29203	1801 Lynbrook Dr.
29204	1802 Lynbrook Dr.
29205	1805 Lynbrook Dr.
29206	1806 Lynbrook Dr.
29207	1809 Lynbrook Dr.
29208	1810 Lynbrook Dr.
29209	1813 Lynbrook Dr.
29210	1814 Lynbrook Dr.
29211	1817 Lynbrook Dr.
29212	1818 Lynbrook Dr.
29213	1825 Lynbrook Dr.
29214	1826 Lynbrook Dr.
29215	1829 Lynbrook Dr.
29216	1830 Lynbrook Dr.
29217	1833 Lynbrook Dr.
29218	1834 Lynbrook Dr.
29219	1837 Lynbrook Dr.
29220	1838 Lynbrook Dr.
29221	1842 Lynbrook Dr.
29222	1901 Lynbrook Dr.
29223	1902 Lynbrook Dr.
29224	1905 Lynbrook Dr.
29225	1906 Lynbrook Dr.
29226	1909 Lynbrook Dr.
29227	1910 Lynbrook Dr.
29228	1914 Lynbrook Dr.
29229	1917 Lynbrook Dr.
29230	1918 Lynbrook Dr.
29231	1921 Lynbrook Dr.
29232	1922 Lynbrook Dr.

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29233	1925 Lynbrook Dr.
29234	1926 Lynbrook Dr.
29235	1929 Lynbrook Dr.
29236	1930 Lynbrook Dr.
29237	1933 Lynbrook Dr.
29238	1934 Lynbrook Dr.
29239	1938 Lynbrook Dr.
29240	4501 Lynbrook Dr.
29241	4507 Lynbrook Dr.
29242	4511 Lynbrook Dr.
29243	4515 Lynbrook Dr.
29244	4519 Lynbrook Dr.
29245	4601 Lynbrook Dr.
29246	4709 Lynbrook Dr.
29247	4711 Lynbrook Dr.
29248	401 Lynch Ave., S.
29249	406 Lynch Ave., S.
29250	411 Lynch Ave., S.
29251	412 Lynch Ave., S.
29252	415 Lynch Ave., S.
29253	419 Lynch Ave., S.
29254	420 Lynch Ave., S.
29255	423 Lynch Ave., S.
29256	424 Lynch Ave., S.
29257	512 Lynch Ave., S.
29258	515 Lynch Ave., S.
29259	516 Lynch Ave., S.
29260	519 Lynch Ave., S.
29261	520 Lynch Ave., S.
29262	521 Lynch Ave., S.
29263	524 Lynch Ave., S.
29264	525 Lynch Ave., S.
29265	528 Lynch Ave., S.
29266	531 Lynch Ave., S.
29267	601 Lynch Ave., S.
29268	602 Lynch Ave., S.
29269	605 Lynch Ave., S.
29270	606 Lynch Ave., S.
29271	609 Lynch Ave., S.
29272	610 Lynch Ave., S.
29273	613 Lynch Ave., S.
29274	614 Lynch Ave., S.
29275	617 Lynch Ave., S.
29276	618 Lynch Ave., S.
29277	1312 Lynch St., N.
29278	1316 Lynch St., N.
29279	1401 Lynch St., N.
29280	1406 Lynch St., N.

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29281	1410 Lynch St., N.
29282	1414 Lynch St., N.
29283	1418 Lynch St., N.
29284	1502 Lynch St., N.
29285	1514 Lynch St., N.
29286	1518 Lynch St., N.
29287	1602 Lynch St., N.
29288	1610 Lynch St., N.
29289	1702 Lynch St., N.
29290	1706 Lynch St., N.
29291	1714 Lynch St., N.
29292	1715 Lynch St., N.
29293	1718 Lynch St., N.
29294	1719 Lynch St., N.
29295	1722 Lynch St., N.
29296	1723 Lynch St., N.
29297	1912 Lynch St., N.
29298	1913 Lynch St., N.
29299	1914 Lynch St., N.
29300	1915 Lynch St., N.
29301	1918 Lynch St., N.
29302	1925 Lynch St., N.
29303	1929 Lynch St., N.
29304	1932 Lynch St., N.
29305	2001 Lynch St., N.
29306	2009 Lynch St., N.
29307	2013 Lynch St., N.
29308	2021 Lynch St., N.
29309	301 Lyndon Ave., E.
29310	305 Lyndon Ave., E.
29311	306 Lyndon Ave., E.
29312	310 Lyndon Ave., E.
29313	313 Lyndon Ave., E.
29314	314 Lyndon Ave., E.
29315	317 Lyndon Ave., E.
29316	318 Lyndon Ave., E.
29317	321 Lyndon Ave., E.
29318	322 Lyndon Ave., E.
29319	325 Lyndon Ave., E.
29320	326 Lyndon Ave., E.
29321	329 Lyndon Ave., E.
29322	330 Lyndon Ave., E.
29323	333 Lyndon Ave., E.
29324	334 Lyndon Ave., E.
29325	337 Lyndon Ave., E.
29326	338 Lyndon Ave., E.
29327	341 Lyndon Ave., E.
29328	345 Lyndon Ave., E.

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29329	346 Lyndon Ave., E.
29330	349 Lyndon Ave., E.
29331	353 Lyndon Ave., E.
29332	354 Lyndon Ave., E.
29333	401 Lyndon Ave., E.
29334	402 Lyndon Ave., E.
29335	409 Lyndon Ave., E.
29336	410 Lyndon Ave., E.
29337	413 Lyndon Ave., E.
29338	414 Lyndon Ave., E.
29339	418 Lyndon Ave., E.
29340	421 Lyndon Ave., E.
29341	422 Lyndon Ave., E.
29342	425 Lyndon Ave., E.
29343	426 Lyndon Ave., E.
29344	501 Lyndon Ave., E.
29345	502 Lyndon Ave., E.
29346	505 Lyndon Ave., E.
29347	506 Lyndon Ave., E.
29348	509 Lyndon Ave., E.
29349	513 Lyndon Ave., E.
29350	514 Lyndon Ave., E.
29351	517 Lyndon Ave., E.
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29359	609 Lyndon Ave., E.
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29361	613 Lyndon Ave., E.
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29393	766 Lyndon Ave., E.
29394	774 Lyndon Ave., E.
29395	620 Lyndon Ave., W.
29396	621 Lyndon Ave., W.
29397	624 Lyndon Ave., W.
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29399	628 Lyndon Ave., W.
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29856	5202 M L King Ave.

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29986	513 Macdonald Ave.
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29991	525 Macdonald Ave.
29992	529 Macdonald Ave.
29993	530 Macdonald Ave.
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29995	534 Macdonald Ave.
29996	601 Macdonald Ave.
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29998	605 Macdonald Ave.
29999	606 Macdonald Ave.
30000	609 Macdonald Ave.

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30016	722 Macdonald Ave.
30017	723 Macdonald Ave.
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30041	1006 Macdonald Ave.
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30043	1010 Macdonald Ave.
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30045	1014 Macdonald Ave.
30046	1017 Macdonald Ave.
30047	1018 Macdonald Ave.
30048	1021 Macdonald Ave.

	A
30049	1022 Macdonald Ave.
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30051	1102 Macdonald Ave.
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30061	2204 Mack Ave.
30062	2211 Mack Ave.
30063	2214 Mack Ave.
30064	2215 Mack Ave.
30065	2302 Mack Ave.
30066	2309 Mack Ave.
30067	1133 Mackin Rd.
30068	1135 Mackin Rd.
30069	1141 Mackin Rd.
30070	1201 Mackin Rd.
30071	1204 Mackin Rd.
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30144	2102 Mackin Rd.

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30225	2840 Mackin Rd.
30226	2843 Mackin Rd.
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30240	2932 Mackin Rd.

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30256	3002 Mackin Rd.
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30288	3306 Mackin Rd.

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30298	3426 Mackin Rd.
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30300	3501 Mackin Rd.
30301	3506 Mackin Rd.
30302	3507 Mackin Rd.
30303	3510 Mackin Rd.
30304	3514 Mackin Rd.
30305	3521 Mackin Rd.
30306	2602 Macomber St.
30307	2611 Macomber St.
30308	2612 Macomber St.
30309	2617 Macomber St.
30310	2705 Macomber St.
30311	114 Madison Ave.
30312	117 Madison Ave.
30313	118 Madison Ave.
30314	119 Madison Ave.
30315	122 Madison Ave.
30316	125 Madison Ave.
30317	126 Madison Ave.
30318	127 Madison Ave.
30319	128 Madison Ave.
30320	131 Madison Ave.
30321	135 Madison Ave.
30322	136 Madison Ave.
30323	137 Madison Ave.
30324	142 Madison Ave.
30325	201 Madison Ave.
30326	202 Madison Ave.
30327	204 Madison Ave.
30328	205 Madison Ave.
30329	208 Madison Ave.
30330	212 Madison Ave.
30331	213 Madison Ave.
30332	217 Madison Ave.
30333	218 Madison Ave.
30334	221 Madison Ave.
30335	224 Madison Ave.
30336	225 Madison Ave.

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30337	229 Madison Ave.
30338	230 Madison Ave.
30339	232 Madison Ave.
30340	233 Madison Ave.
30341	236 Madison Ave.
30342	237 Madison Ave.
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30345	1810 Magnolia Ave.
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30354	1908 Magnolia Ave.
30355	1909 Magnolia Ave.
30356	1913 Magnolia Ave.
30357	1921 Magnolia Ave.
30358	4212 Maines St.
30359	4309 Maines St.
30360	4310 Maines St.
30361	4313 Maines St.
30362	4317 Maines St.
30363	4321 Maines St.
30364	4405 Maines St.
30365	4409 Maines St.
30366	4505 Maines St.
30367	4506 Maines St.
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30374	4606 Maines St.
30375	4609 Maines St.
30376	4610 Maines St.
30377	4613 Maines St.
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30379	4622 Maines St.
30380	802 Major St.
30381	806 Major St.
30382	807 Major St.
30383	809 Major St.
30384	810 Major St.

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30385	814 Major St.
30386	817 Major St.
30387	822 Major St.
30388	829 Major St.
30389	833 Major St.
30390	834 Major St.
30391	837 Major St.
30392	841 Major St.
30393	842 Major St.
30394	845 Major St.
30395	853 Major St.
30396	854 Major St.
30397	857 Major St.
30398	912 Major St.
30399	915 Major St.
30400	916 Major St.
30401	919 Major St.
30402	923 Major St.
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30413	1901 Mallery St.
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30423	1925 Mallery St.
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30425	2001 Mallery St.
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30427	2006 Mallery St.
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30429	2010 Mallery St.
30430	2013 Mallery St.
30431	2014 Mallery St.
30432	2017 Mallery St.

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30433	2018 Mallery St.
30434	2021 Mallery St.
30435	2022 Mallery St.
30436	2101 Mallery St.
30437	2102 Mallery St.
30438	2105 Mallery St.
30439	2106 Mallery St.
30440	2109 Mallery St.
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30467	2409 Mallery St.
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30476	2426 Mallery St.
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30479	2505 Mallery St.
30480	2506 Mallery St.

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30483	2513 Mallery St.
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30486	2518 Mallery St.
30487	2521 Mallery St.
30488	2522 Mallery St.
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30507	2714 Mallery St.
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30511	2722 Mallery St.
30512	2807 Mallery St.
30513	2808 Mallery St.
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30517	2816 Mallery St.
30518	2819 Mallery St.
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30576	3301 Mallery St.

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30577	3302 Mallery St.
30578	3305 Mallery St.
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30581	3402 Mallery St.
30582	3411 Mallery St.
30583	3412 Mallery St.
30584	3421 Mallery St.
30585	3422 Mallery St.
30586	3425 Mallery St.
30587	511 Mann Ave.
30588	521 Mann Ave.
30589	601 Mann Ave.
30590	701 Mann Ave.
30591	705 Mann Ave.
30592	709 Mann Ave.
30593	712 Mann Ave.
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30595	716 Mann Ave.
30596	717 Mann Ave.
30597	720 Mann Ave.
30598	721 Mann Ave.
30599	801 Mann Ave.
30600	802 Mann Ave.
30601	805 Mann Ave.
30602	806 Mann Ave.
30603	808 Mann Ave.
30604	809 Mann Ave.
30605	810 Mann Ave.
30606	813 Mann Ave.
30607	911 Mann Ave.
30608	912 Mann Ave.
30609	915 Mann Ave.
30610	916 Mann Ave.
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30612	920 Mann Ave.
30613	923 Mann Ave.
30614	924 Mann Ave.
30615	927 Mann Ave.
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30621	940 Mann Ave.
30622	944 Mann Ave.
30623	945 Mann Ave.
30624	947 Mann Ave.

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30625	951 Mann Ave.
30626	952 Mann Ave.
30627	955 Mann Ave.
30628	956 Mann Ave.
30629	960 Mann Ave.
30630	961 Mann Ave.
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30632	967 Mann Ave.
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30634	972 Mann Ave.
30635	983 Mann Ave.
30636	984 Mann Ave.
30637	988 Mann Ave.
30638	1002 Mann Ave.
30639	1006 Mann Ave.
30640	1020 Mann Ave.
30641	1021 Mann Ave.
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30646	1116 Mann Ave.
30647	1119 Mann Ave.
30648	1122 Mann Ave.
30649	1123 Mann Ave.
30650	1126 Mann Ave.
30651	1127 Mann Ave.
30652	1201 Mann Ave.
30653	1202 Mann Ave.
30654	1205 Mann Ave.
30655	1210 Mann Ave.
30656	1213 Mann Ave.
30657	1214 Mann Ave.
30658	1217 Mann Ave.
30659	1218 Mann Ave.
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30661	1222 Mann Ave.
30662	1222 Mann Ave.
30663	1302 Mann Ave.
30664	1305 Mann Ave.
30665	1306 Mann Ave.
30666	1309 Mann Ave.
30667	1310 Mann Ave.
30668	1313 Mann Ave.
30669	1317 Mann Ave.
30670	1318 Mann Ave.
30671	1321 Mann Ave.
30672	1325 Mann Ave.

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30673	1326 Mann Ave.
30674	1401 Mann Ave.
30675	1402 Mann Ave.
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30678	1409 Mann Ave.
30679	1410 Mann Ave.
30680	1413 Mann Ave.
30681	1414 Mann Ave.
30682	1417 Mann Ave.
30683	1418 Mann Ave.
30684	2917 Mann Hall Ave.
30685	2925 Mann Hall Ave.
30686	3816 Mann Hall Ave.
30687	3817 Mann Hall Ave.
30688	3820 Mann Hall Ave.
30689	3821 Mann Hall Ave.
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30691	3828 Mann Hall Ave.
30692	3832 Mann Hall Ave.
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30698	3922 Mann Hall Ave.
30699	3926 Mann Hall Ave.
30700	3930 Mann Hall Ave.
30701	3934 Mann Hall Ave.
30702	4001 Mann Hall Ave.
30703	4007 Mann Hall Ave.
30704	4008 Mann Hall Ave.
30705	4011 Mann Hall Ave.
30706	4012 Mann Hall Ave.
30707	4015 Mann Hall Ave.
30708	4019 Mann Hall Ave.
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30711	4027 Mann Hall Ave.
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30716	4036 Mann Hall Ave.
30717	4039 Mann Hall Ave.
30718	4040 Mann Hall Ave.
30719	4044 Mann Hall Ave.
30720	4045 Mann Hall Ave.

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30721	1003 Manning Ct.
30722	1009 Manning Ct.
30723	1015 Manning Ct.
30724	1027 Manning Ct.
30725	1103 Manning Ct.
30726	2701 Mansfield Ave.
30727	2702 Mansfield Ave.
30728	2709 Mansfield Ave.
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30731	2714 Mansfield Ave.
30732	2718 Mansfield Ave.
30733	2719 Mansfield Ave.
30734	2722 Mansfield Ave.
30735	2725 Mansfield Ave.
30736	2731 Mansfield Ave.
30737	2802 Mansfield Ave.
30738	4402 Maple Leaf Tr.
30739	4408 Maple Leaf Tr.
30740	4413 Maple Leaf Tr.
30741	4414 Maple Leaf Tr.
30742	4419 Maple Leaf Tr.
30743	4420 Maple Leaf Tr.
30744	4426 Maple Leaf Tr.
30745	4432 Maple Leaf Tr.
30746	4438 Maple Leaf Tr.
30747	4444 Maple Leaf Tr.
30748	5401 Mapletree Ct.
30749	1301 Maplewood Ave.
30750	1305 Maplewood Ave.
30751	1306 Maplewood Ave.
30752	1310 Maplewood Ave.
30753	1311 Maplewood Ave.
30754	1314 Maplewood Ave.
30755	1317 Maplewood Ave.
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30761	1413 Maplewood Ave.
30762	1414 Maplewood Ave.
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30767	1426 Maplewood Ave.
30768	1428 Maplewood Ave.

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30771	1504 Maplewood Ave.
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30775	1513 Maplewood Ave.
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30780	1522 Maplewood Ave.
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30798	1810 Maplewood Ave.
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30803	1918 Maplewood Ave.
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30805	2010 Maplewood Ave.
30806	2013 Maplewood Ave.
30807	2017 Maplewood Ave.
30808	2018 Maplewood Ave.
30809	2021 Maplewood Ave.
30810	2022 Maplewood Ave.
30811	2101 Maplewood Ave.
30812	2102 Maplewood Ave.
30813	2105 Maplewood Ave.
30814	2106 Maplewood Ave.
30815	2107 Maplewood Ave.
30816	2110 Maplewood Ave.

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30817	2113 Maplewood Ave.
30818	2114 Maplewood Ave.
30819	2118 Maplewood Ave.
30820	2122 Maplewood Ave.
30821	2202 Maplewood Ave.
30822	2206 Maplewood Ave.
30823	2210 Maplewood Ave.
30824	2218 Maplewood Ave.
30825	2221 Maplewood Ave.
30826	2222 Maplewood Ave.
30827	2301 Maplewood Ave.
30828	2302 Maplewood Ave.
30829	2305 Maplewood Ave.
30830	2309 Maplewood Ave.
30831	2310 Maplewood Ave.
30832	2313 Maplewood Ave.
30833	2314 Maplewood Ave.
30834	2317 Maplewood Ave.
30835	2318 Maplewood Ave.
30836	2321 Maplewood Ave.
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30838	2402 Maplewood Ave.
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30843	2421 Maplewood Ave.
30844	2422 Maplewood Ave.
30845	2425 Maplewood Ave.
30846	2426 Maplewood Ave.
30847	2604 Maplewood Ave.
30848	2606 Maplewood Ave.
30849	2612 Maplewood Ave.
30850	2616 Maplewood Ave.
30851	102 Marengo Ave., E.
30852	111 Marengo Ave., E.
30853	112 Marengo Ave., E.
30854	115 Marengo Ave., E.
30855	116 Marengo Ave., E.
30856	119 Marengo Ave., E.
30857	120 Marengo Ave., E.
30858	123 Marengo Ave., E.
30859	124 Marengo Ave., E.
30860	127 Marengo Ave., E.
30861	128 Marengo Ave., E.
30862	131 Marengo Ave., E.
30863	132 Marengo Ave., E.
30864	135 Marengo Ave., E.

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30865	136 Marengo Ave., E.
30866	201 Marengo Ave., E.
30867	202 Marengo Ave., E.
30868	205 Marengo Ave., E.
30869	206 Marengo Ave., E.
30870	209 Marengo Ave., E.
30871	213 Marengo Ave., E.
30872	214 Marengo Ave., E.
30873	217 Marengo Ave., E.
30874	218 Marengo Ave., E.
30875	221 Marengo Ave., E.
30876	222 Marengo Ave., E.
30877	225 Marengo Ave., E.
30878	226 Marengo Ave., E.
30879	229 Marengo Ave., E.
30880	230 Marengo Ave., E.
30881	301 Marengo Ave., E.
30882	302 Marengo Ave., E.
30883	305 Marengo Ave., E.
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30885	310 Marengo Ave., E.
30886	313 Marengo Ave., E.
30887	314 Marengo Ave., E.
30888	318 Marengo Ave., E.
30889	321 Marengo Ave., E.
30890	322 Marengo Ave., E.
30891	325 Marengo Ave., E.
30892	326 Marengo Ave., E.
30893	329 Marengo Ave., E.
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30895	333 Marengo Ave., E.
30896	337 Marengo Ave., E.
30897	338 Marengo Ave., E.
30898	341 Marengo Ave., E.
30899	342 Marengo Ave., E.
30900	345 Marengo Ave., E.
30901	346 Marengo Ave., E.
30902	349 Marengo Ave., E.
30903	350 Marengo Ave., E.
30904	354 Marengo Ave., E.
30905	355 Marengo Ave., E.
30906	358 Marengo Ave., E.
30907	359 Marengo Ave., E.
30908	363 Marengo Ave., E.
30909	364 Marengo Ave., E.
30910	367 Marengo Ave., E.
30911	368 Marengo Ave., E.
30912	402 Marengo Ave., E.

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30913	406 Marengo Ave., E.
30914	410 Marengo Ave., E.
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30916	414 Marengo Ave., E.
30917	417 Marengo Ave., E.
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30919	421 Marengo Ave., E.
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30932	522 Marengo Ave., E.
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30936	606 Marengo Ave., E.
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30938	610 Marengo Ave., E.
30939	613 Marengo Ave., E.
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30941	617 Marengo Ave., E.
30942	618 Marengo Ave., E.
30943	621 Marengo Ave., E.
30944	622 Marengo Ave., E.
30945	626 Marengo Ave., E.
30946	629 Marengo Ave., E.
30947	630 Marengo Ave., E.
30948	633 Marengo Ave., E.
30949	634 Marengo Ave., E.
30950	637 Marengo Ave., E.
30951	638 Marengo Ave., E.
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30957	650 Marengo Ave., E.
30958	653 Marengo Ave., E.
30959	654 Marengo Ave., E.
30960	657 Marengo Ave., E.

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30961	658 Marengo Ave., E.
30962	661 Marengo Ave., E.
30963	662 Marengo Ave., E.
30964	665 Marengo Ave., E.
30965	669 Marengo Ave., E.
30966	674 Marengo Ave., E.
30967	705 Marengo Ave., E.
30968	709 Marengo Ave., E.
30969	712 Marengo Ave., E.
30970	713 Marengo Ave., E.
30971	716 Marengo Ave., E.
30972	717 Marengo Ave., E.
30973	721 Marengo Ave., E.
30974	732 Marengo Ave., E.
30975	736 Marengo Ave., E.
30976	737 Marengo Ave., E.
30977	740 Marengo Ave., E.
30978	741 Marengo Ave., E.
30979	744 Marengo Ave., E.
30980	745 Marengo Ave., E.
30981	748 Marengo Ave., E.
30982	749 Marengo Ave., E.
30983	752 Marengo Ave., E.
30984	756 Marengo Ave., E.
30985	766 Marengo Ave., E.
30986	772 Marengo Ave., E.
30987	805 Marengo Ave., E.
30988	806 Marengo Ave., E.
30989	809 Marengo Ave., E.
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30999	909 Marengo Ave., E.
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31001	917 Marengo Ave., E.
31002	918 Marengo Ave., E.
31003	921 Marengo Ave., E.
31004	921 Marengo Ave., E.
31005	926 Marengo Ave., E.
31006	930 Marengo Ave., E.
31007	1014 Marengo Ave., E.
31008	1018 Marengo Ave., E.

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31009	1022 Marengo Ave., E.
31010	1026 Marengo Ave., E.
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31012	1034 Marengo Ave., E.
31013	1038 Marengo Ave., E.
31014	1051 Marengo Ave., E.
31015	1056 Marengo Ave., E.
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31018	1067 Marengo Ave., E.
31019	1068 Marengo Ave., E.
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31021	1075 Marengo Ave., E.
31022	1078 Marengo Ave., E.
31023	1082 Marengo Ave., E.
31024	1083 Marengo Ave., E.
31025	1101 Marengo Ave., E.
31026	1105 Marengo Ave., E.
31027	1130 Marengo Ave., E.
31028	1134 Marengo Ave., E.
31029	1182 Marengo Ave., E.
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31031	1206 Marengo Ave., E.
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31033	112 Marengo Ave., W.
31034	115 Marengo Ave., W.
31035	116 Marengo Ave., W.
31036	123 Marengo Ave., W.
31037	124 Marengo Ave., W.
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31051	229 Marengo Ave., W.
31052	301 Marengo Ave., W.
31053	302 Marengo Ave., W.
31054	305 Marengo Ave., W.
31055	306 Marengo Ave., W.
31056	310 Marengo Ave., W.

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31057	313 Marengo Ave., W.
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31059	317 Marengo Ave., W.
31060	318 Marengo Ave., W.
31061	321 Marengo Ave., W.
31062	325 Marengo Ave., W.
31063	326 Marengo Ave., W.
31064	330 Marengo Ave., W.
31065	401 Marengo Ave., W.
31066	402 Marengo Ave., W.
31067	405 Marengo Ave., W.
31068	406 Marengo Ave., W.
31069	411 Marengo Ave., W.
31070	414 Marengo Ave., W.
31071	417 Marengo Ave., W.
31072	421 Marengo Ave., W.
31073	424 Marengo Ave., W.
31074	501 Marengo Ave., W.
31075	505 Marengo Ave., W.
31076	506 Marengo Ave., W.
31077	509 Marengo Ave., W.
31078	510 Marengo Ave., W.
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31090	542 Marengo Ave., W.
31091	545 Marengo Ave., W.
31092	546 Marengo Ave., W.
31093	549 Marengo Ave., W.
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31096	602 Marengo Ave., W.
31097	606 Marengo Ave., W.
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31099	612 Marengo Ave., W.
31100	613 Marengo Ave., W.
31101	617 Marengo Ave., W.
31102	618 Marengo Ave., W.
31103	621 Marengo Ave., W.
31104	622 Marengo Ave., W.

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31105	625 Marengo Ave., W.
31106	626 Marengo Ave., W.
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31110	635 Marengo Ave., W.
31111	638 Marengo Ave., W.
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31114	645 Marengo Ave., W.
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31116	701 Marengo Ave., W.
31117	702 Marengo Ave., W.
31118	705 Marengo Ave., W.
31119	709 Marengo Ave., W.
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31131	901 Marengo Ave., W.
31132	902 Marengo Ave., W.
31133	905 Marengo Ave., W.
31134	906 Marengo Ave., W.
31135	909 Marengo Ave., W.
31136	910 Marengo Ave., W.
31137	917 Marengo Ave., W.
31138	918 Marengo Ave., W.
31139	1013 Marengo Ave., W.
31140	2801 Margate Cir.
31141	2802 Margate Cir.
31142	2807 Margate Cir.
31143	2808 Margate Cir.
31144	2813 Margate Cir.
31145	2814 Margate Cir.
31146	2819 Margate Cir.
31147	2820 Margate Cir.
31148	2825 Margate Cir.
31149	2826 Margate Cir.
31150	2831 Margate Cir.
31151	2832 Margate Cir.
31152	2837 Margate Cir.

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31153	2838 Margate Cir.
31154	5201 Marja St.
31155	5202 Marja St.
31156	5211 Marja St.
31157	5301 Marja St.
31158	5302 Marja St.
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31160	5308 Marja St.
31161	5309 Marja St.
31162	5313 Marja St.
31163	5401 Marja St.
31164	5402 Marja St.
31165	5405 Marja St.
31166	5406 Marja St.
31167	5409 Marja St.
31168	5410 Marja St.
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31170	5414 Marja St.
31171	5417 Marja St.
31172	5418 Marja St.
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31176	5506 Marja St.
31177	5509 Marja St.
31178	5510 Marja St.
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31180	5605 Marja St.
31181	5610 Marja St.
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31186	5619 Marja St.
31187	5701 Marja St.
31188	5702 Marja St.
31189	5705 Marja St.
31190	5706 Marja St.
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31196	5722 Marja St.
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31199	5908 Marja St.
31200	5909 Marja St.

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31201	5912 Marja St.
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31203	5916 Marja St.
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31208	5927 Marja St.
31209	5928 Marja St.
31210	5931 Marja St.
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31227	801 Markham St.
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31238	834 Markham St.
31239	836 Markham St.
31240	837 Markham St.
31241	841 Markham St.
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31244	846 Markham St.
31245	850 Markham St.
31246	851 Markham St.
31247	855 Markham St.
31248	859 Markham St.

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31249	863 Markham St.
31250	867 Markham St.
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31292	1229 Markham St.
31293	1230 Markham St.
31294	1233 Markham St.
31295	1234 Markham St.
31296	1238 Markham St.

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31297	1255 Markham St.
31298	1305 Markham St.
31299	1306 Markham St.
31300	1314 Markham St.
31301	1317 Markham St.
31302	1702 Marlowe Dr.
31303	1707 Marlowe Dr.
31304	1708 Marlowe Dr.
31305	1713 Marlowe Dr.
31306	1714 Marlowe Dr.
31307	1719 Marlowe Dr.
31308	1720 Marlowe Dr.
31309	1801 Marlowe Dr.
31310	1802 Marlowe Dr.
31311	1805 Marlowe Dr.
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31315	1814 Marlowe Dr.
31316	1817 Marlowe Dr.
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31318	1821 Marlowe Dr.
31319	1824 Marlowe Dr.
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31321	1901 Marlowe Dr.
31322	1902 Marlowe Dr.
31323	1905 Marlowe Dr.
31324	1908 Marlowe Dr.
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31326	1913 Marlowe Dr.
31327	1917 Marlowe Dr.
31328	5601 Marlowe Dr.
31329	5611 Marlowe Dr.
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31335	5701 Marlowe Dr.
31336	5702 Marlowe Dr.
31337	5705 Marlowe Dr.
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31341	5713 Marlowe Dr.
31342	5714 Marlowe Dr.
31343	5801 Marlowe Dr.
31344	5802 Marlowe Dr.

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31345	5805 Marlowe Dr.
31346	5806 Marlowe Dr.
31347	5809 Marlowe Dr.
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31352	5902 Marlowe Dr.
31353	5905 Marlowe Dr.
31354	5906 Marlowe Dr.
31355	3401 Marmion Ave.
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31359	3413 Marmion Ave.
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31392	3802 Marmion Ave.

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31415	1613 Marquette Dr.
31416	1701 Marquette Dr.
31417	1705 Marquette Dr.
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31422	401 Marquette St.
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31433	602 Marquette St.
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31436	615 Marquette St.
31437	618 Marquette St.
31438	624 Marquette St.
31439	701 Marquette St.
31440	702 Marquette St.

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31441	707 Marquette St.
31442	708 Marquette St.
31443	713 Marquette St.
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31445	802 Marquette St.
31446	808 Marquette St.
31447	809 Marquette St.
31448	814 Marquette St.
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31450	820 Marquette St.
31451	901 Marquette St.
31452	902 Marquette St.
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31454	909 Marquette St.
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31456	1059 Marquette St.
31457	1063 Marquette St.
31458	1912 Marshall St.
31459	1913 Marshall St.
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31464	1928 Marshall St.
31465	2001 Marshall St.
31466	2002 Marshall St.
31467	2010 Marshall St.
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31469	2014 Marshall St.
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31471	2017 Marshall St.
31472	2020 Marshall St.
31473	2021 Marshall St.
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31486	3615 Marvin St.
31487	3617 Marvin St.
31488	3621 Marvin St.

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31489	3622 Marvin St.
31490	3701 Marvin St.
31491	3702 Marvin St.
31492	3705 Marvin St.
31493	3708 Marvin St.
31494	3709 Marvin St.
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31496	3810 Marvin St.
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31501	3920 Marvin St.
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31503	4010 Marvin St.
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31505	4020 Marvin St.
31506	4024 Marvin St.
31507	4102 Marvin St.
31508	4106 Marvin St.
31509	4110 Marvin St.
31510	4114 Marvin St.
31511	4118 Marvin St.
31512	4122 Marvin St.
31513	205 Mary St.
31514	209 Mary St.
31515	210 Mary St.
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31518	225 Mary St.
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31520	231 Mary St.
31521	234 Mary St.
31522	238 Mary St.
31523	241 Mary St.
31524	242 Mary St.
31525	249 Mary St.
31526	303 Mary St.
31527	305 Mary St.
31528	306 Mary St.
31529	308 Mary St.
31530	309 Mary St.
31531	313 Mary St.
31532	316 Mary St.
31533	321 Mary St.
31534	325 Mary St.
31535	328 Mary St.
31536	329 Mary St.

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31537	332 Mary St.
31538	333 Mary St.
31539	404 Mary St.
31540	405 Mary St.
31541	412 Mary St.
31542	419 Mary St.
31543	421 Mary St.
31544	425 Mary St.
31545	431 Mary St.
31546	435 Mary St.
31547	437 Mary St.
31548	505 Mary St.
31549	509 Mary St.
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31551	513 Mary St.
31552	517 Mary St.
31553	551 Mary St.
31554	555 Mary St.
31555	559 Mary St.
31556	601 Mary St.
31557	605 Mary St.
31558	609 Mary St.
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31561	1417 Maryland Ave.
31562	1421 Maryland Ave.
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31612	1644 Maryland Ave.
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31661	2014 Maryland Ave.
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31665	2022 Maryland Ave.
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31680	2217 Maryland Ave.

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31681	2218 Maryland Ave.
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31726	2702 Maryland Ave.
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31734	2919 Maryland Ave.
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31740	3013 Maryland Ave.
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31776	3209 Maryland Ave.

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31782	3221 Maryland Ave.
31783	3222 Maryland Ave.
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31819	3833 Maryland Ave.
31820	307 Mason St.
31821	410 Mason St.
31822	414 Mason St.
31823	417 Mason St.
31824	508 Mason St.

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31825	510 Mason St.
31826	515 Mason St.
31827	518 Mason St.
31828	519 Mason St.
31829	522 Mason St.
31830	614 Mason St.
31831	621 Mason St.
31832	622 Mason St.
31833	625 Mason St.
31834	626 Mason St.
31835	702 Mason St.
31836	703 Mason St.
31837	720 Mason St.
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31847	925 Mason St.
31848	926 Mason St.
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31850	1001 Mason St.
31851	1005 Mason St.
31852	1011 Mason St.
31853	1014 Mason St.
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31856	1021 Mason St.
31857	1024 Mason St.
31858	1026 Mason St.
31859	1028 Mason St.
31860	1100 Mason St.
31861	1101 Mason St.
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31867	1206 Mason St.
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31873	1226 Mason St.
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31878	1307 Mason St.
31879	1310 Mason St.
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31920	1644 Mason St.

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31921	1708 Mason St.
31922	1711 Mason St.
31923	1715 Mason St.
31924	2001 Mason St.
31925	2005 Mason St.
31926	2009 Mason St.
31927	2159 Mason St.
31928	2163 Mason St.
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31933	2221 Mason St.
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31938	2309 Mason St.
31939	2313 Mason St.
31940	2401 Mason St.
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31942	2501 Mason St.
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31947	2557 Mason St.
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31949	2617 Mason St.
31950	2703 Mason St.
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31953	2715 Mason St.
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31958	2901 Mason St.
31959	2907 Mason St.
31960	2911 Mason St.
31961	2915 Mason St.
31962	2916 Mason St.
31963	3003 Mason St.
31964	3007 Mason St.
31965	3112 Mason St.
31966	3117 Mason St.
31967	3201 Mason St.
31968	3207 Mason St.

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31969	3213 Mason St.
31970	3217 Mason St.
31971	3307 Mason St.
31972	3312 Mason St.
31973	3313 Mason St.
31974	3401 Mason St.
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31976	3414 Mason St.
31977	3420 Mason St.
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31981	3501 Mason St.
31982	3502 Mason St.
31983	3505 Mason St.
31984	3506 Mason St.
31985	3509 Mason St.
31986	3510 Mason St.
31987	3513 Mason St.
31988	3514 Mason St.
31989	3517 Mason St.
31990	3518 Mason St.
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31993	3601 Mason St.
31994	3602 Mason St.
31995	3605 Mason St.
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31997	3609 Mason St.
31998	3610 Mason St.
31999	3613 Mason St.
32000	3614 Mason St.
32001	3617 Mason St.
32002	3618 Mason St.
32003	3621 Mason St.
32004	3622 Mason St.
32005	3625 Mason St.
32006	3626 Mason St.
32007	3701 Mason St.
32008	3702 Mason St.
32009	3705 Mason St.
32010	3706 Mason St.
32011	3709 Mason St.
32012	3710 Mason St.
32013	3713 Mason St.
32014	3714 Mason St.
32015	3717 Mason St.
32016	3721 Mason St.

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32017	3800 Mason St.
32018	501 Mathewson St.
32019	502 Mathewson St.
32020	504 Mathewson St.
32021	505 Mathewson St.
32022	507 Mathewson St.
32023	509 Mathewson St.
32024	511 Mathewson St.
32025	512 Mathewson St.
32026	513 Mathewson St.
32027	514 Mathewson St.
32028	515 Mathewson St.
32029	516 Mathewson St.
32030	517 Mathewson St.
32031	518 Mathewson St.
32032	522 Mathewson St.
32033	524 Mathewson St.
32034	4400 Matthew Dr.
32035	4400 Matthew Dr.
32036	4500 Matthew Dr.
32037	4500 Matthew Dr.
32038	4400 Matthew Dr.
32039	4500 Matthew Dr.
32040	601 Maxine Ave.
32041	602 Maxine Ave.
32042	620 Maxine Ave.
32043	624 Maxine Ave.
32044	625 Maxine Ave.
32045	638 Maxine Ave.
32046	702 Maxine Ave.
32047	709 Maxine Ave.
32048	801 Maxine Ave.
32049	807 Maxine Ave.
32050	810 Maxine Ave.
32051	813 Maxine Ave.
32052	814 Maxine Ave.
32053	820 Maxine Ave.
32054	914 Maxine Ave.
32055	915 Maxine Ave.
32056	918 Maxine Ave.
32057	922 Maxine Ave.
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32061	931 Maxine Ave.
32062	932 Maxine Ave.
32063	1001 Maxine Ave.
32064	1002 Maxine Ave.

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32065	1005 Maxine Ave.
32066	1008 Maxine Ave.
32067	1009 Maxine Ave.
32068	1014 Maxine Ave.
32069	1015 Maxine Ave.
32070	1018 Maxine Ave.
32071	1021 Maxine Ave.
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32085	1206 Maxine Ave.
32086	1209 Maxine Ave.
32087	1213 Maxine Ave.
32088	1214 Maxine Ave.
32089	1217 Maxine Ave.
32090	1218 Maxine Ave.
32091	1301 Maxine Ave.
32092	1307 Maxine Ave.
32093	1312 Maxine Ave.
32094	1315 Maxine Ave.
32095	1318 Maxine Ave.
32096	2002 Maybury Ave.
32097	2013 Maybury Ave.
32098	2014 Maybury Ave.
32099	2016 Maybury Ave.
32100	2017 Maybury Ave.
32101	2021 Maybury Ave.
32102	2022 Maybury Ave.
32103	2025 Maybury Ave.
32104	2026 Maybury Ave.
32105	2029 Maybury Ave.
32106	2033 Maybury Ave.
32107	2034 Maybury Ave.
32108	2038 Maybury Ave.
32109	2041 Maybury Ave.
32110	2042 Maybury Ave.
32111	2045 Maybury Ave.
32112	2046 Maybury Ave.

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32113	2049 Maybury Ave.
32114	2106 Maybury Ave.
32115	2108 Maybury Ave.
32116	2110 Maybury Ave.
32117	2130 Maybury Ave.
32118	2202 Maybury Ave.
32119	2212 Maybury Ave.
32120	2226 Maybury Ave.
32121	2230 Maybury Ave.
32122	2234 Maybury Ave.
32123	425 Mc Aras Ct.
32124	428 Mc Aras Ct.
32125	429 Mc Aras Ct.
32126	501 Mc Aras Ct.
32127	502 Mc Aras Ct.
32128	505 Mc Aras Ct.
32129	506 Mc Aras Ct.
32130	510 Mc Aras Ct.
32131	511 Mc Aras Ct.
32132	513 Mc Aras Ct.
32133	514 Mc Aras Ct.
32134	518 Mc Aras Ct.
32135	520 Mc Aras Ct.
32136	521 Mc Aras Ct.
32137	524 Mc Aras Ct.
32138	525 Mc Aras Ct.
32139	528 Mc Aras Ct.
32140	2009 Mc Avoy St.
32141	2010 Mc Avoy St.
32142	2013 Mc Avoy St.
32143	2014 Mc Avoy St.
32144	2017 Mc Avoy St.
32145	2018 Mc Avoy St.
32146	2021 Mc Avoy St.
32147	2022 Mc Avoy St.
32148	2025 Mc Avoy St.
32149	2026 Mc Avoy St.
32150	2029 Mc Avoy St.
32151	2030 Mc Avoy St.
32152	2036 Mc Avoy St.
32153	2040 Mc Avoy St.
32154	2045 Mc Avoy St.
32155	2048 Mc Avoy St.
32156	2049 Mc Avoy St.
32157	2050 Mc Avoy St.
32158	115 Mc Clellan St., E.
32159	116 Mc Clellan St., E.
32160	120 Mc Clellan St., E.

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32161	123 Mc Clellan St., E.
32162	124 Mc Clellan St., E.
32163	128 Mc Clellan St., E.
32164	131 Mc Clellan St., E.
32165	132 Mc Clellan St., E.
32166	133 Mc Clellan St., E.
32167	136 Mc Clellan St., E.
32168	202 Mc Clellan St., E.
32169	206 Mc Clellan St., E.
32170	210 Mc Clellan St., E.
32171	214 Mc Clellan St., E.
32172	218 Mc Clellan St., E.
32173	222 Mc Clellan St., E.
32174	226 Mc Clellan St., E.
32175	230 Mc Clellan St., E.
32176	234 Mc Clellan St., E.
32177	238 Mc Clellan St., E.
32178	301 Mc Clellan St., E.
32179	302 Mc Clellan St., E.
32180	314 Mc Clellan St., E.
32181	322 Mc Clellan St., E.
32182	326 Mc Clellan St., E.
32183	330 Mc Clellan St., E.
32184	334 Mc Clellan St., E.
32185	338 Mc Clellan St., E.
32186	342 Mc Clellan St., E.
32187	402 Mc Clellan St., E.
32188	406 Mc Clellan St., E.
32189	410 Mc Clellan St., E.
32190	414 Mc Clellan St., E.
32191	418 Mc Clellan St., E.
32192	422 Mc Clellan St., E.
32193	433 Mc Clellan St., E.
32194	434 Mc Clellan St., E.
32195	505 Mc Clellan St., E.
32196	509 Mc Clellan St., E.
32197	513 Mc Clellan St., E.
32198	517 Mc Clellan St., E.
32199	521 Mc Clellan St., E.
32200	525 Mc Clellan St., E.
32201	529 Mc Clellan St., E.
32202	541 Mc Clellan St., E.
32203	605 Mc Clellan St., E.
32204	608 Mc Clellan St., E.
32205	609 Mc Clellan St., E.
32206	610 Mc Clellan St., E.
32207	613 Mc Clellan St., E.
32208	614 Mc Clellan St., E.

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32209	617 Mc Clellan St., E.
32210	618 Mc Clellan St., E.
32211	621 Mc Clellan St., E.
32212	622 Mc Clellan St., E.
32213	625 Mc Clellan St., E.
32214	626 Mc Clellan St., E.
32215	630 Mc Clellan St., E.
32216	709 Mc Clellan St., E.
32217	714 Mc Clellan St., E.
32218	715 Mc Clellan St., E.
32219	719 Mc Clellan St., E.
32220	722 Mc Clellan St., E.
32221	723 Mc Clellan St., E.
32222	726 Mc Clellan St., E.
32223	727 Mc Clellan St., E.
32224	730 Mc Clellan St., E.
32225	731 Mc Clellan St., E.
32226	734 Mc Clellan St., E.
32227	735 Mc Clellan St., E.
32228	742 Mc Clellan St., E.
32229	755 Mc Clellan St., E.
32230	758 Mc Clellan St., E.
32231	759 Mc Clellan St., E.
32232	760 Mc Clellan St., E.
32233	763 Mc Clellan St., E.
32234	767 Mc Clellan St., E.
32235	805 Mc Clellan St., E.
32236	806 Mc Clellan St., E.
32237	809 Mc Clellan St., E.
32238	813 Mc Clellan St., E.
32239	822 Mc Clellan St., E.
32240	825 Mc Clellan St., E.
32241	826 Mc Clellan St., E.
32242	829 Mc Clellan St., E.
32243	831 Mc Clellan St., E.
32244	834 Mc Clellan St., E.
32245	903 Mc Clellan St., E.
32246	905 Mc Clellan St., E.
32247	915 Mc Clellan St., E.
32248	112 Mc Clellan St., W.
32249	113 Mc Clellan St., W.
32250	116 Mc Clellan St., W.
32251	117 Mc Clellan St., W.
32252	120 Mc Clellan St., W.
32253	121 Mc Clellan St., W.
32254	124 Mc Clellan St., W.
32255	125 Mc Clellan St., W.
32256	128 Mc Clellan St., W.

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32257	129 Mc Clellan St., W.
32258	132 Mc Clellan St., W.
32259	133 Mc Clellan St., W.
32260	200 Mc Clellan St., W.
32261	201 Mc Clellan St., W.
32262	204 Mc Clellan St., W.
32263	205 Mc Clellan St., W.
32264	208 Mc Clellan St., W.
32265	209 Mc Clellan St., W.
32266	212 Mc Clellan St., W.
32267	213 Mc Clellan St., W.
32268	216 Mc Clellan St., W.
32269	217 Mc Clellan St., W.
32270	220 Mc Clellan St., W.
32271	221 Mc Clellan St., W.
32272	224 Mc Clellan St., W.
32273	225 Mc Clellan St., W.
32274	229 Mc Clellan St., W.
32275	230 Mc Clellan St., W.
32276	301 Mc Clellan St., W.
32277	302 Mc Clellan St., W.
32278	306 Mc Clellan St., W.
32279	307 Mc Clellan St., W.
32280	312 Mc Clellan St., W.
32281	314 Mc Clellan St., W.
32282	315 Mc Clellan St., W.
32283	319 Mc Clellan St., W.
32284	320 Mc Clellan St., W.
32285	323 Mc Clellan St., W.
32286	324 Mc Clellan St., W.
32287	402 Mc Clellan St., W.
32288	405 Mc Clellan St., W.
32289	406 Mc Clellan St., W.
32290	409 Mc Clellan St., W.
32291	410 Mc Clellan St., W.
32292	413 Mc Clellan St., W.
32293	414 Mc Clellan St., W.
32294	417 Mc Clellan St., W.
32295	418 Mc Clellan St., W.
32296	421 Mc Clellan St., W.
32297	422 Mc Clellan St., W.
32298	430 Mc Clellan St., W.
32299	435 Mc Clellan St., W.
32300	513 Mc Clellan St., W.
32301	514 Mc Clellan St., W.
32302	517 Mc Clellan St., W.
32303	522 Mc Clellan St., W.
32304	523 Mc Clellan St., W.

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32305	526 Mc Clellan St., W.
32306	527 Mc Clellan St., W.
32307	530 Mc Clellan St., W.
32308	601 Mc Clellan St., W.
32309	602 Mc Clellan St., W.
32310	606 Mc Clellan St., W.
32311	610 Mc Clellan St., W.
32312	711 Mc Clellan St., W.
32313	716 Mc Clellan St., W.
32314	717 Mc Clellan St., W.
32315	720 Mc Clellan St., W.
32316	723 Mc Clellan St., W.
32317	724 Mc Clellan St., W.
32318	729 Mc Clellan St., W.
32319	735 Mc Clellan St., W.
32320	736 Mc Clellan St., W.
32321	741 Mc Clellan St., W.
32322	742 Mc Clellan St., W.
32323	747 Mc Clellan St., W.
32324	801 Mc Clellan St., W.
32325	807 Mc Clellan St., W.
32326	810 Mc Clellan St., W.
32327	811 Mc Clellan St., W.
32328	814 Mc Clellan St., W.
32329	818 Mc Clellan St., W.
32330	902 Mc Clellan St., W.
32331	906 Mc Clellan St., W.
32332	910 Mc Clellan St., W.
32333	911 Mc Clellan St., W.
32334	915 Mc Clellan St., W.
32335	918 Mc Clellan St., W.
32336	919 Mc Clellan St., W.
32337	923 Mc Clellan St., W.
32338	1001 Mc Clellan St., W.
32339	1005 Mc Clellan St., W.
32340	1009 Mc Clellan St., W.
32341	1013 Mc Clellan St., W.
32342	1101 Mc Clellan St., W.
32343	1102 Mc Clellan St., W.
32344	1110 Mc Clellan St., W.
32345	1114 Mc Clellan St., W.
32346	1205 Mc Clellan St., W.
32347	1209 Mc Clellan St., W.
32348	1210 Mc Clellan St., W.
32349	1301 Mc Clellan St., W.
32350	1307 Mc Clellan St., W.
32351	1315 Mc Clellan St., W.
32352	1325 Mc Clellan St., W.

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32353	1402 Mc Clellan St., W.
32354	1406 Mc Clellan St., W.
32355	1409 Mc Clellan St., W.
32356	1410 Mc Clellan St., W.
32357	1502 Mc Clellan St., W.
32358	1503 Mc Clellan St., W.
32359	1509 Mc Clellan St., W.
32360	1510 Mc Clellan St., W.
32361	1517 Mc Clellan St., W.
32362	1601 Mc Clellan St., W.
32363	1605 Mc Clellan St., W.
32364	1606 Mc Clellan St., W.
32365	1609 Mc Clellan St., W.
32366	1610 Mc Clellan St., W.
32367	1613 Mc Clellan St., W.
32368	1617 Mc Clellan St., W.
32369	1706 Mc Clellan St., W.
32370	1707 Mc Clellan St., W.
32371	1712 Mc Clellan St., W.
32372	1713 Mc Clellan St., W.
32373	1801 Mc Clellan St., W.
32374	1805 Mc Clellan St., W.
32375	1806 Mc Clellan St., W.
32376	1809 Mc Clellan St., W.
32377	1810 Mc Clellan St., W.
32378	1813 Mc Clellan St., W.
32379	1814 Mc Clellan St., W.
32380	1817 Mc Clellan St., W.
32381	1901 Mc Clellan St., W.
32382	1905 Mc Clellan St., W.
32383	1906 Mc Clellan St., W.
32384	1909 Mc Clellan St., W.
32385	1910 Mc Clellan St., W.
32386	1913 Mc Clellan St., W.
32387	1914 Mc Clellan St., W.
32388	1917 Mc Clellan St., W.
32389	2006 Mc Clellan St., W.
32390	2012 Mc Clellan St., W.
32391	2108 Mc Clellan St., W.
32392	2109 Mc Clellan St., W.
32393	2112 Mc Clellan St., W.
32394	2117 Mc Clellan St., W.
32395	2205 Mc Clellan St., W.
32396	2208 Mc Clellan St., W.
32397	2212 Mc Clellan St., W.
32398	2305 Mc Clellan St., W.
32399	2309 Mc Clellan St., W.
32400	2313 Mc Clellan St., W.

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32401	2902 Mc Clure Ave.
32402	2906 Mc Clure Ave.
32403	2910 Mc Clure Ave.
32404	2914 Mc Clure Ave.
32405	2918 Mc Clure Ave.
32406	2922 Mc Clure Ave.
32407	2926 Mc Clure Ave.
32408	2930 Mc Clure Ave.
32409	2934 Mc Clure Ave.
32410	2938 Mc Clure Ave.
32411	3002 Mc Clure Ave.
32412	3006 Mc Clure Ave.
32413	3010 Mc Clure Ave.
32414	3014 Mc Clure Ave.
32415	3018 Mc Clure Ave.
32416	3022 Mc Clure Ave.
32417	3106 Mc Clure Ave.
32418	3110 Mc Clure Ave.
32419	3114 Mc Clure Ave.
32420	3118 Mc Clure Ave.
32421	3122 Mc Clure Ave.
32422	3126 Mc Clure Ave.
32423	3130 Mc Clure Ave.
32424	3134 Mc Clure Ave.
32425	3138 Mc Clure Ave.
32426	3142 Mc Clure Ave.
32427	3146 Mc Clure Ave.
32428	3150 Mc Clure Ave.
32429	3202 Mc Clure Ave.
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32436	3234 Mc Clure Ave.
32437	3238 Mc Clure Ave.
32438	3242 Mc Clure Ave.
32439	2911 Mc Clure Ave.
32440	2915 Mc Clure Ave.
32441	2923 Mc Clure Ave.
32442	2931 Mc Clure Ave.
32443	2951 Mc Clure Ave.
32444	2959 Mc Clure Ave.
32445	2967 Mc Clure Ave.
32446	2975 Mc Clure Ave.
32447	3001 Mc Clure Ave.
32448	3005 Mc Clure Ave.

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32449	3009 Mc Clure Ave.
32450	3117 Mc Clure Ave.
32451	3125 Mc Clure Ave.
32452	3201 Mc Clure Ave.
32453	3205 Mc Clure Ave.
32454	3209 Mc Clure Ave.
32455	3213 Mc Clure Ave.
32456	3217 Mc Clure Ave.
32457	3221 Mc Clure Ave.
32458	3225 Mc Clure Ave.
32459	3229 Mc Clure Ave.
32460	3233 Mc Clure Ave.
32461	3237 Mc Clure Ave.
32462	1214 Mc Intosh Dr.
32463	1222 Mc Intosh Dr.
32464	1226 Mc Intosh Dr.
32465	1230 Mc Intosh Dr.
32466	1234 Mc Intosh Dr.
32467	1301 Mc Intosh Dr.
32468	1302 Mc Intosh Dr.
32469	1308 Mc Intosh Dr.
32470	1309 Mc Intosh Dr.
32471	1310 Mc Intosh Dr.
32472	1313 Mc Intosh Dr.
32473	1314 Mc Intosh Dr.
32474	1321 Mc Intosh Dr.
32475	1322 Mc Intosh Dr.
32476	1326 Mc Intosh Dr.
32477	1334 Mc Intosh Dr.
32478	501 Mc Keighan Ave.
32479	505 Mc Keighan Ave.
32480	509 Mc Keighan Ave.
32481	513 Mc Keighan Ave.
32482	514 Mc Keighan Ave.
32483	517 Mc Keighan Ave.
32484	518 Mc Keighan Ave.
32485	521 Mc Keighan Ave.
32486	522 Mc Keighan Ave.
32487	525 Mc Keighan Ave.
32488	526 Mc Keighan Ave.
32489	529 Mc Keighan Ave.
32490	530 Mc Keighan Ave.
32491	534 Mc Keighan Ave.
32492	537 Mc Keighan Ave.
32493	538 Mc Keighan Ave.
32494	541 Mc Keighan Ave.
32495	542 Mc Keighan Ave.
32496	544 Mc Keighan Ave.

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32497	545 Mc Keighan Ave.
32498	601 Mc Keighan Ave.
32499	602 Mc Keighan Ave.
32500	605 Mc Keighan Ave.
32501	606 Mc Keighan Ave.
32502	609 Mc Keighan Ave.
32503	610 Mc Keighan Ave.
32504	614 Mc Keighan Ave.
32505	617 Mc Keighan Ave.
32506	618 Mc Keighan Ave.
32507	621 Mc Keighan Ave.
32508	622 Mc Keighan Ave.
32509	625 Mc Keighan Ave.
32510	626 Mc Keighan Ave.
32511	629 Mc Keighan Ave.
32512	630 Mc Keighan Ave.
32513	634 Mc Keighan Ave.
32514	640 Mc Keighan Ave.
32515	710 Mc Keighan Ave.
32516	711 Mc Keighan Ave.
32517	714 Mc Keighan Ave.
32518	715 Mc Keighan Ave.
32519	719 Mc Keighan Ave.
32520	722 Mc Keighan Ave.
32521	723 Mc Keighan Ave.
32522	809 Mc Keighan Ave.
32523	810 Mc Keighan Ave.
32524	813 Mc Keighan Ave.
32525	814 Mc Keighan Ave.
32526	817 Mc Keighan Ave.
32527	818 Mc Keighan Ave.
32528	901 Mc Keighan Ave.
32529	902 Mc Keighan Ave.
32530	905 Mc Keighan Ave.
32531	906 Mc Keighan Ave.
32532	909 Mc Keighan Ave.
32533	910 Mc Keighan Ave.
32534	913 Mc Keighan Ave.
32535	914 Mc Keighan Ave.
32536	917 Mc Keighan Ave.
32537	918 Mc Keighan Ave.
32538	1001 Mc Keighan Ave.
32539	1002 Mc Keighan Ave.
32540	1005 Mc Keighan Ave.
32541	1006 Mc Keighan Ave.
32542	1009 Mc Keighan Ave.
32543	1010 Mc Keighan Ave.
32544	1014 Mc Keighan Ave.

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32545	1015 Mc Keighan Ave.
32546	1018 Mc Keighan Ave.
32547	1021 Mc Keighan Ave.
32548	1022 Mc Keighan Ave.
32549	1026 Mc Keighan Ave.
32550	1030 Mc Keighan Ave.
32551	1034 Mc Keighan Ave.
32552	511 Mc Kinley Ave.
32553	515 Mc Kinley Ave.
32554	519 Mc Kinley Ave.
32555	601 Mc Kinley Ave.
32556	602 Mc Kinley Ave.
32557	605 Mc Kinley Ave.
32558	608 Mc Kinley Ave.
32559	609 Mc Kinley Ave.
32560	612 Mc Kinley Ave.
32561	613 Mc Kinley Ave.
32562	616 Mc Kinley Ave.
32563	617 Mc Kinley Ave.
32564	621 Mc Kinley Ave.
32565	624 Mc Kinley Ave.
32566	625 Mc Kinley Ave.
32567	628 Mc Kinley Ave.
32568	629 Mc Kinley Ave.
32569	632 Mc Kinley Ave.
32570	710 Mc Kinley Ave.
32571	714 Mc Kinley Ave.
32572	718 Mc Kinley Ave.
32573	722 Mc Kinley Ave.
32574	802 Mc Kinley Ave.
32575	806 Mc Kinley Ave.
32576	810 Mc Kinley Ave.
32577	814 Mc Kinley Ave.
32578	818 Mc Kinley Ave.
32579	902 Mc Kinley Ave.
32580	906 Mc Kinley Ave.
32581	910 Mc Kinley Ave.
32582	914 Mc Kinley Ave.
32583	918 Mc Kinley Ave.
32584	922 Mc Kinley Ave.
32585	1809 Mc Phail St.
32586	1814 Mc Phail St.
32587	1815 Mc Phail St.
32588	1818 Mc Phail St.
32589	1822 Mc Phail St.
32590	1827 Mc Phail St.
32591	1831 Mc Phail St.
32592	1834 Mc Phail St.

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32593	1839 Mc Phail St.
32594	1840 Mc Phail St.
32595	1846 Mc Phail St.
32596	1847 Mc Phail St.
32597	1851 Mc Phail St.
32598	1854 Mc Phail St.
32599	1905 Mc Phail St.
32600	1906 Mc Phail St.
32601	1909 Mc Phail St.
32602	1913 Mc Phail St.
32603	1914 Mc Phail St.
32604	1921 Mc Phail St.
32605	1924 Mc Phail St.
32606	1926 Mc Phail St.
32607	1929 Mc Phail St.
32608	1930 Mc Phail St.
32609	1933 Mc Phail St.
32610	1934 Mc Phail St.
32611	2014 Mc Phail St.
32612	2018 Mc Phail St.
32613	2022 Mc Phail St.
32614	2026 Mc Phail St.
32615	2032 Mc Phail St.
32616	2036 Mc Phail St.
32617	2040 Mc Phail St.
32618	2044 Mc Phail St.
32619	2048 Mc Phail St.
32620	2052 Mc Phail St.
32621	2058 Mc Phail St.
32622	911 Mc Queen St.
32623	912 Mc Queen St.
32624	915 Mc Queen St.
32625	916 Mc Queen St.
32626	919 Mc Queen St.
32627	920 Mc Queen St.
32628	924 Mc Queen St.
32629	927 Mc Queen St.
32630	928 Mc Queen St.
32631	931 Mc Queen St.
32632	935 Mc Queen St.
32633	936 Mc Queen St.
32634	939 Mc Queen St.
32635	940 Mc Queen St.
32636	944 Mc Queen St.
32637	945 Mc Queen St.
32638	948 Mc Queen St.
32639	1101 Meade St., N.
32640	1701 Meade St., N.

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32641	1709 Meade St., N.
32642	1717 Meade St., N.
32643	402 Meade St., S.
32644	405 Meade St., S.
32645	410 Meade St., S.
32646	411 Meade St., S.
32647	417 Meade St., S.
32648	420 Meade St., S.
32649	421 Meade St., S.
32650	424 Meade St., S.
32651	425 Meade St., S.
32652	428 Meade St., S.
32653	429 Meade St., S.
32654	435 Meade St., S.
32655	438 Meade St., S.
32656	441 Meade St., S.
32657	445 Meade St., S.
32658	501 Meade St., S.
32659	502 Meade St., S.
32660	514 Meade St., S.
32661	518 Meade St., S.
32662	526 Meade St., S.
32663	530 Meade St., S.
32664	534 Meade St., S.
32665	601 Meade St., S.
32666	602 Meade St., S.
32667	606 Meade St., S.
32668	610 Meade St., S.
32669	614 Meade St., S.
32670	618 Meade St., S.
32671	622 Meade St., S.
32672	628 Meade St., S.
32673	701 Meade St., S.
32674	709 Meade St., S.
32675	713 Meade St., S.
32676	721 Meade St., S.
32677	801 Meade St., S.
32678	957 Meida St.
32679	963 Meida St.
32680	969 Meida St.
32681	1014 Meida St.
32682	1020 Meida St.
32683	1030 Meida St.
32684	1031 Meida St.
32685	1034 Meida St.
32686	1038 Meida St.
32687	1046 Meida St.
32688	1047 Meida St.

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32689	1050 Meida St.
32690	2910 Meisner St.
32691	2911 Meisner St.
32692	2914 Meisner St.
32693	2918 Meisner St.
32694	2919 Meisner St.
32695	2922 Meisner St.
32696	2923 Meisner St.
32697	2926 Meisner St.
32698	2927 Meisner St.
32699	2930 Meisner St.
32700	2931 Meisner St.
32701	2935 Meisner St.
32702	2952 Meisner St.
32703	2956 Meisner St.
32704	2959 Meisner St.
32705	2964 Meisner St.
32706	2972 Meisner St.
32707	2976 Meisner St.
32708	2980 Meisner St.
32709	3002 Meisner St.
32710	3006 Meisner St.
32711	3015 Meisner St.
32712	2909 Menominee Ave.
32713	2910 Menominee Ave.
32714	2913 Menominee Ave.
32715	2914 Menominee Ave.
32716	2917 Menominee Ave.
32717	2918 Menominee Ave.
32718	3001 Menominee Ave.
32719	3002 Menominee Ave.
32720	3005 Menominee Ave.
32721	3006 Menominee Ave.
32722	3009 Menominee Ave.
32723	3010 Menominee Ave.
32724	3013 Menominee Ave.
32725	3014 Menominee Ave.
32726	3017 Menominee Ave.
32727	3018 Menominee Ave.
32728	3101 Menominee Ave.
32729	3102 Menominee Ave.
32730	3105 Menominee Ave.
32731	3106 Menominee Ave.
32732	3109 Menominee Ave.
32733	3110 Menominee Ave.
32734	3113 Menominee Ave.
32735	3114 Menominee Ave.
32736	3117 Menominee Ave.

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32737	3118 Menominee Ave.
32738	3201 Menominee Ave.
32739	3202 Menominee Ave.
32740	3205 Menominee Ave.
32741	3206 Menominee Ave.
32742	3209 Menominee Ave.
32743	3210 Menominee Ave.
32744	4102 Menton Ave.
32745	4108 Menton Ave.
32746	4112 Menton Ave.
32747	4116 Menton Ave.
32748	4120 Menton Ave.
32749	4121 Menton Ave.
32750	4124 Menton Ave.
32751	4127 Menton Ave.
32752	4128 Menton Ave.
32753	4131 Menton Ave.
32754	4132 Menton Ave.
32755	4135 Menton Ave.
32756	4139 Menton Ave.
32757	4140 Menton Ave.
32758	4143 Menton Ave.
32759	4201 Menton Ave.
32760	4202 Menton Ave.
32761	4205 Menton Ave.
32762	4209 Menton Ave.
32763	4210 Menton Ave.
32764	4214 Menton Ave.
32765	4217 Menton Ave.
32766	4218 Menton Ave.
32767	4221 Menton Ave.
32768	4222 Menton Ave.
32769	4225 Menton Ave.
32770	4226 Menton Ave.
32771	4229 Menton Ave.
32772	4230 Menton Ave.
32773	4233 Menton Ave.
32774	4301 Menton Ave.
32775	4302 Menton Ave.
32776	4306 Menton Ave.
32777	4313 Menton Ave.
32778	4317 Menton Ave.
32779	4321 Menton Ave.
32780	1016 Merrill Pl.
32781	4801 Miami Ln.
32782	4808 Miami Ln.
32783	4809 Miami Ln.
32784	4812 Miami Ln.

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32785	4813 Miami Ln.
32786	4816 Miami Ln.
32787	4817 Miami Ln.
32788	4820 Miami Ln.
32789	4821 Miami Ln.
32790	4901 Miami Ln.
32791	4902 Miami Ln.
32792	4905 Miami Ln.
32793	4906 Miami Ln.
32794	4909 Miami Ln.
32795	4910 Miami Ln.
32796	4913 Miami Ln.
32797	4914 Miami Ln.
32798	4918 Miami Ln.
32799	5001 Miami Ln.
32800	5002 Miami Ln.
32801	5005 Miami Ln.
32802	5006 Miami Ln.
32803	5009 Miami Ln.
32804	5010 Miami Ln.
32805	5013 Miami Ln.
32806	5014 Miami Ln.
32807	5018 Miami Ln.
32808	5022 Miami Ln.
32809	3401 Michigan Ave.
32810	3401 Michigan Ave.
32811	911 Middleton St.
32812	919 Middleton St.
32813	929 Middleton St.
32814	935 Middleton St.
32815	939 Middleton St.
32816	944 Middleton St.
32817	945 Middleton St.
32818	948 Middleton St.
32819	1101 Milbourne Ave.
32820	1102 Milbourne Ave.
32821	1115 Milbourne Ave.
32822	1116 Milbourne Ave.
32823	1165 Milbourne Ave.
32824	1201 Milbourne Ave.
32825	1202 Milbourne Ave.
32826	1211 Milbourne Ave.
32827	1265 Milbourne Ave.
32828	1315 Milbourne Ave.
32829	1349 Milbourne Ave.
32830	1365 Milbourne Ave.
32831	1413 Milbourne Ave.
32832	1430 Milbourne Ave.

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32833	1463 Milbourne Ave.
32834	1501 Milbourne Ave.
32835	1515 Milbourne Ave.
32836	1650 Milbourne Ave.
32837	1714 Milbourne Ave.
32838	1715 Milbourne Ave.
32839	1720 Milbourne Ave.
32840	1721 Milbourne Ave.
32841	1726 Milbourne Ave.
32842	1727 Milbourne Ave.
32843	1732 Milbourne Ave.
32844	1733 Milbourne Ave.
32845	1802 Milbourne Ave.
32846	1803 Milbourne Ave.
32847	1808 Milbourne Ave.
32848	1809 Milbourne Ave.
32849	1814 Milbourne Ave.
32850	1815 Milbourne Ave.
32851	1820 Milbourne Ave.
32852	1821 Milbourne Ave.
32853	1828 Milbourne Ave.
32854	1908 Milbourne Ave.
32855	1909 Milbourne Ave.
32856	2002 Milbourne Ave.
32857	2005 Milbourne Ave.
32858	2012 Milbourne Ave.
32859	2018 Milbourne Ave.
32860	2019 Milbourne Ave.
32861	2024 Milbourne Ave.
32862	2025 Milbourne Ave.
32863	2030 Milbourne Ave.
32864	2031 Milbourne Ave.
32865	2036 Milbourne Ave.
32866	2037 Milbourne Ave.
32867	2102 Milbourne Ave.
32868	2103 Milbourne Ave.
32869	2108 Milbourne Ave.
32870	2109 Milbourne Ave.
32871	2114 Milbourne Ave.
32872	2115 Milbourne Ave.
32873	2120 Milbourne Ave.
32874	2121 Milbourne Ave.
32875	2126 Milbourne Ave.
32876	2127 Milbourne Ave.
32877	2132 Milbourne Ave.
32878	2133 Milbourne Ave.
32879	2218 Milbourne Ave.
32880	2219 Milbourne Ave.

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32881	2224 Milbourne Ave.
32882	2225 Milbourne Ave.
32883	2228 Milbourne Ave.
32884	2229 Milbourne Ave.
32885	2234 Milbourne Ave.
32886	2235 Milbourne Ave.
32887	2238 Milbourne Ave.
32888	2239 Milbourne Ave.
32889	2244 Milbourne Ave.
32890	2245 Milbourne Ave.
32891	2302 Milbourne Ave.
32892	2303 Milbourne Ave.
32893	2306 Milbourne Ave.
32894	2307 Milbourne Ave.
32895	2312 Milbourne Ave.
32896	2313 Milbourne Ave.
32897	2316 Milbourne Ave.
32898	2317 Milbourne Ave.
32899	2322 Milbourne Ave.
32900	2323 Milbourne Ave.
32901	2513 Milbourne Ave.
32902	2514 Milbourne Ave.
32903	2517 Milbourne Ave.
32904	2518 Milbourne Ave.
32905	2521 Milbourne Ave.
32906	2522 Milbourne Ave.
32907	2525 Milbourne Ave.
32908	2526 Milbourne Ave.
32909	2529 Milbourne Ave.
32910	2530 Milbourne Ave.
32911	2533 Milbourne Ave.
32912	2534 Milbourne Ave.
32913	2539 Milbourne Ave.
32914	2540 Milbourne Ave.
32915	2602 Milbourne Ave.
32916	3101 Milbourne Ave.
32917	3105 Milbourne Ave.
32918	3109 Milbourne Ave.
32919	3113 Milbourne Ave.
32920	3117 Milbourne Ave.
32921	3201 Milbourne Ave.
32922	3205 Milbourne Ave.
32923	3206 Milbourne Ave.
32924	3207 Milbourne Ave.
32925	3210 Milbourne Ave.
32926	3213 Milbourne Ave.
32927	3214 Milbourne Ave.
32928	3217 Milbourne Ave.

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32929	3218 Milbourne Ave.
32930	3221 Milbourne Ave.
32931	3301 Milbourne Ave.
32932	3302 Milbourne Ave.
32933	3306 Milbourne Ave.
32934	3414 Milbourne Ave.
32935	3417 Milbourne Ave.
32936	3418 Milbourne Ave.
32937	3421 Milbourne Ave.
32938	3422 Milbourne Ave.
32939	3501 Milbourne Ave.
32940	3502 Milbourne Ave.
32941	3505 Milbourne Ave.
32942	3506 Milbourne Ave.
32943	3509 Milbourne Ave.
32944	3510 Milbourne Ave.
32945	3513 Milbourne Ave.
32946	3514 Milbourne Ave.
32947	3517 Milbourne Ave.
32948	3518 Milbourne Ave.
32949	3601 Milbourne Ave.
32950	3602 Milbourne Ave.
32951	3605 Milbourne Ave.
32952	3606 Milbourne Ave.
32953	3609 Milbourne Ave.
32954	3610 Milbourne Ave.
32955	3613 Milbourne Ave.
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32957	3701 Milbourne Ave.
32958	3702 Milbourne Ave.
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32975	3901 Milbourne Ave.
32976	3902 Milbourne Ave.

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33007	4109 Milbourne Ave.
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33013	4126 Milbourne Ave.
33014	4130 Milbourne Ave.
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33016	3109 Mildred St.
33017	3123 Mildred St.
33018	3201 Mildred St.
33019	3205 Mildred St.
33020	3209 Mildred St.
33021	3213 Mildred St.
33022	3221 Mildred St.
33023	3311 Mildred St.
33024	3401 Mildred St.

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33025	3511 Mildred St.
33026	3512 Mildred St.
33027	3515 Mildred St.
33028	3516 Mildred St.
33029	1636 Miller Rd.
33030	1650 Miller Rd.
33031	1661 Miller Rd.
33032	1904 Miller Rd.
33033	1914 Miller Rd.
33034	1919 Miller Rd.
33035	1929 Miller Rd.
33036	1941 Miller Rd.
33037	1952 Miller Rd.
33038	1960 Miller Rd.
33039	1961 Miller Rd.
33040	1968 Miller Rd.
33041	2002 Miller Rd.
33042	2010 Miller Rd.
33043	2011 Miller Rd.
33044	2020 Miller Rd.
33045	2023 Miller Rd.
33046	2101 Miller Rd.
33047	2104 Miller Rd.
33048	2111 Miller Rd.
33049	2112 Miller Rd.
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33052	2201 Miller Rd.
33053	2204 Miller Rd.
33054	2209 Miller Rd.
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33058	2301 Miller Rd.
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33065	2414 Miller Rd.
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33068	2428 Miller Rd.
33069	2442 Miller Rd.
33070	2602 Miller Rd.
33071	2608 Miller Rd.
33072	2610 Miller Rd.

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33073	2620 Miller Rd.
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33105	3002 Miller Rd.
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33118	3114 Miller Rd.
33119	3116 Miller Rd.
33120	3117 Miller Rd.

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33130	3232 Miller Rd.
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33132	3302 Miller Rd.
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33135	3313 Miller Rd.
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33139	3332 Miller Rd.
33140	3401 Miller Rd.
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33142	3409 Miller Rd.
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33147	3506 Miller Rd.
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33159	3631 Miller Rd.
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33161	2211 Millett St.
33162	2212 Millett St.
33163	2216 Millett St.
33164	2220 Millett St.
33165	2223 Millett St.
33166	2227 Millett St.
33167	4002 Milton Dr.
33168	4006 Milton Dr.

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33169	4010 Milton Dr.
33170	4018 Milton Dr.
33171	4114 Milton Dr.
33172	4120 Milton Dr.
33173	4217 Milton Dr.
33174	4221 Milton Dr.
33175	4309 Milton Dr.
33176	4313 Milton Dr.
33177	4317 Milton Dr.
33178	4322 Milton Dr.
33179	4401 Milton Dr.
33180	4407 Milton Dr.
33181	4501 Milton Dr.
33182	4502 Milton Dr.
33183	4507 Milton Dr.
33184	4510 Milton Dr.
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33188	4522 Milton Dr.
33189	4525 Milton Dr.
33190	4526 Milton Dr.
33191	4530 Milton Dr.
33192	4531 Milton Dr.
33193	4536 Milton Dr.
33194	4537 Milton Dr.
33195	4542 Milton Dr.
33196	4543 Milton Dr.
33197	4601 Milton Dr.
33198	4602 Milton Dr.
33199	4605 Milton Dr.
33200	4606 Milton Dr.
33201	4609 Milton Dr.
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33211	4629 Milton Dr.
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33213	1118 Minnesota Ave.
33214	1212 Minnesota Ave.
33215	1215 Minnesota Ave.
33216	1216 Minnesota Ave.

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33217	1220 Minnesota Ave.
33218	1312 Minnesota Ave.
33219	1408 Minnesota Ave.
33220	1608 Minnesota Ave.
33221	1708 Minnesota Ave.
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33223	2114 Minnesota Ave.
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33262	1741 Missouri Ave.
33263	1801 Missouri Ave.
33264	1802 Missouri Ave.

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33265	1806 Missouri Ave.
33266	1810 Missouri Ave.
33267	1814 Missouri Ave.
33268	1822 Missouri Ave.
33269	1903 Missouri Ave.
33270	1906 Missouri Ave.
33271	1910 Missouri Ave.
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33273	1918 Missouri Ave.
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33275	2001 Missouri Ave.
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33277	2006 Missouri Ave.
33278	2010 Missouri Ave.
33279	2014 Missouri Ave.
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33283	2106 Missouri Ave.
33284	2110 Missouri Ave.
33285	2116 Missouri Ave.
33286	2120 Missouri Ave.
33287	2124 Missouri Ave.
33288	2128 Missouri Ave.
33289	2132 Missouri Ave.
33290	2201 Missouri Ave.
33291	2202 Missouri Ave.
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33295	2210 Missouri Ave.
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33310	2407 Missouri Ave.
33311	2408 Missouri Ave.
33312	2411 Missouri Ave.

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33313	2412 Missouri Ave.
33314	2417 Missouri Ave.
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33323	2502 Missouri Ave.
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33327	2601 Missouri Ave.
33328	2602 Missouri Ave.
33329	2605 Missouri Ave.
33330	2608 Missouri Ave.
33331	2609 Missouri Ave.
33332	2612 Missouri Ave.
33333	2618 Missouri Ave.
33334	2418 Mitchell St.
33335	2502 Mitchell St.
33336	1001 Mohawk Ave.
33337	1002 Mohawk Ave.
33338	1007 Mohawk Ave.
33339	1010 Mohawk Ave.
33340	1011 Mohawk Ave.
33341	1015 Mohawk Ave.
33342	1019 Mohawk Ave.
33343	1101 Mohawk Ave.
33344	1102 Mohawk Ave.
33345	1105 Mohawk Ave.
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33347	1110 Mohawk Ave.
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33356	1217 Mohawk Ave.
33357	1301 Mohawk Ave.
33358	1302 Mohawk Ave.
33359	1305 Mohawk Ave.
33360	108 Monroe St.

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33361	110 Monroe St.
33362	112 Monroe St.
33363	114 Monroe St.
33364	116 Monroe St.
33365	118 Monroe St.
33366	121 Monroe St.
33367	124 Monroe St.
33368	125 Monroe St.
33369	129 Monroe St.
33370	130 Monroe St.
33371	137 Monroe St.
33372	141 Monroe St.
33373	222 Monroe St.
33374	401 Monroe St.
33375	410 Monroe St.
33376	413 Monroe St.
33377	416 Monroe St.
33378	417 Monroe St.
33379	420 Monroe St.
33380	422 Monroe St.
33381	431 Monroe St.
33382	435 Monroe St.
33383	438 Monroe St.
33384	502 Monroe St.
33385	505 Monroe St.
33386	509 Monroe St.
33387	510 Monroe St.
33388	611 Monroe St.
33389	614 Monroe St.
33390	615 Monroe St.
33391	619 Monroe St.
33392	623 Monroe St.
33393	624 Monroe St.
33394	627 Monroe St.
33395	628 Monroe St.
33396	631 Monroe St.
33397	632 Monroe St.
33398	635 Monroe St.
33399	639 Monroe St.
33400	643 Monroe St.
33401	647 Monroe St.
33402	651 Monroe St.
33403	655 Monroe St.
33404	1408 Montana Ave.
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33406	1412 Montana Ave.
33407	1416 Montana Ave.
33408	1417 Montana Ave.

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33409	1420 Montana Ave.
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33412	1501 Montana Ave.
33413	1502 Montana Ave.
33414	1505 Montana Ave.
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33426	1529 Montana Ave.
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33435	1602 Montana Ave.
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33454	1647 Montana Ave.
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33456	1652 Montana Ave.

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33457	1655 Montana Ave.
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33502	2910 Montana Ave.
33503	2913 Montana Ave.
33504	2914 Montana Ave.

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33505	2917 Montana Ave.
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33507	2921 Montana Ave.
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33511	3001 Montana Ave.
33512	3002 Montana Ave.
33513	3005 Montana Ave.
33514	3006 Montana Ave.
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33517	3013 Montana Ave.
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33525	3101 Montana Ave.
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33536	3122 Montana Ave.
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33542	3134 Montana Ave.
33543	3137 Montana Ave.
33544	3138 Montana Ave.
33545	3141 Montana Ave.
33546	3142 Montana Ave.
33547	3145 Montana Ave.
33548	3146 Montana Ave.
33549	3149 Montana Ave.
33550	3150 Montana Ave.
33551	3153 Montana Ave.
33552	3201 Montana Ave.

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33566	3229 Montana Ave.
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33578	1515 Montclair Ave.
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33589	1717 Montclair Ave.
33590	1801 Montclair Ave.
33591	1809 Montclair Ave.
33592	1810 Montclair Ave.
33593	1813 Montclair Ave.
33594	1814 Montclair Ave.
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33596	1818 Montclair Ave.
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33598	1901 Montclair Ave.
33599	1907 Montclair Ave.
33600	1910 Montclair Ave.

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33601	1913 Montclair Ave.
33602	1914 Montclair Ave.
33603	1918 Montclair Ave.
33604	1924 Montclair Ave.
33605	2001 Montclair Ave.
33606	2002 Montclair Ave.
33607	2010 Montclair Ave.
33608	2101 Montclair Ave.
33609	2201 Montclair Ave.
33610	2202 Montclair Ave.
33611	2212 Montclair Ave.
33612	2215 Montclair Ave.
33613	1801 Monteith St.
33614	1809 Monteith St.
33615	1810 Monteith St.
33616	1813 Monteith St.
33617	1816 Monteith St.
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33619	1821 Monteith St.
33620	1822 Monteith St.
33621	1825 Monteith St.
33622	1826 Monteith St.
33623	1901 Monteith St.
33624	1902 Monteith St.
33625	1905 Monteith St.
33626	1906 Monteith St.
33627	1909 Monteith St.
33628	1910 Monteith St.
33629	1913 Monteith St.
33630	1914 Monteith St.
33631	1917 Monteith St.
33632	1918 Monteith St.
33633	1921 Monteith St.
33634	1922 Monteith St.
33635	1925 Monteith St.
33636	1926 Monteith St.
33637	1929 Monteith St.
33638	2001 Monteith St.
33639	2002 Monteith St.
33640	2007 Monteith St.
33641	2008 Monteith St.
33642	2013 Monteith St.
33643	2014 Monteith St.
33644	2019 Monteith St.
33645	2020 Monteith St.
33646	2025 Monteith St.
33647	2026 Monteith St.
33648	2031 Monteith St.

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33649	2034 Monteith St.
33650	2037 Monteith St.
33651	2040 Monteith St.
33652	2043 Monteith St.
33653	2044 Monteith St.
33654	2101 Monteith St.
33655	2102 Monteith St.
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33659	2114 Monteith St.
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33665	2202 Monteith St.
33666	2206 Monteith St.
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33670	2215 Monteith St.
33671	2218 Monteith St.
33672	2222 Monteith St.
33673	2226 Monteith St.
33674	2301 Monteith St.
33675	2302 Monteith St.
33676	2307 Monteith St.
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33680	2320 Monteith St.
33681	2326 Monteith St.
33682	2332 Monteith St.
33683	1401 Monteray Ave.
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33685	1408 Monteray Ave.
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33687	1414 Monteray Ave.
33688	1415 Monteray Ave.
33689	1501 Monteray Ave.
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33695	1522 Monteray Ave.
33696	1523 Monteray Ave.

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33697	1530 Monteray Ave.
33698	1531 Monteray Ave.
33699	1534 Monteray Ave.
33700	1535 Monteray Ave.
33701	1540 Monteray Ave.
33702	1541 Monteray Ave.
33703	1544 Monteray Ave.
33704	1545 Monteray Ave.
33705	1550 Monteray Ave.
33706	1551 Monteray Ave.
33707	1556 Monteray Ave.
33708	1562 Monteray Ave.
33709	111 Moore St., E.
33710	112 Moore St., E.
33711	115 Moore St., E.
33712	116 Moore St., E.
33713	119 Moore St., E.
33714	123 Moore St., E.
33715	124 Moore St., E.
33716	130 Moore St., E.
33717	131 Moore St., E.
33718	134 Moore St., E.
33719	135 Moore St., E.
33720	139 Moore St., E.
33721	140 Moore St., E.
33722	143 Moore St., E.
33723	144 Moore St., E.
33724	147 Moore St., E.
33725	148 Moore St., E.
33726	151 Moore St., E.
33727	155 Moore St., E.
33728	159 Moore St., E.
33729	163 Moore St., E.
33730	206 Moore St., E.
33731	211 Moore St., E.
33732	214 Moore St., E.
33733	217 Moore St., E.
33734	218 Moore St., E.
33735	221 Moore St., E.
33736	222 Moore St., E.
33737	225 Moore St., E.
33738	226 Moore St., E.
33739	301 Moore St., E.
33740	302 Moore St., E.
33741	305 Moore St., E.
33742	306 Moore St., E.
33743	309 Moore St., E.
33744	310 Moore St., E.

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33745	313 Moore St., E.
33746	314 Moore St., E.
33747	318 Moore St., E.
33748	321 Moore St., E.
33749	322 Moore St., E.
33750	329 Moore St., E.
33751	337 Moore St., E.
33752	350 Moore St., E.
33753	351 Moore St., E.
33754	354 Moore St., E.
33755	355 Moore St., E.
33756	358 Moore St., E.
33757	359 Moore St., E.
33758	362 Moore St., E.
33759	363 Moore St., E.
33760	366 Moore St., E.
33761	367 Moore St., E.
33762	370 Moore St., E.
33763	401 Moore St., E.
33764	402 Moore St., E.
33765	405 Moore St., E.
33766	406 Moore St., E.
33767	410 Moore St., E.
33768	411 Moore St., E.
33769	413 Moore St., E.
33770	414 Moore St., E.
33771	417 Moore St., E.
33772	418 Moore St., E.
33773	421 Moore St., E.
33774	422 Moore St., E.
33775	425 Moore St., E.
33776	426 Moore St., E.
33777	429 Moore St., E.
33778	501 Moore St., E.
33779	505 Moore St., E.
33780	509 Moore St., E.
33781	601 Moore St., E.
33782	607 Moore St., E.
33783	609 Moore St., E.
33784	613 Moore St., E.
33785	617 Moore St., E.
33786	621 Moore St., E.
33787	627 Moore St., E.
33788	629 Moore St., E.
33789	633 Moore St., E.
33790	637 Moore St., E.
33791	643 Moore St., E.
33792	645 Moore St., E.

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33793	649 Moore St., E.
33794	653 Moore St., E.
33795	712 Moore St., E.
33796	728 Moore St., E.
33797	729 Moore St., E.
33798	732 Moore St., E.
33799	736 Moore St., E.
33800	737 Moore St., E.
33801	740 Moore St., E.
33802	741 Moore St., E.
33803	744 Moore St., E.
33804	748 Moore St., E.
33805	749 Moore St., E.
33806	752 Moore St., E.
33807	753 Moore St., E.
33808	756 Moore St., E.
33809	757 Moore St., E.
33810	813 Moore St., E.
33811	814 Moore St., E.
33812	818 Moore St., E.
33813	819 Moore St., E.
33814	821 Moore St., E.
33815	822 Moore St., E.
33816	825 Moore St., E.
33817	826 Moore St., E.
33818	829 Moore St., E.
33819	830 Moore St., E.
33820	834 Moore St., E.
33821	901 Moore St., E.
33822	902 Moore St., E.
33823	910 Moore St., E.
33824	914 Moore St., E.
33825	919 Moore St., E.
33826	921 Moore St., E.
33827	922 Moore St., E.
33828	926 Moore St., E.
33829	702 Moore St., W.
33830	706 Moore St., W.
33831	710 Moore St., W.
33832	714 Moore St., W.
33833	718 Moore St., W.
33834	722 Moore St., W.
33835	726 Moore St., W.
33836	730 Moore St., W.
33837	734 Moore St., W.
33838	802 Moore St., W.
33839	806 Moore St., W.
33840	810 Moore St., W.

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33841	814 Moore St., W.
33842	815 Moore St., W.
33843	818 Moore St., W.
33844	902 Moore St., W.
33845	906 Moore St., W.
33846	910 Moore St., W.
33847	914 Moore St., W.
33848	918 Moore St., W.
33849	1001 Moore St., W.
33850	1013 Moore St., W.
33851	1018 Moore St., W.
33852	1102 Moore St., W.
33853	1108 Moore St., W.
33854	1116 Moore St., W.
33855	1120 Moore St., W.
33856	1202 Moore St., W.
33857	1206 Moore St., W.
33858	1210 Moore St., W.
33859	1214 Moore St., W.
33860	1215 Moore St., W.
33861	1302 Moore St., W.
33862	1306 Moore St., W.
33863	1310 Moore St., W.
33864	1314 Moore St., W.
33865	1318 Moore St., W.
33866	1402 Moore St., W.
33867	1406 Moore St., W.
33868	1410 Moore St., W.
33869	1414 Moore St., W.
33870	1418 Moore St., W.
33871	1501 Moore St., W.
33872	1502 Moore St., W.
33873	416 Morley Ave.
33874	417 Morley Ave.
33875	421 Morley Ave.
33876	424 Morley Ave.
33877	425 Morley Ave.
33878	428 Morley Ave.
33879	501 Morley Ave.
33880	502 Morley Ave.
33881	506 Morley Ave.
33882	509 Morley Ave.
33883	514 Morley Ave.
33884	517 Morley Ave.
33885	518 Morley Ave.
33886	521 Morley Ave.
33887	605 Morley Ave.
33888	609 Morley Ave.

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33889	613 Morley Ave.
33890	617 Morley Ave.
33891	2202 Morningside Dr.
33892	301 Mott Ave., E.
33893	302 Mott Ave., E.
33894	305 Mott Ave., E.
33895	309 Mott Ave., E.
33896	310 Mott Ave., E.
33897	313 Mott Ave., E.
33898	314 Mott Ave., E.
33899	317 Mott Ave., E.
33900	318 Mott Ave., E.
33901	321 Mott Ave., E.
33902	322 Mott Ave., E.
33903	325 Mott Ave., E.
33904	326 Mott Ave., E.
33905	329 Mott Ave., E.
33906	330 Mott Ave., E.
33907	333 Mott Ave., E.
33908	334 Mott Ave., E.
33909	337 Mott Ave., E.
33910	338 Mott Ave., E.
33911	341 Mott Ave., E.
33912	342 Mott Ave., E.
33913	345 Mott Ave., E.
33914	346 Mott Ave., E.
33915	350 Mott Ave., E.
33916	351 Mott Ave., E.
33917	354 Mott Ave., E.
33918	401 Mott Ave., E.
33919	406 Mott Ave., E.
33920	409 Mott Ave., E.
33921	410 Mott Ave., E.
33922	413 Mott Ave., E.
33923	414 Mott Ave., E.
33924	418 Mott Ave., E.
33925	421 Mott Ave., E.
33926	422 Mott Ave., E.
33927	501 Mott Ave., E.
33928	502 Mott Ave., E.
33929	505 Mott Ave., E.
33930	506 Mott Ave., E.
33931	509 Mott Ave., E.
33932	510 Mott Ave., E.
33933	514 Mott Ave., E.
33934	517 Mott Ave., E.
33935	518 Mott Ave., E.
33936	521 Mott Ave., E.

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33937	522 Mott Ave., E.
33938	525 Mott Ave., E.
33939	526 Mott Ave., E.
33940	602 Mott Ave., E.
33941	605 Mott Ave., E.
33942	606 Mott Ave., E.
33943	609 Mott Ave., E.
33944	613 Mott Ave., E.
33945	614 Mott Ave., E.
33946	614 Mott Ave., E.
33947	617 Mott Ave., E.
33948	618 Mott Ave., E.
33949	621 Mott Ave., E.
33950	622 Mott Ave., E.
33951	626 Mott Ave., E.
33952	629 Mott Ave., E.
33953	634 Mott Ave., E.
33954	715 Mott Ave., E.
33955	718 Mott Ave., E.
33956	719 Mott Ave., E.
33957	726 Mott Ave., E.
33958	727 Mott Ave., E.
33959	730 Mott Ave., E.
33960	734 Mott Ave., E.
33961	738 Mott Ave., E.
33962	739 Mott Ave., E.
33963	747 Mott Ave., E.
33964	751 Mott Ave., E.
33965	1111 Mott Ave., E.
33966	1114 Mott Ave., E.
33967	1115 Mott Ave., E.
33968	1119 Mott Ave., E.
33969	1122 Mott Ave., E.
33970	1123 Mott Ave., E.
33971	1126 Mott Ave., E.
33972	1130 Mott Ave., E.
33973	1134 Mott Ave., E.
33974	602 Mott Ave., W.
33975	606 Mott Ave., W.
33976	610 Mott Ave., W.
33977	614 Mott Ave., W.
33978	618 Mott Ave., W.
33979	621 Mott Ave., W.
33980	622 Mott Ave., W.
33981	625 Mott Ave., W.
33982	626 Mott Ave., W.
33983	629 Mott Ave., W.
33984	630 Mott Ave., W.

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33985	634 Mott Ave., W.
33986	1108 Mott Ave., W.
33987	1109 Mott Ave., W.
33988	1201 Mott Ave., W.
33989	1202 Mott Ave., W.
33990	1216 Mott Ave., W.
33991	1217 Mott Ave., W.
33992	1301 Mott Ave., W.
33993	1302 Mott Ave., W.
33994	1314 Mott Ave., W.
33995	1318 Mott Ave., W.
33996	1402 Mott Ave., W.
33997	1406 Mott Ave., W.
33998	1410 Mott Ave., W.
33999	1414 Mott Ave., W.
34000	1417 Mott Ave., W.
34001	1418 Mott Ave., W.
34002	1422 Mott Ave., W.
34003	1502 Mott Ave., W.
34004	1506 Mott Ave., W.
34005	1509 Mott Ave., W.
34006	1510 Mott Ave., W.
34007	1515 Mott Ave., W.
34008	1516 Mott Ave., W.
34009	1603 Mott Ave., W.
34010	1604 Mott Ave., W.
34011	1618 Mott Ave., W.
34012	1619 Mott Ave., W.
34013	2002 Mountain Ave.
34014	2006 Mountain Ave.
34015	2010 Mountain Ave.
34016	2014 Mountain Ave.
34017	2102 Mountain Ave.
34018	2106 Mountain Ave.
34019	2107 Mountain Ave.
34020	2110 Mountain Ave.
34021	2114 Mountain Ave.
34022	2115 Mountain Ave.
34023	2118 Mountain Ave.
34024	2119 Mountain Ave.
34025	2122 Mountain Ave.
34026	2123 Mountain Ave.
34027	2201 Mountain Ave.
34028	2206 Mountain Ave.
34029	2207 Mountain Ave.
34030	2212 Mountain Ave.
34031	2213 Mountain Ave.
34032	2215 Mountain Ave.

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34033	2218 Mountain Ave.
34034	2219 Mountain Ave.
34035	2224 Mountain Ave.
34036	2302 Mountain Ave.
34037	2303 Mountain Ave.
34038	2305 Mountain Ave.
34039	2306 Mountain Ave.
34040	2309 Mountain Ave.
34041	2310 Mountain Ave.
34042	2313 Mountain Ave.
34043	2314 Mountain Ave.
34044	2317 Mountain Ave.
34045	2318 Mountain Ave.
34046	2401 Mountain Ave.
34047	2402 Mountain Ave.
34048	2405 Mountain Ave.
34049	2406 Mountain Ave.
34050	2409 Mountain Ave.
34051	2410 Mountain Ave.
34052	2413 Mountain Ave.
34053	2414 Mountain Ave.
34054	2502 Mountain Ave.
34055	2506 Mountain Ave.
34056	2507 Mountain Ave.
34057	2510 Mountain Ave.
34058	2513 Mountain Ave.
34059	2514 Mountain Ave.
34060	2517 Mountain Ave.
34061	2518 Mountain Ave.
34062	2521 Mountain Ave.
34063	2522 Mountain Ave.
34064	2526 Mountain Ave.
34065	2601 Mountain Ave.
34066	2602 Mountain Ave.
34067	2605 Mountain Ave.
34068	2606 Mountain Ave.
34069	2610 Mountain Ave.
34070	2611 Mountain Ave.
34071	2614 Mountain Ave.
34072	2617 Mountain Ave.
34073	2618 Mountain Ave.
34074	2621 Mountain Ave.
34075	2622 Mountain Ave.
34076	1702 Mt Elliott Ave.
34077	1709 Mt Elliott Ave.
34078	1712 Mt Elliott Ave.
34079	1713 Mt Elliott Ave.
34080	1716 Mt Elliott Ave.

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34081	1717 Mt Elliott Ave.
34082	1718 Mt Elliott Ave.
34083	1721 Mt Elliott Ave.
34084	1722 Mt Elliott Ave.
34085	1801 Mt Elliott Ave.
34086	1802 Mt Elliott Ave.
34087	1805 Mt Elliott Ave.
34088	1806 Mt Elliott Ave.
34089	1915 Mt Elliott Ave.
34090	1916 Mt Elliott Ave.
34091	1919 Mt Elliott Ave.
34092	1920 Mt Elliott Ave.
34093	2001 Mt Elliott Ave.
34094	2002 Mt Elliott Ave.
34095	2005 Mt Elliott Ave.
34096	2006 Mt Elliott Ave.
34097	2009 Mt Elliott Ave.
34098	2010 Mt Elliott Ave.
34099	2013 Mt Elliott Ave.
34100	2014 Mt Elliott Ave.
34101	2017 Mt Elliott Ave.
34102	2018 Mt Elliott Ave.
34103	2101 Mt Elliott Ave.
34104	2102 Mt Elliott Ave.
34105	2105 Mt Elliott Ave.
34106	2106 Mt Elliott Ave.
34107	2109 Mt Elliott Ave.
34108	2110 Mt Elliott Ave.
34109	2113 Mt Elliott Ave.
34110	2114 Mt Elliott Ave.
34111	2117 Mt Elliott Ave.
34112	2118 Mt Elliott Ave.
34113	2151 Mt Elliott Ave.
34114	2152 Mt Elliott Ave.
34115	2155 Mt Elliott Ave.
34116	2156 Mt Elliott Ave.
34117	2168 Mt Elliott Ave.
34118	2214 Mt Elliott Ave.
34119	2215 Mt Elliott Ave.
34120	2217 Mt Elliott Ave.
34121	2218 Mt Elliott Ave.
34122	2221 Mt Elliott Ave.
34123	2222 Mt Elliott Ave.
34124	2225 Mt Elliott Ave.
34125	2226 Mt Elliott Ave.
34126	2230 Mt Elliott Ave.
34127	2231 Mt Elliott Ave.
34128	2233 Mt Elliott Ave.

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34129	2234 Mt Elliott Ave.
34130	2301 Mt Elliott Ave.
34131	2302 Mt Elliott Ave.
34132	2305 Mt Elliott Ave.
34133	2306 Mt Elliott Ave.
34134	2309 Mt Elliott Ave.
34135	2310 Mt Elliott Ave.
34136	2313 Mt Elliott Ave.
34137	2314 Mt Elliott Ave.
34138	2401 Mt Elliott Ave.
34139	2402 Mt Elliott Ave.
34140	2513 Mt Elliott Ave.
34141	2514 Mt Elliott Ave.
34142	2517 Mt Elliott Ave.
34143	2518 Mt Elliott Ave.
34144	2521 Mt Elliott Ave.
34145	2522 Mt Elliott Ave.
34146	2525 Mt Elliott Ave.
34147	2526 Mt Elliott Ave.
34148	2529 Mt Elliott Ave.
34149	2530 Mt Elliott Ave.
34150	2533 Mt Elliott Ave.
34151	2534 Mt Elliott Ave.
34152	2539 Mt Elliott Ave.
34153	2540 Mt Elliott Ave.
34154	2602 Mt Elliott Ave.
34155	2603 Mt Elliott Ave.
34156	2715 Mt Elliott Ave.
34157	2718 Mt Elliott Ave.
34158	2719 Mt Elliott Ave.
34159	2723 Mt Elliott Ave.
34160	2726 Mt Elliott Ave.
34161	2727 Mt Elliott Ave.
34162	2735 Mt Elliott Ave.
34163	2736 Mt Elliott Ave.
34164	1401 Mulberry Ln.
34165	1402 Mulberry Ln.
34166	1406 Mulberry Ln.
34167	1407 Mulberry Ln.
34168	1410 Mulberry Ln.
34169	1413 Mulberry Ln.
34170	1414 Mulberry Ln.
34171	1418 Mulberry Ln.
34172	1419 Mulberry Ln.
34173	1422 Mulberry Ln.
34174	1425 Mulberry Ln.
34175	1426 Mulberry Ln.
34176	1501 Mulberry Ln.

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34177	1502 Mulberry Ln.
34178	1505 Mulberry Ln.
34179	1506 Mulberry Ln.
34180	1509 Mulberry Ln.
34181	1510 Mulberry Ln.
34182	1513 Mulberry Ln.
34183	1514 Mulberry Ln.
34184	1517 Mulberry Ln.
34185	1518 Mulberry Ln.
34186	1521 Mulberry Ln.
34187	1522 Mulberry Ln.
34188	1525 Mulberry Ln.
34189	1526 Mulberry Ln.
34190	1529 Mulberry Ln.
34191	1530 Mulberry Ln.
34192	1601 Mulberry Ln.
34193	1602 Mulberry Ln.
34194	1607 Mulberry Ln.
34195	1608 Mulberry Ln.
34196	1613 Mulberry Ln.
34197	1614 Mulberry Ln.
34198	1619 Mulberry Ln.
34199	1620 Mulberry Ln.
34200	1626 Mulberry Ln.
34201	111 Myrtle Ave., E.
34202	112 Myrtle Ave., E.
34203	116 Myrtle Ave., E.
34204	119 Myrtle Ave., E.
34205	120 Myrtle Ave., E.
34206	124 Myrtle Ave., E.
34207	126 Myrtle Ave., E.
34208	127 Myrtle Ave., E.
34209	131 Myrtle Ave., E.
34210	132 Myrtle Ave., E.
34211	135 Myrtle Ave., E.
34212	139 Myrtle Ave., E.
34213	140 Myrtle Ave., E.
34214	143 Myrtle Ave., E.
34215	144 Myrtle Ave., E.
34216	147 Myrtle Ave., E.
34217	148 Myrtle Ave., E.
34218	152 Myrtle Ave., E.
34219	201 Myrtle Ave., E.
34220	206 Myrtle Ave., E.
34221	207 Myrtle Ave., E.
34222	209 Myrtle Ave., E.
34223	210 Myrtle Ave., E.
34224	213 Myrtle Ave., E.

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34225	214 Myrtle Ave., E.
34226	217 Myrtle Ave., E.
34227	218 Myrtle Ave., E.
34228	221 Myrtle Ave., E.
34229	222 Myrtle Ave., E.
34230	225 Myrtle Ave., E.
34231	226 Myrtle Ave., E.
34232	301 Myrtle Ave., E.
34233	302 Myrtle Ave., E.
34234	305 Myrtle Ave., E.
34235	306 Myrtle Ave., E.
34236	308 Myrtle Ave., E.
34237	309 Myrtle Ave., E.
34238	314 Myrtle Ave., E.
34239	317 Myrtle Ave., E.
34240	318 Myrtle Ave., E.
34241	322 Myrtle Ave., E.
34242	355 Myrtle Ave., E.
34243	357 Myrtle Ave., E.
34244	361 Myrtle Ave., E.
34245	362 Myrtle Ave., E.
34246	406 Myrtle Ave., E.
34247	409 Myrtle Ave., E.
34248	410 Myrtle Ave., E.
34249	413 Myrtle Ave., E.
34250	414 Myrtle Ave., E.
34251	418 Myrtle Ave., E.
34252	421 Myrtle Ave., E.
34253	425 Myrtle Ave., E.
34254	502 Myrtle Ave., E.
34255	505 Myrtle Ave., E.
34256	506 Myrtle Ave., E.
34257	510 Myrtle Ave., E.
34258	513 Myrtle Ave., E.
34259	514 Myrtle Ave., E.
34260	517 Myrtle Ave., E.
34261	518 Myrtle Ave., E.
34262	521 Myrtle Ave., E.
34263	525 Myrtle Ave., E.
34264	600 Myrtle Ave., E.
34265	601 Myrtle Ave., E.
34266	606 Myrtle Ave., E.
34267	610 Myrtle Ave., E.
34268	614 Myrtle Ave., E.
34269	617 Myrtle Ave., E.
34270	618 Myrtle Ave., E.
34271	621 Myrtle Ave., E.
34272	630 Myrtle Ave., E.

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34273	631 Myrtle Ave., E.
34274	633 Myrtle Ave., E.
34275	707 Myrtle Ave., E.
34276	708 Myrtle Ave., E.
34277	711 Myrtle Ave., E.
34278	712 Myrtle Ave., E.
34279	715 Myrtle Ave., E.
34280	718 Myrtle Ave., E.
34281	719 Myrtle Ave., E.
34282	720 Myrtle Ave., E.
34283	723 Myrtle Ave., E.
34284	726 Myrtle Ave., E.
34285	727 Myrtle Ave., E.
34286	730 Myrtle Ave., E.
34287	731 Myrtle Ave., E.
34288	732 Myrtle Ave., E.
34289	736 Myrtle Ave., E.
34290	739 Myrtle Ave., E.
34291	740 Myrtle Ave., E.
34292	743 Myrtle Ave., E.
34293	744 Myrtle Ave., E.
34294	748 Myrtle Ave., E.
34295	749 Myrtle Ave., E.
34296	751 Myrtle Ave., E.
34297	752 Myrtle Ave., E.
34298	755 Myrtle Ave., E.
34299	769 Myrtle Ave., E.
34300	812 Myrtle Ave., E.
34301	813 Myrtle Ave., E.
34302	816 Myrtle Ave., E.
34303	817 Myrtle Ave., E.
34304	820 Myrtle Ave., E.
34305	823 Myrtle Ave., E.
34306	824 Myrtle Ave., E.
34307	827 Myrtle Ave., E.
34308	828 Myrtle Ave., E.
34309	832 Myrtle Ave., E.
34310	833 Myrtle Ave., E.
34311	901 Myrtle Ave., E.
34312	902 Myrtle Ave., E.
34313	906 Myrtle Ave., E.
34314	911 Myrtle Ave., E.
34315	914 Myrtle Ave., E.
34316	930 Myrtle Ave., E.
34317	1215 Myrtle Ave., W.
34318	1216 Myrtle Ave., W.
34319	1301 Myrtle Ave., W.
34320	1302 Myrtle Ave., W.

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34321	1314 Myrtle Ave., W.
34322	1315 Myrtle Ave., W.
34323	1401 Myrtle Ave., W.
34324	1402 Myrtle Ave., W.
34325	1414 Myrtle Ave., W.
34326	1415 Myrtle Ave., W.
34327	1504 Myrtle Ave., W.
34328	1802 Myrtle Ave., W.
34329	2906 Nathan Ave.
34330	2910 Nathan Ave.
34331	2911 Nathan Ave.
34332	2915 Nathan Ave.
34333	2918 Nathan Ave.
34334	2922 Nathan Ave.
34335	2927 Nathan Ave.
34336	2930 Nathan Ave.
34337	2931 Nathan Ave.
34338	2952 Nathan Ave.
34339	2955 Nathan Ave.
34340	2960 Nathan Ave.
34341	2961 Nathan Ave.
34342	2964 Nathan Ave.
34343	429 NB Chavez Dr.
34344	1616 Nebraska Ave.
34345	1620 Nebraska Ave.
34346	1624 Nebraska Ave.
34347	1625 Nebraska Ave.
34348	1627 Nebraska Ave.
34349	1628 Nebraska Ave.
34350	1631 Nebraska Ave.
34351	1634 Nebraska Ave.
34352	1635 Nebraska Ave.
34353	1639 Nebraska Ave.
34354	1643 Nebraska Ave.
34355	1702 Nebraska Ave.
34356	1706 Nebraska Ave.
34357	1709 Nebraska Ave.
34358	1710 Nebraska Ave.
34359	1714 Nebraska Ave.
34360	1718 Nebraska Ave.
34361	1721 Nebraska Ave.
34362	1722 Nebraska Ave.
34363	1725 Nebraska Ave.
34364	1726 Nebraska Ave.
34365	1729 Nebraska Ave.
34366	1730 Nebraska Ave.
34367	1733 Nebraska Ave.
34368	1734 Nebraska Ave.

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34369	1739 Nebraska Ave.
34370	1742 Nebraska Ave.
34371	1801 Nebraska Ave.
34372	1802 Nebraska Ave.
34373	1805 Nebraska Ave.
34374	1806 Nebraska Ave.
34375	1809 Nebraska Ave.
34376	1810 Nebraska Ave.
34377	1813 Nebraska Ave.
34378	1814 Nebraska Ave.
34379	1817 Nebraska Ave.
34380	1902 Nebraska Ave.
34381	1902 Nebraska Ave.
34382	1905 Nebraska Ave.
34383	1909 Nebraska Ave.
34384	1910 Nebraska Ave.
34385	1913 Nebraska Ave.
34386	1914 Nebraska Ave.
34387	1917 Nebraska Ave.
34388	1921 Nebraska Ave.
34389	1922 Nebraska Ave.
34390	1925 Nebraska Ave.
34391	1926 Nebraska Ave.
34392	2000 Nebraska Ave.
34393	2001 Nebraska Ave.
34394	2004 Nebraska Ave.
34395	2005 Nebraska Ave.
34396	2008 Nebraska Ave.
34397	2008 Nebraska Ave.
34398	2009 Nebraska Ave.
34399	2012 Nebraska Ave.
34400	2013 Nebraska Ave.
34401	2016 Nebraska Ave.
34402	2017 Nebraska Ave.
34403	2020 Nebraska Ave.
34404	2021 Nebraska Ave.
34405	2100 Nebraska Ave.
34406	2101 Nebraska Ave.
34407	2104 Nebraska Ave.
34408	2105 Nebraska Ave.
34409	2108 Nebraska Ave.
34410	2109 Nebraska Ave.
34411	2113 Nebraska Ave.
34412	2114 Nebraska Ave.
34413	2116 Nebraska Ave.
34414	2117 Nebraska Ave.
34415	2120 Nebraska Ave.
34416	2121 Nebraska Ave.

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34417	2125 Nebraska Ave.
34418	2126 Nebraska Ave.
34419	2129 Nebraska Ave.
34420	2201 Nebraska Ave.
34421	2202 Nebraska Ave.
34422	2205 Nebraska Ave.
34423	2206 Nebraska Ave.
34424	2209 Nebraska Ave.
34425	2210 Nebraska Ave.
34426	2213 Nebraska Ave.
34427	2214 Nebraska Ave.
34428	2217 Nebraska Ave.
34429	2218 Nebraska Ave.
34430	2301 Nebraska Ave.
34431	2302 Nebraska Ave.
34432	2305 Nebraska Ave.
34433	2306 Nebraska Ave.
34434	2309 Nebraska Ave.
34435	2310 Nebraska Ave.
34436	2313 Nebraska Ave.
34437	2314 Nebraska Ave.
34438	2317 Nebraska Ave.
34439	2318 Nebraska Ave.
34440	2401 Nebraska Ave.
34441	2402 Nebraska Ave.
34442	2407 Nebraska Ave.
34443	2408 Nebraska Ave.
34444	2411 Nebraska Ave.
34445	2412 Nebraska Ave.
34446	2417 Nebraska Ave.
34447	2418 Nebraska Ave.
34448	2423 Nebraska Ave.
34449	2424 Nebraska Ave.
34450	2427 Nebraska Ave.
34451	2428 Nebraska Ave.
34452	2433 Nebraska Ave.
34453	2434 Nebraska Ave.
34454	2501 Nebraska Ave.
34455	2502 Nebraska Ave.
34456	2505 Nebraska Ave.
34457	2510 Nebraska Ave.
34458	2511 Nebraska Ave.
34459	2514 Nebraska Ave.
34460	2601 Nebraska Ave.
34461	2602 Nebraska Ave.
34462	2605 Nebraska Ave.
34463	2606 Nebraska Ave.
34464	2609 Nebraska Ave.

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34465	2610 Nebraska Ave.
34466	2613 Nebraska Ave.
34467	2614 Nebraska Ave.
34468	2618 Nebraska Ave.
34469	G-2070 Nedra St.
34470	4123 Neebish Ave.
34471	4124 Neebish Ave.
34472	4126 Neebish Ave.
34473	4129 Neebish Ave.
34474	4131 Neebish Ave.
34475	4132 Neebish Ave.
34476	4136 Neebish Ave.
34477	4139 Neebish Ave.
34478	4147 Neebish Ave.
34479	1712 Neilson St.
34480	1720 Neilson St.
34481	1721 Neilson St.
34482	1005 Nelson St.
34483	1006 Nelson St.
34484	1009 Nelson St.
34485	1010 Nelson St.
34486	1013 Nelson St.
34487	1014 Nelson St.
34488	1016 Nelson St.
34489	1019 Nelson St.
34490	1025 Nelson St.
34491	1026 Nelson St.
34492	1028 Nelson St.
34493	1029 Nelson St.
34494	1033 Nelson St.
34495	1037 Nelson St.
34496	1038 Nelson St.
34497	1041 Nelson St.
34498	1042 Nelson St.
34499	1045 Nelson St.
34500	1101 Nelson St.
34501	1102 Nelson St.
34502	1106 Nelson St.
34503	1109 Nelson St.
34504	1110 Nelson St.
34505	1114 Nelson St.
34506	1117 Nelson St.
34507	1118 Nelson St.
34508	1609 Neome Dr.
34509	1617 Neome Dr.
34510	1623 Neome Dr.
34511	1631 Neome Dr.
34512	1631 Neome Dr.

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34513	1641 Neome Dr.
34514	1647 Neome Dr.
34515	1655 Neome Dr.
34516	612 Neubert Ave.
34517	615 Neubert Ave.
34518	619 Neubert Ave.
34519	623 Neubert Ave.
34520	624 Neubert Ave.
34521	627 Neubert Ave.
34522	628 Neubert Ave.
34523	631 Neubert Ave.
34524	632 Neubert Ave.
34525	636 Neubert Ave.
34526	639 Neubert Ave.
34527	640 Neubert Ave.
34528	643 Neubert Ave.
34529	644 Neubert Ave.
34530	648 Neubert Ave.
34531	652 Neubert Ave.
34532	656 Neubert Ave.
34533	662 Neubert Ave.
34534	701 Neubert Ave.
34535	705 Neubert Ave.
34536	706 Neubert Ave.
34537	714 Neubert Ave.
34538	718 Neubert Ave.
34539	726 Neubert Ave.
34540	727 Neubert Ave.
34541	732 Neubert Ave.
34542	742 Neubert Ave.
34543	743 Neubert Ave.
34544	747 Neubert Ave.
34545	755 Neubert Ave.
34546	759 Neubert Ave.
34547	801 Neubert Ave.
34548	805 Neubert Ave.
34549	809 Neubert Ave.
34550	813 Neubert Ave.
34551	817 Neubert Ave.
34552	821 Neubert Ave.
34553	837 Neubert Ave.
34554	901 Neubert Ave.
34555	905 Neubert Ave.
34556	919 Neubert Ave.
34557	923 Neubert Ave.
34558	927 Neubert Ave.
34559	1011 Neubert Ave.
34560	1023 Neubert Ave.

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34561	1027 Neubert Ave.
34562	1031 Neubert Ave.
34563	1035 Neubert Ave.
34564	1105 Neubert Ave.
34565	1109 Neubert Ave.
34566	1113 Neubert Ave.
34567	1117 Neubert Ave.
34568	1121 Neubert Ave.
34569	1129 Neubert Ave.
34570	1137 Neubert Ave.
34571	1201 Neubert Ave.
34572	1209 Neubert Ave.
34573	1217 Neubert Ave.
34574	1221 Neubert Ave.
34575	1225 Neubert Ave.
34576	1229 Neubert Ave.
34577	1301 Neubert Ave.
34578	1317 Neubert Ave.
34579	1321 Neubert Ave.
34580	1325 Neubert Ave.
34581	1329 Neubert Ave.
34582	1413 Neubert Ave.
34583	1417 Neubert Ave.
34584	1425 Neubert Ave.
34585	1429 Neubert Ave.
34586	1501 Neubert Ave.
34587	1509 Neubert Ave.
34588	1409 New York Ave.
34589	1410 New York Ave.
34590	1411 New York Ave.
34591	1414 New York Ave.
34592	1416 New York Ave.
34593	1417 New York Ave.
34594	1421 New York Ave.
34595	1422 New York Ave.
34596	1425 New York Ave.
34597	1426 New York Ave.
34598	1429 New York Ave.
34599	1430 New York Ave.
34600	1433 New York Ave.
34601	1434 New York Ave.
34602	1438 New York Ave.
34603	1441 New York Ave.
34604	1442 New York Ave.
34605	1445 New York Ave.
34606	1446 New York Ave.
34607	1449 New York Ave.
34608	1450 New York Ave.

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34609	1453 New York Ave.
34610	1454 New York Ave.
34611	1458 New York Ave.
34612	1501 New York Ave.
34613	1505 New York Ave.
34614	1506 New York Ave.
34615	1509 New York Ave.
34616	1510 New York Ave.
34617	1513 New York Ave.
34618	1514 New York Ave.
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34623	1525 New York Ave.
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34629	1538 New York Ave.
34630	1541 New York Ave.
34631	1542 New York Ave.
34632	1545 New York Ave.
34633	1546 New York Ave.
34634	1549 New York Ave.
34635	1550 New York Ave.
34636	1553 New York Ave.
34637	1600 New York Ave.
34638	1601 New York Ave.
34639	1602 New York Ave.
34640	1607 New York Ave.
34641	1609 New York Ave.
34642	1610 New York Ave.
34643	1613 New York Ave.
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34645	1617 New York Ave.
34646	1618 New York Ave.
34647	1621 New York Ave.
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34649	1625 New York Ave.
34650	1626 New York Ave.
34651	1629 New York Ave.
34652	1630 New York Ave.
34653	1633 New York Ave.
34654	1634 New York Ave.
34655	1637 New York Ave.
34656	1638 New York Ave.

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34657	1641 New York Ave.
34658	1642 New York Ave.
34659	1645 New York Ave.
34660	1646 New York Ave.
34661	1649 New York Ave.
34662	1650 New York Ave.
34663	1653 New York Ave.
34664	1654 New York Ave.
34665	1657 New York Ave.
34666	1658 New York Ave.
34667	1702 New York Ave.
34668	1705 New York Ave.
34669	1706 New York Ave.
34670	1709 New York Ave.
34671	1710 New York Ave.
34672	1713 New York Ave.
34673	1714 New York Ave.
34674	1717 New York Ave.
34675	1718 New York Ave.
34676	1721 New York Ave.
34677	1722 New York Ave.
34678	1726 New York Ave.
34679	1727 New York Ave.
34680	1729 New York Ave.
34681	1730 New York Ave.
34682	1733 New York Ave.
34683	1736 New York Ave.
34684	1801 New York Ave.
34685	1802 New York Ave.
34686	1805 New York Ave.
34687	1806 New York Ave.
34688	1809 New York Ave.
34689	1810 New York Ave.
34690	1813 New York Ave.
34691	1814 New York Ave.
34692	1817 New York Ave.
34693	1818 New York Ave.
34694	1821 New York Ave.
34695	1822 New York Ave.
34696	1830 New York Ave.
34697	160 Newall St., E.
34698	210 Newall St., E.
34699	300 Newall St., E.
34700	301 Newall St., E.
34701	309 Newall St., E.
34702	312 Newall St., E.
34703	315 Newall St., E.
34704	316 Newall St., E.

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34705	320 Newall St., E.
34706	321 Newall St., E.
34707	325 Newall St., E.
34708	330 Newall St., E.
34709	333 Newall St., E.
34710	341 Newall St., E.
34711	345 Newall St., E.
34712	401 Newall St., E.
34713	405 Newall St., E.
34714	406 Newall St., E.
34715	409 Newall St., E.
34716	410 Newall St., E.
34717	413 Newall St., E.
34718	414 Newall St., E.
34719	421 Newall St., E.
34720	422 Newall St., E.
34721	426 Newall St., E.
34722	429 Newall St., E.
34723	430 Newall St., E.
34724	433 Newall St., E.
34725	434 Newall St., E.
34726	438 Newall St., E.
34727	611 Newall St., E.
34728	617 Newall St., E.
34729	619 Newall St., E.
34730	620 Newall St., E.
34731	117 Newall St., W.
34732	127 Newall St., W.
34733	134 Newall St., W.
34734	138 Newall St., W.
34735	202 Newall St., W.
34736	205 Newall St., W.
34737	206 Newall St., W.
34738	207 Newall St., W.
34739	210 Newall St., W.
34740	214 Newall St., W.
34741	215 Newall St., W.
34742	220 Newall St., W.
34743	224 Newall St., W.
34744	227 Newall St., W.
34745	228 Newall St., W.
34746	233 Newall St., W.
34747	235 Newall St., W.
34748	239 Newall St., W.
34749	310 Newall St., W.
34750	311 Newall St., W.
34751	314 Newall St., W.
34752	318 Newall St., W.

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34753	323 Newall St., W.
34754	327 Newall St., W.
34755	331 Newall St., W.
34756	405 Newall St., W.
34757	428 Newall St., W.
34758	501 Newall St., W.
34759	506 Newall St., W.
34760	511 Newall St., W.
34761	514 Newall St., W.
34762	515 Newall St., W.
34763	518 Newall St., W.
34764	519 Newall St., W.
34765	523 Newall St., W.
34766	601 Newall St., W.
34767	602 Newall St., W.
34768	605 Newall St., W.
34769	606 Newall St., W.
34770	609 Newall St., W.
34771	610 Newall St., W.
34772	614 Newall St., W.
34773	615 Newall St., W.
34774	1605 Newcombe St.
34775	1613 Newcombe St.
34776	1616 Newcombe St.
34777	1617 Newcombe St.
34778	1620 Newcombe St.
34779	1621 Newcombe St.
34780	1702 Newcombe St.
34781	1705 Newcombe St.
34782	1201 Niagara Ave.
34783	1205 Niagara Ave.
34784	1209 Niagara Ave.
34785	1213 Niagara Ave.
34786	1215 Niagara Ave.
34787	1220 Niagara Ave.
34788	1221 Niagara Ave.
34789	1222 Niagara Ave.
34790	1225 Niagara Ave.
34791	1230 Niagara Ave.
34792	1234 Niagara Ave.
34793	1240 Niagara Ave.
34794	1243 Niagara Ave.
34795	1244 Niagara Ave.
34796	1247 Niagara Ave.
34797	1248 Niagara Ave.
34798	1251 Niagara Ave.
34799	1252 Niagara Ave.
34800	1259 Niagara Ave.

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34801	1260 Niagara Ave.
34802	1301 Niagara Ave.
34803	1302 Niagara Ave.
34804	1305 Niagara Ave.
34805	1306 Niagara Ave.
34806	1309 Niagara Ave.
34807	1310 Niagara Ave.
34808	1314 Niagara Ave.
34809	1317 Niagara Ave.
34810	112 Ninth Ave.
34811	209 Ninth Ave.
34812	224 Ninth Ave.
34813	308 Ninth Ave.
34814	312 Ninth Ave.
34815	317 Ninth Ave.
34816	318 Ninth Ave.
34817	403 Ninth Ave.
34818	406 Ninth Ave.
34819	407 Ninth Ave.
34820	412 Ninth Ave.
34821	414 Ninth Ave.
34822	415 Ninth Ave.
34823	420 Ninth Ave.
34824	427 Ninth Ave.
34825	433 Ninth Ave.
34826	434 Ninth Ave.
34827	801 Ninth St., E.
34828	804 Ninth St., E.
34829	809 Ninth St., E.
34830	812 Ninth St., E.
34831	814 Ninth St., E.
34832	815 Ninth St., E.
34833	817 Ninth St., E.
34834	818 Ninth St., E.
34835	821 Ninth St., E.
34836	822 Ninth St., E.
34837	825 Ninth St., E.
34838	826 Ninth St., E.
34839	829 Ninth St., E.
34840	830 Ninth St., E.
34841	833 Ninth St., E.
34842	834 Ninth St., E.
34843	837 Ninth St., E.
34844	840 Ninth St., E.
34845	841 Ninth St., E.
34846	842 Ninth St., E.
34847	845 Ninth St., E.
34848	902 Ninth St., E.

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34849	903 Ninth St., E.
34850	905 Ninth St., E.
34851	906 Ninth St., E.
34852	909 Ninth St., E.
34853	910 Ninth St., E.
34854	913 Ninth St., E.
34855	914 Ninth St., E.
34856	917 Ninth St., E.
34857	920 Ninth St., E.
34858	921 Ninth St., E.
34859	2202 Nolen Dr.
34860	2208 Nolen Dr.
34861	2214 Nolen Dr.
34862	2220 Nolen Dr.
34863	2226 Nolen Dr.
34864	2232 Nolen Dr.
34865	2238 Nolen Dr.
34866	2244 Nolen Dr.
34867	2250 Nolen Dr.
34868	2256 Nolen Dr.
34869	2262 Nolen Dr.
34870	2268 Nolen Dr.
34871	2310 Nolen Dr.
34872	2314 Nolen Dr.
34873	2320 Nolen Dr.
34874	2326 Nolen Dr.
34875	2332 Nolen Dr.
34876	2338 Nolen Dr.
34877	2344 Nolen Dr.
34878	2354 Nolen Dr.
34879	2362 Nolen Dr.
34880	2368 Nolen Dr.
34881	2380 Nolen Dr.
34882	2402 Nolen Dr.
34883	2418 Nolen Dr.
34884	2430 Nolen Dr.
34885	2436 Nolen Dr.
34886	2448 Nolen Dr.
34887	2454 Nolen Dr.
34888	2470 Nolen Dr.
34889	2472 Nolen Dr.
34890	2484 Nolen Dr.
34891	2502 Nolen Dr.
34892	2516 Nolen Dr.
34893	2522 Nolen Dr.
34894	2534 Nolen Dr.
34895	2540 Nolen Dr.
34896	2540 Nolen Dr.

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34897	2546 Nolen Dr.
34898	2554 Nolen Dr.
34899	2562 Nolen Dr.
34900	2566 Nolen Dr.
34901	2574 Nolen Dr.
34902	2578 Nolen Dr.
34903	2582 Nolen Dr.
34904	2602 Nolen Dr.
34905	2610 Nolen Dr.
34906	2701 Nolen Dr.
34907	2411 Norbert St.
34908	2412 Norbert St.
34909	2416 Norbert St.
34910	2417 Norbert St.
34911	2420 Norbert St.
34912	2423 Norbert St.
34913	2424 Norbert St.
34914	2428 Norbert St.
34915	2429 Norbert St.
34916	2432 Norbert St.
34917	2435 Norbert St.
34918	2436 Norbert St.
34919	2440 Norbert St.
34920	2441 Norbert St.
34921	2447 Norbert St.
34922	2453 Norbert St.
34923	2459 Norbert St.
34924	2465 Norbert St.
34925	2471 Norbert St.
34926	2508 Norbert St.
34927	2513 Norbert St.
34928	2514 Norbert St.
34929	2518 Norbert St.
34930	2519 Norbert St.
34931	2522 Norbert St.
34932	2523 Norbert St.
34933	2526 Norbert St.
34934	2527 Norbert St.
34935	2530 Norbert St.
34936	2531 Norbert St.
34937	2534 Norbert St.
34938	2535 Norbert St.
34939	2538 Norbert St.
34940	2539 Norbert St.
34941	2542 Norbert St.
34942	2546 Norbert St.
34943	2547 Norbert St.
34944	2550 Norbert St.

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34945	2551 Norbert St.
34946	2554 Norbert St.
34947	2555 Norbert St.
34948	2559 Norbert St.
34949	2563 Norbert St.
34950	2601 Norbert St.
34951	2609 Norbert St.
34952	2617 Norbert St.
34953	2618 Norbert St.
34954	2623 Norbert St.
34955	2701 Norbert St.
34956	2702 Norbert St.
34957	2705 Norbert St.
34958	2706 Norbert St.
34959	2709 Norbert St.
34960	2710 Norbert St.
34961	2713 Norbert St.
34962	2714 Norbert St.
34963	2717 Norbert St.
34964	2718 Norbert St.
34965	2721 Norbert St.
34966	2722 Norbert St.
34967	2725 Norbert St.
34968	2726 Norbert St.
34969	2729 Norbert St.
34970	2730 Norbert St.
34971	2733 Norbert St.
34972	2734 Norbert St.
34973	2737 Norbert St.
34974	2738 Norbert St.
34975	2741 Norbert St.
34976	2744 Norbert St.
34977	2745 Norbert St.
34978	2748 Norbert St.
34979	2749 Norbert St.
34980	2752 Norbert St.
34981	2753 Norbert St.
34982	2754 Norbert St.
34983	2757 Norbert St.
34984	2801 Norbert St.
34985	2802 Norbert St.
34986	2805 Norbert St.
34987	2806 Norbert St.
34988	2809 Norbert St.
34989	2810 Norbert St.
34990	2814 Norbert St.
34991	415 North St.
34992	602 North St.

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34993	2022 North St.
34994	2022 North St.
34995	2022 North St.
34996	3001 North St.
34997	3001 North St.
34998	3111 North St.
34999	3115 North St.
35000	3212 North St.
35001	3319 North St.
35002	3406 North St.
35003	4022 North St.
35004	2022 North St.
35005	2022 North St.
35006	3412 North St.
35007	3520 North St.
35008	3615 North St.
35009	3623 North St.
35010	3701 North St.
35011	3709 North St.
35012	3730 North St.
35013	3905 North St.
35014	3909 North St.
35015	3913 North St.
35016	3914 North St.
35017	3917 North St.
35018	3918 North St.
35019	3926 North St.
35020	3929 North St.
35021	3930 North St.
35022	3934 North St.
35023	3937 North St.
35024	3938 North St.
35025	4002 North St.
35026	4008 North St.
35027	4012 North St.
35028	4017 North St.
35029	4021 North St.
35030	4022 North St.
35031	4025 North St.
35032	4028 North St.
35033	4030 North St.
35034	4033 North St.
35035	4034 North St.
35036	4037 North St.
35037	4038 North St.
35038	4101 North St.
35039	4105 North St.
35040	4106 North St.

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35041	4109 North St.
35042	4110 North St.
35043	4113 North St.
35044	4114 North St.
35045	4209 North St.
35046	4210 North St.
35047	4213 North St.
35048	4214 North St.
35049	4301 North St.
35050	4302 North St.
35051	4306 North St.
35052	4309 North St.
35053	4313 North St.
35054	4314 North St.
35055	4317 North St.
35056	4318 North St.
35057	4402 North St.
35058	4403 North St.
35059	4406 North St.
35060	4511 North St.
35061	4513 North St.
35062	4517 North St.
35063	4521 North St.
35064	4522 North St.
35065	4601 North St.
35066	4605 North St.
35067	4606 North St.
35068	4610 North St.
35069	5210 North St.
35070	5306 North St.
35071	7011 North St.
35072	3109 Norwood Dr.
35073	3110 Norwood Dr.
35074	3113 Norwood Dr.
35075	3116 Norwood Dr.
35076	3117 Norwood Dr.
35077	3120 Norwood Dr.
35078	3121 Norwood Dr.
35079	3128 Norwood Dr.
35080	3131 Norwood Dr.
35081	3132 Norwood Dr.
35082	3201 Norwood Dr.
35083	3202 Norwood Dr.
35084	3205 Norwood Dr.
35085	3206 Norwood Dr.
35086	3209 Norwood Dr.
35087	3210 Norwood Dr.
35088	3213 Norwood Dr.

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35089	3214 Norwood Dr.
35090	3218 Norwood Dr.
35091	3221 Norwood Dr.
35092	3222 Norwood Dr.
35093	3229 Norwood Dr.
35094	3233 Norwood Dr.
35095	3241 Norwood Dr.
35096	3301 Norwood Dr.
35097	3306 Norwood Dr.
35098	3314 Norwood Dr.
35099	3315 Norwood Dr.
35100	3318 Norwood Dr.
35101	3401 Norwood Dr.
35102	3402 Norwood Dr.
35103	3405 Norwood Dr.
35104	3406 Norwood Dr.
35105	3409 Norwood Dr.
35106	3410 Norwood Dr.
35107	3413 Norwood Dr.
35108	3417 Norwood Dr.
35109	3418 Norwood Dr.
35110	3502 Norwood Dr.
35111	3505 Norwood Dr.
35112	3509 Norwood Dr.
35113	3510 Norwood Dr.
35114	3514 Norwood Dr.
35115	3517 Norwood Dr.
35116	3518 Norwood Dr.
35117	3607 Norwood Dr.
35118	3611 Norwood Dr.
35119	3617 Norwood Dr.
35120	3618 Norwood Dr.
35121	3623 Norwood Dr.
35122	3624 Norwood Dr.
35123	3627 Norwood Dr.
35124	3628 Norwood Dr.
35125	3701 Norwood Dr.
35126	3706 Norwood Dr.
35127	3707 Norwood Dr.
35128	3713 Norwood Dr.
35129	3714 Norwood Dr.
35130	3719 Norwood Dr.
35131	3722 Norwood Dr.
35132	3725 Norwood Dr.
35133	3726 Norwood Dr.
35134	3733 Norwood Dr.
35135	3734 Norwood Dr.
35136	3738 Norwood Dr.

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35137	3741 Norwood Dr.
35138	608 Oak St.
35139	608 Oak St.
35140	613 Oak St.
35141	619 Oak St.
35142	704 Oak St.
35143	710 Oak St.
35144	713 Oak St.
35145	717 Oak St.
35146	718 Oak St.
35147	723 Oak St.
35148	725 Oak St.
35149	800 Oak St.
35150	803 Oak St.
35151	804 Oak St.
35152	807 Oak St.
35153	808 Oak St.
35154	811 Oak St.
35155	915 Oak St.
35156	916 Oak St.
35157	922 Oak St.
35158	923 Oak St.
35159	927 Oak St.
35160	1000 Oak St.
35161	1009 Oak St.
35162	1013 Oak St.
35163	1017 Oak St.
35164	1028 Oak St.
35165	1034 Oak St.
35166	1102 Oak St.
35167	1103 Oak St.
35168	1106 Oak St.
35169	1107 Oak St.
35170	1113 Oak St.
35171	1114 Oak St.
35172	1117 Oak St.
35173	1118 Oak St.
35174	1152 Oak St.
35175	1159 Oak St.
35176	1160 Oak St.
35177	1164 Oak St.
35178	1165 Oak St.
35179	1169 Oak St.
35180	1171 Oak St.
35181	1172 Oak St.
35182	1214 Oak St.
35183	1215 Oak St.
35184	1219 Oak St.

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35185	1223 Oak St.
35186	1427 Oak St.
35187	1429 Oak St.
35188	1433 Oak St.
35189	1434 Oak St.
35190	1437 Oak St.
35191	1500 Oak St.
35192	1501 Oak St.
35193	1504 Oak St.
35194	1507 Oak St.
35195	1510 Oak St.
35196	1708 Oak St.
35197	1716 Oak St.
35198	1720 Oak St.
35199	1723 Oak St.
35200	1724 Oak St.
35201	1727 Oak St.
35202	1728 Oak St.
35203	1825 Oakbrook Cir.
35204	1827 Oakbrook Cir.
35205	1829 Oakbrook Cir.
35206	1831 Oakbrook Cir.
35207	1835 Oakbrook Cir.
35208	1837 Oakbrook Cir.
35209	1839 Oakbrook Cir.
35210	1841 Oakbrook Cir.
35211	109 Oakley St., E.
35212	110 Oakley St., E.
35213	117 Oakley St., E.
35214	118 Oakley St., E.
35215	121 Oakley St., E.
35216	122 Oakley St., E.
35217	125 Oakley St., E.
35218	126 Oakley St., E.
35219	129 Oakley St., E.
35220	130 Oakley St., E.
35221	133 Oakley St., E.
35222	134 Oakley St., E.
35223	137 Oakley St., E.
35224	138 Oakley St., E.
35225	143 Oakley St., E.
35226	149 Oakley St., E.
35227	214 Oakley St., E.
35228	218 Oakley St., E.
35229	122 Oakley St., W.
35230	124 Oakley St., W.
35231	128 Oakley St., W.
35232	202 Oakley St., W.

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35233	206 Oakley St., W.
35234	210 Oakley St., W.
35235	211 Oakley St., W.
35236	214 Oakley St., W.
35237	222 Oakley St., W.
35238	226 Oakley St., W.
35239	310 Oakley St., W.
35240	412 Oakley St., W.
35241	420 Oakley St., W.
35242	420 Oakley St., W.
35243	109 Odette St.
35244	113 Odette St.
35245	114 Odette St.
35246	117 Odette St.
35247	118 Odette St.
35248	125 Odette St.
35249	126 Odette St.
35250	129 Odette St.
35251	130 Odette St.
35252	133 Odette St.
35253	136 Odette St.
35254	137 Odette St.
35255	138 Odette St.
35256	201 Odette St.
35257	204 Odette St.
35258	207 Odette St.
35259	212 Odette St.
35260	215 Odette St.
35261	217 Odette St.
35262	223 Odette St.
35263	224 Odette St.
35264	227 Odette St.
35265	228 Odette St.
35266	232 Odette St.
35267	233 Odette St.
35268	239 Odette St.
35269	302 Odette St.
35270	305 Odette St.
35271	306 Odette St.
35272	309 Odette St.
35273	310 Odette St.
35274	313 Odette St.
35275	314 Odette St.
35276	317 Odette St.
35277	318 Odette St.
35278	321 Odette St.
35279	322 Odette St.
35280	325 Odette St.

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35281	326 Odette St.
35282	329 Odette St.
35283	330 Odette St.
35284	401 Odette St.
35285	404 Odette St.
35286	405 Odette St.
35287	408 Odette St.
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35289	410 Odette St.
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35291	414 Odette St.
35292	417 Odette St.
35293	418 Odette St.
35294	421 Odette St.
35295	422 Odette St.
35296	425 Odette St.
35297	426 Odette St.
35298	501 Odette St.
35299	512 Odette St.
35300	513 Odette St.
35301	516 Odette St.
35302	517 Odette St.
35303	520 Odette St.
35304	521 Odette St.
35305	524 Odette St.
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35307	602 Odette St.
35308	605 Odette St.
35309	606 Odette St.
35310	613 Odette St.
35311	614 Odette St.
35312	617 Odette St.
35313	618 Odette St.
35314	622 Odette St.
35315	3601 Ogema Ave.
35316	3605 Ogema Ave.
35317	3606 Ogema Ave.
35318	3609 Ogema Ave.
35319	3610 Ogema Ave.
35320	3613 Ogema Ave.
35321	3614 Ogema Ave.
35322	3618 Ogema Ave.
35323	3622 Ogema Ave.
35324	3701 Ogema Ave.
35325	3702 Ogema Ave.
35326	3815 Ogema Ave.
35327	3818 Ogema Ave.
35328	3819 Ogema Ave.

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35329	3902 Ogema Ave.
35330	3907 Ogema Ave.
35331	3908 Ogema Ave.
35332	3911 Ogema Ave.
35333	3914 Ogema Ave.
35334	3915 Ogema Ave.
35335	3916 Ogema Ave.
35336	4001 Ogema Ave.
35337	4008 Ogema Ave.
35338	4014 Ogema Ave.
35339	4018 Ogema Ave.
35340	4110 Ogema Ave.
35341	4122 Ogema Ave.
35342	4201 Ogema Ave.
35343	4202 Ogema Ave.
35344	4207 Ogema Ave.
35345	4208 Ogema Ave.
35346	4211 Ogema Ave.
35347	4214 Ogema Ave.
35348	4215 Ogema Ave.
35349	4218 Ogema Ave.
35350	4301 Ogema Ave.
35351	4302 Ogema Ave.
35352	4307 Ogema Ave.
35353	4311 Ogema Ave.
35354	4319 Ogema Ave.
35355	4401 Ogema Ave.
35356	4407 Ogema Ave.
35357	4411 Ogema Ave.
35358	4415 Ogema Ave.
35359	4501 Ogema Ave.
35360	4507 Ogema Ave.
35361	4510 Ogema Ave.
35362	4515 Ogema Ave.
35363	4518 Ogema Ave.
35364	4522 Ogema Ave.
35365	4601 Ogema Ave.
35366	4602 Ogema Ave.
35367	4607 Ogema Ave.
35368	4608 Ogema Ave.
35369	4611 Ogema Ave.
35370	4614 Ogema Ave.
35371	1601 Ohio Ave.
35372	1607 Ohio Ave.
35373	1609 Ohio Ave.
35374	1612 Ohio Ave.
35375	1615 Ohio Ave.
35376	1616 Ohio Ave.

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35377	1620 Ohio Ave.
35378	1621 Ohio Ave.
35379	1625 Ohio Ave.
35380	1626 Ohio Ave.
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35382	1629 Ohio Ave.
35383	1632 Ohio Ave.
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35386	1639 Ohio Ave.
35387	1640 Ohio Ave.
35388	1641 Ohio Ave.
35389	1644 Ohio Ave.
35390	1645 Ohio Ave.
35391	1648 Ohio Ave.
35392	1649 Ohio Ave.
35393	1653 Ohio Ave.
35394	1655 Ohio Ave.
35395	1656 Ohio Ave.
35396	1656 Ohio Ave.
35397	1701 Ohio Ave.
35398	1702 Ohio Ave.
35399	1705 Ohio Ave.
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35401	1709 Ohio Ave.
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35403	1713 Ohio Ave.
35404	1717 Ohio Ave.
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35406	1720 Ohio Ave.
35407	1721 Ohio Ave.
35408	1722 Ohio Ave.
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35411	1729 Ohio Ave.
35412	1730 Ohio Ave.
35413	1733 Ohio Ave.
35414	1734 Ohio Ave.
35415	1737 Ohio Ave.
35416	1801 Ohio Ave.
35417	1907 Ohio Ave.
35418	2009 Ohio Ave.
35419	2115 Ohio Ave.
35420	2119 Ohio Ave.
35421	2127 Ohio Ave.
35422	2131 Ohio Ave.
35423	2201 Ohio Ave.
35424	2206 Ohio Ave.

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35425	2209 Ohio Ave.
35426	2210 Ohio Ave.
35427	2213 Ohio Ave.
35428	2214 Ohio Ave.
35429	2217 Ohio Ave.
35430	2218 Ohio Ave.
35431	2220 Ohio Ave.
35432	2301 Ohio Ave.
35433	2305 Ohio Ave.
35434	2306 Ohio Ave.
35435	2309 Ohio Ave.
35436	2310 Ohio Ave.
35437	2313 Ohio Ave.
35438	2314 Ohio Ave.
35439	2317 Ohio Ave.
35440	2318 Ohio Ave.
35441	2405 Ohio Ave.
35442	2407 Ohio Ave.
35443	2412 Ohio Ave.
35444	2415 Ohio Ave.
35445	2416 Ohio Ave.
35446	2418 Ohio Ave.
35447	2419 Ohio Ave.
35448	2423 Ohio Ave.
35449	2424 Ohio Ave.
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35451	2429 Ohio Ave.
35452	2431 Ohio Ave.
35453	2432 Ohio Ave.
35454	2438 Ohio Ave.
35455	2501 Ohio Ave.
35456	2502 Ohio Ave.
35457	2505 Ohio Ave.
35458	2506 Ohio Ave.
35459	2509 Ohio Ave.
35460	2510 Ohio Ave.
35461	2513 Ohio Ave.
35462	2514 Ohio Ave.
35463	2601 Ohio Ave.
35464	2602 Ohio Ave.
35465	2605 Ohio Ave.
35466	2606 Ohio Ave.
35467	2609 Ohio Ave.
35468	2610 Ohio Ave.
35469	2613 Ohio Ave.
35470	2614 Ohio Ave.
35471	2617 Ohio Ave.
35472	1410 Oklahoma Ave.

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35473	1413 Oklahoma Ave.
35474	1414 Oklahoma Ave.
35475	1417 Oklahoma Ave.
35476	1422 Oklahoma Ave.
35477	1425 Oklahoma Ave.
35478	1426 Oklahoma Ave.
35479	1429 Oklahoma Ave.
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35481	1433 Oklahoma Ave.
35482	1434 Oklahoma Ave.
35483	1437 Oklahoma Ave.
35484	1438 Oklahoma Ave.
35485	1442 Oklahoma Ave.
35486	1501 Oklahoma Ave.
35487	1502 Oklahoma Ave.
35488	1505 Oklahoma Ave.
35489	1506 Oklahoma Ave.
35490	1509 Oklahoma Ave.
35491	1510 Oklahoma Ave.
35492	1513 Oklahoma Ave.
35493	1514 Oklahoma Ave.
35494	1517 Oklahoma Ave.
35495	1518 Oklahoma Ave.
35496	1521 Oklahoma Ave.
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35498	1525 Oklahoma Ave.
35499	1526 Oklahoma Ave.
35500	1529 Oklahoma Ave.
35501	1533 Oklahoma Ave.
35502	1534 Oklahoma Ave.
35503	1537 Oklahoma Ave.
35504	1538 Oklahoma Ave.
35505	1541 Oklahoma Ave.
35506	1542 Oklahoma Ave.
35507	1545 Oklahoma Ave.
35508	1546 Oklahoma Ave.
35509	1602 Oklahoma Ave.
35510	1605 Oklahoma Ave.
35511	1606 Oklahoma Ave.
35512	1611 Oklahoma Ave.
35513	1614 Oklahoma Ave.
35514	1615 Oklahoma Ave.
35515	1622 Oklahoma Ave.
35516	1623 Oklahoma Ave.
35517	1626 Oklahoma Ave.
35518	1629 Oklahoma Ave.
35519	1630 Oklahoma Ave.
35520	1633 Oklahoma Ave.

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35521	1634 Oklahoma Ave.
35522	1635 Oklahoma Ave.
35523	1638 Oklahoma Ave.
35524	1639 Oklahoma Ave.
35525	1643 Oklahoma Ave.
35526	1647 Oklahoma Ave.
35527	1705 Oklahoma Ave.
35528	1709 Oklahoma Ave.
35529	1714 Oklahoma Ave.
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35531	1717 Oklahoma Ave.
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35539	1734 Oklahoma Ave.
35540	1737 Oklahoma Ave.
35541	1801 Oklahoma Ave.
35542	1805 Oklahoma Ave.
35543	1806 Oklahoma Ave.
35544	1813 Oklahoma Ave.
35545	1814 Oklahoma Ave.
35546	1817 Oklahoma Ave.
35547	1822 Oklahoma Ave.
35548	1826 Oklahoma Ave.
35549	1830 Oklahoma Ave.
35550	1834 Oklahoma Ave.
35551	1911 Oklahoma Ave.
35552	1915 Oklahoma Ave.
35553	1919 Oklahoma Ave.
35554	1920 Oklahoma Ave.
35555	2001 Oklahoma Ave.
35556	2002 Oklahoma Ave.
35557	2005 Oklahoma Ave.
35558	2006 Oklahoma Ave.
35559	2010 Oklahoma Ave.
35560	2013 Oklahoma Ave.
35561	2014 Oklahoma Ave.
35562	2017 Oklahoma Ave.
35563	2018 Oklahoma Ave.
35564	2022 Oklahoma Ave.
35565	2101 Oklahoma Ave.
35566	2102 Oklahoma Ave.
35567	2105 Oklahoma Ave.
35568	2106 Oklahoma Ave.

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35569	2109 Oklahoma Ave.
35570	2113 Oklahoma Ave.
35571	2114 Oklahoma Ave.
35572	2117 Oklahoma Ave.
35573	2118 Oklahoma Ave.
35574	2201 Oklahoma Ave.
35575	2202 Oklahoma Ave.
35576	2209 Oklahoma Ave.
35577	2210 Oklahoma Ave.
35578	2213 Oklahoma Ave.
35579	2214 Oklahoma Ave.
35580	2217 Oklahoma Ave.
35581	2218 Oklahoma Ave.
35582	2221 Oklahoma Ave.
35583	2222 Oklahoma Ave.
35584	2301 Oklahoma Ave.
35585	2302 Oklahoma Ave.
35586	2305 Oklahoma Ave.
35587	2306 Oklahoma Ave.
35588	2309 Oklahoma Ave.
35589	2310 Oklahoma Ave.
35590	2313 Oklahoma Ave.
35591	2314 Oklahoma Ave.
35592	2317 Oklahoma Ave.
35593	2318 Oklahoma Ave.
35594	2321 Oklahoma Ave.
35595	2322 Oklahoma Ave.
35596	2402 Oklahoma Ave.
35597	2404 Oklahoma Ave.
35598	2405 Oklahoma Ave.
35599	2409 Oklahoma Ave.
35600	2410 Oklahoma Ave.
35601	2413 Oklahoma Ave.
35602	2414 Oklahoma Ave.
35603	2417 Oklahoma Ave.
35604	2418 Oklahoma Ave.
35605	2421 Oklahoma Ave.
35606	2422 Oklahoma Ave.
35607	2426 Oklahoma Ave.
35608	2430 Oklahoma Ave.
35609	2431 Oklahoma Ave.
35610	2435 Oklahoma Ave.
35611	2501 Oklahoma Ave.
35612	2502 Oklahoma Ave.
35613	2505 Oklahoma Ave.
35614	2506 Oklahoma Ave.
35615	2509 Oklahoma Ave.
35616	2510 Oklahoma Ave.

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35617	2514 Oklahoma Ave.
35618	2518 Oklahoma Ave.
35619	2602 Oklahoma Ave.
35620	2606 Oklahoma Ave.
35621	2607 Oklahoma Ave.
35622	2610 Oklahoma Ave.
35623	2618 Oklahoma Ave.
35624	2905 Oklahoma Ave.
35625	2909 Oklahoma Ave.
35626	2912 Oklahoma Ave.
35627	2913 Oklahoma Ave.
35628	2917 Oklahoma Ave.
35629	2920 Oklahoma Ave.
35630	2921 Oklahoma Ave.
35631	2924 Oklahoma Ave.
35632	2925 Oklahoma Ave.
35633	2928 Oklahoma Ave.
35634	2929 Oklahoma Ave.
35635	2933 Oklahoma Ave.
35636	2934 Oklahoma Ave.
35637	2936 Oklahoma Ave.
35638	2937 Oklahoma Ave.
35639	3001 Oklahoma Ave.
35640	3002 Oklahoma Ave.
35641	3007 Oklahoma Ave.
35642	3008 Oklahoma Ave.
35643	3009 Oklahoma Ave.
35644	3011 Oklahoma Ave.
35645	3016 Oklahoma Ave.
35646	3020 Oklahoma Ave.
35647	3021 Oklahoma Ave.
35648	3025 Oklahoma Ave.
35649	3026 Oklahoma Ave.
35650	3031 Oklahoma Ave.
35651	1607 Olive Ave.
35652	1909 Olive Ave.
35653	1917 Olive Ave.
35654	1921 Olive Ave.
35655	2012 Olive Ave.
35656	2413 Olive Ave.
35657	2509 Olive Ave.
35658	2510 Olive Ave.
35659	2805 Olive Ave.
35660	2911 Olive Ave.
35661	113 Oliver St.
35662	116 Oliver St.
35663	117 Oliver St.
35664	120 Oliver St.

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35665	121 Oliver St.
35666	125 Oliver St.
35667	202 Oliver St.
35668	206 Oliver St.
35669	209 Oliver St.
35670	217 Oliver St.
35671	6601 Orange Ln.
35672	6602 Orange Ln.
35673	6609 Orange Ln.
35674	6610 Orange Ln.
35675	6615 Orange Ln.
35676	6616 Orange Ln.
35677	6621 Orange Ln.
35678	6622 Orange Ln.
35679	6627 Orange Ln.
35680	6628 Orange Ln.
35681	6701 Orange Ln.
35682	6702 Orange Ln.
35683	6707 Orange Ln.
35684	6708 Orange Ln.
35685	6713 Orange Ln.
35686	6714 Orange Ln.
35687	6719 Orange Ln.
35688	6720 Orange Ln.
35689	6725 Orange Ln.
35690	6801 Orange Ln.
35691	6802 Orange Ln.
35692	6807 Orange Ln.
35693	6808 Orange Ln.
35694	6813 Orange Ln.
35695	6814 Orange Ln.
35696	6819 Orange Ln.
35697	6820 Orange Ln.
35698	6825 Orange Ln.
35699	6826 Orange Ln.
35700	6829 Orange Ln.
35701	6830 Orange Ln.
35702	6901 Orange Ln.
35703	6902 Orange Ln.
35704	6907 Orange Ln.
35705	6908 Orange Ln.
35706	6913 Orange Ln.
35707	6914 Orange Ln.
35708	7000 Orange Ln.
35709	927 Orchard Ct.
35710	2520 Orchard Ln.
35711	2522 Orchard Ln.
35712	2524 Orchard Ln.

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35713	2526 Orchard Ln.
35714	2528 Orchard Ln.
35715	2530 Orchard Ln.
35716	2532 Orchard Ln.
35717	2534 Orchard Ln.
35718	2536 Orchard Ln.
35719	2538 Orchard Ln.
35720	2540 Orchard Ln.
35721	2542 Orchard Ln.
35722	2625 Orchard Ln.
35723	2627 Orchard Ln.
35724	2629 Orchard Ln.
35725	2631 Orchard Ln.
35726	2633 Orchard Ln.
35727	2635 Orchard Ln.
35728	2645 Orchard Ln.
35729	2709 Orchard Ln.
35730	1602 Oren Ave.
35731	1602 Oren Ave.
35732	1705 Oren Ave.
35733	1722 Oren Ave.
35734	1805 Oren Ave.
35735	1807 Oren Ave.
35736	1816 Oren Ave.
35737	1911 Oren Ave.
35738	1912 Oren Ave.
35739	1915 Oren Ave.
35740	1916 Oren Ave.
35741	1919 Oren Ave.
35742	1931 Oren Ave.
35743	2026 Oren Ave.
35744	2101 Oren Ave.
35745	2259 Oren Ave.
35746	2262 Oren Ave.
35747	2302 Oren Ave.
35748	2306 Oren Ave.
35749	2309 Oren Ave.
35750	2311 Oren Ave.
35751	2315 Oren Ave.
35752	2319 Oren Ave.
35753	3809 Orr St.
35754	3810 Orr St.
35755	3813 Orr St.
35756	3816 Orr St.
35757	3820 Orr St.
35758	3821 Orr St.
35759	4010 Orr St.
35760	4011 Orr St.

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35761	4014 Orr St.
35762	4015 Orr St.
35763	4018 Orr St.
35764	4019 Orr St.
35765	4022 Orr St.
35766	4023 Orr St.
35767	4026 Orr St.
35768	4030 Orr St.
35769	4035 Orr St.
35770	4038 Orr St.
35771	4039 Orr St.
35772	4045 Orr St.
35773	118 Orville St.
35774	133 Orville St.
35775	2904 Orville St.
35776	2908 Orville St.
35777	1051 Osceola Ave.
35778	1070 Osceola Ave.
35779	1073 Osceola Ave.
35780	1074 Osceola Ave.
35781	1078 Osceola Ave.
35782	1106 Osceola Ave.
35783	1116 Osceola Ave.
35784	1118 Osceola Ave.
35785	1121 Osceola Ave.
35786	1122 Osceola Ave.
35787	1123 Osceola Ave.
35788	1126 Osceola Ave.
35789	1133 Osceola Ave.
35790	1134 Osceola Ave.
35791	1243 Osceola Ave.
35792	802 Ossington Ave.
35793	810 Ossington Ave.
35794	811 Ossington Ave.
35795	815 Ossington Ave.
35796	818 Ossington Ave.
35797	822 Ossington Ave.
35798	823 Ossington Ave.
35799	827 Ossington Ave.
35800	830 Ossington Ave.
35801	831 Ossington Ave.
35802	834 Ossington Ave.
35803	838 Ossington Ave.
35804	839 Ossington Ave.
35805	842 Ossington Ave.
35806	843 Ossington Ave.
35807	846 Ossington Ave.
35808	847 Ossington Ave.

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35809	850 Ossington Ave.
35810	853 Ossington Ave.
35811	855 Ossington Ave.
35812	859 Ossington Ave.
35813	910 Ossington Ave.
35814	911 Ossington Ave.
35815	914 Ossington Ave.
35816	915 Ossington Ave.
35817	918 Ossington Ave.
35818	922 Ossington Ave.
35819	923 Ossington Ave.
35820	926 Ossington Ave.
35821	927 Ossington Ave.
35822	930 Ossington Ave.
35823	931 Ossington Ave.
35824	934 Ossington Ave.
35825	935 Ossington Ave.
35826	938 Ossington Ave.
35827	939 Ossington Ave.
35828	942 Ossington Ave.
35829	943 Ossington Ave.
35830	950 Ossington Ave.
35831	951 Ossington Ave.
35832	955 Ossington Ave.
35833	1016 Ossington Ave.
35834	1019 Ossington Ave.
35835	1020 Ossington Ave.
35836	1023 Ossington Ave.
35837	1024 Ossington Ave.
35838	1027 Ossington Ave.
35839	1028 Ossington Ave.
35840	1031 Ossington Ave.
35841	1032 Ossington Ave.
35842	1035 Ossington Ave.
35843	1036 Ossington Ave.
35844	1039 Ossington Ave.
35845	1040 Ossington Ave.
35846	1101 Ossington Ave.
35847	1102 Ossington Ave.
35848	1105 Ossington Ave.
35849	1106 Ossington Ave.
35850	1109 Ossington Ave.
35851	1111 Ossington Ave.
35852	1112 Ossington Ave.
35853	1114 Ossington Ave.
35854	1117 Ossington Ave.
35855	1118 Ossington Ave.
35856	1121 Ossington Ave.

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35857	1122 Ossington Ave.
35858	1125 Ossington Ave.
35859	1126 Ossington Ave.
35860	1129 Ossington Ave.
35861	1130 Ossington Ave.
35862	1133 Ossington Ave.
35863	1134 Ossington Ave.
35864	1702 Overhill Dr.
35865	1707 Overhill Dr.
35866	1711 Overhill Dr.
35867	1724 Overhill Dr.
35868	1730 Overhill Dr.
35869	1810 Overhill Dr.
35870	1827 Overhill Dr.
35871	1813 Owen St.
35872	1814 Owen St.
35873	1817 Owen St.
35874	1818 Owen St.
35875	1822 Owen St.
35876	1825 Owen St.
35877	1829 Owen St.
35878	1830 Owen St.
35879	1835 Owen St.
35880	1835 Owen St.
35881	1838 Owen St.
35882	1839 Owen St.
35883	1846 Owen St.
35884	1847 Owen St.
35885	1850 Owen St.
35886	1851 Owen St.
35887	1857 Owen St.
35888	1906 Owen St.
35889	1909 Owen St.
35890	1913 Owen St.
35891	1916 Owen St.
35892	1922 Owen St.
35893	1925 Owen St.
35894	1930 Owen St.
35895	1933 Owen St.
35896	1937 Owen St.
35897	2001 Oxford Ln.
35898	2011 Oxford Ln.
35899	2014 Oxford Ln.
35900	2022 Oxford Ln.
35901	2031 Oxford Ln.
35902	2034 Oxford Ln.
35903	2040 Oxford Ln.
35904	2041 Oxford Ln.

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35905	1701 Oxley Dr.
35906	1702 Oxley Dr.
35907	1707 Oxley Dr.
35908	1708 Oxley Dr.
35909	1711 Oxley Dr.
35910	1714 Oxley Dr.
35911	1715 Oxley Dr.
35912	1720 Oxley Dr.
35913	1726 Oxley Dr.
35914	1802 Oxley Dr.
35915	1807 Oxley Dr.
35916	1808 Oxley Dr.
35917	1811 Oxley Dr.
35918	1814 Oxley Dr.
35919	1815 Oxley Dr.
35920	1819 Oxley Dr.
35921	1820 Oxley Dr.
35922	1901 Oxley Dr.
35923	1902 Oxley Dr.
35924	1908 Oxley Dr.
35925	1909 Oxley Dr.
35926	1912 Oxley Dr.
35927	1915 Oxley Dr.
35928	1916 Oxley Dr.
35929	1919 Oxley Dr.
35930	2001 Oxley Dr.
35931	2002 Oxley Dr.
35932	2007 Oxley Dr.
35933	2008 Oxley Dr.
35934	2013 Oxley Dr.
35935	2014 Oxley Dr.
35936	2017 Oxley Dr.
35937	2020 Oxley Dr.
35938	2023 Oxley Dr.
35939	5601 Oxley Dr.
35940	5609 Oxley Dr.
35941	5610 Oxley Dr.
35942	5613 Oxley Dr.
35943	5614 Oxley Dr.
35944	5617 Oxley Dr.
35945	5618 Oxley Dr.
35946	5701 Oxley Dr.
35947	5702 Oxley Dr.
35948	5705 Oxley Dr.
35949	5706 Oxley Dr.
35950	5709 Oxley Dr.
35951	5710 Oxley Dr.
35952	5713 Oxley Dr.

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35953	5714 Oxley Dr.
35954	5717 Oxley Dr.
35955	5718 Oxley Dr.
35956	5801 Oxley Dr.
35957	5802 Oxley Dr.
35958	5805 Oxley Dr.
35959	5806 Oxley Dr.
35960	5809 Oxley Dr.
35961	5810 Oxley Dr.
35962	5901 Oxley Dr.
35963	5902 Oxley Dr.
35964	5905 Oxley Dr.
35965	5906 Oxley Dr.
35966	5910 Oxley Dr.
35967	6001 Oxley Dr.
35968	6005 Oxley Dr.
35969	6006 Oxley Dr.
35970	6009 Oxley Dr.
35971	6010 Oxley Dr.
35972	6101 Oxley Dr.
35973	6105 Oxley Dr.
35974	6113 Oxley Dr.
35975	6114 Oxley Dr.
35976	6201 Oxley Dr.
35977	6202 Oxley Dr.
35978	6211 Oxley Dr.
35979	6301 Oxley Dr.
35980	6305 Oxley Dr.
35981	6309 Oxley Dr.
35982	6313 Oxley Dr.
35983	6401 Oxley Dr.
35984	6405 Oxley Dr.
35985	6409 Oxley Dr.
35986	6413 Oxley Dr.
35987	6417 Oxley Dr.
35988	6501 Oxley Dr.
35989	6505 Oxley Dr.
35990	6509 Oxley Dr.
35991	6513 Oxley Dr.
35992	6601 Oxley Dr.
35993	6602 Oxley Dr.
35994	811 Paddington Ave.
35995	814 Paddington Ave.
35996	815 Paddington Ave.
35997	818 Paddington Ave.
35998	819 Paddington Ave.
35999	822 Paddington Ave.
36000	827 Paddington Ave.

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36001	830 Paddington Ave.
36002	831 Paddington Ave.
36003	834 Paddington Ave.
36004	839 Paddington Ave.
36005	842 Paddington Ave.
36006	843 Paddington Ave.
36007	846 Paddington Ave.
36008	847 Paddington Ave.
36009	850 Paddington Ave.
36010	851 Paddington Ave.
36011	854 Paddington Ave.
36012	860 Paddington Ave.
36013	902 Paddington Ave.
36014	906 Paddington Ave.
36015	910 Paddington Ave.
36016	911 Paddington Ave.
36017	915 Paddington Ave.
36018	923 Paddington Ave.
36019	926 Paddington Ave.
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36021	931 Paddington Ave.
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36023	939 Paddington Ave.
36024	943 Paddington Ave.
36025	950 Paddington Ave.
36026	955 Paddington Ave.
36027	962 Paddington Ave.
36028	2514 Paducah St.
36029	2515 Paducah St.
36030	2518 Paducah St.
36031	2519 Paducah St.
36032	2522 Paducah St.
36033	2523 Paducah St.
36034	2526 Paducah St.
36035	2527 Paducah St.
36036	2530 Paducah St.
36037	2531 Paducah St.
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36040	2538 Paducah St.
36041	2539 Paducah St.
36042	2542 Paducah St.
36043	2543 Paducah St.
36044	2546 Paducah St.
36045	2547 Paducah St.
36046	2550 Paducah St.
36047	2551 Paducah St.
36048	2554 Paducah St.

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36049	2555 Paducah St.
36050	2558 Paducah St.
36051	2559 Paducah St.
36052	2562 Paducah St.
36053	2563 Paducah St.
36054	2566 Paducah St.
36055	2567 Paducah St.
36056	2569 Paducah St.
36057	2570 Paducah St.
36058	109 Page St.
36059	201 Page St.
36060	206 Page St.
36061	211 Page St.
36062	213 Page St.
36063	214 Page St.
36064	218 Page St.
36065	219 Page St.
36066	221 Page St.
36067	222 Page St.
36068	225 Page St.
36069	226 Page St.
36070	229 Page St.
36071	230 Page St.
36072	234 Page St.
36073	235 Page St.
36074	238 Page St.
36075	302 Page St.
36076	305 Page St.
36077	306 Page St.
36078	309 Page St.
36079	313 Page St.
36080	314 Page St.
36081	318 Page St.
36082	322 Page St.
36083	325 Page St.
36084	326 Page St.
36085	329 Page St.
36086	330 Page St.
36087	333 Page St.
36088	334 Page St.
36089	401 Page St.
36090	405 Page St.
36091	408 Page St.
36092	412 Page St.
36093	413 Page St.
36094	417 Page St.
36095	418 Page St.
36096	421 Page St.

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36097	425 Page St.
36098	429 Page St.
36099	438 Page St.
36100	448 Page St.
36101	501 Page St.
36102	505 Page St.
36103	506 Page St.
36104	510 Page St.
36105	516 Page St.
36106	517 Page St.
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36108	521 Page St.
36109	522 Page St.
36110	552 Page St.
36111	555 Page St.
36112	556 Page St.
36113	559 Page St.
36114	567 Page St.
36115	571 Page St.
36116	601 Page St.
36117	604 Page St.
36118	605 Page St.
36119	608 Page St.
36120	609 Page St.
36121	3709 Palmer Ave.
36122	3721 Palmer Ave.
36123	3725 Palmer Ave.
36124	3729 Palmer Ave.
36125	3733 Palmer Ave.
36126	3737 Palmer Ave.
36127	3741 Palmer Ave.
36128	3813 Palmer Ave.
36129	3819 Palmer Ave.
36130	3825 Palmer Ave.
36131	3831 Palmer Ave.
36132	3837 Palmer Ave.
36133	3841 Palmer Ave.
36134	1801 Park Forest Dr.
36135	1808 Park Forest Dr.
36136	1811 Park Forest Dr.
36137	1812 Park Forest Dr.
36138	1815 Park Forest Dr.
36139	1816 Park Forest Dr.
36140	1819 Park Forest Dr.
36141	1820 Park Forest Dr.
36142	1823 Park Forest Dr.
36143	1824 Park Forest Dr.
36144	1827 Park Forest Dr.

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36145	1828 Park Forest Dr.
36146	1831 Park Forest Dr.
36147	1832 Park Forest Dr.
36148	1901 Park Forest Dr.
36149	1902 Park Forest Dr.
36150	1905 Park Forest Dr.
36151	1906 Park Forest Dr.
36152	1909 Park Forest Dr.
36153	1910 Park Forest Dr.
36154	1913 Park Forest Dr.
36155	1914 Park Forest Dr.
36156	1917 Park Forest Dr.
36157	1918 Park Forest Dr.
36158	1922 Park Forest Dr.
36159	1925 Park Forest Dr.
36160	1926 Park Forest Dr.
36161	3808 Park Forest Dr.
36162	3809 Park Forest Dr.
36163	3812 Park Forest Dr.
36164	3814 Park Forest Dr.
36165	3816 Park Forest Dr.
36166	3817 Park Forest Dr.
36167	3818 Park Forest Dr.
36168	3820 Park Forest Dr.
36169	3822 Park Forest Dr.
36170	3826 Park Forest Dr.
36171	3828 Park Forest Dr.
36172	3830 Park Forest Dr.
36173	3832 Park Forest Dr.
36174	3834 Park Forest Dr.
36175	3836 Park Forest Dr.
36176	3840 Park Forest Dr.
36177	3842 Park Forest Dr.
36178	3844 Park Forest Dr.
36179	3846 Park Forest Dr.
36180	3848 Park Forest Dr.
36181	3850 Park Forest Dr.
36182	3901 Park Forest Dr.
36183	3910 Park Forest Dr.
36184	3911 Park Forest Dr.
36185	3912 Park Forest Dr.
36186	3914 Park Forest Dr.
36187	3915 Park Forest Dr.
36188	3916 Park Forest Dr.
36189	3918 Park Forest Dr.
36190	3920 Park Forest Dr.
36191	4001 Park Forest Dr.
36192	4004 Park Forest Dr.

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36193	4006 Park Forest Dr.
36194	4007 Park Forest Dr.
36195	4008 Park Forest Dr.
36196	4010 Park Forest Dr.
36197	4012 Park Forest Dr.
36198	4014 Park Forest Dr.
36199	4018 Park Forest Dr.
36200	4020 Park Forest Dr.
36201	4022 Park Forest Dr.
36202	4024 Park Forest Dr.
36203	4026 Park Forest Dr.
36204	4028 Park Forest Dr.
36205	4106 Park Forest Dr.
36206	4107 Park Forest Dr.
36207	4108 Park Forest Dr.
36208	4110 Park Forest Dr.
36209	4112 Park Forest Dr.
36210	4114 Park Forest Dr.
36211	4116 Park Forest Dr.
36212	4202 Park Forest Dr.
36213	4204 Park Forest Dr.
36214	4206 Park Forest Dr.
36215	4208 Park Forest Dr.
36216	4209 Park Forest Dr.
36217	4210 Park Forest Dr.
36218	4212 Park Forest Dr.
36219	4218 Park Forest Dr.
36220	4220 Park Forest Dr.
36221	4222 Park Forest Dr.
36222	4224 Park Forest Dr.
36223	4226 Park Forest Dr.
36224	4228 Park Forest Dr.
36225	4302 Park Forest Dr.
36226	4304 Park Forest Dr.
36227	4306 Park Forest Dr.
36228	4308 Park Forest Dr.
36229	4310 Park Forest Dr.
36230	4312 Park Forest Dr.
36231	4314 Park Forest Dr.
36232	4316 Park Forest Dr.
36233	4318 Park Forest Dr.
36234	4320 Park Forest Dr.
36235	4322 Park Forest Dr.
36236	4324 Park Forest Dr.
36237	1601 Park St.
36238	1605 Park St.
36239	1606 Park St.
36240	1609 Park St.

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36241	1613 Park St.
36242	1614 Park St.
36243	1617 Park St.
36244	1618 Park St.
36245	1621 Park St.
36246	1622 Park St.
36247	1701 Park St.
36248	1702 Park St.
36249	1704 Park St.
36250	1705 Park St.
36251	1708 Park St.
36252	1709 Park St.
36253	1712 Park St.
36254	1713 Park St.
36255	1720 Park St.
36256	6501 Parkbelt Dr.
36257	6505 Parkbelt Dr.
36258	6509 Parkbelt Dr.
36259	6602 Parkbelt Dr.
36260	6607 Parkbelt Dr.
36261	6608 Parkbelt Dr.
36262	6613 Parkbelt Dr.
36263	6614 Parkbelt Dr.
36264	6619 Parkbelt Dr.
36265	6620 Parkbelt Dr.
36266	6625 Parkbelt Dr.
36267	6626 Parkbelt Dr.
36268	6631 Parkbelt Dr.
36269	6632 Parkbelt Dr.
36270	6701 Parkbelt Dr.
36271	6702 Parkbelt Dr.
36272	6707 Parkbelt Dr.
36273	6708 Parkbelt Dr.
36274	6713 Parkbelt Dr.
36275	6714 Parkbelt Dr.
36276	6719 Parkbelt Dr.
36277	6720 Parkbelt Dr.
36278	6725 Parkbelt Dr.
36279	6726 Parkbelt Dr.
36280	6801 Parkbelt Dr.
36281	6802 Parkbelt Dr.
36282	6807 Parkbelt Dr.
36283	6808 Parkbelt Dr.
36284	6813 Parkbelt Dr.
36285	6814 Parkbelt Dr.
36286	6819 Parkbelt Dr.
36287	6820 Parkbelt Dr.
36288	6825 Parkbelt Dr.

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36289	6826 Parkbelt Dr.
36290	6901 Parkbelt Dr.
36291	6902 Parkbelt Dr.
36292	6907 Parkbelt Dr.
36293	6908 Parkbelt Dr.
36294	6913 Parkbelt Dr.
36295	6914 Parkbelt Dr.
36296	6920 Parkbelt Dr.
36297	1702 Parkfront Dr.
36298	1706 Parkfront Dr.
36299	1707 Parkfront Dr.
36300	1710 Parkfront Dr.
36301	1714 Parkfront Dr.
36302	1718 Parkfront Dr.
36303	1722 Parkfront Dr.
36304	1801 Parkfront Dr.
36305	1802 Parkfront Dr.
36306	1806 Parkfront Dr.
36307	1810 Parkfront Dr.
36308	1811 Parkfront Dr.
36309	1814 Parkfront Dr.
36310	1818 Parkfront Dr.
36311	1822 Parkfront Dr.
36312	1826 Parkfront Dr.
36313	771 Parkland St.
36314	1700 Parkside Dr.
36315	2515 Parkside Dr.
36316	2541 Parkside Dr.
36317	2550 Parkside Dr.
36318	2602 Parkside Dr.
36319	2630 Parkside Dr.
36320	2700 Parkside Dr.
36321	2716 Parkside Dr.
36322	2734 Parkside Dr.
36323	2750 Parkside Dr.
36324	2810 Parkside Dr.
36325	2834 Parkside Dr.
36326	2906 Parkside Dr.
36327	2920 Parkside Dr.
36328	2938 Parkside Dr.
36329	2952 Parkside Dr.
36330	3002 Parkside Dr.
36331	3018 Parkside Dr.
36332	3034 Parkside Dr.
36333	3040 Parkside Dr.
36334	3060 Parkside Dr.
36335	3310 Parkside Dr.
36336	3320 Parkside Dr.

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36337	3330 Parkside Dr.
36338	3336 Parkside Dr.
36339	3340 Parkside Dr.
36340	3410 Parkside Dr.
36341	3420 Parkside Dr.
36342	3425 Parkside Dr.
36343	301 Parkway Ave., E.
36344	302 Parkway Ave., E.
36345	306 Parkway Ave., E.
36346	309 Parkway Ave., E.
36347	310 Parkway Ave., E.
36348	314 Parkway Ave., E.
36349	317 Parkway Ave., E.
36350	318 Parkway Ave., E.
36351	321 Parkway Ave., E.
36352	322 Parkway Ave., E.
36353	325 Parkway Ave., E.
36354	329 Parkway Ave., E.
36355	330 Parkway Ave., E.
36356	333 Parkway Ave., E.
36357	334 Parkway Ave., E.
36358	338 Parkway Ave., E.
36359	341 Parkway Ave., E.
36360	342 Parkway Ave., E.
36361	345 Parkway Ave., E.
36362	346 Parkway Ave., E.
36363	350 Parkway Ave., E.
36364	353 Parkway Ave., E.
36365	354 Parkway Ave., E.
36366	401 Parkway Ave., E.
36367	402 Parkway Ave., E.
36368	405 Parkway Ave., E.
36369	408 Parkway Ave., E.
36370	409 Parkway Ave., E.
36371	410 Parkway Ave., E.
36372	413 Parkway Ave., E.
36373	414 Parkway Ave., E.
36374	418 Parkway Ave., E.
36375	421 Parkway Ave., E.
36376	422 Parkway Ave., E.
36377	425 Parkway Ave., E.
36378	426 Parkway Ave., E.
36379	501 Parkway Ave., E.
36380	502 Parkway Ave., E.
36381	505 Parkway Ave., E.
36382	506 Parkway Ave., E.
36383	510 Parkway Ave., E.
36384	514 Parkway Ave., E.

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36385	517 Parkway Ave., E.
36386	518 Parkway Ave., E.
36387	521 Parkway Ave., E.
36388	522 Parkway Ave., E.
36389	525 Parkway Ave., E.
36390	526 Parkway Ave., E.
36391	605 Parkway Ave., E.
36392	606 Parkway Ave., E.
36393	610 Parkway Ave., E.
36394	613 Parkway Ave., E.
36395	614 Parkway Ave., E.
36396	617 Parkway Ave., E.
36397	618 Parkway Ave., E.
36398	621 Parkway Ave., E.
36399	622 Parkway Ave., E.
36400	625 Parkway Ave., E.
36401	626 Parkway Ave., E.
36402	630 Parkway Ave., E.
36403	637 Parkway Ave., E.
36404	638 Parkway Ave., E.
36405	641 Parkway Ave., E.
36406	715 Parkway Ave., E.
36407	718 Parkway Ave., E.
36408	722 Parkway Ave., E.
36409	726 Parkway Ave., E.
36410	730 Parkway Ave., E.
36411	734 Parkway Ave., E.
36412	738 Parkway Ave., E.
36413	742 Parkway Ave., E.
36414	743 Parkway Ave., E.
36415	746 Parkway Ave., E.
36416	750 Parkway Ave., E.
36417	754 Parkway Ave., E.
36418	755 Parkway Ave., E.
36419	759 Parkway Ave., E.
36420	763 Parkway Ave., E.
36421	766 Parkway Ave., E.
36422	767 Parkway Ave., E.
36423	774 Parkway Ave., E.
36424	130 Parkway Ave., W.
36425	202 Parkway Ave., W.
36426	206 Parkway Ave., W.
36427	210 Parkway Ave., W.
36428	214 Parkway Ave., W.
36429	218 Parkway Ave., W.
36430	222 Parkway Ave., W.
36431	301 Parkway Ave., W.
36432	302 Parkway Ave., W.

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36433	305 Parkway Ave., W.
36434	306 Parkway Ave., W.
36435	309 Parkway Ave., W.
36436	310 Parkway Ave., W.
36437	313 Parkway Ave., W.
36438	314 Parkway Ave., W.
36439	317 Parkway Ave., W.
36440	318 Parkway Ave., W.
36441	321 Parkway Ave., W.
36442	322 Parkway Ave., W.
36443	401 Parkway Ave., W.
36444	402 Parkway Ave., W.
36445	405 Parkway Ave., W.
36446	409 Parkway Ave., W.
36447	620 Parkway Ave., W.
36448	621 Parkway Ave., W.
36449	624 Parkway Ave., W.
36450	625 Parkway Ave., W.
36451	628 Parkway Ave., W.
36452	629 Parkway Ave., W.
36453	3801 Parkway Ct.
36454	3802 Parkway Ct.
36455	3808 Parkway Ct.
36456	3809 Parkway Ct.
36457	3811 Parkway Ct.
36458	3812 Parkway Ct.
36459	3815 Parkway Ct.
36460	308 Partridge St.
36461	310 Partridge St.
36462	318 Partridge St.
36463	608 Partridge St.
36464	619 Partridge St.
36465	620 Partridge St.
36466	623 Partridge St.
36467	624 Partridge St.
36468	627 Partridge St.
36469	629 Partridge St.
36470	632 Partridge St.
36471	633 Partridge St.
36472	636 Partridge St.
36473	640 Partridge St.
36474	644 Partridge St.
36475	652 Partridge St.
36476	702 Partridge St.
36477	116 Pasadena Ave., E.
36478	120 Pasadena Ave., E.
36479	120 Pasadena Ave., E.
36480	151 Pasadena Ave., E.

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36481	157 Pasadena Ave., E.
36482	159 Pasadena Ave., E.
36483	163 Pasadena Ave., E.
36484	167 Pasadena Ave., E.
36485	171 Pasadena Ave., E.
36486	201 Pasadena Ave., E.
36487	205 Pasadena Ave., E.
36488	209 Pasadena Ave., E.
36489	213 Pasadena Ave., E.
36490	219 Pasadena Ave., E.
36491	221 Pasadena Ave., E.
36492	301 Pasadena Ave., E.
36493	313 Pasadena Ave., E.
36494	317 Pasadena Ave., E.
36495	351 Pasadena Ave., E.
36496	355 Pasadena Ave., E.
36497	359 Pasadena Ave., E.
36498	363 Pasadena Ave., E.
36499	367 Pasadena Ave., E.
36500	371 Pasadena Ave., E.
36501	401 Pasadena Ave., E.
36502	405 Pasadena Ave., E.
36503	409 Pasadena Ave., E.
36504	416 Pasadena Ave., E.
36505	416 Pasadena Ave., E.
36506	417 Pasadena Ave., E.
36507	424 Pasadena Ave., E.
36508	500 Pasadena Ave., E.
36509	505 Pasadena Ave., E.
36510	509 Pasadena Ave., E.
36511	513 Pasadena Ave., E.
36512	514 Pasadena Ave., E.
36513	517 Pasadena Ave., E.
36514	518 Pasadena Ave., E.
36515	521 Pasadena Ave., E.
36516	522 Pasadena Ave., E.
36517	601 Pasadena Ave., E.
36518	602 Pasadena Ave., E.
36519	605 Pasadena Ave., E.
36520	606 Pasadena Ave., E.
36521	609 Pasadena Ave., E.
36522	610 Pasadena Ave., E.
36523	613 Pasadena Ave., E.
36524	614 Pasadena Ave., E.
36525	617 Pasadena Ave., E.
36526	618 Pasadena Ave., E.
36527	621 Pasadena Ave., E.
36528	622 Pasadena Ave., E.

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36529	625 Pasadena Ave., E.
36530	626 Pasadena Ave., E.
36531	629 Pasadena Ave., E.
36532	630 Pasadena Ave., E.
36533	633 Pasadena Ave., E.
36534	634 Pasadena Ave., E.
36535	637 Pasadena Ave., E.
36536	638 Pasadena Ave., E.
36537	642 Pasadena Ave., E.
36538	711 Pasadena Ave., E.
36539	713 Pasadena Ave., E.
36540	719 Pasadena Ave., E.
36541	727 Pasadena Ave., E.
36542	735 Pasadena Ave., E.
36543	739 Pasadena Ave., E.
36544	743 Pasadena Ave., E.
36545	747 Pasadena Ave., E.
36546	753 Pasadena Ave., E.
36547	755 Pasadena Ave., E.
36548	759 Pasadena Ave., E.
36549	763 Pasadena Ave., E.
36550	767 Pasadena Ave., E.
36551	771 Pasadena Ave., E.
36552	775 Pasadena Ave., E.
36553	805 Pasadena Ave., E.
36554	810 Pasadena Ave., E.
36555	811 Pasadena Ave., E.
36556	813 Pasadena Ave., E.
36557	814 Pasadena Ave., E.
36558	817 Pasadena Ave., E.
36559	822 Pasadena Ave., E.
36560	826 Pasadena Ave., E.
36561	830 Pasadena Ave., E.
36562	833 Pasadena Ave., E.
36563	835 Pasadena Ave., E.
36564	837 Pasadena Ave., E.
36565	838 Pasadena Ave., E.
36566	902 Pasadena Ave., E.
36567	914 Pasadena Ave., E.
36568	113 Pasadena Ave., W.
36569	117 Pasadena Ave., W.
36570	125 Pasadena Ave., W.
36571	129 Pasadena Ave., W.
36572	133 Pasadena Ave., W.
36573	201 Pasadena Ave., W.
36574	202 Pasadena Ave., W.
36575	205 Pasadena Ave., W.
36576	206 Pasadena Ave., W.

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36577	209 Pasadena Ave., W.
36578	213 Pasadena Ave., W.
36579	214 Pasadena Ave., W.
36580	217 Pasadena Ave., W.
36581	218 Pasadena Ave., W.
36582	221 Pasadena Ave., W.
36583	229 Pasadena Ave., W.
36584	301 Pasadena Ave., W.
36585	302 Pasadena Ave., W.
36586	306 Pasadena Ave., W.
36587	310 Pasadena Ave., W.
36588	315 Pasadena Ave., W.
36589	319 Pasadena Ave., W.
36590	323 Pasadena Ave., W.
36591	327 Pasadena Ave., W.
36592	401 Pasadena Ave., W.
36593	405 Pasadena Ave., W.
36594	409 Pasadena Ave., W.
36595	413 Pasadena Ave., W.
36596	421 Pasadena Ave., W.
36597	425 Pasadena Ave., W.
36598	515 Pasadena Ave., W.
36599	519 Pasadena Ave., W.
36600	525 Pasadena Ave., W.
36601	529 Pasadena Ave., W.
36602	601 Pasadena Ave., W.
36603	605 Pasadena Ave., W.
36604	609 Pasadena Ave., W.
36605	613 Pasadena Ave., W.
36606	621 Pasadena Ave., W.
36607	704 Pasadena Ave., W.
36608	708 Pasadena Ave., W.
36609	714 Pasadena Ave., W.
36610	723 Pasadena Ave., W.
36611	726 Pasadena Ave., W.
36612	732 Pasadena Ave., W.
36613	738 Pasadena Ave., W.
36614	801 Pasadena Ave., W.
36615	805 Pasadena Ave., W.
36616	808 Pasadena Ave., W.
36617	808 Pasadena Ave., W.
36618	824 Pasadena Ave., W.
36619	901 Pasadena Ave., W.
36620	902 Pasadena Ave., W.
36621	910 Pasadena Ave., W.
36622	912 Pasadena Ave., W.
36623	915 Pasadena Ave., W.
36624	1001 Pasadena Ave., W.

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36625	1002 Pasadena Ave., W.
36626	1002 Pasadena Ave., W.
36627	1005 Pasadena Ave., W.
36628	1009 Pasadena Ave., W.
36629	1013 Pasadena Ave., W.
36630	1018 Pasadena Ave., W.
36631	1102 Pasadena Ave., W.
36632	1102 Pasadena Ave., W.
36633	1103 Pasadena Ave., W.
36634	1113 Pasadena Ave., W.
36635	1113 Pasadena Ave., W.
36636	1114 Pasadena Ave., W.
36637	1114 Pasadena Ave., W.
36638	1201 Pasadena Ave., W.
36639	1214 Pasadena Ave., W.
36640	1302 Pasadena Ave., W.
36641	1310 Pasadena Ave., W.
36642	1314 Pasadena Ave., W.
36643	1402 Pasadena Ave., W.
36644	1405 Pasadena Ave., W.
36645	1408 Pasadena Ave., W.
36646	1409 Pasadena Ave., W.
36647	1414 Pasadena Ave., W.
36648	1509 Pasadena Ave., W.
36649	1509 Pasadena Ave., W.
36650	1520 Pasadena Ave., W.
36651	1520 Pasadena Ave., W.
36652	1602 Pasadena Ave., W.
36653	1605 Pasadena Ave., W.
36654	1609 Pasadena Ave., W.
36655	1610 Pasadena Ave., W.
36656	1610 Pasadena Ave., W.
36657	1613 Pasadena Ave., W.
36658	1701 Pasadena Ave., W.
36659	1705 Pasadena Ave., W.
36660	1706 Pasadena Ave., W.
36661	1709 Pasadena Ave., W.
36662	1710 Pasadena Ave., W.
36663	1713 Pasadena Ave., W.
36664	1714 Pasadena Ave., W.
36665	1717 Pasadena Ave., W.
36666	1801 Pasadena Ave., W.
36667	1802 Pasadena Ave., W.
36668	1805 Pasadena Ave., W.
36669	1806 Pasadena Ave., W.
36670	1809 Pasadena Ave., W.
36671	1810 Pasadena Ave., W.
36672	1813 Pasadena Ave., W.

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36673	1814 Pasadena Ave., W.
36674	1817 Pasadena Ave., W.
36675	1818 Pasadena Ave., W.
36676	1821 Pasadena Ave., W.
36677	1901 Pasadena Ave., W.
36678	1902 Pasadena Ave., W.
36679	1905 Pasadena Ave., W.
36680	1909 Pasadena Ave., W.
36681	1910 Pasadena Ave., W.
36682	1913 Pasadena Ave., W.
36683	1914 Pasadena Ave., W.
36684	1918 Pasadena Ave., W.
36685	1922 Pasadena Ave., W.
36686	2002 Pasadena Ave., W.
36687	2005 Pasadena Ave., W.
36688	2006 Pasadena Ave., W.
36689	2010 Pasadena Ave., W.
36690	2013 Pasadena Ave., W.
36691	2017 Pasadena Ave., W.
36692	2101 Pasadena Ave., W.
36693	2107 Pasadena Ave., W.
36694	2110 Pasadena Ave., W.
36695	2113 Pasadena Ave., W.
36696	2114 Pasadena Ave., W.
36697	2119 Pasadena Ave., W.
36698	2202 Pasadena Ave., W.
36699	2206 Pasadena Ave., W.
36700	2210 Pasadena Ave., W.
36701	2213 Pasadena Ave., W.
36702	2218 Pasadena Ave., W.
36703	2313 Pasadena Ave., W.
36704	2318 Pasadena Ave., W.
36705	2450 Pasadena Ave., W.
36706	2450 Pasadena Ave., W.
36707	2511 Pasadena Ave., W.
36708	159 Paterson St., E.
36709	159 Paterson St., E.
36710	166 Paterson St., E.
36711	203 Paterson St., E.
36712	204 Paterson St., E.
36713	207 Paterson St., E.
36714	211 Paterson St., E.
36715	214 Paterson St., E.
36716	215 Paterson St., E.
36717	303 Paterson St., E.
36718	309 Paterson St., E.
36719	310 Paterson St., E.
36720	314 Paterson St., E.

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36721	315 Paterson St., E.
36722	317 Paterson St., E.
36723	318 Paterson St., E.
36724	321 Paterson St., E.
36725	322 Paterson St., E.
36726	328 Paterson St., E.
36727	333 Paterson St., E.
36728	334 Paterson St., E.
36729	406 Paterson St., E.
36730	409 Paterson St., E.
36731	410 Paterson St., E.
36732	413 Paterson St., E.
36733	417 Paterson St., E.
36734	421 Paterson St., E.
36735	426 Paterson St., E.
36736	429 Paterson St., E.
36737	430 Paterson St., E.
36738	441 Paterson St., E.
36739	442 Paterson St., E.
36740	445 Paterson St., E.
36741	449 Paterson St., E.
36742	501 Paterson St., E.
36743	502 Paterson St., E.
36744	505 Paterson St., E.
36745	506 Paterson St., E.
36746	512 Paterson St., E.
36747	517 Paterson St., E.
36748	520 Paterson St., E.
36749	521 Paterson St., E.
36750	551 Paterson St., E.
36751	552 Paterson St., E.
36752	554 Paterson St., E.
36753	559 Paterson St., E.
36754	562 Paterson St., E.
36755	563 Paterson St., E.
36756	567 Paterson St., E.
36757	570 Paterson St., E.
36758	602 Paterson St., E.
36759	606 Paterson St., E.
36760	609 Paterson St., E.
36761	610 Paterson St., E.
36762	112 Paterson St., W.
36763	115 Paterson St., W.
36764	116 Paterson St., W.
36765	117 Paterson St., W.
36766	120 Paterson St., W.
36767	121 Paterson St., W.
36768	124 Paterson St., W.

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36769	125 Paterson St., W.
36770	128 Paterson St., W.
36771	130 Paterson St., W.
36772	131 Paterson St., W.
36773	134 Paterson St., W.
36774	135 Paterson St., W.
36775	137 Paterson St., W.
36776	201 Paterson St., W.
36777	202 Paterson St., W.
36778	205 Paterson St., W.
36779	206 Paterson St., W.
36780	209 Paterson St., W.
36781	212 Paterson St., W.
36782	213 Paterson St., W.
36783	216 Paterson St., W.
36784	225 Paterson St., W.
36785	228 Paterson St., W.
36786	229 Paterson St., W.
36787	232 Paterson St., W.
36788	233 Paterson St., W.
36789	237 Paterson St., W.
36790	238 Paterson St., W.
36791	301 Paterson St., W.
36792	302 Paterson St., W.
36793	305 Paterson St., W.
36794	308 Paterson St., W.
36795	310 Paterson St., W.
36796	311 Paterson St., W.
36797	313 Paterson St., W.
36798	314 Paterson St., W.
36799	317 Paterson St., W.
36800	318 Paterson St., W.
36801	321 Paterson St., W.
36802	322 Paterson St., W.
36803	325 Paterson St., W.
36804	326 Paterson St., W.
36805	329 Paterson St., W.
36806	330 Paterson St., W.
36807	401 Paterson St., W.
36808	402 Paterson St., W.
36809	405 Paterson St., W.
36810	406 Paterson St., W.
36811	409 Paterson St., W.
36812	410 Paterson St., W.
36813	413 Paterson St., W.
36814	414 Paterson St., W.
36815	417 Paterson St., W.
36816	418 Paterson St., W.

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36817	421 Paterson St., W.
36818	425 Paterson St., W.
36819	426 Paterson St., W.
36820	505 Paterson St., W.
36821	511 Paterson St., W.
36822	512 Paterson St., W.
36823	515 Paterson St., W.
36824	516 Paterson St., W.
36825	519 Paterson St., W.
36826	520 Paterson St., W.
36827	523 Paterson St., W.
36828	526 Paterson St., W.
36829	601 Paterson St., W.
36830	602 Paterson St., W.
36831	605 Paterson St., W.
36832	606 Paterson St., W.
36833	609 Paterson St., W.
36834	610 Paterson St., W.
36835	613 Paterson St., W.
36836	614 Paterson St., W.
36837	618 Paterson St., W.
36838	622 Paterson St., W.
36839	701 Paterson St., W.
36840	702 Paterson St., W.
36841	705 Paterson St., W.
36842	706 Paterson St., W.
36843	709 Paterson St., W.
36844	710 Paterson St., W.
36845	713 Paterson St., W.
36846	714 Paterson St., W.
36847	717 Paterson St., W.
36848	718 Paterson St., W.
36849	721 Paterson St., W.
36850	722 Paterson St., W.
36851	801 Paterson St., W.
36852	802 Paterson St., W.
36853	805 Paterson St., W.
36854	806 Paterson St., W.
36855	809 Paterson St., W.
36856	810 Paterson St., W.
36857	813 Paterson St., W.
36858	814 Paterson St., W.
36859	818 Paterson St., W.
36860	821 Paterson St., W.
36861	822 Paterson St., W.
36862	901 Paterson St., W.
36863	902 Paterson St., W.
36864	909 Paterson St., W.

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36865	914 Paterson St., W.
36866	1014 Paterson St., W.
36867	1101 Paterson St., W.
36868	1102 Paterson St., W.
36869	1105 Paterson St., W.
36870	1109 Paterson St., W.
36871	1110 Paterson St., W.
36872	1113 Paterson St., W.
36873	1114 Paterson St., W.
36874	1201 Paterson St., W.
36875	1202 Paterson St., W.
36876	1205 Paterson St., W.
36877	1206 Paterson St., W.
36878	1209 Paterson St., W.
36879	1210 Paterson St., W.
36880	1213 Paterson St., W.
36881	1214 Paterson St., W.
36882	1310 Paterson St., W.
36883	1311 Paterson St., W.
36884	1314 Paterson St., W.
36885	1317 Paterson St., W.
36886	1318 Paterson St., W.
36887	1322 Paterson St., W.
36888	1325 Paterson St., W.
36889	1401 Paterson St., W.
36890	1402 Paterson St., W.
36891	1406 Paterson St., W.
36892	1407 Paterson St., W.
36893	1410 Paterson St., W.
36894	1411 Paterson St., W.
36895	1414 Paterson St., W.
36896	1501 Paterson St., W.
36897	1502 Paterson St., W.
36898	1505 Paterson St., W.
36899	1506 Paterson St., W.
36900	1509 Paterson St., W.
36901	1510 Paterson St., W.
36902	1513 Paterson St., W.
36903	1514 Paterson St., W.
36904	1518 Paterson St., W.
36905	1522 Paterson St., W.
36906	1526 Paterson St., W.
36907	1530 Paterson St., W.
36908	1534 Paterson St., W.
36909	613 Patrick St.
36910	621 Patrick St.
36911	627 Patrick St.
36912	631 Patrick St.

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36913	701 Patrick St.
36914	702 Patrick St.
36915	705 Patrick St.
36916	707 Patrick St.
36917	1011 Patrick St.
36918	1033 Patrick St.
36919	1011 Patrick St.
36920	110 Peer Ave.
36921	114 Peer Ave.
36922	154 Peer Ave.
36923	201 Peer Ave.
36924	202 Peer Ave.
36925	205 Peer Ave.
36926	206 Peer Ave.
36927	210 Peer Ave.
36928	214 Peer Ave.
36929	218 Peer Ave.
36930	222 Peer Ave.
36931	230 Peer Ave.
36932	238 Peer Ave.
36933	7002 Pemberton Dr.
36934	7101 Pemberton Dr.
36935	1802 Penbrook Ln.
36936	1806 Penbrook Ln.
36937	1810 Penbrook Ln.
36938	1814 Penbrook Ln.
36939	1818 Penbrook Ln.
36940	1821 Penbrook Ln.
36941	1822 Penbrook Ln.
36942	1825 Penbrook Ln.
36943	1826 Penbrook Ln.
36944	1829 Penbrook Ln.
36945	1830 Penbrook Ln.
36946	1901 Penbrook Ln.
36947	1902 Penbrook Ln.
36948	1905 Penbrook Ln.
36949	1906 Penbrook Ln.
36950	1909 Penbrook Ln.
36951	1910 Penbrook Ln.
36952	1914 Penbrook Ln.
36953	1915 Penbrook Ln.
36954	1918 Penbrook Ln.
36955	1919 Penbrook Ln.
36956	1922 Penbrook Ln.
36957	1923 Penbrook Ln.
36958	1927 Penbrook Ln.
36959	1931 Penbrook Ln.
36960	1935 Penbrook Ln.

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36961	1939 Penbrook Ln.
36962	3601 Penbrook Ln.
36963	3802 Penbrook Ln.
36964	3107 Pencombe Pl.
36965	3113 Pencombe Pl.
36966	3117 Pencombe Pl.
36967	3121 Pencombe Pl.
36968	3125 Pencombe Pl.
36969	3129 Pencombe Pl.
36970	3201 Pencombe Pl.
36971	3205 Pencombe Pl.
36972	3209 Pencombe Pl.
36973	3213 Pencombe Pl.
36974	3221 Pencombe Pl.
36975	3302 Pencombe Pl.
36976	3306 Pencombe Pl.
36977	3307 Pencombe Pl.
36978	3311 Pencombe Pl.
36979	3312 Pencombe Pl.
36980	3315 Pencombe Pl.
36981	3316 Pencombe Pl.
36982	3319 Pencombe Pl.
36983	3320 Pencombe Pl.
36984	3323 Pencombe Pl.
36985	3324 Pencombe Pl.
36986	3328 Pencombe Pl.
36987	3330 Pencombe Pl.
36988	3332 Pencombe Pl.
36989	3333 Pencombe Pl.
36990	3825 Pengelly Rd.
36991	3829 Pengelly Rd.
36992	3829 Pengelly Rd.
36993	3830 Pengelly Rd.
36994	3839 Pengelly Rd.
36995	3839 Pengelly Rd.
36996	3901 Pengelly Rd.
36997	3905 Pengelly Rd.
36998	3917 Pengelly Rd.
36999	4017 Pengelly Rd.
37000	4041 Pengelly Rd.
37001	4101 Pengelly Rd.
37002	4102 Pengelly Rd.
37003	4105 Pengelly Rd.
37004	4113 Pengelly Rd.
37005	4114 Pengelly Rd.
37006	4117 Pengelly Rd.
37007	4121 Pengelly Rd.
37008	4124 Pengelly Rd.

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37009	4125 Pengelly Rd.
37010	4128 Pengelly Rd.
37011	4129 Pengelly Rd.
37012	4201 Pengelly Rd.
37013	4202 Pengelly Rd.
37014	4205 Pengelly Rd.
37015	4206 Pengelly Rd.
37016	4209 Pengelly Rd.
37017	4213 Pengelly Rd.
37018	4214 Pengelly Rd.
37019	4217 Pengelly Rd.
37020	4218 Pengelly Rd.
37021	4221 Pengelly Rd.
37022	4222 Pengelly Rd.
37023	4225 Pengelly Rd.
37024	4229 Pengelly Rd.
37025	4233 Pengelly Rd.
37026	4301 Pengelly Rd.
37027	4302 Pengelly Rd.
37028	4305 Pengelly Rd.
37029	4306 Pengelly Rd.
37030	4309 Pengelly Rd.
37031	4310 Pengelly Rd.
37032	4313 Pengelly Rd.
37033	4317 Pengelly Rd.
37034	4318 Pengelly Rd.
37035	4401 Pengelly Rd.
37036	4405 Pengelly Rd.
37037	4406 Pengelly Rd.
37038	4409 Pengelly Rd.
37039	4413 Pengelly Rd.
37040	4414 Pengelly Rd.
37041	4417 Pengelly Rd.
37042	4421 Pengelly Rd.
37043	4423 Pengelly Rd.
37044	4424 Pengelly Rd.
37045	4428 Pengelly Rd.
37046	4429 Pengelly Rd.
37047	4430 Pengelly Rd.
37048	4501 Pengelly Rd.
37049	4502 Pengelly Rd.
37050	4505 Pengelly Rd.
37051	4506 Pengelly Rd.
37052	4509 Pengelly Rd.
37053	4510 Pengelly Rd.
37054	4513 Pengelly Rd.
37055	4514 Pengelly Rd.
37056	4517 Pengelly Rd.

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37057	4518 Pengelly Rd.
37058	4520 Pengelly Rd.
37059	4521 Pengelly Rd.
37060	4529 Pengelly Rd.
37061	4533 Pengelly Rd.
37062	4537 Pengelly Rd.
37063	4601 Pengelly Rd.
37064	4605 Pengelly Rd.
37065	4609 Pengelly Rd.
37066	1612 Pennsylvania Ave.
37067	1616 Pennsylvania Ave.
37068	1617 Pennsylvania Ave.
37069	1619 Pennsylvania Ave.
37070	1620 Pennsylvania Ave.
37071	1621 Pennsylvania Ave.
37072	1624 Pennsylvania Ave.
37073	1625 Pennsylvania Ave.
37074	1628 Pennsylvania Ave.
37075	1629 Pennsylvania Ave.
37076	1631 Pennsylvania Ave.
37077	1632 Pennsylvania Ave.
37078	1636 Pennsylvania Ave.
37079	1640 Pennsylvania Ave.
37080	1641 Pennsylvania Ave.
37081	1643 Pennsylvania Ave.
37082	1644 Pennsylvania Ave.
37083	1648 Pennsylvania Ave.
37084	1649 Pennsylvania Ave.
37085	1653 Pennsylvania Ave.
37086	1657 Pennsylvania Ave.
37087	1658 Pennsylvania Ave.
37088	1701 Pennsylvania Ave.
37089	1702 Pennsylvania Ave.
37090	1705 Pennsylvania Ave.
37091	1706 Pennsylvania Ave.
37092	1709 Pennsylvania Ave.
37093	1710 Pennsylvania Ave.
37094	1713 Pennsylvania Ave.
37095	1714 Pennsylvania Ave.
37096	1717 Pennsylvania Ave.
37097	1718 Pennsylvania Ave.
37098	1721 Pennsylvania Ave.
37099	1722 Pennsylvania Ave.
37100	1725 Pennsylvania Ave.
37101	1726 Pennsylvania Ave.
37102	1729 Pennsylvania Ave.
37103	1730 Pennsylvania Ave.
37104	1733 Pennsylvania Ave.

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37105	1734 Pennsylvania Ave.
37106	1740 Pennsylvania Ave.
37107	2201 Pennsylvania Ave.
37108	2202 Pennsylvania Ave.
37109	2205 Pennsylvania Ave.
37110	2206 Pennsylvania Ave.
37111	2209 Pennsylvania Ave.
37112	2210 Pennsylvania Ave.
37113	2213 Pennsylvania Ave.
37114	2214 Pennsylvania Ave.
37115	2217 Pennsylvania Ave.
37116	2218 Pennsylvania Ave.
37117	2301 Pennsylvania Ave.
37118	2302 Pennsylvania Ave.
37119	2305 Pennsylvania Ave.
37120	2306 Pennsylvania Ave.
37121	2308 Pennsylvania Ave.
37122	2309 Pennsylvania Ave.
37123	2312 Pennsylvania Ave.
37124	2313 Pennsylvania Ave.
37125	2314 Pennsylvania Ave.
37126	2320 Pennsylvania Ave.
37127	2401 Pennsylvania Ave.
37128	2414 Pennsylvania Ave.
37129	2415 Pennsylvania Ave.
37130	2419 Pennsylvania Ave.
37131	2421 Pennsylvania Ave.
37132	2422 Pennsylvania Ave.
37133	2426 Pennsylvania Ave.
37134	2429 Pennsylvania Ave.
37135	2432 Pennsylvania Ave.
37136	2433 Pennsylvania Ave.
37137	2436 Pennsylvania Ave.
37138	2501 Pennsylvania Ave.
37139	2502 Pennsylvania Ave.
37140	2505 Pennsylvania Ave.
37141	2506 Pennsylvania Ave.
37142	2509 Pennsylvania Ave.
37143	2510 Pennsylvania Ave.
37144	2513 Pennsylvania Ave.
37145	2514 Pennsylvania Ave.
37146	2601 Pennsylvania Ave.
37147	2602 Pennsylvania Ave.
37148	2606 Pennsylvania Ave.
37149	2609 Pennsylvania Ave.
37150	2610 Pennsylvania Ave.
37151	2613 Pennsylvania Ave.
37152	2618 Pennsylvania Ave.

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37153	1711 Penoyer Ct.
37154	1712 Penoyer Ct.
37155	1715 Penoyer Ct.
37156	1716 Penoyer Ct.
37157	1720 Penoyer Ct.
37158	1723 Penoyer Ct.
37159	1726 Penoyer Ct.
37160	1727 Penoyer Ct.
37161	501 Perry St.
37162	601 Perry St.
37163	714 Perry St.
37164	718 Perry St.
37165	722 Perry St.
37166	848 Perry St.
37167	851 Perry St.
37168	854 Perry St.
37169	858 Perry St.
37170	908 Perry St.
37171	909 Perry St.
37172	912 Perry St.
37173	913 Perry St.
37174	916 Perry St.
37175	951 Perry St.
37176	954 Perry St.
37177	955 Perry St.
37178	958 Perry St.
37179	959 Perry St.
37180	962 Perry St.
37181	963 Perry St.
37182	966 Perry St.
37183	967 Perry St.
37184	970 Perry St.
37185	971 Perry St.
37186	1000 Perry St.
37187	1001 Perry St.
37188	1004 Perry St.
37189	1005 Perry St.
37190	1008 Perry St.
37191	1009 Perry St.
37192	1012 Perry St.
37193	1013 Perry St.
37194	1016 Perry St.
37195	1017 Perry St.
37196	1020 Perry St.
37197	1021 Perry St.
37198	1029 Perry St.
37199	409 Pershing St.
37200	415 Pershing St.

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37201	419 Pershing St.
37202	909 Pershing St.
37203	914 Pershing St.
37204	915 Pershing St.
37205	919 Pershing St.
37206	925 Pershing St.
37207	1001 Pershing St.
37208	1002 Pershing St.
37209	1005 Pershing St.
37210	1009 Pershing St.
37211	1010 Pershing St.
37212	1014 Pershing St.
37213	1015 Pershing St.
37214	1016 Pershing St.
37215	1017 Pershing St.
37216	1021 Pershing St.
37217	1022 Pershing St.
37218	1023 Pershing St.
37219	1101 Pershing St.
37220	1104 Pershing St.
37221	1105 Pershing St.
37222	1108 Pershing St.
37223	1109 Pershing St.
37224	1115 Pershing St.
37225	1118 Pershing St.
37226	1122 Pershing St.
37227	1126 Pershing St.
37228	1202 Pershing St.
37229	1210 Pershing St.
37230	1214 Pershing St.
37231	1222 Pershing St.
37232	1228 Pershing St.
37233	1235 Pershing St.
37234	1552 Petrie St.
37235	501 Pettibone Ave.
37236	502 Pettibone Ave.
37237	612 Pettibone Ave.
37238	615 Pettibone Ave.
37239	616 Pettibone Ave.
37240	619 Pettibone Ave.
37241	620 Pettibone Ave.
37242	623 Pettibone Ave.
37243	624 Pettibone Ave.
37244	627 Pettibone Ave.
37245	628 Pettibone Ave.
37246	631 Pettibone Ave.
37247	632 Pettibone Ave.
37248	635 Pettibone Ave.

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37249	636 Pettibone Ave.
37250	639 Pettibone Ave.
37251	643 Pettibone Ave.
37252	647 Pettibone Ave.
37253	648 Pettibone Ave.
37254	652 Pettibone Ave.
37255	701 Pettibone Ave.
37256	702 Pettibone Ave.
37257	707 Pettibone Ave.
37258	708 Pettibone Ave.
37259	711 Pettibone Ave.
37260	712 Pettibone Ave.
37261	715 Pettibone Ave.
37262	716 Pettibone Ave.
37263	719 Pettibone Ave.
37264	720 Pettibone Ave.
37265	723 Pettibone Ave.
37266	724 Pettibone Ave.
37267	727 Pettibone Ave.
37268	728 Pettibone Ave.
37269	731 Pettibone Ave.
37270	732 Pettibone Ave.
37271	735 Pettibone Ave.
37272	736 Pettibone Ave.
37273	739 Pettibone Ave.
37274	740 Pettibone Ave.
37275	743 Pettibone Ave.
37276	744 Pettibone Ave.
37277	747 Pettibone Ave.
37278	748 Pettibone Ave.
37279	751 Pettibone Ave.
37280	752 Pettibone Ave.
37281	802 Pettibone Ave.
37282	806 Pettibone Ave.
37283	809 Pettibone Ave.
37284	810 Pettibone Ave.
37285	815 Pettibone Ave.
37286	820 Pettibone Ave.
37287	821 Pettibone Ave.
37288	825 Pettibone Ave.
37289	830 Pettibone Ave.
37290	834 Pettibone Ave.
37291	837 Pettibone Ave.
37292	842 Pettibone Ave.
37293	846 Pettibone Ave.
37294	850 Pettibone Ave.
37295	912 Pettibone Ave.
37296	915 Pettibone Ave.

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37297	916 Pettibone Ave.
37298	918 Pettibone Ave.
37299	923 Pettibone Ave.
37300	924 Pettibone Ave.
37301	926 Pettibone Ave.
37302	929 Pettibone Ave.
37303	936 Pettibone Ave.
37304	939 Pettibone Ave.
37305	940 Pettibone Ave.
37306	943 Pettibone Ave.
37307	944 Pettibone Ave.
37308	948 Pettibone Ave.
37309	951 Pettibone Ave.
37310	952 Pettibone Ave.
37311	1011 Pettibone Ave.
37312	1012 Pettibone Ave.
37313	1013 Pettibone Ave.
37314	1016 Pettibone Ave.
37315	1023 Pettibone Ave.
37316	1024 Pettibone Ave.
37317	1028 Pettibone Ave.
37318	1032 Pettibone Ave.
37319	1035 Pettibone Ave.
37320	1036 Pettibone Ave.
37321	1101 Pettibone Ave.
37322	1102 Pettibone Ave.
37323	1105 Pettibone Ave.
37324	1109 Pettibone Ave.
37325	1110 Pettibone Ave.
37326	1113 Pettibone Ave.
37327	1114 Pettibone Ave.
37328	1117 Pettibone Ave.
37329	1118 Pettibone Ave.
37330	1121 Pettibone Ave.
37331	1122 Pettibone Ave.
37332	1125 Pettibone Ave.
37333	1126 Pettibone Ave.
37334	1129 Pettibone Ave.
37335	1130 Pettibone Ave.
37336	1133 Pettibone Ave.
37337	1134 Pettibone Ave.
37338	1138 Pettibone Ave.
37339	1201 Pettibone Ave.
37340	1202 Pettibone Ave.
37341	1205 Pettibone Ave.
37342	1206 Pettibone Ave.
37343	1209 Pettibone Ave.
37344	1210 Pettibone Ave.

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37345	1213 Pettibone Ave.
37346	1214 Pettibone Ave.
37347	1217 Pettibone Ave.
37348	1218 Pettibone Ave.
37349	1221 Pettibone Ave.
37350	1222 Pettibone Ave.
37351	1225 Pettibone Ave.
37352	1226 Pettibone Ave.
37353	1302 Pettibone Ave.
37354	1305 Pettibone Ave.
37355	1306 Pettibone Ave.
37356	1309 Pettibone Ave.
37357	1310 Pettibone Ave.
37358	1313 Pettibone Ave.
37359	1314 Pettibone Ave.
37360	1318 Pettibone Ave.
37361	1321 Pettibone Ave.
37362	1322 Pettibone Ave.
37363	1325 Pettibone Ave.
37364	1329 Pettibone Ave.
37365	1330 Pettibone Ave.
37366	1401 Pettibone Ave.
37367	1402 Pettibone Ave.
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37378	1425 Pettibone Ave.
37379	1426 Pettibone Ave.
37380	1501 Pettibone Ave.
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37382	1505 Pettibone Ave.
37383	1506 Pettibone Ave.
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37386	1513 Pettibone Ave.
37387	1514 Pettibone Ave.
37388	1517 Pettibone Ave.
37389	1520 Pettibone Ave.
37390	1524 Pettibone Ave.
37391	1525 Pettibone Ave.
37392	1528 Pettibone Ave.

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37393	1532 Pettibone Ave.
37394	1533 Pettibone Ave.
37395	1536 Pettibone Ave.
37396	1537 Pettibone Ave.
37397	1601 Pettibone Ave.
37398	1602 Pettibone Ave.
37399	1606 Pettibone Ave.
37400	1609 Pettibone Ave.
37401	1610 Pettibone Ave.
37402	1611 Pettibone Ave.
37403	1614 Pettibone Ave.
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37407	1622 Pettibone Ave.
37408	1623 Pettibone Ave.
37409	1626 Pettibone Ave.
37410	1627 Pettibone Ave.
37411	1631 Pettibone Ave.
37412	1634 Pettibone Ave.
37413	1638 Pettibone Ave.
37414	1639 Pettibone Ave.
37415	2601 Pewanaga Pl.
37416	2602 Pewanaga Pl.
37417	2610 Pewanaga Pl.
37418	2615 Pewanaga Pl.
37419	2620 Pewanaga Pl.
37420	2630 Pewanaga Pl.
37421	104 Philadelphia Blvd., E.
37422	111 Philadelphia Blvd., E.
37423	112 Philadelphia Blvd., E.
37424	115 Philadelphia Blvd., E.
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37437	143 Philadelphia Blvd., E.
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37439	147 Philadelphia Blvd., E.
37440	148 Philadelphia Blvd., E.

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37456	310 Philadelphia Blvd., E.
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37474	355 Philadelphia Blvd., E.
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37477	360 Philadelphia Blvd., E.
37478	363 Philadelphia Blvd., E.
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37480	367 Philadelphia Blvd., E.
37481	368 Philadelphia Blvd., E.
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37488	413 Philadelphia Blvd., E.

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37489	417 Philadelphia Blvd., E.
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37515	622 Philadelphia Blvd., E.
37516	625 Philadelphia Blvd., E.
37517	626 Philadelphia Blvd., E.
37518	629 Philadelphia Blvd., E.
37519	630 Philadelphia Blvd., E.
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37530	665 Philadelphia Blvd., E.
37531	669 Philadelphia Blvd., E.
37532	709 Philadelphia Blvd., E.
37533	712 Philadelphia Blvd., E.
37534	716 Philadelphia Blvd., E.
37535	717 Philadelphia Blvd., E.
37536	720 Philadelphia Blvd., E.

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37537	724 Philadelphia Blvd., E.
37538	725 Philadelphia Blvd., E.
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37543	737 Philadelphia Blvd., E.
37544	740 Philadelphia Blvd., E.
37545	744 Philadelphia Blvd., E.
37546	745 Philadelphia Blvd., E.
37547	752 Philadelphia Blvd., E.
37548	756 Philadelphia Blvd., E.
37549	759 Philadelphia Blvd., E.
37550	768 Philadelphia Blvd., E.
37551	769 Philadelphia Blvd., E.
37552	776 Philadelphia Blvd., E.
37553	802 Philadelphia Blvd., E.
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37556	810 Philadelphia Blvd., E.
37557	813 Philadelphia Blvd., E.
37558	817 Philadelphia Blvd., E.
37559	818 Philadelphia Blvd., E.
37560	826 Philadelphia Blvd., E.
37561	901 Philadelphia Blvd., E.
37562	902 Philadelphia Blvd., E.
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37568	929 Philadelphia Blvd., E.
37569	937 Philadelphia Blvd., E.
37570	1014 Philadelphia Blvd., E.
37571	1015 Philadelphia Blvd., E.
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37581	1054 Philadelphia Blvd., E.
37582	1062 Philadelphia Blvd., E.
37583	1067 Philadelphia Blvd., E.
37584	1074 Philadelphia Blvd., E.

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37585	1075 Philadelphia Blvd., E.
37586	1078 Philadelphia Blvd., E.
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37588	1120 Philadelphia Blvd., E.
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37590	1203 Philadelphia Blvd., E.
37591	1205 Philadelphia Blvd., E.
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37593	1217 Philadelphia Blvd., E.
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37595	111 Philadelphia Blvd., W.
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37609	214 Philadelphia Blvd., W.
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37611	218 Philadelphia Blvd., W.
37612	222 Philadelphia Blvd., W.
37613	225 Philadelphia Blvd., W.
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37627	403 Philadelphia Blvd., W.
37628	408 Philadelphia Blvd., W.
37629	409 Philadelphia Blvd., W.
37630	412 Philadelphia Blvd., W.
37631	418 Philadelphia Blvd., W.
37632	422 Philadelphia Blvd., W.

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37633	501 Philadelphia Blvd., W.
37634	502 Philadelphia Blvd., W.
37635	506 Philadelphia Blvd., W.
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37637	510 Philadelphia Blvd., W.
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37639	514 Philadelphia Blvd., W.
37640	518 Philadelphia Blvd., W.
37641	521 Philadelphia Blvd., W.
37642	522 Philadelphia Blvd., W.
37643	523 Philadelphia Blvd., W.
37644	526 Philadelphia Blvd., W.
37645	529 Philadelphia Blvd., W.
37646	530 Philadelphia Blvd., W.
37647	533 Philadelphia Blvd., W.
37648	534 Philadelphia Blvd., W.
37649	539 Philadelphia Blvd., W.
37650	540 Philadelphia Blvd., W.
37651	543 Philadelphia Blvd., W.
37652	546 Philadelphia Blvd., W.
37653	549 Philadelphia Blvd., W.
37654	550 Philadelphia Blvd., W.
37655	601 Philadelphia Blvd., W.
37656	602 Philadelphia Blvd., W.
37657	605 Philadelphia Blvd., W.
37658	606 Philadelphia Blvd., W.
37659	609 Philadelphia Blvd., W.
37660	610 Philadelphia Blvd., W.
37661	613 Philadelphia Blvd., W.
37662	614 Philadelphia Blvd., W.
37663	617 Philadelphia Blvd., W.
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37665	621 Philadelphia Blvd., W.
37666	622 Philadelphia Blvd., W.
37667	625 Philadelphia Blvd., W.
37668	626 Philadelphia Blvd., W.
37669	629 Philadelphia Blvd., W.
37670	632 Philadelphia Blvd., W.
37671	633 Philadelphia Blvd., W.
37672	637 Philadelphia Blvd., W.
37673	638 Philadelphia Blvd., W.
37674	641 Philadelphia Blvd., W.
37675	642 Philadelphia Blvd., W.
37676	645 Philadelphia Blvd., W.
37677	646 Philadelphia Blvd., W.
37678	3312 Phillis Ave.
37679	3314 Phillis Ave.
37680	3624 Pickwick Dr.

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37681	3638 Pickwick Dr.
37682	2001 Pierce St.
37683	2002 Pierce St.
37684	2005 Pierce St.
37685	2008 Pierce St.
37686	2013 Pierce St.
37687	2014 Pierce St.
37688	2017 Pierce St.
37689	2018 Pierce St.
37690	2021 Pierce St.
37691	2025 Pierce St.
37692	2026 Pierce St.
37693	2029 Pierce St.
37694	2030 Pierce St.
37695	2101 Pierce St.
37696	2102 Pierce St.
37697	2105 Pierce St.
37698	2106 Pierce St.
37699	2109 Pierce St.
37700	2110 Pierce St.
37701	2113 Pierce St.
37702	2114 Pierce St.
37703	2117 Pierce St.
37704	2118 Pierce St.
37705	2121 Pierce St.
37706	2122 Pierce St.
37707	2126 Pierce St.
37708	2127 Pierce St.
37709	2201 Pierce St.
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37712	2208 Pierce St.
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37716	2216 Pierce St.
37717	2219 Pierce St.
37718	2220 Pierce St.
37719	2223 Pierce St.
37720	2224 Pierce St.
37721	2301 Pierce St.
37722	2302 Pierce St.
37723	2305 Pierce St.
37724	2306 Pierce St.
37725	2309 Pierce St.
37726	2310 Pierce St.
37727	2313 Pierce St.
37728	2314 Pierce St.

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37729	2317 Pierce St.
37730	2318 Pierce St.
37731	2401 Pierce St.
37732	2402 Pierce St.
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37734	2406 Pierce St.
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37745	2515 Pierce St.
37746	2516 Pierce St.
37747	2519 Pierce St.
37748	2520 Pierce St.
37749	2601 Pierce St.
37750	2605 Pierce St.
37751	2606 Pierce St.
37752	2609 Pierce St.
37753	2613 Pierce St.
37754	2614 Pierce St.
37755	2617 Pierce St.
37756	101 Pierson Rd., E.
37757	101 Pierson Rd., E.
37758	112 Pierson Rd., E.
37759	115 Pierson Rd., E.
37760	116 Pierson Rd., E.
37761	128 Pierson Rd., E.
37762	132 Pierson Rd., E.
37763	201 Pierson Rd., E.
37764	210 Pierson Rd., E.
37765	216 Pierson Rd., E.
37766	226 Pierson Rd., E.
37767	230 Pierson Rd., E.
37768	301 Pierson Rd., E.
37769	306 Pierson Rd., E.
37770	310 Pierson Rd., E.
37771	313 Pierson Rd., E.
37772	314 Pierson Rd., E.
37773	318 Pierson Rd., E.
37774	319 Pierson Rd., E.
37775	322 Pierson Rd., E.
37776	325 Pierson Rd., E.

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37777	330 Pierson Rd., E.
37778	333 Pierson Rd., E.
37779	334 Pierson Rd., E.
37780	337 Pierson Rd., E.
37781	338 Pierson Rd., E.
37782	341 Pierson Rd., E.
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37784	346 Pierson Rd., E.
37785	349 Pierson Rd., E.
37786	350 Pierson Rd., E.
37787	354 Pierson Rd., E.
37788	357 Pierson Rd., E.
37789	357 Pierson Rd., E.
37790	360 Pierson Rd., E.
37791	370 Pierson Rd., E.
37792	402 Pierson Rd., E.
37793	405 Pierson Rd., E.
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37795	410 Pierson Rd., E.
37796	414 Pierson Rd., E.
37797	417 Pierson Rd., E.
37798	418 Pierson Rd., E.
37799	422 Pierson Rd., E.
37800	425 Pierson Rd., E.
37801	435 Pierson Rd., E.
37802	506 Pierson Rd., E.
37803	509 Pierson Rd., E.
37804	510 Pierson Rd., E.
37805	511 Pierson Rd., E.
37806	515 Pierson Rd., E.
37807	521 Pierson Rd., E.
37808	533 Pierson Rd., E.
37809	601 Pierson Rd., E.
37810	602 Pierson Rd., E.
37811	606 Pierson Rd., E.
37812	609 Pierson Rd., E.
37813	610 Pierson Rd., E.
37814	617 Pierson Rd., E.
37815	618 Pierson Rd., E.
37816	624 Pierson Rd., E.
37817	630 Pierson Rd., E.
37818	634 Pierson Rd., E.
37819	637 Pierson Rd., E.
37820	641 Pierson Rd., E.
37821	642 Pierson Rd., E.
37822	646 Pierson Rd., E.
37823	650 Pierson Rd., E.
37824	657 Pierson Rd., E.

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37825	657 Pierson Rd., E.
37826	673 Pierson Rd., E.
37827	675 Pierson Rd., E.
37828	680 Pierson Rd., E.
37829	680 Pierson Rd., E.
37830	709 Pierson Rd., E.
37831	709 Pierson Rd., E.
37832	720 Pierson Rd., E.
37833	723 Pierson Rd., E.
37834	727 Pierson Rd., E.
37835	728 Pierson Rd., E.
37836	735 Pierson Rd., E.
37837	736 Pierson Rd., E.
37838	739 Pierson Rd., E.
37839	740 Pierson Rd., E.
37840	743 Pierson Rd., E.
37841	744 Pierson Rd., E.
37842	759 Pierson Rd., E.
37843	763 Pierson Rd., E.
37844	764 Pierson Rd., E.
37845	771 Pierson Rd., E.
37846	772 Pierson Rd., E.
37847	802 Pierson Rd., E.
37848	804 Pierson Rd., E.
37849	805 Pierson Rd., E.
37850	807 Pierson Rd., E.
37851	813 Pierson Rd., E.
37852	817 Pierson Rd., E.
37853	821 Pierson Rd., E.
37854	825 Pierson Rd., E.
37855	826 Pierson Rd., E.
37856	905 Pierson Rd., E.
37857	909 Pierson Rd., E.
37858	913 Pierson Rd., E.
37859	914 Pierson Rd., E.
37860	917 Pierson Rd., E.
37861	918 Pierson Rd., E.
37862	921 Pierson Rd., E.
37863	922 Pierson Rd., E.
37864	929 Pierson Rd., E.
37865	930 Pierson Rd., E.
37866	937 Pierson Rd., E.
37867	941 Pierson Rd., E.
37868	1172 Pierson Rd., E.
37869	1409 Pierson Rd., E.
37870	1420 Pierson Rd., E.
37871	1017 Pierson Rd., E.
37872	1021 Pierson Rd., E.

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37873	1025 Pierson Rd., E.
37874	1026 Pierson Rd., E.
37875	1030 Pierson Rd., E.
37876	1041 Pierson Rd., E.
37877	1049 Pierson Rd., E.
37878	1050 Pierson Rd., E.
37879	1054 Pierson Rd., E.
37880	1061 Pierson Rd., E.
37881	1073 Pierson Rd., E.
37882	1109 Pierson Rd., E.
37883	1121 Pierson Rd., E.
37884	1124 Pierson Rd., E.
37885	1129 Pierson Rd., E.
37886	1130 Pierson Rd., E.
37887	1133 Pierson Rd., E.
37888	1172 Pierson Rd., E.
37889	1202 Pierson Rd., E.
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37891	1409 Pierson Rd., E.
37892	1420 Pierson Rd., E.
37893	2402 Pierson Rd., E.
37894	2501 Pierson Rd., E.
37895	2704 Pierson Rd., E.
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37897	2709 Pierson Rd., E.
37898	2710 Pierson Rd., E.
37899	2713 Pierson Rd., E.
37900	2714 Pierson Rd., E.
37901	2717 Pierson Rd., E.
37902	2718 Pierson Rd., E.
37903	2721 Pierson Rd., E.
37904	2722 Pierson Rd., E.
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37909	2733 Pierson Rd., E.
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37937	2918 Pierson Rd., E.
37938	2921 Pierson Rd., E.
37939	102 Pierson Rd., W.
37940	102 Pierson Rd., W.
37941	114 Pierson Rd., W.
37942	118 Pierson Rd., W.
37943	121 Pierson Rd., W.
37944	130 Pierson Rd., W.
37945	134 Pierson Rd., W.
37946	138 Pierson Rd., W.
37947	201 Pierson Rd., W.
37948	206 Pierson Rd., W.
37949	211 Pierson Rd., W.
37950	217 Pierson Rd., W.
37951	301 Pierson Rd., W.
37952	302 Pierson Rd., W.
37953	306 Pierson Rd., W.
37954	309 Pierson Rd., W.
37955	310 Pierson Rd., W.
37956	314 Pierson Rd., W.
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37958	318 Pierson Rd., W.
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37967	409 Pierson Rd., W.
37968	410 Pierson Rd., W.

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37969	414 Pierson Rd., W.
37970	418 Pierson Rd., W.
37971	423 Pierson Rd., W.
37972	450 Pierson Rd., W.
37973	500 Pierson Rd., W.
37974	517 Pierson Rd., W.
37975	525 Pierson Rd., W.
37976	545 Pierson Rd., W.
37977	549 Pierson Rd., W.
37978	601 Pierson Rd., W.
37979	602 Pierson Rd., W.
37980	605 Pierson Rd., W.
37981	608 Pierson Rd., W.
37982	609 Pierson Rd., W.
37983	612 Pierson Rd., W.
37984	613 Pierson Rd., W.
37985	616 Pierson Rd., W.
37986	617 Pierson Rd., W.
37987	620 Pierson Rd., W.
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37989	624 Pierson Rd., W.
37990	625 Pierson Rd., W.
37991	628 Pierson Rd., W.
37992	629 Pierson Rd., W.
37993	632 Pierson Rd., W.
37994	633 Pierson Rd., W.
37995	637 Pierson Rd., W.
37996	645 Pierson Rd., W.
37997	645 Pierson Rd., W.
37998	701 Pierson Rd., W.
37999	701 Pierson Rd., W.
38000	702 Pierson Rd., W.
38001	705 Pierson Rd., W.
38002	708 Pierson Rd., W.
38003	709 Pierson Rd., W.
38004	716 Pierson Rd., W.
38005	717 Pierson Rd., W.
38006	801 Pierson Rd., W.
38007	805 Pierson Rd., W.
38008	806 Pierson Rd., W.
38009	806 Pierson Rd., W.
38010	808 Pierson Rd., W.
38011	809 Pierson Rd., W.
38012	812 Pierson Rd., W.
38013	813 Pierson Rd., W.
38014	816 Pierson Rd., W.
38015	817 Pierson Rd., W.
38016	820 Pierson Rd., W.

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38017	901 Pierson Rd., W.
38018	902 Pierson Rd., W.
38019	905 Pierson Rd., W.
38020	906 Pierson Rd., W.
38021	909 Pierson Rd., W.
38022	910 Pierson Rd., W.
38023	913 Pierson Rd., W.
38024	914 Pierson Rd., W.
38025	917 Pierson Rd., W.
38026	1001 Pierson Rd., W.
38027	1002 Pierson Rd., W.
38028	1008 Pierson Rd., W.
38029	1009 Pierson Rd., W.
38030	1012 Pierson Rd., W.
38031	1013 Pierson Rd., W.
38032	1013 Pierson Rd., W.
38033	1016 Pierson Rd., W.
38034	1020 Pierson Rd., W.
38035	1101 Pierson Rd., W.
38036	1101 Pierson Rd., W.
38037	1102 Pierson Rd., W.
38038	1106 Pierson Rd., W.
38039	1109 Pierson Rd., W.
38040	1110 Pierson Rd., W.
38041	1113 Pierson Rd., W.
38042	1114 Pierson Rd., W.
38043	1206 Pierson Rd., W.
38044	1218 Pierson Rd., W.
38045	1301 Pierson Rd., W.
38046	1302 Pierson Rd., W.
38047	1306 Pierson Rd., W.
38048	1310 Pierson Rd., W.
38049	1313 Pierson Rd., W.
38050	1314 Pierson Rd., W.
38051	1317 Pierson Rd., W.
38052	1318 Pierson Rd., W.
38053	1325 Pierson Rd., W.
38054	1401 Pierson Rd., W.
38055	1402 Pierson Rd., W.
38056	1406 Pierson Rd., W.
38057	1407 Pierson Rd., W.
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38060	1415 Pierson Rd., W.
38061	1501 Pierson Rd., W.
38062	1502 Pierson Rd., W.
38063	1502 Pierson Rd., W.
38064	1502 Pierson Rd., W.

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38065	1516 Pierson Rd., W.
38066	1516 Pierson Rd., W.
38067	1610 Pierson Rd., W.
38068	1710 Pierson Rd., W.
38069	1718 Pierson Rd., W.
38070	1910 Pierson Rd., W.
38071	2002 Pierson Rd., W.
38072	2002 Pierson Rd., W.
38073	2210 Pierson Rd., W.
38074	2214 Pierson Rd., W.
38075	2320 Pierson Rd., W.
38076	2320 Pierson Rd., W.
38077	2320 Pierson Rd., W.
38078	2360 Pierson Rd., W.
38079	2360 Pierson Rd., W.
38080	2501 Pierson Rd., W.
38081	2501 Pierson Rd., W.
38082	2501 Pierson Rd., W.
38083	2601 Pierson Rd., W.
38084	2605 Pierson Rd., W.
38085	2613 Pierson Rd., W.
38086	2615 Pierson Rd., W.
38087	2619 Pierson Rd., W.
38088	2621 Pierson Rd., W.
38089	2625 Pierson Rd., W.
38090	2627 Pierson Rd., W.
38091	2629 Pierson Rd., W.
38092	2501 Pierson Rd., W.
38093	603 Pierson St.
38094	609 Pierson St.
38095	613 Pierson St.
38096	614 Pierson St.
38097	619 Pierson St.
38098	620 Pierson St.
38099	621 Pierson St.
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38101	710 Pierson St.
38102	713 Pierson St.
38103	718 Pierson St.
38104	719 Pierson St.
38105	722 Pierson St.
38106	724 Pierson St.
38107	728 Pierson St.
38108	729 Pierson St.
38109	730 Pierson St.
38110	800 Pierson St.
38111	801 Pierson St.
38112	804 Pierson St.

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38113	805 Pierson St.
38114	808 Pierson St.
38115	1027 Pinehurst Ave.
38116	1028 Pinehurst Ave.
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38120	1043 Pinehurst Ave.
38121	1046 Pinehurst Ave.
38122	1101 Pinehurst Ave.
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38150	1306 Pinehurst Ave.
38151	1309 Pinehurst Ave.
38152	1314 Pinehurst Ave.
38153	1317 Pinehurst Ave.
38154	1322 Pinehurst Ave.
38155	2602 Pinetree Dr.
38156	2605 Pinetree Dr.
38157	2609 Pinetree Dr.
38158	2610 Pinetree Dr.
38159	2617 Pinetree Dr.
38160	2618 Pinetree Dr.

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38161	2625 Pinetree Dr.
38162	2626 Pinetree Dr.
38163	2633 Pinetree Dr.
38164	2634 Pinetree Dr.
38165	2638 Pinetree Dr.
38166	2642 Pinetree Dr.
38167	2643 Pinetree Dr.
38168	2648 Pinetree Dr.
38169	2654 Pinetree Dr.
38170	2655 Pinetree Dr.
38171	2660 Pinetree Dr.
38172	2666 Pinetree Dr.
38173	420 Pingree Ave.
38174	603 Pingree Ave.
38175	608 Pingree Ave.
38176	713 Pingree Ave.
38177	717 Pingree Ave.
38178	802 Pingree Ave.
38179	804 Pingree Ave.
38180	805 Pingree Ave.
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38182	817 Pingree Ave.
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38184	901 Pingree Ave.
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38186	905 Pingree Ave.
38187	909 Pingree Ave.
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38189	1019 Pingree Ave.
38190	1101 Pingree Ave.
38191	1105 Pingree Ave.
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38201	1601 Pingree Ave.
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38207	1613 Pingree Ave.
38208	1614 Pingree Ave.

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38209	1617 Pingree Ave.
38210	1618 Pingree Ave.
38211	1801 Pingree Ave.
38212	1816 Pingree Ave.
38213	1901 Pingree Ave.
38214	1902 Pingree Ave.
38215	1916 Pingree Ave.
38216	2002 Pingree Ave.
38217	2016 Pingree Ave.
38218	2101 Pingree Ave.
38219	3501 Pingree Ave.
38220	3504 Pingree Ave.
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38222	3516 Pingree Ave.
38223	3523 Pingree Ave.
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38225	3528 Pingree Ave.
38226	3531 Pingree Ave.
38227	3535 Pingree Ave.
38228	3536 Pingree Ave.
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38234	3606 Pingree Ave.
38235	3611 Pingree Ave.
38236	3612 Pingree Ave.
38237	3617 Pingree Ave.
38238	3618 Pingree Ave.
38239	3623 Pingree Ave.
38240	3624 Pingree Ave.
38241	3629 Pingree Ave.
38242	3630 Pingree Ave.
38243	3635 Pingree Ave.
38244	3636 Pingree Ave.
38245	3642 Pingree Ave.
38246	101 Piper Ave., E.
38247	102 Piper Ave., E.
38248	105 Piper Ave., E.
38249	106 Piper Ave., E.
38250	110 Piper Ave., E.
38251	113 Piper Ave., E.
38252	114 Piper Ave., E.
38253	117 Piper Ave., E.
38254	121 Piper Ave., E.
38255	125 Piper Ave., E.
38256	129 Piper Ave., E.

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38257	130 Piper Ave., E.
38258	137 Piper Ave., E.
38259	137 Piper Ave., E.
38260	141 Piper Ave., E.
38261	142 Piper Ave., E.
38262	145 Piper Ave., E.
38263	146 Piper Ave., E.
38264	149 Piper Ave., E.
38265	153 Piper Ave., E.
38266	158 Piper Ave., E.
38267	201 Piper Ave., E.
38268	205 Piper Ave., E.
38269	206 Piper Ave., E.
38270	210 Piper Ave., E.
38271	213 Piper Ave., E.
38272	214 Piper Ave., E.
38273	217 Piper Ave., E.
38274	221 Piper Ave., E.
38275	222 Piper Ave., E.
38276	225 Piper Ave., E.
38277	229 Piper Ave., E.
38278	250 Piper Ave., E.
38279	253 Piper Ave., E.
38280	254 Piper Ave., E.
38281	257 Piper Ave., E.
38282	258 Piper Ave., E.
38283	301 Piper Ave., E.
38284	302 Piper Ave., E.
38285	303 Piper Ave., E.
38286	306 Piper Ave., E.
38287	310 Piper Ave., E.
38288	313 Piper Ave., E.
38289	318 Piper Ave., E.
38290	322 Piper Ave., E.
38291	326 Piper Ave., E.
38292	327 Piper Ave., E.
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38295	341 Piper Ave., E.
38296	344 Piper Ave., E.
38297	349 Piper Ave., E.
38298	353 Piper Ave., E.
38299	354 Piper Ave., E.
38300	357 Piper Ave., E.
38301	358 Piper Ave., E.
38302	401 Piper Ave., E.
38303	402 Piper Ave., E.
38304	405 Piper Ave., E.

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38305	406 Piper Ave., E.
38306	410 Piper Ave., E.
38307	413 Piper Ave., E.
38308	414 Piper Ave., E.
38309	421 Piper Ave., E.
38310	425 Piper Ave., E.
38311	426 Piper Ave., E.
38312	429 Piper Ave., E.
38313	430 Piper Ave., E.
38314	505 Piper Ave., E.
38315	506 Piper Ave., E.
38316	509 Piper Ave., E.
38317	510 Piper Ave., E.
38318	514 Piper Ave., E.
38319	518 Piper Ave., E.
38320	601 Piper Ave., E.
38321	601 Piper Ave., E.
38322	602 Piper Ave., E.
38323	605 Piper Ave., E.
38324	606 Piper Ave., E.
38325	609 Piper Ave., E.
38326	614 Piper Ave., E.
38327	617 Piper Ave., E.
38328	618 Piper Ave., E.
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38330	622 Piper Ave., E.
38331	626 Piper Ave., E.
38332	629 Piper Ave., E.
38333	630 Piper Ave., E.
38334	633 Piper Ave., E.
38335	637 Piper Ave., E.
38336	641 Piper Ave., E.
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38338	645 Piper Ave., E.
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38340	1155 Piper Ave., E.
38341	1159 Piper Ave., E.
38342	1160 Piper Ave., E.
38343	1163 Piper Ave., E.
38344	1167 Piper Ave., E.
38345	1168 Piper Ave., E.
38346	1171 Piper Ave., E.
38347	1172 Piper Ave., E.
38348	1201 Piper Ave., E.
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38350	1205 Piper Ave., E.
38351	1206 Piper Ave., E.
38352	1209 Piper Ave., E.

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38354	1214 Piper Ave., E.
38355	1218 Piper Ave., E.
38356	1222 Piper Ave., E.
38357	101 Piper Ave., W.
38358	110 Piper Ave., W.
38359	116 Piper Ave., W.
38360	119 Piper Ave., W.
38361	123 Piper Ave., W.
38362	127 Piper Ave., W.
38363	128 Piper Ave., W.
38364	201 Piper Ave., W.
38365	202 Piper Ave., W.
38366	205 Piper Ave., W.
38367	206 Piper Ave., W.
38368	209 Piper Ave., W.
38369	213 Piper Ave., W.
38370	217 Piper Ave., W.
38371	221 Piper Ave., W.
38372	222 Piper Ave., W.
38373	225 Piper Ave., W.
38374	226 Piper Ave., W.
38375	229 Piper Ave., W.
38376	302 Piper Ave., W.
38377	306 Piper Ave., W.
38378	310 Piper Ave., W.
38379	401 Piper Ave., W.
38380	402 Piper Ave., W.
38381	407 Piper Ave., W.
38382	411 Piper Ave., W.
38383	3402 Pitkin Ave.
38384	3406 Pitkin Ave.
38385	3410 Pitkin Ave.
38386	3418 Pitkin Ave.
38387	3420 Pitkin Ave.
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38389	3505 Pitkin Ave.
38390	3508 Pitkin Ave.
38391	3509 Pitkin Ave.
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38393	3514 Pitkin Ave.
38394	3520 Pitkin Ave.
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38396	3602 Pitkin Ave.
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38398	3607 Pitkin Ave.
38399	3610 Pitkin Ave.
38400	3610 Pitkin Ave.

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38427	3802 Pitkin Ave.
38428	3806 Pitkin Ave.
38429	3810 Pitkin Ave.
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38445	3846 Pitkin Ave.
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38447	2406 Plainfield Ave.
38448	2409 Plainfield Ave.

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38492	2810 Plainfield Ave.
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38495	2817 Plainfield Ave.
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38503	2901 Plainfield Ave.
38504	2902 Plainfield Ave.
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38507	2909 Plainfield Ave.
38508	2913 Plainfield Ave.
38509	2917 Plainfield Ave.
38510	2921 Plainfield Ave.
38511	2925 Plainfield Ave.
38512	2929 Plainfield Ave.
38513	3001 Plainfield Ave.
38514	3005 Plainfield Ave.
38515	3009 Plainfield Ave.
38516	1701 Polly St.
38517	1705 Polly St.
38518	1706 Polly St.
38519	1710 Polly St.
38520	1714 Polly St.
38521	1715 Polly St.
38522	1718 Polly St.
38523	1721 Polly St.
38524	1722 Polly St.
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38528	1733 Polly St.
38529	1734 Polly St.
38530	1738 Polly St.
38531	1801 Polly St.
38532	1802 Polly St.
38533	1806 Polly St.
38534	1807 Polly St.
38535	1810 Polly St.
38536	1813 Polly St.
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38541	1822 Polly St.
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38543	1826 Polly St.
38544	1829 Polly St.

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38545	1830 Polly St.
38546	1833 Polly St.
38547	1834 Polly St.
38548	1837 Polly St.
38549	1838 Polly St.
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38565	1233 Poplar St.
38566	1237 Poplar St.
38567	1239 Poplar St.
38568	1241 Poplar St.
38569	1243 Poplar St.
38570	1247 Poplar St.
38571	1251 Poplar St.
38572	1255 Poplar St.
38573	1301 Poplar St.
38574	1302 Poplar St.
38575	1305 Poplar St.
38576	1310 Poplar St.
38577	1311 Poplar St.
38578	1314 Poplar St.
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38586	1353 Poplar St.
38587	1357 Poplar St.
38588	1361 Poplar St.
38589	1365 Poplar St.
38590	1369 Poplar St.
38591	1371 Poplar St.
38592	1375 Poplar St.

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38593	1377 Poplar St.
38594	1379 Poplar St.
38595	1381 Poplar St.
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38601	1415 Poplar St.
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38603	1416 Poplar St.
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38605	1423 Poplar St.
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38607	1450 Poplar St.
38608	1453 Poplar St.
38609	1457 Poplar St.
38610	1459 Poplar St.
38611	1465 Poplar St.
38612	1469 Poplar St.
38613	1726 Proctor Ave.
38614	1801 Proctor Ave.
38615	1804 Proctor Ave.
38616	1805 Proctor Ave.
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38621	1816 Proctor Ave.
38622	1817 Proctor Ave.
38623	1820 Proctor Ave.
38624	1901 Proctor Ave.
38625	1902 Proctor Ave.
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38628	1909 Proctor Ave.
38629	1920 Proctor Ave.
38630	2014 Proctor Ave.
38631	2018 Proctor Ave.
38632	2101 Proctor Ave.
38633	2102 Proctor Ave.
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38636	2109 Proctor Ave.
38637	2110 Proctor Ave.
38638	2113 Proctor Ave.
38639	2114 Proctor Ave.
38640	2117 Proctor Ave.

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38641	2118 Proctor Ave.
38642	2121 Proctor Ave.
38643	2151 Proctor Ave.
38644	2152 Proctor Ave.
38645	2155 Proctor Ave.
38646	2156 Proctor Ave.
38647	2159 Proctor Ave.
38648	2202 Proctor Ave.
38649	2213 Proctor Ave.
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38651	2217 Proctor Ave.
38652	2218 Proctor Ave.
38653	2221 Proctor Ave.
38654	2222 Proctor Ave.
38655	2225 Proctor Ave.
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38660	2234 Proctor Ave.
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38663	2302 Proctor Ave.
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38667	2310 Proctor Ave.
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38669	2314 Proctor Ave.
38670	2317 Proctor Ave.
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38684	2530 Proctor Ave.
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38686	2535 Proctor Ave.
38687	2537 Proctor Ave.
38688	2613 Proctor Ave.

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38703	2650 Proctor Ave.
38704	2653 Proctor Ave.
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38707	2662 Proctor Ave.
38708	2913 Proctor Ave.
38709	3001 Proctor Ave.
38710	3002 Proctor Ave.
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38712	3102 Proctor Ave.
38713	3108 Proctor Ave.
38714	3112 Proctor Ave.
38715	3113 Proctor Ave.
38716	3116 Proctor Ave.
38717	3118 Proctor Ave.
38718	3121 Proctor Ave.
38719	3125 Proctor Ave.
38720	3202 Proctor Ave.
38721	3205 Proctor Ave.
38722	3206 Proctor Ave.
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38730	3301 Proctor Ave.
38731	3302 Proctor Ave.
38732	3307 Proctor Ave.
38733	3418 Proctor Ave.
38734	3422 Proctor Ave.
38735	3501 Proctor Ave.
38736	3502 Proctor Ave.

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38737	3505 Proctor Ave.
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38739	3509 Proctor Ave.
38740	3510 Proctor Ave.
38741	3513 Proctor Ave.
38742	3514 Proctor Ave.
38743	3517 Proctor Ave.
38744	3522 Proctor Ave.
38745	3601 Proctor Ave.
38746	3602 Proctor Ave.
38747	3605 Proctor Ave.
38748	3606 Proctor Ave.
38749	3609 Proctor Ave.
38750	3610 Proctor Ave.
38751	3613 Proctor Ave.
38752	3614 Proctor Ave.
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38754	3702 Proctor Ave.
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38757	3710 Proctor Ave.
38758	3713 Proctor Ave.
38759	3714 Proctor Ave.
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38761	3801 Proctor Ave.
38762	3802 Proctor Ave.
38763	3805 Proctor Ave.
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38766	3813 Proctor Ave.
38767	3814 Proctor Ave.
38768	3817 Proctor Ave.
38769	3817 Proctor Ave.
38770	3902 Proctor Ave.
38771	3905 Proctor Ave.
38772	3909 Proctor Ave.
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38774	3913 Proctor Ave.
38775	3914 Proctor Ave.
38776	3917 Proctor Ave.
38777	3918 Proctor Ave.
38778	4001 Proctor Ave.
38779	4002 Proctor Ave.
38780	4005 Proctor Ave.
38781	4006 Proctor Ave.
38782	4009 Proctor Ave.
38783	4010 Proctor Ave.
38784	4013 Proctor Ave.

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38785	4014 Proctor Ave.
38786	4017 Proctor Ave.
38787	4018 Proctor Ave.
38788	4021 Proctor Ave.
38789	4022 Proctor Ave.
38790	4025 Proctor Ave.
38791	4026 Proctor Ave.
38792	4029 Proctor Ave.
38793	4030 Proctor Ave.
38794	4033 Proctor Ave.
38795	4034 Proctor Ave.
38796	4101 Proctor Ave.
38797	4102 Proctor Ave.
38798	4105 Proctor Ave.
38799	4106 Proctor Ave.
38800	4109 Proctor Ave.
38801	4110 Proctor Ave.
38802	4113 Proctor Ave.
38803	4114 Proctor Ave.
38804	4117 Proctor Ave.
38805	4118 Proctor Ave.
38806	4121 Proctor Ave.
38807	4122 Proctor Ave.
38808	4125 Proctor Ave.
38809	4126 Proctor Ave.
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38811	4130 Proctor Ave.
38812	4133 Proctor Ave.
38813	4211 Proctor Ave.
38814	4215 Proctor Ave.
38815	3307 Proctor Ave.
38816	407 Prospect St.
38817	415 Prospect St.
38818	503 Prospect St.
38819	505 Prospect St.
38820	509 Prospect St.
38821	513 Prospect St.
38822	525 Prospect St.
38823	610 Prospect St.
38824	613 Prospect St.
38825	614 Prospect St.
38826	619 Prospect St.
38827	623 Prospect St.
38828	630 Prospect St.
38829	631 Prospect St.
38830	634 Prospect St.
38831	702 Prospect St.
38832	706 Prospect St.

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38833	707 Prospect St.
38834	712 Prospect St.
38835	715 Prospect St.
38836	719 Prospect St.
38837	723 Prospect St.
38838	729 Prospect St.
38839	733 Prospect St.
38840	900 Prospect St.
38841	900 Prospect St.
38842	1009 Prospect St.
38843	1013 Prospect St.
38844	1014 Prospect St.
38845	1017 Prospect St.
38846	1018 Prospect St.
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38848	1025 Prospect St.
38849	1033 Prospect St.
38850	1113 Prospect St.
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38853	1122 Prospect St.
38854	1202 Prospect St.
38855	1301 Prospect St.
38856	1302 Prospect St.
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38861	1318 Prospect St.
38862	1321 Prospect St.
38863	1322 Prospect St.
38864	1326 Prospect St.
38865	1400 Prospect St.
38866	1401 Prospect St.
38867	1404 Prospect St.
38868	1408 Prospect St.
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38870	1412 Prospect St.
38871	1413 Prospect St.
38872	1416 Prospect St.
38873	1419 Prospect St.
38874	1420 Prospect St.
38875	1423 Prospect St.
38876	1427 Prospect St.
38877	1428 Prospect St.
38878	1431 Prospect St.
38879	1432 Prospect St.
38880	1435 Prospect St.

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38881	1501 Prospect St.
38882	1505 Prospect St.
38883	1509 Prospect St.
38884	1510 Prospect St.
38885	1513 Prospect St.
38886	1517 Prospect St.
38887	1518 Prospect St.
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38892	1711 Prospect St.
38893	1717 Prospect St.
38894	1722 Prospect St.
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38897	1729 Prospect St.
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38899	1735 Prospect St.
38900	1739 Prospect St.
38901	1740 Prospect St.
38902	1801 Prospect St.
38903	1802 Prospect St.
38904	1807 Prospect St.
38905	1808 Prospect St.
38906	1813 Prospect St.
38907	1814 Prospect St.
38908	1819 Prospect St.
38909	1820 Prospect St.
38910	1907 Prospect St.
38911	1908 Prospect St.
38912	1909 Prospect St.
38913	1912 Prospect St.
38914	1915 Prospect St.
38915	1916 Prospect St.
38916	1919 Prospect St.
38917	1920 Prospect St.
38918	2001 Prospect St.
38919	2002 Prospect St.
38920	2005 Prospect St.
38921	2006 Prospect St.
38922	2009 Prospect St.
38923	2010 Prospect St.
38924	2013 Prospect St.
38925	2014 Prospect St.
38926	2017 Prospect St.
38927	2018 Prospect St.
38928	2021 Prospect St.

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38929	2022 Prospect St.
38930	2101 Prospect St.
38931	2102 Prospect St.
38932	2105 Prospect St.
38933	2106 Prospect St.
38934	2109 Prospect St.
38935	2113 Prospect St.
38936	2114 Prospect St.
38937	2402 Prospect St.
38938	2409 Prospect St.
38939	2410 Prospect St.
38940	2413 Prospect St.
38941	2414 Prospect St.
38942	2417 Prospect St.
38943	2418 Prospect St.
38944	2420 Prospect St.
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38946	2425 Prospect St.
38947	2426 Prospect St.
38948	2429 Prospect St.
38949	2430 Prospect St.
38950	2434 Prospect St.
38951	2435 Prospect St.
38952	2438 Prospect St.
38953	2501 Prospect St.
38954	2502 Prospect St.
38955	2505 Prospect St.
38956	2506 Prospect St.
38957	2509 Prospect St.
38958	2510 Prospect St.
38959	2513 Prospect St.
38960	2514 Prospect St.
38961	2517 Prospect St.
38962	2518 Prospect St.
38963	2521 Prospect St.
38964	2525 Prospect St.
38965	2611 Prospect St.
38966	2612 Prospect St.
38967	2616 Prospect St.
38968	2617 Prospect St.
38969	2620 Prospect St.
38970	2623 Prospect St.
38971	2624 Prospect St.
38972	2627 Prospect St.
38973	2628 Prospect St.
38974	2701 Prospect St.
38975	2702 Prospect St.
38976	2706 Prospect St.

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38977	2709 Prospect St.
38978	2710 Prospect St.
38979	2713 Prospect St.
38980	2714 Prospect St.
38981	2717 Prospect St.
38982	2718 Prospect St.
38983	2721 Prospect St.
38984	2722 Prospect St.
38985	2725 Prospect St.
38986	2729 Prospect St.
38987	2730 Prospect St.
38988	2801 Prospect St.
38989	2807 Prospect St.
38990	2817 Prospect St.
38991	2821 Prospect St.
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38993	2825 Prospect St.
38994	2828 Prospect St.
38995	2832 Prospect St.
38996	2833 Prospect St.
38997	2838 Prospect St.
38998	2844 Prospect St.
38999	2845 Prospect St.
39000	2848 Prospect St.
39001	2849 Prospect St.
39002	2853 Prospect St.
39003	2855 Prospect St.
39004	2858 Prospect St.
39005	2863 Prospect St.
39006	2901 Prospect St.
39007	2902 Prospect St.
39008	2903 Prospect St.
39009	2905 Prospect St.
39010	2906 Prospect St.
39011	2909 Prospect St.
39012	2910 Prospect St.
39013	2912 Prospect St.
39014	2913 Prospect St.
39015	2914 Prospect St.
39016	2918 Prospect St.
39017	2921 Prospect St.
39018	2922 Prospect St.
39019	2926 Prospect St.
39020	2929 Prospect St.
39021	2930 Prospect St.
39022	2934 Prospect St.
39023	3001 Prospect St.
39024	3002 Prospect St.

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39025	3005 Prospect St.
39026	3006 Prospect St.
39027	3009 Prospect St.
39028	3010 Prospect St.
39029	3013 Prospect St.
39030	3014 Prospect St.
39031	3017 Prospect St.
39032	3018 Prospect St.
39033	3026 Prospect St.
39034	3041 Prospect St.
39035	3101 Prospect St.
39036	3111 Prospect St.
39037	3112 Prospect St.
39038	3115 Prospect St.
39039	3119 Prospect St.
39040	3120 Prospect St.
39041	3127 Prospect St.
39042	3131 Prospect St.
39043	3202 Prospect St.
39044	3209 Prospect St.
39045	3214 Prospect St.
39046	3217 Prospect St.
39047	3220 Prospect St.
39048	3228 Prospect St.
39049	3234 Prospect St.
39050	3235 Prospect St.
39051	3240 Prospect St.
39052	3248 Prospect St.
39053	3249 Prospect St.
39054	3256 Prospect St.
39055	3509 Providence St.
39056	3510 Providence St.
39057	3515 Providence St.
39058	3516 Providence St.
39059	3521 Providence St.
39060	3522 Providence St.
39061	3527 Providence St.
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39063	3532 Providence St.
39064	3533 Providence St.
39065	3536 Providence St.
39066	3540 Providence St.
39067	3541 Providence St.
39068	3601 Providence St.
39069	3602 Providence St.
39070	3607 Providence St.
39071	3608 Providence St.
39072	3613 Providence St.

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39073	3614 Providence St.
39074	3617 Providence St.
39075	3618 Providence St.
39076	3621 Providence St.
39077	3622 Providence St.
39078	3625 Providence St.
39079	3626 Providence St.
39080	3629 Providence St.
39081	3630 Providence St.
39082	3635 Providence St.
39083	3636 Providence St.
39084	3641 Providence St.
39085	3705 Providence St.
39086	3706 Providence St.
39087	3709 Providence St.
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39089	3715 Providence St.
39090	3716 Providence St.
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39094	3726 Providence St.
39095	3731 Providence St.
39096	3732 Providence St.
39097	3737 Providence St.
39098	3738 Providence St.
39099	3743 Providence St.
39100	3744 Providence St.
39101	3801 Providence St.
39102	3807 Providence St.
39103	3812 Providence St.
39104	3813 Providence St.
39105	3818 Providence St.
39106	3819 Providence St.
39107	3824 Providence St.
39108	3830 Providence St.
39109	3836 Providence St.
39110	3837 Providence St.
39111	111 Pulaski St., E.
39112	115 Pulaski St., E.
39113	116 Pulaski St., E.
39114	120 Pulaski St., E.
39115	123 Pulaski St., E.
39116	124 Pulaski St., E.
39117	127 Pulaski St., E.
39118	128 Pulaski St., E.
39119	131 Pulaski St., E.
39120	132 Pulaski St., E.

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39121	135 Pulaski St., E.
39122	136 Pulaski St., E.
39123	201 Pulaski St., E.
39124	202 Pulaski St., E.
39125	205 Pulaski St., E.
39126	206 Pulaski St., E.
39127	209 Pulaski St., E.
39128	210 Pulaski St., E.
39129	213 Pulaski St., E.
39130	214 Pulaski St., E.
39131	218 Pulaski St., E.
39132	219 Pulaski St., E.
39133	222 Pulaski St., E.
39134	225 Pulaski St., E.
39135	226 Pulaski St., E.
39136	229 Pulaski St., E.
39137	230 Pulaski St., E.
39138	301 Pulaski St., E.
39139	302 Pulaski St., E.
39140	305 Pulaski St., E.
39141	306 Pulaski St., E.
39142	309 Pulaski St., E.
39143	310 Pulaski St., E.
39144	313 Pulaski St., E.
39145	314 Pulaski St., E.
39146	317 Pulaski St., E.
39147	318 Pulaski St., E.
39148	321 Pulaski St., E.
39149	322 Pulaski St., E.
39150	325 Pulaski St., E.
39151	326 Pulaski St., E.
39152	329 Pulaski St., E.
39153	330 Pulaski St., E.
39154	333 Pulaski St., E.
39155	334 Pulaski St., E.
39156	337 Pulaski St., E.
39157	340 Pulaski St., E.
39158	341 Pulaski St., E.
39159	345 Pulaski St., E.
39160	349 Pulaski St., E.
39161	350 Pulaski St., E.
39162	351 Pulaski St., E.
39163	354 Pulaski St., E.
39164	355 Pulaski St., E.
39165	358 Pulaski St., E.
39166	359 Pulaski St., E.
39167	362 Pulaski St., E.
39168	363 Pulaski St., E.

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39169	366 Pulaski St., E.
39170	367 Pulaski St., E.
39171	370 Pulaski St., E.
39172	401 Pulaski St., E.
39173	402 Pulaski St., E.
39174	405 Pulaski St., E.
39175	406 Pulaski St., E.
39176	409 Pulaski St., E.
39177	410 Pulaski St., E.
39178	413 Pulaski St., E.
39179	414 Pulaski St., E.
39180	417 Pulaski St., E.
39181	418 Pulaski St., E.
39182	421 Pulaski St., E.
39183	422 Pulaski St., E.
39184	501 Pulaski St., E.
39185	505 Pulaski St., E.
39186	506 Pulaski St., E.
39187	509 Pulaski St., E.
39188	513 Pulaski St., E.
39189	514 Pulaski St., E.
39190	518 Pulaski St., E.
39191	521 Pulaski St., E.
39192	522 Pulaski St., E.
39193	602 Pulaski St., E.
39194	605 Pulaski St., E.
39195	609 Pulaski St., E.
39196	610 Pulaski St., E.
39197	613 Pulaski St., E.
39198	617 Pulaski St., E.
39199	618 Pulaski St., E.
39200	621 Pulaski St., E.
39201	622 Pulaski St., E.
39202	625 Pulaski St., E.
39203	629 Pulaski St., E.
39204	630 Pulaski St., E.
39205	633 Pulaski St., E.
39206	634 Pulaski St., E.
39207	637 Pulaski St., E.
39208	641 Pulaski St., E.
39209	642 Pulaski St., E.
39210	645 Pulaski St., E.
39211	646 Pulaski St., E.
39212	649 Pulaski St., E.
39213	650 Pulaski St., E.
39214	653 Pulaski St., E.
39215	654 Pulaski St., E.
39216	658 Pulaski St., E.

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39217	663 Pulaski St., E.
39218	666 Pulaski St., E.
39219	668 Pulaski St., E.
39220	669 Pulaski St., E.
39221	670 Pulaski St., E.
39222	111 Pulaski St., W.
39223	112 Pulaski St., W.
39224	115 Pulaski St., W.
39225	116 Pulaski St., W.
39226	119 Pulaski St., W.
39227	120 Pulaski St., W.
39228	124 Pulaski St., W.
39229	125 Pulaski St., W.
39230	130 Pulaski St., W.
39231	201 Pulaski St., W.
39232	205 Pulaski St., W.
39233	206 Pulaski St., W.
39234	210 Pulaski St., W.
39235	213 Pulaski St., W.
39236	214 Pulaski St., W.
39237	217 Pulaski St., W.
39238	218 Pulaski St., W.
39239	221 Pulaski St., W.
39240	222 Pulaski St., W.
39241	225 Pulaski St., W.
39242	226 Pulaski St., W.
39243	229 Pulaski St., W.
39244	230 Pulaski St., W.
39245	301 Pulaski St., W.
39246	302 Pulaski St., W.
39247	305 Pulaski St., W.
39248	309 Pulaski St., W.
39249	310 Pulaski St., W.
39250	313 Pulaski St., W.
39251	314 Pulaski St., W.
39252	318 Pulaski St., W.
39253	321 Pulaski St., W.
39254	322 Pulaski St., W.
39255	325 Pulaski St., W.
39256	326 Pulaski St., W.
39257	329 Pulaski St., W.
39258	401 Pulaski St., W.
39259	402 Pulaski St., W.
39260	405 Pulaski St., W.
39261	406 Pulaski St., W.
39262	409 Pulaski St., W.
39263	410 Pulaski St., W.
39264	414 Pulaski St., W.

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39265	417 Pulaski St., W.
39266	418 Pulaski St., W.
39267	421 Pulaski St., W.
39268	426 Pulaski St., W.
39269	502 Pulaski St., W.
39270	505 Pulaski St., W.
39271	506 Pulaski St., W.
39272	509 Pulaski St., W.
39273	510 Pulaski St., W.
39274	517 Pulaski St., W.
39275	518 Pulaski St., W.
39276	521 Pulaski St., W.
39277	522 Pulaski St., W.
39278	525 Pulaski St., W.
39279	526 Pulaski St., W.
39280	529 Pulaski St., W.
39281	533 Pulaski St., W.
39282	534 Pulaski St., W.
39283	537 Pulaski St., W.
39284	540 Pulaski St., W.
39285	541 Pulaski St., W.
39286	545 Pulaski St., W.
39287	546 Pulaski St., W.
39288	549 Pulaski St., W.
39289	550 Pulaski St., W.
39290	601 Pulaski St., W.
39291	602 Pulaski St., W.
39292	605 Pulaski St., W.
39293	606 Pulaski St., W.
39294	609 Pulaski St., W.
39295	610 Pulaski St., W.
39296	613 Pulaski St., W.
39297	617 Pulaski St., W.
39298	618 Pulaski St., W.
39299	621 Pulaski St., W.
39300	622 Pulaski St., W.
39301	625 Pulaski St., W.
39302	626 Pulaski St., W.
39303	629 Pulaski St., W.
39304	630 Pulaski St., W.
39305	633 Pulaski St., W.
39306	634 Pulaski St., W.
39307	637 Pulaski St., W.
39308	638 Pulaski St., W.
39309	642 Pulaski St., W.
39310	645 Pulaski St., W.
39311	3413 Race St.
39312	3414 Race St.

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39313	3417 Race St.
39314	3418 Race St.
39315	3421 Race St.
39316	3422 Race St.
39317	3501 Race St.
39318	3502 Race St.
39319	3505 Race St.
39320	3506 Race St.
39321	3509 Race St.
39322	3510 Race St.
39323	3513 Race St.
39324	3514 Race St.
39325	3517 Race St.
39326	3518 Race St.
39327	3601 Race St.
39328	3602 Race St.
39329	3605 Race St.
39330	3606 Race St.
39331	3609 Race St.
39332	3610 Race St.
39333	3613 Race St.
39334	3614 Race St.
39335	3701 Race St.
39336	3702 Race St.
39337	3705 Race St.
39338	3706 Race St.
39339	3709 Race St.
39340	3710 Race St.
39341	3713 Race St.
39342	3714 Race St.
39343	3717 Race St.
39344	3718 Race St.
39345	3801 Race St.
39346	3802 Race St.
39347	3805 Race St.
39348	3806 Race St.
39349	3809 Race St.
39350	3810 Race St.
39351	3813 Race St.
39352	3814 Race St.
39353	3901 Race St.
39354	3902 Race St.
39355	3905 Race St.
39356	3906 Race St.
39357	3909 Race St.
39358	3910 Race St.
39359	3913 Race St.
39360	3914 Race St.

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39361	3917 Race St.
39362	3918 Race St.
39363	4001 Race St.
39364	4002 Race St.
39365	4005 Race St.
39366	4006 Race St.
39367	4009 Race St.
39368	4010 Race St.
39369	4013 Race St.
39370	4014 Race St.
39371	4017 Race St.
39372	4021 Race St.
39373	4022 Race St.
39374	4025 Race St.
39375	4026 Race St.
39376	4029 Race St.
39377	4030 Race St.
39378	4033 Race St.
39379	4034 Race St.
39380	4101 Race St.
39381	4102 Race St.
39382	4105 Race St.
39383	4106 Race St.
39384	4109 Race St.
39385	4110 Race St.
39386	4113 Race St.
39387	4114 Race St.
39388	4117 Race St.
39389	4118 Race St.
39390	4121 Race St.
39391	4122 Race St.
39392	4125 Race St.
39393	4126 Race St.
39394	4129 Race St.
39395	4130 Race St.
39396	4132 Race St.
39397	4133 Race St.
39398	4137 Race St.
39399	4138 Race St.
39400	2101 Radcliffe Ave.
39401	2107 Radcliffe Ave.
39402	2112 Radcliffe Ave.
39403	2115 Radcliffe Ave.
39404	2119 Radcliffe Ave.
39405	2123 Radcliffe Ave.
39406	2202 Radcliffe Ave.
39407	2208 Radcliffe Ave.
39408	2213 Radcliffe Ave.

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39409	2214 Radcliffe Ave.
39410	2220 Radcliffe Ave.
39411	2226 Radcliffe Ave.
39412	2302 Radcliffe Ave.
39413	2307 Radcliffe Ave.
39414	2308 Radcliffe Ave.
39415	2314 Radcliffe Ave.
39416	2315 Radcliffe Ave.
39417	2320 Radcliffe Ave.
39418	3701 Ralph St.
39419	3702 Ralph St.
39420	3712 Ralph St.
39421	3806 Ralph St.
39422	3810 Ralph St.
39423	1606 Ramsey Blvd.
39424	1710 Ramsey Blvd.
39425	1718 Ramsey Blvd.
39426	1802 Ramsey Blvd.
39427	1805 Ramsey Blvd.
39428	1810 Ramsey Blvd.
39429	1818 Ramsey Blvd.
39430	1901 Ramsey Blvd.
39431	1909 Ramsey Blvd.
39432	1910 Ramsey Blvd.
39433	1501 Randy Ct.
39434	1502 Randy Ct.
39435	1505 Randy Ct.
39436	1506 Randy Ct.
39437	1509 Randy Ct.
39438	1510 Randy Ct.
39439	1513 Randy Ct.
39440	1514 Randy Ct.
39441	1517 Randy Ct.
39442	1518 Randy Ct.
39443	1522 Randy Ct.
39444	3421 Rangeley Dr.
39445	3505 Rangeley Dr.
39446	3505 Rangeley Dr.
39447	3505 Rangeley Dr.
39448	3505 Rangeley Dr.
39449	3507 Rangeley Dr.
39450	3507 Rangeley Dr.
39451	3507 Rangeley Dr.
39452	3507 Rangeley Dr.
39453	3509 Rangeley Dr.
39454	3509 Rangeley Dr.
39455	3509 Rangeley Dr.
39456	3509 Rangeley Dr.

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39457	3517 Rangeley Dr.
39458	3517 Rangeley Dr.
39459	3517 Rangeley Dr.
39460	3517 Rangeley Dr.
39461	3519 Rangeley Dr.
39462	3519 Rangeley Dr.
39463	3519 Rangeley Dr.
39464	3519 Rangeley Dr.
39465	3521 Rangeley Dr.
39466	3523 Rangeley Dr.
39467	3525 Rangeley Dr.
39468	3527 Rangeley Dr.
39469	3529 Rangeley Dr.
39470	3531 Rangeley Dr.
39471	3533 Rangeley Dr.
39472	3535 Rangeley Dr.
39473	112 Rankin St., E.
39474	116 Rankin St., E.
39475	119 Rankin St., E.
39476	120 Rankin St., E.
39477	123 Rankin St., E.
39478	126 Rankin St., E.
39479	127 Rankin St., E.
39480	128 Rankin St., E.
39481	131 Rankin St., E.
39482	132 Rankin St., E.
39483	133 Rankin St., E.
39484	136 Rankin St., E.
39485	137 Rankin St., E.
39486	201 Rankin St., E.
39487	202 Rankin St., E.
39488	206 Rankin St., E.
39489	207 Rankin St., E.
39490	208 Rankin St., E.
39491	211 Rankin St., E.
39492	212 Rankin St., E.
39493	217 Rankin St., E.
39494	218 Rankin St., E.
39495	224 Rankin St., E.
39496	225 Rankin St., E.
39497	228 Rankin St., E.
39498	229 Rankin St., E.
39499	232 Rankin St., E.
39500	233 Rankin St., E.
39501	236 Rankin St., E.
39502	237 Rankin St., E.
39503	301 Rankin St., E.
39504	302 Rankin St., E.

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39505	305 Rankin St., E.
39506	306 Rankin St., E.
39507	309 Rankin St., E.
39508	310 Rankin St., E.
39509	313 Rankin St., E.
39510	314 Rankin St., E.
39511	317 Rankin St., E.
39512	318 Rankin St., E.
39513	322 Rankin St., E.
39514	325 Rankin St., E.
39515	329 Rankin St., E.
39516	333 Rankin St., E.
39517	337 Rankin St., E.
39518	343 Rankin St., E.
39519	414 Rankin St., E.
39520	415 Rankin St., E.
39521	422 Rankin St., E.
39522	423 Rankin St., E.
39523	425 Rankin St., E.
39524	503 Rankin St., E.
39525	504 Rankin St., E.
39526	508 Rankin St., E.
39527	509 Rankin St., E.
39528	513 Rankin St., E.
39529	524 Rankin St., E.
39530	530 Rankin St., E.
39531	533 Rankin St., E.
39532	604 Rankin St., E.
39533	605 Rankin St., E.
39534	610 Rankin St., E.
39535	615 Rankin St., E.
39536	616 Rankin St., E.
39537	617 Rankin St., E.
39538	621 Rankin St., E.
39539	622 Rankin St., E.
39540	626 Rankin St., E.
39541	629 Rankin St., E.
39542	630 Rankin St., E.
39543	113 Rankin St., W.
39544	114 Rankin St., W.
39545	115 Rankin St., W.
39546	116 Rankin St., W.
39547	119 Rankin St., W.
39548	120 Rankin St., W.
39549	123 Rankin St., W.
39550	124 Rankin St., W.
39551	128 Rankin St., W.
39552	131 Rankin St., W.

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39553	132 Rankin St., W.
39554	200 Rankin St., W.
39555	201 Rankin St., W.
39556	204 Rankin St., W.
39557	205 Rankin St., W.
39558	208 Rankin St., W.
39559	209 Rankin St., W.
39560	212 Rankin St., W.
39561	213 Rankin St., W.
39562	216 Rankin St., W.
39563	217 Rankin St., W.
39564	221 Rankin St., W.
39565	225 Rankin St., W.
39566	226 Rankin St., W.
39567	230 Rankin St., W.
39568	231 Rankin St., W.
39569	311 Rankin St., W.
39570	312 Rankin St., W.
39571	316 Rankin St., W.
39572	319 Rankin St., W.
39573	320 Rankin St., W.
39574	323 Rankin St., W.
39575	324 Rankin St., W.
39576	327 Rankin St., W.
39577	328 Rankin St., W.
39578	331 Rankin St., W.
39579	332 Rankin St., W.
39580	400 Rankin St., W.
39581	401 Rankin St., W.
39582	405 Rankin St., W.
39583	406 Rankin St., W.
39584	409 Rankin St., W.
39585	410 Rankin St., W.
39586	413 Rankin St., W.
39587	414 Rankin St., W.
39588	418 Rankin St., W.
39589	422 Rankin St., W.
39590	501 Rankin St., W.
39591	511 Rankin St., W.
39592	515 Rankin St., W.
39593	519 Rankin St., W.
39594	520 Rankin St., W.
39595	523 Rankin St., W.
39596	601 Rankin St., W.
39597	605 Rankin St., W.
39598	608 Rankin St., W.
39599	609 Rankin St., W.
39600	614 Rankin St., W.

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39601	617 Rankin St., W.
39602	618 Rankin St., W.
39603	701 Rankin St., W.
39604	702 Rankin St., W.
39605	706 Rankin St., W.
39606	707 Rankin St., W.
39607	710 Rankin St., W.
39608	711 Rankin St., W.
39609	716 Rankin St., W.
39610	717 Rankin St., W.
39611	722 Rankin St., W.
39612	723 Rankin St., W.
39613	805 Rankin St., W.
39614	806 Rankin St., W.
39615	809 Rankin St., W.
39616	810 Rankin St., W.
39617	813 Rankin St., W.
39618	814 Rankin St., W.
39619	817 Rankin St., W.
39620	818 Rankin St., W.
39621	905 Rankin St., W.
39622	906 Rankin St., W.
39623	909 Rankin St., W.
39624	910 Rankin St., W.
39625	913 Rankin St., W.
39626	914 Rankin St., W.
39627	1002 Rankin St., W.
39628	1005 Rankin St., W.
39629	1006 Rankin St., W.
39630	1009 Rankin St., W.
39631	1010 Rankin St., W.
39632	1014 Rankin St., W.
39633	1101 Rankin St., W.
39634	1102 Rankin St., W.
39635	1105 Rankin St., W.
39636	1106 Rankin St., W.
39637	1109 Rankin St., W.
39638	1110 Rankin St., W.
39639	1113 Rankin St., W.
39640	1114 Rankin St., W.
39641	1201 Rankin St., W.
39642	1202 Rankin St., W.
39643	1205 Rankin St., W.
39644	1206 Rankin St., W.
39645	1209 Rankin St., W.
39646	1210 Rankin St., W.
39647	1213 Rankin St., W.
39648	1214 Rankin St., W.

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39649	1217 Rankin St., W.
39650	1218 Rankin St., W.
39651	1222 Rankin St., W.
39652	1509 Rankin St., W.
39653	1513 Rankin St., W.
39654	1517 Rankin St., W.
39655	1521 Rankin St., W.
39656	1601 Rankin St., W.
39657	1605 Rankin St., W.
39658	418 Rasch Ct.
39659	426 Rasch Ct.
39660	1901 Raskob St.
39661	1902 Raskob St.
39662	1905 Raskob St.
39663	1908 Raskob St.
39664	1909 Raskob St.
39665	1912 Raskob St.
39666	1913 Raskob St.
39667	1916 Raskob St.
39668	1917 Raskob St.
39669	1920 Raskob St.
39670	1924 Raskob St.
39671	2001 Raskob St.
39672	2002 Raskob St.
39673	2005 Raskob St.
39674	2006 Raskob St.
39675	2009 Raskob St.
39676	2010 Raskob St.
39677	2013 Raskob St.
39678	2014 Raskob St.
39679	2017 Raskob St.
39680	2018 Raskob St.
39681	2021 Raskob St.
39682	2022 Raskob St.
39683	2026 Raskob St.
39684	2101 Raskob St.
39685	2102 Raskob St.
39686	2107 Raskob St.
39687	2108 Raskob St.
39688	2112 Raskob St.
39689	2113 Raskob St.
39690	2116 Raskob St.
39691	2117 Raskob St.
39692	2120 Raskob St.
39693	2121 Raskob St.
39694	2201 Raskob St.
39695	2202 Raskob St.
39696	2205 Raskob St.

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39697	2206 Raskob St.
39698	2209 Raskob St.
39699	2210 Raskob St.
39700	2213 Raskob St.
39701	2214 Raskob St.
39702	2217 Raskob St.
39703	2218 Raskob St.
39704	2221 Raskob St.
39705	2222 Raskob St.
39706	2301 Raskob St.
39707	2302 Raskob St.
39708	2305 Raskob St.
39709	2306 Raskob St.
39710	2309 Raskob St.
39711	2310 Raskob St.
39712	2313 Raskob St.
39713	2314 Raskob St.
39714	2317 Raskob St.
39715	2318 Raskob St.
39716	2321 Raskob St.
39717	2322 Raskob St.
39718	2325 Raskob St.
39719	2326 Raskob St.
39720	2329 Raskob St.
39721	2401 Raskob St.
39722	2413 Raskob St.
39723	2414 Raskob St.
39724	2419 Raskob St.
39725	2420 Raskob St.
39726	2423 Raskob St.
39727	2426 Raskob St.
39728	2427 Raskob St.
39729	2431 Raskob St.
39730	2432 Raskob St.
39731	2438 Raskob St.
39732	2442 Raskob St.
39733	2501 Raskob St.
39734	2505 Raskob St.
39735	2506 Raskob St.
39736	2509 Raskob St.
39737	2608 Raskob St.
39738	2609 Raskob St.
39739	2612 Raskob St.
39740	2613 Raskob St.
39741	2616 Raskob St.
39742	2617 Raskob St.
39743	2620 Raskob St.
39744	2621 Raskob St.

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39745	2624 Raskob St.
39746	2625 Raskob St.
39747	2628 Raskob St.
39748	2630 Raskob St.
39749	2633 Raskob St.
39750	2636 Raskob St.
39751	2637 Raskob St.
39752	2640 Raskob St.
39753	2641 Raskob St.
39754	2644 Raskob St.
39755	2645 Raskob St.
39756	2648 Raskob St.
39757	2649 Raskob St.
39758	2652 Raskob St.
39759	2653 Raskob St.
39760	2661 Raskob St.
39761	2702 Raskob St.
39762	2710 Raskob St.
39763	2711 Raskob St.
39764	2714 Raskob St.
39765	2715 Raskob St.
39766	2718 Raskob St.
39767	2719 Raskob St.
39768	2722 Raskob St.
39769	2723 Raskob St.
39770	2726 Raskob St.
39771	2727 Raskob St.
39772	2730 Raskob St.
39773	2734 Raskob St.
39774	2735 Raskob St.
39775	2738 Raskob St.
39776	2739 Raskob St.
39777	2742 Raskob St.
39778	2743 Raskob St.
39779	2746 Raskob St.
39780	2747 Raskob St.
39781	2750 Raskob St.
39782	2751 Raskob St.
39783	2754 Raskob St.
39784	2755 Raskob St.
39785	2759 Raskob St.
39786	2765 Raskob St.
39787	2813 Raskob St.
39788	2817 Raskob St.
39789	2818 Raskob St.
39790	2821 Raskob St.
39791	2822 Raskob St.
39792	2824 Raskob St.

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39793	2825 Raskob St.
39794	2828 Raskob St.
39795	2831 Raskob St.
39796	2832 Raskob St.
39797	2835 Raskob St.
39798	2838 Raskob St.
39799	2915 Raskob St.
39800	2919 Raskob St.
39801	2927 Raskob St.
39802	2928 Raskob St.
39803	2932 Raskob St.
39804	3012 Raskob St.
39805	3015 Raskob St.
39806	3016 Raskob St.
39807	3019 Raskob St.
39808	3020 Raskob St.
39809	3023 Raskob St.
39810	3024 Raskob St.
39811	3027 Raskob St.
39812	3028 Raskob St.
39813	3031 Raskob St.
39814	3032 Raskob St.
39815	3035 Raskob St.
39816	3036 Raskob St.
39817	3040 Raskob St.
39818	3044 Raskob St.
39819	3050 Raskob St.
39820	3101 Raskob St.
39821	3102 Raskob St.
39822	3111 Raskob St.
39823	3112 Raskob St.
39824	3115 Raskob St.
39825	3116 Raskob St.
39826	3119 Raskob St.
39827	3120 Raskob St.
39828	3123 Raskob St.
39829	3124 Raskob St.
39830	3127 Raskob St.
39831	3128 Raskob St.
39832	3131 Raskob St.
39833	3132 Raskob St.
39834	3135 Raskob St.
39835	3136 Raskob St.
39836	3139 Raskob St.
39837	3143 Raskob St.
39838	3144 Raskob St.
39839	3147 Raskob St.
39840	3150 Raskob St.

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39841	3151 Raskob St.
39842	3215 Raskob St.
39843	3218 Raskob St.
39844	3227 Raskob St.
39845	1401 Raspberry Ln.
39846	1402 Raspberry Ln.
39847	1405 Raspberry Ln.
39848	1409 Raspberry Ln.
39849	1410 Raspberry Ln.
39850	1413 Raspberry Ln.
39851	1414 Raspberry Ln.
39852	1417 Raspberry Ln.
39853	1417 Raspberry Ln.
39854	1418 Raspberry Ln.
39855	1501 Raspberry Ln.
39856	1502 Raspberry Ln.
39857	1505 Raspberry Ln.
39858	1506 Raspberry Ln.
39859	1509 Raspberry Ln.
39860	1510 Raspberry Ln.
39861	1513 Raspberry Ln.
39862	1514 Raspberry Ln.
39863	1601 Raspberry Ln.
39864	1602 Raspberry Ln.
39865	1605 Raspberry Ln.
39866	1606 Raspberry Ln.
39867	1609 Raspberry Ln.
39868	1610 Raspberry Ln.
39869	1613 Raspberry Ln.
39870	1614 Raspberry Ln.
39871	1617 Raspberry Ln.
39872	1618 Raspberry Ln.
39873	1621 Raspberry Ln.
39874	1625 Raspberry Ln.
39875	1629 Raspberry Ln.
39876	418 Ray Ct.
39877	422 Ray Ct.
39878	926 Ray St.
39879	1018 Ray St.
39880	3810 Red Arrow Rd.
39881	3820 Red Arrow Rd.
39882	3834 Red Arrow Rd.
39883	3858 Red Arrow Rd.
39884	3906 Red Arrow Rd.
39885	3910 Red Arrow Rd.
39886	3914 Red Arrow Rd.
39887	3917 Red Arrow Rd.
39888	3918 Red Arrow Rd.

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39889	3922 Red Arrow Rd.
39890	3926 Red Arrow Rd.
39891	3940 Red Arrow Rd.
39892	4002 Red Arrow Rd.
39893	4006 Red Arrow Rd.
39894	4010 Red Arrow Rd.
39895	4014 Red Arrow Rd.
39896	4018 Red Arrow Rd.
39897	4021 Red Arrow Rd.
39898	4026 Red Arrow Rd.
39899	4030 Red Arrow Rd.
39900	4031 Red Arrow Rd.
39901	4102 Red Arrow Rd.
39902	4106 Red Arrow Rd.
39903	4110 Red Arrow Rd.
39904	4114 Red Arrow Rd.
39905	4118 Red Arrow Rd.
39906	4122 Red Arrow Rd.
39907	4127 Red Arrow Rd.
39908	4130 Red Arrow Rd.
39909	4135 Red Arrow Rd.
39910	4138 Red Arrow Rd.
39911	4143 Red Arrow Rd.
39912	4201 Red Arrow Rd.
39913	4202 Red Arrow Rd.
39914	4205 Red Arrow Rd.
39915	4206 Red Arrow Rd.
39916	4209 Red Arrow Rd.
39917	4210 Red Arrow Rd.
39918	4213 Red Arrow Rd.
39919	4217 Red Arrow Rd.
39920	4218 Red Arrow Rd.
39921	4222 Red Arrow Rd.
39922	4226 Red Arrow Rd.
39923	4227 Red Arrow Rd.
39924	4230 Red Arrow Rd.
39925	4231 Red Arrow Rd.
39926	4234 Red Arrow Rd.
39927	4235 Red Arrow Rd.
39928	4301 Red Arrow Rd.
39929	4305 Red Arrow Rd.
39930	4306 Red Arrow Rd.
39931	4309 Red Arrow Rd.
39932	4310 Red Arrow Rd.
39933	4313 Red Arrow Rd.
39934	4314 Red Arrow Rd.
39935	4317 Red Arrow Rd.
39936	4318 Red Arrow Rd.

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39937	4322 Red Arrow Rd.
39938	4325 Red Arrow Rd.
39939	4329 Red Arrow Rd.
39940	4330 Red Arrow Rd.
39941	4401 Red Arrow Rd.
39942	4402 Red Arrow Rd.
39943	4411 Red Arrow Rd.
39944	4414 Red Arrow Rd.
39945	4418 Red Arrow Rd.
39946	4421 Red Arrow Rd.
39947	4422 Red Arrow Rd.
39948	4425 Red Arrow Rd.
39949	4426 Red Arrow Rd.
39950	4430 Red Arrow Rd.
39951	4434 Red Arrow Rd.
39952	4501 Red Arrow Rd.
39953	4502 Red Arrow Rd.
39954	4535 Red Arrow Rd.
39955	4601 Red Arrow Rd.
39956	4615 Red Arrow Rd.
39957	4616 Red Arrow Rd.
39958	2201 Reid St.
39959	2205 Reid St.
39960	2209 Reid St.
39961	2210 Reid St.
39962	2213 Reid St.
39963	2216 Reid St.
39964	2217 Reid St.
39965	2221 Reid St.
39966	2222 Reid St.
39967	2225 Reid St.
39968	2226 Reid St.
39969	2301 Reid St.
39970	2302 Reid St.
39971	2305 Reid St.
39972	2306 Reid St.
39973	2308 Reid St.
39974	2309 Reid St.
39975	2313 Reid St.
39976	2317 Reid St.
39977	2318 Reid St.
39978	2324 Reid St.
39979	2410 Reid St.
39980	2413 Reid St.
39981	2414 Reid St.
39982	2417 Reid St.
39983	2421 Reid St.
39984	2422 Reid St.

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39985	2426 Reid St.
39986	2429 Reid St.
39987	2433 Reid St.
39988	2434 Reid St.
39989	2437 Reid St.
39990	2438 Reid St.
39991	2441 Reid St.
39992	2445 Reid St.
39993	2446 Reid St.
39994	2449 Reid St.
39995	2450 Reid St.
39996	2455 Reid St.
39997	2460 Reid St.
39998	1810 Remell St.
39999	1810 Remell St.
40000	1814 Remell St.
40001	1814 Remell St.
40002	1830 Remell St.
40003	1830 Remell St.
40004	1838 Remell St.
40005	1838 Remell St.
40006	1838 Remell St.
40007	1838 Remell St.
40008	1838 Remell St.
40009	1838 Remell St.
40010	1839 Remell St.
40011	1846 Remell St.
40012	1846 Remell St.
40013	1846 Remell St.
40014	1846 Remell St.
40015	1846 Remell St.
40016	1846 Remell St.
40017	1846 Remell St.
40018	1846 Remell St.
40019	1846 Remell St.
40020	1854 Remell St.
40021	1861 Remell St.
40022	812 Remington Ave.
40023	813 Remington Ave.
40024	819 Remington Ave.
40025	822 Remington Ave.
40026	823 Remington Ave.
40027	826 Remington Ave.
40028	830 Remington Ave.
40029	831 Remington Ave.
40030	834 Remington Ave.
40031	838 Remington Ave.
40032	839 Remington Ave.

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40033	840 Remington Ave.
40034	842 Remington Ave.
40035	843 Remington Ave.
40036	847 Remington Ave.
40037	858 Remington Ave.
40038	910 Remington Ave.
40039	911 Remington Ave.
40040	914 Remington Ave.
40041	915 Remington Ave.
40042	918 Remington Ave.
40043	922 Remington Ave.
40044	927 Remington Ave.
40045	930 Remington Ave.
40046	933 Remington Ave.
40047	934 Remington Ave.
40048	938 Remington Ave.
40049	941 Remington Ave.
40050	942 Remington Ave.
40051	943 Remington Ave.
40052	946 Remington Ave.
40053	949 Remington Ave.
40054	950 Remington Ave.
40055	951 Remington Ave.
40056	954 Remington Ave.
40057	1011 Remington Ave.
40058	1015 Remington Ave.
40059	1018 Remington Ave.
40060	1021 Remington Ave.
40061	1022 Remington Ave.
40062	1025 Remington Ave.
40063	1026 Remington Ave.
40064	1029 Remington Ave.
40065	1030 Remington Ave.
40066	1033 Remington Ave.
40067	1034 Remington Ave.
40068	1101 Remington Ave.
40069	1102 Remington Ave.
40070	1105 Remington Ave.
40071	1106 Remington Ave.
40072	1109 Remington Ave.
40073	1110 Remington Ave.
40074	1113 Remington Ave.
40075	1114 Remington Ave.
40076	1117 Remington Ave.
40077	1118 Remington Ave.
40078	1122 Remington Ave.
40079	1125 Remington Ave.
40080	1129 Remington Ave.

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40081	1133 Remington Ave.
40082	1134 Remington Ave.
40083	2701 Reynolds St.
40084	2702 Reynolds St.
40085	2705 Reynolds St.
40086	2706 Reynolds St.
40087	2709 Reynolds St.
40088	2710 Reynolds St.
40089	2717 Reynolds St.
40090	2718 Reynolds St.
40091	2721 Reynolds St.
40092	2722 Reynolds St.
40093	2725 Reynolds St.
40094	2726 Reynolds St.
40095	2730 Reynolds St.
40096	2801 Reynolds St.
40097	2805 Reynolds St.
40098	2809 Reynolds St.
40099	2810 Reynolds St.
40100	2814 Reynolds St.
40101	2815 Reynolds St.
40102	2818 Reynolds St.
40103	2822 Reynolds St.
40104	2823 Reynolds St.
40105	2825 Reynolds St.
40106	2826 Reynolds St.
40107	2827 Reynolds St.
40108	2830 Reynolds St.
40109	2831 Reynolds St.
40110	2905 Reynolds St.
40111	2906 Reynolds St.
40112	2909 Reynolds St.
40113	2910 Reynolds St.
40114	3902 Reynolds St.
40115	3906 Reynolds St.
40116	3910 Reynolds St.
40117	3914 Reynolds St.
40118	3917 Reynolds St.
40119	3918 Reynolds St.
40120	3921 Reynolds St.
40121	3922 Reynolds St.
40122	3926 Reynolds St.
40123	3929 Reynolds St.
40124	3934 Reynolds St.
40125	4002 Reynolds St.
40126	4005 Reynolds St.
40127	4006 Reynolds St.
40128	4009 Reynolds St.

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40129	4010 Reynolds St.
40130	4013 Reynolds St.
40131	4014 Reynolds St.
40132	4017 Reynolds St.
40133	4021 Reynolds St.
40134	4022 Reynolds St.
40135	4025 Reynolds St.
40136	4026 Reynolds St.
40137	1928 Richfield Rd.
40138	2014 Richfield Rd.
40139	2153 Richfield Rd.
40140	2440 Richfield Rd.
40141	2440 Richfield Rd.
40142	2533 Richfield Rd.
40143	2535 Richfield Rd.
40144	2730 Richfield Rd.
40145	2803 Richfield Rd.
40146	2804 Richfield Rd.
40147	2807 Richfield Rd.
40148	2808 Richfield Rd.
40149	2812 Richfield Rd.
40150	2816 Richfield Rd.
40151	2902 Richfield Rd.
40152	3002 Richfield Rd.
40153	3020 Richfield Rd.
40154	3025 Richfield Rd.
40155	3106 Richfield Rd.
40156	3110 Richfield Rd.
40157	3246 Richfield Rd.
40158	3281 Richfield Rd.
40159	3302 Richfield Rd.
40160	3312 Richfield Rd.
40161	3312 Richfield Rd.
40162	3402 Richfield Rd.
40163	3430 Richfield Rd.
40164	3430 Richfield Rd.
40165	3520 Richfield Rd.
40166	3538 Richfield Rd.
40167	3702 Richfield Rd.
40168	3706 Richfield Rd.
40169	3708 Richfield Rd.
40170	3710 Richfield Rd.
40171	3718 Richfield Rd.
40172	3838 Richfield Rd.
40173	3850 Richfield Rd.
40174	1916 Richfield Rd.
40175	1928 Richfield Rd.
40176	2014 Richfield Rd.

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40177	2022 Richfield Rd.
40178	2153 Richfield Rd.
40179	2425 Richfield Rd.
40180	2440 Richfield Rd.
40181	2450 Richfield Rd.
40182	2533 Richfield Rd.
40183	2533 Richfield Rd.
40184	2535 Richfield Rd.
40185	2730 Richfield Rd.
40186	2800 Richfield Rd.
40187	2801 Richfield Rd.
40188	2807 Richfield Rd.
40189	2815 Richfield Rd.
40190	2819 Richfield Rd.
40191	2901 Richfield Rd.
40192	2902 Richfield Rd.
40193	2914 Richfield Rd.
40194	2918 Richfield Rd.
40195	2922 Richfield Rd.
40196	2925 Richfield Rd.
40197	2930 Richfield Rd.
40198	2935 Richfield Rd.
40199	2951 Richfield Rd.
40200	2952 Richfield Rd.
40201	2955 Richfield Rd.
40202	2956 Richfield Rd.
40203	2962 Richfield Rd.
40204	2967 Richfield Rd.
40205	2968 Richfield Rd.
40206	2969 Richfield Rd.
40207	2972 Richfield Rd.
40208	2975 Richfield Rd.
40209	3001 Richfield Rd.
40210	3002 Richfield Rd.
40211	3009 Richfield Rd.
40212	3017 Richfield Rd.
40213	3020 Richfield Rd.
40214	3025 Richfield Rd.
40215	3029 Richfield Rd.
40216	3102 Richfield Rd.
40217	3108 Richfield Rd.
40218	3110 Richfield Rd.
40219	3142 Richfield Rd.
40220	3210 Richfield Rd.
40221	3230 Richfield Rd.
40222	3232 Richfield Rd.
40223	3246 Richfield Rd.
40224	3302 Richfield Rd.

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40225	3314 Richfield Rd.
40226	3402 Richfield Rd.
40227	3538 Richfield Rd.
40228	3602 Richfield Rd.
40229	3608 Richfield Rd.
40230	3614 Richfield Rd.
40231	3620 Richfield Rd.
40232	3702 Richfield Rd.
40233	3706 Richfield Rd.
40234	3720 Richfield Rd.
40235	3726 Richfield Rd.
40236	3744 Richfield Rd.
40237	3746 Richfield Rd.
40238	3800 Richfield Rd.
40239	3820 Richfield Rd.
40240	3824 Richfield Rd.
40241	3826 Richfield Rd.
40242	3850 Richfield Rd.
40243	3850 Richfield Rd.
40244	1069 Ridgecrest Dr.
40245	1409 Ridgelawn Ave.
40246	1412 Ridgelawn Ave.
40247	1415 Ridgelawn Ave.
40248	1416 Ridgelawn Ave.
40249	1419 Ridgelawn Ave.
40250	1420 Ridgelawn Ave.
40251	1501 Ridgelawn Ave.
40252	1505 Ridgelawn Ave.
40253	1506 Ridgelawn Ave.
40254	1509 Ridgelawn Ave.
40255	1510 Ridgelawn Ave.
40256	1513 Ridgelawn Ave.
40257	1514 Ridgelawn Ave.
40258	301 Ridgeway Ave., E.
40259	302 Ridgeway Ave., E.
40260	305 Ridgeway Ave., E.
40261	306 Ridgeway Ave., E.
40262	309 Ridgeway Ave., E.
40263	310 Ridgeway Ave., E.
40264	313 Ridgeway Ave., E.
40265	314 Ridgeway Ave., E.
40266	317 Ridgeway Ave., E.
40267	318 Ridgeway Ave., E.
40268	321 Ridgeway Ave., E.
40269	322 Ridgeway Ave., E.
40270	326 Ridgeway Ave., E.
40271	329 Ridgeway Ave., E.
40272	330 Ridgeway Ave., E.

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40273	335 Ridgeway Ave., E.
40274	337 Ridgeway Ave., E.
40275	338 Ridgeway Ave., E.
40276	341 Ridgeway Ave., E.
40277	345 Ridgeway Ave., E.
40278	349 Ridgeway Ave., E.
40279	350 Ridgeway Ave., E.
40280	353 Ridgeway Ave., E.
40281	402 Ridgeway Ave., E.
40282	405 Ridgeway Ave., E.
40283	406 Ridgeway Ave., E.
40284	409 Ridgeway Ave., E.
40285	410 Ridgeway Ave., E.
40286	413 Ridgeway Ave., E.
40287	414 Ridgeway Ave., E.
40288	416 Ridgeway Ave., E.
40289	417 Ridgeway Ave., E.
40290	421 Ridgeway Ave., E.
40291	422 Ridgeway Ave., E.
40292	425 Ridgeway Ave., E.
40293	501 Ridgeway Ave., E.
40294	505 Ridgeway Ave., E.
40295	506 Ridgeway Ave., E.
40296	509 Ridgeway Ave., E.
40297	510 Ridgeway Ave., E.
40298	514 Ridgeway Ave., E.
40299	518 Ridgeway Ave., E.
40300	521 Ridgeway Ave., E.
40301	522 Ridgeway Ave., E.
40302	525 Ridgeway Ave., E.
40303	526 Ridgeway Ave., E.
40304	601 Ridgeway Ave., E.
40305	605 Ridgeway Ave., E.
40306	606 Ridgeway Ave., E.
40307	609 Ridgeway Ave., E.
40308	610 Ridgeway Ave., E.
40309	613 Ridgeway Ave., E.
40310	614 Ridgeway Ave., E.
40311	617 Ridgeway Ave., E.
40312	621 Ridgeway Ave., E.
40313	622 Ridgeway Ave., E.
40314	629 Ridgeway Ave., E.
40315	630 Ridgeway Ave., E.
40316	633 Ridgeway Ave., E.
40317	634 Ridgeway Ave., E.
40318	637 Ridgeway Ave., E.
40319	638 Ridgeway Ave., E.
40320	641 Ridgeway Ave., E.

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40321	642 Ridgeway Ave., E.
40322	645 Ridgeway Ave., E.
40323	713 Ridgeway Ave., E.
40324	717 Ridgeway Ave., E.
40325	722 Ridgeway Ave., E.
40326	725 Ridgeway Ave., E.
40327	729 Ridgeway Ave., E.
40328	730 Ridgeway Ave., E.
40329	734 Ridgeway Ave., E.
40330	737 Ridgeway Ave., E.
40331	738 Ridgeway Ave., E.
40332	743 Ridgeway Ave., E.
40333	746 Ridgeway Ave., E.
40334	749 Ridgeway Ave., E.
40335	754 Ridgeway Ave., E.
40336	757 Ridgeway Ave., E.
40337	762 Ridgeway Ave., E.
40338	765 Ridgeway Ave., E.
40339	766 Ridgeway Ave., E.
40340	770 Ridgeway Ave., E.
40341	774 Ridgeway Ave., E.
40342	802 Ridgeway Ave., E.
40343	806 Ridgeway Ave., E.
40344	810 Ridgeway Ave., E.
40345	820 Ridgeway Ave., E.
40346	902 Ridgeway Ave., E.
40347	912 Ridgeway Ave., E.
40348	916 Ridgeway Ave., E.
40349	920 Ridgeway Ave., E.
40350	1090 Ridgeway Ave., E.
40351	1063 Ridgeway Ave., E.
40352	1071 Ridgeway Ave., E.
40353	1079 Ridgeway Ave., E.
40354	1090 Ridgeway Ave., E.
40355	1105 Ridgeway Ave., E.
40356	1110 Ridgeway Ave., E.
40357	1113 Ridgeway Ave., E.
40358	1114 Ridgeway Ave., E.
40359	1118 Ridgeway Ave., E.
40360	1121 Ridgeway Ave., E.
40361	1126 Ridgeway Ave., E.
40362	1133 Ridgeway Ave., E.
40363	301 Ridgeway Ave., W.
40364	302 Ridgeway Ave., W.
40365	305 Ridgeway Ave., W.
40366	306 Ridgeway Ave., W.
40367	309 Ridgeway Ave., W.
40368	310 Ridgeway Ave., W.

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40369	313 Ridgeway Ave., W.
40370	314 Ridgeway Ave., W.
40371	317 Ridgeway Ave., W.
40372	318 Ridgeway Ave., W.
40373	321 Ridgeway Ave., W.
40374	322 Ridgeway Ave., W.
40375	401 Ridgeway Ave., W.
40376	402 Ridgeway Ave., W.
40377	405 Ridgeway Ave., W.
40378	406 Ridgeway Ave., W.
40379	409 Ridgeway Ave., W.
40380	410 Ridgeway Ave., W.
40381	413 Ridgeway Ave., W.
40382	414 Ridgeway Ave., W.
40383	417 Ridgeway Ave., W.
40384	421 Ridgeway Ave., W.
40385	601 Ridgeway Ave., W.
40386	609 Ridgeway Ave., W.
40387	613 Ridgeway Ave., W.
40388	617 Ridgeway Ave., W.
40389	620 Ridgeway Ave., W.
40390	621 Ridgeway Ave., W.
40391	624 Ridgeway Ave., W.
40392	625 Ridgeway Ave., W.
40393	628 Ridgeway Ave., W.
40394	629 Ridgeway Ave., W.
40395	701 Ridgeway Ave., W.
40396	707 Ridgeway Ave., W.
40397	711 Ridgeway Ave., W.
40398	715 Ridgeway Ave., W.
40399	721 Ridgeway Ave., W.
40400	801 Ridgeway Ave., W.
40401	802 Ridgeway Ave., W.
40402	807 Ridgeway Ave., W.
40403	810 Ridgeway Ave., W.
40404	811 Ridgeway Ave., W.
40405	815 Ridgeway Ave., W.
40406	816 Ridgeway Ave., W.
40407	819 Ridgeway Ave., W.
40408	901 Ridgeway Ave., W.
40409	902 Ridgeway Ave., W.
40410	905 Ridgeway Ave., W.
40411	906 Ridgeway Ave., W.
40412	909 Ridgeway Ave., W.
40413	910 Ridgeway Ave., W.
40414	913 Ridgeway Ave., W.
40415	914 Ridgeway Ave., W.
40416	1001 Ridgeway Ave., W.

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40417	1002 Ridgeway Ave., W.
40418	1007 Ridgeway Ave., W.
40419	1008 Ridgeway Ave., W.
40420	1011 Ridgeway Ave., W.
40421	1012 Ridgeway Ave., W.
40422	1015 Ridgeway Ave., W.
40423	1016 Ridgeway Ave., W.
40424	1019 Ridgeway Ave., W.
40425	2801 Riegle Ave.
40426	2802 Riegle Ave.
40427	2808 Riegle Ave.
40428	2811 Riegle Ave.
40429	2814 Riegle Ave.
40430	2820 Riegle Ave.
40431	2826 Riegle Ave.
40432	2830 Riegle Ave.
40433	3115 Risedorph Ave.
40434	3116 Risedorph Ave.
40435	3119 Risedorph Ave.
40436	3120 Risedorph Ave.
40437	3127 Risedorph Ave.
40438	3128 Risedorph Ave.
40439	3131 Risedorph Ave.
40440	3132 Risedorph Ave.
40441	3135 Risedorph Ave.
40442	3136 Risedorph Ave.
40443	3139 Risedorph Ave.
40444	3140 Risedorph Ave.
40445	3143 Risedorph Ave.
40446	3144 Risedorph Ave.
40447	3147 Risedorph Ave.
40448	3148 Risedorph Ave.
40449	3151 Risedorph Ave.
40450	3152 Risedorph Ave.
40451	3155 Risedorph Ave.
40452	3156 Risedorph Ave.
40453	3201 Risedorph Ave.
40454	3202 Risedorph Ave.
40455	3205 Risedorph Ave.
40456	3208 Risedorph Ave.
40457	3209 Risedorph Ave.
40458	3213 Risedorph Ave.
40459	3216 Risedorph Ave.
40460	3217 Risedorph Ave.
40461	3220 Risedorph Ave.
40462	3221 Risedorph Ave.
40463	3223 Risedorph Ave.
40464	3224 Risedorph Ave.

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40465	3228 Risedorph Ave.
40466	3233 Risedorph Ave.
40467	3236 Risedorph Ave.
40468	3237 Risedorph Ave.
40469	3701 Risedorph Ave.
40470	3702 Risedorph Ave.
40471	3705 Risedorph Ave.
40472	3706 Risedorph Ave.
40473	3709 Risedorph Ave.
40474	3710 Risedorph Ave.
40475	3713 Risedorph Ave.
40476	3714 Risedorph Ave.
40477	3717 Risedorph Ave.
40478	3718 Risedorph Ave.
40479	3721 Risedorph Ave.
40480	3722 Risedorph Ave.
40481	3725 Risedorph Ave.
40482	3726 Risedorph Ave.
40483	3729 Risedorph Ave.
40484	3730 Risedorph Ave.
40485	3733 Risedorph Ave.
40486	3734 Risedorph Ave.
40487	3737 Risedorph Ave.
40488	3738 Risedorph Ave.
40489	3741 Risedorph Ave.
40490	3742 Risedorph Ave.
40491	3745 Risedorph Ave.
40492	3746 Risedorph Ave.
40493	3801 Risedorph Ave.
40494	3802 Risedorph Ave.
40495	3805 Risedorph Ave.
40496	3806 Risedorph Ave.
40497	3809 Risedorph Ave.
40498	3810 Risedorph Ave.
40499	3813 Risedorph Ave.
40500	3814 Risedorph Ave.
40501	3817 Risedorph Ave.
40502	3818 Risedorph Ave.
40503	3821 Risedorph Ave.
40504	3822 Risedorph Ave.
40505	3825 Risedorph Ave.
40506	3826 Risedorph Ave.
40507	3829 Risedorph Ave.
40508	3830 Risedorph Ave.
40509	3833 Risedorph Ave.
40510	3834 Risedorph Ave.
40511	3837 Risedorph Ave.
40512	3838 Risedorph Ave.

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40513	3841 Risedorph Ave.
40514	3842 Risedorph Ave.
40515	130 Riverbank Dr.
40516	1251 Riverdale Rd.
40517	1301 Riverdale Rd.
40518	1309 Riverdale Rd.
40519	1317 Riverdale Rd.
40520	1 Riverfront Ctr., W.
40521	2128 Riverside Dr.
40522	2132 Riverside Dr.
40523	2228 Riverside Dr.
40524	2404 Riverside Dr.
40525	2410 Riverside Dr.
40526	2414 Riverside Dr.
40527	2418 Riverside Dr.
40528	2422 Riverside Dr.
40529	2428 Riverside Dr.
40530	310 Robbie Ln.
40531	311 Robbie Ln.
40532	314 Robbie Ln.
40533	320 Robbie Ln.
40534	324 Robbie Ln.
40535	328 Robbie Ln.
40536	334 Robbie Ln.
40537	335 Robbie Ln.
40538	338 Robbie Ln.
40539	341 Robbie Ln.
40540	344 Robbie Ln.
40541	349 Robbie Ln.
40542	350 Robbie Ln.
40543	353 Robbie Ln.
40544	354 Robbie Ln.
40545	357 Robbie Ln.
40546	358 Robbie Ln.
40547	1101 Robert T. Longway Blvd.
40548	1150 Robert T. Longway Blvd.
40549	1150 Robert T. Longway Blvd.
40550	1160 Robert T. Longway Blvd.
40551	1164 Robert T. Longway Blvd.
40552	1172 Robert T. Longway Blvd.
40553	1174 Robert T. Longway Blvd.
40554	1174 Robert T. Longway Blvd.
40555	1176 Robert T. Longway Blvd.
40556	1198 Robert T. Longway Blvd.
40557	1225 Robert T. Longway Blvd.
40558	1364 Robert T. Longway Blvd.
40559	1818 Robert T. Longway Blvd.
40560	1910 Robert T. Longway Blvd.

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40561	1910 Robert T. Longway Blvd.
40562	2006 Robert T. Longway Blvd.
40563	2006 Robert T. Longway Blvd.
40564	2008 Robert T. Longway Blvd.
40565	2012 Robert T. Longway Blvd.
40566	2016 Robert T. Longway Blvd.
40567	2016 Robert T. Longway Blvd.
40568	2020 Robert T. Longway Blvd.
40569	2022 Robert T. Longway Blvd.
40570	2026 Robert T. Longway Blvd.
40571	2030 Robert T. Longway Blvd.
40572	2034 Robert T. Longway Blvd.
40573	2038 Robert T. Longway Blvd.
40574	2102 Robert T. Longway Blvd.
40575	2106 Robert T. Longway Blvd.
40576	2110 Robert T. Longway Blvd.
40577	2210 Robert T. Longway Blvd.
40578	2402 Robert T. Longway Blvd.
40579	2412 Robert T. Longway Blvd.
40580	2510 Robert T. Longway Blvd.
40581	2700 Robert T. Longway Blvd.
40582	2702 Robert T. Longway Blvd.
40583	2840 Robert T. Longway Blvd.
40584	2842 Robert T. Longway Blvd.
40585	2850 Robert T. Longway Blvd.
40586	2890 Robert T. Longway Blvd.
40587	2890 Robert T. Longway Blvd.
40588	2906 Robert T. Longway Blvd.
40589	2906 Robert T. Longway Blvd.
40590	2910 Robert T. Longway Blvd.
40591	2910 Robert T. Longway Blvd.
40592	2926 Robert T. Longway Blvd.
40593	2926 Robert T. Longway Blvd.
40594	3001 Robert T. Longway Blvd.
40595	3001 Robert T. Longway Blvd.
40596	3010 Robert T. Longway Blvd.
40597	3026 Robert T. Longway Blvd.
40598	3220 Robert T. Longway Blvd.
40599	3220 Robert T. Longway Blvd.
40600	3238 Robert T. Longway Blvd.
40601	3240 Robert T. Longway Blvd.
40602	3302 Robert T. Longway Blvd.
40603	3302 Robert T. Longway Blvd.
40604	3318 Robert T. Longway Blvd.
40605	3318 Robert T. Longway Blvd.
40606	3418 Robert T. Longway Blvd.
40607	3518 Robert T. Longway Blvd.
40608	3518 Robert T. Longway Blvd.

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40609	3708 Robert T. Longway Blvd.
40610	3708 Robert T. Longway Blvd.
40611	3724 Robert T. Longway Blvd.
40612	3728 Robert T. Longway Blvd.
40613	3728 Robert T. Longway Blvd.
40614	3752 Robert T. Longway Blvd.
40615	3752 Robert T. Longway Blvd.
40616	3800 Robert T. Longway Blvd.
40617	3838 Robert T. Longway Blvd.
40618	3842 Robert T. Longway Blvd.
40619	3842 Robert T. Longway Blvd.
40620	3846 Robert T. Longway Blvd.
40621	2700 Robert T. Longway Blvd.
40622	2700 Robert T. Longway Blvd.
40623	3001 Robert T. Longway Blvd.
40624	4212 Roberts St.
40625	4301 Roberts St.
40626	4302 Roberts St.
40627	4309 Roberts St.
40628	4313 Roberts St.
40629	4314 Roberts St.
40630	4317 Roberts St.
40631	4318 Roberts St.
40632	4401 Roberts St.
40633	4402 Roberts St.
40634	4405 Roberts St.
40635	4406 Roberts St.
40636	4512 Roberts St.
40637	4513 Roberts St.
40638	4517 Roberts St.
40639	4520 Roberts St.
40640	4521 Roberts St.
40641	4602 Roberts St.
40642	4609 Roberts St.
40643	4610 Roberts St.
40644	4618 Roberts St.
40645	3404 Robin St.
40646	3409 Robin St.
40647	3413 Robin St.
40648	3414 Robin St.
40649	3418 Robin St.
40650	3419 Robin St.
40651	3422 Robin St.
40652	3501 Robin St.
40653	3502 Robin St.
40654	3505 Robin St.
40655	3506 Robin St.
40656	3510 Robin St.

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40657	3513 Robin St.
40658	3516 Robin St.
40659	3517 Robin St.
40660	3518 Robin St.
40661	3601 Robin St.
40662	3602 Robin St.
40663	3605 Robin St.
40664	3606 Robin St.
40665	3609 Robin St.
40666	3610 Robin St.
40667	3613 Robin St.
40668	3614 Robin St.
40669	3617 Robin St.
40670	3621 Robin St.
40671	3625 Robin St.
40672	3626 Robin St.
40673	3701 Robin St.
40674	3702 Robin St.
40675	3706 Robin St.
40676	3709 Robin St.
40677	3710 Robin St.
40678	1802 Rockcreek Ln.
40679	1805 Rockcreek Ln.
40680	1806 Rockcreek Ln.
40681	1809 Rockcreek Ln.
40682	1810 Rockcreek Ln.
40683	1813 Rockcreek Ln.
40684	1814 Rockcreek Ln.
40685	1817 Rockcreek Ln.
40686	1818 Rockcreek Ln.
40687	1821 Rockcreek Ln.
40688	1822 Rockcreek Ln.
40689	1825 Rockcreek Ln.
40690	1826 Rockcreek Ln.
40691	1829 Rockcreek Ln.
40692	1830 Rockcreek Ln.
40693	1834 Rockcreek Ln.
40694	1837 Rockcreek Ln.
40695	1901 Rockcreek Ln.
40696	1902 Rockcreek Ln.
40697	1905 Rockcreek Ln.
40698	1906 Rockcreek Ln.
40699	1909 Rockcreek Ln.
40700	1910 Rockcreek Ln.
40701	1913 Rockcreek Ln.
40702	1914 Rockcreek Ln.
40703	1917 Rockcreek Ln.
40704	1918 Rockcreek Ln.

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40705	1921 Rockcreek Ln.
40706	1922 Rockcreek Ln.
40707	1925 Rockcreek Ln.
40708	1926 Rockcreek Ln.
40709	1929 Rockcreek Ln.
40710	1930 Rockcreek Ln.
40711	1933 Rockcreek Ln.
40712	1934 Rockcreek Ln.
40713	1937 Rockcreek Ln.
40714	2260 Ronn Dr.
40715	607 Roome Ct.
40716	608 Roome Ct.
40717	611 Roome Ct.
40718	616 Roome Ct.
40719	617 Roome Ct.
40720	620 Roome Ct.
40721	621 Roome Ct.
40722	624 Roome Ct.
40723	625 Roome Ct.
40724	628 Roome Ct.
40725	629 Roome Ct.
40726	1230 Roosevelt Ave.
40727	1232 Roosevelt Ave.
40728	1234 Roosevelt Ave.
40729	1242 Roosevelt Ave.
40730	1249 Roosevelt Ave.
40731	1250 Roosevelt Ave.
40732	1301 Roosevelt Ave.
40733	1306 Roosevelt Ave.
40734	1309 Roosevelt Ave.
40735	1310 Roosevelt Ave.
40736	1313 Roosevelt Ave.
40737	1314 Roosevelt Ave.
40738	1317 Roosevelt Ave.
40739	1318 Roosevelt Ave.
40740	1321 Roosevelt Ave.
40741	1322 Roosevelt Ave.
40742	1325 Roosevelt Ave.
40743	1326 Roosevelt Ave.
40744	1352 Roosevelt Ave.
40745	1355 Roosevelt Ave.
40746	1356 Roosevelt Ave.
40747	1359 Roosevelt Ave.
40748	1360 Roosevelt Ave.
40749	1363 Roosevelt Ave.
40750	1364 Roosevelt Ave.
40751	1367 Roosevelt Ave.
40752	1368 Roosevelt Ave.

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40753	1371 Roosevelt Ave.
40754	1375 Roosevelt Ave.
40755	1376 Roosevelt Ave.
40756	1379 Roosevelt Ave.
40757	1380 Roosevelt Ave.
40758	1381 Roosevelt Ave.
40759	1383 Roosevelt Ave.
40760	1384 Roosevelt Ave.
40761	1402 Roosevelt Ave.
40762	1406 Roosevelt Ave.
40763	1409 Roosevelt Ave.
40764	1410 Roosevelt Ave.
40765	1413 Roosevelt Ave.
40766	1414 Roosevelt Ave.
40767	1416 Roosevelt Ave.
40768	1417 Roosevelt Ave.
40769	1421 Roosevelt Ave.
40770	1424 Roosevelt Ave.
40771	1428 Roosevelt Ave.
40772	815 Root St.
40773	819 Root St.
40774	907 Root St.
40775	909 Root St.
40776	913 Root St.
40777	1004 Root St.
40778	1005 Root St.
40779	1006 Root St.
40780	1012 Root St.
40781	1028 Root St.
40782	1031 Root St.
40783	1036 Root St.
40784	1103 Root St.
40785	1112 Root St.
40786	1116 Root St.
40787	1119 Root St.
40788	1122 Root St.
40789	1131 Root St.
40790	1214 Root St.
40791	1215 Root St.
40792	1220 Root St.
40793	1221 Root St.
40794	1302 Root St.
40795	1303 Root St.
40796	1314 Root St.
40797	1321 Root St.
40798	1406 Root St.
40799	1413 Root St.
40800	1423 Root St.

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40801	1427 Root St.
40802	1513 Root St.
40803	1517 Root St.
40804	1521 Root St.
40805	1525 Root St.
40806	1529 Root St.
40807	1533 Root St.
40808	1541 Root St.
40809	1605 Root St.
40810	1613 Root St.
40811	1713 Root St.
40812	1913 Root St.
40813	1914 Root St.
40814	1917 Root St.
40815	1920 Root St.
40816	1926 Root St.
40817	2001 Root St.
40818	2002 Root St.
40819	2005 Root St.
40820	2008 Root St.
40821	113 Rosalie Dr.
40822	117 Rosalie Dr.
40823	121 Rosalie Dr.
40824	6701 Roseanna Dr.
40825	6702 Roseanna Dr.
40826	6707 Roseanna Dr.
40827	6713 Roseanna Dr.
40828	6714 Roseanna Dr.
40829	6801 Roseanna Dr.
40830	6802 Roseanna Dr.
40831	6807 Roseanna Dr.
40832	6813 Roseanna Dr.
40833	6814 Roseanna Dr.
40834	6819 Roseanna Dr.
40835	6825 Roseanna Dr.
40836	6901 Roseanna Dr.
40837	6902 Roseanna Dr.
40838	6906 Roseanna Dr.
40839	6907 Roseanna Dr.
40840	6912 Roseanna Dr.
40841	6915 Roseanna Dr.
40842	6920 Roseanna Dr.
40843	6924 Roseanna Dr.
40844	7001 Roseanna Dr.
40845	7002 Roseanna Dr.
40846	7006 Roseanna Dr.
40847	7007 Roseanna Dr.
40848	7012 Roseanna Dr.

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40849	1064 Rosedale Ave.
40850	1076 Rosedale Ave.
40851	1085 Rosedale Ave.
40852	1105 Rosedale Ave.
40853	1109 Rosedale Ave.
40854	1113 Rosedale Ave.
40855	1117 Rosedale Ave.
40856	1118 Rosedale Ave.
40857	1121 Rosedale Ave.
40858	1122 Rosedale Ave.
40859	1125 Rosedale Ave.
40860	1129 Rosedale Ave.
40861	2012 Roseland Ave.
40862	2024 Roseland Ave.
40863	1705 Roselawn Dr.
40864	1706 Roselawn Dr.
40865	1709 Roselawn Dr.
40866	1710 Roselawn Dr.
40867	1713 Roselawn Dr.
40868	1714 Roselawn Dr.
40869	1717 Roselawn Dr.
40870	1718 Roselawn Dr.
40871	1721 Roselawn Dr.
40872	1722 Roselawn Dr.
40873	1725 Roselawn Dr.
40874	1726 Roselawn Dr.
40875	1801 Roselawn Dr.
40876	1802 Roselawn Dr.
40877	1805 Roselawn Dr.
40878	1806 Roselawn Dr.
40879	1809 Roselawn Dr.
40880	1810 Roselawn Dr.
40881	1813 Roselawn Dr.
40882	1814 Roselawn Dr.
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40885	1821 Roselawn Dr.
40886	1822 Roselawn Dr.
40887	1825 Roselawn Dr.
40888	1826 Roselawn Dr.
40889	1901 Roselawn Dr.
40890	1902 Roselawn Dr.
40891	1905 Roselawn Dr.
40892	1906 Roselawn Dr.
40893	1909 Roselawn Dr.
40894	1910 Roselawn Dr.
40895	1913 Roselawn Dr.
40896	1914 Roselawn Dr.

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40897	1917 Roselawn Dr.
40898	1918 Roselawn Dr.
40899	1921 Roselawn Dr.
40900	1922 Roselawn Dr.
40901	2040 Rosemary Ave.
40902	2044 Rosemary Ave.
40903	2052 Rosemary Ave.
40904	106 Russell Ave., E.
40905	109 Russell Ave., E.
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40909	117 Russell Ave., E.
40910	118 Russell Ave., E.
40911	122 Russell Ave., E.
40912	125 Russell Ave., E.
40913	126 Russell Ave., E.
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40944	238 Russell Ave., E.

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40945	239 Russell Ave., E.
40946	242 Russell Ave., E.
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40986	427 Russell Ave., E.
40987	501 Russell Ave., E.
40988	502 Russell Ave., E.
40989	506 Russell Ave., E.
40990	509 Russell Ave., E.
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40992	513 Russell Ave., E.

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41023	758 Russell Ave., E.
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41025	762 Russell Ave., E.
41026	774 Russell Ave., E.
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41036	906 Russell Ave., E.
41037	917 Russell Ave., E.
41038	921 Russell Ave., E.
41039	937 Russell Ave., E.
41040	942 Russell Ave., E.

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41043	1009 Russell Ave., E.
41044	1010 Russell Ave., E.
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41053	1046 Russell Ave., E.
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41063	1174 Russell Ave., E.
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41066	1187 Russell Ave., E.
41067	1191 Russell Ave., E.
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41069	1198 Russell Ave., E.
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41072	113 Russell Ave., W.
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41084	224 Russell Ave., W.
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41088	310 Russell Ave., W.

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41101	429 Russell Ave., W.
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41106	510 Russell Ave., W.
41107	513 Russell Ave., W.
41108	517 Russell Ave., W.
41109	521 Russell Ave., W.
41110	522 Russell Ave., W.
41111	605 Russell Ave., W.
41112	609 Russell Ave., W.
41113	6701 Russet Ct.
41114	6702 Russet Ct.
41115	6708 Russet Ct.
41116	6709 Russet Ct.
41117	6714 Russet Ct.
41118	6715 Russet Ct.
41119	6720 Russet Ct.
41120	6721 Russet Ct.
41121	1607 Russet Pl.
41122	1608 Russet Pl.
41123	1613 Russet Pl.
41124	1614 Russet Pl.
41125	1617 Russet Pl.
41126	1701 Russet Pl.
41127	1705 Russet Pl.
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41129	1711 Russet Pl.
41130	1717 Russet Pl.
41131	1801 Russet Pl.
41132	1807 Russet Pl.
41133	1810 Russet Pl.
41134	1811 Russet Pl.
41135	1815 Russet Pl.
41136	1816 Russet Pl.

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41137	1821 Russet Pl.
41138	101 Ruth Ave., E.
41139	101 Ruth Ave., E.
41140	106 Ruth Ave., E.
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41142	110 Ruth Ave., E.
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41155	143 Ruth Ave., E.
41156	146 Ruth Ave., E.
41157	150 Ruth Ave., E.
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41165	210 Ruth Ave., E.
41166	213 Ruth Ave., E.
41167	214 Ruth Ave., E.
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41170	222 Ruth Ave., E.
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41178	250 Ruth Ave., E.
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41181	257 Ruth Ave., E.
41182	260 Ruth Ave., E.
41183	301 Ruth Ave., E.
41184	302 Ruth Ave., E.

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41185	306 Ruth Ave., E.
41186	309 Ruth Ave., E.
41187	310 Ruth Ave., E.
41188	314 Ruth Ave., E.
41189	317 Ruth Ave., E.
41190	318 Ruth Ave., E.
41191	321 Ruth Ave., E.
41192	322 Ruth Ave., E.
41193	325 Ruth Ave., E.
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41196	334 Ruth Ave., E.
41197	336 Ruth Ave., E.
41198	337 Ruth Ave., E.
41199	341 Ruth Ave., E.
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41201	345 Ruth Ave., E.
41202	353 Ruth Ave., E.
41203	354 Ruth Ave., E.
41204	357 Ruth Ave., E.
41205	358 Ruth Ave., E.
41206	401 Ruth Ave., E.
41207	402 Ruth Ave., E.
41208	405 Ruth Ave., E.
41209	406 Ruth Ave., E.
41210	410 Ruth Ave., E.
41211	413 Ruth Ave., E.
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41213	417 Ruth Ave., E.
41214	421 Ruth Ave., E.
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41225	525 Ruth Ave., E.
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41227	605 Ruth Ave., E.
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41229	609 Ruth Ave., E.
41230	614 Ruth Ave., E.
41231	618 Ruth Ave., E.
41232	621 Ruth Ave., E.

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41233	622 Ruth Ave., E.
41234	625 Ruth Ave., E.
41235	630 Ruth Ave., E.
41236	633 Ruth Ave., E.
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41241	642 Ruth Ave., E.
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41245	726 Ruth Ave., E.
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41253	750 Ruth Ave., E.
41254	754 Ruth Ave., E.
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41256	766 Ruth Ave., E.
41257	770 Ruth Ave., E.
41258	774 Ruth Ave., E.
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41262	810 Ruth Ave., E.
41263	814 Ruth Ave., E.
41264	818 Ruth Ave., E.
41265	822 Ruth Ave., E.
41266	901 Ruth Ave., E.
41267	902 Ruth Ave., E.
41268	906 Ruth Ave., E.
41269	910 Ruth Ave., E.
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41279	942 Ruth Ave., E.
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41281	946 Ruth Ave., E.
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41285	1006 Ruth Ave., E.
41286	1033 Ruth Ave., E.
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41295	1162 Ruth Ave., E.
41296	1167 Ruth Ave., E.
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41299	1175 Ruth Ave., E.
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41301	1179 Ruth Ave., E.
41302	1182 Ruth Ave., E.
41303	1183 Ruth Ave., E.
41304	1186 Ruth Ave., E.
41305	1187 Ruth Ave., E.
41306	1190 Ruth Ave., E.
41307	1194 Ruth Ave., E.
41308	1195 Ruth Ave., E.
41309	1198 Ruth Ave., E.
41310	1199 Ruth Ave., E.
41311	105 Ruth Ave., W.
41312	106 Ruth Ave., W.
41313	109 Ruth Ave., W.
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41315	113 Ruth Ave., W.
41316	114 Ruth Ave., W.
41317	117 Ruth Ave., W.
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41319	201 Ruth Ave., W.
41320	202 Ruth Ave., W.
41321	207 Ruth Ave., W.
41322	209 Ruth Ave., W.
41323	212 Ruth Ave., W.
41324	214 Ruth Ave., W.
41325	217 Ruth Ave., W.
41326	221 Ruth Ave., W.
41327	222 Ruth Ave., W.
41328	301 Ruth Ave., W.

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41329	305 Ruth Ave., W.
41330	309 Ruth Ave., W.
41331	313 Ruth Ave., W.
41332	314 Ruth Ave., W.
41333	317 Ruth Ave., W.
41334	318 Ruth Ave., W.
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41346	506 Ruth Ave., W.
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41358	609 Ruth Ave., W.
41359	610 Ruth Ave., W.
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41361	614 Ruth Ave., W.
41362	617 Ruth Ave., W.
41363	618 Ruth Ave., W.
41364	622 Ruth Ave., W.
41365	626 Ruth Ave., W.
41366	629 Ruth Ave., W.
41367	630 Ruth Ave., W.
41368	633 Ruth Ave., W.
41369	634 Ruth Ave., W.
41370	637 Ruth Ave., W.
41371	638 Ruth Ave., W.
41372	641 Ruth Ave., W.
41373	642 Ruth Ave., W.
41374	645 Ruth Ave., W.
41375	646 Ruth Ave., W.
41376	400 Saginaw St., N.

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41377	400 Saginaw St., N.
41378	400 Saginaw St., N.
41379	432 Saginaw St., N.
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41402	1001 Saginaw St., N.
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41501	3505 Saginaw St., N.
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41515	3817 Saginaw St., N.
41516	3817 Saginaw St., N.
41517	3901 Saginaw St., N.
41518	3907 Saginaw St., N.
41519	3922 Saginaw St., N.
41520	4001 Saginaw St., N.

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41521	4050 Saginaw St., N.
41522	4108 Saginaw St., N.
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41524	4205 Saginaw St., N.
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41552	4808 Saginaw St., N.
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41554	4901 Saginaw St., N.
41555	4907 Saginaw St., N.
41556	4907 Saginaw St., N.
41557	4912 Saginaw St., N.
41558	4913 Saginaw St., N.
41559	4915 Saginaw St., N.
41560	5001 Saginaw St., N.
41561	5002 Saginaw St., N.
41562	5009 Saginaw St., N.
41563	5013 Saginaw St., N.
41564	5018 Saginaw St., N.
41565	5101 Saginaw St., N.
41566	5101 Saginaw St., N.
41567	5106 Saginaw St., N.
41568	5111 Saginaw St., N.

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41569	5201 Saginaw St., N.
41570	5217 Saginaw St., N.
41571	5217 Saginaw St., N.
41572	5301 Saginaw St., N.
41573	5301 Saginaw St., N.
41574	5317 Saginaw St., N.
41575	5414 Saginaw St., N.
41576	5421 Saginaw St., N.
41577	5517 Saginaw St., N.
41578	5518 Saginaw St., N.
41579	5525 Saginaw St., N.
41580	5533 Saginaw St., N.
41581	5533 Saginaw St., N.
41582	5601 Saginaw St., N.
41583	5602 Saginaw St., N.
41584	5635 Saginaw St., N.
41585	5701 Saginaw St., N.
41586	5717 Saginaw St., N.
41587	5721 Saginaw St., N.
41588	5801 Saginaw St., N.
41589	5801 Saginaw St., N.
41590	5811 Saginaw St., N.
41591	5813 Saginaw St., N.
41592	5817 Saginaw St., N.
41593	5901 Saginaw St., N.
41594	5905 Saginaw St., N.
41595	5917 Saginaw St., N.
41596	5917 Saginaw St., N.
41597	6009 Saginaw St., N.
41598	6013 Saginaw St., N.
41599	6017 Saginaw St., N.
41600	6101 Saginaw St., N.
41601	6101 Saginaw St., N.
41602	6101 Saginaw St., N.
41603	6119 Saginaw St., N.
41604	6123 Saginaw St., N.
41605	6125 Saginaw St., N.
41606	6201 Saginaw St., N.
41607	6201 Saginaw St., N.
41608	6204 Saginaw St., N.
41609	6209 Saginaw St., N.
41610	6217 Saginaw St., N.
41611	6301 Saginaw St., N.
41612	6307 Saginaw St., N.
41613	6313 Saginaw St., N.
41614	6317 Saginaw St., N.
41615	6401 Saginaw St., N.
41616	6413 Saginaw St., N.

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41617	6502 Saginaw St., N.
41618	6509 Saginaw St., N.
41619	6509 Saginaw St., N.
41620	6601 Saginaw St., N.
41621	6609 Saginaw St., N.
41622	6615 Saginaw St., N.
41623	6701 Saginaw St., N.
41624	6714 Saginaw St., N.
41625	6715 Saginaw St., N.
41626	6801 Saginaw St., N.
41627	6801 Saginaw St., N.
41628	6809 Saginaw St., N.
41629	6809 Saginaw St., N.
41630	6817 Saginaw St., N.
41631	6817 Saginaw St., N.
41632	6901 Saginaw St., N.
41633	6925 Saginaw St., N.
41634	7015 Saginaw St., N.
41635	7015 Saginaw St., N.
41636	7021 Saginaw St., N.
41637	7021 Saginaw St., N.
41638	7022 Saginaw St., N.
41639	7022 Saginaw St., N.
41640	2712 Saginaw St., N.
41641	2712 Saginaw St., N.
41642	2712 Saginaw St., N.
41643	2712 Saginaw St., N.
41644	2712 Saginaw St., N.
41645	2712 Saginaw St., N.
41646	2712 Saginaw St., N.
41647	2712 Saginaw St., N.
41648	2712 Saginaw St., N.
41649	3500 Saginaw St., N.
41650	3510 Saginaw St., N.
41651	3606 Saginaw St., N.
41652	3612 Saginaw St., N.
41653	3614 Saginaw St., N.
41654	3814 Saginaw St., N.
41655	3922 Saginaw St., N.
41656	3970 Saginaw St., N.
41657	4002 Saginaw St., N.
41658	4010 Saginaw St., N.
41659	4050 Saginaw St., N.
41660	4058 Saginaw St., N.
41661	4060 Saginaw St., N.
41662	4108 Saginaw St., N.
41663	4142 Saginaw St., N.
41664	4250 Saginaw St., N.

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41665	4316 Saginaw St., N.
41666	4414 Saginaw St., N.
41667	4514 Saginaw St., N.
41668	4522 Saginaw St., N.
41669	4622 Saginaw St., N.
41670	4702 Saginaw St., N.
41671	4712 Saginaw St., N.
41672	4804 Saginaw St., N.
41673	4812 Saginaw St., N.
41674	4818 Saginaw St., N.
41675	4900 Saginaw St., N.
41676	4902 Saginaw St., N.
41677	4912 Saginaw St., N.
41678	5002 Saginaw St., N.
41679	5010 Saginaw St., N.
41680	5014 Saginaw St., N.
41681	5106 Saginaw St., N.
41682	5302 Saginaw St., N.
41683	5306 Saginaw St., N.
41684	5322 Saginaw St., N.
41685	5402 Saginaw St., N.
41686	5410 Saginaw St., N.
41687	5414 Saginaw St., N.
41688	5420 Saginaw St., N.
41689	5502 Saginaw St., N.
41690	5518 Saginaw St., N.
41691	5602 Saginaw St., N.
41692	5606 Saginaw St., N.
41693	5610 Saginaw St., N.
41694	5710 Saginaw St., N.
41695	6122 Saginaw St., N.
41696	6204 Saginaw St., N.
41697	6302 Saginaw St., N.
41698	6314 Saginaw St., N.
41699	6402 Saginaw St., N.
41700	6418 Saginaw St., N.
41701	6502 Saginaw St., N.
41702	6510 Saginaw St., N.
41703	6518 Saginaw St., N.
41704	6602 Saginaw St., N.
41705	6606 Saginaw St., N.
41706	6620 Saginaw St., N.
41707	6702 Saginaw St., N.
41708	6704 Saginaw St., N.
41709	6714 Saginaw St., N.
41710	6804 Saginaw St., N.
41711	6834 Saginaw St., N.
41712	6906 Saginaw St., N.

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41713	6924 Saginaw St., N.
41714	7022 Saginaw St., N.
41715	303 Saginaw St., S.
41716	303 Saginaw St., S.
41717	303 Saginaw St., S.
41718	303 Saginaw St., S.
41719	303 Saginaw St., S.
41720	303 Saginaw St., S.
41721	303 Saginaw St., S.
41722	303 Saginaw St., S.
41723	303 Saginaw St., S.
41724	303 Saginaw St., S.
41725	303 Saginaw St., S.
41726	328 Saginaw St., S.
41727	328 Saginaw St., S.
41728	328 Saginaw St., S.
41729	328 Saginaw St., S.
41730	328 Saginaw St., S.
41731	328 Saginaw St., S.
41732	328 Saginaw St., S.
41733	328 Saginaw St., S.
41734	328 Saginaw St., S.
41735	328 Saginaw St., S.
41736	340 Saginaw St., S.
41737	340 Saginaw St., S.
41738	344 Saginaw St., S.
41739	352 Saginaw St., S.
41740	400 Saginaw St., S.
41741	400 Saginaw St., S.
41742	412 Saginaw St., S.
41743	412 Saginaw St., S.
41744	412 Saginaw St., S.
41745	412 Saginaw St., S.
41746	420 Saginaw St., S.
41747	424 Saginaw St., S.
41748	424 Saginaw St., S.
41749	428 Saginaw St., S.
41750	428 Saginaw St., S.
41751	432 Saginaw St., S.
41752	436 Saginaw St., S.
41753	436 Saginaw St., S.
41754	436 Saginaw St., S.
41755	436 Saginaw St., S.
41756	444 Saginaw St., S.
41757	444 Saginaw St., S.
41758	448 Saginaw St., S.
41759	452 Saginaw St., S.
41760	460 Saginaw St., S.

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41761	502 Saginaw St., S.
41762	503 Saginaw St., S.
41763	503 Saginaw St., S.
41764	503 Saginaw St., S.
41765	503 Saginaw St., S.
41766	503 Saginaw St., S.
41767	503 Saginaw St., S.
41768	503 Saginaw St., S.
41769	503 Saginaw St., S.
41770	503 Saginaw St., S.
41771	503 Saginaw St., S.
41772	503 Saginaw St., S.
41773	503 Saginaw St., S.
41774	503 Saginaw St., S.
41775	503 Saginaw St., S.
41776	503 Saginaw St., S.
41777	503 Saginaw St., S.
41778	503 Saginaw St., S.
41779	503 Saginaw St., S.
41780	503 Saginaw St., S.
41781	503 Saginaw St., S.
41782	503 Saginaw St., S.
41783	503 Saginaw St., S.
41784	503 Saginaw St., S.
41785	503 Saginaw St., S.
41786	503 Saginaw St., S.
41787	503 Saginaw St., S.
41788	503 Saginaw St., S.
41789	503 Saginaw St., S.
41790	503 Saginaw St., S.
41791	506 Saginaw St., S.
41792	510 Saginaw St., S.
41793	510 Saginaw St., S.
41794	518 Saginaw St., S.
41795	518 Saginaw St., S.
41796	519 Saginaw St., S.
41797	519 Saginaw St., S.
41798	519 Saginaw St., S.
41799	522 Saginaw St., S.
41800	522 Saginaw St., S.
41801	526 Saginaw St., S.
41802	532 Saginaw St., S.
41803	533 Saginaw St., S.
41804	538 Saginaw St., S.
41805	538 Saginaw St., S.
41806	539 Saginaw St., S.
41807	542 Saginaw St., S.
41808	545 Saginaw St., S.

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41809	550 Saginaw St., S.
41810	550 Saginaw St., S.
41811	551 Saginaw St., S.
41812	559 Saginaw St., S.
41813	565 Saginaw St., S.
41814	600 Saginaw St., S.
41815	601 Saginaw St., S.
41816	601 Saginaw St., S.
41817	601 Saginaw St., S.
41818	601 Saginaw St., S.
41819	601 Saginaw St., S.
41820	601 Saginaw St., S.
41821	601 Saginaw St., S.
41822	605 Saginaw St., S.
41823	615 Saginaw St., S.
41824	625 Saginaw St., S.
41825	629 Saginaw St., S.
41826	629 Saginaw St., S.
41827	635 Saginaw St., S.
41828	641 Saginaw St., S.
41829	647 Saginaw St., S.
41830	647 Saginaw St., S.
41831	649 Saginaw St., S.
41832	653 Saginaw St., S.
41833	653 Saginaw St., S.
41834	653 Saginaw St., S.
41835	653 Saginaw St., S.
41836	653 Saginaw St., S.
41837	653 Saginaw St., S.
41838	653 Saginaw St., S.
41839	653 Saginaw St., S.
41840	653 Saginaw St., S.
41841	655 Saginaw St., S.
41842	660 Saginaw St., S.
41843	711 Saginaw St., S.
41844	746 Saginaw St., S.
41845	755 Saginaw St., S.
41846	755 Saginaw St., S.
41847	755 Saginaw St., S.
41848	800 Saginaw St., S.
41849	800 Saginaw St., S.
41850	800 Saginaw St., S.
41851	801 Saginaw St., S.
41852	801 Saginaw St., S.
41853	801 Saginaw St., S.
41854	801 Saginaw St., S.
41855	801 Saginaw St., S.
41856	815 Saginaw St., S.

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41857	816 Saginaw St., S.
41858	836 Saginaw St., S.
41859	836 Saginaw St., S.
41860	900 Saginaw St., S.
41861	927 Saginaw St., S.
41862	927 Saginaw St., S.
41863	1101 Saginaw St., S.
41864	1201 Saginaw St., S.
41865	1201 Saginaw St., S.
41866	1206 Saginaw St., S.
41867	1208 Saginaw St., S.
41868	1209 Saginaw St., S.
41869	1209 Saginaw St., S.
41870	1214 Saginaw St., S.
41871	1214 Saginaw St., S.
41872	1401 Saginaw St., S.
41873	1401 Saginaw St., S.
41874	1402 Saginaw St., S.
41875	1402 Saginaw St., S.
41876	1410 Saginaw St., S.
41877	1410 Saginaw St., S.
41878	1501 Saginaw St., S.
41879	1514 Saginaw St., S.
41880	1514 Saginaw St., S.
41881	1515 Saginaw St., S.
41882	1520 Saginaw St., S.
41883	1525 Saginaw St., S.
41884	1530 Saginaw St., S.
41885	1537 Saginaw St., S.
41886	1600 Saginaw St., S.
41887	1600 Saginaw St., S.
41888	1607 Saginaw St., S.
41889	1611 Saginaw St., S.
41890	1613 Saginaw St., S.
41891	1613 Saginaw St., S.
41892	1621 Saginaw St., S.
41893	1621 Saginaw St., S.
41894	1628 Saginaw St., S.
41895	1638 Saginaw St., S.
41896	1638 Saginaw St., S.
41897	1646 Saginaw St., S.
41898	1650 Saginaw St., S.
41899	1700 Saginaw St., S.
41900	1701 Saginaw St., S.
41901	1701 Saginaw St., S.
41902	1702 Saginaw St., S.
41903	1705 Saginaw St., S.
41904	1707 Saginaw St., S.

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41905	1714 Saginaw St., S.
41906	1714 Saginaw St., S.
41907	1801 Saginaw St., S.
41908	1802 Saginaw St., S.
41909	1802 Saginaw St., S.
41910	2001 Saginaw St., S.
41911	2032 Saginaw St., S.
41912	2032 Saginaw St., S.
41913	2101 Saginaw St., S.
41914	2117 Saginaw St., S.
41915	2127 Saginaw St., S.
41916	2134 Saginaw St., S.
41917	2134 Saginaw St., S.
41918	2147 Saginaw St., S.
41919	2147 Saginaw St., S.
41920	2201 Saginaw St., S.
41921	2211 Saginaw St., S.
41922	2240 Saginaw St., S.
41923	2240 Saginaw St., S.
41924	2254 Saginaw St., S.
41925	2304 Saginaw St., S.
41926	2304 Saginaw St., S.
41927	2307 Saginaw St., S.
41928	2307 Saginaw St., S.
41929	2310 Saginaw St., S.
41930	2310 Saginaw St., S.
41931	2323 Saginaw St., S.
41932	2324 Saginaw St., S.
41933	2400 Saginaw St., S.
41934	2404 Saginaw St., S.
41935	2408 Saginaw St., S.
41936	2408 Saginaw St., S.
41937	2417 Saginaw St., S.
41938	2500 Saginaw St., S.
41939	2501 Saginaw St., S.
41940	2501 Saginaw St., S.
41941	2505 Saginaw St., S.
41942	2508 Saginaw St., S.
41943	2512 Saginaw St., S.
41944	2517 Saginaw St., S.
41945	2517 Saginaw St., S.
41946	2601 Saginaw St., S.
41947	2604 Saginaw St., S.
41948	2612 Saginaw St., S.
41949	2623 Saginaw St., S.
41950	2623 Saginaw St., S.
41951	2624 Saginaw St., S.
41952	2626 Saginaw St., S.

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41953	2705 Saginaw St., S.
41954	2706 Saginaw St., S.
41955	2706 Saginaw St., S.
41956	2709 Saginaw St., S.
41957	2713 Saginaw St., S.
41958	2716 Saginaw St., S.
41959	2717 Saginaw St., S.
41960	2724 Saginaw St., S.
41961	2724 Saginaw St., S.
41962	2805 Saginaw St., S.
41963	2809 Saginaw St., S.
41964	2809 Saginaw St., S.
41965	2813 Saginaw St., S.
41966	2817 Saginaw St., S.
41967	2820 Saginaw St., S.
41968	2901 Saginaw St., S.
41969	2905 Saginaw St., S.
41970	2905 Saginaw St., S.
41971	2915 Saginaw St., S.
41972	2921 Saginaw St., S.
41973	3001 Saginaw St., S.
41974	3009 Saginaw St., S.
41975	3016 Saginaw St., S.
41976	3205 Saginaw St., S.
41977	3205 Saginaw St., S.
41978	3207 Saginaw St., S.
41979	3207 Saginaw St., S.
41980	3212 Saginaw St., S.
41981	3213 Saginaw St., S.
41982	3217 Saginaw St., S.
41983	3222 Saginaw St., S.
41984	3302 Saginaw St., S.
41985	3303 Saginaw St., S.
41986	3305 Saginaw St., S.
41987	3308 Saginaw St., S.
41988	3312 Saginaw St., S.
41989	3313 Saginaw St., S.
41990	3313 Saginaw St., S.
41991	3318 Saginaw St., S.
41992	3402 Saginaw St., S.
41993	3408 Saginaw St., S.
41994	3410 Saginaw St., S.
41995	3414 Saginaw St., S.
41996	3420 Saginaw St., S.
41997	3423 Saginaw St., S.
41998	3432 Saginaw St., S.
41999	3508 Saginaw St., S.
42000	3508 Saginaw St., S.

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42001	3508 Saginaw St., S.
42002	3514 Saginaw St., S.
42003	3518 Saginaw St., S.
42004	3518 Saginaw St., S.
42005	3526 Saginaw St., S.
42006	3530 Saginaw St., S.
42007	3534 Saginaw St., S.
42008	3537 Saginaw St., S.
42009	3602 Saginaw St., S.
42010	3606 Saginaw St., S.
42011	3606 Saginaw St., S.
42012	3606 Saginaw St., S.
42013	3610 Saginaw St., S.
42014	3624 Saginaw St., S.
42015	3637 Saginaw St., S.
42016	3637 Saginaw St., S.
42017	3638 Saginaw St., S.
42018	3640 Saginaw St., S.
42019	3640 Saginaw St., S.
42020	3725 Saginaw St., S.
42021	3725 Saginaw St., S.
42022	3725 Saginaw St., S.
42023	3725 Saginaw St., S.
42024	3730 Saginaw St., S.
42025	3801 Saginaw St., S.
42026	3801 Saginaw St., S.
42027	3805 Saginaw St., S.
42028	3805 Saginaw St., S.
42029	3805 Saginaw St., S.
42030	3841 Saginaw St., S.
42031	3841 Saginaw St., S.
42032	3907 Saginaw St., S.
42033	3907 Saginaw St., S.
42034	3929 Saginaw St., S.
42035	3929 Saginaw St., S.
42036	4000 Saginaw St., S.
42037	4000 Saginaw St., S.
42038	4000 Saginaw St., S.
42039	4000 Saginaw St., S.
42040	4003 Saginaw St., S.
42041	4005 Saginaw St., S.
42042	4009 Saginaw St., S.
42043	4011 Saginaw St., S.
42044	4011 Saginaw St., S.
42045	4041 Saginaw St., S.
42046	4041 Saginaw St., S.
42047	4100 Saginaw St., S.
42048	4100 Saginaw St., S.

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42049	4100 Saginaw St., S.
42050	4103 Saginaw St., S.
42051	4129 Saginaw St., S.
42052	4225 Saginaw St., S.
42053	4229 Saginaw St., S.
42054	4229 Saginaw St., S.
42055	4300 Saginaw St., S.
42056	4300 Saginaw St., S.
42057	4300 Saginaw St., S.
42058	4301 Saginaw St., S.
42059	4301 Saginaw St., S.
42060	4305 Saginaw St., S.
42061	4307 Saginaw St., S.
42062	4313 Saginaw St., S.
42063	4317 Saginaw St., S.
42064	4317 Saginaw St., S.
42065	4341 Saginaw St., S.
42066	4345 Saginaw St., S.
42067	4347 Saginaw St., S.
42068	4400 Saginaw St., S.
42069	4400 Saginaw St., S.
42070	4400 Saginaw St., S.
42071	4400 Saginaw St., S.
42072	4400 Saginaw St., S.
42073	4400 Saginaw St., S.
42074	4400 Saginaw St., S.
42075	4425 Saginaw St., S.
42076	4441 Saginaw St., S.
42077	4441 Saginaw St., S.
42078	4500 Saginaw St., S.
42079	4500 Saginaw St., S.
42080	4509 Saginaw St., S.
42081	4509 Saginaw St., S.
42082	4511 Saginaw St., S.
42083	4511 Saginaw St., S.
42084	4515 Saginaw St., S.
42085	4617 Saginaw St., S.
42086	4621 Saginaw St., S.
42087	4621 Saginaw St., S.
42088	4629 Saginaw St., S.
42089	4645 Saginaw St., S.
42090	4653 Saginaw St., S.
42091	913 Salisbury Ave.
42092	917 Salisbury Ave.
42093	923 Salisbury Ave.
42094	929 Salisbury Ave.
42095	933 Salisbury Ave.
42096	938 Salisbury Ave.

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42097	939 Salisbury Ave.
42098	944 Salisbury Ave.
42099	945 Salisbury Ave.
42100	948 Salisbury Ave.
42101	949 Salisbury Ave.
42102	951 Salisbury Ave.
42103	952 Salisbury Ave.
42104	955 Salisbury Ave.
42105	956 Salisbury Ave.
42106	959 Salisbury Ave.
42107	960 Salisbury Ave.
42108	963 Salisbury Ave.
42109	964 Salisbury Ave.
42110	967 Salisbury Ave.
42111	968 Salisbury Ave.
42112	971 Salisbury Ave.
42113	975 Salisbury Ave.
42114	978 Salisbury Ave.
42115	979 Salisbury Ave.
42116	982 Salisbury Ave.
42117	983 Salisbury Ave.
42118	986 Salisbury Ave.
42119	987 Salisbury Ave.
42120	990 Salisbury Ave.
42121	1024 Salisbury Ave.
42122	1028 Salisbury Ave.
42123	3201 Salishan Cir.
42124	3201 Salishan Cir.
42125	3202 Salishan Cir.
42126	3205 Salishan Cir.
42127	3206 Salishan Cir.
42128	3209 Salishan Cir.
42129	3210 Salishan Cir.
42130	3213 Salishan Cir.
42131	3214 Salishan Cir.
42132	3217 Salishan Cir.
42133	3218 Salishan Cir.
42134	5701 Sally Ct.
42135	5702 Sally Ct.
42136	5707 Sally Ct.
42137	5708 Sally Ct.
42138	5709 Sally Ct.
42139	5803 Sally Ct.
42140	5807 Sally Ct.
42141	5808 Sally Ct.
42142	5901 Sally Ct.
42143	5908 Sally Ct.
42144	5909 Sally Ct.

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42145	5912 Sally Ct.
42146	5915 Sally Ct.
42147	5916 Sally Ct.
42148	5920 Sally Ct.
42149	6009 Sally Ct.
42150	6010 Sally Ct.
42151	6014 Sally Ct.
42152	6019 Sally Ct.
42153	6022 Sally Ct.
42154	6101 Sally Ct.
42155	6102 Sally Ct.
42156	6107 Sally Ct.
42157	6108 Sally Ct.
42158	6114 Sally Ct.
42159	6118 Sally Ct.
42160	6122 Sally Ct.
42161	6202 Sally Ct.
42162	6206 Sally Ct.
42163	6207 Sally Ct.
42164	6210 Sally Ct.
42165	6214 Sally Ct.
42166	6301 Sally Ct.
42167	6302 Sally Ct.
42168	6306 Sally Ct.
42169	6501 Sally Ct.
42170	6502 Sally Ct.
42171	6509 Sally Ct.
42172	6510 Sally Ct.
42173	6514 Sally Ct.
42174	6518 Sally Ct.
42175	6601 Sally Ct.
42176	6602 Sally Ct.
42177	6606 Sally Ct.
42178	6607 Sally Ct.
42179	6610 Sally Ct.
42180	6611 Sally Ct.
42181	6614 Sally Ct.
42182	6615 Sally Ct.
42183	6618 Sally Ct.
42184	6622 Sally Ct.
42185	6623 Sally Ct.
42186	6626 Sally Ct.
42187	6629 Sally Ct.
42188	6630 Sally Ct.
42189	6702 Sally Ct.
42190	6703 Sally Ct.
42191	6706 Sally Ct.
42192	6709 Sally Ct.

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42193	6710 Sally Ct.
42194	6713 Sally Ct.
42195	6714 Sally Ct.
42196	6717 Sally Ct.
42197	6718 Sally Ct.
42198	6721 Sally Ct.
42199	6801 Sally Ct.
42200	6802 Sally Ct.
42201	6805 Sally Ct.
42202	6806 Sally Ct.
42203	6809 Sally Ct.
42204	6810 Sally Ct.
42205	6813 Sally Ct.
42206	6814 Sally Ct.
42207	6817 Sally Ct.
42208	6818 Sally Ct.
42209	6901 Sally Ct.
42210	6902 Sally Ct.
42211	6905 Sally Ct.
42212	6906 Sally Ct.
42213	6909 Sally Ct.
42214	6910 Sally Ct.
42215	6914 Sally Ct.
42216	6918 Sally Ct.
42217	1201 San Juan Dr.
42218	1202 San Juan Dr.
42219	1210 San Juan Dr.
42220	1217 San Juan Dr.
42221	1223 San Juan Dr.
42222	1229 San Juan Dr.
42223	1242 San Juan Dr.
42224	1302 San Juan Dr.
42225	1309 San Juan Dr.
42226	1310 San Juan Dr.
42227	1315 San Juan Dr.
42228	1318 San Juan Dr.
42229	1321 San Juan Dr.
42230	1326 San Juan Dr.
42231	1327 San Juan Dr.
42232	1333 San Juan Dr.
42233	1339 San Juan Dr.
42234	1345 San Juan Dr.
42235	102 Sanford Pl.
42236	103 Sanford Pl.
42237	104 Sanford Pl.
42238	105 Sanford Pl.
42239	1902 Santa Barbara Dr.
42240	1910 Santa Barbara Dr.

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42241	1911 Santa Barbara Dr.
42242	1914 Santa Barbara Dr.
42243	1915 Santa Barbara Dr.
42244	1918 Santa Barbara Dr.
42245	1919 Santa Barbara Dr.
42246	1922 Santa Barbara Dr.
42247	2001 Santa Barbara Dr.
42248	2002 Santa Barbara Dr.
42249	2006 Santa Barbara Dr.
42250	2007 Santa Barbara Dr.
42251	2010 Santa Barbara Dr.
42252	2013 Santa Barbara Dr.
42253	2014 Santa Barbara Dr.
42254	2018 Santa Barbara Dr.
42255	2106 Santa Barbara Dr.
42256	2110 Santa Barbara Dr.
42257	2111 Santa Barbara Dr.
42258	2114 Santa Barbara Dr.
42259	2115 Santa Barbara Dr.
42260	2118 Santa Barbara Dr.
42261	2119 Santa Barbara Dr.
42262	2201 Santa Barbara Dr.
42263	2202 Santa Barbara Dr.
42264	2206 Santa Barbara Dr.
42265	2207 Santa Barbara Dr.
42266	2210 Santa Barbara Dr.
42267	2211 Santa Barbara Dr.
42268	2214 Santa Barbara Dr.
42269	2215 Santa Barbara Dr.
42270	2218 Santa Barbara Dr.
42271	2222 Santa Barbara Dr.
42272	2301 Santa Barbara Dr.
42273	2302 Santa Barbara Dr.
42274	2306 Santa Barbara Dr.
42275	2310 Santa Barbara Dr.
42276	2311 Santa Barbara Dr.
42277	2314 Santa Barbara Dr.
42278	2315 Santa Barbara Dr.
42279	2318 Santa Barbara Dr.
42280	2319 Santa Barbara Dr.
42281	2322 Santa Barbara Dr.
42282	2323 Santa Barbara Dr.
42283	2326 Santa Barbara Dr.
42284	2327 Santa Barbara Dr.
42285	2330 Santa Barbara Dr.
42286	2331 Santa Barbara Dr.
42287	2334 Santa Barbara Dr.
42288	2335 Santa Barbara Dr.

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42289	3401 Santa Clara Ct.
42290	3402 Santa Clara Ct.
42291	3406 Santa Clara Ct.
42292	3409 Santa Clara Ct.
42293	3410 Santa Clara Ct.
42294	3415 Santa Clara Ct.
42295	3418 Santa Clara Ct.
42296	3421 Santa Clara Ct.
42297	3422 Santa Clara Ct.
42298	3427 Santa Clara Ct.
42299	3401 Santa Cruz Dr.
42300	3402 Santa Cruz Dr.
42301	3415 Santa Cruz Dr.
42302	415 SB Chavez Dr.
42303	415 SB Chavez Dr.
42304	609 SB Chavez Dr.
42305	609 SB Chavez Dr.
42306	609 SB Chavez Dr.
42307	823 SB Chavez Dr.
42308	833 SB Chavez Dr.
42309	1101 SB Chavez Dr.
42310	201 Schwartz Dr.
42311	209 Schwartz Dr.
42312	209 Schwartz Dr.
42313	915 Scott St.
42314	917 Scott St.
42315	921 Scott St.
42316	925 Scott St.
42317	929 Scott St.
42318	607 Second Ave., E.
42319	815 Second Ave., E.
42320	214 Second Ave., W.
42321	216 Second Ave., W.
42322	224 Second Ave., W.
42323	311 Second Ave., W.
42324	314 Second Ave., W.
42325	315 Second Ave., W.
42326	320 Second Ave., W.
42327	321 Second Ave., W.
42328	322 Second Ave., W.
42329	401 Second Ave., W.
42330	407 Second Ave., W.
42331	408 Second Ave., W.
42332	412 Second Ave., W.
42333	417 Second Ave., W.
42334	419 Second Ave., W.
42335	427 Second Ave., W.
42336	428 Second Ave., W.

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42337	433 Second Ave., W.
42338	502 Second Ave., W.
42339	503 Second Ave., W.
42340	508 Second Ave., W.
42341	509 Second Ave., W.
42342	512 Second Ave., W.
42343	515 Second Ave., W.
42344	519 Second Ave., W.
42345	611 Second Ave., W.
42346	612 Second Ave., W.
42347	616 Second Ave., W.
42348	624 Second Ave., W.
42349	115 Second St., E.
42350	130 Second St., E.
42351	130 Second St., E.
42352	140 Second St., E.
42353	140 Second St., E.
42354	142 Second St., E.
42355	221 Second St., E.
42356	411 Second St., E.
42357	604 Second St., E.
42358	610 Second St., E.
42359	615 Second St., E.
42360	616 Second St., E.
42361	620 Second St., E.
42362	626 Second St., E.
42363	626 Second St., E.
42364	626 Second St., E.
42365	627 Second St., E.
42366	628 Second St., E.
42367	708 Second St., E.
42368	710 Second St., E.
42369	714 Second St., E.
42370	720 Second St., E.
42371	724 Second St., E.
42372	801 Second St., E.
42373	802 Second St., E.
42374	807 Second St., E.
42375	808 Second St., E.
42376	811 Second St., E.
42377	812 Second St., E.
42378	815 Second St., E.
42379	908 Second St., E.
42380	909 Second St., E.
42381	910 Second St., E.
42382	913 Second St., E.
42383	914 Second St., E.
42384	920 Second St., E.

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42385	1502 Second St., E.
42386	1520 Second St., E.
42387	1708 Second St., E.
42388	1714 Second St., E.
42389	1720 Second St., E.
42390	1802 Second St., E.
42391	1812 Second St., E.
42392	1815 Second St., E.
42393	1816 Second St., E.
42394	1901 Second St., E.
42395	1902 Second St., E.
42396	1906 Second St., E.
42397	1907 Second St., E.
42398	1913 Second St., E.
42399	1914 Second St., E.
42400	2013 Second St., E.
42401	2014 Second St., E.
42402	2019 Second St., E.
42403	2020 Second St., E.
42404	2101 Second St., E.
42405	2102 Second St., E.
42406	2113 Second St., E.
42407	2114 Second St., E.
42408	2119 Second St., E.
42409	2120 Second St., E.
42410	2123 Second St., E.
42411	2126 Second St., E.
42412	2132 Second St., E.
42413	2201 Second St., E.
42414	2208 Second St., E.
42415	2213 Second St., E.
42416	2214 Second St., E.
42417	2301 Second St., E.
42418	2302 Second St., E.
42419	2307 Second St., E.
42420	2316 Second St., E.
42421	2319 Second St., E.
42422	2401 Second St., E.
42423	2402 Second St., E.
42424	2408 Second St., E.
42425	2409 Second St., E.
42426	2415 Second St., E.
42427	2421 Second St., E.
42428	2501 Second St., E.
42429	2508 Second St., E.
42430	2509 Second St., E.
42431	2512 Second St., E.
42432	2515 Second St., E.

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42433	2516 Second St., E.
42434	2521 Second St., E.
42435	2602 Second St., E.
42436	2607 Second St., E.
42437	2608 Second St., E.
42438	2611 Second St., E.
42439	113 Second St., W.
42440	132 Second St., W.
42441	132 Second St., W.
42442	134 Second St., W.
42443	142 Second St., W.
42444	142 Second St., W.
42445	142 Second St., W.
42446	142 Second St., W.
42447	220 Second St., W.
42448	226 Second St., W.
42449	300 Second St., W.
42450	318 Second St., W.
42451	321 Second St., W.
42452	321 Second St., W.
42453	323 Second St., W.
42454	326 Second St., W.
42455	402 Second St., W.
42456	402 Second St., W.
42457	408 Second St., W.
42458	415 Second St., W.
42459	419 Second St., W.
42460	420 Second St., W.
42461	422 Second St., W.
42462	426 Second St., W.
42463	430 Second St., W.
42464	430 Second St., W.
42465	503 Second St., W.
42466	504 Second St., W.
42467	607 Second St., W.
42468	805 Second St., W.
42469	817 Second St., W.
42470	901 Second St., W.
42471	901 Second St., W.
42472	1021 Second St., W.
42473	1027 Second St., W.
42474	1027 Second St., W.
42475	1103 Second St., W.
42476	1104 Second St., W.
42477	1107 Second St., W.
42478	1110 Second St., W.
42479	1111 Second St., W.
42480	1113 Second St., W.

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42481	1114 Second St., W.
42482	1115 Second St., W.
42483	1216 Second St., W.
42484	1217 Second St., W.
42485	1218 Second St., W.
42486	1219 Second St., W.
42487	1222 Second St., W.
42488	1225 Second St., W.
42489	1226 Second St., W.
42490	1301 Second St., W.
42491	1311 Second St., W.
42492	1315 Second St., W.
42493	1319 Second St., W.
42494	1323 Second St., W.
42495	1325 Second St., W.
42496	1409 Second St., W.
42497	1410 Second St., W.
42498	1411 Second St., W.
42499	1414 Second St., W.
42500	1415 Second St., W.
42501	1420 Second St., W.
42502	1421 Second St., W.
42503	1427 Second St., W.
42504	1501 Second St., W.
42505	1504 Second St., W.
42506	1505 Second St., W.
42507	1509 Second St., W.
42508	1511 Second St., W.
42509	4215 Selby St.
42510	4317 Selby St.
42511	4401 Selby St.
42512	4406 Selby St.
42513	4509 Selby St.
42514	4510 Selby St.
42515	4513 Selby St.
42516	4514 Selby St.
42517	4519 Selby St.
42518	4525 Selby St.
42519	4606 Selby St.
42520	4610 Selby St.
42521	4614 Selby St.
42522	4622 Selby St.
42523	4806 Selby St.
42524	5309 Selby St.
42525	5411 Selby St.
42526	5601 Selby St.
42527	6101 Selby St.
42528	1416 Seminole St.

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42529	1602 Seminole St.
42530	1612 Seminole St.
42531	1613 Seminole St.
42532	1616 Seminole St.
42533	1617 Seminole St.
42534	1620 Seminole St.
42535	1621 Seminole St.
42536	1624 Seminole St.
42537	1625 Seminole St.
42538	1628 Seminole St.
42539	1629 Seminole St.
42540	1632 Seminole St.
42541	1633 Seminole St.
42542	1636 Seminole St.
42543	1637 Seminole St.
42544	1640 Seminole St.
42545	1641 Seminole St.
42546	1644 Seminole St.
42547	1645 Seminole St.
42548	1648 Seminole St.
42549	1512 Seneca St.
42550	1513 Seneca St.
42551	1517 Seneca St.
42552	1602 Seneca St.
42553	1605 Seneca St.
42554	1609 Seneca St.
42555	1613 Seneca St.
42556	1614 Seneca St.
42557	1617 Seneca St.
42558	1701 Seneca St.
42559	1707 Seneca St.
42560	1710 Seneca St.
42561	1713 Seneca St.
42562	1718 Seneca St.
42563	1719 Seneca St.
42564	1801 Seneca St.
42565	1807 Seneca St.
42566	1812 Seneca St.
42567	1813 Seneca St.
42568	1901 Seneca St.
42569	1905 Seneca St.
42570	1909 Seneca St.
42571	2001 Seneca St.
42572	2005 Seneca St.
42573	2009 Seneca St.
42574	2010 Seneca St.
42575	2201 Seneca St.
42576	2212 Seneca St.

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42577	2410 Seneca St.
42578	2416 Seneca St.
42579	2422 Seneca St.
42580	2425 Seneca St.
42581	2428 Seneca St.
42582	2433 Seneca St.
42583	2434 Seneca St.
42584	2441 Seneca St.
42585	2512 Seneca St.
42586	2513 Seneca St.
42587	2517 Seneca St.
42588	2520 Seneca St.
42589	2529 Seneca St.
42590	2605 Seneca St.
42591	2613 Seneca St.
42592	2614 Seneca St.
42593	2617 Seneca St.
42594	2618 Seneca St.
42595	2624 Seneca St.
42596	2625 Seneca St.
42597	2628 Seneca St.
42598	2633 Seneca St.
42599	2634 Seneca St.
42600	2637 Seneca St.
42601	2641 Seneca St.
42602	2701 Seneca St.
42603	2705 Seneca St.
42604	2711 Seneca St.
42605	2712 Seneca St.
42606	2715 Seneca St.
42607	2716 Seneca St.
42608	2719 Seneca St.
42609	2720 Seneca St.
42610	2725 Seneca St.
42611	2726 Seneca St.
42612	2730 Seneca St.
42613	2735 Seneca St.
42614	2817 Seneca St.
42615	2818 Seneca St.
42616	2902 Seneca St.
42617	2905 Seneca St.
42618	2906 Seneca St.
42619	2910 Seneca St.
42620	2913 Seneca St.
42621	2914 Seneca St.
42622	3001 Seneca St.
42623	3002 Seneca St.
42624	3005 Seneca St.

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42625	3006 Seneca St.
42626	3009 Seneca St.
42627	3010 Seneca St.
42628	3013 Seneca St.
42629	3014 Seneca St.
42630	3017 Seneca St.
42631	3018 Seneca St.
42632	3021 Seneca St.
42633	3022 Seneca St.
42634	3101 Seneca St.
42635	3102 Seneca St.
42636	3105 Seneca St.
42637	3109 Seneca St.
42638	3112 Seneca St.
42639	3113 Seneca St.
42640	3117 Seneca St.
42641	3201 Seneca St.
42642	3202 Seneca St.
42643	3206 Seneca St.
42644	3414 Seneca St.
42645	3415 Seneca St.
42646	3418 Seneca St.
42647	3419 Seneca St.
42648	3501 Seneca St.
42649	3502 Seneca St.
42650	3505 Seneca St.
42651	3506 Seneca St.
42652	3509 Seneca St.
42653	3510 Seneca St.
42654	3513 Seneca St.
42655	3517 Seneca St.
42656	3518 Seneca St.
42657	3521 Seneca St.
42658	3522 Seneca St.
42659	3601 Seneca St.
42660	3602 Seneca St.
42661	3605 Seneca St.
42662	3606 Seneca St.
42663	3609 Seneca St.
42664	3610 Seneca St.
42665	3613 Seneca St.
42666	3614 Seneca St.
42667	3618 Seneca St.
42668	3621 Seneca St.
42669	3622 Seneca St.
42670	3701 Seneca St.
42671	3702 Seneca St.
42672	3705 Seneca St.

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42673	3706 Seneca St.
42674	3713 Seneca St.
42675	3714 Seneca St.
42676	3717 Seneca St.
42677	3718 Seneca St.
42678	3801 Seneca St.
42679	3802 Seneca St.
42680	3805 Seneca St.
42681	3806 Seneca St.
42682	3813 Seneca St.
42683	3814 Seneca St.
42684	3817 Seneca St.
42685	3818 Seneca St.
42686	3821 Seneca St.
42687	3822 Seneca St.
42688	3901 Seneca St.
42689	3902 Seneca St.
42690	3905 Seneca St.
42691	3909 Seneca St.
42692	3910 Seneca St.
42693	3914 Seneca St.
42694	3917 Seneca St.
42695	3918 Seneca St.
42696	3921 Seneca St.
42697	3922 Seneca St.
42698	4202 Seneca St.
42699	4208 Seneca St.
42700	4211 Seneca St.
42701	4214 Seneca St.
42702	4218 Seneca St.
42703	4219 Seneca St.
42704	4222 Seneca St.
42705	4223 Seneca St.
42706	4226 Seneca St.
42707	4227 Seneca St.
42708	4233 Seneca St.
42709	116 Seventh Ave., W.
42710	210 Seventh Ave., W.
42711	211 Seventh Ave., W.
42712	214 Seventh Ave., W.
42713	217 Seventh Ave., W.
42714	218 Seventh Ave., W.
42715	308 Seventh Ave., W.
42716	311 Seventh Ave., W.
42717	315 Seventh Ave., W.
42718	320 Seventh Ave., W.
42719	416 Seventh Ave., W.
42720	425 Seventh Ave., W.

	A
42721	430 Seventh Ave., W.
42722	434 Seventh Ave., W.
42723	110 Seventh St., E.
42724	120 Seventh St., E.
42725	809 Seventh St., E.
42726	810 Seventh St., E.
42727	814 Seventh St., E.
42728	815 Seventh St., E.
42729	817 Seventh St., E.
42730	818 Seventh St., E.
42731	821 Seventh St., E.
42732	822 Seventh St., E.
42733	825 Seventh St., E.
42734	826 Seventh St., E.
42735	829 Seventh St., E.
42736	830 Seventh St., E.
42737	833 Seventh St., E.
42738	834 Seventh St., E.
42739	837 Seventh St., E.
42740	838 Seventh St., E.
42741	841 Seventh St., E.
42742	842 Seventh St., E.
42743	845 Seventh St., E.
42744	846 Seventh St., E.
42745	849 Seventh St., E.
42746	850 Seventh St., E.
42747	853 Seventh St., E.
42748	854 Seventh St., E.
42749	857 Seventh St., E.
42750	858 Seventh St., E.
42751	903 Seventh St., E.
42752	904 Seventh St., E.
42753	906 Seventh St., E.
42754	909 Seventh St., E.
42755	911 Seventh St., E.
42756	914 Seventh St., E.
42757	915 Seventh St., E.
42758	918 Seventh St., E.
42759	921 Seventh St., E.
42760	924 Seventh St., E.
42761	925 Seventh St., E.
42762	929 Seventh St., E.
42763	932 Seventh St., E.
42764	937 Seventh St., E.
42765	942 Seventh St., E.
42766	965 Seventh St., E.
42767	1000 Seventh St., E.
42768	209 Seventh St., W.

	A
42769	218 Seventh St., W.
42770	222 Seventh St., W.
42771	308 Seventh St., W.
42772	309 Seventh St., W.
42773	312 Seventh St., W.
42774	316 Seventh St., W.
42775	317 Seventh St., W.
42776	320 Seventh St., W.
42777	321 Seventh St., W.
42778	325 Seventh St., W.
42779	326 Seventh St., W.
42780	327 Seventh St., W.
42781	408 Seventh St., W.
42782	409 Seventh St., W.
42783	409 Seventh St., W.
42784	412 Seventh St., W.
42785	418 Seventh St., W.
42786	505 Seventh St., W.
42787	509 Seventh St., W.
42788	513 Seventh St., W.
42789	514 Seventh St., W.
42790	519 Seventh St., W.
42791	616 Seventh St., W.
42792	1802 Seymour St.
42793	1810 Seymour St.
42794	1811 Seymour St.
42795	1823 Seymour St.
42796	1827 Seymour St.
42797	1832 Seymour St.
42798	1832 Seymour St.
42799	1835 Seymour St.
42800	1839 Seymour St.
42801	1840 Seymour St.
42802	1843 Seymour St.
42803	1844 Seymour St.
42804	1851 Seymour St.
42805	1855 Seymour St.
42806	1901 Seymour St.
42807	1905 Seymour St.
42808	1909 Seymour St.
42809	1913 Seymour St.
42810	1917 Seymour St.
42811	1921 Seymour St.
42812	1925 Seymour St.
42813	1929 Seymour St.
42814	1933 Seymour St.
42815	2001 Seymour St.
42816	2009 Seymour St.

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42817	2010 Seymour St.
42818	2013 Seymour St.
42819	2014 Seymour St.
42820	2017 Seymour St.
42821	2018 Seymour St.
42822	2021 Seymour St.
42823	2022 Seymour St.
42824	2026 Seymour St.
42825	2029 Seymour St.
42826	2030 Seymour St.
42827	2033 Seymour St.
42828	2034 Seymour St.
42829	2037 Seymour St.
42830	2038 Seymour St.
42831	2041 Seymour St.
42832	2042 Seymour St.
42833	2045 Seymour St.
42834	2046 Seymour St.
42835	2052 Seymour St.
42836	2055 Seymour St.
42837	1614 Shamrock Ln.
42838	1618 Shamrock Ln.
42839	1621 Shamrock Ln.
42840	1622 Shamrock Ln.
42841	1626 Shamrock Ln.
42842	1629 Shamrock Ln.
42843	1630 Shamrock Ln.
42844	1634 Shamrock Ln.
42845	1702 Shamrock Ln.
42846	1705 Shamrock Ln.
42847	1706 Shamrock Ln.
42848	1709 Shamrock Ln.
42849	1710 Shamrock Ln.
42850	1713 Shamrock Ln.
42851	1714 Shamrock Ln.
42852	1717 Shamrock Ln.
42853	1718 Shamrock Ln.
42854	1721 Shamrock Ln.
42855	1722 Shamrock Ln.
42856	1725 Shamrock Ln.
42857	1726 Shamrock Ln.
42858	1801 Shamrock Ln.
42859	1802 Shamrock Ln.
42860	1805 Shamrock Ln.
42861	1806 Shamrock Ln.
42862	1809 Shamrock Ln.
42863	1810 Shamrock Ln.
42864	1813 Shamrock Ln.

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42865	1814 Shamrock Ln.
42866	1817 Shamrock Ln.
42867	1818 Shamrock Ln.
42868	1821 Shamrock Ln.
42869	1822 Shamrock Ln.
42870	1825 Shamrock Ln.
42871	1826 Shamrock Ln.
42872	1901 Shamrock Ln.
42873	1902 Shamrock Ln.
42874	1905 Shamrock Ln.
42875	1906 Shamrock Ln.
42876	1909 Shamrock Ln.
42877	1910 Shamrock Ln.
42878	1913 Shamrock Ln.
42879	1914 Shamrock Ln.
42880	1917 Shamrock Ln.
42881	1918 Shamrock Ln.
42882	1921 Shamrock Ln.
42883	1922 Shamrock Ln.
42884	2909 Shawnee Ave.
42885	2910 Shawnee Ave.
42886	2913 Shawnee Ave.
42887	2914 Shawnee Ave.
42888	2917 Shawnee Ave.
42889	2918 Shawnee Ave.
42890	3001 Shawnee Ave.
42891	3002 Shawnee Ave.
42892	3005 Shawnee Ave.
42893	3006 Shawnee Ave.
42894	3009 Shawnee Ave.
42895	3010 Shawnee Ave.
42896	3013 Shawnee Ave.
42897	3014 Shawnee Ave.
42898	3017 Shawnee Ave.
42899	3018 Shawnee Ave.
42900	3101 Shawnee Ave.
42901	3102 Shawnee Ave.
42902	3105 Shawnee Ave.
42903	3106 Shawnee Ave.
42904	3109 Shawnee Ave.
42905	3110 Shawnee Ave.
42906	3113 Shawnee Ave.
42907	3114 Shawnee Ave.
42908	3117 Shawnee Ave.
42909	3118 Shawnee Ave.
42910	3201 Shawnee Ave.
42911	3202 Shawnee Ave.
42912	3205 Shawnee Ave.

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42913	3206 Shawnee Ave.
42914	3209 Shawnee Ave.
42915	3210 Shawnee Ave.
42916	3213 Shawnee Ave.
42917	3214 Shawnee Ave.
42918	3805 Shawnee Ave.
42919	3806 Shawnee Ave.
42920	3809 Shawnee Ave.
42921	3810 Shawnee Ave.
42922	3813 Shawnee Ave.
42923	3814 Shawnee Ave.
42924	3901 Shawnee Ave.
42925	3902 Shawnee Ave.
42926	3905 Shawnee Ave.
42927	3906 Shawnee Ave.
42928	3911 Shawnee Ave.
42929	3912 Shawnee Ave.
42930	4201 Shawnee Ave.
42931	4207 Shawnee Ave.
42932	4208 Shawnee Ave.
42933	4302 Shawnee Ave.
42934	4307 Shawnee Ave.
42935	4308 Shawnee Ave.
42936	4313 Shawnee Ave.
42937	4314 Shawnee Ave.
42938	4317 Shawnee Ave.
42939	4321 Shawnee Ave.
42940	4325 Shawnee Ave.
42941	4401 Shawnee Ave.
42942	4405 Shawnee Ave.
42943	4409 Shawnee Ave.
42944	4413 Shawnee Ave.
42945	4414 Shawnee Ave.
42946	308 Sheffield Ave.
42947	310 Sheffield Ave.
42948	312 Sheffield Ave.
42949	314 Sheffield Ave.
42950	316 Sheffield Ave.
42951	318 Sheffield Ave.
42952	320 Sheffield Ave.
42953	322 Sheffield Ave.
42954	324 Sheffield Ave.
42955	326 Sheffield Ave.
42956	328 Sheffield Ave.
42957	330 Sheffield Ave.
42958	332 Sheffield Ave.
42959	334 Sheffield Ave.
42960	336 Sheffield Ave.

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42961	338 Sheffield Ave.
42962	340 Sheffield Ave.
42963	342 Sheffield Ave.
42964	344 Sheffield Ave.
42965	346 Sheffield Ave.
42966	348 Sheffield Ave.
42967	350 Sheffield Ave.
42968	407 Sheffield Ave.
42969	408 Sheffield Ave.
42970	412 Sheffield Ave.
42971	508 Sheffield Ave.
42972	509 Sheffield Ave.
42973	512 Sheffield Ave.
42974	513 Sheffield Ave.
42975	516 Sheffield Ave.
42976	521 Sheffield Ave.
42977	4111 Sheraton Dr.
42978	2109 Sherff Pl.
42979	2112 Sherff Pl.
42980	2115 Sherff Pl.
42981	2120 Sherff Pl.
42982	2123 Sherff Pl.
42983	2127 Sherff Pl.
42984	2131 Sherff Pl.
42985	101 Sherman Ave.
42986	102 Sherman Ave.
42987	105 Sherman Ave.
42988	106 Sherman Ave.
42989	110 Sherman Ave.
42990	113 Sherman Ave.
42991	114 Sherman Ave.
42992	117 Sherman Ave.
42993	121 Sherman Ave.
42994	122 Sherman Ave.
42995	125 Sherman Ave.
42996	134 Sherman Ave.
42997	134 Sherman Ave.
42998	141 Sherman Ave.
42999	142 Sherman Ave.
43000	145 Sherman Ave.
43001	146 Sherman Ave.
43002	149 Sherman Ave.
43003	153 Sherman Ave.
43004	154 Sherman Ave.
43005	157 Sherman Ave.
43006	158 Sherman Ave.
43007	200 Sherman Ave.
43008	201 Sherman Ave.

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43009	205 Sherman Ave.
43010	206 Sherman Ave.
43011	209 Sherman Ave.
43012	210 Sherman Ave.
43013	213 Sherman Ave.
43014	214 Sherman Ave.
43015	217 Sherman Ave.
43016	218 Sherman Ave.
43017	222 Sherman Ave.
43018	226 Sherman Ave.
43019	229 Sherman Ave.
43020	230 Sherman Ave.
43021	233 Sherman Ave.
43022	237 Sherman Ave.
43023	238 Sherman Ave.
43024	241 Sherman Ave.
43025	242 Sherman Ave.
43026	245 Sherman Ave.
43027	246 Sherman Ave.
43028	249 Sherman Ave.
43029	253 Sherman Ave.
43030	254 Sherman Ave.
43031	301 Sherman Ave.
43032	302 Sherman Ave.
43033	302 Sherman Ave.
43034	305 Sherman Ave.
43035	314 Sherman Ave.
43036	317 Sherman Ave.
43037	321 Sherman Ave.
43038	330 Sherman Ave.
43039	333 Sherman Ave.
43040	337 Sherman Ave.
43041	341 Sherman Ave.
43042	345 Sherman Ave.
43043	346 Sherman Ave.
43044	349 Sherman Ave.
43045	357 Sherman Ave.
43046	406 Sherman Ave.
43047	409 Sherman Ave.
43048	410 Sherman Ave.
43049	414 Sherman Ave.
43050	417 Sherman Ave.
43051	421 Sherman Ave.
43052	422 Sherman Ave.
43053	425 Sherman Ave.
43054	426 Sherman Ave.
43055	429 Sherman Ave.
43056	430 Sherman Ave.

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43057	501 Sherman Ave.
43058	509 Sherman Ave.
43059	512 Sherman Ave.
43060	513 Sherman Ave.
43061	517 Sherman Ave.
43062	525 Sherman Ave.
43063	526 Sherman Ave.
43064	601 Sherman Ave.
43065	602 Sherman Ave.
43066	605 Sherman Ave.
43067	606 Sherman Ave.
43068	609 Sherman Ave.
43069	610 Sherman Ave.
43070	614 Sherman Ave.
43071	617 Sherman Ave.
43072	618 Sherman Ave.
43073	621 Sherman Ave.
43074	625 Sherman Ave.
43075	634 Sherman Ave.
43076	635 Sherman Ave.
43077	637 Sherman Ave.
43078	638 Sherman Ave.
43079	642 Sherman Ave.
43080	646 Sherman Ave.
43081	650 Sherman Ave.
43082	1115 Sherman Ave.
43083	1120 Sherman Ave.
43084	1124 Sherman Ave.
43085	1127 Sherman Ave.
43086	1128 Sherman Ave.
43087	1209 Sherman Ave.
43088	1213 Sherman Ave.
43089	1218 Sherman Ave.
43090	1218 Sherman Ave.
43091	1221 Sherman Ave.
43092	1226 Sherman Ave.
43093	3601 Sherry Dr.
43094	3602 Sherry Dr.
43095	3605 Sherry Dr.
43096	3606 Sherry Dr.
43097	3609 Sherry Dr.
43098	3610 Sherry Dr.
43099	3613 Sherry Dr.
43100	3614 Sherry Dr.
43101	3701 Sherry Dr.
43102	3702 Sherry Dr.
43103	3705 Sherry Dr.
43104	3706 Sherry Dr.

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43105	3709 Sherry Dr.
43106	3710 Sherry Dr.
43107	3713 Sherry Dr.
43108	3714 Sherry Dr.
43109	3717 Sherry Dr.
43110	3101 Sherwood Dr.
43111	3112 Sherwood Dr.
43112	3115 Sherwood Dr.
43113	3116 Sherwood Dr.
43114	3119 Sherwood Dr.
43115	3124 Sherwood Dr.
43116	3128 Sherwood Dr.
43117	3132 Sherwood Dr.
43118	3140 Sherwood Dr.
43119	3201 Sherwood Dr.
43120	3202 Sherwood Dr.
43121	3205 Sherwood Dr.
43122	3209 Sherwood Dr.
43123	3210 Sherwood Dr.
43124	3213 Sherwood Dr.
43125	3214 Sherwood Dr.
43126	3305 Sherwood Dr.
43127	3309 Sherwood Dr.
43128	3310 Sherwood Dr.
43129	3313 Sherwood Dr.
43130	3314 Sherwood Dr.
43131	3321 Sherwood Dr.
43132	3322 Sherwood Dr.
43133	3325 Sherwood Dr.
43134	3401 Sherwood Dr.
43135	3404 Sherwood Dr.
43136	3405 Sherwood Dr.
43137	3409 Sherwood Dr.
43138	3410 Sherwood Dr.
43139	3413 Sherwood Dr.
43140	3501 Sherwood Dr.
43141	3509 Sherwood Dr.
43142	3515 Sherwood Dr.
43143	3613 Sherwood Dr.
43144	3617 Sherwood Dr.
43145	3625 Sherwood Dr.
43146	3629 Sherwood Dr.
43147	3633 Sherwood Dr.
43148	3637 Sherwood Dr.
43149	3641 Sherwood Dr.
43150	3701 Sherwood Dr.
43151	3705 Sherwood Dr.
43152	3709 Sherwood Dr.

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43153	3710 Sherwood Dr.
43154	3762 Sherwood Dr.
43155	3763 Sherwood Dr.
43156	612 Simcoe Ave.
43157	615 Simcoe Ave.
43158	616 Simcoe Ave.
43159	619 Simcoe Ave.
43160	620 Simcoe Ave.
43161	624 Simcoe Ave.
43162	627 Simcoe Ave.
43163	628 Simcoe Ave.
43164	631 Simcoe Ave.
43165	632 Simcoe Ave.
43166	635 Simcoe Ave.
43167	636 Simcoe Ave.
43168	640 Simcoe Ave.
43169	643 Simcoe Ave.
43170	644 Simcoe Ave.
43171	647 Simcoe Ave.
43172	651 Simcoe Ave.
43173	652 Simcoe Ave.
43174	655 Simcoe Ave.
43175	659 Simcoe Ave.
43176	660 Simcoe Ave.
43177	701 Simcoe Ave.
43178	702 Simcoe Ave.
43179	705 Simcoe Ave.
43180	706 Simcoe Ave.
43181	709 Simcoe Ave.
43182	710 Simcoe Ave.
43183	716 Simcoe Ave.
43184	719 Simcoe Ave.
43185	725 Simcoe Ave.
43186	726 Simcoe Ave.
43187	728 Simcoe Ave.
43188	731 Simcoe Ave.
43189	738 Simcoe Ave.
43190	741 Simcoe Ave.
43191	745 Simcoe Ave.
43192	746 Simcoe Ave.
43193	750 Simcoe Ave.
43194	757 Simcoe Ave.
43195	758 Simcoe Ave.
43196	801 Simcoe Ave.
43197	802 Simcoe Ave.
43198	806 Simcoe Ave.
43199	811 Simcoe Ave.
43200	816 Simcoe Ave.

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43201	817 Simcoe Ave.
43202	820 Simcoe Ave.
43203	823 Simcoe Ave.
43204	824 Simcoe Ave.
43205	828 Simcoe Ave.
43206	831 Simcoe Ave.
43207	832 Simcoe Ave.
43208	836 Simcoe Ave.
43209	839 Simcoe Ave.
43210	840 Simcoe Ave.
43211	844 Simcoe Ave.
43212	845 Simcoe Ave.
43213	848 Simcoe Ave.
43214	852 Simcoe Ave.
43215	853 Simcoe Ave.
43216	901 Simcoe Ave.
43217	902 Simcoe Ave.
43218	906 Simcoe Ave.
43219	907 Simcoe Ave.
43220	913 Simcoe Ave.
43221	914 Simcoe Ave.
43222	918 Simcoe Ave.
43223	919 Simcoe Ave.
43224	922 Simcoe Ave.
43225	925 Simcoe Ave.
43226	926 Simcoe Ave.
43227	930 Simcoe Ave.
43228	931 Simcoe Ave.
43229	934 Simcoe Ave.
43230	937 Simcoe Ave.
43231	938 Simcoe Ave.
43232	942 Simcoe Ave.
43233	942 Simcoe Ave.
43234	943 Simcoe Ave.
43235	949 Simcoe Ave.
43236	955 Simcoe Ave.
43237	1013 Simcoe Ave.
43238	1014 Simcoe Ave.
43239	1017 Simcoe Ave.
43240	1018 Simcoe Ave.
43241	1021 Simcoe Ave.
43242	1022 Simcoe Ave.
43243	1025 Simcoe Ave.
43244	1029 Simcoe Ave.
43245	1030 Simcoe Ave.
43246	1033 Simcoe Ave.
43247	1034 Simcoe Ave.
43248	1037 Simcoe Ave.

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43249	1038 Simcoe Ave.
43250	1102 Simcoe Ave.
43251	1105 Simcoe Ave.
43252	1110 Simcoe Ave.
43253	1113 Simcoe Ave.
43254	1114 Simcoe Ave.
43255	1117 Simcoe Ave.
43256	1118 Simcoe Ave.
43257	1121 Simcoe Ave.
43258	1122 Simcoe Ave.
43259	1125 Simcoe Ave.
43260	1130 Simcoe Ave.
43261	1134 Simcoe Ave.
43262	1137 Simcoe Ave.
43263	1138 Simcoe Ave.
43264	1410 Simpson Ct.
43265	302 Sixth Ave., W.
43266	310 Sixth Ave., W.
43267	316 Sixth Ave., W.
43268	320 Sixth Ave., W.
43269	412 Sixth Ave., W.
43270	416 Sixth Ave., W.
43271	422 Sixth Ave., W.
43272	426 Sixth Ave., W.
43273	510 Sixth Ave., W.
43274	1021 Sixth Ave., W.
43275	1302 Sixth Ave., W.
43276	1306 Sixth Ave., W.
43277	714 Sixth St., E.
43278	718 Sixth St., E.
43279	722 Sixth St., E.
43280	726 Sixth St., E.
43281	730 Sixth St., E.
43282	734 Sixth St., E.
43283	802 Sixth St., E.
43284	806 Sixth St., E.
43285	810 Sixth St., E.
43286	814 Sixth St., E.
43287	818 Sixth St., E.
43288	822 Sixth St., E.
43289	826 Sixth St., E.
43290	830 Sixth St., E.
43291	902 Sixth St., E.
43292	924 Sixth St., E.
43293	205 Sixth St., W.
43294	209 Sixth St., W.
43295	403 Sixth St., W.
43296	405 Sixth St., W.

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43297	409 Sixth St., W.
43298	412 Sixth St., W.
43299	415 Sixth St., W.
43300	416 Sixth St., W.
43301	425 Sixth St., W.
43302	512 Sixth St., W.
43303	513 Sixth St., W.
43304	514 Sixth St., W.
43305	516 Sixth St., W.
43306	607 Sixth St., W.
43307	610 Sixth St., W.
43308	611 Sixth St., W.
43309	614 Sixth St., W.
43310	615 Sixth St., W.
43311	1901 Sloan St.
43312	1902 Sloan St.
43313	1909 Sloan St.
43314	1910 Sloan St.
43315	1913 Sloan St.
43316	1914 Sloan St.
43317	1917 Sloan St.
43318	1918 Sloan St.
43319	2001 Sloan St.
43320	2002 Sloan St.
43321	2005 Sloan St.
43322	2006 Sloan St.
43323	2009 Sloan St.
43324	2010 Sloan St.
43325	2013 Sloan St.
43326	2014 Sloan St.
43327	2017 Sloan St.
43328	2018 Sloan St.
43329	2022 Sloan St.
43330	2101 Sloan St.
43331	2102 Sloan St.
43332	2107 Sloan St.
43333	2111 Sloan St.
43334	2112 Sloan St.
43335	2115 Sloan St.
43336	2116 Sloan St.
43337	2119 Sloan St.
43338	2120 Sloan St.
43339	2123 Sloan St.
43340	2124 Sloan St.
43341	2201 Sloan St.
43342	2202 Sloan St.
43343	2205 Sloan St.
43344	2206 Sloan St.

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43345	2209 Sloan St.
43346	2210 Sloan St.
43347	2213 Sloan St.
43348	2214 Sloan St.
43349	2217 Sloan St.
43350	2218 Sloan St.
43351	2221 Sloan St.
43352	2222 Sloan St.
43353	2301 Sloan St.
43354	2302 Sloan St.
43355	2305 Sloan St.
43356	2306 Sloan St.
43357	2309 Sloan St.
43358	2310 Sloan St.
43359	2313 Sloan St.
43360	2314 Sloan St.
43361	2317 Sloan St.
43362	2318 Sloan St.
43363	2401 Sloan St.
43364	2402 Sloan St.
43365	2405 Sloan St.
43366	2406 Sloan St.
43367	2409 Sloan St.
43368	2410 Sloan St.
43369	2413 Sloan St.
43370	2414 Sloan St.
43371	2417 Sloan St.
43372	2513 Sloan St.
43373	2514 Sloan St.
43374	2517 Sloan St.
43375	2520 Sloan St.
43376	2521 Sloan St.
43377	2524 Sloan St.
43378	2525 Sloan St.
43379	2528 Sloan St.
43380	2529 Sloan St.
43381	2532 Sloan St.
43382	2533 Sloan St.
43383	2536 Sloan St.
43384	2537 Sloan St.
43385	2540 Sloan St.
43386	2544 Sloan St.
43387	2602 Sloan St.
43388	2608 Sloan St.
43389	2609 Sloan St.
43390	2612 Sloan St.
43391	2613 Sloan St.
43392	2616 Sloan St.

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43393	2617 Sloan St.
43394	2620 Sloan St.
43395	2621 Sloan St.
43396	2627 Sloan St.
43397	2630 Sloan St.
43398	2634 Sloan St.
43399	2635 Sloan St.
43400	2638 Sloan St.
43401	2639 Sloan St.
43402	2642 Sloan St.
43403	2645 Sloan St.
43404	2646 Sloan St.
43405	2649 Sloan St.
43406	2650 Sloan St.
43407	2653 Sloan St.
43408	2657 Sloan St.
43409	2661 Sloan St.
43410	2701 Sloan St.
43411	2711 Sloan St.
43412	2712 Sloan St.
43413	2715 Sloan St.
43414	2716 Sloan St.
43415	2719 Sloan St.
43416	2720 Sloan St.
43417	2723 Sloan St.
43418	2724 Sloan St.
43419	2727 Sloan St.
43420	2731 Sloan St.
43421	2732 Sloan St.
43422	2735 Sloan St.
43423	2736 Sloan St.
43424	2739 Sloan St.
43425	2740 Sloan St.
43426	2743 Sloan St.
43427	2744 Sloan St.
43428	2747 Sloan St.
43429	2748 Sloan St.
43430	2751 Sloan St.
43431	2752 Sloan St.
43432	2755 Sloan St.
43433	2759 Sloan St.
43434	2760 Sloan St.
43435	2763 Sloan St.
43436	2764 Sloan St.
43437	2767 Sloan St.
43438	2801 Sloan St.
43439	2802 Sloan St.
43440	2811 Sloan St.

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43441	2812 Sloan St.
43442	2816 Sloan St.
43443	2820 Sloan St.
43444	2824 Sloan St.
43445	2830 Sloan St.
43446	2916 Sloan St.
43447	2928 Sloan St.
43448	2938 Sloan St.
43449	3010 Sloan St.
43450	3014 Sloan St.
43451	3015 Sloan St.
43452	3019 Sloan St.
43453	3022 Sloan St.
43454	3026 Sloan St.
43455	3030 Sloan St.
43456	3034 Sloan St.
43457	3042 Sloan St.
43458	3101 Sloan St.
43459	3108 Sloan St.
43460	3112 Sloan St.
43461	3117 Sloan St.
43462	3120 Sloan St.
43463	3124 Sloan St.
43464	3127 Sloan St.
43465	3128 Sloan St.
43466	3132 Sloan St.
43467	3136 Sloan St.
43468	3139 Sloan St.
43469	3140 Sloan St.
43470	3143 Sloan St.
43471	3144 Sloan St.
43472	3147 Sloan St.
43473	3148 Sloan St.
43474	3151 Sloan St.
43475	3152 Sloan St.
43476	3155 Sloan St.
43477	3156 Sloan St.
43478	3217 Sloan St.
43479	3227 Sloan St.
43480	3237 Sloan St.
43481	906 Somerset Ln.
43482	910 Somerset Ln.
43483	913 Somerset Ln.
43484	916 Somerset Ln.
43485	919 Somerset Ln.
43486	923 Somerset Ln.
43487	924 Somerset Ln.
43488	927 Somerset Ln.

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43489	930 Somerset Ln.
43490	931 Somerset Ln.
43491	936 Somerset Ln.
43492	1001 Somerset Ln.
43493	1002 Somerset Ln.
43494	1005 Somerset Ln.
43495	1006 Somerset Ln.
43496	1009 Somerset Ln.
43497	1010 Somerset Ln.
43498	1013 Somerset Ln.
43499	1014 Somerset Ln.
43500	1017 Somerset Ln.
43501	1018 Somerset Ln.
43502	1101 Somerset Ln.
43503	1102 Somerset Ln.
43504	1106 Somerset Ln.
43505	1112 Somerset Ln.
43506	1118 Somerset Ln.
43507	1123 Somerset Ln.
43508	1124 Somerset Ln.
43509	1201 Somerset Ln.
43510	1207 Somerset Ln.
43511	1208 Somerset Ln.
43512	1211 Somerset Ln.
43513	1212 Somerset Ln.
43514	1215 Somerset Ln.
43515	1216 Somerset Ln.
43516	1219 Somerset Ln.
43517	1220 Somerset Ln.
43518	1223 Somerset Ln.
43519	1224 Somerset Ln.
43520	1228 Somerset Ln.
43521	1229 Somerset Ln.
43522	1232 Somerset Ln.
43523	1236 Somerset Ln.
43524	1237 Somerset Ln.
43525	1902 Sonny St.
43526	2318 Sonny St.
43527	1006 South Dr.
43528	1018 South Dr.
43529	1102 South Dr.
43530	1105 South Dr.
43531	1110 South Dr.
43532	1114 South Dr.
43533	1117 South Dr.
43534	1122 South Dr.
43535	1125 South Dr.
43536	1002 Southlawn Ave.

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43537	1005 Southlawn Ave.
43538	1006 Southlawn Ave.
43539	1010 Southlawn Ave.
43540	1011 Southlawn Ave.
43541	1014 Southlawn Ave.
43542	1018 Southlawn Ave.
43543	1102 Southlawn Ave.
43544	1104 Southlawn Ave.
43545	1106 Southlawn Ave.
43546	1109 Southlawn Ave.
43547	1110 Southlawn Ave.
43548	1114 Southlawn Ave.
43549	1118 Southlawn Ave.
43550	702 Spellman Dr.
43551	705 Spellman Dr.
43552	706 Spellman Dr.
43553	709 Spellman Dr.
43554	710 Spellman Dr.
43555	713 Spellman Dr.
43556	714 Spellman Dr.
43557	717 Spellman Dr.
43558	718 Spellman Dr.
43559	721 Spellman Dr.
43560	722 Spellman Dr.
43561	725 Spellman Dr.
43562	726 Spellman Dr.
43563	729 Spellman Dr.
43564	730 Spellman Dr.
43565	734 Spellman Dr.
43566	738 Spellman Dr.
43567	742 Spellman Dr.
43568	412 Spencer St.
43569	416 Spencer St.
43570	501 Spencer St.
43571	502 Spencer St.
43572	506 Spencer St.
43573	507 Spencer St.
43574	510 Spencer St.
43575	511 Spencer St.
43576	514 Spencer St.
43577	515 Spencer St.
43578	518 Spencer St.
43579	521 Spencer St.
43580	522 Spencer St.
43581	526 Spencer St.
43582	529 Spencer St.
43583	530 Spencer St.
43584	534 Spencer St.

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43585	601 Spencer St.
43586	602 Spencer St.
43587	607 Spencer St.
43588	610 Spencer St.
43589	613 Spencer St.
43590	614 Spencer St.
43591	618 Spencer St.
43592	621 Spencer St.
43593	622 Spencer St.
43594	625 Spencer St.
43595	626 Spencer St.
43596	629 Spencer St.
43597	630 Spencer St.
43598	633 Spencer St.
43599	634 Spencer St.
43600	638 Spencer St.
43601	809 Spencer St.
43602	810 Spencer St.
43603	813 Spencer St.
43604	814 Spencer St.
43605	817 Spencer St.
43606	818 Spencer St.
43607	821 Spencer St.
43608	826 Spencer St.
43609	829 Spencer St.
43610	830 Spencer St.
43611	833 Spencer St.
43612	834 Spencer St.
43613	838 Spencer St.
43614	902 Spencer St.
43615	906 Spencer St.
43616	907 Spencer St.
43617	910 Spencer St.
43618	918 Spencer St.
43619	960 Springer Ave.
43620	968 Springer Ave.
43621	1802 Springfield St.
43622	1813 Springfield St.
43623	1816 Springfield St.
43624	1817 Springfield St.
43625	1821 Springfield St.
43626	1825 Springfield St.
43627	1829 Springfield St.
43628	1830 Springfield St.
43629	1833 Springfield St.
43630	1837 Springfield St.
43631	1838 Springfield St.
43632	1841 Springfield St.

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43633	1842 Springfield St.
43634	1846 Springfield St.
43635	1849 Springfield St.
43636	1850 Springfield St.
43637	1853 Springfield St.
43638	1854 Springfield St.
43639	1857 Springfield St.
43640	1858 Springfield St.
43641	1861 Springfield St.
43642	1862 Springfield St.
43643	1865 Springfield St.
43644	1866 Springfield St.
43645	1872 Springfield St.
43646	1876 Springfield St.
43647	1880 Springfield St.
43648	1884 Springfield St.
43649	603 St Clair St.
43650	615 St Clair St.
43651	616 St Clair St.
43652	619 St Clair St.
43653	620 St Clair St.
43654	623 St Clair St.
43655	624 St Clair St.
43656	627 St Clair St.
43657	628 St Clair St.
43658	631 St Clair St.
43659	632 St Clair St.
43660	701 St Clair St.
43661	702 St Clair St.
43662	705 St Clair St.
43663	708 St Clair St.
43664	709 St Clair St.
43665	713 St Clair St.
43666	716 St Clair St.
43667	717 St Clair St.
43668	1368 St John St.
43669	1402 St John St.
43670	1513 St John St.
43671	1517 St John St.
43672	2402 St John St.
43673	3420 St John St.
43674	6502 Stafford Pl.
43675	1949 Stanford Ave.
43676	1951 Stanford Ave.
43677	1961 Stanford Ave.
43678	2000 Stanford Ave.
43679	2005 Stanford Ave.
43680	2006 Stanford Ave.

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43681	2009 Stanford Ave.
43682	2010 Stanford Ave.
43683	2012 Stanford Ave.
43684	2015 Stanford Ave.
43685	2017 Stanford Ave.
43686	2018 Stanford Ave.
43687	2020 Stanford Ave.
43688	2021 Stanford Ave.
43689	2022 Stanford Ave.
43690	2025 Stanford Ave.
43691	2030 Stanford Ave.
43692	2033 Stanford Ave.
43693	2034 Stanford Ave.
43694	2038 Stanford Ave.
43695	2039 Stanford Ave.
43696	2041 Stanford Ave.
43697	2042 Stanford Ave.
43698	2045 Stanford Ave.
43699	2046 Stanford Ave.
43700	2049 Stanford Ave.
43701	2050 Stanford Ave.
43702	2109 Stanford Ave.
43703	2110 Stanford Ave.
43704	2113 Stanford Ave.
43705	2117 Stanford Ave.
43706	2118 Stanford Ave.
43707	2121 Stanford Ave.
43708	2122 Stanford Ave.
43709	2125 Stanford Ave.
43710	2209 Stanford Ave.
43711	719 Stanley St.
43712	1910 Starkweather St.
43713	2002 Starkweather St.
43714	2010 Starkweather St.
43715	2101 Starkweather St.
43716	2102 Starkweather St.
43717	2110 Starkweather St.
43718	2201 Starkweather St.
43719	2202 Starkweather St.
43720	2209 Starkweather St.
43721	2210 Starkweather St.
43722	2301 Starkweather St.
43723	2302 Starkweather St.
43724	2309 Starkweather St.
43725	2310 Starkweather St.
43726	3101 Starkweather St.
43727	3102 Starkweather St.
43728	3109 Starkweather St.

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43729	3201 Starkweather St.
43730	3207 Starkweather St.
43731	3208 Starkweather St.
43732	3215 Starkweather St.
43733	3225 Starkweather St.
43734	3229 Starkweather St.
43735	3301 Starkweather St.
43736	3308 Starkweather St.
43737	3313 Starkweather St.
43738	3314 Starkweather St.
43739	3320 Starkweather St.
43740	3325 Starkweather St.
43741	3326 Starkweather St.
43742	2101 Stedron St.
43743	2102 Stedron St.
43744	2211 Stedron St.
43745	3412 Sterling St.
43746	3413 Sterling St.
43747	3416 Sterling St.
43748	3417 Sterling St.
43749	3420 Sterling St.
43750	3421 Sterling St.
43751	3424 Sterling St.
43752	3425 Sterling St.
43753	3501 Sterling St.
43754	3502 Sterling St.
43755	3505 Sterling St.
43756	3506 Sterling St.
43757	3509 Sterling St.
43758	3510 Sterling St.
43759	3513 Sterling St.
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43761	3517 Sterling St.
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43763	3521 Sterling St.
43764	3522 Sterling St.
43765	3601 Sterling St.
43766	3602 Sterling St.
43767	3605 Sterling St.
43768	3606 Sterling St.
43769	3609 Sterling St.
43770	3610 Sterling St.
43771	3613 Sterling St.
43772	3614 Sterling St.
43773	3617 Sterling St.
43774	3618 Sterling St.
43775	3701 Sterling St.
43776	3702 Sterling St.

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43777	3705 Sterling St.
43778	3706 Sterling St.
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43782	3714 Sterling St.
43783	3717 Sterling St.
43784	3721 Sterling St.
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43786	3801 Sterling St.
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43790	3809 Sterling St.
43791	3810 Sterling St.
43792	3813 Sterling St.
43793	3814 Sterling St.
43794	3817 Sterling St.
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43796	3901 Sterling St.
43797	3902 Sterling St.
43798	3905 Sterling St.
43799	3906 Sterling St.
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43801	3910 Sterling St.
43802	3913 Sterling St.
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43805	4006 Sterling St.
43806	4009 Sterling St.
43807	4010 Sterling St.
43808	4013 Sterling St.
43809	4014 Sterling St.
43810	4017 Sterling St.
43811	4018 Sterling St.
43812	4021 Sterling St.
43813	4022 Sterling St.
43814	4025 Sterling St.
43815	4026 Sterling St.
43816	4029 Sterling St.
43817	4030 Sterling St.
43818	4033 Sterling St.
43819	4034 Sterling St.
43820	4102 Sterling St.
43821	4106 Sterling St.
43822	4110 Sterling St.
43823	4114 Sterling St.
43824	4118 Sterling St.

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43825	4122 Sterling St.
43826	4126 Sterling St.
43827	4130 Sterling St.
43828	515 Stevens St.
43829	606 Stevens St.
43830	612 Stevens St.
43831	612 Stevens St.
43832	626 Stevens St.
43833	725 Stevens St.
43834	803 Stevens St.
43835	808 Stevens St.
43836	918 Stevens St.
43837	929 Stevens St.
43838	414 Stevenson St., N.
43839	418 Stevenson St., N.
43840	510 Stevenson St., N.
43841	515 Stevenson St., N.
43842	518 Stevenson St., N.
43843	522 Stevenson St., N.
43844	612 Stevenson St., N.
43845	613 Stevenson St., N.
43846	616 Stevenson St., N.
43847	617 Stevenson St., N.
43848	620 Stevenson St., N.
43849	624 Stevenson St., N.
43850	625 Stevenson St., N.
43851	628 Stevenson St., N.
43852	629 Stevenson St., N.
43853	632 Stevenson St., N.
43854	636 Stevenson St., N.
43855	705 Stevenson St., N.
43856	706 Stevenson St., N.
43857	709 Stevenson St., N.
43858	718 Stevenson St., N.
43859	719 Stevenson St., N.
43860	722 Stevenson St., N.
43861	725 Stevenson St., N.
43862	726 Stevenson St., N.
43863	734 Stevenson St., N.
43864	806 Stevenson St., N.
43865	810 Stevenson St., N.
43866	816 Stevenson St., N.
43867	817 Stevenson St., N.
43868	818 Stevenson St., N.
43869	823 Stevenson St., N.
43870	829 Stevenson St., N.
43871	833 Stevenson St., N.
43872	841 Stevenson St., N.

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43873	847 Stevenson St., N.
43874	902 Stevenson St., N.
43875	914 Stevenson St., N.
43876	918 Stevenson St., N.
43877	926 Stevenson St., N.
43878	927 Stevenson St., N.
43879	1003 Stevenson St., N.
43880	1006 Stevenson St., N.
43881	1011 Stevenson St., N.
43882	1015 Stevenson St., N.
43883	1018 Stevenson St., N.
43884	1022 Stevenson St., N.
43885	1023 Stevenson St., N.
43886	1026 Stevenson St., N.
43887	1027 Stevenson St., N.
43888	1030 Stevenson St., N.
43889	1031 Stevenson St., N.
43890	1034 Stevenson St., N.
43891	1035 Stevenson St., N.
43892	1039 Stevenson St., N.
43893	1101 Stevenson St., N.
43894	1102 Stevenson St., N.
43895	1201 Stevenson St., N.
43896	1202 Stevenson St., N.
43897	1206 Stevenson St., N.
43898	1208 Stevenson St., N.
43899	1209 Stevenson St., N.
43900	1213 Stevenson St., N.
43901	1216 Stevenson St., N.
43902	1300 Stevenson St., N.
43903	1301 Stevenson St., N.
43904	1304 Stevenson St., N.
43905	1305 Stevenson St., N.
43906	1308 Stevenson St., N.
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43912	1320 Stevenson St., N.
43913	1321 Stevenson St., N.
43914	1325 Stevenson St., N.
43915	1402 Stevenson St., N.
43916	1406 Stevenson St., N.
43917	1409 Stevenson St., N.
43918	1410 Stevenson St., N.
43919	1413 Stevenson St., N.
43920	1414 Stevenson St., N.

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43921	1417 Stevenson St., N.
43922	1418 Stevenson St., N.
43923	1422 Stevenson St., N.
43924	1611 Stevenson St., N.
43925	1615 Stevenson St., N.
43926	1617 Stevenson St., N.
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43932	1709 Stevenson St., N.
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43936	1717 Stevenson St., N.
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43945	1814 Stevenson St., N.
43946	1817 Stevenson St., N.
43947	1818 Stevenson St., N.
43948	1821 Stevenson St., N.
43949	1822 Stevenson St., N.
43950	1901 Stevenson St., N.
43951	1902 Stevenson St., N.
43952	1905 Stevenson St., N.
43953	1906 Stevenson St., N.
43954	1909 Stevenson St., N.
43955	1910 Stevenson St., N.
43956	1913 Stevenson St., N.
43957	1914 Stevenson St., N.
43958	2001 Stevenson St., N.
43959	2002 Stevenson St., N.
43960	2007 Stevenson St., N.
43961	2008 Stevenson St., N.
43962	2011 Stevenson St., N.
43963	2012 Stevenson St., N.
43964	2015 Stevenson St., N.
43965	2016 Stevenson St., N.
43966	2019 Stevenson St., N.
43967	2020 Stevenson St., N.
43968	2101 Stevenson St., N.

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43969	2102 Stevenson St., N.
43970	2105 Stevenson St., N.
43971	2106 Stevenson St., N.
43972	2109 Stevenson St., N.
43973	2110 Stevenson St., N.
43974	2113 Stevenson St., N.
43975	2114 Stevenson St., N.
43976	2117 Stevenson St., N.
43977	2118 Stevenson St., N.
43978	2121 Stevenson St., N.
43979	2122 Stevenson St., N.
43980	2201 Stevenson St., N.
43981	2202 Stevenson St., N.
43982	2205 Stevenson St., N.
43983	2206 Stevenson St., N.
43984	2209 Stevenson St., N.
43985	2210 Stevenson St., N.
43986	2213 Stevenson St., N.
43987	2214 Stevenson St., N.
43988	2217 Stevenson St., N.
43989	2218 Stevenson St., N.
43990	2502 Stevenson St., N.
43991	2508 Stevenson St., N.
43992	2509 Stevenson St., N.
43993	2512 Stevenson St., N.
43994	2513 Stevenson St., N.
43995	2516 Stevenson St., N.
43996	2517 Stevenson St., N.
43997	2520 Stevenson St., N.
43998	2521 Stevenson St., N.
43999	2527 Stevenson St., N.
44000	2528 Stevenson St., N.
44001	2533 Stevenson St., N.
44002	2534 Stevenson St., N.
44003	2539 Stevenson St., N.
44004	2601 Stevenson St., N.
44005	2602 Stevenson St., N.
44006	2605 Stevenson St., N.
44007	2606 Stevenson St., N.
44008	2609 Stevenson St., N.
44009	2610 Stevenson St., N.
44010	2613 Stevenson St., N.
44011	2614 Stevenson St., N.
44012	2617 Stevenson St., N.
44013	2618 Stevenson St., N.
44014	2621 Stevenson St., N.
44015	2622 Stevenson St., N.
44016	2625 Stevenson St., N.

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44017	2626 Stevenson St., N.
44018	2629 Stevenson St., N.
44019	2710 Stevenson St., N.
44020	2711 Stevenson St., N.
44021	2714 Stevenson St., N.
44022	2715 Stevenson St., N.
44023	2718 Stevenson St., N.
44024	2719 Stevenson St., N.
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44026	2723 Stevenson St., N.
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44029	2730 Stevenson St., N.
44030	2731 Stevenson St., N.
44031	2734 Stevenson St., N.
44032	2735 Stevenson St., N.
44033	2738 Stevenson St., N.
44034	2739 Stevenson St., N.
44035	2742 Stevenson St., N.
44036	2743 Stevenson St., N.
44037	2746 Stevenson St., N.
44038	2747 Stevenson St., N.
44039	2750 Stevenson St., N.
44040	2751 Stevenson St., N.
44041	2812 Stevenson St., N.
44042	2813 Stevenson St., N.
44043	2817 Stevenson St., N.
44044	2820 Stevenson St., N.
44045	2821 Stevenson St., N.
44046	2824 Stevenson St., N.
44047	2825 Stevenson St., N.
44048	2828 Stevenson St., N.
44049	2829 Stevenson St., N.
44050	2832 Stevenson St., N.
44051	2833 Stevenson St., N.
44052	2836 Stevenson St., N.
44053	2837 Stevenson St., N.
44054	2840 Stevenson St., N.
44055	2841 Stevenson St., N.
44056	2845 Stevenson St., N.
44057	2848 Stevenson St., N.
44058	2849 Stevenson St., N.
44059	2852 Stevenson St., N.
44060	2853 Stevenson St., N.
44061	2857 Stevenson St., N.
44062	2947 Stevenson St., N.
44063	2951 Stevenson St., N.
44064	2952 Stevenson St., N.

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44065	2955 Stevenson St., N.
44066	2956 Stevenson St., N.
44067	2959 Stevenson St., N.
44068	2960 Stevenson St., N.
44069	2964 Stevenson St., N.
44070	3001 Stevenson St., N.
44071	3002 Stevenson St., N.
44072	3005 Stevenson St., N.
44073	3009 Stevenson St., N.
44074	3013 Stevenson St., N.
44075	3014 Stevenson St., N.
44076	3018 Stevenson St., N.
44077	3021 Stevenson St., N.
44078	3022 Stevenson St., N.
44079	3106 Stevenson St., N.
44080	3111 Stevenson St., N.
44081	3112 Stevenson St., N.
44082	3117 Stevenson St., N.
44083	3118 Stevenson St., N.
44084	3123 Stevenson St., N.
44085	3124 Stevenson St., N.
44086	3129 Stevenson St., N.
44087	3130 Stevenson St., N.
44088	3135 Stevenson St., N.
44089	3136 Stevenson St., N.
44090	3139 Stevenson St., N.
44091	3140 Stevenson St., N.
44092	3143 Stevenson St., N.
44093	3202 Stevenson St., N.
44094	3208 Stevenson St., N.
44095	3216 Stevenson St., N.
44096	3224 Stevenson St., N.
44097	3230 Stevenson St., N.
44098	3238 Stevenson St., N.
44099	306 Stevenson St.
44100	307 Stevenson St.
44101	843 Stevenson St.
44102	847 Stevenson St.
44103	111 Stewart Ave., E.
44104	112 Stewart Ave., E.
44105	113 Stewart Ave., E.
44106	117 Stewart Ave., E.
44107	118 Stewart Ave., E.
44108	121 Stewart Ave., E.
44109	125 Stewart Ave., E.
44110	126 Stewart Ave., E.
44111	129 Stewart Ave., E.
44112	130 Stewart Ave., E.

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44113	134 Stewart Ave., E.
44114	135 Stewart Ave., E.
44115	138 Stewart Ave., E.
44116	139 Stewart Ave., E.
44117	141 Stewart Ave., E.
44118	142 Stewart Ave., E.
44119	146 Stewart Ave., E.
44120	150 Stewart Ave., E.
44121	151 Stewart Ave., E.
44122	153 Stewart Ave., E.
44123	154 Stewart Ave., E.
44124	157 Stewart Ave., E.
44125	158 Stewart Ave., E.
44126	161 Stewart Ave., E.
44127	162 Stewart Ave., E.
44128	165 Stewart Ave., E.
44129	168 Stewart Ave., E.
44130	203 Stewart Ave., E.
44131	205 Stewart Ave., E.
44132	206 Stewart Ave., E.
44133	209 Stewart Ave., E.
44134	210 Stewart Ave., E.
44135	214 Stewart Ave., E.
44136	215 Stewart Ave., E.
44137	219 Stewart Ave., E.
44138	222 Stewart Ave., E.
44139	223 Stewart Ave., E.
44140	225 Stewart Ave., E.
44141	226 Stewart Ave., E.
44142	301 Stewart Ave., E.
44143	302 Stewart Ave., E.
44144	305 Stewart Ave., E.
44145	306 Stewart Ave., E.
44146	309 Stewart Ave., E.
44147	310 Stewart Ave., E.
44148	313 Stewart Ave., E.
44149	314 Stewart Ave., E.
44150	317 Stewart Ave., E.
44151	318 Stewart Ave., E.
44152	321 Stewart Ave., E.
44153	322 Stewart Ave., E.
44154	325 Stewart Ave., E.
44155	326 Stewart Ave., E.
44156	351 Stewart Ave., E.
44157	352 Stewart Ave., E.
44158	356 Stewart Ave., E.
44159	359 Stewart Ave., E.
44160	360 Stewart Ave., E.

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44161	363 Stewart Ave., E.
44162	364 Stewart Ave., E.
44163	367 Stewart Ave., E.
44164	368 Stewart Ave., E.
44165	401 Stewart Ave., E.
44166	402 Stewart Ave., E.
44167	405 Stewart Ave., E.
44168	406 Stewart Ave., E.
44169	410 Stewart Ave., E.
44170	411 Stewart Ave., E.
44171	414 Stewart Ave., E.
44172	415 Stewart Ave., E.
44173	417 Stewart Ave., E.
44174	418 Stewart Ave., E.
44175	422 Stewart Ave., E.
44176	501 Stewart Ave., E.
44177	502 Stewart Ave., E.
44178	505 Stewart Ave., E.
44179	506 Stewart Ave., E.
44180	509 Stewart Ave., E.
44181	510 Stewart Ave., E.
44182	514 Stewart Ave., E.
44183	517 Stewart Ave., E.
44184	601 Stewart Ave., E.
44185	602 Stewart Ave., E.
44186	605 Stewart Ave., E.
44187	606 Stewart Ave., E.
44188	609 Stewart Ave., E.
44189	610 Stewart Ave., E.
44190	613 Stewart Ave., E.
44191	614 Stewart Ave., E.
44192	617 Stewart Ave., E.
44193	618 Stewart Ave., E.
44194	621 Stewart Ave., E.
44195	622 Stewart Ave., E.
44196	625 Stewart Ave., E.
44197	626 Stewart Ave., E.
44198	629 Stewart Ave., E.
44199	630 Stewart Ave., E.
44200	633 Stewart Ave., E.
44201	634 Stewart Ave., E.
44202	637 Stewart Ave., E.
44203	638 Stewart Ave., E.
44204	641 Stewart Ave., E.
44205	642 Stewart Ave., E.
44206	645 Stewart Ave., E.
44207	646 Stewart Ave., E.
44208	649 Stewart Ave., E.

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44209	650 Stewart Ave., E.
44210	662 Stewart Ave., E.
44211	729 Stewart Ave., E.
44212	738 Stewart Ave., E.
44213	740 Stewart Ave., E.
44214	746 Stewart Ave., E.
44215	748 Stewart Ave., E.
44216	750 Stewart Ave., E.
44217	760 Stewart Ave., E.
44218	762 Stewart Ave., E.
44219	802 Stewart Ave., E.
44220	816 Stewart Ave., E.
44221	818 Stewart Ave., E.
44222	822 Stewart Ave., E.
44223	826 Stewart Ave., E.
44224	828 Stewart Ave., E.
44225	832 Stewart Ave., E.
44226	902 Stewart Ave., E.
44227	906 Stewart Ave., E.
44228	910 Stewart Ave., E.
44229	914 Stewart Ave., E.
44230	918 Stewart Ave., E.
44231	922 Stewart Ave., E.
44232	971 Stewart Ave., E.
44233	1009 Stewart Ave., E.
44234	1109 Stewart Ave., E.
44235	1117 Stewart Ave., E.
44236	1401 Stewart Ave., E.
44237	1510 Stewart Ave., E.
44238	1009 Stewart Ave., E.
44239	1051 Stewart Ave., E.
44240	1055 Stewart Ave., E.
44241	1059 Stewart Ave., E.
44242	1079 Stewart Ave., E.
44243	1083 Stewart Ave., E.
44244	1109 Stewart Ave., E.
44245	1117 Stewart Ave., E.
44246	1401 Stewart Ave., E.
44247	1510 Stewart Ave., E.
44248	1553 Stewart Ave., E.
44249	103 Stewart Ave., W.
44250	109 Stewart Ave., W.
44251	110 Stewart Ave., W.
44252	114 Stewart Ave., W.
44253	117 Stewart Ave., W.
44254	118 Stewart Ave., W.
44255	121 Stewart Ave., W.
44256	125 Stewart Ave., W.

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44257	129 Stewart Ave., W.
44258	130 Stewart Ave., W.
44259	205 Stewart Ave., W.
44260	206 Stewart Ave., W.
44261	210 Stewart Ave., W.
44262	213 Stewart Ave., W.
44263	214 Stewart Ave., W.
44264	217 Stewart Ave., W.
44265	218 Stewart Ave., W.
44266	221 Stewart Ave., W.
44267	222 Stewart Ave., W.
44268	226 Stewart Ave., W.
44269	229 Stewart Ave., W.
44270	230 Stewart Ave., W.
44271	301 Stewart Ave., W.
44272	302 Stewart Ave., W.
44273	305 Stewart Ave., W.
44274	308 Stewart Ave., W.
44275	312 Stewart Ave., W.
44276	313 Stewart Ave., W.
44277	317 Stewart Ave., W.
44278	318 Stewart Ave., W.
44279	322 Stewart Ave., W.
44280	325 Stewart Ave., W.
44281	329 Stewart Ave., W.
44282	330 Stewart Ave., W.
44283	401 Stewart Ave., W.
44284	402 Stewart Ave., W.
44285	409 Stewart Ave., W.
44286	410 Stewart Ave., W.
44287	413 Stewart Ave., W.
44288	414 Stewart Ave., W.
44289	417 Stewart Ave., W.
44290	418 Stewart Ave., W.
44291	421 Stewart Ave., W.
44292	425 Stewart Ave., W.
44293	426 Stewart Ave., W.
44294	429 Stewart Ave., W.
44295	430 Stewart Ave., W.
44296	501 Stewart Ave., W.
44297	510 Stewart Ave., W.
44298	511 Stewart Ave., W.
44299	516 Stewart Ave., W.
44300	521 Stewart Ave., W.
44301	524 Stewart Ave., W.
44302	525 Stewart Ave., W.
44303	530 Stewart Ave., W.
44304	534 Stewart Ave., W.

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44305	535 Stewart Ave., W.
44306	541 Stewart Ave., W.
44307	542 Stewart Ave., W.
44308	546 Stewart Ave., W.
44309	549 Stewart Ave., W.
44310	550 Stewart Ave., W.
44311	601 Stewart Ave., W.
44312	602 Stewart Ave., W.
44313	606 Stewart Ave., W.
44314	607 Stewart Ave., W.
44315	610 Stewart Ave., W.
44316	613 Stewart Ave., W.
44317	614 Stewart Ave., W.
44318	618 Stewart Ave., W.
44319	621 Stewart Ave., W.
44320	624 Stewart Ave., W.
44321	625 Stewart Ave., W.
44322	630 Stewart Ave., W.
44323	631 Stewart Ave., W.
44324	634 Stewart Ave., W.
44325	637 Stewart Ave., W.
44326	638 Stewart Ave., W.
44327	642 Stewart Ave., W.
44328	646 Stewart Ave., W.
44329	701 Stewart Ave., W.
44330	701 Stewart Ave., W.
44331	717 Stewart Ave., W.
44332	801 Stewart Ave., W.
44333	809 Stewart Ave., W.
44334	813 Stewart Ave., W.
44335	817 Stewart Ave., W.
44336	829 Stewart Ave., W.
44337	833 Stewart Ave., W.
44338	837 Stewart Ave., W.
44339	841 Stewart Ave., W.
44340	845 Stewart Ave., W.
44341	1109 Stewart Ave., W.
44342	1113 Stewart Ave., W.
44343	1116 Stewart Ave., W.
44344	1119 Stewart Ave., W.
44345	1120 Stewart Ave., W.
44346	1123 Stewart Ave., W.
44347	1201 Stewart Ave., W.
44348	1208 Stewart Ave., W.
44349	1209 Stewart Ave., W.
44350	1216 Stewart Ave., W.
44351	1220 Stewart Ave., W.
44352	1301 Stewart Ave., W.

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44353	1302 Stewart Ave., W.
44354	1306 Stewart Ave., W.
44355	1309 Stewart Ave., W.
44356	1310 Stewart Ave., W.
44357	1313 Stewart Ave., W.
44358	1314 Stewart Ave., W.
44359	1317 Stewart Ave., W.
44360	1318 Stewart Ave., W.
44361	1401 Stewart Ave., W.
44362	1402 Stewart Ave., W.
44363	1406 Stewart Ave., W.
44364	1407 Stewart Ave., W.
44365	1410 Stewart Ave., W.
44366	1411 Stewart Ave., W.
44367	1414 Stewart Ave., W.
44368	1415 Stewart Ave., W.
44369	1418 Stewart Ave., W.
44370	1419 Stewart Ave., W.
44371	1501 Stewart Ave., W.
44372	1502 Stewart Ave., W.
44373	1505 Stewart Ave., W.
44374	1506 Stewart Ave., W.
44375	1510 Stewart Ave., W.
44376	1514 Stewart Ave., W.
44377	1608 Stewart Ave., W.
44378	1712 Stewart Ave., W.
44379	1716 Stewart Ave., W.
44380	1906 Stewart Ave., W.
44381	1910 Stewart Ave., W.
44382	1914 Stewart Ave., W.
44383	1918 Stewart Ave., W.
44384	1922 Stewart Ave., W.
44385	1926 Stewart Ave., W.
44386	1930 Stewart Ave., W.
44387	2002 Stewart Ave., W.
44388	2006 Stewart Ave., W.
44389	2010 Stewart Ave., W.
44390	2014 Stewart Ave., W.
44391	2018 Stewart Ave., W.
44392	2022 Stewart Ave., W.
44393	2102 Stewart Ave., W.
44394	2106 Stewart Ave., W.
44395	2107 Stewart Ave., W.
44396	2110 Stewart Ave., W.
44397	2114 Stewart Ave., W.
44398	2118 Stewart Ave., W.
44399	2202 Stewart Ave., W.
44400	2206 Stewart Ave., W.

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44401	2207 Stewart Ave., W.
44402	2210 Stewart Ave., W.
44403	2213 Stewart Ave., W.
44404	2214 Stewart Ave., W.
44405	2218 Stewart Ave., W.
44406	2302 Stewart Ave., W.
44407	2306 Stewart Ave., W.
44408	2307 Stewart Ave., W.
44409	2310 Stewart Ave., W.
44410	2408 Stewart Ave., W.
44411	2415 Stewart Ave., W.
44412	2416 Stewart Ave., W.
44413	101 Stockdale St.
44414	112 Stockdale St.
44415	113 Stockdale St.
44416	118 Stockdale St.
44417	119 Stockdale St.
44418	122 Stockdale St.
44419	125 Stockdale St.
44420	126 Stockdale St.
44421	128 Stockdale St.
44422	129 Stockdale St.
44423	133 Stockdale St.
44424	134 Stockdale St.
44425	139 Stockdale St.
44426	140 Stockdale St.
44427	201 Stockdale St.
44428	202 Stockdale St.
44429	206 Stockdale St.
44430	207 Stockdale St.
44431	210 Stockdale St.
44432	211 Stockdale St.
44433	217 Stockdale St.
44434	218 Stockdale St.
44435	221 Stockdale St.
44436	222 Stockdale St.
44437	225 Stockdale St.
44438	226 Stockdale St.
44439	230 Stockdale St.
44440	231 Stockdale St.
44441	236 Stockdale St.
44442	237 Stockdale St.
44443	240 Stockdale St.
44444	304 Stockdale St.
44445	310 Stockdale St.
44446	314 Stockdale St.
44447	318 Stockdale St.
44448	322 Stockdale St.

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44449	326 Stockdale St.
44450	330 Stockdale St.
44451	402 Stockdale St.
44452	410 Stockdale St.
44453	414 Stockdale St.
44454	418 Stockdale St.
44455	511 Stockdale St.
44456	512 Stockdale St.
44457	515 Stockdale St.
44458	516 Stockdale St.
44459	517 Stockdale St.
44460	520 Stockdale St.
44461	521 Stockdale St.
44462	524 Stockdale St.
44463	525 Stockdale St.
44464	528 Stockdale St.
44465	529 Stockdale St.
44466	601 Stockdale St.
44467	602 Stockdale St.
44468	605 Stockdale St.
44469	606 Stockdale St.
44470	609 Stockdale St.
44471	610 Stockdale St.
44472	614 Stockdale St.
44473	617 Stockdale St.
44474	618 Stockdale St.
44475	618 Stockdale St.
44476	701 Stockdale St.
44477	702 Stockdale St.
44478	706 Stockdale St.
44479	707 Stockdale St.
44480	710 Stockdale St.
44481	711 Stockdale St.
44482	714 Stockdale St.
44483	715 Stockdale St.
44484	718 Stockdale St.
44485	719 Stockdale St.
44486	723 Stockdale St.
44487	801 Stockdale St.
44488	802 Stockdale St.
44489	805 Stockdale St.
44490	805 Stockdale St.
44491	808 Stockdale St.
44492	809 Stockdale St.
44493	812 Stockdale St.
44494	813 Stockdale St.
44495	817 Stockdale St.
44496	820 Stockdale St.

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44497	821 Stockdale St.
44498	823 Stockdale St.
44499	824 Stockdale St.
44500	825 Stockdale St.
44501	825 Stockdale St.
44502	829 Stockdale St.
44503	829 Stockdale St.
44504	831 Stockdale St.
44505	833 Stockdale St.
44506	902 Stockdale St.
44507	908 Stockdale St.
44508	914 Stockdale St.
44509	912 Stocker Ave.
44510	915 Stocker Ave.
44511	916 Stocker Ave.
44512	917 Stocker Ave.
44513	920 Stocker Ave.
44514	923 Stocker Ave.
44515	924 Stocker Ave.
44516	927 Stocker Ave.
44517	928 Stocker Ave.
44518	931 Stocker Ave.
44519	932 Stocker Ave.
44520	935 Stocker Ave.
44521	936 Stocker Ave.
44522	938 Stocker Ave.
44523	939 Stocker Ave.
44524	940 Stocker Ave.
44525	943 Stocker Ave.
44526	947 Stocker Ave.
44527	948 Stocker Ave.
44528	951 Stocker Ave.
44529	952 Stocker Ave.
44530	956 Stocker Ave.
44531	959 Stocker Ave.
44532	960 Stocker Ave.
44533	962 Stocker Ave.
44534	963 Stocker Ave.
44535	967 Stocker Ave.
44536	968 Stocker Ave.
44537	971 Stocker Ave.
44538	1002 Stocker Ave.
44539	1005 Stocker Ave.
44540	1011 Stocker Ave.
44541	1012 Stocker Ave.
44542	1016 Stocker Ave.
44543	1017 Stocker Ave.
44544	1020 Stocker Ave.

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44545	1110 Stocker Ave.
44546	1114 Stocker Ave.
44547	1115 Stocker Ave.
44548	1118 Stocker Ave.
44549	1119 Stocker Ave.
44550	1122 Stocker Ave.
44551	1123 Stocker Ave.
44552	1127 Stocker Ave.
44553	1200 Stocker Ave.
44554	1201 Stocker Ave.
44555	1205 Stocker Ave.
44556	1209 Stocker Ave.
44557	1214 Stocker Ave.
44558	1217 Stocker Ave.
44559	1218 Stocker Ave.
44560	1221 Stocker Ave.
44561	1222 Stocker Ave.
44562	1301 Stocker Ave.
44563	1302 Stocker Ave.
44564	1305 Stocker Ave.
44565	1309 Stocker Ave.
44566	1310 Stocker Ave.
44567	1313 Stocker Ave.
44568	1314 Stocker Ave.
44569	1317 Stocker Ave.
44570	1318 Stocker Ave.
44571	1322 Stocker Ave.
44572	1325 Stocker Ave.
44573	1326 Stocker Ave.
44574	1329 Stocker Ave.
44575	1401 Stocker Ave.
44576	1402 Stocker Ave.
44577	1406 Stocker Ave.
44578	1409 Stocker Ave.
44579	1413 Stocker Ave.
44580	1414 Stocker Ave.
44581	1417 Stocker Ave.
44582	1418 Stocker Ave.
44583	1421 Stocker Ave.
44584	1501 Stocker Ave.
44585	1513 Stocker Ave.
44586	1517 Stocker Ave.
44587	1601 Stocker Ave.
44588	1605 Stocker Ave.
44589	1609 Stocker Ave.
44590	1613 Stocker Ave.
44591	1617 Stocker Ave.
44592	1621 Stocker Ave.

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44593	1701 Stocker Ave.
44594	1705 Stocker Ave.
44595	1713 Stocker Ave.
44596	629 Stockton St.
44597	702 Stockton St.
44598	708 Stockton St.
44599	709 Stockton St.
44600	713 Stockton St.
44601	713 Stockton St.
44602	714 Stockton St.
44603	720 Stockton St.
44604	725 Stockton St.
44605	726 Stockton St.
44606	727 Stockton St.
44607	800 Stockton St.
44608	801 Stockton St.
44609	803 Stockton St.
44610	804 Stockton St.
44611	807 Stockton St.
44612	808 Stockton St.
44613	812 Stockton St.
44614	909 Stockton St.
44615	1010 Stockton St.
44616	1014 Stockton St.
44617	1022 Stockton St.
44618	1025 Stockton St.
44619	1026 Stockton St.
44620	1033 Stockton St.
44621	1034 Stockton St.
44622	1036 Stockton St.
44623	1100 Stockton St.
44624	1105 Stockton St.
44625	1106 Stockton St.
44626	1109 Stockton St.
44627	1112 Stockton St.
44628	1113 Stockton St.
44629	1120 Stockton St.
44630	1161 Stockton St.
44631	1165 Stockton St.
44632	1210 Stockton St.
44633	1211 Stockton St.
44634	1212 Stockton St.
44635	1213 Stockton St.
44636	1214 Stockton St.
44637	1217 Stockton St.
44638	1219 Stockton St.
44639	1223 Stockton St.
44640	1433 Stockton St.

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44641	1437 Stockton St.
44642	1501 Stockton St.
44643	1505 Stockton St.
44644	1513 Stockton St.
44645	1517 Stockton St.
44646	1529 Stockton St.
44647	414 Stone St.
44648	427 Stone St.
44649	501 Stone St.
44650	505 Stone St.
44651	513 Stone St.
44652	517 Stone St.
44653	519 Stone St.
44654	605 Stone St.
44655	610 Stone St.
44656	611 Stone St.
44657	614 Stone St.
44658	615 Stone St.
44659	618 Stone St.
44660	621 Stone St.
44661	626 Stone St.
44662	627 Stone St.
44663	628 Stone St.
44664	702 Stone St.
44665	707 Stone St.
44666	712 Stone St.
44667	717 Stone St.
44668	718 Stone St.
44669	719 Stone St.
44670	720 Stone St.
44671	725 Stone St.
44672	726 Stone St.
44673	728 Stone St.
44674	820 Stone St.
44675	822 Stone St.
44676	824 Stone St.
44677	1301 Stone St.
44678	1309 Stone St.
44679	1310 Stone St.
44680	1313 Stone St.
44681	1314 Stone St.
44682	1319 Stone St.
44683	1321 Stone St.
44684	1322 Stone St.
44685	1325 Stone St.
44686	1326 Stone St.
44687	1330 Stone St.
44688	1334 Stone St.

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44689	1401 Stone St.
44690	1402 Stone St.
44691	1405 Stone St.
44692	1406 Stone St.
44693	1413 Stone St.
44694	1414 Stone St.
44695	1417 Stone St.
44696	1418 Stone St.
44697	1421 Stone St.
44698	1422 Stone St.
44699	1426 Stone St.
44700	1429 Stone St.
44701	1432 Stone St.
44702	1434 Stone St.
44703	1501 Stone St.
44704	1506 Stone St.
44705	1529 Stone St.
44706	1534 Stone St.
44707	1538 Stone St.
44708	1546 Stone St.
44709	1605 Stone St.
44710	1611 Stone St.
44711	1615 Stone St.
44712	1621 Stone St.
44713	1001 Stonecreek Dr.
44714	2801 Stonegate Dr.
44715	2832 Stonegate Dr.
44716	3002 Stonegate Dr.
44717	3101 Stonegate Dr.
44718	3102 Stonegate Dr.
44719	3201 Stonegate Dr.
44720	3426 Stonegate Dr.
44721	3526 Stonegate Dr.
44722	3526 Stonegate Dr.
44723	3632 Stonegate Dr.
44724	2002 Stoney Brook Ct.
44725	2004 Stoney Brook Ct.
44726	2005 Stoney Brook Ct.
44727	2006 Stoney Brook Ct.
44728	2007 Stoney Brook Ct.
44729	2008 Stoney Brook Ct.
44730	2009 Stoney Brook Ct.
44731	2010 Stoney Brook Ct.
44732	2011 Stoney Brook Ct.
44733	2012 Stoney Brook Ct.
44734	2015 Stoney Brook Ct.
44735	2016 Stoney Brook Ct.
44736	2017 Stoney Brook Ct.

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44737	2018 Stoney Brook Ct.
44738	2019 Stoney Brook Ct.
44739	2020 Stoney Brook Ct.
44740	2021 Stoney Brook Ct.
44741	2022 Stoney Brook Ct.
44742	2023 Stoney Brook Ct.
44743	2024 Stoney Brook Ct.
44744	2025 Stoney Brook Ct.
44745	2026 Stoney Brook Ct.
44746	2101 Stoney Brook Ct.
44747	2102 Stoney Brook Ct.
44748	2103 Stoney Brook Ct.
44749	2104 Stoney Brook Ct.
44750	2105 Stoney Brook Ct.
44751	2106 Stoney Brook Ct.
44752	2107 Stoney Brook Ct.
44753	2108 Stoney Brook Ct.
44754	5701 Suburban Ct.
44755	5702 Suburban Ct.
44756	5705 Suburban Ct.
44757	5706 Suburban Ct.
44758	5709 Suburban Ct.
44759	5710 Suburban Ct.
44760	5713 Suburban Ct.
44761	5714 Suburban Ct.
44762	5717 Suburban Ct.
44763	5718 Suburban Ct.
44764	5721 Suburban Ct.
44765	5722 Suburban Ct.
44766	4101 Sugar Maple Run.
44767	4201 Sugar Maple Run.
44768	4202 Sugar Maple Run.
44769	4207 Sugar Maple Run.
44770	4208 Sugar Maple Run.
44771	4213 Sugar Maple Run.
44772	4214 Sugar Maple Run.
44773	4219 Sugar Maple Run.
44774	4220 Sugar Maple Run.
44775	4225 Sugar Maple Run.
44776	4226 Sugar Maple Run.
44777	4231 Sugar Maple Run.
44778	4237 Sugar Maple Run.
44779	4243 Sugar Maple Run.
44780	4255 Sugar Maple Run.
44781	4258 Sugar Maple Run.
44782	4261 Sugar Maple Run.
44783	4264 Sugar Maple Run.
44784	4267 Sugar Maple Run.

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44785	4273 Sugar Maple Run.
44786	4279 Sugar Maple Run.
44787	4285 Sugar Maple Run.
44788	914 Sunday St.
44789	919 Sunday St.
44790	927 Sunday St.
44791	931 Sunday St.
44792	932 Sunday St.
44793	935 Sunday St.
44794	938 Sunday St.
44795	1401 Sunnyside Ave.
44796	1414 Sunnyside Ave.
44797	1415 Sunnyside Ave.
44798	1418 Sunnyside Ave.
44799	1424 Sunnyside Ave.
44800	1429 Sunnyside Ave.
44801	1441 Sunnyside Ave.
44802	3607 Sunridge Dr.
44803	3608 Sunridge Dr.
44804	3611 Sunridge Dr.
44805	3612 Sunridge Dr.
44806	3615 Sunridge Dr.
44807	3616 Sunridge Dr.
44808	3619 Sunridge Dr.
44809	3620 Sunridge Dr.
44810	3701 Sunridge Dr.
44811	3702 Sunridge Dr.
44812	3705 Sunridge Dr.
44813	3706 Sunridge Dr.
44814	3709 Sunridge Dr.
44815	3710 Sunridge Dr.
44816	3715 Sunridge Dr.
44817	3716 Sunridge Dr.
44818	3801 Sunridge Dr.
44819	3802 Sunridge Dr.
44820	3805 Sunridge Dr.
44821	3806 Sunridge Dr.
44822	3809 Sunridge Dr.
44823	3810 Sunridge Dr.
44824	3813 Sunridge Dr.
44825	3814 Sunridge Dr.
44826	3817 Sunridge Dr.
44827	3821 Sunridge Dr.
44828	3825 Sunridge Dr.
44829	3829 Sunridge Dr.
44830	3833 Sunridge Dr.
44831	3836 Sunridge Dr.
44832	3837 Sunridge Dr.

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44833	2801 Sunset Dr.
44834	2829 Sunset Dr.
44835	3301 Sunset Dr.
44836	3303 Sunset Dr.
44837	3305 Sunset Dr.
44838	3307 Sunset Dr.
44839	3309 Sunset Dr.
44840	3401 Sunset Dr.
44841	3407 Sunset Dr.
44842	3411 Sunset Dr.
44843	3501 Sunset Dr.
44844	3507 Sunset Dr.
44845	3511 Sunset Dr.
44846	3515 Sunset Dr.
44847	3601 Sunset Dr.
44848	3615 Sunset Dr.
44849	3707 Sunset Dr.
44850	3715 Sunset Dr.
44851	3759 Sunset Dr.
44852	3769 Sunset Dr.
44853	3779 Sunset Dr.
44854	5205 Susan St.
44855	5209 Susan St.
44856	5210 Susan St.
44857	5214 Susan St.
44858	5215 Susan St.
44859	5218 Susan St.
44860	5219 Susan St.
44861	5222 Susan St.
44862	5225 Susan St.
44863	5226 Susan St.
44864	5302 Susan St.
44865	5308 Susan St.
44866	5309 Susan St.
44867	5311 Susan St.
44868	5312 Susan St.
44869	5315 Susan St.
44870	5316 Susan St.
44871	5320 Susan St.
44872	5401 Susan St.
44873	5402 Susan St.
44874	5405 Susan St.
44875	5406 Susan St.
44876	5409 Susan St.
44877	5410 Susan St.
44878	5413 Susan St.
44879	5414 Susan St.
44880	5501 Susan St.

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44881	5502 Susan St.
44882	5505 Susan St.
44883	5506 Susan St.
44884	5509 Susan St.
44885	5510 Susan St.
44886	5513 Susan St.
44887	5514 Susan St.
44888	5517 Susan St.
44889	5518 Susan St.
44890	5605 Susan St.
44891	5606 Susan St.
44892	5610 Susan St.
44893	5611 Susan St.
44894	5614 Susan St.
44895	5615 Susan St.
44896	5618 Susan St.
44897	5619 Susan St.
44898	5701 Susan St.
44899	5702 Susan St.
44900	5705 Susan St.
44901	5706 Susan St.
44902	5709 Susan St.
44903	5710 Susan St.
44904	5713 Susan St.
44905	5714 Susan St.
44906	5718 Susan St.
44907	5719 Susan St.
44908	5722 Susan St.
44909	5801 Susan St.
44910	5802 Susan St.
44911	5805 Susan St.
44912	5806 Susan St.
44913	5809 Susan St.
44914	5810 Susan St.
44915	5816 Susan St.
44916	5905 Susan St.
44917	5907 Susan St.
44918	5908 Susan St.
44919	5911 Susan St.
44920	5912 Susan St.
44921	5915 Susan St.
44922	5916 Susan St.
44923	5919 Susan St.
44924	5920 Susan St.
44925	5924 Susan St.
44926	6001 Susan St.
44927	6002 Susan St.
44928	6005 Susan St.

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44929	6008 Susan St.
44930	6009 Susan St.
44931	6013 Susan St.
44932	6014 Susan St.
44933	6017 Susan St.
44934	6021 Susan St.
44935	6022 Susan St.
44936	6029 Susan St.
44937	5329 Sussex Dr.
44938	5330 Sussex Dr.
44939	1115 Sutton Ave.
44940	1116 Sutton Ave.
44941	1124 Sutton Ave.
44942	1127 Sutton Ave.
44943	1128 Sutton Ave.
44944	1152 Sutton Ave.
44945	1156 Sutton Ave.
44946	1159 Sutton Ave.
44947	1160 Sutton Ave.
44948	1163 Sutton Ave.
44949	1168 Sutton Ave.
44950	1205 Sutton Ave.
44951	1209 Sutton Ave.
44952	1213 Sutton Ave.
44953	1214 Sutton Ave.
44954	1255 Sutton Ave.
44955	1256 Sutton Ave.
44956	1258 Sutton Ave.
44957	1259 Sutton Ave.
44958	1260 Sutton Ave.
44959	1267 Sutton Ave.
44960	1268 Sutton Ave.
44961	1302 Sutton Ave.
44962	1305 Sutton Ave.
44963	1306 Sutton Ave.
44964	1309 Sutton Ave.
44965	1310 Sutton Ave.
44966	1313 Sutton Ave.
44967	1314 Sutton Ave.
44968	1317 Sutton Ave.
44969	1318 Sutton Ave.
44970	1352 Sutton Ave.
44971	1355 Sutton Ave.
44972	1356 Sutton Ave.
44973	1359 Sutton Ave.
44974	1363 Sutton Ave.
44975	1364 Sutton Ave.
44976	1368 Sutton Ave.

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44977	1401 Sutton Ave.
44978	1405 Sutton Ave.
44979	1406 Sutton Ave.
44980	2012 Swayze St.
44981	2015 Swayze St.
44982	2017 Swayze St.
44983	2020 Swayze St.
44984	2021 Swayze St.
44985	2027 Swayze St.
44986	2101 Swayze St.
44987	2108 Swayze St.
44988	2109 Swayze St.
44989	2112 Swayze St.
44990	2113 Swayze St.
44991	2116 Swayze St.
44992	2117 Swayze St.
44993	2120 Swayze St.
44994	2121 Swayze St.
44995	2124 Swayze St.
44996	2201 Swayze St.
44997	2202 Swayze St.
44998	2206 Swayze St.
44999	2207 Swayze St.
45000	2209 Swayze St.
45001	2210 Swayze St.
45002	2213 Swayze St.
45003	2214 Swayze St.
45004	2217 Swayze St.
45005	2218 Swayze St.
45006	2221 Swayze St.
45007	2222 Swayze St.
45008	2301 Swayze St.
45009	2302 Swayze St.
45010	2305 Swayze St.
45011	2306 Swayze St.
45012	2309 Swayze St.
45013	2310 Swayze St.
45014	2313 Swayze St.
45015	2314 Swayze St.
45016	2317 Swayze St.
45017	2321 Swayze St.
45018	2325 Swayze St.
45019	2501 Swayze St.
45020	2502 Swayze St.
45021	2505 Swayze St.
45022	2510 Swayze St.
45023	2513 Swayze St.
45024	2514 Swayze St.

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45025	2517 Swayze St.
45026	2518 Swayze St.
45027	2521 Swayze St.
45028	2522 Swayze St.
45029	2525 Swayze St.
45030	2528 Swayze St.
45031	2529 Swayze St.
45032	2530 Swayze St.
45033	2533 Swayze St.
45034	2534 Swayze St.
45035	2537 Swayze St.
45036	2538 Swayze St.
45037	2541 Swayze St.
45038	2546 Swayze St.
45039	2549 Swayze St.
45040	2550 Swayze St.
45041	2553 Swayze St.
45042	2554 Swayze St.
45043	2601 Swayze St.
45044	2605 Swayze St.
45045	2606 Swayze St.
45046	2610 Swayze St.
45047	2613 Swayze St.
45048	2614 Swayze St.
45049	2617 Swayze St.
45050	2618 Swayze St.
45051	2621 Swayze St.
45052	2622 Swayze St.
45053	2625 Swayze St.
45054	2626 Swayze St.
45055	2629 Swayze St.
45056	2632 Swayze St.
45057	2634 Swayze St.
45058	2635 Swayze St.
45059	2637 Swayze St.
45060	2638 Swayze St.
45061	2641 Swayze St.
45062	2645 Swayze St.
45063	2648 Swayze St.
45064	2701 Swayze St.
45065	2705 Swayze St.
45066	2709 Swayze St.
45067	2710 Swayze St.
45068	2713 Swayze St.
45069	2714 Swayze St.
45070	2717 Swayze St.
45071	2718 Swayze St.
45072	2721 Swayze St.

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45073	2725 Swayze St.
45074	2726 Swayze St.
45075	2729 Swayze St.
45076	2733 Swayze St.
45077	2734 Swayze St.
45078	2737 Swayze St.
45079	2738 Swayze St.
45080	2743 Swayze St.
45081	2744 Swayze St.
45082	2747 Swayze St.
45083	2748 Swayze St.
45084	2751 Swayze St.
45085	308 Sylvan Ct.
45086	310 Sylvan Ct.
45087	311 Sylvan Ct.
45088	314 Sylvan Ct.
45089	315 Sylvan Ct.
45090	318 Sylvan Ct.
45091	319 Sylvan Ct.
45092	322 Sylvan Ct.
45093	325 Sylvan Ct.
45094	765 Tacken St.
45095	768 Tacken St.
45096	769 Tacken St.
45097	772 Tacken St.
45098	773 Tacken St.
45099	801 Tacken St.
45100	802 Tacken St.
45101	806 Tacken St.
45102	809 Tacken St.
45103	812 Tacken St.
45104	813 Tacken St.
45105	816 Tacken St.
45106	817 Tacken St.
45107	825 Tacken St.
45108	826 Tacken St.
45109	829 Tacken St.
45110	832 Tacken St.
45111	833 Tacken St.
45112	836 Tacken St.
45113	837 Tacken St.
45114	852 Tacken St.
45115	856 Tacken St.
45116	859 Tacken St.
45117	863 Tacken St.
45118	866 Tacken St.
45119	870 Tacken St.
45120	871 Tacken St.

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45121	874 Tacken St.
45122	878 Tacken St.
45123	914 Tacken St.
45124	924 Tacken St.
45125	928 Tacken St.
45126	931 Tacken St.
45127	932 Tacken St.
45128	936 Tacken St.
45129	944 Tacken St.
45130	951 Tacken St.
45131	959 Tacken St.
45132	964 Tacken St.
45133	967 Tacken St.
45134	972 Tacken St.
45135	1002 Tacken St.
45136	1008 Tacken St.
45137	1014 Tacken St.
45138	1031 Tacken St.
45139	1052 Tacken St.
45140	1058 Tacken St.
45141	1415 Tacoma St.
45142	1419 Tacoma St.
45143	1423 Tacoma St.
45144	1426 Tacoma St.
45145	1427 Tacoma St.
45146	1430 Tacoma St.
45147	1434 Tacoma St.
45148	1435 Tacoma St.
45149	1501 Tacoma St.
45150	1502 Tacoma St.
45151	1505 Tacoma St.
45152	1506 Tacoma St.
45153	1510 Tacoma St.
45154	1511 Tacoma St.
45155	1513 Tacoma St.
45156	1514 Tacoma St.
45157	1517 Tacoma St.
45158	1521 Tacoma St.
45159	1522 Tacoma St.
45160	1605 Tacoma St.
45161	1606 Tacoma St.
45162	1608 Tacoma St.
45163	1613 Tacoma St.
45164	1618 Tacoma St.
45165	1711 Tacoma St.
45166	1712 Tacoma St.
45167	1714 Tacoma St.
45168	1715 Tacoma St.

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45169	1719 Tacoma St.
45170	1720 Tacoma St.
45171	1728 Tacoma St.
45172	111 Taylor St., E.
45173	112 Taylor St., E.
45174	113 Taylor St., E.
45175	116 Taylor St., E.
45176	117 Taylor St., E.
45177	119 Taylor St., E.
45178	120 Taylor St., E.
45179	123 Taylor St., E.
45180	124 Taylor St., E.
45181	127 Taylor St., E.
45182	128 Taylor St., E.
45183	132 Taylor St., E.
45184	136 Taylor St., E.
45185	200 Taylor St., E.
45186	201 Taylor St., E.
45187	205 Taylor St., E.
45188	206 Taylor St., E.
45189	208 Taylor St., E.
45190	209 Taylor St., E.
45191	212 Taylor St., E.
45192	213 Taylor St., E.
45193	216 Taylor St., E.
45194	217 Taylor St., E.
45195	220 Taylor St., E.
45196	221 Taylor St., E.
45197	224 Taylor St., E.
45198	225 Taylor St., E.
45199	228 Taylor St., E.
45200	229 Taylor St., E.
45201	232 Taylor St., E.
45202	233 Taylor St., E.
45203	236 Taylor St., E.
45204	237 Taylor St., E.
45205	402 Taylor St., E.
45206	405 Taylor St., E.
45207	407 Taylor St., E.
45208	410 Taylor St., E.
45209	411 Taylor St., E.
45210	414 Taylor St., E.
45211	418 Taylor St., E.
45212	421 Taylor St., E.
45213	422 Taylor St., E.
45214	500 Taylor St., E.
45215	504 Taylor St., E.
45216	507 Taylor St., E.

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45217	508 Taylor St., E.
45218	511 Taylor St., E.
45219	512 Taylor St., E.
45220	516 Taylor St., E.
45221	519 Taylor St., E.
45222	602 Taylor St., E.
45223	605 Taylor St., E.
45224	613 Taylor St., E.
45225	616 Taylor St., E.
45226	620 Taylor St., E.
45227	621 Taylor St., E.
45228	625 Taylor St., E.
45229	628 Taylor St., E.
45230	111 Taylor St., W.
45231	112 Taylor St., W.
45232	115 Taylor St., W.
45233	116 Taylor St., W.
45234	119 Taylor St., W.
45235	120 Taylor St., W.
45236	123 Taylor St., W.
45237	124 Taylor St., W.
45238	127 Taylor St., W.
45239	128 Taylor St., W.
45240	131 Taylor St., W.
45241	132 Taylor St., W.
45242	200 Taylor St., W.
45243	201 Taylor St., W.
45244	204 Taylor St., W.
45245	205 Taylor St., W.
45246	208 Taylor St., W.
45247	209 Taylor St., W.
45248	212 Taylor St., W.
45249	213 Taylor St., W.
45250	216 Taylor St., W.
45251	217 Taylor St., W.
45252	220 Taylor St., W.
45253	221 Taylor St., W.
45254	224 Taylor St., W.
45255	225 Taylor St., W.
45256	230 Taylor St., W.
45257	311 Taylor St., W.
45258	312 Taylor St., W.
45259	315 Taylor St., W.
45260	319 Taylor St., W.
45261	322 Taylor St., W.
45262	323 Taylor St., W.
45263	326 Taylor St., W.
45264	330 Taylor St., W.

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45265	401 Taylor St., W.
45266	402 Taylor St., W.
45267	405 Taylor St., W.
45268	406 Taylor St., W.
45269	410 Taylor St., W.
45270	413 Taylor St., W.
45271	414 Taylor St., W.
45272	417 Taylor St., W.
45273	418 Taylor St., W.
45274	422 Taylor St., W.
45275	423 Taylor St., W.
45276	426 Taylor St., W.
45277	602 Taylor St., W.
45278	606 Taylor St., W.
45279	609 Taylor St., W.
45280	610 Taylor St., W.
45281	613 Taylor St., W.
45282	1812 Tebo St.
45283	1816 Tebo St.
45284	1819 Tebo St.
45285	1820 Tebo St.
45286	1823 Tebo St.
45287	1824 Tebo St.
45288	1827 Tebo St.
45289	1828 Tebo St.
45290	1832 Tebo St.
45291	1833 Tebo St.
45292	1838 Tebo St.
45293	1839 Tebo St.
45294	1843 Tebo St.
45295	1844 Tebo St.
45296	1850 Tebo St.
45297	1851 Tebo St.
45298	1855 Tebo St.
45299	1856 Tebo St.
45300	1859 Tebo St.
45301	1860 Tebo St.
45302	1901 Tebo St.
45303	1909 Tebo St.
45304	1910 Tebo St.
45305	1915 Tebo St.
45306	1916 Tebo St.
45307	1920 Tebo St.
45308	1921 Tebo St.
45309	1924 Tebo St.
45310	1925 Tebo St.
45311	1928 Tebo St.
45312	1929 Tebo St.

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45313	1932 Tebo St.
45314	1933 Tebo St.
45315	1936 Tebo St.
45316	1937 Tebo St.
45317	1940 Tebo St.
45318	1941 Tebo St.
45319	1944 Tebo St.
45320	1945 Tebo St.
45321	1949 Tebo St.
45322	2001 Tebo St.
45323	2002 Tebo St.
45324	2006 Tebo St.
45325	2007 Tebo St.
45326	2010 Tebo St.
45327	2011 Tebo St.
45328	2014 Tebo St.
45329	2023 Tebo St.
45330	2039 Tebo St.
45331	2043 Tebo St.
45332	2055 Tebo St.
45333	201 Tennyson Ave.
45334	202 Tennyson Ave.
45335	207 Tennyson Ave.
45336	212 Tennyson Ave.
45337	215 Tennyson Ave.
45338	220 Tennyson Ave.
45339	221 Tennyson Ave.
45340	224 Tennyson Ave.
45341	225 Tennyson Ave.
45342	229 Tennyson Ave.
45343	232 Tennyson Ave.
45344	236 Tennyson Ave.
45345	237 Tennyson Ave.
45346	244 Tennyson Ave.
45347	318 Tennyson Ave.
45348	322 Tennyson Ave.
45349	326 Tennyson Ave.
45350	327 Tennyson Ave.
45351	330 Tennyson Ave.
45352	331 Tennyson Ave.
45353	334 Tennyson Ave.
45354	339 Tennyson Ave.
45355	342 Tennyson Ave.
45356	351 Tennyson Ave.
45357	358 Tennyson Ave.
45358	359 Tennyson Ave.
45359	406 Tennyson Ave.
45360	407 Tennyson Ave.

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45361	410 Tennyson Ave.
45362	413 Tennyson Ave.
45363	415 Tennyson Ave.
45364	418 Tennyson Ave.
45365	419 Tennyson Ave.
45366	422 Tennyson Ave.
45367	426 Tennyson Ave.
45368	430 Tennyson Ave.
45369	434 Tennyson Ave.
45370	438 Tennyson Ave.
45371	217 Tenth Ave.
45372	222 Tenth Ave.
45373	307 Tenth Ave.
45374	312 Tenth Ave.
45375	409 Tenth Ave.
45376	410 Tenth Ave.
45377	411 Tenth Ave.
45378	414 Tenth Ave.
45379	418 Tenth Ave.
45380	419 Tenth Ave.
45381	423 Tenth Ave.
45382	425 Tenth Ave.
45383	430 Tenth Ave.
45384	436 Tenth Ave.
45385	516 Tenth Ave.
45386	524 Tenth Ave.
45387	616 Tenth Ave.
45388	621 Tenth Ave.
45389	623 Tenth Ave.
45390	115 Tenth St.
45391	120 Tenth St.
45392	121 Tenth St.
45393	124 Tenth St.
45394	201 Tenth St.
45395	205 Tenth St.
45396	209 Tenth St.
45397	215 Tenth St.
45398	221 Tenth St.
45399	3401 Term St.
45400	3402 Term St.
45401	3408 Term St.
45402	3411 Term St.
45403	3414 Term St.
45404	3417 Term St.
45405	3420 Term St.
45406	3426 Term St.
45407	3502 Term St.
45408	3505 Term St.

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45409	3508 Term St.
45410	3509 Term St.
45411	3514 Term St.
45412	3517 Term St.
45413	3520 Term St.
45414	3601 Term St.
45415	3602 Term St.
45416	3608 Term St.
45417	3609 Term St.
45418	3614 Term St.
45419	3617 Term St.
45420	3701 Term St.
45421	3702 Term St.
45422	3708 Term St.
45423	3713 Term St.
45424	3714 Term St.
45425	3717 Term St.
45426	3720 Term St.
45427	3726 Term St.
45428	3801 Term St.
45429	3808 Term St.
45430	3809 Term St.
45431	3814 Term St.
45432	3817 Term St.
45433	3820 Term St.
45434	3901 Term St.
45435	3902 Term St.
45436	3917 Term St.
45437	3925 Term St.
45438	1810 Terrace Ct.
45439	1814 Terrace Ct.
45440	1815 Terrace Ct.
45441	1819 Terrace Ct.
45442	1822 Terrace Ct.
45443	1823 Terrace Ct.
45444	1826 Terrace Ct.
45445	1827 Terrace Ct.
45446	1830 Terrace Ct.
45447	1831 Terrace Ct.
45448	1834 Terrace Ct.
45449	1835 Terrace Ct.
45450	1836 Terrace Ct.
45451	1839 Terrace Ct.
45452	2601 Terrace Dr.
45453	2602 Terrace Dr.
45454	2605 Terrace Dr.
45455	2606 Terrace Dr.
45456	2609 Terrace Dr.

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45457	2610 Terrace Dr.
45458	2613 Terrace Dr.
45459	2614 Terrace Dr.
45460	2617 Terrace Dr.
45461	2618 Terrace Dr.
45462	2621 Terrace Dr.
45463	2622 Terrace Dr.
45464	2625 Terrace Dr.
45465	2626 Terrace Dr.
45466	2629 Terrace Dr.
45467	2701 Terrace Dr.
45468	2702 Terrace Dr.
45469	2705 Terrace Dr.
45470	2706 Terrace Dr.
45471	2709 Terrace Dr.
45472	2710 Terrace Dr.
45473	2714 Terrace Dr.
45474	2715 Terrace Dr.
45475	2718 Terrace Dr.
45476	2722 Terrace Dr.
45477	2726 Terrace Dr.
45478	2730 Terrace Dr.
45479	105 Thackery Ave., E.
45480	113 Thackery Ave., E.
45481	113 Thackery Ave., E.
45482	117 Thackery Ave., E.
45483	125 Thackery Ave., E.
45484	102 Thackery Ave., W.
45485	106 Thackery Ave., W.
45486	110 Thackery Ave., W.
45487	114 Thackery Ave., W.
45488	118 Thackery Ave., W.
45489	202 Thackery Ave., W.
45490	214 Thackery Ave., W.
45491	218 Thackery Ave., W.
45492	222 Thackery Ave., W.
45493	310 Thackery Ave., W.
45494	314 Thackery Ave., W.
45495	318 Thackery Ave., W.
45496	322 Thackery Ave., W.
45497	326 Thackery Ave., W.
45498	402 Thackery Ave., W.
45499	406 Thackery Ave., W.
45500	410 Thackery Ave., W.
45501	414 Thackery Ave., W.
45502	418 Thackery Ave., W.
45503	428 Thackery Ave., W.
45504	508 Thackery Ave., W.

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45505	512 Thackery Ave., W.
45506	518 Thackery Ave., W.
45507	526 Thackery Ave., W.
45508	534 Thackery Ave., W.
45509	538 Thackery Ave., W.
45510	546 Thackery Ave., W.
45511	554 Thackery Ave., W.
45512	602 Thackery Ave., W.
45513	614 Thackery Ave., W.
45514	618 Thackery Ave., W.
45515	638 Thackery Ave., W.
45516	642 Thackery Ave., W.
45517	646 Thackery Ave., W.
45518	650 Thackery Ave., W.
45519	516 Thayer St.
45520	522 Thayer St.
45521	607 Thayer St.
45522	608 Thayer St.
45523	611 Thayer St.
45524	614 Thayer St.
45525	617 Thayer St.
45526	620 Thayer St.
45527	621 Thayer St.
45528	625 Thayer St.
45529	705 Thayer St.
45530	711 Thayer St.
45531	717 Thayer St.
45532	725 Thayer St.
45533	729 Thayer St.
45534	4907 Theta Pass.
45535	4908 Theta Pass.
45536	4911 Theta Pass.
45537	4915 Theta Pass.
45538	4916 Theta Pass.
45539	4919 Theta Pass.
45540	4923 Theta Pass.
45541	4924 Theta Pass.
45542	4927 Theta Pass.
45543	4928 Theta Pass.
45544	4931 Theta Pass.
45545	4932 Theta Pass.
45546	4936 Theta Pass.
45547	4940 Theta Pass.
45548	5001 Theta Pass.
45549	5002 Theta Pass.
45550	5006 Theta Pass.
45551	5007 Theta Pass.
45552	5010 Theta Pass.

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45553	4617 Thetford Rd.
45554	4701 Thetford Rd.
45555	4701 Thetford Rd.
45556	5020 Thetford Rd.
45557	214 Third Ave., W.
45558	218 Third Ave., W.
45559	224 Third Ave., W.
45560	225 Third Ave., W.
45561	228 Third Ave., W.
45562	301 Third Ave., W.
45563	302 Third Ave., W.
45564	307 Third Ave., W.
45565	308 Third Ave., W.
45566	314 Third Ave., W.
45567	315 Third Ave., W.
45568	320 Third Ave., W.
45569	321 Third Ave., W.
45570	402 Third Ave., W.
45571	402 Third Ave., W.
45572	405 Third Ave., W.
45573	421 Third Ave., W.
45574	422 Third Ave., W.
45575	429 Third Ave., W.
45576	513 Third Ave., W.
45577	515 Third Ave., W.
45578	517 Third Ave., W.
45579	520 Third Ave., W.
45580	603 Third Ave., W.
45581	604 Third Ave., W.
45582	607 Third Ave., W.
45583	608 Third Ave., W.
45584	612 Third Ave., W.
45585	615 Third Ave., W.
45586	616 Third Ave., W.
45587	623 Third Ave., W.
45588	623 Third Ave., W.
45589	624 Third Ave., W.
45590	701 Third Ave., W.
45591	702 Third Ave., W.
45592	806 Third Ave., W.
45593	810 Third Ave., W.
45594	814 Third Ave., W.
45595	822 Third Ave., W.
45596	904 Third Ave., W.
45597	912 Third Ave., W.
45598	914 Third Ave., W.
45599	921 Third Ave., W.
45600	921 Third Ave., W.

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45601	1005 Third Ave., W.
45602	1014 Third Ave., W.
45603	1024 Third Ave., W.
45604	1105 Third Ave., W.
45605	1113 Third Ave., W.
45606	1113 Third Ave., W.
45607	1114 Third Ave., W.
45608	1119 Third Ave., W.
45609	1201 Third Ave., W.
45610	1202 Third Ave., W.
45611	1204 Third Ave., W.
45612	1205 Third Ave., W.
45613	1208 Third Ave., W.
45614	1211 Third Ave., W.
45615	1214 Third Ave., W.
45616	1215 Third Ave., W.
45617	1219 Third Ave., W.
45618	1222 Third Ave., W.
45619	1303 Third Ave., W.
45620	1304 Third Ave., W.
45621	1307 Third Ave., W.
45622	1308 Third Ave., W.
45623	1311 Third Ave., W.
45624	1312 Third Ave., W.
45625	1313 Third Ave., W.
45626	1314 Third Ave., W.
45627	1318 Third Ave., W.
45628	1402 Third Ave., W.
45629	1406 Third Ave., W.
45630	1415 Third Ave., W.
45631	1421 Third Ave., W.
45632	1429 Third Ave., W.
45633	1435 Third Ave., W.
45634	1511 Third Ave., W.
45635	1517 Third Ave., W.
45636	1518 Third Ave., W.
45637	1523 Third Ave., W.
45638	1523 Third Ave., W.
45639	1602 Third Ave., W.
45640	1625 Third Ave., W.
45641	1625 Third Ave., W.
45642	1626 Third Ave., W.
45643	1630 Third Ave., W.
45644	1638 Third Ave., W.
45645	1646 Third Ave., W.
45646	1700 Third Ave., W.
45647	1700 Third Ave., W.
45648	1700 Third Ave., W.

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45649	1902 Third Ave., W.
45650	1908 Third Ave., W.
45651	1912 Third Ave., W.
45652	1916 Third Ave., W.
45653	2008 Third Ave., W.
45654	2012 Third Ave., W.
45655	2022 Third Ave., W.
45656	2102 Third Ave., W.
45657	2108 Third Ave., W.
45658	2112 Third Ave., W.
45659	2116 Third Ave., W.
45660	2208 Third Ave., W.
45661	2401 Third Ave., W.
45662	1700 Third Ave., W.
45663	111 Third St., E.
45664	129 Third St., E.
45665	307 Third St., E.
45666	307 Third St., E.
45667	310 Third St., E.
45668	314 Third St., E.
45669	402 Third St., E.
45670	411 Third St., E.
45671	612 Third St., E.
45672	616 Third St., E.
45673	617 Third St., E.
45674	620 Third St., E.
45675	621 Third St., E.
45676	625 Third St., E.
45677	628 Third St., E.
45678	629 Third St., E.
45679	702 Third St., E.
45680	706 Third St., E.
45681	710 Third St., E.
45682	714 Third St., E.
45683	802 Third St., E.
45684	806 Third St., E.
45685	809 Third St., E.
45686	813 Third St., E.
45687	814 Third St., E.
45688	816 Third St., E.
45689	309 Third St., W.
45690	413 Third St., W.
45691	418 Third St., W.
45692	419 Third St., W.
45693	420 Third St., W.
45694	509 Third St., W.
45695	515 Third St., W.
45696	520 Third St., W.

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45697	520 Third St., W.
45698	521 Third St., W.
45699	609 Third St., W.
45700	613 Third St., W.
45701	619 Third St., W.
45702	109 Thirteenth St., E.
45703	117 Thirteenth St., E.
45704	117 Thirteenth St., E.
45705	211 Thirteenth St., W.
45706	212 Thirteenth St., W.
45707	217 Thirteenth St., W.
45708	220 Thirteenth St., W.
45709	225 Thirteenth St., W.
45710	1912 Thom St.
45711	1916 Thom St.
45712	1919 Thom St.
45713	1920 Thom St.
45714	1923 Thom St.
45715	1924 Thom St.
45716	2001 Thom St.
45717	2002 Thom St.
45718	2005 Thom St.
45719	2006 Thom St.
45720	2009 Thom St.
45721	2010 Thom St.
45722	2013 Thom St.
45723	2014 Thom St.
45724	2022 Thom St.
45725	2101 Thom St.
45726	2102 Thom St.
45727	2110 Thom St.
45728	2113 Thom St.
45729	2202 Thom St.
45730	2205 Thom St.
45731	2206 Thom St.
45732	2209 Thom St.
45733	2210 Thom St.
45734	2214 Thom St.
45735	2217 Thom St.
45736	2218 Thom St.
45737	2222 Thom St.
45738	2310 Thom St.
45739	2314 Thom St.
45740	2318 Thom St.
45741	2322 Thom St.
45742	2402 Thom St.
45743	2403 Thom St.
45744	2406 Thom St.

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45745	2407 Thom St.
45746	2411 Thom St.
45747	2414 Thom St.
45748	2415 Thom St.
45749	2416 Thom St.
45750	2421 Thom St.
45751	2423 Thom St.
45752	2427 Thom St.
45753	2428 Thom St.
45754	2431 Thom St.
45755	2435 Thom St.
45756	2436 Thom St.
45757	2502 Thom St.
45758	2506 Thom St.
45759	2510 Thom St.
45760	2511 Thom St.
45761	2513 Thom St.
45762	2514 Thom St.
45763	2518 Thom St.
45764	2812 Thom St.
45765	2816 Thom St.
45766	2820 Thom St.
45767	2823 Thom St.
45768	2824 Thom St.
45769	2827 Thom St.
45770	2832 Thom St.
45771	2833 Thom St.
45772	2836 Thom St.
45773	2837 Thom St.
45774	2901 Thom St.
45775	2902 Thom St.
45776	2905 Thom St.
45777	2906 Thom St.
45778	2909 Thom St.
45779	2910 Thom St.
45780	2913 Thom St.
45781	2914 Thom St.
45782	2917 Thom St.
45783	2918 Thom St.
45784	2921 Thom St.
45785	2922 Thom St.
45786	2925 Thom St.
45787	3001 Thom St.
45788	3002 Thom St.
45789	3004 Thom St.
45790	3005 Thom St.
45791	3009 Thom St.
45792	3013 Thom St.

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45793	3016 Thom St.
45794	3017 Thom St.
45795	3020 Thom St.
45796	3021 Thom St.
45797	3022 Thom St.
45798	3025 Thom St.
45799	3101 Thom St.
45800	3102 Thom St.
45801	3108 Thom St.
45802	3109 Thom St.
45803	3113 Thom St.
45804	3114 Thom St.
45805	3117 Thom St.
45806	3118 Thom St.
45807	3121 Thom St.
45808	3122 Thom St.
45809	3125 Thom St.
45810	3130 Thom St.
45811	3137 Thom St.
45812	3138 Thom St.
45813	3142 Thom St.
45814	3145 Thom St.
45815	3146 Thom St.
45816	3149 Thom St.
45817	3153 Thom St.
45818	3201 Thom St.
45819	3202 Thom St.
45820	3205 Thom St.
45821	3206 Thom St.
45822	3210 Thom St.
45823	3218 Thom St.
45824	3226 Thom St.
45825	3233 Thom St.
45826	2411 Thomas St.
45827	2412 Thomas St.
45828	2417 Thomas St.
45829	2423 Thomas St.
45830	2424 Thomas St.
45831	2427 Thomas St.
45832	2428 Thomas St.
45833	2431 Thomas St.
45834	2432 Thomas St.
45835	2435 Thomas St.
45836	2436 Thomas St.
45837	2439 Thomas St.
45838	2440 Thomas St.
45839	2443 Thomas St.
45840	2444 Thomas St.

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45841	2447 Thomas St.
45842	2448 Thomas St.
45843	2451 Thomas St.
45844	2452 Thomas St.
45845	2455 Thomas St.
45846	2456 Thomas St.
45847	2459 Thomas St.
45848	2460 Thomas St.
45849	2463 Thomas St.
45850	2464 Thomas St.
45851	2467 Thomas St.
45852	2468 Thomas St.
45853	2472 Thomas St.
45854	2512 Thomas St.
45855	2513 Thomas St.
45856	2516 Thomas St.
45857	2517 Thomas St.
45858	2520 Thomas St.
45859	2521 Thomas St.
45860	2524 Thomas St.
45861	2525 Thomas St.
45862	2528 Thomas St.
45863	2529 Thomas St.
45864	2532 Thomas St.
45865	2533 Thomas St.
45866	2536 Thomas St.
45867	2537 Thomas St.
45868	2540 Thomas St.
45869	2541 Thomas St.
45870	2545 Thomas St.
45871	2548 Thomas St.
45872	2549 Thomas St.
45873	2552 Thomas St.
45874	2553 Thomas St.
45875	2556 Thomas St.
45876	2557 Thomas St.
45877	2560 Thomas St.
45878	2561 Thomas St.
45879	2564 Thomas St.
45880	2565 Thomas St.
45881	2568 Thomas St.
45882	2569 Thomas St.
45883	2573 Thomas St.
45884	2577 Thomas St.
45885	2578 Thomas St.
45886	2581 Thomas St.
45887	2601 Thomas St.
45888	2602 Thomas St.

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45889	2607 Thomas St.
45890	2610 Thomas St.
45891	2613 Thomas St.
45892	2616 Thomas St.
45893	2619 Thomas St.
45894	2622 Thomas St.
45895	2625 Thomas St.
45896	2626 Thomas St.
45897	2631 Thomas St.
45898	2701 Thomas St.
45899	2702 Thomas St.
45900	2705 Thomas St.
45901	2706 Thomas St.
45902	2709 Thomas St.
45903	2710 Thomas St.
45904	2713 Thomas St.
45905	2714 Thomas St.
45906	2717 Thomas St.
45907	2718 Thomas St.
45908	2721 Thomas St.
45909	2722 Thomas St.
45910	2725 Thomas St.
45911	2726 Thomas St.
45912	2729 Thomas St.
45913	2733 Thomas St.
45914	2734 Thomas St.
45915	2737 Thomas St.
45916	2738 Thomas St.
45917	2741 Thomas St.
45918	2742 Thomas St.
45919	2745 Thomas St.
45920	2746 Thomas St.
45921	2749 Thomas St.
45922	2750 Thomas St.
45923	2754 Thomas St.
45924	2758 Thomas St.
45925	2762 Thomas St.
45926	2801 Thomas St.
45927	2802 Thomas St.
45928	2806 Thomas St.
45929	2807 Thomas St.
45930	2810 Thomas St.
45931	2814 Thomas St.
45932	406 Thomson St.
45933	414 Thomson St.
45934	418 Thomson St.
45935	423 Thomson St.
45936	423 Thomson St.

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45937	424 Thomson St.
45938	431 Thomson St.
45939	436 Thomson St.
45940	501 Thomson St.
45941	504 Thomson St.
45942	507 Thomson St.
45943	510 Thomson St.
45944	518 Thomson St.
45945	519 Thomson St.
45946	523 Thomson St.
45947	530 Thomson St.
45948	609 Thomson St.
45949	613 Thomson St.
45950	614 Thomson St.
45951	617 Thomson St.
45952	620 Thomson St.
45953	621 Thomson St.
45954	624 Thomson St.
45955	702 Thomson St.
45956	709 Thomson St.
45957	713 Thomson St.
45958	714 Thomson St.
45959	721 Thomson St.
45960	722 Thomson St.
45961	725 Thomson St.
45962	728 Thomson St.
45963	729 Thomson St.
45964	734 Thomson St.
45965	735 Thomson St.
45966	801 Thomson St.
45967	804 Thomson St.
45968	806 Thomson St.
45969	807 Thomson St.
45970	811 Thomson St.
45971	814 Thomson St.
45972	2513 Tiffin St.
45973	2514 Tiffin St.
45974	2517 Tiffin St.
45975	2518 Tiffin St.
45976	2521 Tiffin St.
45977	2522 Tiffin St.
45978	2525 Tiffin St.
45979	2526 Tiffin St.
45980	2529 Tiffin St.
45981	2530 Tiffin St.
45982	2533 Tiffin St.
45983	2534 Tiffin St.
45984	2537 Tiffin St.

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45985	2538 Tiffin St.
45986	2541 Tiffin St.
45987	2542 Tiffin St.
45988	2545 Tiffin St.
45989	2546 Tiffin St.
45990	2549 Tiffin St.
45991	2550 Tiffin St.
45992	2553 Tiffin St.
45993	2554 Tiffin St.
45994	2557 Tiffin St.
45995	2558 Tiffin St.
45996	2561 Tiffin St.
45997	2562 Tiffin St.
45998	2565 Tiffin St.
45999	2566 Tiffin St.
46000	710 Tilden St.
46001	714 Tilden St.
46002	718 Tilden St.
46003	719 Tilden St.
46004	723 Tilden St.
46005	726 Tilden St.
46006	727 Tilden St.
46007	730 Tilden St.
46008	731 Tilden St.
46009	734 Tilden St.
46010	738 Tilden St.
46011	739 Tilden St.
46012	742 Tilden St.
46013	743 Tilden St.
46014	746 Tilden St.
46015	747 Tilden St.
46016	750 Tilden St.
46017	751 Tilden St.
46018	754 Tilden St.
46019	755 Tilden St.
46020	759 Tilden St.
46021	801 Tilden St.
46022	806 Tilden St.
46023	810 Tilden St.
46024	813 Tilden St.
46025	814 Tilden St.
46026	817 Tilden St.
46027	820 Tilden St.
46028	821 Tilden St.
46029	822 Tilden St.
46030	826 Tilden St.
46031	829 Tilden St.
46032	830 Tilden St.

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46033	833 Tilden St.
46034	901 Tilden St.
46035	902 Tilden St.
46036	905 Tilden St.
46037	906 Tilden St.
46038	909 Tilden St.
46039	910 Tilden St.
46040	913 Tilden St.
46041	914 Tilden St.
46042	917 Tilden St.
46043	920 Tilden St.
46044	921 Tilden St.
46045	922 Tilden St.
46046	926 Tilden St.
46047	109 Tillinghast Pl.
46048	113 Tillinghast Pl.
46049	117 Tillinghast Pl.
46050	121 Tillinghast Pl.
46051	123 Tillinghast Pl.
46052	1701 Timberlane Dr.
46053	1703 Timberlane Dr.
46054	1704 Timberlane Dr.
46055	1705 Timberlane Dr.
46056	1706 Timberlane Dr.
46057	1707 Timberlane Dr.
46058	1708 Timberlane Dr.
46059	1709 Timberlane Dr.
46060	1710 Timberlane Dr.
46061	1711 Timberlane Dr.
46062	1713 Timberlane Dr.
46063	1715 Timberlane Dr.
46064	1717 Timberlane Dr.
46065	1801 Timberlane Dr.
46066	1802 Timberlane Dr.
46067	1803 Timberlane Dr.
46068	1804 Timberlane Dr.
46069	1805 Timberlane Dr.
46070	1806 Timberlane Dr.
46071	1807 Timberlane Dr.
46072	1808 Timberlane Dr.
46073	1809 Timberlane Dr.
46074	1810 Timberlane Dr.
46075	1811 Timberlane Dr.
46076	1812 Timberlane Dr.
46077	1815 Timberlane Dr.
46078	1816 Timberlane Dr.
46079	1817 Timberlane Dr.
46080	1818 Timberlane Dr.

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46081	1819 Timberlane Dr.
46082	1820 Timberlane Dr.
46083	1821 Timberlane Dr.
46084	1822 Timberlane Dr.
46085	1823 Timberlane Dr.
46086	1824 Timberlane Dr.
46087	1825 Timberlane Dr.
46088	1826 Timberlane Dr.
46089	2702 Tiptree Path.
46090	2708 Tiptree Path.
46091	2711 Tiptree Path.
46092	2712 Tiptree Path.
46093	2716 Tiptree Path.
46094	2717 Tiptree Path.
46095	2720 Tiptree Path.
46096	2723 Tiptree Path.
46097	2724 Tiptree Path.
46098	2728 Tiptree Path.
46099	2729 Tiptree Path.
46100	2732 Tiptree Path.
46101	2735 Tiptree Path.
46102	2801 Tiptree Path.
46103	2802 Tiptree Path.
46104	2805 Tiptree Path.
46105	2806 Tiptree Path.
46106	2811 Tiptree Path.
46107	2812 Tiptree Path.
46108	104 Tobias St., E.
46109	108 Tobias St., E.
46110	112 Tobias St., E.
46111	113 Tobias St., E.
46112	115 Tobias St., E.
46113	116 Tobias St., E.
46114	119 Tobias St., E.
46115	120 Tobias St., E.
46116	123 Tobias St., E.
46117	124 Tobias St., E.
46118	127 Tobias St., E.
46119	128 Tobias St., E.
46120	131 Tobias St., E.
46121	132 Tobias St., E.
46122	135 Tobias St., E.
46123	139 Tobias St., E.
46124	140 Tobias St., E.
46125	144 Tobias St., E.
46126	145 Tobias St., E.
46127	149 Tobias St., E.
46128	150 Tobias St., E.

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46129	151 Tobias St., E.
46130	152 Tobias St., E.
46131	156 Tobias St., E.
46132	114 Tobias St., W.
46133	115 Tobias St., W.
46134	117 Tobias St., W.
46135	118 Tobias St., W.
46136	121 Tobias St., W.
46137	125 Tobias St., W.
46138	129 Tobias St., W.
46139	130 Tobias St., W.
46140	133 Tobias St., W.
46141	134 Tobias St., W.
46142	138 Tobias St., W.
46143	201 Tobias St., W.
46144	205 Tobias St., W.
46145	209 Tobias St., W.
46146	212 Tobias St., W.
46147	213 Tobias St., W.
46148	217 Tobias St., W.
46149	221 Tobias St., W.
46150	225 Tobias St., W.
46151	304 Tobias St., W.
46152	308 Tobias St., W.
46153	312 Tobias St., W.
46154	316 Tobias St., W.
46155	402 Tobias St., W.
46156	410 Tobias St., W.
46157	415 Tobias St., W.
46158	416 Tobias St., W.
46159	501 Tobias St., W.
46160	501 Tobias St., W.
46161	502 Tobias St., W.
46162	506 Tobias St., W.
46163	510 Tobias St., W.
46164	2308 Toronto St.
46165	2308 Toronto St.
46166	2309 Toronto St.
46167	2013 Torrance St.
46168	2017 Torrance St.
46169	2021 Torrance St.
46170	2025 Torrance St.
46171	2027 Torrance St.
46172	2030 Torrance St.
46173	2033 Torrance St.
46174	2034 Torrance St.
46175	2037 Torrance St.
46176	2038 Torrance St.

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46177	2101 Torrance St.
46178	2102 Torrance St.
46179	2105 Torrance St.
46180	2109 Torrance St.
46181	2113 Torrance St.
46182	2201 Torrance St.
46183	2202 Torrance St.
46184	2206 Torrance St.
46185	2207 Torrance St.
46186	2210 Torrance St.
46187	2211 Torrance St.
46188	2217 Torrance St.
46189	2222 Torrance St.
46190	2301 Torrance St.
46191	2302 Torrance St.
46192	2306 Torrance St.
46193	2309 Torrance St.
46194	2412 Torrance St.
46195	2413 Torrance St.
46196	2416 Torrance St.
46197	2417 Torrance St.
46198	2420 Torrance St.
46199	2424 Torrance St.
46200	2427 Torrance St.
46201	2428 Torrance St.
46202	2432 Torrance St.
46203	2433 Torrance St.
46204	2501 Torrance St.
46205	2502 Torrance St.
46206	2505 Torrance St.
46207	2506 Torrance St.
46208	2509 Torrance St.
46209	2510 Torrance St.
46210	2517 Torrance St.
46211	2518 Torrance St.
46212	2521 Torrance St.
46213	2522 Torrance St.
46214	2525 Torrance St.
46215	2526 Torrance St.
46216	2529 Torrance St.
46217	2601 Torrance St.
46218	2602 Torrance St.
46219	2605 Torrance St.
46220	2606 Torrance St.
46221	2611 Torrance St.
46222	2613 Torrance St.
46223	2614 Torrance St.
46224	2618 Torrance St.

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46225	4270 Torrey Rd.
46226	4270 Torrey Rd.
46227	6815 Touraine Dr.
46228	6827 Touraine Dr.
46229	6907 Touraine Dr.
46230	6921 Touraine Dr.
46231	6927 Touraine Dr.
46232	910 Tower St.
46233	920 Tower St.
46234	1110 Tower St.
46235	1835 Tower St.
46236	1835 Tower St.
46237	1848 Tower St.
46238	1848 Tower St.
46239	1848 Tower St.
46240	1851 Tower St.
46241	1871 Tower St.
46242	1871 Tower St.
46243	2502 Trumbull Ave.
46244	2508 Trumbull Ave.
46245	2509 Trumbull Ave.
46246	2514 Trumbull Ave.
46247	2515 Trumbull Ave.
46248	2520 Trumbull Ave.
46249	2521 Trumbull Ave.
46250	2526 Trumbull Ave.
46251	2527 Trumbull Ave.
46252	2601 Trumbull Ave.
46253	2608 Trumbull Ave.
46254	2609 Trumbull Ave.
46255	2614 Trumbull Ave.
46256	2615 Trumbull Ave.
46257	2620 Trumbull Ave.
46258	2621 Trumbull Ave.
46259	2627 Trumbull Ave.
46260	2701 Trumbull Ave.
46261	2702 Trumbull Ave.
46262	2708 Trumbull Ave.
46263	2709 Trumbull Ave.
46264	2714 Trumbull Ave.
46265	2715 Trumbull Ave.
46266	2720 Trumbull Ave.
46267	2721 Trumbull Ave.
46268	2738 Trumbull Ave.
46269	2802 Trumbull Ave.
46270	2816 Trumbull Ave.
46271	2817 Trumbull Ave.
46272	2907 Trumbull Ave.

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46273	2908 Trumbull Ave.
46274	3001 Trumbull Ave.
46275	3002 Trumbull Ave.
46276	3101 Trumbull Ave.
46277	3102 Trumbull Ave.
46278	3110 Trumbull Ave.
46279	3111 Trumbull Ave.
46280	3114 Trumbull Ave.
46281	3115 Trumbull Ave.
46282	3118 Trumbull Ave.
46283	3119 Trumbull Ave.
46284	3123 Trumbull Ave.
46285	3201 Trumbull Ave.
46286	3202 Trumbull Ave.
46287	3205 Trumbull Ave.
46288	3206 Trumbull Ave.
46289	3210 Trumbull Ave.
46290	3214 Trumbull Ave.
46291	3218 Trumbull Ave.
46292	3412 Trumbull Ave.
46293	3416 Trumbull Ave.
46294	3417 Trumbull Ave.
46295	3420 Trumbull Ave.
46296	3423 Trumbull Ave.
46297	3429 Trumbull Ave.
46298	3502 Trumbull Ave.
46299	3505 Trumbull Ave.
46300	3506 Trumbull Ave.
46301	3509 Trumbull Ave.
46302	3510 Trumbull Ave.
46303	3513 Trumbull Ave.
46304	3514 Trumbull Ave.
46305	3517 Trumbull Ave.
46306	3518 Trumbull Ave.
46307	3601 Trumbull Ave.
46308	3602 Trumbull Ave.
46309	3605 Trumbull Ave.
46310	3606 Trumbull Ave.
46311	3609 Trumbull Ave.
46312	3613 Trumbull Ave.
46313	3614 Trumbull Ave.
46314	3617 Trumbull Ave.
46315	3618 Trumbull Ave.
46316	3621 Trumbull Ave.
46317	3622 Trumbull Ave.
46318	3701 Trumbull Ave.
46319	3702 Trumbull Ave.
46320	3705 Trumbull Ave.

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46321	3706 Trumbull Ave.
46322	3710 Trumbull Ave.
46323	3713 Trumbull Ave.
46324	3715 Trumbull Ave.
46325	3718 Trumbull Ave.
46326	3721 Trumbull Ave.
46327	3801 Trumbull Ave.
46328	3805 Trumbull Ave.
46329	3806 Trumbull Ave.
46330	3810 Trumbull Ave.
46331	3813 Trumbull Ave.
46332	3814 Trumbull Ave.
46333	3817 Trumbull Ave.
46334	3818 Trumbull Ave.
46335	3902 Trumbull Ave.
46336	3905 Trumbull Ave.
46337	3909 Trumbull Ave.
46338	3910 Trumbull Ave.
46339	3915 Trumbull Ave.
46340	3918 Trumbull Ave.
46341	4001 Trumbull Ave.
46342	4002 Trumbull Ave.
46343	4009 Trumbull Ave.
46344	4017 Trumbull Ave.
46345	4023 Trumbull Ave.
46346	4030 Trumbull Ave.
46347	4034 Trumbull Ave.
46348	4038 Trumbull Ave.
46349	4105 Trumbull Ave.
46350	4106 Trumbull Ave.
46351	4109 Trumbull Ave.
46352	4110 Trumbull Ave.
46353	4114 Trumbull Ave.
46354	4117 Trumbull Ave.
46355	4202 Trumbull Ave.
46356	4206 Trumbull Ave.
46357	4212 Trumbull Ave.
46358	4213 Trumbull Ave.
46359	4217 Trumbull Ave.
46360	4218 Trumbull Ave.
46361	4221 Trumbull Ave.
46362	4229 Trumbull Ave.
46363	4230 Trumbull Ave.
46364	4234 Trumbull Ave.
46365	4301 Trumbull Ave.
46366	4302 Trumbull Ave.
46367	4307 Trumbull Ave.
46368	4308 Trumbull Ave.

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46369	4312 Trumbull Ave.
46370	4315 Trumbull Ave.
46371	4316 Trumbull Ave.
46372	4319 Trumbull Ave.
46373	4320 Trumbull Ave.
46374	4401 Trumbull Ave.
46375	4402 Trumbull Ave.
46376	4405 Trumbull Ave.
46377	4409 Trumbull Ave.
46378	4410 Trumbull Ave.
46379	4413 Trumbull Ave.
46380	4414 Trumbull Ave.
46381	4417 Trumbull Ave.
46382	4418 Trumbull Ave.
46383	4501 Trumbull Ave.
46384	4502 Trumbull Ave.
46385	4506 Trumbull Ave.
46386	4509 Trumbull Ave.
46387	4510 Trumbull Ave.
46388	4513 Trumbull Ave.
46389	4517 Trumbull Ave.
46390	4518 Trumbull Ave.
46391	4521 Trumbull Ave.
46392	4526 Trumbull Ave.
46393	4529 Trumbull Ave.
46394	4533 Trumbull Ave.
46395	4534 Trumbull Ave.
46396	4539 Trumbull Ave.
46397	4543 Trumbull Ave.
46398	4311 Trumbull Dr.
46399	1502 Tulane Cir.
46400	1503 Tulane Cir.
46401	1506 Tulane Cir.
46402	1507 Tulane Cir.
46403	1510 Tulane Cir.
46404	1511 Tulane Cir.
46405	1514 Tulane Cir.
46406	1515 Tulane Cir.
46407	1518 Tulane Cir.
46408	804 Tulane Dr.
46409	808 Tulane Dr.
46410	812 Tulane Dr.
46411	816 Tulane Dr.
46412	820 Tulane Dr.
46413	1813 Tuscola Ave.
46414	1814 Tuscola Ave.
46415	1817 Tuscola Ave.
46416	1818 Tuscola Ave.

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46417	1821 Tuscola Ave.
46418	1822 Tuscola Ave.
46419	1825 Tuscola Ave.
46420	1901 Tuscola Ave.
46421	1906 Tuscola Ave.
46422	1911 Tuscola Ave.
46423	1915 Tuscola Ave.
46424	1918 Tuscola Ave.
46425	2001 Tuscola Ave.
46426	2002 Tuscola Ave.
46427	2005 Tuscola Ave.
46428	2009 Tuscola Ave.
46429	2012 Tuscola Ave.
46430	2013 Tuscola Ave.
46431	2016 Tuscola Ave.
46432	2017 Tuscola Ave.
46433	2020 Tuscola Ave.
46434	2021 Tuscola Ave.
46435	2024 Tuscola Ave.
46436	2029 Tuscola Ave.
46437	2033 Tuscola Ave.
46438	2037 Tuscola Ave.
46439	2101 Tuscola Ave.
46440	2105 Tuscola Ave.
46441	2211 Tuscola Ave.
46442	2217 Tuscola Ave.
46443	2223 Tuscola Ave.
46444	2301 Tuscola Ave.
46445	2307 Tuscola Ave.
46446	2313 Tuscola Ave.
46447	2314 Tuscola Ave.
46448	2318 Tuscola Ave.
46449	2321 Tuscola Ave.
46450	2322 Tuscola Ave.
46451	2402 Tuscola Ave.
46452	2403 Tuscola Ave.
46453	2406 Tuscola Ave.
46454	2409 Tuscola Ave.
46455	2415 Tuscola Ave.
46456	2419 Tuscola Ave.
46457	2423 Tuscola Ave.
46458	2427 Tuscola Ave.
46459	2505 Tuscola Ave.
46460	2508 Tuscola Ave.
46461	2509 Tuscola Ave.
46462	801 Tuuri Pl.
46463	806 Tuuri Pl.
46464	1010 Tuuri Pl.

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46465	1014 Tuuri Pl.
46466	3814 Tuxedo Ave.
46467	3821 Tuxedo Ave.
46468	3822 Tuxedo Ave.
46469	3902 Tuxedo Ave.
46470	3905 Tuxedo Ave.
46471	3913 Tuxedo Ave.
46472	3914 Tuxedo Ave.
46473	3917 Tuxedo Ave.
46474	3918 Tuxedo Ave.
46475	3921 Tuxedo Ave.
46476	3922 Tuxedo Ave.
46477	4001 Tuxedo Ave.
46478	4002 Tuxedo Ave.
46479	4009 Tuxedo Ave.
46480	4014 Tuxedo Ave.
46481	4021 Tuxedo Ave.
46482	4022 Tuxedo Ave.
46483	4101 Tuxedo Ave.
46484	4102 Tuxedo Ave.
46485	4110 Tuxedo Ave.
46486	4113 Tuxedo Ave.
46487	4117 Tuxedo Ave.
46488	4118 Tuxedo Ave.
46489	4122 Tuxedo Ave.
46490	4125 Tuxedo Ave.
46491	4126 Tuxedo Ave.
46492	401 Twelfth St., E.
46493	407 Twelfth St., E.
46494	411 Twelfth St., E.
46495	421 Twelfth St., E.
46496	509 Twelfth St., E.
46497	514 Twelfth St., E.
46498	518 Twelfth St., E.
46499	525 Twelfth St., E.
46500	528 Twelfth St., E.
46501	529 Twelfth St., E.
46502	530 Twelfth St., E.
46503	531 Twelfth St., E.
46504	533 Twelfth St., E.
46505	534 Twelfth St., E.
46506	535 Twelfth St., E.
46507	537 Twelfth St., E.
46508	545 Twelfth St., E.
46509	602 Twelfth St., E.
46510	610 Twelfth St., E.
46511	614 Twelfth St., E.
46512	620 Twelfth St., E.

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46513	702 Twelfth St., E.
46514	703 Twelfth St., E.
46515	706 Twelfth St., E.
46516	721 Twelfth St., E.
46517	209 Twelfth St., W.
46518	210 Twelfth St., W.
46519	211 Twelfth St., W.
46520	214 Twelfth St., W.
46521	215 Twelfth St., W.
46522	218 Twelfth St., W.
46523	219 Twelfth St., W.
46524	224 Twelfth St., W.
46525	225 Twelfth St., W.
46526	235 Twelfth St., W.
46527	313 Twelfth St., W.
46528	321 Twelfth St., W.
46529	412 Twelfth St., W.
46530	416 Twelfth St., W.
46531	417 Twelfth St., W.
46532	420 Twelfth St., W.
46533	421 Twelfth St., W.
46534	429 Twelfth St., W.
46535	501 Twelfth St., W.
46536	504 Twelfth St., W.
46537	509 Twelfth St., W.
46538	512 Twelfth St., W.
46539	513 Twelfth St., W.
46540	516 Twelfth St., W.
46541	517 Twelfth St., W.
46542	602 Twelfth St., W.
46543	651 Twelfth St., W.
46544	661 Twelfth St., W.
46545	702 Twelfth St., W.
46546	711 Twelfth St., W.
46547	711 Twelfth St., W.
46548	715 Twelfth St., W.
46549	719 Twelfth St., W.
46550	719 Twelfth St., W.
46551	801 Twelfth St., W.
46552	811 Twelfth St., W.
46553	811 Twelfth St., W.
46554	811 Twelfth St., W.
46555	811 Twelfth St., W.
46556	815 Twelfth St., W.
46557	817 Twelfth St., W.
46558	901 Twelfth St., W.
46559	951 Twelfth St., W.
46560	963 Twelfth St., W.

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46561	1019 Twelfth St., W.
46562	1025 Twelfth St., W.
46563	1029 Twelfth St., W.
46564	1033 Twelfth St., W.
46565	1034 Twelfth St., W.
46566	1038 Twelfth St., W.
46567	1039 Twelfth St., W.
46568	1042 Twelfth St., W.
46569	1043 Twelfth St., W.
46570	1047 Twelfth St., W.
46571	1052 Twelfth St., W.
46572	1201 Twelfth St., W.
46573	1420 Twelfth St., W.
46574	3601 Twilight Dr.
46575	3607 Twilight Dr.
46576	3608 Twilight Dr.
46577	3611 Twilight Dr.
46578	3612 Twilight Dr.
46579	3615 Twilight Dr.
46580	3616 Twilight Dr.
46581	3619 Twilight Dr.
46582	3620 Twilight Dr.
46583	3701 Twilight Dr.
46584	3702 Twilight Dr.
46585	3705 Twilight Dr.
46586	3706 Twilight Dr.
46587	3709 Twilight Dr.
46588	3712 Twilight Dr.
46589	3715 Twilight Dr.
46590	3716 Twilight Dr.
46591	3801 Twilight Dr.
46592	3802 Twilight Dr.
46593	3805 Twilight Dr.
46594	3806 Twilight Dr.
46595	3809 Twilight Dr.
46596	3810 Twilight Dr.
46597	3813 Twilight Dr.
46598	3814 Twilight Dr.
46599	3818 Twilight Dr.
46600	3822 Twilight Dr.
46601	3826 Twilight Dr.
46602	3830 Twilight Dr.
46603	3833 Twilight Dr.
46604	2512 Tyrone St.
46605	2515 Tyrone St.
46606	2516 Tyrone St.
46607	2520 Tyrone St.
46608	2521 Tyrone St.

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46609	2524 Tyrone St.
46610	2525 Tyrone St.
46611	2528 Tyrone St.
46612	2529 Tyrone St.
46613	2532 Tyrone St.
46614	2533 Tyrone St.
46615	2536 Tyrone St.
46616	2537 Tyrone St.
46617	2540 Tyrone St.
46618	2541 Tyrone St.
46619	2544 Tyrone St.
46620	2545 Tyrone St.
46621	2548 Tyrone St.
46622	2549 Tyrone St.
46623	2552 Tyrone St.
46624	2553 Tyrone St.
46625	2556 Tyrone St.
46626	2557 Tyrone St.
46627	2560 Tyrone St.
46628	2561 Tyrone St.
46629	2564 Tyrone St.
46630	2565 Tyrone St.
46631	2568 Tyrone St.
46632	2569 Tyrone St.
46633	125 Union St., E.
46634	1510 Utah Ave.
46635	1514 Utah Ave.
46636	1518 Utah Ave.
46637	1522 Utah Ave.
46638	1526 Utah Ave.
46639	1530 Utah Ave.
46640	1534 Utah Ave.
46641	1538 Utah Ave.
46642	1706 Utah Ave.
46643	1710 Utah Ave.
46644	1718 Utah Ave.
46645	1722 Utah Ave.
46646	1726 Utah Ave.
46647	1730 Utah Ave.
46648	1734 Utah Ave.
46649	1802 Utah Ave.
46650	1822 Utah Ave.
46651	1826 Utah Ave.
46652	1917 Utah Ave.
46653	1923 Utah Ave.
46654	2001 Utah Ave.
46655	2005 Utah Ave.
46656	2009 Utah Ave.

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46657	2021 Utah Ave.
46658	1800 Valley Ln.
46659	1809 Valley Ln.
46660	1810 Valley Ln.
46661	1817 Valley Ln.
46662	1818 Valley Ln.
46663	1818 Valley Ln.
46664	1823 Valley Ln.
46665	1829 Valley Ln.
46666	6305 Valorie Ln.
46667	6306 Valorie Ln.
46668	6309 Valorie Ln.
46669	6310 Valorie Ln.
46670	6313 Valorie Ln.
46671	6314 Valorie Ln.
46672	6401 Valorie Ln.
46673	6402 Valorie Ln.
46674	6405 Valorie Ln.
46675	6406 Valorie Ln.
46676	6409 Valorie Ln.
46677	6410 Valorie Ln.
46678	6413 Valorie Ln.
46679	6414 Valorie Ln.
46680	6417 Valorie Ln.
46681	6418 Valorie Ln.
46682	6501 Valorie Ln.
46683	6502 Valorie Ln.
46684	6506 Valorie Ln.
46685	6509 Valorie Ln.
46686	6513 Valorie Ln.
46687	3301 Van Buren Ave.
46688	3302 Van Buren Ave.
46689	3311 Van Buren Ave.
46690	3314 Van Buren Ave.
46691	3318 Van Buren Ave.
46692	3401 Van Buren Ave.
46693	3402 Van Buren Ave.
46694	3405 Van Buren Ave.
46695	3406 Van Buren Ave.
46696	3410 Van Buren Ave.
46697	3414 Van Buren Ave.
46698	3502 Van Buren Ave.
46699	3514 Van Buren Ave.
46700	3602 Van Buren Ave.
46701	3606 Van Buren Ave.
46702	3610 Van Buren Ave.
46703	3614 Van Buren Ave.
46704	3618 Van Buren Ave.

	A
46705	3622 Van Buren Ave.
46706	3701 Van Buren Ave.
46707	3702 Van Buren Ave.
46708	3706 Van Buren Ave.
46709	3710 Van Buren Ave.
46710	3714 Van Buren Ave.
46711	3718 Van Buren Ave.
46712	3722 Van Buren Ave.
46713	1022 Van Buskirk St.
46714	1558 Van Buskirk St.
46715	213 Van Lue Ct.
46716	214 Van Lue Ct.
46717	215 Van Lue Ct.
46718	217 Van Lue Ct.
46719	218 Van Lue Ct.
46720	222 Van Lue Ct.
46721	3000 Van Slyke Rd.
46722	3100 Van Slyke Rd.
46723	3100 Van Slyke Rd.
46724	3248 Van Slyke Rd.
46725	3248 Van Slyke Rd.
46726	3248 Van Slyke Rd.
46727	3605 Van Slyke Rd.
46728	3717 Van Slyke Rd.
46729	3717 Van Slyke Rd.
46730	3717 Van Slyke Rd.
46731	3717 Van Slyke Rd.
46732	4202 Van Slyke Rd.
46733	4202 Van Slyke Rd.
46734	4202 Van Slyke Rd.
46735	4202 Van Slyke Rd.
46736	4501 Van Slyke Rd.
46737	4501 Van Slyke Rd.
46738	4549 Van Slyke Rd.
46739	4549 Van Slyke Rd.
46740	3100 Van Slyke Rd.
46741	3248 Van Slyke Rd.
46742	3248 Van Slyke Rd.
46743	102 Van Wagoner Ave., E.
46744	106 Van Wagoner Ave., E.
46745	109 Van Wagoner Ave., E.
46746	110 Van Wagoner Ave., E.
46747	113 Van Wagoner Ave., E.
46748	114 Van Wagoner Ave., E.
46749	117 Van Wagoner Ave., E.
46750	118 Van Wagoner Ave., E.
46751	122 Van Wagoner Ave., E.
46752	152 Van Wagoner Ave., E.

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46753	153 Van Wagoner Ave., E.
46754	155 Van Wagoner Ave., E.
46755	156 Van Wagoner Ave., E.
46756	160 Van Wagoner Ave., E.
46757	161 Van Wagoner Ave., E.
46758	163 Van Wagoner Ave., E.
46759	164 Van Wagoner Ave., E.
46760	167 Van Wagoner Ave., E.
46761	168 Van Wagoner Ave., E.
46762	171 Van Wagoner Ave., E.
46763	172 Van Wagoner Ave., E.
46764	201 Van Wagoner Ave., E.
46765	202 Van Wagoner Ave., E.
46766	205 Van Wagoner Ave., E.
46767	206 Van Wagoner Ave., E.
46768	209 Van Wagoner Ave., E.
46769	210 Van Wagoner Ave., E.
46770	213 Van Wagoner Ave., E.
46771	214 Van Wagoner Ave., E.
46772	217 Van Wagoner Ave., E.
46773	218 Van Wagoner Ave., E.
46774	221 Van Wagoner Ave., E.
46775	301 Van Wagoner Ave., E.
46776	302 Van Wagoner Ave., E.
46777	305 Van Wagoner Ave., E.
46778	309 Van Wagoner Ave., E.
46779	310 Van Wagoner Ave., E.
46780	313 Van Wagoner Ave., E.
46781	314 Van Wagoner Ave., E.
46782	318 Van Wagoner Ave., E.
46783	322 Van Wagoner Ave., E.
46784	339 Van Wagoner Ave., E.
46785	343 Van Wagoner Ave., E.
46786	351 Van Wagoner Ave., E.
46787	352 Van Wagoner Ave., E.
46788	353 Van Wagoner Ave., E.
46789	354 Van Wagoner Ave., E.
46790	358 Van Wagoner Ave., E.
46791	359 Van Wagoner Ave., E.
46792	363 Van Wagoner Ave., E.
46793	365 Van Wagoner Ave., E.
46794	370 Van Wagoner Ave., E.
46795	371 Van Wagoner Ave., E.
46796	400 Van Wagoner Ave., E.
46797	401 Van Wagoner Ave., E.
46798	405 Van Wagoner Ave., E.
46799	406 Van Wagoner Ave., E.
46800	409 Van Wagoner Ave., E.

	A
46801	412 Van Wagoner Ave., E.
46802	413 Van Wagoner Ave., E.
46803	414 Van Wagoner Ave., E.
46804	417 Van Wagoner Ave., E.
46805	418 Van Wagoner Ave., E.
46806	421 Van Wagoner Ave., E.
46807	422 Van Wagoner Ave., E.
46808	502 Van Wagoner Ave., E.
46809	503 Van Wagoner Ave., E.
46810	506 Van Wagoner Ave., E.
46811	509 Van Wagoner Ave., E.
46812	510 Van Wagoner Ave., E.
46813	513 Van Wagoner Ave., E.
46814	514 Van Wagoner Ave., E.
46815	522 Van Wagoner Ave., E.
46816	523 Van Wagoner Ave., E.
46817	526 Van Wagoner Ave., E.
46818	605 Van Wagoner Ave., E.
46819	609 Van Wagoner Ave., E.
46820	613 Van Wagoner Ave., E.
46821	617 Van Wagoner Ave., E.
46822	620 Van Wagoner Ave., E.
46823	621 Van Wagoner Ave., E.
46824	624 Van Wagoner Ave., E.
46825	628 Van Wagoner Ave., E.
46826	630 Van Wagoner Ave., E.
46827	633 Van Wagoner Ave., E.
46828	637 Van Wagoner Ave., E.
46829	638 Van Wagoner Ave., E.
46830	113 Van Wagoner Ave., W.
46831	117 Van Wagoner Ave., W.
46832	201 Van Wagoner Ave., W.
46833	202 Van Wagoner Ave., W.
46834	205 Van Wagoner Ave., W.
46835	210 Van Wagoner Ave., W.
46836	213 Van Wagoner Ave., W.
46837	214 Van Wagoner Ave., W.
46838	220 Van Wagoner Ave., W.
46839	221 Van Wagoner Ave., W.
46840	228 Van Wagoner Ave., W.
46841	301 Van Wagoner Ave., W.
46842	302 Van Wagoner Ave., W.
46843	309 Van Wagoner Ave., W.
46844	310 Van Wagoner Ave., W.
46845	314 Van Wagoner Ave., W.
46846	317 Van Wagoner Ave., W.
46847	318 Van Wagoner Ave., W.
46848	322 Van Wagoner Ave., W.

	A
46849	1405 Vanderbilt Dr.
46850	1409 Vanderbilt Dr.
46851	1501 Vanderbilt Dr.
46852	1505 Vanderbilt Dr.
46853	1509 Vanderbilt Dr.
46854	1513 Vanderbilt Dr.
46855	1517 Vanderbilt Dr.
46856	1521 Vanderbilt Dr.
46857	1525 Vanderbilt Dr.
46858	1533 Vanderbilt Dr.
46859	5711 Verdun St.
46860	6401 Verdun St.
46861	6815 Verdun St.
46862	7006 Verdun St.
46863	611 Vermilya Ave.
46864	612 Vermilya Ave.
46865	615 Vermilya Ave.
46866	616 Vermilya Ave.
46867	619 Vermilya Ave.
46868	620 Vermilya Ave.
46869	623 Vermilya Ave.
46870	624 Vermilya Ave.
46871	627 Vermilya Ave.
46872	628 Vermilya Ave.
46873	631 Vermilya Ave.
46874	632 Vermilya Ave.
46875	635 Vermilya Ave.
46876	636 Vermilya Ave.
46877	637 Vermilya Ave.
46878	640 Vermilya Ave.
46879	643 Vermilya Ave.
46880	647 Vermilya Ave.
46881	648 Vermilya Ave.
46882	651 Vermilya Ave.
46883	652 Vermilya Ave.
46884	701 Vermilya Ave.
46885	702 Vermilya Ave.
46886	705 Vermilya Ave.
46887	706 Vermilya Ave.
46888	710 Vermilya Ave.
46889	711 Vermilya Ave.
46890	714 Vermilya Ave.
46891	715 Vermilya Ave.
46892	718 Vermilya Ave.
46893	719 Vermilya Ave.
46894	723 Vermilya Ave.
46895	724 Vermilya Ave.
46896	727 Vermilya Ave.

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46897	728 Vermilya Ave.
46898	731 Vermilya Ave.
46899	732 Vermilya Ave.
46900	733 Vermilya Ave.
46901	736 Vermilya Ave.
46902	738 Vermilya Ave.
46903	739 Vermilya Ave.
46904	743 Vermilya Ave.
46905	747 Vermilya Ave.
46906	748 Vermilya Ave.
46907	751 Vermilya Ave.
46908	752 Vermilya Ave.
46909	755 Vermilya Ave.
46910	756 Vermilya Ave.
46911	801 Vermilya Ave.
46912	802 Vermilya Ave.
46913	805 Vermilya Ave.
46914	808 Vermilya Ave.
46915	809 Vermilya Ave.
46916	812 Vermilya Ave.
46917	813 Vermilya Ave.
46918	816 Vermilya Ave.
46919	817 Vermilya Ave.
46920	820 Vermilya Ave.
46921	821 Vermilya Ave.
46922	824 Vermilya Ave.
46923	825 Vermilya Ave.
46924	827 Vermilya Ave.
46925	828 Vermilya Ave.
46926	832 Vermilya Ave.
46927	836 Vermilya Ave.
46928	837 Vermilya Ave.
46929	845 Vermilya Ave.
46930	902 Vermilya Ave.
46931	906 Vermilya Ave.
46932	911 Vermilya Ave.
46933	912 Vermilya Ave.
46934	915 Vermilya Ave.
46935	916 Vermilya Ave.
46936	919 Vermilya Ave.
46937	920 Vermilya Ave.
46938	923 Vermilya Ave.
46939	924 Vermilya Ave.
46940	927 Vermilya Ave.
46941	931 Vermilya Ave.
46942	932 Vermilya Ave.
46943	935 Vermilya Ave.
46944	936 Vermilya Ave.

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46945	939 Vermilya Ave.
46946	943 Vermilya Ave.
46947	1012 Vermilya Ave.
46948	1023 Vermilya Ave.
46949	1024 Vermilya Ave.
46950	1028 Vermilya Ave.
46951	1035 Vermilya Ave.
46952	1036 Vermilya Ave.
46953	1102 Vermilya Ave.
46954	1105 Vermilya Ave.
46955	1106 Vermilya Ave.
46956	1110 Vermilya Ave.
46957	1113 Vermilya Ave.
46958	1114 Vermilya Ave.
46959	1115 Vermilya Ave.
46960	1117 Vermilya Ave.
46961	1118 Vermilya Ave.
46962	1121 Vermilya Ave.
46963	1122 Vermilya Ave.
46964	1126 Vermilya Ave.
46965	1129 Vermilya Ave.
46966	1130 Vermilya Ave.
46967	1137 Vermilya Ave.
46968	1138 Vermilya Ave.
46969	1202 Vermilya Ave.
46970	1205 Vermilya Ave.
46971	1206 Vermilya Ave.
46972	1209 Vermilya Ave.
46973	1213 Vermilya Ave.
46974	1214 Vermilya Ave.
46975	1217 Vermilya Ave.
46976	1218 Vermilya Ave.
46977	1224 Vermilya Ave.
46978	1225 Vermilya Ave.
46979	1301 Vermilya Ave.
46980	1305 Vermilya Ave.
46981	1306 Vermilya Ave.
46982	1309 Vermilya Ave.
46983	1313 Vermilya Ave.
46984	1314 Vermilya Ave.
46985	1317 Vermilya Ave.
46986	1318 Vermilya Ave.
46987	1321 Vermilya Ave.
46988	1322 Vermilya Ave.
46989	1326 Vermilya Ave.
46990	1329 Vermilya Ave.
46991	1401 Vermilya Ave.
46992	1402 Vermilya Ave.

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46993	1405 Vermilya Ave.
46994	1410 Vermilya Ave.
46995	1413 Vermilya Ave.
46996	1414 Vermilya Ave.
46997	1417 Vermilya Ave.
46998	1418 Vermilya Ave.
46999	1421 Vermilya Ave.
47000	1422 Vermilya Ave.
47001	1426 Vermilya Ave.
47002	1429 Vermilya Ave.
47003	1430 Vermilya Ave.
47004	1501 Vermilya Ave.
47005	1502 Vermilya Ave.
47006	1505 Vermilya Ave.
47007	1509 Vermilya Ave.
47008	1510 Vermilya Ave.
47009	1514 Vermilya Ave.
47010	910 Vernon Ave., N.
47011	910 Vernon Ave., N.
47012	912 Vernon Ave., N.
47013	920 Vernon Ave., N.
47014	920 Vernon Ave., N.
47015	1105 Vernon Ave., N.
47016	1117 Vernon Ave., N.
47017	1400 Vernon Ave., N.
47018	1414 Vernon Ave., N.
47019	1510 Vernon Ave., N.
47020	1514 Vernon Ave., N.
47021	1518 Vernon Ave., N.
47022	1701 Vernon Ave., N.
47023	1702 Vernon Ave., N.
47024	1704 Vernon Ave., N.
47025	1705 Vernon Ave., N.
47026	1708 Vernon Ave., N.
47027	1709 Vernon Ave., N.
47028	1712 Vernon Ave., N.
47029	1716 Vernon Ave., N.
47030	1720 Vernon Ave., N.
47031	1724 Vernon Ave., N.
47032	1911 Vernon Ave., N.
47033	1914 Vernon Ave., N.
47034	1915 Vernon Ave., N.
47035	1916 Vernon Ave., N.
47036	1919 Vernon Ave., N.
47037	1923 Vernon Ave., N.
47038	1924 Vernon Ave., N.
47039	1928 Vernon Ave., N.
47040	1932 Vernon Ave., N.

	A
47041	2000 Vernon Ave., N.
47042	2001 Vernon Ave., N.
47043	2004 Vernon Ave., N.
47044	2005 Vernon Ave., N.
47045	2007 Vernon Ave., N.
47046	2009 Vernon Ave., N.
47047	2021 Vernon Ave., N.
47048	2101 Vernon Ave., N.
47049	2105 Vernon Ave., N.
47050	2113 Vernon Ave., N.
47051	2114 Vernon Ave., N.
47052	2117 Vernon Ave., N.
47053	2120 Vernon Ave., N.
47054	2121 Vernon Ave., N.
47055	2125 Vernon Ave., N.
47056	2128 Vernon Ave., N.
47057	2131 Vernon Ave., N.
47058	2132 Vernon Ave., N.
47059	2200 Vernon Ave., N.
47060	2201 Vernon Ave., N.
47061	2204 Vernon Ave., N.
47062	2205 Vernon Ave., N.
47063	2208 Vernon Ave., N.
47064	2209 Vernon Ave., N.
47065	2214 Vernon Ave., N.
47066	2216 Vernon Ave., N.
47067	2217 Vernon Ave., N.
47068	2221 Vernon Ave., N.
47069	2300 Vernon Ave., N.
47070	2301 Vernon Ave., N.
47071	2304 Vernon Ave., N.
47072	2305 Vernon Ave., N.
47073	2308 Vernon Ave., N.
47074	2311 Vernon Ave., N.
47075	2312 Vernon Ave., N.
47076	2316 Vernon Ave., N.
47077	2317 Vernon Ave., N.
47078	2401 Vernon Ave., N.
47079	2402 Vernon Ave., N.
47080	2405 Vernon Ave., N.
47081	2406 Vernon Ave., N.
47082	2408 Vernon Ave., N.
47083	2409 Vernon Ave., N.
47084	2410 Vernon Ave., N.
47085	2413 Vernon Ave., N.
47086	2417 Vernon Ave., N.
47087	2422 Vernon Ave., N.
47088	2426 Vernon Ave., N.

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47089	2427 Vernon Ave., N.
47090	2429 Vernon Ave., N.
47091	2430 Vernon Ave., N.
47092	2433 Vernon Ave., N.
47093	2436 Vernon Ave., N.
47094	2437 Vernon Ave., N.
47095	2441 Vernon Ave., N.
47096	2500 Vernon Ave., N.
47097	2501 Vernon Ave., N.
47098	2505 Vernon Ave., N.
47099	2506 Vernon Ave., N.
47100	2510 Vernon Ave., N.
47101	2512 Vernon Ave., N.
47102	2513 Vernon Ave., N.
47103	2517 Vernon Ave., N.
47104	2518 Vernon Ave., N.
47105	2600 Vernon Ave., N.
47106	2601 Vernon Ave., N.
47107	2604 Vernon Ave., N.
47108	2605 Vernon Ave., N.
47109	2608 Vernon Ave., N.
47110	2609 Vernon Ave., N.
47111	2612 Vernon Ave., N.
47112	2613 Vernon Ave., N.
47113	2802 Vernon Ave., N.
47114	2811 Vernon Ave., N.
47115	2812 Vernon Ave., N.
47116	3013 Vernon Ave., N.
47117	3301 Vernon Ave., N.
47118	101 Vernon Ave., S.
47119	107 Vernon Ave., S.
47120	108 Vernon Ave., S.
47121	113 Vernon Ave., S.
47122	114 Vernon Ave., S.
47123	119 Vernon Ave., S.
47124	120 Vernon Ave., S.
47125	201 Vernon Ave., S.
47126	202 Vernon Ave., S.
47127	207 Vernon Ave., S.
47128	208 Vernon Ave., S.
47129	213 Vernon Ave., S.
47130	214 Vernon Ave., S.
47131	220 Vernon Ave., S.
47132	221 Vernon Ave., S.
47133	226 Vernon Ave., S.
47134	301 Vernon Ave., S.
47135	302 Vernon Ave., S.
47136	306 Vernon Ave., S.

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47137	307 Vernon Ave., S.
47138	311 Vernon Ave., S.
47139	401 Vernon Ave., S.
47140	411 Vernon Ave., S.
47141	415 Vernon Ave., S.
47142	419 Vernon Ave., S.
47143	420 Vernon Ave., S.
47144	423 Vernon Ave., S.
47145	426 Vernon Ave., S.
47146	501 Vernon Ave., S.
47147	515 Vernon Ave., S.
47148	523 Vernon Ave., S.
47149	527 Vernon Ave., S.
47150	528 Vernon Ave., S.
47151	529 Vernon Ave., S.
47152	532 Vernon Ave., S.
47153	601 Vernon Ave., S.
47154	602 Vernon Ave., S.
47155	605 Vernon Ave., S.
47156	606 Vernon Ave., S.
47157	609 Vernon Ave., S.
47158	610 Vernon Ave., S.
47159	613 Vernon Ave., S.
47160	614 Vernon Ave., S.
47161	617 Vernon Ave., S.
47162	618 Vernon Ave., S.
47163	801 Vernon Ave., S.
47164	814 Vernon Ave., S.
47165	906 Vernon Ave., S.
47166	1061 Vernon Dr., E.
47167	1101 Vernon Dr., E.
47168	1109 Vernon Dr., E.
47169	1115 Vernon Dr., E.
47170	1052 Vernon Dr., W.
47171	1107 Vernon Dr., W.
47172	1108 Vernon Dr., W.
47173	1114 Vernon Dr., W.
47174	1120 Vernon Dr., W.
47175	1126 Vernon Dr., W.
47176	610 Victoria Ave.
47177	611 Victoria Ave.
47178	614 Victoria Ave.
47179	615 Victoria Ave.
47180	617 Victoria Ave.
47181	618 Victoria Ave.
47182	622 Victoria Ave.
47183	623 Victoria Ave.
47184	627 Victoria Ave.

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47185	631 Victoria Ave.
47186	632 Victoria Ave.
47187	636 Victoria Ave.
47188	639 Victoria Ave.
47189	640 Victoria Ave.
47190	643 Victoria Ave.
47191	644 Victoria Ave.
47192	647 Victoria Ave.
47193	648 Victoria Ave.
47194	652 Victoria Ave.
47195	653 Victoria Ave.
47196	659 Victoria Ave.
47197	701 Victoria Ave.
47198	704 Victoria Ave.
47199	705 Victoria Ave.
47200	708 Victoria Ave.
47201	709 Victoria Ave.
47202	713 Victoria Ave.
47203	715 Victoria Ave.
47204	718 Victoria Ave.
47205	719 Victoria Ave.
47206	724 Victoria Ave.
47207	729 Victoria Ave.
47208	730 Victoria Ave.
47209	735 Victoria Ave.
47210	738 Victoria Ave.
47211	741 Victoria Ave.
47212	742 Victoria Ave.
47213	754 Victoria Ave.
47214	806 Victoria Ave.
47215	811 Victoria Ave.
47216	812 Victoria Ave.
47217	815 Victoria Ave.
47218	816 Victoria Ave.
47219	819 Victoria Ave.
47220	820 Victoria Ave.
47221	824 Victoria Ave.
47222	827 Victoria Ave.
47223	828 Victoria Ave.
47224	831 Victoria Ave.
47225	832 Victoria Ave.
47226	835 Victoria Ave.
47227	836 Victoria Ave.
47228	839 Victoria Ave.
47229	840 Victoria Ave.
47230	843 Victoria Ave.
47231	844 Victoria Ave.
47232	847 Victoria Ave.

	A
47233	848 Victoria Ave.
47234	851 Victoria Ave.
47235	852 Victoria Ave.
47236	855 Victoria Ave.
47237	856 Victoria Ave.
47238	859 Victoria Ave.
47239	860 Victoria Ave.
47240	863 Victoria Ave.
47241	867 Victoria Ave.
47242	901 Victoria Ave.
47243	902 Victoria Ave.
47244	905 Victoria Ave.
47245	906 Victoria Ave.
47246	909 Victoria Ave.
47247	910 Victoria Ave.
47248	913 Victoria Ave.
47249	914 Victoria Ave.
47250	917 Victoria Ave.
47251	922 Victoria Ave.
47252	926 Victoria Ave.
47253	934 Victoria Ave.
47254	938 Victoria Ave.
47255	940 Victoria Ave.
47256	942 Victoria Ave.
47257	1010 Victoria Ave.
47258	1014 Victoria Ave.
47259	1015 Victoria Ave.
47260	1018 Victoria Ave.
47261	1019 Victoria Ave.
47262	1023 Victoria Ave.
47263	1026 Victoria Ave.
47264	1027 Victoria Ave.
47265	1034 Victoria Ave.
47266	1035 Victoria Ave.
47267	1039 Victoria Ave.
47268	1102 Victoria Ave.
47269	1108 Victoria Ave.
47270	1109 Victoria Ave.
47271	1116 Victoria Ave.
47272	1117 Victoria Ave.
47273	1120 Victoria Ave.
47274	1121 Victoria Ave.
47275	1124 Victoria Ave.
47276	1129 Victoria Ave.
47277	1130 Victoria Ave.
47278	1133 Victoria Ave.
47279	1136 Victoria Ave.
47280	1140 Victoria Ave.

	A
47281	1141 Victoria Ave.
47282	1145 Victoria Ave.
47283	902 Vincent Ave.
47284	910 Vincent Ave.
47285	918 Vincent Ave.
47286	1002 Vincent Ave.
47287	1018 Vincent Ave.
47288	1022 Vincent Ave.
47289	1201 Vincent Ave.
47290	1213 Vincent Ave.
47291	1217 Vincent Ave.
47292	1221 Vincent Ave.
47293	1225 Vincent Ave.
47294	1229 Vincent Ave.
47295	1233 Vincent Ave.
47296	1234 Vincent Ave.
47297	1237 Vincent Ave.
47298	1238 Vincent Ave.
47299	1241 Vincent Ave.
47300	1242 Vincent Ave.
47301	1220 Vincent Ct.
47302	1401 Virginia St., N.
47303	1402 Virginia St., N.
47304	1405 Virginia St., N.
47305	1406 Virginia St., N.
47306	1601 Virginia St., N.
47307	1602 Virginia St., N.
47308	1711 Virginia St., N.
47309	1917 Virginia St., N.
47310	2001 Virginia St., N.
47311	600 Virginia St., S.
47312	600 Virginia St., S.
47313	602 Virginia St., S.
47314	909 Vosburg St.
47315	912 Vosburg St.
47316	913 Vosburg St.
47317	916 Vosburg St.
47318	917 Vosburg St.
47319	919 Vosburg St.
47320	953 Vosburg St.
47321	955 Vosburg St.
47322	956 Vosburg St.
47323	959 Vosburg St.
47324	960 Vosburg St.
47325	964 Vosburg St.
47326	965 Vosburg St.
47327	969 Vosburg St.
47328	1501 Wabash Ave.

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47329	1502 Wabash Ave.
47330	1513 Wabash Ave.
47331	1514 Wabash Ave.
47332	1601 Wabash Ave.
47333	1608 Wabash Ave.
47334	1609 Wabash Ave.
47335	1613 Wabash Ave.
47336	1614 Wabash Ave.
47337	1709 Wabash Ave.
47338	1710 Wabash Ave.
47339	1802 Wabash Ave.
47340	1809 Wabash Ave.
47341	1810 Wabash Ave.
47342	1909 Wabash Ave.
47343	2009 Wabash Ave.
47344	2010 Wabash Ave.
47345	2017 Wabash Ave.
47346	2101 Wabash Ave.
47347	2108 Wabash Ave.
47348	2109 Wabash Ave.
47349	2117 Wabash Ave.
47350	735 Wager Ave.
47351	755 Wager Ave.
47352	761 Wager Ave.
47353	765 Wager Ave.
47354	769 Wager Ave.
47355	773 Wager Ave.
47356	773 Wager Ave.
47357	773 Wager Ave.
47358	809 Wager Ave.
47359	817 Wager Ave.
47360	901 Wager Ave.
47361	905 Wager Ave.
47362	909 Wager Ave.
47363	913 Wager Ave.
47364	921 Wager Ave.
47365	925 Wager Ave.
47366	929 Wager Ave.
47367	931 Wager Ave.
47368	1000 Wager Ave.
47369	1017 Wager Ave.
47370	1025 Wager Ave.
47371	1033 Wager Ave.
47372	1037 Wager Ave.
47373	1051 Wager Ave.
47374	1071 Wager Ave.
47375	1075 Wager Ave.
47376	1079 Wager Ave.

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47377	1109 Wager Ave.
47378	1113 Wager Ave.
47379	502 Waldman Ave.
47380	510 Waldman Ave.
47381	514 Waldman Ave.
47382	613 Waldman Ave.
47383	616 Waldman Ave.
47384	621 Waldman Ave.
47385	624 Waldman Ave.
47386	625 Waldman Ave.
47387	628 Waldman Ave.
47388	632 Waldman Ave.
47389	633 Waldman Ave.
47390	636 Waldman Ave.
47391	637 Waldman Ave.
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47393	644 Waldman Ave.
47394	645 Waldman Ave.
47395	648 Waldman Ave.
47396	652 Waldman Ave.
47397	653 Waldman Ave.
47398	701 Waldman Ave.
47399	702 Waldman Ave.
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47401	711 Waldman Ave.
47402	712 Waldman Ave.
47403	715 Waldman Ave.
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47410	728 Waldman Ave.
47411	731 Waldman Ave.
47412	732 Waldman Ave.
47413	735 Waldman Ave.
47414	736 Waldman Ave.
47415	739 Waldman Ave.
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47417	743 Waldman Ave.
47418	744 Waldman Ave.
47419	747 Waldman Ave.
47420	748 Waldman Ave.
47421	751 Waldman Ave.
47422	752 Waldman Ave.
47423	801 Waldman Ave.
47424	802 Waldman Ave.

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47425	805 Waldman Ave.
47426	813 Waldman Ave.
47427	818 Waldman Ave.
47428	821 Waldman Ave.
47429	822 Waldman Ave.
47430	826 Waldman Ave.
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47432	831 Waldman Ave.
47433	835 Waldman Ave.
47434	838 Waldman Ave.
47435	839 Waldman Ave.
47436	842 Waldman Ave.
47437	845 Waldman Ave.
47438	849 Waldman Ave.
47439	852 Waldman Ave.
47440	853 Waldman Ave.
47441	911 Waldman Ave.
47442	912 Waldman Ave.
47443	917 Waldman Ave.
47444	924 Waldman Ave.
47445	936 Waldman Ave.
47446	940 Waldman Ave.
47447	1020 Waldman Ave.
47448	1024 Waldman Ave.
47449	1027 Waldman Ave.
47450	1031 Waldman Ave.
47451	1032 Waldman Ave.
47452	1035 Waldman Ave.
47453	1036 Waldman Ave.
47454	1101 Waldman Ave.
47455	1102 Waldman Ave.
47456	1105 Waldman Ave.
47457	1106 Waldman Ave.
47458	1110 Waldman Ave.
47459	1113 Waldman Ave.
47460	1114 Waldman Ave.
47461	1117 Waldman Ave.
47462	1118 Waldman Ave.
47463	1121 Waldman Ave.
47464	1124 Waldman Ave.
47465	1125 Waldman Ave.
47466	1129 Waldman Ave.
47467	1130 Waldman Ave.
47468	1133 Waldman Ave.
47469	1134 Waldman Ave.
47470	1137 Waldman Ave.
47471	1138 Waldman Ave.
47472	1201 Waldman Ave.

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47473	1202 Waldman Ave.
47474	1206 Waldman Ave.
47475	1214 Waldman Ave.
47476	1217 Waldman Ave.
47477	1218 Waldman Ave.
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47479	1222 Waldman Ave.
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47482	1305 Waldman Ave.
47483	1306 Waldman Ave.
47484	1309 Waldman Ave.
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47486	1313 Waldman Ave.
47487	1317 Waldman Ave.
47488	1318 Waldman Ave.
47489	1321 Waldman Ave.
47490	1322 Waldman Ave.
47491	1325 Waldman Ave.
47492	1329 Waldman Ave.
47493	1330 Waldman Ave.
47494	1401 Waldman Ave.
47495	1402 Waldman Ave.
47496	1406 Waldman Ave.
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47498	1410 Waldman Ave.
47499	1413 Waldman Ave.
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47501	1417 Waldman Ave.
47502	1418 Waldman Ave.
47503	1422 Waldman Ave.
47504	1425 Waldman Ave.
47505	1501 Waldman Ave.
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47508	1506 Waldman Ave.
47509	1510 Waldman Ave.
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47513	1523 Waldman Ave.
47514	1524 Waldman Ave.
47515	1531 Waldman Ave.
47516	1535 Waldman Ave.
47517	1536 Waldman Ave.
47518	1601 Waldman Ave.
47519	1602 Waldman Ave.
47520	1605 Waldman Ave.

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47521	1606 Waldman Ave.
47522	1609 Waldman Ave.
47523	1610 Waldman Ave.
47524	1613 Waldman Ave.
47525	1614 Waldman Ave.
47526	1617 Waldman Ave.
47527	1618 Waldman Ave.
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47529	1622 Waldman Ave.
47530	1625 Waldman Ave.
47531	1626 Waldman Ave.
47532	1630 Waldman Ave.
47533	1633 Waldman Ave.
47534	1634 Waldman Ave.
47535	1637 Waldman Ave.
47536	1638 Waldman Ave.
47537	1207 Walker St.
47538	1210 Walker St.
47539	1216 Walker St.
47540	1219 Walker St.
47541	1220 Walker St.
47542	1225 Walker St.
47543	1226 Walker St.
47544	113 Wallace St.
47545	113 Wallace St.
47546	123 Wallace St.
47547	128 Wallace St.
47548	613 Wallenberg St.
47549	619 Wallenberg St.
47550	1697 Walnut Creek Dr.
47551	1702 Walnut Creek Dr.
47552	1706 Walnut Creek Dr.
47553	1721 Walnut Creek Dr.
47554	1726 Walnut Creek Dr.
47555	1730 Walnut Creek Dr.
47556	1730 Walnut Creek Dr.
47557	1738 Walnut Creek Dr.
47558	1745 Walnut Creek Dr.
47559	303 Walnut St.
47560	310 Walnut St.
47561	917 Walnut St.
47562	920 Walnut St.
47563	920 Walnut St.
47564	1109 Walnut St.
47565	1202 Walnut St.
47566	1206 Walnut St.
47567	1209 Walnut St.
47568	1213 Walnut St.

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47569	1308 Walnut St.
47570	2511 Walter St.
47571	2512 Walter St.
47572	2517 Walter St.
47573	2518 Walter St.
47574	2523 Walter St.
47575	2524 Walter St.
47576	2529 Walter St.
47577	2530 Walter St.
47578	2535 Walter St.
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47582	2608 Walter St.
47583	2613 Walter St.
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47585	2619 Walter St.
47586	2620 Walter St.
47587	2625 Walter St.
47588	2626 Walter St.
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47590	2632 Walter St.
47591	2701 Walter St.
47592	2702 Walter St.
47593	2707 Walter St.
47594	2708 Walter St.
47595	2713 Walter St.
47596	2714 Walter St.
47597	2719 Walter St.
47598	2720 Walter St.
47599	2725 Walter St.
47600	2726 Walter St.
47601	1317 Walton Ave.
47602	1418 Walton Ave.
47603	1501 Walton Ave.
47604	1720 Walton Ave.
47605	531 Warner Ave.
47606	2005 Warner Ave.
47607	2009 Warner Ave.
47608	2015 Warner Ave.
47609	2017 Warner Ave.
47610	2021 Warner Ave.
47611	2026 Warner Ave.
47612	2027 Warner Ave.
47613	2029 Warner Ave.
47614	2030 Warner Ave.
47615	2033 Warner Ave.
47616	2034 Warner Ave.

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47617	2037 Warner Ave.
47618	2038 Warner Ave.
47619	2041 Warner Ave.
47620	2042 Warner Ave.
47621	2045 Warner Ave.
47622	2049 Warner Ave.
47623	2050 Warner Ave.
47624	354 Warren St.
47625	363 Warren St.
47626	367 Warren St.
47627	371 Warren St.
47628	372 Warren St.
47629	375 Warren St.
47630	379 Warren St.
47631	383 Warren St.
47632	387 Warren St.
47633	400 Warren St.
47634	411 Warren St.
47635	415 Warren St.
47636	418 Warren St.
47637	419 Warren St.
47638	510 Warren St.
47639	514 Warren St.
47640	515 Warren St.
47641	517 Warren St.
47642	518 Warren St.
47643	531 Warren St.
47644	535 Warren St.
47645	539 Warren St.
47646	605 Warren St.
47647	606 Warren St.
47648	609 Warren St.
47649	618 Warren St.
47650	625 Warren St.
47651	626 Warren St.
47652	629 Warren St.
47653	4301 Warrington Dr.
47654	4309 Warrington Dr.
47655	4310 Warrington Dr.
47656	4316 Warrington Dr.
47657	4320 Warrington Dr.
47658	4401 Warrington Dr.
47659	4402 Warrington Dr.
47660	4406 Warrington Dr.
47661	4410 Warrington Dr.
47662	4411 Warrington Dr.
47663	4415 Warrington Dr.
47664	4416 Warrington Dr.

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47665	4419 Warrington Dr.
47666	4501 Warrington Dr.
47667	4502 Warrington Dr.
47668	4505 Warrington Dr.
47669	4508 Warrington Dr.
47670	4509 Warrington Dr.
47671	4514 Warrington Dr.
47672	4515 Warrington Dr.
47673	4518 Warrington Dr.
47674	4522 Warrington Dr.
47675	4602 Warrington Dr.
47676	4606 Warrington Dr.
47677	4607 Warrington Dr.
47678	4610 Warrington Dr.
47679	4613 Warrington Dr.
47680	4614 Warrington Dr.
47681	4618 Warrington Dr.
47682	4621 Warrington Dr.
47683	4622 Warrington Dr.
47684	4630 Warrington Dr.
47685	4702 Warrington Dr.
47686	4707 Warrington Dr.
47687	4711 Warrington Dr.
47688	4712 Warrington Dr.
47689	4715 Warrington Dr.
47690	4716 Warrington Dr.
47691	4802 Warrington Dr.
47692	4807 Warrington Dr.
47693	4808 Warrington Dr.
47694	4812 Warrington Dr.
47695	4816 Warrington Dr.
47696	1233 Washington Ave.
47697	1303 Washington Ave.
47698	1305 Washington Ave.
47699	1307 Washington Ave.
47700	1308 Washington Ave.
47701	1311 Washington Ave.
47702	1313 Washington Ave.
47703	1316 Washington Ave.
47704	1317 Washington Ave.
47705	1320 Washington Ave.
47706	1321 Washington Ave.
47707	1324 Washington Ave.
47708	1328 Washington Ave.
47709	1329 Washington Ave.
47710	1351 Washington Ave.
47711	1355 Washington Ave.
47712	1356 Washington Ave.

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47713	1359 Washington Ave.
47714	1360 Washington Ave.
47715	1364 Washington Ave.
47716	1367 Washington Ave.
47717	1368 Washington Ave.
47718	1371 Washington Ave.
47719	1372 Washington Ave.
47720	1375 Washington Ave.
47721	1376 Washington Ave.
47722	1379 Washington Ave.
47723	1383 Washington Ave.
47724	1387 Washington Ave.
47725	1388 Washington Ave.
47726	1 Water St.
47727	303 Water St.
47728	303 Water St.
47729	303 Water St.
47730	303 Water St.
47731	316 Water St.
47732	316 Water St.
47733	402 Water St.
47734	402 Water St.
47735	405 Water St.
47736	422 Water St.
47737	434 Water St.
47738	434 Water St.
47739	434 Water St.
47740	910 Watson St.
47741	914 Watson St.
47742	918 Watson St.
47743	1511 Wayne St.
47744	1512 Wayne St.
47745	1515 Wayne St.
47746	1516 Wayne St.
47747	1519 Wayne St.
47748	1520 Wayne St.
47749	1523 Wayne St.
47750	1524 Wayne St.
47751	1601 Wayne St.
47752	1602 Wayne St.
47753	1605 Wayne St.
47754	1609 Wayne St.
47755	1610 Wayne St.
47756	1618 Wayne St.
47757	1911 Weaver St.
47758	1916 Weaver St.
47759	1923 Weaver St.
47760	1924 Weaver St.

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47761	1928 Weaver St.
47762	2002 Weaver St.
47763	2007 Weaver St.
47764	2009 Weaver St.
47765	2013 Weaver St.
47766	2014 Weaver St.
47767	2018 Weaver St.
47768	1718 Webster Rd.
47769	1718 Webster Rd.
47770	1806 Webster Rd.
47771	1606 Webster Rd.
47772	1652 Webster Rd.
47773	1701 Webster Rd.
47774	1702 Webster Rd.
47775	1704 Webster Rd.
47776	1705 Webster Rd.
47777	1706 Webster Rd.
47778	1709 Webster Rd.
47779	1710 Webster Rd.
47780	1717 Webster Rd.
47781	1718 Webster Rd.
47782	1723 Webster Rd.
47783	1729 Webster Rd.
47784	1801 Webster Rd.
47785	1806 Webster Rd.
47786	1807 Webster Rd.
47787	1813 Webster Rd.
47788	1822 Webster Rd.
47789	6417 Webster Rd.
47790	6513 Webster Rd.
47791	6601 Webster Rd.
47792	6613 Webster Rd.
47793	6615 Webster Rd.
47794	6619 Webster Rd.
47795	6681 Webster Rd.
47796	6702 Webster Rd.
47797	6707 Webster Rd.
47798	6708 Webster Rd.
47799	6714 Webster Rd.
47800	6725 Webster Rd.
47801	6726 Webster Rd.
47802	6732 Webster Rd.
47803	6738 Webster Rd.
47804	6802 Webster Rd.
47805	6808 Webster Rd.
47806	6814 Webster Rd.
47807	6820 Webster Rd.
47808	6826 Webster Rd.

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47809	6902 Webster Rd.
47810	6908 Webster Rd.
47811	6914 Webster Rd.
47812	6920 Webster Rd.
47813	7002 Webster Rd.
47814	7008 Webster Rd.
47815	104 Welch Blvd.
47816	112 Welch Blvd.
47817	115 Welch Blvd.
47818	116 Welch Blvd.
47819	122 Welch Blvd.
47820	201 Welch Blvd.
47821	204 Welch Blvd.
47822	209 Welch Blvd.
47823	210 Welch Blvd.
47824	215 Welch Blvd.
47825	218 Welch Blvd.
47826	221 Welch Blvd.
47827	228 Welch Blvd.
47828	230 Welch Blvd.
47829	301 Welch Blvd.
47830	302 Welch Blvd.
47831	306 Welch Blvd.
47832	307 Welch Blvd.
47833	311 Welch Blvd.
47834	312 Welch Blvd.
47835	317 Welch Blvd.
47836	318 Welch Blvd.
47837	321 Welch Blvd.
47838	326 Welch Blvd.
47839	405 Welch Blvd.
47840	415 Welch Blvd.
47841	421 Welch Blvd.
47842	500 Welch Blvd.
47843	503 Welch Blvd.
47844	509 Welch Blvd.
47845	515 Welch Blvd.
47846	521 Welch Blvd.
47847	552 Welch Blvd.
47848	553 Welch Blvd.
47849	556 Welch Blvd.
47850	557 Welch Blvd.
47851	562 Welch Blvd.
47852	564 Welch Blvd.
47853	565 Welch Blvd.
47854	568 Welch Blvd.
47855	600 Welch Blvd.
47856	603 Welch Blvd.

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47857	607 Welch Blvd.
47858	608 Welch Blvd.
47859	611 Welch Blvd.
47860	612 Welch Blvd.
47861	615 Welch Blvd.
47862	616 Welch Blvd.
47863	620 Welch Blvd.
47864	624 Welch Blvd.
47865	627 Welch Blvd.
47866	628 Welch Blvd.
47867	631 Welch Blvd.
47868	632 Welch Blvd.
47869	635 Welch Blvd.
47870	636 Welch Blvd.
47871	701 Welch Blvd.
47872	702 Welch Blvd.
47873	705 Welch Blvd.
47874	711 Welch Blvd.
47875	712 Welch Blvd.
47876	717 Welch Blvd.
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47879	725 Welch Blvd.
47880	728 Welch Blvd.
47881	729 Welch Blvd.
47882	730 Welch Blvd.
47883	735 Welch Blvd.
47884	802 Welch Blvd.
47885	806 Welch Blvd.
47886	807 Welch Blvd.
47887	809 Welch Blvd.
47888	810 Welch Blvd.
47889	811 Welch Blvd.
47890	815 Welch Blvd.
47891	816 Welch Blvd.
47892	816 Welch Blvd.
47893	818 Welch Blvd.
47894	818 Welch Blvd.
47895	820 Welch Blvd.
47896	826 Welch Blvd.
47897	826 Welch Blvd.
47898	830 Welch Blvd.
47899	830 Welch Blvd.
47900	834 Welch Blvd.
47901	834 Welch Blvd.
47902	901 Welch Blvd.
47903	907 Welch Blvd.
47904	909 Welch Blvd.

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47905	913 Welch Blvd.
47906	918 Welch Blvd.
47907	921 Welch Blvd.
47908	922 Welch Blvd.
47909	927 Welch Blvd.
47910	933 Welch Blvd.
47911	939 Welch Blvd.
47912	945 Welch Blvd.
47913	950 Welch Blvd.
47914	951 Welch Blvd.
47915	954 Welch Blvd.
47916	1001 Welch Blvd.
47917	1002 Welch Blvd.
47918	1006 Welch Blvd.
47919	1007 Welch Blvd.
47920	1010 Welch Blvd.
47921	1011 Welch Blvd.
47922	1015 Welch Blvd.
47923	1019 Welch Blvd.
47924	1101 Welch Blvd.
47925	1102 Welch Blvd.
47926	1106 Welch Blvd.
47927	1107 Welch Blvd.
47928	1201 Welch Blvd.
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47930	1207 Welch Blvd.
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47933	1301 Welch Blvd.
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47947	1416 Welch Blvd.
47948	1419 Welch Blvd.
47949	1501 Welch Blvd.
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47953	1514 Welch Blvd.
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47959	1624 Welch Blvd.
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47974	1920 Welch Blvd.
47975	1921 Welch Blvd.
47976	1927 Welch Blvd.
47977	2001 Welch Blvd.
47978	2002 Welch Blvd.
47979	2007 Welch Blvd.
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47981	2013 Welch Blvd.
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47983	2019 Welch Blvd.
47984	2020 Welch Blvd.
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47987	2109 Welch Blvd.
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47992	2127 Welch Blvd.
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47996	2201 Welch Blvd.
47997	2202 Welch Blvd.
47998	2207 Welch Blvd.
47999	2213 Welch Blvd.
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48001	2220 Welch Blvd.
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48013	2325 Welch Blvd.
48014	2331 Welch Blvd.
48015	2401 Welch Blvd.
48016	2402 Welch Blvd.
48017	2407 Welch Blvd.
48018	2410 Welch Blvd.
48019	2413 Welch Blvd.
48020	2418 Welch Blvd.
48021	2419 Welch Blvd.
48022	2425 Welch Blvd.
48023	2425 Welch Blvd.
48024	2429 Welch Blvd.
48025	2429 Welch Blvd.
48026	2437 Welch Blvd.
48027	321 Weller St.
48028	401 Weller St.
48029	415 Weller St.
48030	423 Weller St.
48031	501 Weller St.
48032	509 Weller St.
48033	515 Weller St.
48034	601 Weller St.
48035	611 Weller St.
48036	110 Wellington Ave., E.
48037	118 Wellington Ave., E.
48038	809 Wellington Ave., E.
48039	812 Wellington Ave., E.
48040	813 Wellington Ave., E.
48041	816 Wellington Ave., E.
48042	817 Wellington Ave., E.
48043	820 Wellington Ave., E.
48044	821 Wellington Ave., E.
48045	824 Wellington Ave., E.
48046	825 Wellington Ave., E.
48047	828 Wellington Ave., E.
48048	829 Wellington Ave., E.

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48049	833 Wellington Ave., E.
48050	901 Wellington Ave., E.
48051	904 Wellington Ave., E.
48052	905 Wellington Ave., E.
48053	908 Wellington Ave., E.
48054	909 Wellington Ave., E.
48055	912 Wellington Ave., E.
48056	913 Wellington Ave., E.
48057	916 Wellington Ave., E.
48058	917 Wellington Ave., E.
48059	921 Wellington Ave., E.
48060	925 Wellington Ave., E.
48061	929 Wellington Ave., E.
48062	207 Wellington Ave., W.
48063	207 Wellington Ave., W.
48064	210 Wellington Ave., W.
48065	211 Wellington Ave., W.
48066	214 Wellington Ave., W.
48067	218 Wellington Ave., W.
48068	219 Wellington Ave., W.
48069	229 Wellington Ave., W.
48070	1015 Wellman St.
48071	1020 Wellman St.
48072	1023 Wellman St.
48073	1032 Wellman St.
48074	1035 Wellman St.
48075	1035.5 Wellman St.
48076	3409 Wesley St.
48077	3412 Wesley St.
48078	3501 Wesley St.
48079	3502 Wesley St.
48080	3506 Wesley St.
48081	3509 Wesley St.
48082	3510 Wesley St.
48083	3513 Wesley St.
48084	3514 Wesley St.
48085	3517 Wesley St.
48086	3521 Wesley St.
48087	3602 Wesley St.
48088	3605 Wesley St.
48089	3609 Wesley St.
48090	3610 Wesley St.
48091	3613 Wesley St.
48092	3614 Wesley St.
48093	3617 Wesley St.
48094	3618 Wesley St.
48095	3621 Wesley St.
48096	3701 Wesley St.

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48097	3705 Wesley St.
48098	3709 Wesley St.
48099	3710 Wesley St.
48100	3714 Wesley St.
48101	3715 Wesley St.
48102	311 Westcombe Ave.
48103	314 Westcombe Ave.
48104	319 Westcombe Ave.
48105	320 Westcombe Ave.
48106	323 Westcombe Ave.
48107	324 Westcombe Ave.
48108	331 Westcombe Ave.
48109	332 Westcombe Ave.
48110	336 Westcombe Ave.
48111	339 Westcombe Ave.
48112	340 Westcombe Ave.
48113	343 Westcombe Ave.
48114	351 Westcombe Ave.
48115	352 Westcombe Ave.
48116	402 Westcombe Ave.
48117	408 Westcombe Ave.
48118	412 Westcombe Ave.
48119	417 Westcombe Ave.
48120	430 Westcombe Ave.
48121	440 Westcombe Ave.
48122	460 Westcombe Ave.
48123	465 Westcombe Ave.
48124	701 Westcombe Ave.
48125	705 Westcombe Ave.
48126	709 Westcombe Ave.
48127	713 Westcombe Ave.
48128	717 Westcombe Ave.
48129	721 Westcombe Ave.
48130	725 Westcombe Ave.
48131	729 Westcombe Ave.
48132	733 Westcombe Ave.
48133	3102 Western Rd.
48134	3105 Western Rd.
48135	3122 Western Rd.
48136	3202 Western Rd.
48137	3220 Western Rd.
48138	3220 Western Rd.
48139	3320 Western Rd.
48140	3320 Western Rd.
48141	3402 Western Rd.
48142	3415 Western Rd.
48143	3415 Western Rd.
48144	3711 Western Rd.

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48145	3711 Western Rd.
48146	3711 Western Rd.
48147	3905 Western Rd.
48148	4301 Western Rd.
48149	4302 Western Rd.
48150	4305 Western Rd.
48151	4401 Western Rd.
48152	4602 Western Rd.
48153	4612 Western Rd.
48154	4615 Western Rd.
48155	5931 Western Rd.
48156	3612 Western Rd.
48157	3622 Western Rd.
48158	3632 Western Rd.
48159	3642 Western Rd.
48160	3702 Western Rd.
48161	3711 Western Rd.
48162	3722 Western Rd.
48163	3732 Western Rd.
48164	3742 Western Rd.
48165	3800 Western Rd.
48166	3822 Western Rd.
48167	3905 Western Rd.
48168	3912 Western Rd.
48169	3926 Western Rd.
48170	3932 Western Rd.
48171	3942 Western Rd.
48172	4120 Western Rd.
48173	4124 Western Rd.
48174	4125 Western Rd.
48175	4128 Western Rd.
48176	4132 Western Rd.
48177	4136 Western Rd.
48178	4140 Western Rd.
48179	4144 Western Rd.
48180	4148 Western Rd.
48181	4301 Western Rd.
48182	4302 Western Rd.
48183	4305 Western Rd.
48184	4401 Western Rd.
48185	4602 Western Rd.
48186	4612 Western Rd.
48187	4615 Western Rd.
48188	4714 Western Rd.
48189	4735 Western Rd.
48190	4801 Western Rd.
48191	4802 Western Rd.
48192	4811 Western Rd.

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48193	4815 Western Rd.
48194	4819 Western Rd.
48195	4901 Western Rd.
48196	4905 Western Rd.
48197	4908 Western Rd.
48198	4909 Western Rd.
48199	4913 Western Rd.
48200	4917 Western Rd.
48201	4921 Western Rd.
48202	5001 Western Rd.
48203	5007 Western Rd.
48204	5010 Western Rd.
48205	5011 Western Rd.
48206	5101 Western Rd.
48207	5102 Western Rd.
48208	5105 Western Rd.
48209	5201 Western Rd.
48210	5202 Western Rd.
48211	5205 Western Rd.
48212	5211 Western Rd.
48213	5217 Western Rd.
48214	5220 Western Rd.
48215	5223 Western Rd.
48216	5301 Western Rd.
48217	5307 Western Rd.
48218	5308 Western Rd.
48219	5314 Western Rd.
48220	5320 Western Rd.
48221	5323 Western Rd.
48222	5326 Western Rd.
48223	5402 Western Rd.
48224	5413 Western Rd.
48225	5419 Western Rd.
48226	5420 Western Rd.
48227	5501 Western Rd.
48228	5508 Western Rd.
48229	5613 Western Rd.
48230	5614 Western Rd.
48231	5619 Western Rd.
48232	5701 Western Rd.
48233	5707 Western Rd.
48234	5708 Western Rd.
48235	5713 Western Rd.
48236	5719 Western Rd.
48237	5725 Western Rd.
48238	5801 Western Rd.
48239	5802 Western Rd.
48240	5807 Western Rd.

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48241	5808 Western Rd.
48242	5813 Western Rd.
48243	5901 Western Rd.
48244	5907 Western Rd.
48245	5913 Western Rd.
48246	5914 Western Rd.
48247	5919 Western Rd.
48248	5920 Western Rd.
48249	5925 Western Rd.
48250	5931 Western Rd.
48251	101 Westmoreland Dr.
48252	102 Westmoreland Dr.
48253	108 Westmoreland Dr.
48254	109 Westmoreland Dr.
48255	112 Westmoreland Dr.
48256	116 Westmoreland Dr.
48257	117 Westmoreland Dr.
48258	124 Westmoreland Dr.
48259	127 Westmoreland Dr.
48260	128 Westmoreland Dr.
48261	201 Westmoreland Dr.
48262	202 Westmoreland Dr.
48263	205 Westmoreland Dr.
48264	206 Westmoreland Dr.
48265	209 Westmoreland Dr.
48266	210 Westmoreland Dr.
48267	213 Westmoreland Dr.
48268	214 Westmoreland Dr.
48269	217 Westmoreland Dr.
48270	218 Westmoreland Dr.
48271	221 Westmoreland Dr.
48272	222 Westmoreland Dr.
48273	301 Westmoreland Dr.
48274	302 Westmoreland Dr.
48275	305 Westmoreland Dr.
48276	306 Westmoreland Dr.
48277	309 Westmoreland Dr.
48278	310 Westmoreland Dr.
48279	313 Westmoreland Dr.
48280	314 Westmoreland Dr.
48281	317 Westmoreland Dr.
48282	320 Westmoreland Dr.
48283	321 Westmoreland Dr.
48284	328 Westmoreland Dr.
48285	2606 Westwood Pkwy.
48286	2609 Westwood Pkwy.
48287	2615 Westwood Pkwy.
48288	2620 Westwood Pkwy.

	A
48289	2630 Westwood Pkwy.
48290	2641 Westwood Pkwy.
48291	2660 Westwood Pkwy.
48292	2671 Westwood Pkwy.
48293	2702 Westwood Pkwy.
48294	2720 Westwood Pkwy.
48295	2721 Westwood Pkwy.
48296	2730 Westwood Pkwy.
48297	2741 Westwood Pkwy.
48298	2747 Westwood Pkwy.
48299	2750 Westwood Pkwy.
48300	2801 Westwood Pkwy.
48301	2802 Westwood Pkwy.
48302	2811 Westwood Pkwy.
48303	2820 Westwood Pkwy.
48304	2821 Westwood Pkwy.
48305	2901 Westwood Pkwy.
48306	2902 Westwood Pkwy.
48307	2910 Westwood Pkwy.
48308	3000 Westwood Pkwy.
48309	3001 Westwood Pkwy.
48310	3020 Westwood Pkwy.
48311	3021 Westwood Pkwy.
48312	3030 Westwood Pkwy.
48313	3031 Westwood Pkwy.
48314	3101 Westwood Pkwy.
48315	3102 Westwood Pkwy.
48316	3110 Westwood Pkwy.
48317	3111 Westwood Pkwy.
48318	3120 Westwood Pkwy.
48319	3121 Westwood Pkwy.
48320	3130 Westwood Pkwy.
48321	3131 Westwood Pkwy.
48322	3201 Westwood Pkwy.
48323	3202 Westwood Pkwy.
48324	3211 Westwood Pkwy.
48325	3220 Westwood Pkwy.
48326	3221 Westwood Pkwy.
48327	3301 Westwood Pkwy.
48328	3302 Westwood Pkwy.
48329	3315 Westwood Pkwy.
48330	3325 Westwood Pkwy.
48331	3330 Westwood Pkwy.
48332	3335 Westwood Pkwy.
48333	3401 Westwood Pkwy.
48334	3402 Westwood Pkwy.
48335	3405 Westwood Pkwy.
48336	3410 Westwood Pkwy.

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48337	3411 Westwood Pkwy.
48338	3420 Westwood Pkwy.
48339	110 White St.
48340	111 White St.
48341	114 White St.
48342	115 White St.
48343	118 White St.
48344	123 White St.
48345	126 White St.
48346	127 White St.
48347	130 White St.
48348	134 White St.
48349	135 White St.
48350	138 White St.
48351	139 White St.
48352	203 White St.
48353	204 White St.
48354	207 White St.
48355	208 White St.
48356	211 White St.
48357	212 White St.
48358	216 White St.
48359	219 White St.
48360	220 White St.
48361	224 White St.
48362	227 White St.
48363	228 White St.
48364	231 White St.
48365	232 White St.
48366	235 White St.
48367	236 White St.
48368	239 White St.
48369	310 White St.
48370	315 White St.
48371	318 White St.
48372	319 White St.
48373	322 White St.
48374	323 White St.
48375	326 White St.
48376	405 White St.
48377	418 White St.
48378	501 White St.
48379	502 White St.
48380	510 White St.
48381	511 White St.
48382	514 White St.
48383	515 White St.
48384	518 White St.

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48385	519 White St.
48386	522 White St.
48387	523 White St.
48388	601 White St.
48389	602 White St.
48390	605 White St.
48391	606 White St.
48392	609 White St.
48393	610 White St.
48394	613 White St.
48395	1001 Whitingham Dr.
48396	1008 Whitingham Dr.
48397	1009 Whitingham Dr.
48398	1014 Whitingham Dr.
48399	1018 Whitingham Dr.
48400	1104 Whitingham Dr.
48401	1105 Whitingham Dr.
48402	1108 Whitingham Dr.
48403	1109 Whitingham Dr.
48404	1109 Whitingham Dr.
48405	1113 Whitingham Dr.
48406	1116 Whitingham Dr.
48407	1117 Whitingham Dr.
48408	1123 Whitingham Dr.
48409	3401 Whitney Ave.
48410	3402 Whitney Ave.
48411	3406 Whitney Ave.
48412	3410 Whitney Ave.
48413	3413 Whitney Ave.
48414	3417 Whitney Ave.
48415	3418 Whitney Ave.
48416	3421 Whitney Ave.
48417	3502 Whitney Ave.
48418	3505 Whitney Ave.
48419	3512 Whitney Ave.
48420	3513 Whitney Ave.
48421	3517 Whitney Ave.
48422	3521 Whitney Ave.
48423	3522 Whitney Ave.
48424	3601 Whitney Ave.
48425	3604 Whitney Ave.
48426	3605 Whitney Ave.
48427	3609 Whitney Ave.
48428	3610 Whitney Ave.
48429	3613 Whitney Ave.
48430	3614 Whitney Ave.
48431	3617 Whitney Ave.
48432	3618 Whitney Ave.

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48433	3622 Whitney Ave.
48434	3625 Whitney Ave.
48435	3626 Whitney Ave.
48436	3627 Whitney Ave.
48437	3701 Whitney Ave.
48438	3702 Whitney Ave.
48439	3705 Whitney Ave.
48440	3706 Whitney Ave.
48441	3709 Whitney Ave.
48442	3710 Whitney Ave.
48443	3714 Whitney Ave.
48444	3717 Whitney Ave.
48445	3718 Whitney Ave.
48446	3722 Whitney Ave.
48447	3801 Whitney Ave.
48448	3802 Whitney Ave.
48449	3806 Whitney Ave.
48450	3809 Whitney Ave.
48451	3810 Whitney Ave.
48452	3813 Whitney Ave.
48453	3814 Whitney Ave.
48454	3817 Whitney Ave.
48455	3821 Whitney Ave.
48456	3822 Whitney Ave.
48457	3825 Whitney Ave.
48458	3826 Whitney Ave.
48459	3902 Whitney Ave.
48460	3905 Whitney Ave.
48461	3909 Whitney Ave.
48462	3910 Whitney Ave.
48463	3913 Whitney Ave.
48464	3917 Whitney Ave.
48465	3918 Whitney Ave.
48466	3925 Whitney Ave.
48467	3926 Whitney Ave.
48468	3934 Whitney Ave.
48469	3113 Whittier Ave.
48470	3117 Whittier Ave.
48471	3118 Whittier Ave.
48472	3125 Whittier Ave.
48473	3126 Whittier Ave.
48474	3129 Whittier Ave.
48475	3133 Whittier Ave.
48476	3134 Whittier Ave.
48477	3138 Whittier Ave.
48478	3142 Whittier Ave.
48479	3145 Whittier Ave.
48480	3146 Whittier Ave.

	A
48481	3149 Whittier Ave.
48482	3201 Whittier Ave.
48483	3207 Whittier Ave.
48484	3211 Whittier Ave.
48485	3212 Whittier Ave.
48486	3216 Whittier Ave.
48487	3219 Whittier Ave.
48488	3223 Whittier Ave.
48489	3228 Whittier Ave.
48490	3232 Whittier Ave.
48491	3235 Whittier Ave.
48492	3236 Whittier Ave.
48493	3242 Whittier Ave.
48494	3302 Whittier Ave.
48495	3316 Whittier Ave.
48496	3320 Whittier Ave.
48497	3324 Whittier Ave.
48498	3402 Whittier Ave.
48499	3406 Whittier Ave.
48500	3410 Whittier Ave.
48501	3414 Whittier Ave.
48502	3418 Whittier Ave.
48503	3506 Whittier Ave.
48504	3510 Whittier Ave.
48505	3514 Whittier Ave.
48506	3518 Whittier Ave.
48507	3522 Whittier Ave.
48508	3526 Whittier Ave.
48509	3602 Whittier Ave.
48510	3606 Whittier Ave.
48511	3610 Whittier Ave.
48512	3614 Whittier Ave.
48513	3618 Whittier Ave.
48514	3622 Whittier Ave.
48515	3701 Whittier Ave.
48516	3702 Whittier Ave.
48517	3705 Whittier Ave.
48518	3706 Whittier Ave.
48519	3709 Whittier Ave.
48520	3710 Whittier Ave.
48521	3713 Whittier Ave.
48522	3714 Whittier Ave.
48523	3717 Whittier Ave.
48524	3718 Whittier Ave.
48525	3721 Whittier Ave.
48526	3722 Whittier Ave.
48527	3725 Whittier Ave.
48528	3726 Whittier Ave.

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48529	3729 Whittier Ave.
48530	3730 Whittier Ave.
48531	3733 Whittier Ave.
48532	3734 Whittier Ave.
48533	3737 Whittier Ave.
48534	3738 Whittier Ave.
48535	3741 Whittier Ave.
48536	3742 Whittier Ave.
48537	3745 Whittier Ave.
48538	3746 Whittier Ave.
48539	3801 Whittier Ave.
48540	3802 Whittier Ave.
48541	3805 Whittier Ave.
48542	3806 Whittier Ave.
48543	3809 Whittier Ave.
48544	3810 Whittier Ave.
48545	3813 Whittier Ave.
48546	3814 Whittier Ave.
48547	3817 Whittier Ave.
48548	3818 Whittier Ave.
48549	3821 Whittier Ave.
48550	3822 Whittier Ave.
48551	3825 Whittier Ave.
48552	3826 Whittier Ave.
48553	3829 Whittier Ave.
48554	3830 Whittier Ave.
48555	3833 Whittier Ave.
48556	3834 Whittier Ave.
48557	3837 Whittier Ave.
48558	3838 Whittier Ave.
48559	3841 Whittier Ave.
48560	3842 Whittier Ave.
48561	1801 Whittlesey St.
48562	1802 Whittlesey St.
48563	1815 Whittlesey St.
48564	1818 Whittlesey St.
48565	1819 Whittlesey St.
48566	1822 Whittlesey St.
48567	1823 Whittlesey St.
48568	1826 Whittlesey St.
48569	1830 Whittlesey St.
48570	1831 Whittlesey St.
48571	1834 Whittlesey St.
48572	1835 Whittlesey St.
48573	1838 Whittlesey St.
48574	1839 Whittlesey St.
48575	1842 Whittlesey St.
48576	1843 Whittlesey St.

	A
48577	1846 Whittlesey St.
48578	1847 Whittlesey St.
48579	1850 Whittlesey St.
48580	1851 Whittlesey St.
48581	1905 Whittlesey St.
48582	1906 Whittlesey St.
48583	1909 Whittlesey St.
48584	1910 Whittlesey St.
48585	1913 Whittlesey St.
48586	1914 Whittlesey St.
48587	1917 Whittlesey St.
48588	1920 Whittlesey St.
48589	1925 Whittlesey St.
48590	1926 Whittlesey St.
48591	1929 Whittlesey St.
48592	1930 Whittlesey St.
48593	1933 Whittlesey St.
48594	1934 Whittlesey St.
48595	2006 Whittlesey St.
48596	2007 Whittlesey St.
48597	2010 Whittlesey St.
48598	2013 Whittlesey St.
48599	2014 Whittlesey St.
48600	2017 Whittlesey St.
48601	2018 Whittlesey St.
48602	2021 Whittlesey St.
48603	2022 Whittlesey St.
48604	2025 Whittlesey St.
48605	2026 Whittlesey St.
48606	2030 Whittlesey St.
48607	2031 Whittlesey St.
48608	2034 Whittlesey St.
48609	2035 Whittlesey St.
48610	2039 Whittlesey St.
48611	2040 Whittlesey St.
48612	2043 Whittlesey St.
48613	2046 Whittlesey St.
48614	2047 Whittlesey St.
48615	2050 Whittlesey St.
48616	2051 Whittlesey St.
48617	2056 Whittlesey St.
48618	2057 Whittlesey St.
48619	1701 Wilberforce Cir.
48620	1702 Wilberforce Cir.
48621	1705 Wilberforce Cir.
48622	1706 Wilberforce Cir.
48623	1709 Wilberforce Cir.
48624	1710 Wilberforce Cir.

	A
48625	704 Wilberforce Dr.
48626	708 Wilberforce Dr.
48627	712 Wilberforce Dr.
48628	716 Wilberforce Dr.
48629	720 Wilberforce Dr.
48630	724 Wilberforce Dr.
48631	728 Wilberforce Dr.
48632	740 Wilberforce Dr.
48633	744 Wilberforce Dr.
48634	802 Wilberforce Dr.
48635	806 Wilberforce Dr.
48636	810 Wilberforce Dr.
48637	701 Wilberforce Ln.
48638	705 Wilberforce Ln.
48639	709 Wilberforce Ln.
48640	713 Wilberforce Ln.
48641	717 Wilberforce Ln.
48642	721 Wilberforce Ln.
48643	725 Wilberforce Ln.
48644	1704 Wilberforce Ln.
48645	1706 Wilberforce Ln.
48646	403 Williams St.
48647	423 Williams St.
48648	457 Williams St.
48649	458 Williams St.
48650	461 Williams St.
48651	462 Williams St.
48652	465 Williams St.
48653	518 Williams St.
48654	522 Williams St.
48655	558 Williams St.
48656	605 Williams St.
48657	609 Williams St.
48658	916 Willow St.
48659	920 Willow St.
48660	1015 Willow St.
48661	1020 Willow St.
48662	1114 Willow St.
48663	1202 Willow St.
48664	1206 Willow St.
48665	1210 Willow St.
48666	1211 Willow St.
48667	1214 Willow St.
48668	1218 Willow St.
48669	1222 Willow St.
48670	1824 Willowbrook Cir.
48671	1825 Willowbrook Cir.
48672	1826 Willowbrook Cir.

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48673	1827 Willowbrook Cir.
48674	1828 Willowbrook Cir.
48675	1829 Willowbrook Cir.
48676	1830 Willowbrook Cir.
48677	1831 Willowbrook Cir.
48678	1834 Willowbrook Cir.
48679	1835 Willowbrook Cir.
48680	1836 Willowbrook Cir.
48681	1837 Willowbrook Cir.
48682	1838 Willowbrook Cir.
48683	1839 Willowbrook Cir.
48684	1840 Willowbrook Cir.
48685	1841 Willowbrook Cir.
48686	1842 Willowbrook Cir.
48687	1843 Willowbrook Cir.
48688	1844 Willowbrook Cir.
48689	1845 Willowbrook Cir.
48690	2701 Wilton Pl.
48691	2702 Wilton Pl.
48692	2707 Wilton Pl.
48693	2708 Wilton Pl.
48694	2713 Wilton Pl.
48695	2714 Wilton Pl.
48696	2719 Wilton Pl.
48697	2720 Wilton Pl.
48698	2723 Wilton Pl.
48699	2801 Wilton Pl.
48700	2802 Wilton Pl.
48701	2803 Wilton Pl.
48702	2804 Wilton Pl.
48703	2805 Wilton Pl.
48704	2806 Wilton Pl.
48705	2809 Wilton Pl.
48706	2810 Wilton Pl.
48707	2813 Wilton Pl.
48708	2814 Wilton Pl.
48709	2901 Wilton Pl.
48710	2902 Wilton Pl.
48711	2906 Wilton Pl.
48712	2909 Wilton Pl.
48713	2910 Wilton Pl.
48714	2913 Wilton Pl.
48715	3007 Wilton Pl.
48716	3010 Wilton Pl.
48717	5513 Wilton Pl.
48718	5515 Wilton Pl.
48719	2003 Winans Ave.
48720	2005 Winans Ave.

	A
48721	2006 Winans Ave.
48722	2009 Winans Ave.
48723	2010 Winans Ave.
48724	2014 Winans Ave.
48725	2016 Winans Ave.
48726	2017 Winans Ave.
48727	2021 Winans Ave.
48728	2022 Winans Ave.
48729	2025 Winans Ave.
48730	2026 Winans Ave.
48731	2029 Winans Ave.
48732	2030 Winans Ave.
48733	2033 Winans Ave.
48734	2034 Winans Ave.
48735	2037 Winans Ave.
48736	2038 Winans Ave.
48737	2042 Winans Ave.
48738	2046 Winans Ave.
48739	2050 Winans Ave.
48740	2105 Winans Ave.
48741	2107 Winans Ave.
48742	2109 Winans Ave.
48743	2110 Winans Ave.
48744	2113 Winans Ave.
48745	2114 Winans Ave.
48746	2117 Winans Ave.
48747	2121 Winans Ave.
48748	2122 Winans Ave.
48749	2125 Winans Ave.
48750	2129 Winans Ave.
48751	2201 Winans Ave.
48752	2202 Winans Ave.
48753	2225 Winans Ave.
48754	2235 Winans Ave.
48755	2802 Windcliff Tr.
48756	5928 Windcliff Tr.
48757	2002 Windemere Ave.
48758	2008 Windemere Ave.
48759	2014 Windemere Ave.
48760	2020 Windemere Ave.
48761	2101 Windemere Ave.
48762	2109 Windemere Ave.
48763	2112 Windemere Ave.
48764	2116 Windemere Ave.
48765	2119 Windemere Ave.
48766	2120 Windemere Ave.
48767	2123 Windemere Ave.
48768	2124 Windemere Ave.

	A
48769	2127 Windemere Ave.
48770	2128 Windemere Ave.
48771	2131 Windemere Ave.
48772	2201 Windemere Ave.
48773	2202 Windemere Ave.
48774	2207 Windemere Ave.
48775	2208 Windemere Ave.
48776	2211 Windemere Ave.
48777	2212 Windemere Ave.
48778	2218 Windemere Ave.
48779	2224 Windemere Ave.
48780	2301 Windemere Ave.
48781	2302 Windemere Ave.
48782	2307 Windemere Ave.
48783	2308 Windemere Ave.
48784	2311 Windemere Ave.
48785	2313 Windemere Ave.
48786	2314 Windemere Ave.
48787	2318 Windemere Ave.
48788	2401 Windemere Ave.
48789	2402 Windemere Ave.
48790	2406 Windemere Ave.
48791	2407 Windemere Ave.
48792	2410 Windemere Ave.
48793	2411 Windemere Ave.
48794	2414 Windemere Ave.
48795	2415 Windemere Ave.
48796	2501 Windemere Ave.
48797	2508 Windemere Ave.
48798	2511 Windemere Ave.
48799	2514 Windemere Ave.
48800	2515 Windemere Ave.
48801	2518 Windemere Ave.
48802	2522 Windemere Ave.
48803	2601 Windemere Ave.
48804	2602 Windemere Ave.
48805	2605 Windemere Ave.
48806	2606 Windemere Ave.
48807	2609 Windemere Ave.
48808	2612 Windemere Ave.
48809	2613 Windemere Ave.
48810	2618 Windemere Ave.
48811	2622 Windemere Ave.
48812	2801 Windrush Pass.
48813	2808 Windrush Pass.
48814	2814 Windrush Pass.
48815	1801 Windsor Ln.
48816	1802 Windsor Ln.

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48817	1805 Windsor Ln.
48818	1809 Windsor Ln.
48819	1813 Windsor Ln.
48820	1814 Windsor Ln.
48821	1817 Windsor Ln.
48822	1820 Windsor Ln.
48823	1821 Windsor Ln.
48824	1825 Windsor Ln.
48825	1826 Windsor Ln.
48826	1829 Windsor Ln.
48827	1830 Windsor Ln.
48828	1833 Windsor Ln.
48829	1901 Windsor Ln.
48830	1902 Windsor Ln.
48831	1905 Windsor Ln.
48832	1906 Windsor Ln.
48833	1909 Windsor Ln.
48834	1910 Windsor Ln.
48835	1913 Windsor Ln.
48836	1914 Windsor Ln.
48837	1917 Windsor Ln.
48838	1918 Windsor Ln.
48839	1921 Windsor Ln.
48840	1922 Windsor Ln.
48841	1925 Windsor Ln.
48842	1926 Windsor Ln.
48843	1929 Windsor Ln.
48844	1930 Windsor Ln.
48845	2301 Winifred Dr.
48846	2305 Winifred Dr.
48847	2306 Winifred Dr.
48848	2309 Winifred Dr.
48849	2310 Winifred Dr.
48850	2313 Winifred Dr.
48851	2314 Winifred Dr.
48852	2316 Winifred Dr.
48853	2317 Winifred Dr.
48854	2324 Winifred Dr.
48855	2325 Winifred Dr.
48856	2326 Winifred Dr.
48857	2400 Winifred Dr.
48858	2401 Winifred Dr.
48859	2404 Winifred Dr.
48860	2405 Winifred Dr.
48861	2406 Winifred Dr.
48862	2409 Winifred Dr.
48863	2413 Winifred Dr.
48864	2417 Winifred Dr.

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48865	1502 Winona St.
48866	1513 Winona St.
48867	1514 Winona St.
48868	1601 Winona St.
48869	1605 Winona St.
48870	1614 Winona St.
48871	1615 Winona St.
48872	1702 Winona St.
48873	1705 Winona St.
48874	1709 Winona St.
48875	1802 Winona St.
48876	1805 Winona St.
48877	1901 Winona St.
48878	1909 Winona St.
48879	1914 Winona St.
48880	1917 Winona St.
48881	2013 Winona St.
48882	2101 Winona St.
48883	2102 Winona St.
48884	2112 Winona St.
48885	2212 Winona St.
48886	2218 Winona St.
48887	2223 Winona St.
48888	2224 Winona St.
48889	2230 Winona St.
48890	2233 Winona St.
48891	2236 Winona St.
48892	2239 Winona St.
48893	2242 Winona St.
48894	2301 Winona St.
48895	2302 Winona St.
48896	2307 Winona St.
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48898	2313 Winona St.
48899	2314 Winona St.
48900	2319 Winona St.
48901	2320 Winona St.
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48907	2402 Winona St.
48908	2408 Winona St.
48909	2409 Winona St.
48910	2413 Winona St.
48911	2414 Winona St.
48912	2419 Winona St.

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48913	2420 Winona St.
48914	2425 Winona St.
48915	2511 Winona St.
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48938	2707 Winona St.
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48953	2906 Winona St.
48954	2911 Winona St.
48955	2917 Winona St.
48956	2920 Winona St.
48957	2923 Winona St.
48958	3001 Winona St.
48959	3002 Winona St.
48960	3007 Winona St.

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48961	3008 Winona St.
48962	3013 Winona St.
48963	3107 Winona St.
48964	3108 Winona St.
48965	3112 Winona St.
48966	3116 Winona St.
48967	3201 Winona St.
48968	3202 Winona St.
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48971	3209 Winona St.
48972	3210 Winona St.
48973	3213 Winona St.
48974	3214 Winona St.
48975	3217 Winona St.
48976	3218 Winona St.
48977	3301 Winona St.
48978	3306 Winona St.
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48980	3402 Winona St.
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48987	3418 Winona St.
48988	3419 Winona St.
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48997	3517 Winona St.
48998	3521 Winona St.
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49001	3605 Winona St.
49002	3606 Winona St.
49003	3609 Winona St.
49004	3610 Winona St.
49005	3613 Winona St.
49006	3614 Winona St.
49007	3617 Winona St.
49008	3618 Winona St.

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49009	3621 Winona St.
49010	3622 Winona St.
49011	3701 Winona St.
49012	3702 Winona St.
49013	3709 Winona St.
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49015	3713 Winona St.
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49020	3805 Winona St.
49021	3809 Winona St.
49022	3813 Winona St.
49023	3814 Winona St.
49024	3821 Winona St.
49025	3822 Winona St.
49026	3902 Winona St.
49027	3905 Winona St.
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49031	3917 Winona St.
49032	3921 Winona St.
49033	3922 Winona St.
49034	4002 Winona St.
49035	4008 Winona St.
49036	4012 Winona St.
49037	4016 Winona St.
49038	4020 Winona St.
49039	4024 Winona St.
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49041	4108 Winona St.
49042	4112 Winona St.
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49051	4213 Winona St.
49052	4214 Winona St.
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49054	4220 Winona St.
49055	4225 Winona St.
49056	4226 Winona St.

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49057	4231 Winona St.
49058	4232 Winona St.
49059	4235 Winona St.
49060	4236 Winona St.
49061	5107 Winsford Byway.
49062	5112 Winsford Byway.
49063	5113 Winsford Byway.
49064	5206 Winsford Byway.
49065	5302 Winsford Byway.
49066	5306 Winsford Byway.
49067	4812 Winthrop Blvd.
49068	4816 Winthrop Blvd.
49069	4819 Winthrop Blvd.
49070	4820 Winthrop Blvd.
49071	4902 Winthrop Blvd.
49072	4906 Winthrop Blvd.
49073	4910 Winthrop Blvd.
49074	4914 Winthrop Blvd.
49075	5002 Winthrop Blvd.
49076	5006 Winthrop Blvd.
49077	5301 Winthrop Blvd.
49078	5305 Winthrop Blvd.
49079	5309 Winthrop Blvd.
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49081	5314 Winthrop Blvd.
49082	5317 Winthrop Blvd.
49083	5318 Winthrop Blvd.
49084	5321 Winthrop Blvd.
49085	5322 Winthrop Blvd.
49086	5325 Winthrop Blvd.
49087	5326 Winthrop Blvd.
49088	5401 Winthrop Blvd.
49089	5402 Winthrop Blvd.
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49096	5417 Winthrop Blvd.
49097	5418 Winthrop Blvd.
49098	5501 Winthrop Blvd.
49099	5502 Winthrop Blvd.
49100	5505 Winthrop Blvd.
49101	5506 Winthrop Blvd.
49102	5509 Winthrop Blvd.
49103	5510 Winthrop Blvd.
49104	5513 Winthrop Blvd.

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49105	5514 Winthrop Blvd.
49106	5517 Winthrop Blvd.
49107	5518 Winthrop Blvd.
49108	5601 Winthrop Blvd.
49109	5602 Winthrop Blvd.
49110	5605 Winthrop Blvd.
49111	5606 Winthrop Blvd.
49112	5609 Winthrop Blvd.
49113	5610 Winthrop Blvd.
49114	5613 Winthrop Blvd.
49115	5614 Winthrop Blvd.
49116	5617 Winthrop Blvd.
49117	5618 Winthrop Blvd.
49118	5701 Winthrop Blvd.
49119	5702 Winthrop Blvd.
49120	5705 Winthrop Blvd.
49121	5706 Winthrop Blvd.
49122	5709 Winthrop Blvd.
49123	5710 Winthrop Blvd.
49124	5713 Winthrop Blvd.
49125	5714 Winthrop Blvd.
49126	5717 Winthrop Blvd.
49127	5718 Winthrop Blvd.
49128	5721 Winthrop Blvd.
49129	5722 Winthrop Blvd.
49130	5801 Winthrop Blvd.
49131	5802 Winthrop Blvd.
49132	5805 Winthrop Blvd.
49133	5806 Winthrop Blvd.
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49135	5810 Winthrop Blvd.
49136	5813 Winthrop Blvd.
49137	5814 Winthrop Blvd.
49138	5817 Winthrop Blvd.
49139	5818 Winthrop Blvd.
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49141	5902 Winthrop Blvd.
49142	5905 Winthrop Blvd.
49143	5906 Winthrop Blvd.
49144	5909 Winthrop Blvd.
49145	5910 Winthrop Blvd.
49146	5913 Winthrop Blvd.
49147	5914 Winthrop Blvd.
49148	5917 Winthrop Blvd.
49149	5918 Winthrop Blvd.
49150	1507 Wisconsin Ave.
49151	1509 Wisconsin Ave.
49152	1513 Wisconsin Ave.

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49153	1517 Wisconsin Ave.
49154	1518 Wisconsin Ave.
49155	1521 Wisconsin Ave.
49156	1525 Wisconsin Ave.
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49158	1533 Wisconsin Ave.
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49196	1725 Wisconsin Ave.
49197	1726 Wisconsin Ave.
49198	1730 Wisconsin Ave.
49199	1731 Wisconsin Ave.
49200	1735 Wisconsin Ave.

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49201	1738 Wisconsin Ave.
49202	2111 Wisconsin Ave.
49203	2115 Wisconsin Ave.
49204	2116 Wisconsin Ave.
49205	2119 Wisconsin Ave.
49206	2120 Wisconsin Ave.
49207	2123 Wisconsin Ave.
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49210	2128 Wisconsin Ave.
49211	2201 Wisconsin Ave.
49212	2205 Wisconsin Ave.
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49214	2209 Wisconsin Ave.
49215	2212 Wisconsin Ave.
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49217	2216 Wisconsin Ave.
49218	2218 Wisconsin Ave.
49219	2219 Wisconsin Ave.
49220	2301 Wisconsin Ave.
49221	2302 Wisconsin Ave.
49222	2305 Wisconsin Ave.
49223	2309 Wisconsin Ave.
49224	2310 Wisconsin Ave.
49225	2313 Wisconsin Ave.
49226	2314 Wisconsin Ave.
49227	2317 Wisconsin Ave.
49228	2318 Wisconsin Ave.
49229	2407 Wisconsin Ave.
49230	2410 Wisconsin Ave.
49231	2411 Wisconsin Ave.
49232	2418 Wisconsin Ave.
49233	2421 Wisconsin Ave.
49234	2422 Wisconsin Ave.
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49239	2433 Wisconsin Ave.
49240	2434 Wisconsin Ave.
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49242	2437 Wisconsin Ave.
49243	2438 Wisconsin Ave.
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49245	2507 Wisconsin Ave.
49246	2509 Wisconsin Ave.
49247	2510 Wisconsin Ave.
49248	2514 Wisconsin Ave.

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49249	2601 Wisconsin Ave.
49250	2602 Wisconsin Ave.
49251	2605 Wisconsin Ave.
49252	2606 Wisconsin Ave.
49253	2609 Wisconsin Ave.
49254	2610 Wisconsin Ave.
49255	2613 Wisconsin Ave.
49256	2614 Wisconsin Ave.
49257	2512 Wisner St.
49258	2513 Wisner St.
49259	2516 Wisner St.
49260	2517 Wisner St.
49261	2521 Wisner St.
49262	2524 Wisner St.
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49265	2609 Wisner St.
49266	2610 Wisner St.
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49268	2617 Wisner St.
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49274	2635 Wisner St.
49275	2638 Wisner St.
49276	2639 Wisner St.
49277	2704 Wisner St.
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49279	2709 Wisner St.
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49294	2901 Wisner St.
49295	2905 Wisner St.
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49297	2909 Wisner St.
49298	2910 Wisner St.
49299	2913 Wisner St.
49300	2914 Wisner St.
49301	3001 Wisner St.
49302	3002 Wisner St.
49303	3005 Wisner St.
49304	3006 Wisner St.
49305	3009 Wisner St.
49306	3010 Wisner St.
49307	3017 Wisner St.
49308	3018 Wisner St.
49309	3021 Wisner St.
49310	3022 Wisner St.
49311	3101 Wisner St.
49312	3102 Wisner St.
49313	3105 Wisner St.
49314	3106 Wisner St.
49315	3109 Wisner St.
49316	3110 Wisner St.
49317	3114 Wisner St.
49318	3117 Wisner St.
49319	3201 Wisner St.
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49321	3502 Wisner St.
49322	3514 Wisner St.
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49327	3701 Wisner St.
49328	3705 Wisner St.
49329	3706 Wisner St.
49330	3713 Wisner St.
49331	3714 Wisner St.
49332	3717 Wisner St.
49333	3802 Wisner St.
49334	3805 Wisner St.
49335	3806 Wisner St.
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49339	3818 Wisner St.
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49341	3822 Wisner St.
49342	3901 Wisner St.
49343	3902 Wisner St.
49344	3909 Wisner St.

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49345	3910 Wisner St.
49346	3913 Wisner St.
49347	3914 Wisner St.
49348	3917 Wisner St.
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49355	4222 Wisner St.
49356	4226 Wisner St.
49357	4235 Wisner St.
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49360	4302 Wisner St.
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49381	4701 Wisner St.
49382	4705 Wisner St.
49383	4709 Wisner St.
49384	4713 Wisner St.
49385	4716 Wisner St.
49386	4717 Wisner St.
49387	108 Witherbee St., E.
49388	158 Witherbee St., E.
49389	212 Witherbee St., E.
49390	302 Witherbee St., E.
49391	306 Witherbee St., E.
49392	310 Witherbee St., E.

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49393	314 Witherbee St., E.
49394	402 Witherbee St., E.
49395	406 Witherbee St., E.
49396	410 Witherbee St., E.
49397	418 Witherbee St., E.
49398	422 Witherbee St., E.
49399	426 Witherbee St., E.
49400	444 Witherbee St., E.
49401	506 Witherbee St., E.
49402	510 Witherbee St., E.
49403	514 Witherbee St., E.
49404	518 Witherbee St., E.
49405	522 Witherbee St., E.
49406	550 Witherbee St., E.
49407	554 Witherbee St., E.
49408	558 Witherbee St., E.
49409	562 Witherbee St., E.
49410	566 Witherbee St., E.
49411	570 Witherbee St., E.
49412	110 Witherbee St., W.
49413	114 Witherbee St., W.
49414	122 Witherbee St., W.
49415	129 Witherbee St., W.
49416	130 Witherbee St., W.
49417	134 Witherbee St., W.
49418	135 Witherbee St., W.
49419	138 Witherbee St., W.
49420	139 Witherbee St., W.
49421	201 Witherbee St., W.
49422	202 Witherbee St., W.
49423	208 Witherbee St., W.
49424	209 Witherbee St., W.
49425	210 Witherbee St., W.
49426	215 Witherbee St., W.
49427	218 Witherbee St., W.
49428	219 Witherbee St., W.
49429	222 Witherbee St., W.
49430	226 Witherbee St., W.
49431	227 Witherbee St., W.
49432	230 Witherbee St., W.
49433	231 Witherbee St., W.
49434	234 Witherbee St., W.
49435	235 Witherbee St., W.
49436	238 Witherbee St., W.
49437	239 Witherbee St., W.
49438	301 Witherbee St., W.
49439	302 Witherbee St., W.
49440	307 Witherbee St., W.

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49441	308 Witherbee St., W.
49442	309 Witherbee St., W.
49443	310 Witherbee St., W.
49444	313 Witherbee St., W.
49445	314 Witherbee St., W.
49446	317 Witherbee St., W.
49447	318 Witherbee St., W.
49448	321 Witherbee St., W.
49449	322 Witherbee St., W.
49450	325 Witherbee St., W.
49451	326 Witherbee St., W.
49452	329 Witherbee St., W.
49453	330 Witherbee St., W.
49454	401 Witherbee St., W.
49455	402 Witherbee St., W.
49456	405 Witherbee St., W.
49457	406 Witherbee St., W.
49458	409 Witherbee St., W.
49459	410 Witherbee St., W.
49460	413 Witherbee St., W.
49461	414 Witherbee St., W.
49462	417 Witherbee St., W.
49463	418 Witherbee St., W.
49464	421 Witherbee St., W.
49465	422 Witherbee St., W.
49466	425 Witherbee St., W.
49467	426 Witherbee St., W.
49468	501 Witherbee St., W.
49469	502 Witherbee St., W.
49470	511 Witherbee St., W.
49471	512 Witherbee St., W.
49472	515 Witherbee St., W.
49473	516 Witherbee St., W.
49474	519 Witherbee St., W.
49475	520 Witherbee St., W.
49476	523 Witherbee St., W.
49477	524 Witherbee St., W.
49478	601 Witherbee St., W.
49479	602 Witherbee St., W.
49480	605 Witherbee St., W.
49481	606 Witherbee St., W.
49482	610 Witherbee St., W.
49483	611 Witherbee St., W.
49484	613 Witherbee St., W.
49485	614 Witherbee St., W.
49486	617 Witherbee St., W.
49487	618 Witherbee St., W.
49488	622 Witherbee St., W.

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49489	623 Witherbee St., W.
49490	606 Wolcott St.
49491	611 Wolcott St.
49492	615 Wolcott St.
49493	617 Wolcott St.
49494	618 Wolcott St.
49495	621 Wolcott St.
49496	622 Wolcott St.
49497	625 Wolcott St.
49498	626 Wolcott St.
49499	630 Wolcott St.
49500	633 Wolcott St.
49501	634 Wolcott St.
49502	701 Wolcott St.
49503	702 Wolcott St.
49504	705 Wolcott St.
49505	706 Wolcott St.
49506	709 Wolcott St.
49507	712 Wolcott St.
49508	714 Wolcott St.
49509	717 Wolcott St.
49510	718 Wolcott St.
49511	721 Wolcott St.
49512	722 Wolcott St.
49513	725 Wolcott St.
49514	726 Wolcott St.
49515	729 Wolcott St.
49516	730 Wolcott St.
49517	733 Wolcott St.
49518	736 Wolcott St.
49519	801 Wolcott St.
49520	805 Wolcott St.
49521	911 Wolcott St.
49522	915 Wolcott St.
49523	919 Wolcott St.
49524	923 Wolcott St.
49525	927 Wolcott St.
49526	1001 Wolcott St.
49527	1002 Wolcott St.
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49529	1006 Wolcott St.
49530	1009 Wolcott St.
49531	1010 Wolcott St.
49532	1013 Wolcott St.
49533	1014 Wolcott St.
49534	1017 Wolcott St.
49535	1018 Wolcott St.
49536	1021 Wolcott St.

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49538	1025 Wolcott St.
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49542	1033 Wolcott St.
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49577	1701 Wolcott St.
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49583	1718 Wolcott St.
49584	1738 Wolcott St.

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49586	1802 Wolcott St.
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49605	1920 Wolcott St.
49606	2001 Wolcott St.
49607	2007 Wolcott St.
49608	2008 Wolcott St.
49609	2011 Wolcott St.
49610	2012 Wolcott St.
49611	2015 Wolcott St.
49612	2016 Wolcott St.
49613	2019 Wolcott St.
49614	2020 Wolcott St.
49615	2101 Wolcott St.
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49617	2105 Wolcott St.
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49627	2201 Wolcott St.
49628	2202 Wolcott St.
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49632	2210 Wolcott St.

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49680	2746 Wolcott St.

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49683	2753 Wolcott St.
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49703	2853 Wolcott St.
49704	2856 Wolcott St.
49705	2862 Wolcott St.
49706	2910 Wolcott St.
49707	2924 Wolcott St.
49708	2930 Wolcott St.
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49712	2944 Wolcott St.
49713	2945 Wolcott St.
49714	2949 Wolcott St.
49715	2952 Wolcott St.
49716	2953 Wolcott St.
49717	2956 Wolcott St.
49718	2960 Wolcott St.
49719	3001 Wolcott St.
49720	3002 Wolcott St.
49721	3005 Wolcott St.
49722	3006 Wolcott St.
49723	3009 Wolcott St.
49724	3010 Wolcott St.
49725	3013 Wolcott St.
49726	3014 Wolcott St.
49727	3018 Wolcott St.
49728	3021 Wolcott St.

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49729	3022 Wolcott St.
49730	3025 Wolcott St.
49731	3102 Wolcott St.
49732	3111 Wolcott St.
49733	3119 Wolcott St.
49734	3125 Wolcott St.
49735	3128 Wolcott St.
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49749	3301 Wolcott St.
49750	3307 Wolcott St.
49751	3312 Wolcott St.
49752	3313 Wolcott St.
49753	3319 Wolcott St.
49754	3322 Wolcott St.
49755	3325 Wolcott St.
49756	1901 Wood Ln.
49757	1904 Wood Ln.
49758	1907 Wood Ln.
49759	1913 Wood Ln.
49760	1914 Wood Ln.
49761	1916 Wood Ln.
49762	1920 Wood Ln.
49763	1921 Wood Ln.
49764	1926 Wood Ln.
49765	1927 Wood Ln.
49766	1930 Wood Ln.
49767	1936 Wood Ln.
49768	1940 Wood Ln.
49769	1944 Wood Ln.
49770	1948 Wood Ln.
49771	1952 Wood Ln.
49772	2013 Wood Ln.
49773	2018 Wood Ln.
49774	2021 Wood Ln.
49775	2022 Wood Ln.
49776	2026 Wood Ln.

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49777	2027 Wood Ln.
49778	2030 Wood Ln.
49779	2034 Wood Ln.
49780	2035 Wood Ln.
49781	2038 Wood Ln.
49782	2041 Wood Ln.
49783	213 Wood St., E.
49784	329 Wood St., E.
49785	459 Wood St., E.
49786	465 Wood St., E.
49787	469 Wood St., E.
49788	515 Wood St., E.
49789	518 Wood St., E.
49790	521 Wood St., E.
49791	976 Wood St., E.
49792	976 Wood St., E.
49793	113 Wood St., W.
49794	213 Wood St., W.
49795	214 Wood St., W.
49796	217 Wood St., W.
49797	218 Wood St., W.
49798	311 Wood St., W.
49799	406 Wood St., W.
49800	413 Wood St., W.
49801	417 Wood St., W.
49802	421 Wood St., W.
49803	422 Wood St., W.
49804	426 Wood St., W.
49805	515 Wood St., W.
49806	610 Wood St., W.
49807	613 Wood St., W.
49808	617 Wood St., W.
49809	621 Wood St., W.
49810	5308 Woodbine Dr.
49811	5408 Woodbine Dr.
49812	715 Woodbridge St.
49813	902 Woodbridge St.
49814	906 Woodbridge St.
49815	907 Woodbridge St.
49816	911 Woodbridge St.
49817	965 Woodbridge St.
49818	971 Woodbridge St.
49819	1012 Woodbridge St.
49820	1016 Woodbridge St.
49821	1160 Woodbridge St.
49822	1213 Woodbridge St.
49823	1331 Woodbridge St.
49824	1341 Woodbridge St.

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49825	1342 Woodbridge St.
49826	1351 Woodbridge St.
49827	1352 Woodbridge St.
49828	1600 Woodburne Dr.
49829	1601 Woodburne Dr.
49830	1634 Woodburne Dr.
49831	1677 Woodburne Dr.
49832	1709 Woodburne Dr.
49833	1730 Woodburne Dr.
49834	1801 Woodburne Dr.
49835	1402 Woodcroft Ave.
49836	1407 Woodcroft Ave.
49837	1408 Woodcroft Ave.
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49839	1411 Woodcroft Ave.
49840	1414 Woodcroft Ave.
49841	1415 Woodcroft Ave.
49842	1418 Woodcroft Ave.
49843	1419 Woodcroft Ave.
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49846	1426 Woodcroft Ave.
49847	1501 Woodcroft Ave.
49848	1502 Woodcroft Ave.
49849	1506 Woodcroft Ave.
49850	1507 Woodcroft Ave.
49851	1510 Woodcroft Ave.
49852	1511 Woodcroft Ave.
49853	1402 Woodhall Dr.
49854	1405 Woodhall Dr.
49855	1409 Woodhall Dr.
49856	1410 Woodhall Dr.
49857	1413 Woodhall Dr.
49858	1414 Woodhall Dr.
49859	1417 Woodhall Dr.
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49863	1425 Woodhall Dr.
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49865	1502 Woodhall Dr.
49866	1506 Woodhall Dr.
49867	1509 Woodhall Dr.
49868	1510 Woodhall Dr.
49869	1514 Woodhall Dr.
49870	1517 Woodhall Dr.
49871	1518 Woodhall Dr.
49872	1523 Woodhall Dr.

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49873	1524 Woodhall Dr.
49874	915 Woodlawn Park Dr.
49875	929 Woodlawn Park Dr.
49876	1001 Woodlawn Park Dr.
49877	1009 Woodlawn Park Dr.
49878	1017 Woodlawn Park Dr.
49879	1025 Woodlawn Park Dr.
49880	1101 Woodlawn Park Dr.
49881	1121 Woodlawn Park Dr.
49882	1201 Woodlawn Park Dr.
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49884	1212 Woodlawn Park Dr.
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49886	1311 Woodlawn Park Dr.
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49888	1401 Woodlawn Park Dr.
49889	1407 Woodlawn Park Dr.
49890	1505 Woodlawn Park Dr.
49891	1601 Woodlawn Park Dr.
49892	1613 Woodlawn Park Dr.
49893	1614 Woodlawn Park Dr.
49894	1619 Woodlawn Park Dr.
49895	1651 Woodlawn Park Dr.
49896	1659 Woodlawn Park Dr.
49897	1710 Woodlawn Park Dr.
49898	1601 Woodlin Dr.
49899	1608 Woodlin Dr.
49900	1613 Woodlin Dr.
49901	1614 Woodlin Dr.
49902	1618 Woodlin Dr.
49903	1701 Woodlin Dr.
49904	1702 Woodlin Dr.
49905	1706 Woodlin Dr.
49906	1710 Woodlin Dr.
49907	1711 Woodlin Dr.
49908	1714 Woodlin Dr.
49909	1715 Woodlin Dr.
49910	1718 Woodlin Dr.
49911	1801 Woodlin Dr.
49912	1802 Woodlin Dr.
49913	1806 Woodlin Dr.
49914	1807 Woodlin Dr.
49915	1810 Woodlin Dr.
49916	1811 Woodlin Dr.
49917	1816 Woodlin Dr.
49918	1817 Woodlin Dr.
49919	1820 Woodlin Dr.
49920	2219 Woodrow Ave.

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49921	2304 Woodrow Ave.
49922	2305 Woodrow Ave.
49923	2308 Woodrow Ave.
49924	2312 Woodrow Ave.
49925	2313 Woodrow Ave.
49926	2315 Woodrow Ave.
49927	2316 Woodrow Ave.
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49930	2325 Woodrow Ave.
49931	2400 Woodrow Ave.
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49946	2517 Woodrow Ave.
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49950	2601 Woodrow Ave.
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49957	2622 Woodrow Ave.
49958	2701 Woodrow Ave.
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49960	2705 Woodrow Ave.
49961	2709 Woodrow Ave.
49962	2713 Woodrow Ave.
49963	2820 Woodrow Ave.
49964	3112 Woodrow Ave.
49965	3115 Woodrow Ave.
49966	3116 Woodrow Ave.
49967	3119 Woodrow Ave.
49968	3120 Woodrow Ave.

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49969	3124 Woodrow Ave.
49970	3127 Woodrow Ave.
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49972	3131 Woodrow Ave.
49973	3132 Woodrow Ave.
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49978	3144 Woodrow Ave.
49979	3147 Woodrow Ave.
49980	3148 Woodrow Ave.
49981	3152 Woodrow Ave.
49982	3153 Woodrow Ave.
49983	3156 Woodrow Ave.
49984	3201 Woodrow Ave.
49985	3202 Woodrow Ave.
49986	3208 Woodrow Ave.
49987	3209 Woodrow Ave.
49988	3210 Woodrow Ave.
49989	3213 Woodrow Ave.
49990	3220 Woodrow Ave.
49991	3221 Woodrow Ave.
49992	3224 Woodrow Ave.
49993	3225 Woodrow Ave.
49994	3228 Woodrow Ave.
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49996	3236 Woodrow Ave.
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49999	3705 Woodrow Ave.
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50017	3741 Woodrow Ave.
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50021	3801 Woodrow Ave.
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50047	922 Woodside Dr.
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50049	1001 Woodside Dr.
50050	1008 Woodside Dr.
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50057	1101 Woodside Dr.
50058	1102 Woodside Dr.
50059	1111 Woodside Dr.
50060	1119 Woodside Dr.
50061	1120 Woodside Dr.
50062	1126 Woodside Dr.
50063	1127 Woodside Dr.
50064	1132 Woodside Dr.

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50065	1138 Woodside Dr.
50066	1143 Woodside Dr.
50067	1144 Woodside Dr.
50068	1150 Woodside Dr.
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50070	1201 Woodslea Dr.
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50077	1432 Woodslea Dr.
50078	1451 Woodslea Dr.
50079	1463 Woodslea Dr.
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50091	1621 Woodslea Dr.
50092	1701 Woodslea Dr.
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50094	1711 Woodslea Dr.
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50096	1718 Woodslea Dr.
50097	1801 Woodslea Dr.
50098	1809 Woodslea Dr.
50099	1813 Woodslea Dr.
50100	1817 Woodslea Dr.
50101	1821 Woodslea Dr.
50102	1901 Woodslea Dr.
50103	3601 Worchester Dr.
50104	3602 Worchester Dr.
50105	3606 Worchester Dr.
50106	3610 Worchester Dr.
50107	3611 Worchester Dr.
50108	3614 Worchester Dr.
50109	3618 Worchester Dr.
50110	3705 Worchester Dr.
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50113	3716 Worchester Dr.
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50126	3752 Worchester Dr.
50127	3757 Worchester Dr.
50128	3758 Worchester Dr.
50129	3764 Worchester Dr.
50130	1502 Wyoming Ave.
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50206	2925 Wyoming Ave.
50207	2928 Wyoming Ave.
50208	2929 Wyoming Ave.

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50209	2932 Wyoming Ave.
50210	2933 Wyoming Ave.
50211	2936 Wyoming Ave.
50212	2937 Wyoming Ave.
50213	3001 Wyoming Ave.
50214	3002 Wyoming Ave.
50215	3005 Wyoming Ave.
50216	3006 Wyoming Ave.
50217	3009 Wyoming Ave.
50218	3010 Wyoming Ave.
50219	3013 Wyoming Ave.
50220	3014 Wyoming Ave.
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50226	3026 Wyoming Ave.
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50231	3105 Wyoming Ave.
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50249	3141 Wyoming Ave.
50250	3142 Wyoming Ave.
50251	3145 Wyoming Ave.
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50253	3149 Wyoming Ave.
50254	3150 Wyoming Ave.
50255	3201 Wyoming Ave.
50256	3202 Wyoming Ave.

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50258	3206 Wyoming Ave.
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50261	3213 Wyoming Ave.
50262	3214 Wyoming Ave.
50263	3217 Wyoming Ave.
50264	3218 Wyoming Ave.
50265	3221 Wyoming Ave.
50266	3222 Wyoming Ave.
50267	3225 Wyoming Ave.
50268	3226 Wyoming Ave.
50269	3229 Wyoming Ave.
50270	3230 Wyoming Ave.
50271	3233 Wyoming Ave.
50272	3234 Wyoming Ave.
50273	3237 Wyoming Ave.
50274	3238 Wyoming Ave.
50275	3241 Wyoming Ave.
50276	3242 Wyoming Ave.
50277	3305 Wyoming Ave.
50278	3308 Wyoming Ave.
50279	3314 Wyoming Ave.
50280	3316 Wyoming Ave.
50281	3402 Wyoming Ave.
50282	3406 Wyoming Ave.
50283	3407 Wyoming Ave.
50284	3413 Wyoming Ave.
50285	3419 Wyoming Ave.
50286	3425 Wyoming Ave.
50287	3429 Wyoming Ave.
50288	3433 Wyoming Ave.
50289	3501 Wyoming Ave.
50290	3505 Wyoming Ave.
50291	3509 Wyoming Ave.
50292	3513 Wyoming Ave.
50293	3517 Wyoming Ave.
50294	3527 Wyoming Ave.
50295	3602 Wyoming Ave.
50296	3608 Wyoming Ave.
50297	3614 Wyoming Ave.
50298	3620 Wyoming Ave.
50299	3632 Wyoming Ave.
50300	2701 Yale St.
50301	2702 Yale St.
50302	2705 Yale St.
50303	2706 Yale St.
50304	2709 Yale St.

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50305	2710 Yale St.
50306	2713 Yale St.
50307	2714 Yale St.
50308	2717 Yale St.
50309	2718 Yale St.
50310	2721 Yale St.
50311	2722 Yale St.
50312	2726 Yale St.
50313	2730 Yale St.
50314	2734 Yale St.
50315	2737 Yale St.
50316	2738 Yale St.
50317	2742 Yale St.
50318	2745 Yale St.
50319	2746 Yale St.
50320	2761 Yale St.
50321	2762 Yale St.
50322	2765 Yale St.
50323	2766 Yale St.
50324	2769 Yale St.
50325	2770 Yale St.
50326	2801 Yale St.
50327	2802 Yale St.
50328	2805 Yale St.
50329	2806 Yale St.
50330	2810 Yale St.
50331	2811 Yale St.
50332	2813 Yale St.
50333	2814 Yale St.
50334	2817 Yale St.
50335	2818 Yale St.
50336	2821 Yale St.
50337	2822 Yale St.
50338	2825 Yale St.
50339	2826 Yale St.
50340	2829 Yale St.
50341	2830 Yale St.
50342	2833 Yale St.
50343	2834 Yale St.
50344	2838 Yale St.
50345	2841 Yale St.
50346	2842 Yale St.
50347	2846 Yale St.
50348	2901 Yale St.
50349	2906 Yale St.
50350	2910 Yale St.
50351	2914 Yale St.
50352	2917 Yale St.

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50353	2918 Yale St.
50354	2921 Yale St.
50355	2922 Yale St.
50356	2925 Yale St.
50357	2926 Yale St.
50358	3001 Yale St.
50359	3002 Yale St.
50360	3005 Yale St.
50361	3006 Yale St.
50362	3009 Yale St.
50363	3010 Yale St.
50364	3013 Yale St.
50365	3014 Yale St.
50366	3017 Yale St.
50367	3018 Yale St.
50368	3021 Yale St.
50369	3022 Yale St.
50370	3101 Yale St.
50371	3102 Yale St.
50372	3105 Yale St.
50373	3106 Yale St.
50374	3109 Yale St.
50375	3110 Yale St.
50376	3113 Yale St.
50377	3114 Yale St.
50378	3117 Yale St.
50379	3118 Yale St.
50380	3201 Yale St.
50381	3202 Yale St.
50382	3205 Yale St.
50383	3206 Yale St.
50384	3209 Yale St.
50385	3210 Yale St.
50386	3213 Yale St.
50387	3214 Yale St.
50388	3217 Yale St.
50389	3218 Yale St.
50390	3221 Yale St.
50391	3222 Yale St.
50392	3301 Yale St.
50393	3302 Yale St.
50394	3305 Yale St.
50395	3306 Yale St.
50396	3309 Yale St.
50397	3310 Yale St.
50398	3314 Yale St.
50399	3317 Yale St.
50400	3318 Yale St.

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50401	3321 Yale St.
50402	3322 Yale St.
50403	3402 Yale St.
50404	3406 Yale St.
50405	3410 Yale St.
50406	3414 Yale St.
50407	3418 Yale St.
50408	3501 Yale St.
50409	3502 Yale St.
50410	3505 Yale St.
50411	3506 Yale St.
50412	3509 Yale St.
50413	3510 Yale St.
50414	3513 Yale St.
50415	3514 Yale St.
50416	3517 Yale St.
50417	3518 Yale St.
50418	3521 Yale St.
50419	3522 Yale St.
50420	3525 Yale St.
50421	3529 Yale St.
50422	3533 Yale St.
50423	3537 Yale St.
50424	3541 Yale St.
50425	110 York Ave., E.
50426	121 York Ave., E.
50427	134 York Ave., E.
50428	138 York Ave., E.
50429	142 York Ave., E.
50430	201 York Ave., E.
50431	202 York Ave., E.
50432	209 York Ave., E.
50433	210 York Ave., E.
50434	214 York Ave., E.
50435	221 York Ave., E.
50436	222 York Ave., E.
50437	233 York Ave., E.
50438	238 York Ave., E.
50439	241 York Ave., E.
50440	246 York Ave., E.
50441	247 York Ave., E.
50442	250 York Ave., E.
50443	254 York Ave., E.
50444	257 York Ave., E.
50445	258 York Ave., E.
50446	301 York Ave., E.
50447	302 York Ave., E.
50448	306 York Ave., E.

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50449	307 York Ave., E.
50450	310 York Ave., E.
50451	314 York Ave., E.
50452	318 York Ave., E.
50453	319 York Ave., E.
50454	322 York Ave., E.
50455	330 York Ave., E.
50456	335 York Ave., E.
50457	336 York Ave., E.
50458	341 York Ave., E.
50459	342 York Ave., E.
50460	346 York Ave., E.
50461	350 York Ave., E.
50462	354 York Ave., E.
50463	355 York Ave., E.
50464	358 York Ave., E.
50465	401 York Ave., E.
50466	402 York Ave., E.
50467	406 York Ave., E.
50468	409 York Ave., E.
50469	417 York Ave., E.
50470	418 York Ave., E.
50471	419 York Ave., E.
50472	422 York Ave., E.
50473	425 York Ave., E.
50474	430 York Ave., E.
50475	501 York Ave., E.
50476	506 York Ave., E.
50477	510 York Ave., E.
50478	517 York Ave., E.
50479	519 York Ave., E.
50480	522 York Ave., E.
50481	602 York Ave., E.
50482	606 York Ave., E.
50483	614 York Ave., E.
50484	618 York Ave., E.
50485	620 York Ave., E.
50486	621 York Ave., E.
50487	622 York Ave., E.
50488	634 York Ave., E.
50489	637 York Ave., E.
50490	642 York Ave., E.
50491	714 York Ave., E.
50492	718 York Ave., E.
50493	722 York Ave., E.
50494	725 York Ave., E.
50495	726 York Ave., E.
50496	729 York Ave., E.

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50497	733 York Ave., E.
50498	738 York Ave., E.
50499	742 York Ave., E.
50500	745 York Ave., E.
50501	749 York Ave., E.
50502	750 York Ave., E.
50503	753 York Ave., E.
50504	754 York Ave., E.
50505	757 York Ave., E.
50506	761 York Ave., E.
50507	765 York Ave., E.
50508	770 York Ave., E.
50509	773 York Ave., E.
50510	777 York Ave., E.
50511	801 York Ave., E.
50512	802 York Ave., E.
50513	803 York Ave., E.
50514	804 York Ave., E.
50515	809 York Ave., E.
50516	813 York Ave., E.
50517	814 York Ave., E.
50518	818 York Ave., E.
50519	821 York Ave., E.
50520	822 York Ave., E.
50521	825 York Ave., E.
50522	902 York Ave., E.
50523	906 York Ave., E.
50524	906 York Ave., E.
50525	909 York Ave., E.
50526	914 York Ave., E.
50527	921 York Ave., E.
50528	922 York Ave., E.
50529	925 York Ave., E.
50530	929 York Ave., E.
50531	930 York Ave., E.
50532	938 York Ave., E.
50533	941 York Ave., E.
50534	946 York Ave., E.
50535	1001 York Ave., E.
50536	1005 York Ave., E.
50537	1006 York Ave., E.
50538	1009 York Ave., E.
50539	1010 York Ave., E.
50540	1014 York Ave., E.
50541	1022 York Ave., E.
50542	1037 York Ave., E.
50543	1038 York Ave., E.
50544	1043 York Ave., E.

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50545	1046 York Ave., E.
50546	1049 York Ave., E.
50547	1050 York Ave., E.
50548	1054 York Ave., E.
50549	1058 York Ave., E.
50550	1061 York Ave., E.
50551	1065 York Ave., E.
50552	1069 York Ave., E.
50553	1150 York Ave., E.
50554	1155 York Ave., E.
50555	1158 York Ave., E.
50556	1162 York Ave., E.
50557	1166 York Ave., E.
50558	1170 York Ave., E.
50559	1171 York Ave., E.
50560	1174 York Ave., E.
50561	1177 York Ave., E.
50562	1178 York Ave., E.
50563	1185 York Ave., E.
50564	1186 York Ave., E.
50565	1190 York Ave., E.
50566	1194 York Ave., E.
50567	1213 York Ave., E.
50568	1222 York Ave., E.
50569	1225 York Ave., E.
50570	1226 York Ave., E.
50571	1237 York Ave., E.
50572	1241 York Ave., E.
50573	1242 York Ave., E.
50574	1250 York Ave., E.
50575	101 York Ave., W.
50576	102 York Ave., W.
50577	105 York Ave., W.
50578	108 York Ave., W.
50579	109 York Ave., W.
50580	112 York Ave., W.
50581	201 York Ave., W.
50582	202 York Ave., W.
50583	205 York Ave., W.
50584	206 York Ave., W.
50585	209 York Ave., W.
50586	210 York Ave., W.
50587	213 York Ave., W.
50588	214 York Ave., W.
50589	217 York Ave., W.
50590	218 York Ave., W.
50591	301 York Ave., W.
50592	302 York Ave., W.

	A
50593	305 York Ave., W.
50594	306 York Ave., W.
50595	309 York Ave., W.
50596	310 York Ave., W.
50597	313 York Ave., W.
50598	316 York Ave., W.
50599	319 York Ave., W.
50600	401 York Ave., W.
50601	405 York Ave., W.
50602	406 York Ave., W.
50603	409 York Ave., W.
50604	410 York Ave., W.
50605	414 York Ave., W.
50606	418 York Ave., W.
50607	422 York Ave., W.
50608	426 York Ave., W.
50609	430 York Ave., W.
50610	501 York Ave., W.
50611	502 York Ave., W.
50612	505 York Ave., W.
50613	506 York Ave., W.
50614	509 York Ave., W.
50615	513 York Ave., W.
50616	514 York Ave., W.
50617	517 York Ave., W.
50618	518 York Ave., W.
50619	521 York Ave., W.
50620	526 York Ave., W.
50621	601 York Ave., W.
50622	602 York Ave., W.
50623	605 York Ave., W.
50624	606 York Ave., W.
50625	609 York Ave., W.
50626	610 York Ave., W.
50627	613 York Ave., W.
50628	614 York Ave., W.
50629	617 York Ave., W.
50630	618 York Ave., W.
50631	621 York Ave., W.
50632	622 York Ave., W.
50633	625 York Ave., W.
50634	626 York Ave., W.
50635	629 York Ave., W.
50636	630 York Ave., W.
50637	633 York Ave., W.
50638	634 York Ave., W.
50639	637 York Ave., W.
50640	638 York Ave., W.

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50641	641 York Ave., W.
50642	642 York Ave., W.
50643	646 York Ave., W.
50644	7030 Yorkshire Dr.
50645	908 Young St.
50646	912 Young St.
50647	913 Young St.
50648	914 Young St.
50649	1801 Zimmerman St.
50650	1805 Zimmerman St.
50651	1809 Zimmerman St.
50652	1813 Zimmerman St.
50653	1817 Zimmerman St.
50654	1818 Zimmerman St.
50655	1821 Zimmerman St.
50656	1822 Zimmerman St.
50657	1828 Zimmerman St.
50658	1832 Zimmerman St.
50659	1910 Zimmerman St.
50660	1915 Zimmerman St.
50661	1919 Zimmerman St.
50662	1923 Zimmerman St.
50663	2004 Zimmerman St.
50664	2009 Zimmerman St.
50665	2010 Zimmerman St.
50666	2014 Zimmerman St.
50667	2203 Zimmerman St.
50668	2207 Zimmerman St.
50669	2209 Zimmerman St.
50670	2212 Zimmerman St.
50671	2215 Zimmerman St.
50672	2216 Zimmerman St.
50673	2217 Zimmerman St.
50674	2220 Zimmerman St.
50675	2221 Zimmerman St.
50676	2222 Zimmerman St.
50677	2225 Zimmerman St.
50678	2226 Zimmerman St.
50679	2301 Zimmerman St.
50680	2302 Zimmerman St.
50681	2305 Zimmerman St.
50682	2306 Zimmerman St.
50683	2309 Zimmerman St.
50684	2313 Zimmerman St.
50685	2314 Zimmerman St.
50686	2317 Zimmerman St.
50687	2318 Zimmerman St.
50688	2321 Zimmerman St.

	A
50689	2322 Zimmerman St.
50690	2325 Zimmerman St.
50691	2409 Zimmerman St.
50692	2410 Zimmerman St.
50693	2413 Zimmerman St.
50694	2417 Zimmerman St.
50695	2418 Zimmerman St.
50696	2421 Zimmerman St.
50697	2422 Zimmerman St.
50698	2425 Zimmerman St.
50699	2426 Zimmerman St.
50700	2429 Zimmerman St.
50701	2433 Zimmerman St.
50702	2434 Zimmerman St.
50703	2437 Zimmerman St.
50704	2438 Zimmerman St.
50705	2441 Zimmerman St.
50706	2445 Zimmerman St.
50707	2446 Zimmerman St.
50708	2449 Zimmerman St.
50709	2450 Zimmerman St.
50710	2454 Zimmerman St.
50711	2460 Zimmerman St.
50712	2461 Zimmerman St.
50713	2466 Zimmerman St.
50714	2468 Zimmerman St.
50715	2472 Zimmerman St.
50716	2475 Zimmerman St.
50717	2476 Zimmerman St.
50718	2479 Zimmerman St.
50719	2480 Zimmerman St.
50720	2483 Zimmerman St.
50721	2486 Zimmerman St.
50722	2487 Zimmerman St.
50723	2488 Zimmerman St.
50724	2491 Zimmerman St.
50725	2496 Zimmerman St.
50726	3808 Zimmerman St.
50727	3812 Zimmerman St.
50728	3815 Zimmerman St.
50729	3816 Zimmerman St.
50730	3819 Zimmerman St.
50731	3820 Zimmerman St.
50732	3823 Zimmerman St.
50733	3824 Zimmerman St.
50734	3827 Zimmerman St.
50735	3828 Zimmerman St.
50736	3831 Zimmerman St.

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50737	3901 Zimmerman St.
50738	3902 Zimmerman St.
50739	3905 Zimmerman St.
50740	3906 Zimmerman St.
50741	3909 Zimmerman St.
50742	3910 Zimmerman St.
50743	3913 Zimmerman St.
50744	3914 Zimmerman St.
50745	3917 Zimmerman St.
50746	3918 Zimmerman St.
50747	3921 Zimmerman St.
50748	3922 Zimmerman St.
50749	3925 Zimmerman St.
50750	3929 Zimmerman St.
50751	3930 Zimmerman St.
50752	3934 Zimmerman St.

	A	B	C	D	E	F	G
1	Orig Row #	house number	Original Full Street name	Street name without house number	Street name fixed	Corrected Full Street name	lookup in streetnames
2	62	305	305 Allendale Pl.	Allendale Pl.	Allendale Pl.	305 Allendale Pl.	305 Allendale Pl.
3	96	631	631 Alvord Ave.	Alvord Ave.	Alvord Ave.	631 Alvord Ave.	631 Alvord Ave.
4	57	1220	1220 Beard St.	Beard St.	Beard St.	1220 Beard St.	1220 Beard St.
5	89	3714	3714 Beecher Rd.	Beecher Rd.	Beecher Rd.	3714 Beecher Rd.	3714 Beecher Rd.
6	99	3714	3714 Beecher Rd.	Beecher Rd.	Beecher Rd.	3714 Beecher Rd.	3714 Beecher Rd.
7	118	3517	3517 Bennett Ave.	Bennett Ave.	Bennett Ave.	3517 Bennett Ave.	3517 Bennett Ave.
8	60	3521	3521 Bennett Ave.	Bennett Ave.	Bennett Ave.	3521 Bennett Ave.	3521 Bennett Ave.
9	127	3521	3521 Bennett Ave.	Bennett Ave.	Bennett Ave.	3521 Bennett Ave.	3521 Bennett Ave.
10	121	2432	2432 Beta Ln.	Beta Ln.	Beta Ln.	2432 Beta Ln.	2432 Beta Ln.
11	131	1205	1205 Blanchard Ave	Blanchard Ave	Blanchard Ave.	1205 Blanchard Ave.	1205 Blanchard Ave.
12	67	815	815 Bradley Ave.	Bradley Ave.	Bradley Ave.	815 Bradley Ave.	815 Bradley Ave.
13	111	3811	3811 Brentwood Dr.	Brentwood Dr.	Brentwood Dr.	3811 Brentwood Dr.	3811 Brentwood Dr.
14	159	2909	2909 Brownell Blvd.	Brownell Blvd.	Brownell Blvd.	2909 Brownell Blvd.	2909 Brownell Blvd.
15	44	3808	3808 Brownell Blvd.	Brownell Blvd.	Brownell Blvd.	3808 Brownell Blvd.	3808 Brownell Blvd.
16	10	4013	4013 Brownell Blvd.	Brownell Blvd.	Brownell Blvd.	4013 Brownell Blvd.	4013 Brownell Blvd.
17	138	4013	4013 Brownell Blvd.	Brownell Blvd.	Brownell Blvd.	4013 Brownell Blvd.	4013 Brownell Blvd.
18	78	201	201 Browning Ave.	Browning Ave.	Browning Ave.	201 Browning Ave.	201 Browning Ave.
19	147	202	202 Browning Ave.	Browning Ave.	Browning Ave.	202 Browning Ave.	202 Browning Ave.
20	71	212	212 Browning Ave.	Browning Ave.	Browning Ave.	212 Browning Ave.	212 Browning Ave.
21	74	212	212 Browning Ave.	Browning Ave.	Browning Ave.	212 Browning Ave.	212 Browning Ave.
22	80	212	212 Browning Ave.	Browning Ave.	Browning Ave.	212 Browning Ave.	212 Browning Ave.
23	145	212	212 Browning Ave.	Browning Ave.	Browning Ave.	212 Browning Ave.	212 Browning Ave.
24	76	215	215 Browning Ave.	Browning Ave.	Browning Ave.	215 Browning Ave.	215 Browning Ave.
25	97	216	216 Browning Ave.	Browning Ave.	Browning Ave.	216 Browning Ave.	216 Browning Ave.
26	88	778	778 E. Bundy Ave.	E. Bundy Ave.	Bundy Ave., E.	778 Bundy Ave., E.	778 Bundy Ave., E.
27	25	413	413 Burroughs Ave.	Burroughs Ave.	Burroughs Ave.	413 Burroughs Ave.	413 Burroughs Ave.
28	152	413	413 Burroughs Ave.	Burroughs Ave.	Burroughs Ave.	413 Burroughs Ave.	413 Burroughs Ave.
29	158	2107	2107 Calumet St.	Calumet St.	Calumet St.	2107 Calumet St.	2107 Calumet St.
30	48	1223	1223 Campbell St.	Campbell St.	Campbell St.	1223 Campbell St.	1223 Campbell St.
31	164	604	604 Chalmers St.	Chalmers St.	Chalmers St.	604 Chalmers St.	604 Chalmers St.
32	92	3010	3010 Cheyenne St.	Cheyenne St.	Cheyenne Ave.	3010 Cheyenne Ave.	3010 Cheyenne Ave.
33	2	2006	2006 Clement St.	Clement St.	Clement St.	2006 Clement St.	2006 Clement St.
34	37	3139	3139 Colorado	Colorado	Colorado Ave.	3139 Colorado Ave.	3139 Colorado Ave.
35	9	626	626 Commonwealth Ave.	Commonwealth Ave.	Commonwealth Ave.	626 Commonwealth Ave.	626 Commonwealth Ave.
36	115	547	547 Copeman Blvd.	Copeman Blvd.	Copeman Blvd.	547 Copeman Blvd.	547 Copeman Blvd.
37	50	1911	1911 Correy St.	Correy St.	Correy St.	1911 Correy St.	#N/A
38	1	2028	2028 Corunna Rd.	Corunna Rd.	Corunna Rd.	2028 Corunna Rd.	2028 Corunna Rd.
39	42	224	224 E. Court St.	E. Court St.	Court St., E.	224 Court St., E.	224 Court St., E.
40	162	1509	1509 E. Court St.	E. Court St.	Court St., E.	1509 Court St., E.	1509 Court St., E.
41	163	1509	1509 E. Court St.	E. Court St.	Court St., E.	1509 Court St., E.	1509 Court St., E.
42	39	2730	2730 Coventry Ct.	Coventry Ct.	Coventry Ct.	2730 Coventry Ct.	2730 Coventry Ct.
43	55	1901	1901 Crestbrook Ln.	Crestbrook Ln.	Crestbrook Ln.	1901 Crestbrook Ln.	1901 Crestbrook Ln.
44	94	2020	2020 Crooked Ln.	Crooked Ln.	Crooked Ln.	2020 Crooked Ln.	2020 Crooked Ln.
45	73	4202	4202 Custer Ave.	Custer Ave.	Custer Ave.	4202 Custer Ave.	4202 Custer Ave.
46	160	3125	3125 Dakota Ave.	Dakota Ave.	Dakota Ave.	3125 Dakota Ave.	3125 Dakota Ave.
47	161	3131	3131 Dakota Ave.	Dakota Ave.	Dakota Ave.	3131 Dakota Ave.	3131 Dakota Ave.
48	4	1720	1720 Davison Rd.	Davison Rd.	Davison Rd.	1720 Davison Rd.	1720 Davison Rd.

	H	I	J	K	L
1	lookup result	Curb box map data	Old location card data	New location card service Line material	full address for Google
2		3/4" copper	(n/a)	(n/a)	305 Allendale Pl., Flint, MI
3		lead-copper	3/4" lead to copper	(n/a)	631 Alvord Ave., Flint, MI
4		(n/a)	1" copper	(n/a)	1220 Beard St., Flint, MI
5		(n/a)	(n/a)	3/4" copper	3714 Beecher Rd., Flint, MI
6	Duplicate				3714 Beecher Rd., Flint, MI
7		copper	3/4" copper	(n/a)	3517 Bennett Ave., Flint, MI
8		copper	3/4" copper	(n/a)	3521 Bennett Ave., Flint, MI
9	Duplicate				3521 Bennett Ave., Flint, MI
10		copper	3/4" copper	(n/a)	2432 Beta Ln., Flint, MI
11		lead-copper	3/4" copper	(n/a)	1205 Blanchard Ave., Flint, MI
12		1.5" copper	1.5" copper	(n/a)	815 Bradley Ave., Flint, MI
13		copper	(n/a)	(n/a)	3811 Brentwood Dr., Flint, MI
14		copper	copper	(n/a)	2909 Brownell Blvd., Flint, MI
15		copper	copper	(n/a)	3808 Brownell Blvd., Flint, MI
16		copper	copper	(n/a)	4013 Brownell Blvd., Flint, MI
17	Duplicate				4013 Brownell Blvd., Flint, MI
18		copper	3/4" copper	(n/a)	201 Browning Ave., Flint, MI
19		copper	3/4"	(n/a)	202 Browning Ave., Flint, MI
20		(n/a)	(n/a)	3/4" copper	212 Browning Ave., Flint, MI
21	Duplicate				212 Browning Ave., Flint, MI
22	Duplicate				212 Browning Ave., Flint, MI
23	Duplicate				212 Browning Ave., Flint, MI
24		copper	3/4" copper	(n/a)	215 Browning Ave., Flint, MI
25		copper	(n/a)	(n/a)	216 Browning Ave., Flint, MI
26		copper	3/4" copper	(n/a)	778 Bundy Ave., E., Flint, MI
27		copper	(n/a)	(n/a)	413 Burroughs Ave., Flint, MI
28	Duplicate				413 Burroughs Ave., Flint, MI
29		copper	(n/a)	(n/a)	2107 Calumet St., Flint, MI
30		(n/a)	(n/a)	(n/a)	1223 Campbell St., Flint, MI
31		copper	(n/a)	(n/a)	604 Chalmers St., Flint, MI
32		copper	3/4" copper	(n/a)	3010 Cheyenne Ave., Flint, MI
33		(n/a)	(n/a)	(n/a)	2006 Clement St., Flint, MI
34		(n/a)	3/4" copper	(n/a)	3139 Colorado Ave., Flint, MI
35		copper	(n/a)	(n/a)	626 Commonwealth Ave., Flint, MI
36		(n/a)	(n/a)	(n/a)	547 Copeman Blvd., Flint, MI
37	no such address				#N/A
38		3/4" copper	(n/a)	(n/a)	2028 Corunna Rd., Flint, MI
39		4" main	(n/a)	(n/a)	224 Court St., E., Flint, MI
40		(n/a)	(n/a)	2" copper	1509 Court St., E., Flint, MI
41	Duplicate				1509 Court St., E., Flint, MI
42		copper	(n/a)	(n/a)	2730 Coventry Ct., Flint, MI
43		(n/a)	3/4" copper	(n/a)	1901 Crestbrook Ln., Flint, MI
44		copper	(n/a)	(n/a)	2020 Crooked Ln., Flint, MI
45		(n/a)	(n/a)	(n/a)	4202 Custer Ave., Flint, MI
46		copper	(n/a)	(n/a)	3125 Dakota Ave., Flint, MI
47		copper	(n/a)	(n/a)	3131 Dakota Ave., Flint, MI
48		1" copper	(n/a)	(n/a)	1720 Davison Rd., Flint, MI

	A	B	C	D	E	F	G
49	51	3507	3507 Dearborn Ave.	Dearborn Ave.	Dearborn St.	3507 Dearborn St.	3507 Dearborn St.
50	81	1220	1220 Decker St.	Decker St.	Decker St.	1220 Decker St.	1220 Decker St.
51	79	1224	1224 Decker St.	Decker St.	Decker St.	1224 Decker St.	1224 Decker St.
52	110	1528	1528 Delaware Ave.	Delaware Ave.	Delaware Ave.	1528 Delaware Ave.	1528 Delaware Ave.
53	47	3821	3821 Delaware Ave.	Delaware Ave.	Delaware Ave.	3821 Delaware Ave.	3821 Delaware Ave.
54	58	3718	3718 Dolphaine Ln.	Dolphaine Ln.	Dolphaine Ln.	3718 Dolphaine Ln.	3718 Dolphaine Ln.
55	174	1001	1001 Dupont St.	Dupont St.	Dupont St.	1001 Dupont St.	1001 Dupont St.
56	15	928	928 Durand St.	Durand St.	Durand St.	928 Durand St.	928 Durand St.
57	65	1002	1002 Durand St.	Durand St.	Durand St.	1002 Durand St.	1002 Durand St.
58	16	1616	1616 Durand St.	Durand St.	Durand St.	1616 Durand St.	1616 Durand St.
59	168	1019	1019 Fork Dr.	Fork Dr.	East Fork Dr.	1019 East Fork Dr.	1019 East Fork Dr.
60	123	721	721 East St. Apt #2	East St. Apt #2	East St.	721 East St.	721 East St.
61	133	2110	2110 Flushing Rd.	Flushing Rd.	Flushing Rd.	2110 Flushing Rd.	2110 Flushing Rd.
62	143	2114	2114 Flushing Rd.	Flushing Rd.	Flushing Rd.	2114 Flushing Rd.	2114 Flushing Rd.
63	135	2130	2130 Flushing Rd.	Flushing Rd.	Flushing Rd.	2130 Flushing Rd.	2130 Flushing Rd.
64	136	2202	2202 Flushing Rd.	Flushing Rd.	Flushing Rd.	2202 Flushing Rd.	2202 Flushing Rd.
65	63	2205	2205 Flushing Rd.	Flushing Rd.	Flushing Rd.	2205 Flushing Rd.	2205 Flushing Rd.
66	70	2205	2205 Flushing Rd.	Flushing Rd.	Flushing Rd.	2205 Flushing Rd.	2205 Flushing Rd.
67	59	2213	2213 Flushing Rd.	Flushing Rd.	Flushing Rd.	2213 Flushing Rd.	2213 Flushing Rd.
68	134	2300	2300 Flushing Rd.	Flushing Rd.	Flushing Rd.	2300 Flushing Rd.	2300 Flushing Rd.
69	139	2414	2414 Flushing Rd.	Flushing Rd.	Flushing Rd.	2414 Flushing Rd.	2414 Flushing Rd.
70	137	2429	2429 Flushing Rd.	Flushing Rd.	Flushing Rd.	2429 Flushing Rd.	2429 Flushing Rd.
71	155	3710	3710 Fox Croft Cr.	Fox Croft Cr.	Foxcroft Cir.	3710 Foxcroft Cir.	3710 Foxcroft Cir.
72	17	1021	1021 S. Franklin Ave.	S. Franklin Ave.	Franklin Ave., S.	1021 Franklin Ave., S.	1021 Franklin Ave., S.
73	112	1615	1615 S. Franklin Ave.	S. Franklin Ave.	Franklin Ave., S.	1615 Franklin Ave., S.	1615 Franklin Ave., S.
74	53	518	518 Frost St.	Frost St.	Frost St.	518 Frost St.	518 Frost St.
75	146	628	628 Frost St.	Frost St.	Frost St.	628 Frost St.	628 Frost St.
76	40	709	709 Frost St.	Frost St.	Frost St.	709 Frost St.	709 Frost St.
77	144	709	709 Frost St.	Frost St.	Frost St.	709 Frost St.	709 Frost St.
78	31	983	983 Gainey Ave.	Gainey Ave.	Gainey Ave.	983 Gainey Ave.	983 Gainey Ave.
79	38	1401	1401 Gainey Ave.	Gainey Ave.	Gainey Ave.	1401 Gainey Ave.	1401 Gainey Ave.
80	20	2015	2015 Gold Ave.	Gold Ave.	Gold Ave.	2015 Gold Ave.	2015 Gold Ave.
81	68	2418	2418 Gold Ave.	Gold Ave.	Gold Ave.	2418 Gold Ave.	2418 Gold Ave.
82	5	3802	3802 Gorey Ave.	Gorey Ave.	Gorey Ave.	3802 Gorey Ave.	3802 Gorey Ave.
83	98	625	625 S. Grand Traverse (B)	S. Grand Traverse (B)	Grand Traverse St., S.	625 Grand Traverse St., S.	625 Grand Traverse St., S.
84	100	625	625 S. Grand Traverse (U)	S. Grand Traverse (U)	Grand Traverse St., S.	625 Grand Traverse St., S.	625 Grand Traverse St., S.
85	148	625	625 S. Grand Traverse	S. Grand Traverse	Grand Traverse St., S.	625 Grand Traverse St., S.	625 Grand Traverse St., S.
86	169	3311	3311 Hawthorne Dr.	Hawthorne Dr.	Hawthorne Dr.	3311 Hawthorne Dr.	3311 Hawthorne Dr.
87	90	1016	1016 Ingleside Ave.	Ingleside Ave.	Ingleside Ave.	1016 Ingleside Ave.	1016 Ingleside Ave.
88	52	3829	3829 Ivanhoe Ave.	Ivanhoe Ave.	Ivanhoe Ave.	3829 Ivanhoe Ave.	3829 Ivanhoe Ave.
89	13	1543	1543 Kearsley Park Blvd.	Kearsley Park Blvd.	Kearsley Park Blvd.	1543 Kearsley Park Blvd.	1543 Kearsley Park Blvd.
90	21	711	711 Kensington Ave.	Kensington Ave.	Kensington Ave.	711 Kensington Ave.	711 Kensington Ave.
91	30	927	927 Kensington Ave.	Kensington Ave.	Kensington Ave.	927 Kensington Ave.	927 Kensington Ave.
92	45	1006	1006 Kensington	Kensington	Kensington Ave.	1006 Kensington Ave.	1006 Kensington Ave.
93	29	1109	1109 Kensington Ave.	Kensington Ave.	Kensington Ave.	1109 Kensington Ave.	1109 Kensington Ave.
94	141	3901	3901 Leedra St.	Leedra St.	Le Erda Ave.	3901 Le Erda Ave.	3901 Le Erda Ave.
95	101	912	912 Lexington Ave.	Lexington Ave.	Lexington Ave.	912 Lexington Ave.	912 Lexington Ave.
96	117	742	742 Lincoln Ave.	Lincoln Ave.	Lincoln Ave.	742 Lincoln Ave.	742 Lincoln Ave.

	H	I	J	K	L
49		(n/a)	3/4" copper	(n/a)	3507 Dearborn St., Flint, MI
50		3/4"	(n/a)	(n/a)	1220 Decker St., Flint, MI
51		3/4"	(n/a)	(n/a)	1224 Decker St., Flint, MI
52		3/4"	(n/a)	(n/a)	1528 Delaware Ave., Flint, MI
53		copper	(n/a)	(n/a)	3821 Delaware Ave., Flint, MI
54		copper	(n/a)	(n/a)	3718 Dolphaine Ln., Flint, MI
55		(n/a)	(n/a)	(n/a)	1001 Dupont St., Flint, MI
56		(n/a)	(n/a)	(n/a)	928 Durand St., Flint, MI
57		3/4"	(n/a)	(n/a)	1002 Durand St., Flint, MI
58		3/4" copper	3/4" copper	(n/a)	1616 Durand St., Flint, MI
59		3/4"	(n/a)	(n/a)	1019 East Fork Dr., Flint, MI
60		lead-copper	(n/a)	(n/a)	721 East St., Flint, MI
61		3/4"	(n/a)	1" copper to 3/4" galvanized	2110 Flushing Rd., Flint, MI
62		3/4"	(n/a)	1" copper to 3/4" galvanized	2114 Flushing Rd., Flint, MI
63		lead-copper	3/4"	1" copper to 3/4" copper	2130 Flushing Rd., Flint, MI
64		lead-copper	3/4"	1" copper to 3/4" copper	2202 Flushing Rd., Flint, MI
65		3/4"	(n/a)	1" copper to 3/4" galvanized	2205 Flushing Rd., Flint, MI
66	Duplicate				2205 Flushing Rd., Flint, MI
67		lead-copper	(n/a)	1" copper to 3/4" copper	2213 Flushing Rd., Flint, MI
68		3/4"	(n/a)	1" copper to 3/4" galvanized	2300 Flushing Rd., Flint, MI
69		3/4"	(n/a)	1" copper to 3/4" galvanized	2414 Flushing Rd., Flint, MI
70		3/4"	(n/a)	1" copper to 3/4" copper	2429 Flushing Rd., Flint, MI
71		copper	(n/a)	(n/a)	3710 Foxcroft Cir., Flint, MI
72		(n/a)	(n/a)	(n/a)	1021 Franklin Ave., S., Flint, MI
73		copper	3/4" copper	(n/a)	1615 Franklin Ave., S., Flint, MI
74		3/4"	(n/a)	(n/a)	518 Frost St., Flint, MI
75		(n/a)	(n/a)	3/4" lead to 3/4" copper	628 Frost St., Flint, MI
76		3/4"	(n/a)	(n/a)	709 Frost St., Flint, MI
77	Duplicate				709 Frost St., Flint, MI
78		3/4"	(n/a)	(n/a)	983 Gainey Ave., Flint, MI
79		(n/a)	(n/a)	(n/a)	1401 Gainey Ave., Flint, MI
80		1" to 3/4" zinc	(n/a)	(n/a)	2015 Gold Ave., Flint, MI
81		(n/a)	3/4" copper	(n/a)	2418 Gold Ave., Flint, MI
82		(n/a)	(n/a)	(n/a)	3802 Gorey Ave., Flint, MI
83		(n/a)	(n/a)	(n/a)	625 Grand Traverse St., S., Flint, MI
84	Duplicate				625 Grand Traverse St., S., Flint, MI
85	Duplicate				625 Grand Traverse St., S., Flint, MI
86		1" copper	(n/a)	(n/a)	3311 Hawthorne Dr., Flint, MI
87		(n/a)	(n/a)	3/4" lead to copper	1016 Ingleside Ave., Flint, MI
88		copper	3/4" copper	(n/a)	3829 Ivanhoe Ave., Flint, MI
89		(n/a)	(n/a)	3/4" lead to 3/4" copper	1543 Kearsley Park Blvd., Flint, MI
90		(n/a)	(n/a)	(n/a)	711 Kensington Ave., Flint, MI
91		(n/a)	3/4" copper	(n/a)	927 Kensington Ave., Flint, MI
92		copper	(n/a)	(n/a)	1006 Kensington Ave., Flint, MI
93		copper	(n/a)	(n/a)	1109 Kensington Ave., Flint, MI
94		copper	3/4" copper	(n/a)	3901 Le Erda Ave., Flint, MI
95		lead-copper	3/4" copper	(n/a)	912 Lexington Ave., Flint, MI
96		copper	3/4" copper	(n/a)	742 Lincoln Ave., Flint, MI

	A	B	C	D	E	F	G
97	36	1725	1725 lincoln Ave.	lincoln Ave.	lincoln Dr.	1725 lincoln Dr.	1725 Lincoln Dr.
98	27	1809	1809 Lynbrook Ave.	Lynbrook Ave.	Lynbrook Dr.	1809 Lynbrook Dr.	1809 Lynbrook Dr.
99	129	1809	1809 Lynbrook	Lynbrook	Lynbrook Dr.	1809 Lynbrook Dr.	1809 Lynbrook Dr.
100	109	421	421 Lyon St.	Lyon St.	Lyon St.	421 Lyon St.	421 Lyon St.
101	156	421	421 Lyon St.	Lyon St.	Lyon St.	421 Lyon St.	421 Lyon St.
102	153	818	818 Lyon St.	Lyon St.	Lyon St.	818 Lyon St.	818 Lyon St.
103	87	1701	1701 Marquette Dr.	Marquette Dr.	Marquette Dr.	1701 Marquette Dr.	1701 Marquette Dr.
104	56	3737	3737 Maryland Ave.	Maryland Ave.	Maryland Ave.	3737 Maryland Ave.	#N/A
105	175	914	914 Maxine St. (FD)	Maxine St. (FD)	Maxine Ave.	914 Maxine Ave.	914 Maxine Ave.
106	176	914	914 Maxine St. (Flush)	Maxine St. (Flush)	Maxine Ave.	914 Maxine Ave.	914 Maxine Ave.
107	171	1201	1201 Maxine St.	Maxine St.	Maxine Ave.	1201 Maxine Ave.	1201 Maxine Ave.
108	142	3142	3142 McClure	McClure	Mc Clure Ave.	3142 Mc Clure Ave.	3142 Mc Clure Ave.
109	19	618	618 S. Meade St.	S. Meade St.	Meade St., S.	618 Meade St., S.	618 Meade St., S.
110	122	2023	2023 Miller Rd.	Miller Rd.	Miller Rd.	2023 Miller Rd.	2023 Miller Rd.
111	167	2023	2023 Miller Rd.	Miller Rd.	Miller Rd.	2023 Miller Rd.	2023 Miller Rd.
112	49	3009	3009 Montana Ave.	Montana Ave.	Montana Ave.	3009 Montana Ave.	3009 Montana Ave.
113	28	1901	1901 Montclair Ave.	Montclair Ave.	Montclair Ave.	1901 Montclair Ave.	1901 Montclair Ave.
114	95	310	310 E. Moore St.	E. Moore St.	Moore St., E.	310 Moore St., E.	310 Moore St., E.
115	3	2110	2110 Mountain Ave.	Mountain Ave.	Mountain Ave.	2110 Mountain Ave.	2110 Mountain Ave.
116	149	2110	2110 Mountain Ave.	Mountain Ave.	Mountain Ave.	2110 Mountain Ave.	2110 Mountain Ave.
117	93	2606	2606 Mountain Ave.	Mountain Ave.	Mountain Ave.	2606 Mountain Ave.	2606 Mountain Ave.
118	6	1623	1623 Neome Dr.	Neome Dr.	Neome Dr.	1623 Neome Dr.	1623 Neome Dr.
119	172	1623	1623 Neome Dr.	Neome Dr.	Neome Dr.	1623 Neome Dr.	1623 Neome Dr.
120	75	401	401 E. Newall St.	E. Newall St.	Newall St., E.	401 Newall St., E.	401 Newall St., E.
121	22	2441	2441 Norbert	Norbert	Norbert St.	2441 Norbert St.	2441 Norbert St.
122	32	2806	2806 Norbert St.	Norbert St.	Norbert St.	2806 Norbert St.	2806 Norbert St.
123	54	3120	3120 Norwood Dr.	Norwood Dr.	Norwood Dr.	3120 Norwood Dr.	3120 Norwood Dr.
124	125	3120	3120 Norwood Dr.	Norwood Dr.	Norwood Dr.	3120 Norwood Dr.	3120 Norwood Dr.
125	108	1807	1807 Oren Ave.	Oren Ave.	Oren Ave.	1807 Oren Ave.	1807 Oren Ave.
126	119	1730	1730 Overhill Dr.	Overhill Dr.	Overhill Dr.	1730 Overhill Dr.	1730 Overhill Dr.
127	12	2920	2920 Parkside Dr.	Parkside Dr.	Parkside Dr.	2920 Parkside Dr.	2920 Parkside Dr.
128	61	1914	1914 Penbrook Ln.	Penbrook Ln.	Penbrook Ln.	1914 Penbrook Ln.	1914 Penbrook Ln.
129	140	1914	1914 Penbrook	Penbrook	Penbrook Ln.	1914 Penbrook Ln.	1914 Penbrook Ln.
130	151	2106	2106 Pierce St.	Pierce St.	Pierce St.	2106 Pierce St.	2106 Pierce St.
131	126	2122	2122 Pierce St	Pierce St	Pierce St.	2122 Pierce St.	2122 Pierce St.
132	41	2307	2307 Radcliffe	Radcliffe	Radcliffe Ave.	2307 Radcliffe Ave.	2307 Radcliffe Ave.
133	69	1910	1910 Ramsay Blvd.	Ramsay Blvd.	Ramsey Blvd.	1910 Ramsey Blvd.	1910 Ramsey Blvd.
134	43	3440	3440 Rangeley	Rangeley	Rangeley Dr.	3440 Rangeley Dr.	#N/A
135	128	1602	1602 Raspberry Ln.	Raspberry Ln.	Raspberry Ln.	1602 Raspberry Ln.	1602 Raspberry Ln.
136	105	328	328 Robbie Ln.	Robbie Ln.	Robbie Ln.	328 Robbie Ln.	328 Robbie Ln.
137	104	341	341 Robbie Ln.	Robbie Ln.	Robbie Ln.	341 Robbie Ln.	341 Robbie Ln.
138	150	341	341 Robbie Ln.	Robbie Ln.	Robbie Ln.	341 Robbie Ln.	341 Robbie Ln.
139	107	344	344 Robbie Ln.	Robbie Ln.	Robbie Ln.	344 Robbie Ln.	344 Robbie Ln.
140	102	349	349 Robbie Ln.	Robbie Ln.	Robbie Ln.	349 Robbie Ln.	349 Robbie Ln.
141	103	353	353 Robbie Ln.	Robbie Ln.	Robbie Ln.	353 Robbie Ln.	353 Robbie Ln.
142	106	357	357 Robbie Ln.	Robbie Ln.	Robbie Ln.	357 Robbie Ln.	357 Robbie Ln.
143	91	1818	1818 Rock Creek Ln.	Rock Creek Ln.	Rockcreek Ln.	1818 Rockcreek Ln.	1818 Rockcreek Ln.
144	132	860	860 Schafer St	Schafer St	Schafer St.	860 Schafer St.	#N/A

	H	I	J	K	L
97		(n/a)	1" copper	(n/a)	1725 Lincoln Dr., Flint, MI
98		copper	3/4" copper	(n/a)	1809 Lynbrook Dr., Flint, MI
99	Duplicate				1809 Lynbrook Dr., Flint, MI
100		3/4"	(n/a)	(n/a)	421 Lyon St., Flint, MI
101	Duplicate				421 Lyon St., Flint, MI
102		3/4"	3/4"	(n/a)	818 Lyon St., Flint, MI
103		(n/a)	(n/a)	1" copper	1701 Marquette Dr., Flint, MI
104	no such address				#N/A
105		lead-copper	(n/a)	(n/a)	914 Maxine Ave., Flint, MI
106	Duplicate				914 Maxine Ave., Flint, MI
107		(n/a)	(n/a)	(n/a)	1201 Maxine Ave., Flint, MI
108		copper	3/4" copper	(n/a)	3142 Mc Clure Ave., Flint, MI
109		(n/a)	3/4" copper	(n/a)	618 Meade St., S., Flint, MI
110		(n/a)	(n/a)	(n/a)	2023 Miller Rd., Flint, MI
111	Duplicate				2023 Miller Rd., Flint, MI
112		(n/a)	3/4" copper	(n/a)	3009 Montana Ave., Flint, MI
113		lead-copper	(n/a)	(n/a)	1901 Montclair Ave., Flint, MI
114		3/4"	(n/a)	(n/a)	310 Moore St., E., Flint, MI
115		(n/a)	3/4" copper	(n/a)	2110 Mountain Ave., Flint, MI
116	Duplicate				2110 Mountain Ave., Flint, MI
117		copper	3/4" copper	(n/a)	2606 Mountain Ave., Flint, MI
118		(n/a)	(n/a)	1" copper	1623 Neome Dr., Flint, MI
119	Duplicate				1623 Neome Dr., Flint, MI
120		3/4"	(n/a)	3/4" galvanized	401 Newall St., E., Flint, MI
121		(n/a)	(n/a)	(n/a)	2441 Norbert St., Flint, MI
122		copper	(n/a)	(n/a)	2806 Norbert St., Flint, MI
123		copper	(n/a)	(n/a)	3120 Norwood Dr., Flint, MI
124	Duplicate				3120 Norwood Dr., Flint, MI
125		3/4"	(n/a)	(n/a)	1807 Oren Ave., Flint, MI
126		1" copper	1" copper	(n/a)	1730 Overhill Dr., Flint, MI
127		1.5" copper	(n/a)	(n/a)	2920 Parkside Dr., Flint, MI
128		copper	3/4" copper	(n/a)	1914 Penbrook Ln., Flint, MI
129	Duplicate				1914 Penbrook Ln., Flint, MI
130		(n/a)	(n/a)	3/4" copper	2106 Pierce St., Flint, MI
131		copper	(n/a)	(n/a)	2122 Pierce St., Flint, MI
132		(n/a)	(n/a)	(n/a)	2307 Radcliffe Ave., Flint, MI
133		(n/a)	(n/a)	(n/a)	1910 Ramsey Blvd., Flint, MI
134	no such address				#N/A
135		copper	3/4" copper	(n/a)	1602 Raspberry Ln., Flint, MI
136		copper	3/4" copper	(n/a)	328 Robbie Ln., Flint, MI
137		copper	3/4" copper	(n/a)	341 Robbie Ln., Flint, MI
138	Duplicate				341 Robbie Ln., Flint, MI
139		copper	3/4" copper	(n/a)	344 Robbie Ln., Flint, MI
140		copper	3/4" copper	(n/a)	349 Robbie Ln., Flint, MI
141		copper	3/4" copper	(n/a)	353 Robbie Ln., Flint, MI
142		copper	3/4" copper	(n/a)	357 Robbie Ln., Flint, MI
143		copper	3/4" copper	(n/a)	1818 Rockcreek Ln., Flint, MI
144	no such address				#N/A

	A	B	C	D	E	F	G
145	113	853	853 E. 7th St.	E. 7th St.	Seventh St., E.	853 Seventh St., E.	853 Seventh St., E.
146	130	2112	2112 Sherff	Sherff	Sherff Pl.	2112 Sherff Pl.	2112 Sherff Pl.
147	165	2112	2112 Sherff	Sherff	Sherff Pl.	2112 Sherff Pl.	2112 Sherff Pl.
148	26	1130	1130 Simcoe Ave.	Simcoe Ave.	Simcoe Ave.	1130 Simcoe Ave.	1130 Simcoe Ave.
149	120	2117	2117 Stanford Ave.	Stanford Ave.	Stanford Ave.	2117 Stanford Ave.	2117 Stanford Ave.
150	33	4024	4024 Sterling	Sterling	Sterling St.	4024 Sterling St.	#N/A
151	72	1809	1809 Stevenson St.	Stevenson St.	Stevenson St., N.	1809 Stevenson St., N.	1809 Stevenson St., N.
152	8	920	920 Stocker Ave.	Stocker Ave.	Stocker Ave.	920 Stocker Ave.	920 Stocker Ave.
153	116	920	920 Stocker Ave.	Stocker Ave.	Stocker Ave.	920 Stocker Ave.	920 Stocker Ave.
154	35	1100	1100 Stockton St.	Stockton St.	Stockton St.	1100 Stockton St.	1100 Stockton St.
155	157	2553	2553 Swayze	Swayze	Swayze St.	2553 Swayze St.	2553 Swayze St.
156	173	2553	2553 Swayze	Swayze	Swayze St.	2553 Swayze St.	2553 Swayze St.
157	66	2560	2560 Thomas St.	Thomas St.	Thomas St.	2560 Thomas St.	2560 Thomas St.
158	77	2615	2615 Trumbull Ave.	Trumbull Ave.	Trumbull Ave.	2615 Trumbull Ave.	2615 Trumbull Ave.
159	170	1911	1911 Tuscola	Tuscola	Tuscola Ave.	1911 Tuscola Ave.	1911 Tuscola Ave.
160	86	1367	1367 Washington Ave.	Washington Ave.	Washington Ave.	1367 Washington Ave.	1367 Washington Ave.
161	84	1372	1372 Washington Ave.	Washington Ave.	Washington Ave.	1372 Washington Ave.	1372 Washington Ave.
162	82	1379	1379 Washington Ave.	Washington Ave.	Washington Ave.	1379 Washington Ave.	1379 Washington Ave.
163	83	1383	1383 Washington Ave.	Washington Ave.	Washington Ave.	1383 Washington Ave.	1383 Washington Ave.
164	85	1383	1383 Washington Ave.	Washington Ave.	Washington Ave.	1383 Washington Ave.	1383 Washington Ave.
165	7	430	430 Westcombe Ave.	Westcombe Ave.	Westcombe Ave.	430 Westcombe Ave.	430 Westcombe Ave.
166	23	2615	2615 Westwood Pkwy.	Westwood Pkwy.	Westwood Pkwy.	2615 Westwood Pkwy.	2615 Westwood Pkwy.
167	11	2721	2721 Westwood Pkwy.	Westwood Pkwy.	Westwood Pkwy.	2721 Westwood Pkwy.	2721 Westwood Pkwy.
168	14	2730	2730 Westwood Pkwy.	Westwood Pkwy.	Westwood Pkwy.	2730 Westwood Pkwy.	2730 Westwood Pkwy.
169	18	2802	2802 Westwood Pkwy.	Westwood Pkwy.	Westwood Pkwy.	2802 Westwood Pkwy.	2802 Westwood Pkwy.
170	64	3814	3814 Whitter Ave.	Whitter Ave.	Whittier Ave.	3814 Whittier Ave.	3814 Whittier Ave.
171	124	3814	3814 Whitter	Whitter	Whittier Ave.	3814 Whittier Ave.	3814 Whittier Ave.
172	166	1311	1311 Woodlawn Park Dr.	Woodlawn Park Dr.	Woodlawn Park Dr.	1311 Woodlawn Park Dr.	1311 Woodlawn Park Dr.
173	46	1651	1651 Woodlawn Park Blvd.	Woodlawn Park Blvd.	Woodlawn Park Dr.	1651 Woodlawn Park Dr.	1651 Woodlawn Park Dr.
174	114	1150	1150 Woodside Dr.	Woodside Dr.	Woodside Dr.	1150 Woodside Dr.	1150 Woodside Dr.
175	154	1150	1150 Woodside Dr.	Woodside Dr.	Woodside Dr.	1150 Woodside Dr.	1150 Woodside Dr.
176	34	3737	3737 Worchester Dr.	Worchester Dr.	Worchester Dr.	3737 Worchester Dr.	3737 Worchester Dr.
177	24	2079	2079 Zimmerman St.	Zimmerman St.	Zimmerman St.	2079 Zimmerman St.	#N/A

	H	I	J	K	L
145		3/4"	(n/a)	(n/a)	853 Seventh St., E., Flint, MI
146		(n/a)	(n/a)	(n/a)	2112 Sherff Pl., Flint, MI
147	Duplicate				2112 Sherff Pl., Flint, MI
148		3/4"	(n/a)	(n/a)	1130 Simcoe Ave., Flint, MI
149		copper	3/4"	(n/a)	2117 Stanford Ave., Flint, MI
150	no such address				#N/A
151		3/4"	(n/a)	(n/a)	1809 Stevenson St., N., Flint, MI
152		copper	3/4" copper	(n/a)	920 Stocker Ave., Flint, MI
153	Duplicate				920 Stocker Ave., Flint, MI
154		(n/a)	(n/a)	3/4" copper	1100 Stockton St., Flint, MI
155		lead-copper	3/4"	(n/a)	2553 Swayze St., Flint, MI
156	Duplicate				2553 Swayze St., Flint, MI
157		(n/a)	3/4" copper	(n/a)	2560 Thomas St., Flint, MI
158		lead-copper	3/4"	(n/a)	2615 Trumbull Ave., Flint, MI
159		copper	3/4" copper	(n/a)	1911 Tuscola Ave., Flint, MI
160		(n/a)	(n/a)	(n/a)	1367 Washington Ave., Flint, MI
161		3/4"	(n/a)	(n/a)	1372 Washington Ave., Flint, MI
162		(n/a)	3/4" copper	(n/a)	1379 Washington Ave., Flint, MI
163		(n/a)	3/4" copper	(n/a)	1383 Washington Ave., Flint, MI
164	Duplicate				1383 Washington Ave., Flint, MI
165		copper	(n/a)	(n/a)	430 Westcombe Ave., Flint, MI
166		1"	(n/a)	(n/a)	2615 Westwood Pkwy., Flint, MI
167		1"	(n/a)	(n/a)	2721 Westwood Pkwy., Flint, MI
168		1"	(n/a)	(n/a)	2730 Westwood Pkwy., Flint, MI
169		1.5" copper	(n/a)	(n/a)	2802 Westwood Pkwy., Flint, MI
170		copper	3/4" copper	(n/a)	3814 Whittier Ave., Flint, MI
171	Duplicate				3814 Whittier Ave., Flint, MI
172		2" copper	(n/a)	(n/a)	1311 Woodlawn Park Dr., Flint, MI
173		(n/a)	(n/a)	3/4" copper	1651 Woodlawn Park Dr., Flint, MI
174		3/4"	(n/a)	(n/a)	1150 Woodside Dr., Flint, MI
175	Duplicate				1150 Woodside Dr., Flint, MI
176		copper	3/4"	(n/a)	3737 Worchester Dr., Flint, MI
177	no such address				

From: postmaster@Michigan.gov
Sent: Tuesday, May 19, 2015 3:36 PM
To: Prysby, Mike (DEQ)
Subject: Delivery Final Failure Notice
Attachments: original.eml

Can not deliver the message you sent. Will not retry.

Sender: <PRYSBYM@michigan.gov>

The following addresses had delivery problems

<jhansen@workhorsecd.com> : Reply from lsns2t.state.mi.us[10.254.254.25]:
<<< Relay domain does not exist.

From: Prysby, Mike (DEQ) <PRYSBYM@michigan.gov>
Sent: Tuesday, May 19, 2015 3:36 PM
To: Jeff Hansen
Subject: Flint OEL - MDEQ Comments
Attachments: March 1st, 2015 OEL Report - DEQ Comments.doc

Jeff,

In looking at some of the Flint TTHM material for tomorrow's TAC meeting.....I noted our March 1, 2015 comments pertaining to the most recent Operation Evaluation Report prepared for Flint. I didn't see an electronic "sent date" to you on this document. It may be that I hand delivered our comments to LAN during our first TAC meeting on March 4th. If not, attached are our comments and I apologize in the delay. These comments can be addressed in the next report due on May 29, 2015.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

City of Flint
Operational Evaluation Report
March 1, 2015
MDEQ Comments

1. Revise Tables 2 and 3 on Page 7 to account for proper alignment of DDBP samples (results, location, site code). Also, revise statement on Page 1 regarding the number of sites exceeding the TTHM MCL following the 4th quarter sample cycle.

2. The ozone system was recently repaired. (Page 10 & 19). What is the ozone system's current production rate?

3. The city's hydraulic model (prepared by Potter Consulting) is being updated (Page 16). Is the model currently sufficient in determining proper sizing for the transmission main replacement in DuPont & Bishop Street corridor? (currently sized at 24-inch) (Pages 5, 16, and 20)

4. Are the potassium permanganate results & conclusions available? (Pages 4 and 17)

5. We agree that some reduction in storage volume could be achieved without compromising reliability; however given high usage, main breaks, and "let runs" during the winter, storage volume remains important. We agree with the need to determine adequate storage volume which will likely differ between summer and winter. (Page 15)

6. We agree with the concern of re-circulation of water pumped from the booster pump stations; however, we were recently informed of existing distribution system check valves to prevent recirculation. These appurtenances and their condition need to be confirmed. The hydraulic model may also need to be updated to include these valves. (Page 15)

7. We concur with the recommendation to provide the ability to monitor raw water TOC and PTAP TTHM. (Pages 17 & 18)

8. Page 20 provides 2 options to manage water age and each option includes reducing the utilized storage volume of the 3 MGAL well to 2 MGAL. The reduction in storage volume limits the WTP's ability to meet CT under worst case conditions (low temp, high pH, 30 MGD pumping rate from reservoir).

9. Table 11 on Page 21 outlines an Action Plan for Stage 1 and Stage 2 actions. Several actions listed in Stage 2 including; repair of ozone system, continued valve replacement, and replacement of deteriorated watermains are longer term solutions; however, they need to proceed regardless of the outcome of TTHM reduction.

From: Michael <smarterwater@comcast.net>
Sent: Friday, October 09, 2015 5:21 PM
To: sfmatta@lan-inc.com
Cc: Prysby, Mike (DEQ);Cook, Pat (DEQ)
Subject: Our Phone Conversation About Flint, MI and Our Phosphate Product SeaQuest
Attachments: SEAQUEST - OPFLOW 2003 (COLOR).pdf; SEAQUEST FILES - CHLORINE, CAUSTIC, COMPLAINTS - PERU, IL.pdf; SEAQUEST FILES - CHLORINE, IRON, COMPLAINTS - MAGNOLIA, IL.pdf; SEAQUEST FILES - CORROSION AND SCALE - STELLARTON, NS.pdf; SEAQUEST FILES - SCALE - CARLINVILLE, IL.pdf; SEAQUEST FILES - CORROSION - BRUNSWICK, GA.pdf; SEAQUEST FILES - SCALE - MANHEIM, PA.pdf; SeaQuest - Greer THM and HAA Report.jpg; SeaQuest Document 6 - Virgin Islands In Line Lead Pipes With Graphs.pdf; SeaQuest Document 9 - Chlorine Reduction and Amonia Elimination, THMs.pdf

Samir Matta
Lockwood, Andrews & Newnam (LAN)
1311 S. Linden Road, Suite B
Flint, MI 48532

PPI (cell)
810-820-2682 (office)
810-820-2703 (fax)

October 9, 2015

Hello Samir...

Thank you for your time on the phone. As promised, I'm sending you some information on our phosphate product, SeaQuest.

SeaQuest is a Phosphate blend made exclusively from 100% North American food grade poly and orthophosphates, with no fillers whatsoever. Our product is thoroughly documented and is the most stable, blended phosphate product available that effectively works in a wider pH range (5.5 through 12) and temperature range (only a 5% reversion in 250 degrees F) than any other phosphate on the market. SeaQuest provides a mono molecular coating which unlike any other phosphate, bonds with pipes and will lower lead and copper numbers even in extreme cases such as in desalinated water systems.

SeaQuest will completely sequester soluble hardness without precipitation in pipes or home water heaters, reduces calcium scale hardness and corrosion in the pipes through a gradual cleanout, increases chlorine residuals while decreasing chlorine usage (typically from 10% - 20%) and removes biofilms on both plastic and metal pipes, to name a few of our benefits.

SeaQuest is the only third generation phosphate technology and provides advantages not found with any other phosphate product. Our NSF Certified phosphate corrosion inhibitor is the only phosphate technology that has been independently written about and presented twice at the Water Quality Technology Conference of AWWA (1999 and 2007). SeaQuest is also the subject of numerous additional independent studies and professional Papers including a front page article in Op Flow Magazine (January, 2003).

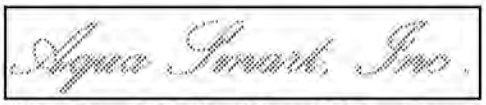
I'm attaching some Case Histories which should give you a better sense of some of what SeaQuest can provide. I would be available to set up an appointment at your convenience either during the first or second week in November.

Thank you. I appreciate your time.

Respectfully,

Michael Edelstein
National Sales and Development Manager
Aqua Smart, Inc.
4445 Commerce Drive, SW
Atlanta, GA 30336
404-696-4406 (office)
404-696-3712 (fax)
PPI cell)

Website: www.aquasmartinc.com



"SeaQuest Makes Your Water Smarter"

From: Prysby, Mike (DEQ)
Sent: Wednesday, September 17, 2014 3:35 PM
To: Howard Croft
Cc: Busch, Stephen (DEQ)
Subject: RE: Boil Water Advisory Report

Howard,

A few changes.....

Overview – 3rd bulleted item - Change date of expanded advisory to Sat. Sept 6th

Background – 3rd bulleted item - two consecutive tests taken 24 hrs apart with negative results are required to lift the boil notice.....not three

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Wednesday, September 17, 2014 2:53 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: Boil Water Advisory Report

Mike,

I wanted you to have a copy of the report I sent to the Mayor and EM today as an overview of the recent biol water advisory. Please let me know if anything here appears amiss.

Thanks,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7346 Ext.2043
hcroft@cityofflint.com

Sent: Thursday, October 02, 2014 4:08 PM
To: deq-assist
Subject: RE: Email Inquiry

Need to consult with supervisor on other DW issues....out at 4:30pm and off tomorrow. Able to respond on Monday

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: deq-assist
Sent: Thursday, October 02, 2014 4:01 PM
To: Prysby, Mike (DEQ)
Subject: FW: Email Inquiry

Hi Mike,

Can you assist with the attached email regarding drinking water in the City of Flint?

Thanks,
Karen Gutting
Department of Environmental Quality
Office of Environmental Assistance
Environmental Assistance Center
800-662-9278

From: Prysby, Mike (DEQ)
Sent: Thursday, December 11, 2014 2:20 PM
To: Busch, Stephen (DEQ);Rosenthal, Adam (DEQ);Benzie, Richard (DEQ)
Subject: Flint
Attachments: Flint DBP MCL 4Q14 draft II.doc

As per Richard's thoughts... here's a stab at adding some additional language to the letter....bottom paragraph was expanded and highlighted in blue...

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

December 12, 2014

Mr. Brent Wright, Operation Supervisor
City Of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, MI 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Violation Notice – Maximum Contaminant Level for Total Trihalomethanes
Operational Evaluation – Total Trihalomethanes
3rd Quarter 2014

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the City of Flint is in violation of the Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels* (MCL) *for disinfection byproducts*, of the 1979 Administrative Code.

In accordance with R.325.10610, *MCLs for disinfection byproducts*, of the 1979 Administrative Code, the MCL for disinfection byproduct total trihalomethanes (TTHM) is 0.080 milligrams per liter (mg/L) as a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the City of Flint's highest TTHM locational running annual average (LRAA), based on the last three quarters ending November 30, 2014, is 0.099 mg/l which exceeds the standard, and that two of the eight sample site locations exceed the standard of 0.080 mg/L.

Further, in accordance with R325.10719l, Disinfection byproducts: operational evaluation levels, of the 1979 Administrative Code, when an operational evaluation level (OEL) at a monitoring location for TTHM exceeds 0.080 mg/L, a supply shall conduct an operational evaluation and submit a written report of the evaluation to the department not later than 90 days after being notified of the analytical result that causes the supply to exceed the operational evaluation level. As listed in the table below, our records show that TTHM operational evaluation levels for the City of Flint exceed 0.080 mg/L, at four of the City's eight sample site locations.

TTHM Results (mg/L)					
	5/21/14	8/21/14	11/20/14	LRAA	OEL
DBP1 McDonalds 3719 Davison	**0.162**	**0.145**	0.059	**0.092**	**0.106**
DBP2 Liquor Palace 3302 S. Dort Highway	**0.112**	**0.127**	0.033	0.068	0.076
DBP3 North Flint Auto	**0.097**	**0.118**	0.041	0.064	0.074

6204 N. Saginaw St.					
DBP4 University Market 2501 Flushing Road	**0.106**	**0.196**	**0.094**	**0.099**	**0.122**
DBP5 Taco Bell 3606 Corunna Road	0.079	**0.181**	0.034	0.074	**0.082**
DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.088**	**0.144**	0.054	0.072	**0.085**
DBP7 Salem Housing 3216 MLK Boulevard	**0.082**	**0.112**	0.050	0.061	0.074
DBP8 BP Gas Station 822 S. Dort Highway	0.075	**0.112**	0.036	0.056	0.065

Our investigation consisted of a review of ODWMA files for laboratory reports received for compliance monitoring. Our investigation is considered complete. This violation began on December 1, 2014, and will continue until TTHM LRAA is below the MCL at all sample sites.

Water systems who exceed the OEL must complete and submit an Operational Evaluation in accordance with Administrative Rule 7191(R325.10791) within 90 days since the start of the violation. We acknowledge the city's collaborative effort with our department towards preparing an Operational Evaluation several months prior to OEL exceedance and submitting a draft report. The draft report identifies possible causes and corrective measures for the elevated TTHM levels. We also acknowledge that the city has implemented some of these measures including improved distribution system operation and softening the entire treatment plant flow and has likely attributed to the reduction in TTHM levels in the most recent quarter. The city is encouraged to continue working with their consultant towards implementing additional TTHM reduction measures identified in the draft report. We will review the draft report and provide comments as needed towards assisting the city in this endeavor. The Operational Evaluation report needs to be completed and received by our office by no later than March 1, 2015.

If you have any factual information you would like us to consider regarding the violation identified in this Notice, please provide them in a written response by January 12, 2015.

Administrative rule R 325.10403 of Act 399 requires that suppliers provide public notice as soon as practical but no later than thirty (30) days after the supplier learns of the violation, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not normally reached by mail. Enclosed is a sample public notice (PN) which contains the minimum required language. The City is encouraged to provide additional information regarding its response to this violation. **Please notify your consumers by January 10, 2015, and send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the public notice**. This violation must be included in your Consumer Confidence Report (CCR,) due by July 1, 2015. The public notification must be repeated every quarter until you no longer exceed the TTHM standard. **Failure to issue a PN for this violation will result in a fine of at least $1,000 per event, with a maximum of $5,000 per violation.** Contact our office for a more complete summary of our fines policies.

We anticipate and appreciate your cooperation in resolving this matter. If you have any questions regarding this Violation Notice, please contact us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water & Municipal Assistance
517-290-8817

Adam Rosenthal, EQA
Lansing District Office
Office of Drinking Water & Municipal Assistance
517-284-6644

MFP:AR:JR

Enclosure

cc:
Genesee County Health Dept.
Jennifer Crooks, EPA Region 5
Mr. Darnell Early, Emergency Manager, City of Flint
Daughtry Johnson
Howard Croft
Rovert Bincsik
Liane Shekter Smith, P.E.
Richard Benzie, P.E.
Stephen Busch, P.E.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, and November 20 of 2014). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the MCL. The standard for TTHMs is 80 µg/L. The location reporting the highest TTHM level was 99 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem by 2015.

For more information, please contact Mr. Brent Wright at 517-787-6537 or the Flint Water Plant at 4500 North Dort Highway, Flint, MI 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Prysby, Mike (DEQ)
Sent: Tuesday, December 16, 2014 11:08 AM
To: Busch, Stephen (DEQ)
Subject: Flint
Attachments: TTHM Reduction measures.doc

Steve,

I spoke with WTP staff (Brent and Mike) and the WSC (Robert Binscik) to confirm the proactive measures taken by the city; thus far, towards reducing TTHM levels. Attached is a brief summary.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

TTHM Reduction
Action taken by City
December 16, 2014

Flint's 3rd quarter of TTHM monitoring (Nov 20th, 2014) shows a reduction in TTHM levels at all of the sampling locations. The reduced TTHMs are the combined result of seasonal variation of total organic carbon (TTHM precursors) in the raw water and action taken by the city towards reducing TTHM levels. The amount of reduction contributed by each factor cannot be determined; however, the following is a list of proactive measures taken by the city in their effort to reduce TTHM levels.

1. **Removed the 20 MGAL Dort Reservoir from service**.

   The reservoir allowed treated water from the WTP to re-circulate back to high service thus adding up to one week of retention time.

2. **Softening 100% of the WTP flow during normal plant operation**.

   Softening the complete flow reduces the chlorine demand. During high water demands (large main breaks, filling reservoirs), split treatment must be utilized due to VFD control problems with the 20 MGD low service pump; however, split treatment is no longer the WTP's main mode of operation.

3. **Improved turn-over of water in distribution system reservoirs.**

   The operating range of the Cedar Street and Westside reservoirs was increased from 1-2 ft. (summer) to approximately 10 feet. The increased drawdown has reduced residence time and improved chlorine residuals.

4. **Established a more proactive flushing program.**

   Increased flushing reduced residence time in the distribution system especially at dead-ends.

5. **Optimizing Transmission System Operation w. repair of major valves and confirming proper valve position.**

   Several critical valves were replaced on one of Flint's four major transmission mains and several other valves (found to be closed) were opened. This eliminated stagnation problems in areas near this main, improved chlorine residuals and allows the main to operate in a looped configuration.

   Action to be taken soon:

- **LAN treatability study – jar testing (Starting this week)**
- **Trouble shoot Ozone system – early January**
- **Disinfect filters – after the next "top-off" of system reservoirs**

From: Prysby, Mike (DEQ)
Sent: Friday, January 02, 2015 1:33 PM
To: Busch, Stephen (DEQ)
Subject: Fwd: Question re emergency service requirements

Steve,
On AL today...saw Liane's message and will respond first thing Monday...I recall we were not requiring GCDC to establish back up with Detroit provided that they could demonstrate adequate redundancy on their own... Which it seems like they are planning based on their prelim design of the raw water reservoir, back up wells, and back up from Flint.

Sent from my iPhone

Begin forwarded message:

> **From:** "Shekter Smith, Liane (DEQ)" <SHEKTERL@michigan.gov>
> **Date:** January 2, 2015, 1:08:28 PM EST
> **To:** "Prysby, Mike (DEQ)" <PRYSBYM@michigan.gov>
> **Cc:** "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov>, "Benzie, Richard (DEQ)" <BENZIER@michigan.gov>, "Creal, William (DEQ)" <CREALW@michigan.gov>
> **Subject: FW: Question re emergency service requirements**
>
> Mike –
>
> Please handle. Thanks.
>
> ---
>
> **From:** Creal, William (DEQ)
> **Sent:** Friday, January 02, 2015 12:54 PM
> **To:** West, Samantha (GOV)
> **Cc:** Shekter Smith, Liane (DEQ)
> **Subject:** RE: Question re emergency service requirements
>
> I think this is drinking water, which would be Liane Shekter Smith at 517 284 6543, or one of her staff.
>
> ---
>
> **From:** West, Samantha (GOV)
> **Sent:** Friday, January 02, 2015 12:52 PM
> **To:** Creal, William (DEQ)
> **Subject:** RE: Question re emergency service requirements
>
> What Genesee County needs to get from DWSD – per Valerie.
>
> ---
>
> **From:** Creal, William (DEQ)
> **Sent:** Friday, January 02, 2015 12:50 PM
> **To:** West, Samantha (GOV)
> **Subject:** RE: Question re emergency service requirements
>
> What type of emergency service requirements are we looking at?

From: West, Samantha (GOV)
Sent: Friday, January 02, 2015 10:11 AM
To: Creal, William (DEQ)
Subject: Question re emergency service requirements

Good morning Bill,

Valerie is trying to find the right person from DEQ to talk to about emergency service requirements and thought you might know who she should talk to. Any idea?

Thank you,
Sam

Samantha West
Executive Assistant
Executive Office – Legal Division
111 South Capitol Avenue
Lansing, Michigan 48909
Telephone: 517-241-5630
Facsimile: 517-335-6196

From: Prysby, Mike (DEQ)
Sent: Friday, January 02, 2015 1:52 PM
To: Shekter Smith, Liane (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: Fwd: Question re emergency service requirements

Sent from my iPhone

Begin forwarded message:

> **From:** "Prysby, Mike (DEQ)" <PRYSBYM@michigan.gov>
> **Date:** January 2, 2015, 1:32:42 PM EST
> **To:** "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov>
> **Subject: Fwd: Question re emergency service requirements**
>
> Liane,
> On AL today...I will respond first thing Monday...I recall we were not requiring GCDC to establish back up with Detroit provided that they can demonstrate adequate redundancy on their own... This appears likely as they have proposed a combination of emergency raw water storage, utilization of up back up wells, and emergency back up from Flint. Following several meetings to review their preliminary proposal along with revisions, we are comfortable with their plan for an emergency backup supply of water. I wish to confirm the details ...unless this information is needed before COB today.
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** "Shekter Smith, Liane (DEQ)" <SHEKTERL@michigan.gov>
> > **Date:** January 2, 2015, 1:08:28 PM EST
> > **To:** "Prysby, Mike (DEQ)" <PRYSBYM@michigan.gov>
> > **Cc:** "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov>, "Benzie, Richard (DEQ)" <BENZIER@michigan.gov>, "Creal, William (DEQ)" <CREALW@michigan.gov>
> > **Subject: FW: Question re emergency service requirements**
> >
> > Mike –
> >
> > Please handle. Thanks.
> >
> > ---
> >
> > **From:** Creal, William (DEQ)
> > **Sent:** Friday, January 02, 2015 12:54 PM
> > **To:** West, Samantha (GOV)
> > **Cc:** Shekter Smith, Liane (DEQ)
> > **Subject:** RE: Question re emergency service requirements

I think this is drinking water, which would be Liane Shekter Smith at 517 284 6543, or one of her staff.

From: West, Samantha (GOV)
Sent: Friday, January 02, 2015 12:52 PM
To: Creal, William (DEQ)
Subject: RE: Question re emergency service requirements

What Genesee County needs to get from DWSD – per Valerie.

From: Creal, William (DEQ)
Sent: Friday, January 02, 2015 12:50 PM
To: West, Samantha (GOV)
Subject: RE: Question re emergency service requirements

What type of emergency service requirements are we looking at?

From: West, Samantha (GOV)
Sent: Friday, January 02, 2015 10:11 AM
To: Creal, William (DEQ)
Subject: Question re emergency service requirements

Good morning Bill,

Valerie is trying to find the right person from DEQ to talk to about emergency service requirements and thought you might know who she should talk to. Any idea?

Thank you,
Sam

Samantha West
Executive Assistant
Executive Office – Legal Division
111 South Capitol Avenue
Lansing, Michigan 48909
Telephone: 517-241-5630
Facsimile: 517-335-6196

From: Prysby, Mike (DEQ)
Sent: Monday, January 05, 2015 8:57 AM
To: Shekter Smith, Liane (DEQ)
Subject: Emergency Service Requirements
Attachments: Act 399 Capacity and Reliability Requirements.pdf

Liane,

Attached is our letter we sent to the city of Flint concerning emergency service requirements. Flint meets the required capacity under R 325.110204 and ability to provide water during electrical power interruptions under R 325.11206. Although additional emergency interconnections with other public water supplies are not required based on Flint meeting the above requirements, we encouraged the city to maintain all possible interconnections for emergency purposes. Steve & I anticipate that we have maintain the same position with Genesee County when they are treating water purchased from KWA. If you wish to go over any specifics prior to the call, I am available to meet with you prior to 10:30 (10:00 or 10:15).

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

DAN WYANT
DIRECTOR

April 29, 2014

Mr. Daugherty Johnson, Utilities Administrator
City of Flint
1101 South Saginaw Street
Flint, Michigan 48502

WSSN: 02310

Dear: Mr. Johnson

Subject: Act 399 Capacity and Reliability Requirements

This letter, per your request, is being written as verification that the City of Flint water system is currently in compliance with required capacity and power service reliability requirements under the Michigan Safe Drinking Water Act and Administrative Rules, Supplying Water to the Public.

The required capacity of a waterworks system as established in Rule 1204 (R 325.11204) required sufficient capacity to meet approved finished water supply requirements, and is based upon the combination of the following options:

a. Rated capacity of an approved surface water supply or complete treatment system;
b. Firm capacity of approved groundwater supply;
c. Available contracted capacity that can be delivered from another public water supply;
d. Excess finished water storage capacity.

Under the first option listed above, the City's baseline water withdrawal capacity from the Flint River, and rated capacity of the City's water treatment plant (WTP), both exceed its finished water supply requirements. The rated capacity of a complete treatment system is established under Rule 1006 (R 325.11006). In accordance with this rule, the Department of Environmental Quality (DEQ) has established a rated capacity of 36 million gallons per day for the City's WTP, which again far exceeds current and future finished water supply requirements for the City's service area.

In addition, while capacity under item d above for excess finished water storage has not been established, the City currently has enough finished water storage to supply more than 2 days of normal finished water supply requirements

Rule 1206 (R 325.11206) requires water systems to provide a means to continuously supply fully finished water during normal power service interruption. The City's WTP is now equipped with a redundant electrical system that includes provisions for stand-by power generation; thus meeting this requirement.

While additional means to meet the above requirements for capacity and power interruption can be provided through contracted interconnections with other water systems, the City has demonstrated compliance with these requirements without such means. However, the DEQ still supports and encourages such interconnections be maintained for emergency purposes as an additional barrier to help maintain public health protections. While these emergency

interconnections have no requirement to establish an available or contracted capacity, the DEQ encourages the corresponding utilities to establish mutual aid agreements where possible. Such agreements can be developed through the Michigan Water/Wastewater Agency Response Network (MiWARN). For more information, please visit miwarn.org. A MiWARN brochure is also enclosed for your information.

If you have any questions, feel free to contact me at (517) 290-8817; prysbym@michigan.gov; or Department of Environmental Quality, Office of Drinking Water and Municipal Assistance, Lansing District Office, 525 West Allegan Street, 1st Floor South, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Field Operations Section
Office of Drinking Water and
Municipal Assistance

mfp/jlr
Enclosure

cc: Mr. Howard Kroft, Utilities Director, City of Flint

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 06, 2015 2:05 PM
To: Busch, Stephen (DEQ)
Subject: RE: Flint NBC News Interview - Flint TTHMs

Mr. Walter was told that chlorine is used as a disinfectant and that TTHMs are the by-product of chlorine reacting with remaining TOC in the water....this was part of the recorded interview....I am totally surprised how this could get so misconstrued..

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Tuesday, January 06, 2015 1:56 PM
To: Prysby, Mike (DEQ)
Subject: RE: Flint NBC News Interview - Flint TTHMs

It appears the reporter didn't listen very well. Their write up is completely misleading.
http://www.minbcnews.com/news/story.aspx?id=1144852

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 06, 2015 10:22 AM
To: Shekter Smith, Liane (DEQ); Wurfel, Brad (DEQ); Feuerstein, Heather (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Willard, Veronica (DEQ)
Subject: Flint NBC News Interview - Flint TTHMs

Attached is a summary of the interview I had with Flint NBC 25 News late yesterday.....sorry this summary is late as I am receiving incoming calls from Flint residents...

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 06, 2015 3:08 PM
To: Howes, Sarah (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: RE: Availability TODAY? re Mtg w Legislator

Sarah,

I am available to meet with you and Richard at your earliest convenience.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howes, Sarah (DEQ)
Sent: Tuesday, January 06, 2015 3:01 PM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: Availability TODAY? re Mtg w Legislator
Importance: High

Hi Mike,

I just left you a voicemail but thought you may check your email first. We just received a request from recently elected Rep. Neeley's office asking us to come over TODAY to discuss Flint drinking water.

Are you available at all this afternoon to go over with Richard and me? Please let me know as soon as possible.
Thanks,
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 06, 2015 3:18 PM
To: Howes, Sarah (DEQ)
Subject: Accepted: Rep. Neeley-Flint Drinking Water

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 07, 2015 11:30 AM
To: Busch, Stephen (DEQ)
Subject: Tally of Flint calls
Attachments: Calls from Public list.doc

Steve,

Attached is a list of the calls from the public that I have taken to avoid duplication of efforts. I will update the list and re-send to you following each additional call received.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Flint TTHM Violation
Completed Calls from the Public
MFP

1/5: Ron Fonger – Flint Journal – Media inquiry
1/5: Lawrence Reynolds – Mott Children's Health
1/5: Walter Smith-Randolth – NBC 25 Flint News – Recorded interview

1/6: Arthur Woodston – resident – general questions, invite to res. Mtg
1/6: Bradley - resident – ok to boil water for baby formula bottle?
1/6: Raimy Elley – resident – gen info., most upset on city's delay to notify
1/6: Reps. Sheldon Neeley and Phil Phelps – update State Reps for Flint Districts on TTHM issue. Richard Benzie and Sarah Howes participated.

1/7:

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 07, 2015 1:28 PM
To: Howes, Sarah (DEQ)
Subject: RE: Availability TODAY? re Mtg w Legislator

Sarah,

I will keep u in the loop....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howes, Sarah (DEQ)
Sent: Wednesday, January 07, 2015 1:26 PM
To: Prysby, Mike (DEQ)
Subject: RE: Availability TODAY? re Mtg w Legislator

Sorry—Just getting to today's emails.

I didn't get the name of the other individual either. It's not a big deal, though. Thanks for the write-up!

Also, I mentioned to Richard yesterday on the elevator, if you guys could get me a copy of any correspondence that we send to the City of Flint on this issue or a heads up on if anything "big" is going to happen, that'd be great. I'll pass it on to the Reps.

Thanks again,
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 07, 2015 8:57 AM
To: Howes, Sarah (DEQ)
Subject: RE: Availability TODAY? re Mtg w Legislator

Sarah,

I appreciate the opportunity to present information to the state reps that cover Flint regarding the TTHM violation.

I'm writing a brief summary for LDO management. Rep. Sheldon Neeley, 34th District provided me his card; however, I did not receive cards from the other two participants.
I recall Mr. Phelps being the other Rep. ; however, I don't know the District # he represents. Finally, I do not have the name & title of the third person. If you could provide that to me, that would be appreciated as I will need to reference them in my summary to LDO management. Thanks!

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howes, Sarah (DEQ)
Sent: Tuesday, January 06, 2015 3:01 PM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: Availability TODAY? re Mtg w Legislator
Importance: High

Hi Mike,

I just left you a voicemail but thought you may check your email first. We just received a request from recently elected Rep. Neeley's office asking us to come over TODAY to discuss Flint drinking water.

Are you available at all this afternoon to go over with Richard and me? Please let me know as soon as possible.
Thanks,
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Prysby, Mike (DEQ)
Sent: Friday, January 09, 2015 1:24 PM
To: Wolf, Jennifer (DEQ)
Cc: VanOtteren, Bruce (DNR);Doll, Jeanette (DTMB);Busch, Stephen (DEQ)
Subject: RE: Facility Notification: Flint State Office Building

I left a message for Jeanette to call me back.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Wolf, Jennifer (DEQ)
Sent: Friday, January 09, 2015 10:42 AM
To: Prysby, Mike (DEQ)
Cc: VanOtteren, Bruce (DNR); Doll, Jeanette (DTMB)
Subject: FW: Facility Notification: Flint State Office Building

Hi Mike!

Are you handling this one? If so are you able to address Jeanette's below?

SGT. JEN WOLF
MI DEPT. OF ENVIRONMENTAL QUALITY
MI DEPT. OF NATURAL RESOURCES
LAW ENFORCEMENT DIVISION
EMERGENCY MANAGEMENT
DESK: 517-284-6231
CELL PPI

From: Doll, Jeanette (DTMB)
Sent: Friday, January 09, 2015 7:33 AM
To: VanOtteren, Bruce (DNR); Wolf, Jennifer (DEQ)
Subject: FW: Facility Notification: Flint State Office Building

Good morning!

My phone call was referencing the advisory our Real Estate Division received from the City of Flint. Just wanted to know if we would know sooner than March 1 on the TTHM levels.

Jeanette

From: DTMB Facilities [mailto:dtmb@govsubscriptions.michigan.gov]
Sent: Wednesday, January 07, 2015 11:49 AM
To: Doll, Jeanette (DTMB)
Subject: Facility Notification: Flint State Office Building

Flint Water Advisory

Date/Time:

Effective Wednesday, January 7, 2015

Details:

The City of Flint recently sent out the attached notice regarding violations to the drinking water standards. While the City of Flint states that corrective actions are not necessary, DTMB is in the process of providing a water cooler on each occupied floor, positioned near the water fountain, so you can choose which water to drink. The coolers will arrive today and will be provided as long as the public water does not meet treatment requirements.

- Flint Water.pdf

Contact:

DTMB Customer Service Center, DTMB-Customerservice@michigan.gov or (517) 373-6227

	Since we spend about 40 hours a week at our workplaces, isn't the office the best place to try out some new energy-saving tricks? The Energy Information Administration estimates that if commercial and industrial buildings improved their energy efficiency by 10 percent, our economy could see yearly savings of nearly $20 billion.

This email was sent to dalli@michigan.gov using GovDelivery, on behalf of DTMB - Lewis Cass Building - 320 South Walnut Street Lansing, MI 48913 (517) 373-1004

From: Prysby, Mike (DEQ)
Sent: Monday, January 12, 2015 8:32 AM
To: Rennaker, Joanne (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Joanne,

Can you assist with me with finding the proper format (form) for me to draft up a letter. Steve referenced this is a "Director's Log letter". Thanks!

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Benzie, Richard (DEQ)
Sent: Friday, January 09, 2015 5:24 PM
To: Prysby, Mike (DEQ); Willard, Veronica (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Mike,

You need to draft a response that says pretty much what you say below but in a format (letter) that can be used to provide a response to Ms. Warner from someone probably higher up the chain. I assume Joanne can assist you in identifying the appropriate format.

Veronica,

Can you tell from the attachment you sent (DIR00004) whose signature Mike should be preparing this response? All I see is the initials "RD." Will Mike be signing it or will it be someone else?

Also, since we did not receive this request until the afternoon of January 9th, is it possible we may have a week to respond, making the due date January 16th? Mike has his hands full with all of the demands placed on him by the ongoing issues in Flint.

Richard

From: Prysby, Mike (DEQ)
Sent: Friday, January 09, 2015 3:25 PM
To: Willard, Veronica (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Veronica,

I contacted Ms. Patricia Warner and gave her the opportunity to ask me questions and/or voice concerns with the TTHM violation in Flint. Her main complaint, most common complaint across the board, is the high cost of water Flint residents are paying yet receiving water of poor quality. Another concern she voiced was the city's delay in notifying the public of increased TTHM levels. She and others feel the city should have notified residents last May when high TTHM levels were first detected.

I explained to Patricia some of the possible reasons for the increase in water rates included.... improvements needed at the WTP (necessary for full-time operation both for KWA and Flint River operation) and the cost of infrastructure to connect to KWA. The financial commitment to KWA may also be factored into increased costs; however, I stressed that the city needs to work harder at educating the public on why the water rates were increased. With regards to PN requirements, I explained how the TTHM exceedance for Flint is determined (running annual average) and the PN requirement. I stressed that...although the city has met all of the monitoring and PN requirements for this violation, it may be worthwhile for them to convey the status of TTHMs ahead of state and federal reporting deadlines as a means towards regaining public trust. I also provided technical information pertaining to TTHMs and discussed the health-effects in more detail. The duration of the call was a half hour and Patricia seemed satisfied with my response to her questions/concerns. I offered her the opportunity to call me again if she has any further questions.

If any further action is needed regarding this inquiry, please let me know.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Willard, Veronica (DEQ)
Sent: Friday, January 09, 2015 2:16 PM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Mike – this is the official assignment.

From: DEQ-LogLetter
Sent: Friday, January 09, 2015 11:36 AM
To: Willard, Veronica (DEQ)
Cc: Thelen, Mary Beth (DEQ); Shaler, Karen (DEQ)
Subject: DIR00004 Warner / Water toxins in Flint MI

Assigned to ODWMA

From: Prysby, Mike (DEQ)
Sent: Monday, January 12, 2015 10:44 AM
To: Benzie, Richard (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Richard,

I will draft a response for inclusion into a letter...Steve indicated the proper format to use is a Director's log letter....Joanne searched the intranet for the appropriate log letter form and found a form over eight years old w. Granholm's letter head on it. We do not think we're on the right track.... Any suggestions on where to look for the proper form as I wish to complete this assignment by COB today...since I be out all day tomorrow and out Thurs and Fri...

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Benzie, Richard (DEQ)
Sent: Friday, January 09, 2015 5:24 PM
To: Prysby, Mike (DEQ); Willard, Veronica (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Mike,

You need to draft a response that says pretty much what you say below but in a format (letter) that can be used to provide a response to Ms. Warner from someone probably higher up the chain. I assume Joanne can assist you in identifying the appropriate format.

Veronica,

Can you tell from the attachment you sent (DIR00004) whose signature Mike should be preparing this response? All I see is the initials "RD." Will Mike be signing it or will it be someone else?

Also, since we did not receive this request until the afternoon of January 9th, is it possible we may have a week to respond, making the due date January 16th? Mike has his hands full with all of the demands placed on him by the ongoing issues in Flint.

Richard

From: Prysby, Mike (DEQ)
Sent: Friday, January 09, 2015 3:25 PM
To: Willard, Veronica (DEQ)

Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Veronica,

I contacted Ms. Patricia Warner and gave her the opportunity to ask me questions and/or voice concerns with the TTHM violation in Flint. Her main complaint, most common complaint across the board, is the high cost of water Flint residents are paying yet receiving water of poor quality. Another concern she voiced was the city's delay in notifying the public of increased TTHM levels. She and others feel the city should have notified residents last May when high TTHM levels were first detected.

I explained to Patricia some of the possible reasons for the increase in water rates included.... improvements needed at the WTP (necessary for full-time operation both for KWA and Flint River operation) and the cost of infrastructure to connect to KWA. The financial commitment to KWA may also be factored into increased costs; however, I stressed that the city needs to work harder at educating the public on why the water rates were increased. With regards to PN requirements, I explained how the TTHM exceedance for Flint is determined (running annual average) and the PN requirement. I stressed that...although the city has met all of the monitoring and PN requirements for this violation, it may be worthwhile for them to convey the status of TTHMs ahead of state and federal reporting deadlines as a means towards regaining public trust. I also provided technical information pertaining to TTHMs and discussed the health-effects in more detail. The duration of the call was a half hour and Patricia seemed satisfied with my response to her questions/concerns. I offered her the opportunity to call me again if she has any further questions.

If any further action is needed regarding this inquiry, please let me know.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Willard, Veronica (DEQ)
Sent: Friday, January 09, 2015 2:16 PM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Mike – this is the official assignment.

From: DEQ-LogLetter
Sent: Friday, January 09, 2015 11:36 AM
To: Willard, Veronica (DEQ)

Cc: Thelen, Mary Beth (DEQ); Shaler, Karen (DEQ)
Subject: DIR00004 Warner / Water toxins in Flint MI

Assigned to ODWMA

From: Prysby, Mike (DEQ)
Sent: Monday, January 12, 2015 11:37 AM
To: Benzie, Richard (DEQ)
Subject: Flint response

Richard,

Joanne is working with Veronica on obtaining the proper form for my summary letter...so you can dis-regard my earlier email...

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 13, 2015 12:20 PM
To: Benzie, Richard (DEQ)
Subject: Re: question on Flint

Richard,
I requested a copy of Flint's water rate schedule...of which they provided...based on our calculation...the water bill for a family of four using 1000 cuft (7500 gal) on a monthly basis having a 5/8" meter would be approx. $98. The bill will be $20 higher for a 3/4" meter. So I could see a family of 6 with leaking fixtures and a larger meter size seeing a monthly bill in this range. I can provide u with a copy of their rate schedule tomorrow.

Sent from my iPhone

On Jan 13, 2015, at 10:43 AM, "Benzie, Richard (DEQ)" <BENZIER@michigan.gov> wrote:

> Those bills seem high even if it includes sewerage. Do you know if it does include wastewater? If it does, be sure to point that out -- that it is a combined bill that reflects both utilities, not just the cost of drinking water. But those bills sound almost as high as what most of those customers are probably paying for their internet and cellphone service or even their cable bills! I wonder which one they think is more essential.
>
> I believe there have been some significant wastewater treatment plant projects in the Genesee County system in recent years, so maybe a significant component of any increase is also on the wastewater side.
>
> Richard
>
> ---
>
> **From:** Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
> **Sent:** Tuesday, January 13, 2015 10:33 AM
> **To:** Benzie, Richard (DEQ)
> **Cc:** Poy, Thomas
> **Subject:** RE: question
>
> Thanks for the update, Richard. The numerous people I talk to from Flint say their water bills are between $175-$200/month. Would DWSD have raised their rates that high? (Don't answer that; just pure conjecture ☺) I talked with a woman yesterday, whose pediatrician swears there has been an increase in kidney stones in his patients since April. I told her to have the pediatrician contact CDC in Atlanta. (I prepared a briefing this summer for ATSDR/CDC about the physical ailments people were complaining about to me, but without any expert or documentation, they didn't pick it up.) Talked to another man yesterday that's mounting a campaign to stop paying their water bills, and wants to organize against the City. And on it goes...
> Jen
>
> ---
>
> **From:** Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
> **Sent:** Monday, January 12, 2015 5:08 PM
> **To:** Crooks, Jennifer
> **Subject:** RE: question

Still going on – even some council members talking about going back to Detroit at least until the KWA pipeline is available sometime in 2016. I don't know that the newspapers or media are advocating for one side or the other in this issue, but covering those individuals who are keeps the flames flickering.

I can't say the city wouldn't be better off to not have switched to the River, but I believe Flint was sure that DWSD was going to raise water rates significantly after the contract expired (by decree of DWSD) in order to recoup lost bonding costs or something similar. Flint did not want to be subjected to rates without any contractual controls.

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Monday, January 12, 2015 4:57 PM
To: Benzie, Richard (DEQ)
Subject: question

Richard—Last week when we were on the call with Jason, Wendy, and Tom Poleck, you made a passing comment about the newspaper getting into the stories about Flint drinking water, maybe elevating the issue in the public to fire them up? Perhaps talk of going back to Detroit water?
Jen

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 8:29 AM
To: Rennaker, Joanne (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Willard, Veronica (DEQ)
Sent: Wednesday, January 14, 2015 8:23 AM
To: Prysby, Mike (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

This is a reply direct letter, so it can come from you or your supervisor.

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 7:57 AM
To: Willard, Veronica (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Veronica,

Can you send me the proper format (letter) for me to complete this assignment...."Directors Log letter?" Today is my last day in the office till next week. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Benzie, Richard (DEQ)
Sent: Friday, January 09, 2015 5:24 PM
To: Prysby, Mike (DEQ); Willard, Veronica (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Mike,

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Richard

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Sent: Friday, January 09, 2015 3:25 PM
To: Willard, Veronica (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Veronica,

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If any further action is needed regarding this inquiry, please let me know.

Michael Prysby, P.E.
District Engineer

Office of Drinking Water and Municipal Assistance
517 290-8817

From: Willard, Veronica (DEQ)
Sent: Friday, January 09, 2015 2:16 PM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Mike – this is the official assignment.

From: DEQ-LogLetter
Sent: Friday, January 09, 2015 11:36 AM
To: Willard, Veronica (DEQ)
Cc: Thelen, Mary Beth (DEQ); Shaler, Karen (DEQ)
Subject: DIR00004 Warner / Water toxins in Flint MI

Assigned to ODWMA

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 8:37 AM
To: Busch, Stephen (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Steve,

I will prepare the letter and forward to you to finalize...there is a standard opening and closing paragraph with the body based on my discussion with the Flint resident.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Willard, Veronica (DEQ)
Sent: Wednesday, January 14, 2015 8:23 AM
To: Prysby, Mike (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

This is a reply direct letter, so it can come from you or your supervisor.

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 7:57 AM
To: Willard, Veronica (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Veronica,

Can you send me the proper format (letter) for me to complete this assignment...."Directors Log letter?" Today is my last day in the office till next week. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Benzie, Richard (DEQ)
Sent: Friday, January 09, 2015 5:24 PM
To: Prysby, Mike (DEQ); Willard, Veronica (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Mike,

You need to draft a response that says pretty much what you say below but in a format (letter) that can be used to provide a response to Ms. Warner from someone probably higher up the chain. I assume Joanne can assist you in identifying the appropriate format.

Veronica,

Can you tell from the attachment you sent (DIR00004) whose signature Mike should be preparing this response? All I see is the initials "RD." Will Mike be signing it or will it be someone else?

Also, since we did not receive this request until the afternoon of January 9th, is it possible we may have a week to respond, making the due date January 16th? Mike has his hands full with all of the demands placed on him by the ongoing issues in Flint.

Richard

From: Prysby, Mike (DEQ)
Sent: Friday, January 09, 2015 3:25 PM
To: Willard, Veronica (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: DIR00004 Warner / Water toxins in Flint MI

Veronica,

I contacted Ms. Patricia Warner and gave her the opportunity to ask me questions and/or voice concerns with the TTHM violation in Flint. Her main complaint, most common complaint across the board, is the high cost of water Flint residents are paying yet receiving water of poor quality. Another concern she voiced was the city's delay in notifying the public of increased TTHM levels. She and others feel the city should have notified residents last May when high TTHM levels were first detected.

I explained to Patricia some of the possible reasons for the increase in water rates included.... improvements needed at the WTP (necessary for full-time operation both for KWA and Flint River operation) and the cost of infrastructure to connect to KWA. The financial commitment to KWA may also be factored into increased costs; however, I stressed that the city needs to work harder at educating the public on why the water rates were increased. With regards to PN requirements, I explained how the TTHM exceedance for Flint is determined (running annual average) and the PN requirement. I stressed that...although the city has met all of the monitoring and PN requirements for this violation, it may be worthwhile for them to convey the status of TTHMs ahead of state and federal reporting deadlines as a means towards regaining public trust. I also provided technical information pertaining to TTHMs and discussed the health-effects in more detail. The duration of the call was a half hour and Patricia seemed satisfied with my response to her questions/concerns. I offered her the opportunity to call me again if she has any further questions.

If any further action is needed regarding this inquiry, please let me know.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Willard, Veronica (DEQ)
Sent: Friday, January 09, 2015 2:16 PM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Mike – this is the official assignment.

From: DEQ-LogLetter
Sent: Friday, January 09, 2015 11:36 AM
To: Willard, Veronica (DEQ)
Cc: Thelen, Mary Beth (DEQ); Shaler, Karen (DEQ)
Subject: DIR00004 Warner / Water toxins in Flint MI

Assigned to ODWMA

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 8:44 AM
To: Rennaker, Joanne (DEQ)
Subject: FW: City of Flint-2014 Letters sent by DEQ

Fyi,

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howes, Sarah (DEQ)
Sent: Wednesday, January 14, 2015 8:42 AM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: City of Flint-2014 Letters sent by DEQ

Yes---Sorry. All formal correspondence that was send on DEQ letterhead.

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 14, 2015 8:41 AM
To: Howes, Sarah (DEQ)
Cc: Prysby, Mike (DEQ); Shekter Smith, Liane (DEQ)
Subject: Re: City of Flint-2014 Letters sent by DEQ

Sarah,

Could you be a little more specific. If you want all correspondence including emails it will be quite a bit and take some time.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

Sent from my iPhone

On Jan 13, 2015, at 5:10 PM, Howes, Sarah (DEQ) <HowesS1@michigan.gov> wrote:

> Mike or Steve.
>
> Could one of you send me copies of all documents that were sent to the City of Flint re drinking water in 2014 as soon as you get a chance?

Thanks,
Sarah

Sarah M. Howes | Legislative Liaison
Department of Environmental Quality
517.284.6707 O | C PPI

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 11:36 AM
To: Busch, Stephen (DEQ)
Subject: Flint resident letter
Attachments: Resp Ltr to resident.doc

Steve,

Attached is the letter to Ms. Warner that summarizes my call...routed to us from DCH ...since Ms. Warner contacted them first. I tried to attach the boiler plate opening and closing paragraphs that Joanne provided me; however, my link to the scanned documents won't connect. I you need to look at the boiler plate paragraphs, I can have Joanne email it to you. I will also forward you (in a separate e-mail) the original assignment from Veronica that shows the e-mail thread beginning with DHC...to verify that all the appropriate staff are being copied.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

January 14, 2015

{PRIVATE }

Ms. Patty Warner
2721 Coventry Court
Flint, Michigan 48503

Dear Ms. Warner:

SUBJECT: City of Flint – Water System, Total Trihalomethane (TTHM) Maximum Contaminant Level (MCL) Violation

Thank you for your e-mail of January 6, 2015, to Ms. Nancy Grijaiva in the Director's Office of the Michigan Department of Community Health (DCH). Your e-mail was referred from DCH to the Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA) for response.

District staff from the ODWMA contacted you on January 9, 2015 to address your concerns regarding the TTHM MCL violation of Flint's drinking water. The main concerns discussed included unacceptable quality of the drinking water at a high cost to Flint residents and the perceived delay in notifying residents of the TTHM MCL violation. Some of the factors contributing to the formation of TTHMs in the water distribution system were also discussed.

District Staff explained the need to complete capital improvements at the water treatment plant in order to treat water from the Flint River and to be ready for operation when water from Lake Huron via the Karegnondi Water Authority (KWA) becomes available. Also, the cost of committing to KWA and the infrastructure being installed are the main factors likely contributing to increased water rates. Staff stressed; however, that the city is responsible to inform their residents, in more detail, as to how the most recent water rates were established as a result of the expenditures made to proceed with the work described above.

District Staff also explained how the city's water distribution system storage reservoirs were kept full, with minimal cycling, while purchasing water from Detroit. This method of operation provided the city with several days of emergency storage in the event of an interruption of water service from Detroit (source via single pipeline). Although excess storage benefited the city while purchasing water from Detroit without causing additional TTHM formation, stagnant conditions within the reservoirs contributed to additional TTHMs after the city switched to the Flint River. The city has since changed their operating methodology of these reservoirs which has alleviated the stagnation.

District Staff confirmed that the city met the public notification requirements and the associated deadline to notify residents once the TTHM MCL violation became established. Establishment of the TTHM MCL violation is based on the running annual average on a quarterly basis; thus, the city was not in violation of the TTHM MCL until three quarters of monitoring were completed (November 2014). It wasn't until after the MCL was exceeded that the city was required to post the public notice. Although the city met all DEQ's TTHM monitoring and reporting requirements, it may be worthwhile for the city to convey the status of TTHMs to the public ahead of DEQ's reporting deadlines to help improve public relations.

If you need further information or assistance, please contact Mr. Michael Prysby, District Engineer, ODWMA, DEQ at (517) 290-8817,

Sincerely,

Stephen Busch, P.E.
District Supervisor
Office of Drinking Water and
Municipal Assistance
Lansing District Office
(517) 643-2314

cc: Mr. Richard Benzie, P.E., DEQ
Ms. Liane Shekter Smith, P.E., DEQ
Ms. Veronica Willard, DEQ
Ms. Nancy Grijalva, DCH

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 11:37 AM
To: Busch, Stephen (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI
Attachments: ODWMA 15 DIR00004I Warner.pdf

Steve,

Here is the original assignment fyi...

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Willard, Veronica (DEQ)
Sent: Friday, January 09, 2015 2:16 PM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: FW: DIR00004 Warner / Water toxins in Flint MI

Mike – this is the official assignment.

From: DEQ-LogLetter
Sent: Friday, January 09, 2015 11:36 AM
To: Willard, Veronica (DEQ)
Cc: Thelen, Mary Beth (DEQ); Shaler, Karen (DEQ)
Subject: DIR00004 Warner / Water toxins in Flint MI

Assigned to ODWMA

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 11:57 AM
To: Busch, Stephen (DEQ)
Subject: RE: Flint resident letter
Attachments: content.pdf; content 2.pdf

Thanks Steve,

I was able to connect to the scanner ...so here are the attached boiler plate paragraphs from Joanne.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 14, 2015 11:47 AM
To: Prysby, Mike (DEQ)
Cc: Rennaker, Joanne (DEQ)
Subject: RE: Flint resident letter

I won't be able to sign this letter until tomorrow morning. I will look at it this afternoon to make some changes.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 14, 2015 11:36 AM
To: Busch, Stephen (DEQ)
Subject: Flint resident letter

Steve,

Attached is the letter to Ms. Warner that summarizes my call...routed to us from DCH ...since Ms. Warner contacted them first. I tried to attach the boiler plate opening and closing paragraphs that Joanne provided me; however, my link to the scanned documents won't connect. I you need to look at the boiler plate paragraphs, I can have Joanne email it to you. I will also forward you (in a separate e-mail) the original assignment from Veronica that shows

the e-mail thread beginning with DHC...to verify that all the appropriate staff are being copied.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

OPENING PARAGRAPH (Continued)

BUREAU/DIVISION/OFFICE CHIEF/ASSISTANT DIVISION CHIEF'S SIGNATURE:

Thank you for your January 2, 2009, letter to Governor Jennifer M. Granholm regarding odors from the Algonac Wastewater Treatment Plant near your home. Governor Granholm has referred your letter to the Department of Environmental Quality (DEQ) for response.

Thank you for your letter of January 2, 2009, to United States Representative John D. Dingell expressing concern with sewage backups in basements in Gibraltar. Representative Dingell has forwarded your letter to the Department of Environmental Quality (DEQ) for response.

Thank you for your February 3, 2009, letter to Director Steven E. Chester concerning Pall Gelman Sciences, Inc. Director Chester has referred your letter to the Waste and Hazardous Materials Division (WHMD) for response.

Thank you for your letter of February 13, 2009, to Mr. Jim Sygo, Deputy Director, regarding funding for removal of underground storage tanks. Mr. Sygo has forwarded your letter to the Waste and Hazardous Materials Division (WHMD) for response.

Thank you for your January 10, 2009, letter to Ms. Carol Linteau, Legislative Director. Ms. Linteau has asked the Remediation and Redevelopment Division (RRD) to respond to your concerns regarding a remediation site in your district.

Thank you for your e-mail of February 1, 2009, to Director Steven E. Chester concerning mining in the Upper Peninsula. Director Chester has referred your e-mail to the Office of Geological Survey (OGS) for response.

LETTER BODY

Make sure all questions, concerns, and issues stated in the incoming correspondence are addressed. If detailed information is provided, use the name of the staff person who gathered the information. Letters that require a lengthy, detailed response shall be prepared as a staff report or another similar format as applicable, with a cover letter for the director's or Executive Division staff signature (see page 47). Italic type is now the preferred means of giving special emphasis to words and phrases instead of bolding or underlining.

From: Prysby, Mike (DEQ)
Sent: Thursday, January 15, 2015 9:53 AM
To: Busch, Stephen (DEQ)
Subject: Fwd: qualifications

I could respond to Ron's question....depending on field work may not get to run this one up the chain or else I can make brief summary and send to you.

Sent from my iPhone

Begin forwarded message:

> **From:** "Fonger, Ronald" <RFONGER1@mlive.com>
> **Date:** January 15, 2015, 9:30:37 AM EST
> **To:** "prysbym@michigan.gov" <prysbym@michigan.gov>
> **Subject: qualifications**
>
> Hi Mike:
> There's some reader conversation about the qualifications of those who operate the Flint Water Plant.
> I know there are requirements that some on staff have achieved a certain certification. I've heard city officials talk about that.
> What are the certifications required and how many employees have to have achieved it?
> Thanks,
>
> Ron Fonger
> MLive Media Group
> Reporter
>
> mobile PPI
> email rfonger1@mlive.com
> address 540 S. Saginaw St. #101, Flint MI 48502

From: Prysby, Mike (DEQ)
Sent: Thursday, January 15, 2015 12:49 PM
To: Fonger, Ronald
Cc: Busch, Stephen (DEQ);Benzie, Richard (DEQ)
Subject: Re: qualifications

Ron,
I am out of the office till next Tues; however, I am taking the opportunity to answer your question concerning qualification (certification requirements) for the Flint WTP. The city of Flint (WTP) is required to designate an Operator In Charge (OIC) holding an F-1 drinking water license. The F designation stands for Complete Treatment and the 1 designation stands for the level (based on pop served, greater than 20,000). Flint meets this requirement. Flint must also have a shift operator available having at least an F-4 license to cover shifts when the OIC is not present. The city employs numerous operators holding F-4, F-3, and F-2 licenses; thus, the city meets MDEQ's operator certification requirements.

Sent from my iPhone

On Jan 15, 2015, at 9:33 AM, "Fonger, Ronald" <RFONGER1@mlive.com> wrote:

> Hi Mike:
> There's some reader conversation about the qualifications of those who operate the Flint Water Plant.
> I know there are requirements that some on staff have achieved a certain certification. I've heard city officials talk about that.
> What are the certifications required and how many employees have to have achieved it?
> Thanks,
>
> **Ron Fonger**
> MLive Media Group
> Reporter
>
> mobile PPI
> email rfonger1@mlive.com
> address 540 S. Saginaw St. #101, Flint MI 48502

From: Prysby, Mike (DEQ)
Sent: Thursday, January 15, 2015 12:54 PM
To: Benzie, Richard (DEQ)
Subject: Re: Flint Drinking Water

Very good, my extended leave message states I will be out till Tues and to contact Steve B if an emergency...or I can change it to have them call you!

Sent from my iPhone

On Jan 15, 2015, at 12:43 PM, "Benzie, Richard (DEQ)" <BENZIER@michigan.gov> wrote:

> Thanks Mike. I would still recommend to OEA that they forward calls to you and let the caller decide whether to leave a message or attempt to reach someone else in the Lansing District.
>
> ---
>
> **From:** Prysby, Mike (DEQ)
> **Sent:** Thursday, January 15, 2015 12:31 PM
> **To:** Benzie, Richard (DEQ)
> **Subject:** Re: Flint Drinking Water
>
> Richard,
> I am out in the field today, flexing tomorrow, and out on Monday...I will respond to emergency calls but not sure if I should be taking Flint calls while out. I plan to participate in tomorrow's conference call from home with the City of Flint, DEQ, Gen Co. Concerning the upcoming public meeting on Jan 21st
>
> Sent from my iPhone
>
> On Jan 15, 2015, at 12:22 PM, "Benzie, Richard (DEQ)" <BENZIER@michigan.gov> wrote:
>
> > Mike Prysby first, then Steve Busch, then Adam Rosenthal, all in the Lansing District. Oh, then me or Liane.
> >
> > ---
> >
> > **From:** Drullinger, Dave (DEQ)
> > **Sent:** Thursday, January 15, 2015 11:12 AM
> > **To:** Benzie, Richard (DEQ)
> > **Subject:** Flint Drinking Water
> >
> > Hi Richard, OEA is getting calls and emails on the Flint drinking water issues. Do you have a contact person on that? Steve Busch?
> >
> > Thanks.
> >
> > === Dave

From: Prysby, Mike (DEQ)
Sent: Friday, January 16, 2015 10:11 AM
To: Busch, Stephen (DEQ)
Subject: Accepted: Pre-meeting Flint Drinking Water Public Meeting

From: Prysby, Mike (DEQ)
Sent: Thursday, January 22, 2015 1:05 PM
To: Rosenthal, Adam (DEQ)
Subject: FW: Flint water

If you could gather up some of this info that would be helpful...then I will contact Robin at the Free Press....meanwhile I now have the pleasure of calling the Detroit News concerning Flint....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Wurfel, Brad (DEQ)
Sent: Thursday, January 22, 2015 10:43 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Cc: Shekter Smith, Liane (DEQ); Karen Tommasulo
Subject: Fwd: Flint water

Mike, can you please contact Robin Erb at the Free Press?
I provided her and essential briefing, as she had not previously covered this issue.
But my remarks were on background.
Thanks.
b
Sent from my iPhone

Begin forwarded message:

> **From:** "Erb, Robin" <rerb@freepress.com>
> **Date:** January 22, 2015 at 10:39:18 AM EST
> **To:** "WurfelB@michigan.gov" <WurfelB@michigan.gov>
> **Subject: Flint water**
>
> Thanks for the time just now; it was nice to speak to you again.
>
> I'd love to connect with Mike as soon as he has a few minutes. I'm also hoping to nail down a timeline for the boil advisories, the dates of the samples that were problematic, when DEQ notified Flint of the exceedance problems, and the dates of meetings that DEQ has had with residents.
>
> My direct line is 313-222-2708. My cell is PPI
>
> Again, many thanks.

(And really, I don't think you're crazy to hang out on a slab of ice waiting for fish. Nope, not at all. Weirdo.)

Robin Erb
Detroit Free Press Medical Writer
160 W. Fort Street
Detroit, MI 48226
Metro desk: 313-222-6601
Direct line: 313-222-2708

Follow me on Twitter **@Freephealth**

From: Prysby, Mike (DEQ)
Sent: Thursday, January 22, 2015 3:04 PM
To: rerb@freepress.com
Subject: Flint TTHM Results
Attachments: Flint 2014 DBP results.pdf

Robin,

Attached is the summary of Flint's TTHM sample results beginning with the May 2014 quarter.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Flint 2014 TTHM & HAA5 results and Locational Running Annual Average (LRAA) 1/16/15

TTHM Results (mg/L)				
	5/21/14	8/21/14	11/20/14	LRAA
DBP1 McDonalds 3719 Davison	**0.162**	**0.145**	0.059	**0.092**
DBP2 Liquor Palace 3302 S. Dort Highway	**0.112**	**0.127**	0.033	0.068
DBP3 North Flint Auto 6204 N. Saginaw St.	**0.097**	**0.118**	0.041	0.064
DBP4 University Market 2501 Flushing Road	**0.106**	**0.196**	**0.094**	**0.099**
DBP5 Taco Bell 3606 Corunna Road	0.079	**0.181**	0.034	0.074
DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.088**	**0.144**	0.054	0.072
DBP7 Salem Housing 3216 MLK Boulevard	**0.082**	**0.112**	0.050	0.061
DBP8 BP Gas Station 822 S. Dort Highway	0.075	**0.112**	0.036	0.056

HAA5 Results (mg/L)				
	5/21/14	8/21/14	11/20/14	LRAA
DBP1 McDonalds 3719 Davison	**0.064**	0.043	0.016	0.031
DBP2 Liquor Palace 3302 S. Dort Highway	0.052	0.031	0.015	0.025
DBP3 North Flint Auto 6204 N. Saginaw St.	0.048	0.037	0.018	0.026
DBP4 University Market 2501 Flushing Road	0.055	0.017	0.024	0.024
DBP5 Taco Bell 3606 Corunna Road	0.050	0.024	0.015	0.022
DBP6 Rite-Aid Pharmacy 5018 Clio Road	0.049	0.030	0.017	0.024
DBP7 Salem Housing 3216 MLK Boulevard	0.041	0.025	0.005	0.018
DBP8 BP Gas Station 822 S. Dort Highway	0.038	0.040	0.021	0.025

Locational running annual average (LRAA): the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

Maximum contaminant level (MCL): the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.

The Stage 2 Disinfection By-Products Rule (DBPR) requires systems to meet an LRAA of 0.080 mg/L for TTHM and 0.060 mg/L for HAA5 at each compliance monitoring location.

From: Prysby, Mike (DEQ)
Sent: Friday, January 23, 2015 10:31 AM
To: Busch, Stephen (DEQ)
Subject: RE: Flint in the Free Press

Thanks for the e-mail on this...the article is also in the Lansing State Journal.....I tried to forward you the voicemail from Jim (GCHD) regarding their pursuit of determining the occurrence of Legionella in Flint.., let me know if you received it...otherwise I will call you..

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Friday, January 23, 2015 10:24 AM
To: Prysby, Mike (DEQ)
Subject: FW: Flint in the Free Press

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Berndt, Jason (DEQ)
Sent: Friday, January 23, 2015 10:23 AM
To: Fisher, Brant (DEQ); Philip, Kris (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: Flint in the Free Press

I'm sure we are all aware of the issue, but Flint is on the front page of the Detroit Free Press today.

http://www.freep.com/story/news/local/michigan/2015/01/22/water-woes-latest-hit-flint/22193291/

Jason Berndt
Environmental Quality Analyst
Office of Drinking Water and Municipal Assistance
Gaylord Field Office
~~517-284-6513~~
989-705-3420

From: Prysby, Mike (DEQ)
Sent: Monday, January 26, 2015 4:03 PM
To: ginovicci@gmail.com
Subject: Flint Water
Attachments: 1-6-2015 3-56-33 PM.jpg

Gino,

Attached is my pic for use in the telephone interview.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Monday, January 26, 2015 4:17 PM
To: Shekter Smith, Liane (DEQ);Wurfel, Brad (DEQ)
Cc: Busch, Stephen (DEQ);Benzie, Richard (DEQ)
Subject: RE: Wrong phone number.

I completed the phone interview with Gino Vicci (WNEM CH 5). Main topics covered included the safety of the drinking water for Flint residents and what the TTHM violation means, DEQ's role in working with the city, how TTHMs form and its standard, condition of the distribution system and how it is affecting the overall WQ, and the direction the city is taking to resolve the TTHM contamination.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

-----Original Message-----
From: Shekter Smith, Liane (DEQ)
Sent: Monday, January 26, 2015 1:01 PM
To: Wurfel, Brad (DEQ)
Cc: Busch, Stephen (DEQ); Benzie, Richard (DEQ); Prysby, Mike (DEQ)
Subject: FW: Wrong phone number.
Importance: High

Brad - did you have a chance to respond to Steve/Mike on this?

Are you available for an interview?

-----Original Message-----
From: Busch, Stephen (DEQ)
Sent: Monday, January 26, 2015 10:38 AM
To: Shekter Smith, Liane (DEQ); Wurfel, Brad (DEQ); Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: RE: Wrong phone number.
Importance: High

Mike called Mr. Wyatt.

WNEM 5 (CBS) would like to come to Lansing today to do a camera interview about the situation in Flint. Mike and I are not prepared to do this today and have other obligations. Please let me know how you would like to proceed.

We could do an interview on another day.

Stephen Busch, P.E.

Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance MDEQ
517-643-2314

-----Original Message-----
From: Shekter Smith, Liane (DEQ)
Sent: Monday, January 26, 2015 10:18 AM
To: Wurfel, Brad (DEQ); Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: RE: Wrong phone number.

Who is Jim Wyatt? Should I know this?

-----Original Message-----
From: Wurfel, Brad (DEQ)
Sent: Monday, January 26, 2015 10:16 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ)
Subject: Wrong phone number.

989-758-2044

Sent from my iPhone

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 27, 2015 9:20 AM
To: Busch, Stephen (DEQ)
Subject: Re: ABC12 News Flint water test results comment?

Absolutely ....and ...is the city aware of the sampling and/or have they had an opportunity to look at the results?

Sent from my iPhone

On Jan 27, 2015, at 9:17 AM, "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov> wrote:

> I would be sure to look into:
> Who collected the samples
> What sampling protocols were used
> Is the lab certified to run this analysis
> What lab method was used
>
> Stephen Busch, P.E.
> Lansing and Jackson District Supervisor
> Office of Drinking Water and Municipal Assistance
> MDEQ
> 517-643-2314
>
> **From:** Prysby, Mike (DEQ)
> **Sent:** Tuesday, January 27, 2015 8:55 AM
> **To:** Busch, Stephen (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
> **Subject:** FW: ABC12 News Flint water test results comment?
>
> I am in the position to look at these results; however, the validity of the samples may be questionable given they were most likely not collected by Flint operators or in accordance to Flint's Stage 2 DDBP plan. Any professional opinion may need to be carefully worded....
>
> Michael Prysby, P.E.
> District Engineer
> Office of Drinking Water and Municipal Assistance
> 517 290-8817
>
> **From:** Elliott, Larry F. [mailto:larry.f.elliott@abc12.com]
> **Sent:** Tuesday, January 27, 2015 7:48 AM
> **To:** Prysby, Mike (DEQ)
> **Subject:** ABC12 News Flint water test results comment?
>
> Mike,

We have just completed our own independent testing of multiple sites within the Flint water system and wonder if you'd be willing to look them over and give us your professional opinion.
I could email you the reports from the testing lab we used.
Larry Elliott
ABC12 News
(810)257-2805 office
PPI cell

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 27, 2015 11:03 AM
To: Feuerstein, Heather (DEQ)
Subject: Accepted: Meet w/ Sen. Ananich re: Flint Water Issues

From: Prysby, Mike (DEQ)
Sent: Tuesday, January 27, 2015 7:54 PM
To: Benzie, Richard (DEQ)
Cc: Busch, Stephen (DEQ);Shekter Smith, Liane (DEQ)
Subject: Re: ABC12 News Flint water test results comment?

Thanks Richard,
I will let the reporter know first thing tomorrow morn...did not hear from Brad yet...

Sent from my iPhone

On Jan 27, 2015, at 5:32 PM, "Benzie, Richard (DEQ)" <BENZIER@michigan.gov> wrote:

> Did you get a response from Brad?
>
> I am not sure what would be necessary to exempt the results sent to us from a FOIA request. However, we have 5 days to respond to FOIA requests, and we can ask for 5 more days (or longer in some cases), so it shouldn't be a problem to say we won't release the results before they do.
>
> ---
>
> **From:** Prysby, Mike (DEQ)
> **Sent:** Tuesday, January 27, 2015 2:38 PM
> **To:** Wurfel, Brad (DEQ)
> **Cc:** Busch, Stephen (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
> **Subject:** FW: ABC12 News Flint water test results comment?
>
> Brad,
>
> The reporter from ABC12 has provided me the answers to the questions I asked pertaining to the TTHM samples he collected (however...not the actual results) ...Before the results are provided to us, Larry wants us to agree not to release the results till their embargo time...this coming Friday....can we guarantee that? Besides that, I am comfortable in assisting you with the preparation of our comments back to ABC12.
>
> Michael Prysby, P.E.
> District Engineer
> Office of Drinking Water and Municipal Assistance
> 517 290-8817
>
> ---
>
> **From:** Elliott, Larry F. [mailto:larry.f.elliott@abc12.com]
> **Sent:** Tuesday, January 27, 2015 2:01 PM
> **To:** Prysby, Mike (DEQ)
> **Subject:** RE: ABC12 News Flint water test results comment?
>
> Mike..

In answer to your questions below:

1.Our sampling was done at 4 locations within the Flint city water system on Tuesday, January 20th, between 10:40am for our first location and 3:40 pm for our last location. They were not the same sites used for Flint's stage 2 DDBP monitoring.

2. I collected the samples after receiving instruction from our the independent certified testing lab we used. City certified operators did not collect or oversee the collection of our samples.

3. Sampling protocol: Run tap for 1-2 minutes.
Samples were collected in a 40 ml VOA vial with sodium thiosulfate as a dechlorinating agent. Samples were collected with zero head space. VOC's used 40 ml VOA with ascorbic acid then adding hydrochloric acid with zero head space. All other tests wereMDPE containers except bacteria samples were in specific BACTI containers.

4. Lab used was Water Tech in Howell, ID#0023

5. Method used is EPA524.2 (see above for sampling unit) or as specified on the report.

Please let me know if you can comment on our results. **I would only provide them to you with the agreement that keep them completely confidential and not release them to anyone before our embargo time of Friday, January 30th at 7 AM.**

Larry

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Tuesday, January 27, 2015 10:00 AM
To: Elliott, Larry F.
Cc: Busch, Stephen (DEQ); Benzie, Richard (DEQ); Wurfel, Brad (DEQ); Shekter Smith, Liane (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: ABC12 News Flint water test results comment?

Larry,

We are willing to review the TTHM results of all samples collected within the Flint water system for a limited assessment of the data. Please include the following information with the sample results:

1. Sampling location /time – was Flint's Stage 2 DDBP monitoring plan sites used?
2. Who collected the samples? Did city certified operators collect the samples or oversee the sample collection?
3. Sampling protocol (method)
4. Certified lab used
5. Lab method used & proper sampling unit

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Elliott, Larry F. [mailto:larry.f.elliott@abc12.com]
Sent: Tuesday, January 27, 2015 7:48 AM
To: Prysby, Mike (DEQ)
Subject: ABC12 News Flint water test results comment?

Mike,
We have just completed our own independent testing of multiple sites within the Flint water system and wonder if you'd be willing to look them over and give us your professional opinion.
I could email you the reports from the testing lab we used.
Larry Elliott
ABC12 News
(810)257-2805 office
PPI cell

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 28, 2015 8:38 AM
To: Daugherty Johnson;Hansen, Jeff
Cc: Brent Wright (bwright@cityofflint.com);Green, Warren
Subject: RE: MDEQ THM Meeting

Feel free to offer your times of availability for next week....so far, my calendar is open for all of next week....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Daugherty Johnson [mailto:djohnson@cityofflint.com]
Sent: Tuesday, January 27, 2015 4:52 PM
To: Hansen, Jeff
Cc: Brent Wright (bwright@cityofflint.com); Green, Warren; Prysby, Mike (DEQ)
Subject: Re: MDEQ THM Meeting

That day is not good for me. Were there other dates/times available?

Duffy

On Tue, Jan 27, 2015 at 4:07 PM, Hansen, Jeff <jrhansen@lan-inc.com> wrote:

Looks like we are confirmed for 9:00 am on 2/5/15 at the Flint WTP for the meeting requested by MDEQ to discuss progress and schedule.

Jeffrey R. Hansen

Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A MEAD & HUNT COMPANY

1311 South Linden Road, Suite B • Flint, MI 48532

T 810.820.2682 **C** PPI

www.lan-inc.com • JRHansen@lan-inc.com

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From: Prysby, Mike (DEQ)
Sent: Wednesday, January 28, 2015 12:54 PM
To: Wurfel, Brad (DEQ)
Subject: RE: Flint water media calls

Brad,

Reporter David (Coutser – sp?) from CH5 WNEM left me a voicemail with questions concerning TTHMs in Flint. The call back number he left me was (989) 395-4727.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Wurfel, Brad (DEQ)
Sent: Tuesday, January 27, 2015 1:30 PM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: Flint water media calls

I've been instructed to take all media inquiries on this for the foreseeable future. Please alert other staff as necessary. Thanks.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
PPI cell

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 28, 2015 2:43 PM
To: Daugherty Johnson
Cc: Hansen, Jeff;Brent Wright;Rob Bincsik
Subject: Re: MDEQ THM Meeting

I will 1pm on my calendar.

Sent from my iPhone

On Jan 28, 2015, at 2:41 PM, "Daugherty Johnson" <djohnson@cityofflint.com> wrote:

> Let's do 1 pm
>
> On Jan 28, 2015 12:48 PM, "Prysby, Mike (DEQ)" <PRYSBYM@michigan.gov> wrote:
>
> Feb 4th works for me....let me know what time.....
>
> Michael Prysby, P.E.
>
> District Engineer
>
> Office of Drinking Water and Municipal Assistance
>
> 517 290-8817
>
> **From:** Daugherty Johnson [mailto:djohnson@cityofflint.com]
> **Sent:** Wednesday, January 28, 2015 10:00 AM
> **To:** Hansen, Jeff; Prysby, Mike (DEQ)
> **Subject:** RE: MDEQ THM Meeting
>
> Feb 4th works for me.
>
> On Jan 27, 2015 5:02 PM, "Hansen, Jeff" <jrhansen@lan-inc.com> wrote:
>
> Hi Duffy,
>
> Sorry, I thought Brent had checked with you. What about Wednesday, 2/4?

Jeffrey R. Hansen

Senior Project Manager

From: Daugherty Johnson [mailto:djohnson@cityofflint.com]
Sent: Tuesday, January 27, 2015 4:52 PM
To: Hansen, Jeff
Cc: Brent Wright (bwright@cityofflint.com); Green, Warren; Mike Prysby
Subject: Re: MDEQ THM Meeting

That day is not good for me. Were there other dates/times available?

Duffy

On Tue, Jan 27, 2015 at 4:07 PM, Hansen, Jeff <jrhansen@lan-inc.com> wrote:

Looks like we are confirmed for 9:00 am on 2/5/15 at the Flint WTP for the meeting requested by MDEQ to discuss progress and schedule.

Jeffrey R. Hansen

Senior Project Manager

<image001.gif>

1311 South Linden Road, Suite B • Flint, MI 48532

T 810.820.2682 **C** PPI

www.lan-inc.com • JRHansen@lan-inc.com

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From: Prysby, Mike (DEQ)
Sent: Wednesday, January 28, 2015 3:50 PM
To: Wurfel, Brad (DEQ)
Subject: Re: Flint issue DEQ points. Please check me for message accuracy?

On my way to ur office

Sent from my iPhone

On Jan 28, 2015, at 3:39 PM, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov> wrote:

> Wyant has a meeting at 4 with Community Health and Treasury. Not to push, but I'd like to be able to share this over prior to that talk. Doable?
>
> ---
>
> **From:** Prysby, Mike (DEQ)
> **Sent:** Wednesday, January 28, 2015 3:09 PM
> **To:** Wurfel, Brad (DEQ)
> **Subject:** Re: Flint issue DEQ points. Please check me for message accuracy?
>
> Brad
> Printed it out....will read and let u know ASAP
>
> Sent from my iPhone
>
> On Jan 28, 2015, at 3:06 PM, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov> wrote:
>
> > Terry, all good and thanks for working these up. Been rebriefed by our staff, so let me throw in some things that are pertinent from that point.
> >
> > Following the formal approval of Flint into the KWA, DWSD sent Flint a letter saying their contract was thereby terminated (at some certain date).
> > According to our folks, Genesee County has been using DWSD water without a contract for years. But Flint took the letter to imply a water cutoff, and promptly turned to DEQ with a proposal to use the Flint River (their historic backup system).
> >
> > This proposed shift put the city in the business of water production, where they historically had been in the business of water transmission. DEQ approved the use of the river as a source, believing that with the proper conditions it could be managed. Several municipalities around the state use surface water supplies (rivers): Blissfield near Monroe, Manistique, and Alma to name a few.

The city constructed the facility and DEQ approved it April / May 2014.

There were some initial hiccups. Last summer, there were a couple of 'boil water' notices issued. One for a water test that showed e. coli, one for a break in the water main.

The challenge to using the Flint River as a source is that the condition of the water is variable and changes with season and weather. It has substantially more organic matter than deep lake sources like Lake Huron. This organic matter is mobilized by high water events, and warm weather also can account for more organic material in the water.

The treatment of the organic matter is done with chlorine. One might conclude that the perennial answer is just to use more chlorine to achieve water safety. However, at some point on the continuum, the chlorine and organic matter create TTHM – total trihalomethanes – as a byproduct. When the standard for those is exceeded over several consecutive quarters of testing, the operator of the system is required by law to issue public notice and submit an approved plan for addressing the situation.

You'll note that this regulatory approach means TTHM testing is done quarterly. That means people who use the system are exposed to TTHM for several months before the public notice is required. It's because TTHM is a chronic health threat. Over the long term (measured in decades), continued exposure can contribute to some known health problems. Put in context, the EPA (who established the standard and the rule) estimates this rule prevents an estimated 280 bladder cancer cases each year … out of more than 330 million people who use public water supplies around the country.

It's not nothing. State and federal law requires quarterly testing for TTHM and that the public be informed of it when three quarters' worth of consecutive testing shows elevated TTHM levels, and they must develop a plan to address it. But it's not like an eminent threat to public health like e. Coli or even coliform bacteria, which require immediate public notification and response and are part of daily / hourly testing of public water supplies.

It's clear the nature of the threat was communicated poorly. It's also clear that folks in Flint are concerned about other aspects of their water – taste, smell and color being among the top complaints.

The Safe Drinking Water Act requires public water supplies be tested for more than 90 toxins and pathogens. The act, and the program here in Michigan, work to ensure that water is safe to drink. The act does not cover aesthetic values of water. Here are some factors affecting the aesthetics of water in Flint.

1. It's the Flint River. The water supplied by DWSD historically came from Lake Huron. It's softer. With hard water, you get a different flavor and feel. It's why General Motors suspended use of Flint Water – it was rusting their parts. Also, there's the 'organics' factor (discussed previously).

2. The system is old. Flint has more than 500 miles of water pipes. More than half of those pipe miles are more than 75 years old. Much of it is cast iron. Hard water hits cast iron and exacerbates the rusty factor, which creates that brown water that angry residents were holding up in jugs for the media cameras last week. Valve failure has also been a key challenge. The system has an estimated 7,500+ valves. When they stick open or stick shut, it affects the hydrology of the system. Water can stagnate in pipes. The city has a backlog of valves that need to be addressed. They've done half a dozen or so since November.

3. Flint is old. Many of the homes served by the system are old. Residents who are getting brown water may have aged, cast iron pipes in their service connection to the city lines. The DEQ has been encouraging people with water coloration concerns to contact the city and see whether it is the service line or the City's line causing the issue. Again, discoloration is not an indicator of water quality or water safety, but we recognize that nobody likes it.

In summary, the City of Flint has tremendous need to address its water delivery system. We are not aware that they have any Capital Improvement account in place to set aside maintenance funds, much less line replacement project monies that will

require hundreds of millions. The City was approved for a Revolving Fund loan in 2008 or 2009. As a Distressed Community, they qualified for flexible terms and 2 percent increase. After they were notified they were approved for the loan, they declined it. Previous SRF loans from the state to Flint bear an outstanding balance of $20.7 million today.

The DEQ continues working with the city to address the TTHM issue. They can take interim steps – from scrubbing the insides of transmission lines to carefully monitoring the hydrological challenges in their system – to address customers' aesthetic concerns. Their TTHM numbers already are showing dramatic improvement; the November testing showed only one of seven sample points exceeding the standard. The key now is that the standard is an average of three quarters' worth of results. It will be some time before they are officially "not in violation." However, depending on weather in 2015, it's not unforeseeable that we will be having this conversation again by next Christmas.

The key to the conversation is that TTHM is not a top health concern. That's key because residents need to understand TTHM in context, and it is key because it appears the mayor has seized on the public panic (sparked, frankly, by their poor communication of the violation notice) to ask the state for loan forgiveness and more money for their infrastructure improvement.

Another key thing to remember is that once the city connects to the new KWA system in 2016, this issue will fade in the rearview.

Until then, our top messages:

1. The DEQ Drinking Water program works with communities around the state to ensure that municipalities provide customers with clean, safe drinking water.
2. Municipal water supplies are tested rigorously and regularly for more than 90 toxins and pathogens.
3. Flint's exceedance of the TTHM standard should reassure residents that the testing program is effective.
4. TTHM is not an immediate health threat. It is a chronic concern, one that can be problematic over the course of

many years. The public was notified because the law requires the city to make public notification, so that everyone can make informed decisions. This is particularly true for people with infants or those with compromised immune systems.

5. The DEQ is working with the City to address the situation. Recent tests show the TTHM numbers dropping rapidly. The department will continue working with the city in the months ahead, and residents should feel confident that their water is safe to drink unless the DEQ or City notifies them otherwise.
6. The discoloration and odor issues some Flint residents are experiencing are separate issues from the TTHM issue. TTHM is odorless, colorless and measured in parts per billion.
7. Flint water customers who have questions or concerns about their water should first contact the city to get answers and help. They also can contact the Michigan DEQ at ********** (web or phone address?)

From: Stanton, Terry A. (Treasury)
Sent: Tuesday, January 27, 2015 5:52 PM
To: Wurfel, Brad (DEQ); Wurfel, Sara (GOV); Murray, David (GOV)
Cc: Brown, Jessica (GOV); Stanton, Terry A. (Treasury); Sampson, Jeremy (TREASURY)
Subject: Flint issue
Importance: High

All,

Please see the attached TPs. I have also attached a couple pdfs noted in the TPs. They include the Treasurer's conditional approval of the eventual move to KWA and the EM's response to DWSD's "last, best offer."

Additionally, during my most recent interaction with Jerry Ambrose, he indicated that the water issue is critically important and that he and staff are working on it every day They have posted a host of information for residents on the City's website (http://cityofflint.com/?p=6251). They have extended the deadline for the Water Quality Consultant RFP to this Thursday, to ensure interested and qualified firms can submit comprehensive proposals and assist the city.

I have also attached the earlier talking points I had shared with Dave.

Let me know if you need anything else in the meantime...or before we speak again...

Terry

From: Prysby, Mike (DEQ)
Sent: Tuesday, February 03, 2015 11:53 AM
To: Busch, Stephen (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: Re: Flint event on Tuesday

Steve,
Brad just called me...him and the Director want me to accompany them to Flint...not to speak...more so to brief the Director on the ride over.

Sent from my iPhone

On Feb 3, 2015, at 9:33 AM, "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov> wrote:

> FYI.
>
> Stephen Busch, P.E.
> Lansing and Jackson District Supervisor
> Office of Drinking Water and Municipal Assistance
> MDEQ
> 517-643-2314
>
> ---
>
> **From:** Wurfel, Brad (DEQ)
> **Sent:** Monday, February 02, 2015 4:35 PM
> **To:** Wyant, Dan (DEQ); Datema, Maggie (DEQ); Tommasulo, Karen (DEQ); Thelen, Mary Beth (DEQ)
> **Cc:** Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
> **Subject:** Fwd: Flint event on Tuesday
>
> All,
> Here is some early information about the event tomorrow in Flint. State leaders, including director Wyant, Will announce $2 million in distress community grants. Based on what little I know so far, it sounds a little bit like SAW grants.
> Will share more details when I get them.
> b
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** "Murray, David (GOV)" <MurrayD1@michigan.gov>
> > **Date:** February 2, 2015 at 1:34:21 PM EST
> > **To:** "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>, "Biehl, Laura (GOV)" <BiehlL@michigan.gov>, "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>, "Clayton, Stacie (GOV)" <claytons3@michigan.gov>, "Walsh, John (GOV)" <WalshJ@michigan.gov>, "Brownfield, Michael (GOV)" <BrownfieldM2@michigan.gov>, "Allard, Claire (GOV)" <allardc1@michigan.gov>, "Rexford, Tori (GOV)" <rexfordt@michigan.gov>
> > **Subject: Flint event on Tuesday**
> >
> > Good afternoon team,

Just wanted to touch base on Tuesday's event in Flint. Unless told otherwise, I'm continuing to prepare for the event.

I touched base with Harvey and Stacie, who recommended we proceed. Harvey is approaching some stakeholders about appearing at the event, and will forward those names to me later today.

I left a message with Dick Posthumus to see if he has any concerns about proceeding.

The Senate Democrats said Sen. Ananich will want to appear. Katie Carey from the House said she would forward information to Rep. Neeley and Phelps. I have not heard back from her yet.

I've attached the backgrounder and the draft releases from Governor's Communications and Treasury. I've sent a message to the mayor's office about a quote, but have not heard back yet.

Brad and I spoke about Director Wyant's role and potential comments. He will point out that there are things the state can do to help monitor the situation, but also will note that the city's water infrastructure is aging, which contributes to the problems.

We need some direction on an advisory. Should this be listed on a typical advisory from the governor's office, or come from Treasury? Do we even issue an advisory in favor of just contacting media directly in the morning?

Please give the draft releases a read for potential changes, or let me know of other concerns.

Thank you!

Dave

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
PPI nobile
Twitter:@michigandmurray

<2 FDCVT Grant Awards draft.docx>
<Briefing Flint grant announcement.docx>
<RELEASE Flint water grants.docx>

From: Prysby, Mike (DEQ)
Sent: Wednesday, February 04, 2015 8:20 AM
To: Barger, Kristin (DEQ)
Subject: Re: Flint Drinking Water

Kristen,
I am out in the field today... Won't be back in the office till tomorrow.

Sent from my iPhone

On Feb 4, 2015, at 8:02 AM, "Barger, Kristin (DEQ)" <BargerK@michigan.gov> wrote:

> Good Morning,
>
> Mike
>
> We received a Voicemail from Scott Bonk (517-768-2816) he said that he would like to talk to someone about possible solutions to the drinking water problem.
>
> Thank you.
>
> *Kristin Barger*
> Office of Environmental Assistance
> Dept. of Environmental Quality
> PO Box 30457
> Lansing, MI 48909
> 800-662-9278 or 517-284-6853
> <image001.gif><image002.jpg>

From: Prysby, Mike (DEQ)
Sent: Thursday, February 05, 2015 9:20 AM
To: Swendsen, Kurt (DEQ)
Subject: Re: Interview Aids

Kurt,
I am not aware of any DWRF loans that Flint is pursuing thus year. I anticipate once they quantify the extent of their distribution system being in a state of disrepair ...they will be a good candidate for funding.

Sent from my iPhone

On Feb 5, 2015, at 8:42 AM, "Swendsen, Kurt (DEQ)" <SWENDSENK@michigan.gov> wrote:

> Since I was the project manager for the previous Flint loans, I've been keeping an eye on the news reports myself. I asked Rowe if they plan on submitting a project plan this May but haven't heard answer from them. Do you know whether Flint is trying to put together a project plan? If so, with it being such a political project, it would be good for me and you to get a copy of the draft project plan, which would ideally be available this month.
>
> ---
>
> **From:** Prysby, Mike (DEQ)
> **Sent:** Thursday, February 05, 2015 8:20 AM
> **To:** Swendsen, Kurt (DEQ)
> **Subject:** RE: Interview Aids
>
> Kurt,
>
> Good luck on the interview, sorry I didn't get back with you...wasn't ignoring ...just been totally swamped with the Flint situation.....
>
> Michael Prysby, P.E.
> District Engineer
> Office of Drinking Water and Municipal Assistance
> 517 290-8817
>
> ---
>
> **From:** Swendsen, Kurt (DEQ)
> **Sent:** Thursday, February 05, 2015 8:04 AM
> **To:** Prysby, Mike (DEQ)
> **Cc:** Skinker, Bethel (DEQ)
> **Subject:** Interview Aids
>
> Hi Mike,
> I wanted to let you know that Bethel pointed me to the OTU short courses booklets, which I'm now diving into. They will be a great help and will more than fill up my time between now and next week, so I'm all set for reading materials and you can therefore disregard my email from last week.
>
> Kurt Swendsen

DEQ - Revolving Loan Section
(517) 284-5418

From: Prysby, Mike (DEQ)
Sent: Friday, February 06, 2015 11:01 AM
To: emurphy@cityofflint.com
Subject: FW: Water Supply Sources

Elizabeth,

Below is a link to our website that lists all of surface water systems in Michigan. You will need to scroll down to the bottom of the list to see the listing of supplies using a river as their source. Also, I am not aware of any source water assessment conducted for the Flint River watershed; however, I would like to confirm that. I will let you know asap once I obtain the confirmation.

http://www.michigan.gov/deq/0,4561,7-135-3313_3675_3691-9775--,00.html

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Friday, February 06, 2015 11:37 AM
To: Benzie, Richard (DEQ)
Subject: Flint

Richard,

Just received the 15-page source water assess. of the Flint River from Jason. I will forward this to the city as requested.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Friday, February 06, 2015 12:55 PM
To: Berndt, Jason (DEQ)
Subject: RE: Source Wster assessment Flint River

Jason,

I scrolled through the Flint assessment several times and did not see lat...long. Cooridinates for the intake....and only very basic mention of its construction....so I'm not sure where to edit....I couldn't see where you made edits in the St. Ig. Assessment. Call me before 2 if you get a chance...perhaps I'm missing something. Thanks

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Berndt, Jason (DEQ)
Sent: Friday, February 06, 2015 11:35 AM
To: Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: RE: Source Wster assessment Flint River

See the attachment.

From: Prysby, Mike (DEQ)
Sent: Friday, February 06, 2015 11:04 AM
To: Berndt, Jason (DEQ)
Subject: Source Wster assessment Flint River

Jason,

Has a source water assessment been performed for the Flint River watershed...spec. for the Flint WTP intake? If so, the city of Flint would like to obtain a copy of source water assessment report.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Friday, February 06, 2015 1:49 PM
To: emurphy@cityofflint.com
Cc: 'bwright@cityofflint.com'
Subject: Flint River Source Water Assessment
Attachments: Flint River Source Water Assess..doc

Elizabeth,

Attached is a copy of the Flint River Source Water Assessment report for your information. Water treatment plant staff should have a copy of this report, if not, please provide them with a copy.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

Source Water Assessment Report for the City of Flint Water Supply Flint River Emergency Intake February 2004

City of Flint Water Treatment Plant, Flint, Michigan

Prepared for:

City of Flint Water Supply; WSSN 2310

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Michigan Source Water Assessment Report 54

Executive Summary

The purpose of the Source Water Assessment is to analyze the sensitivity and determine susceptibility of a community's source of drinking water to potential sources of contamination.

Sensitivity is determined from the natural setting of the source water (raw water to the water treatment plant), and indicates natural protection afforded the source water. Using procedures established in the Great Lakes Protocol, Michigan Source Water Assessment Program, the ***emergency*** *intake for the Flint Water Treatment Plant has a very high degree of sensitivity to potential contaminants. When the effects of agricultural and urban runoff in the Flint River watershed are considered, the Flint intake is categorized as very highly sensitive.*

Susceptibility identifies factors within the community's source water area that may pose a risk to the water supply. The susceptibility determination provides information with respect to listed facilities and land areas within the source water area that should be given greater priority and oversight in implementing a source water protection program. The source water area for the Flint ***emergency*** *intake includes 96 potential contaminant sources, 16 listed potential contaminant sources within the susceptible area, plus urban and agricultural runoff from the Flint River watershed into the Flint River. The potential contaminant sources, in combination with the very highly sensitive intake, indicate that the Flint* ***emergency*** *intake source water is very highly susceptible to potential contamination.*

The Flint ***emergency*** *intake source water is categorized as very highly susceptible, given land uses and potential contaminant sources within the source water area. However, it is noted that when operating, the City of Flint Water Treatment Plant has effectively treated this source water to meet drinking water standards. The City of Flint has instituted pollution prevention programs, but should be cognizant of additional potential threats to its source of drinking water that are identified in this report. This report explains the background and basis for these determinations.*

Using this Assessment

Clean, safe drinking water is fundamental to the viability of any community. Protecting the drinking water source is a wise and relatively inexpensive investment in your community's future. The overall intent of this assessment is to provide background information for your community to use in developing a local source water protection program. The assessment benefits your community by providing the following:

- ***A basis for focusing limited resources within the community to protect the drinking water source(s).***

  The assessment provides your community with information regarding activities within the **source water area (SWA)** that directly affect your water supply. It is within this SWA that a spill or improper use of **potential contaminants** may cause these contaminants to migrate toward the water **intake**. By examining where the source waters are most susceptible to contaminants, and where potential contaminants are located, the assessment clearly illustrates the potential risks that should be addressed.

- ***A basis for informed decision-making regarding land use within the community.***

  The assessment provides your community with a significant amount of information regarding where your drinking water comes from (the source) and what the risks are to the quality of that source. Knowing where the resource is allows your community planning authorities to make informed decisions regarding proposed land uses within the SWA that are compatible with both your drinking water resource and the vision of growth embraced by your community.

- ***A basis for dealing with future regulations.***

  The assessment has been designed to functionally meet proposed requirements for surface-water supplies. Information needed to address regulatory needs and requirements has been collected and made available to your community through this report.

This source water assessment also provides the basis for a locally developed, voluntary source water protection program. Communities interested in voluntarily developing source water protection programs should contact the Michigan Department of Environmental Quality (MDEQ) or visit the Department web page at http://www.deq.state.mi.us.

Introduction

In 1996, Congress amended the **Safe Drinking Water Act** and provided resources for state agencies to conduct source water assessments by identifying SWAs, analyzing the **sensitivity** of the source to natural conditions, conducting contaminant source inventories, and determining the **susceptibility** of the source to potential contamination. Delineations, sensitivity analyses, contaminant inventories, and susceptibility determinations comprise a "source water assessment." Assessments will be completed for every public water supply source in Michigan. To support this effort, the MDEQ Water Division established a partnership with the U.S. Geological Survey (USGS) to develop a method for conducting source water assessments for surface water supplies (Sweat and others, 2000; Sweat and others, 2001).

The requirements for public water supplies in Michigan to meet United States Environmental Protection Agency (USEPA) **maximum contaminant levels** (MCLs) provide some degree of assurance of safe drinking water; however, all systems are vulnerable to potential contamination. One of the best ways to ensure safe drinking water is to develop a local program designed to protect the source of drinking water against potential contamination. Not only does this add a margin of safety, but it also raises the awareness of consumers and/or the community of the risks of drinking water contamination. It is expected that source water assessment results will provide a basis for developing a source water protection program.

Background

Flint is located in Genesee County, about 55 miles northwest of Detroit, Michigan (fig. 1). The city of Flint water supply serves a population of 125,000. In 1967, the city connected to the Detroit Water and Sewage Department (DWSD) water supply and the Flint Water Treatment Plant (WTP) was placed on stand-by operation. The city is required by the MDEQ to maintain this treatment facility for reliabilty since the city obtains treated water through a single pipeline from the DWSD Lake Huron WTP which is subject to interruption of service. The present intake at the Flint WTP was constructed in 1948 and consists of a concrete box structure on the edge of the Flint River. The intake structure has a bottom elevation of 700.00 and connects through a 72-inch concrete pipe to the low service pump station. Low service pumps lift the river water through the WTP processes of conventional treatment and lime-soda softening .

Flint WTP Emergency, Flint River Intake Structure (Viewed from downstream)

Treatment at the plant includes the addition ferric chloride as a coagulant, lime and soda ash for softening, chlorine for disinfection, and fluoride addition for dental health.

Water treatment plants are periodically inspected to identify construction, maintenance, operational or source defects that could make them vulnerable to contamination, particularly from contaminants that are microbial in nature, such as fecal coliforms. Water suppliers are provided a sanitary survey report that notes deficiencies in the system, and the State may direct the system to make necessary corrections. The sanitary survey is an important part of a safe drinking water program.

Climate

The Flint water supply is located in the central Lower Peninsula hydrologic province (Rheaume, 1991), in the Flint River watershed (USGS, 1974, 1982). The region experiences temperate summers with moderate winters. The Flint Bishop International Airport Weather Bureau station reports that the average annual precipitation for the climatic years 1887-2001 was 30.28 inches and the average from the past 5 years is 31.42 inches (NOAA, 2001), with about 13 percent of that as snowfall between November and March. Annual average runoff for the Flint SWA, extrapolated from Miller and Twenter (1986, fig. 1) is 9 to 10 inches.

Source Water Area Geology and Hydrology

The study area for evaluating the extent of the Flint emergency intake SWA includes the upper reaches of the Flint River watershed (fig. 1). Flint is located roughly in the middle of the Flint River watershed. The SWA consists of lacustrine clays and silts; end moraines of coarse- and medium-textured till; fine-, medium-, and coarse-textured glacial tills ; and postglacial alluvium. The SWA is underlain by Bayport Limestone, Marshall Sandstone and mixed shales, sandstones, and limetsones of the Saginaw and Michigan Formations (Martin, 1955; Milstein, 1987). Soils underlying the Flint SWA are primarily associations of the Blount, Boyer, Brookston, Capac, Ceresco, Celina, Chelsea, Cohoctah, Conover, Del Ray, Kibbie, Lapeer, Lenawee, McBride, Metea, Miami, Montcalm, Sloan, Spinks series (U.S. Department of Agriculture, 1961; BASINS, 1998; MIRIS, 2000). They include loams, loamy sands, fine sandy loams, silty clay and muck.

Flint River – Source Water for City of Flint WTP

Soil permeability is based on the calculated time of travel, in inches per hour (in/hr), for water to move vertically through a saturated soil zone. Soil thickness and permeability values are available in soil survey reports published by the National Cooperative Soil Survey and U.S. Department of Agriculture (1982, 1992, 1993, also 2 county reprints in press). Permeability ranges from less than 0.06 in/hr, rated as very slow, to more than 20 in/hr, rated as very rapid.

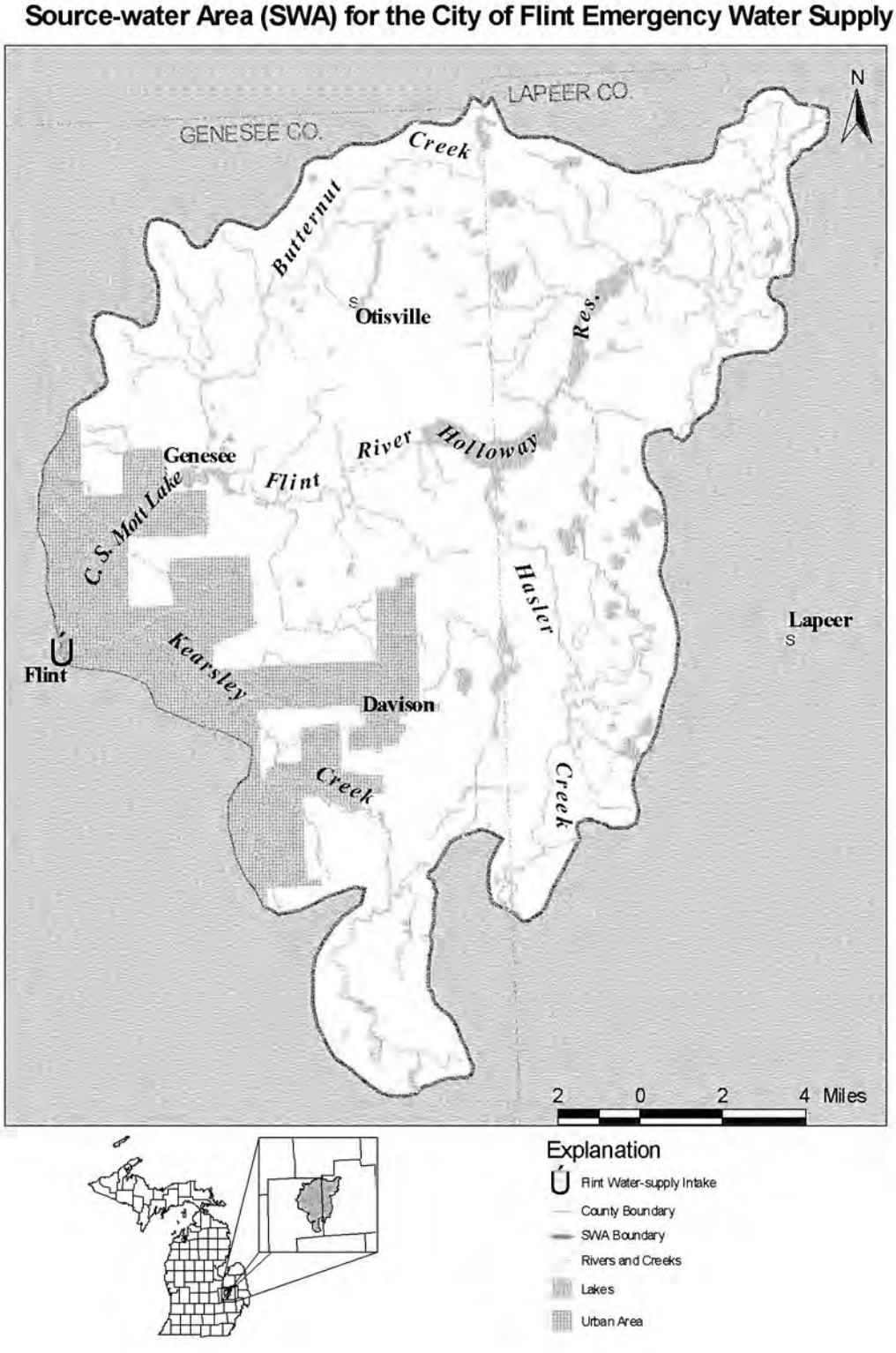

Figure 1. Source-water area (SWA) for the evaluation of the Flint emergency intake, Flint, MI.

Mott Lake and Dam on Flint River upstream of Flint WTP

Very slowly permeable soils significantly reduce the movement of water through the soil zone and, as a result, allow greater time for natural degradation of contaminants. However, such soils also provide for rapid overland transport of contaminants directly to receiving waters, which in turn may affect the water supply intake. Erosion and transport of soils by surface waters can cause an increase in turbidity. In contrast, very rapidly permeable soils allow for rapid infiltration and passage through the soil zone from the surface. Such soils potentially allow rapid transport of contaminants with minimal contact-time available for contaminant breakdown.

Mean, area-weighted, depth-integrated permeabilities for the Flint SWA range from 0.6 to as much as 7.8 in/hr. The mean permeability is 3.1in/hr (Schneider and Erickson, undated, series of 5 maps; BASINS, 1998; MIRIS, 2000). Soil permeability ranges from moderately slow in the northeastern portion of the SWA to moderate over the eastern portion of the SWA to moderately rapid throughout the central and western portions of the SWA, and rapid around the Flint River (fig. 2; U.S. Department of Agriculture, 1961; BASINS, 1998; MIRIS, 2000). Areas adjacent to the Flint River are underlain by highly sensitive drift lithologies, whereas the remainder of the SWA is underlain by least sensitive drift lithology (Lusch and others, 1992).

The Flint SWA contains an area of about 237 square miles (mi2). There are is one operable gage within the Flint SWA and a Flint River gage which operates approximately 9 miles downstream from the Flint Emergency Intake. Between 1932 and 2002 discharge has been recorded at this station by the USGS (Blumer and others, 2002). Annual mean discharge at the Flint River at Flint gauging station was 339 cubic feet per second (cfs) between 1932 and 2001, and ranged from 153 to 1258 cfs. Velocity measured at this stream gage was used to estimate the distance in which contaminants could travel within 24 hours, or the 24-hour time-of-travel (TOT) for this area on the Flint River. The distance calculated for the 24-hour TOT was approximately 27 miles.

Kearsley Lake and Dam on Kearsley Creek Upstream of Discharge to Flint River and Flint WTP Emergency Intake

Soil Permeability for the Flint Source-water Area, Flint, MI

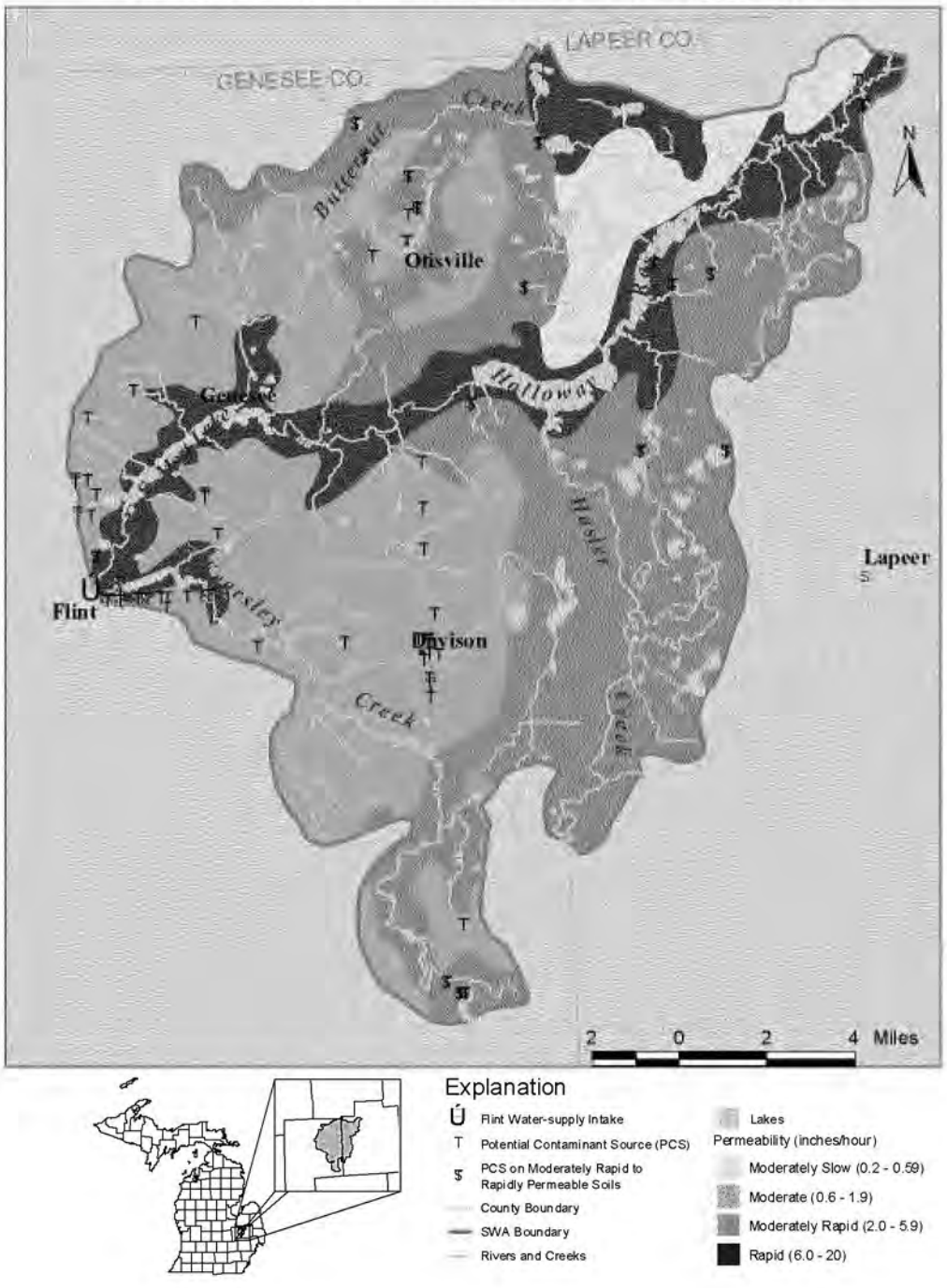

Figure 2. Soil permeability for the Flint emergency water-supply intake SWA. Flint, MI.

History of Raw Water Quality at the Source

Public water supplies are required to routinely monitor raw water quality for selected parameters to optimize treatment, and to monitor treated water quality for a list of contaminants that is determined by MDEQ and the Safe Drinking Water Act. A detection of any contaminant may indicate that a pathway exists for contaminants to reach the intake. It is important to realize that the results from a given sample only provide information regarding the water quality at the time the sample was collected. Water quality can change with time for a number of reasons. The fact that a water sample does not contain contaminants is no guarantee that contamination will not occur in the future. Conversely, the detection of a contaminant in the past does not indicate that it will occur in the future.

The Flint WTP records for the last 3 years of routine operation, 1965-1967 show that water use fluctuated between 34.4 and 46.5 million gallons per day (MGD), with an average daily use of 38.5 MGD. Raw water quality reported for these three years ranged from 5 to 183 nephelometric turbidity units (NTU) for turbidity, 203 to 375 mg/l total hardness as CaCO3, 116 to 235 mg/l alkalinity as CaCO3, 16 to 46 mg/l chlorides and 8.2 to 8.5 units for pH. Precipitation events were noted to increase turbidity and lower hardness. An analysis of flow duration for the Flint River and source water chemistry would probably indicate that there may be an indirect correlation between turbidity, suspended sediments, and coliforms and high flows associated with spring snowmelt and precipitation runoff events.

In recent years, the Flint WTP has undergone operational and process improvements for water treatment. Raw water quality during these testing periods when the WTP was operating but discharging to waste are noted in the table below.

Date of Tests	Turbidity	Total Organic Carbon	pH	Alkalinity	Hardness
	(NTU)	(mg/l)	(pH units)	(mg/l)	(mg/l)
12/5-7/2000	4.2	8.75	7.8	249	324
1/16-18/2001	2.4	8.5	7.7	275	363
3/20-21-2001	5.4	N/A	7.9	196	266
4/16-18/2001	7.6	8.6	8.2	213	284

Source Water Assessment Methodology

Technical guidelines for completing source water assessments are contained in the Michigan Source Water Assessment Program, Assessment Protocol for Great Lakes Sources (Protocol) (MDEQ, 1999, Appendix L) available at http://www.deq.state.mi.us/dwr. In general, an assessment is a process for evaluating a drinking water supply and the potential for its treated water to exceed an MCL due to raw water contamination. A source water assessment considers the SWA, potential sources of contamination within the SWA, conditions of the water supply intake, and susceptibility to contaminants in order to identify potential risks to drinking water quality. Although the Protocol provides the minimum requirements and instructions on how to conduct an assessment, each water supply is unique with respect to how the process is carried out, due to local conditions and information. Sweat and others (2000, 2001) have developed and documented the methodology used in the preparation of this assessment.

Delineating Source Water Areas

Delineation of the SWA is accomplished by using geographic information system (GIS) software to map the watershed(s) that have the potential to affect source water at the intake. Using information from the water supply, a critical assessment zone (CAZ) is defined for the intake (MDEQ, 1999, Appendix L). A buffer is then created along any shoreline intersected by the CAZ, and from the edge of the CAZ to the mouth of any river(s) that might influence the intake. Finally, the buffer is extended along the shoreline of any river(s) that might influence the intake, from the mouth of the river to its headwaters. The area defined by the CAZ, river and shoreline buffers is termed the susceptible area. The susceptible area within the SWA defines locations where a water supply should focus its management strategies and resources to benefit the drinking water resources.

Using the Great Lakes Protocol and the Flint water supply information:

- The CAZ for the Flint intake is assigned as 3,000 ft since the intake is located in an inland river (fig. 3).
- The susceptible area along the shoreline is determined to be: A distance of 300 ft inland along the banks of the Flint River and its tributaries (fig. 4).

Contaminant Source Inventory

Past, current, and potential future sources of contaminants were inventoried to identify several categories of potential sources of contaminants including microorganisms (bacteria, oocysts, and viruses), inorganic

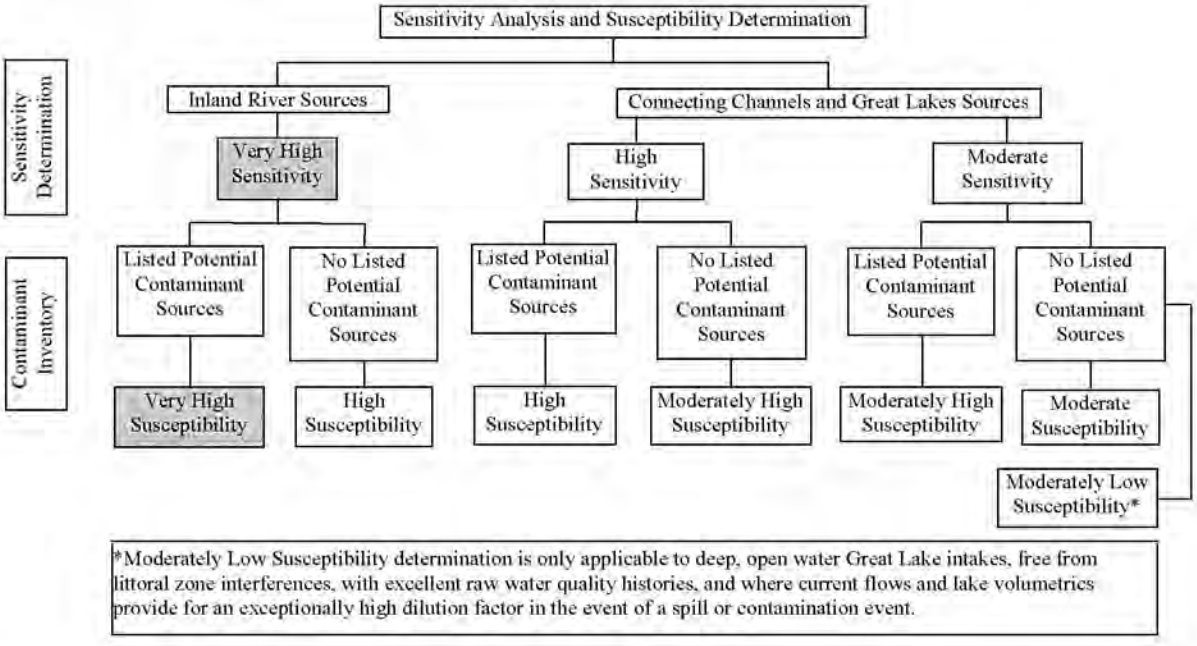

Figure 53. Surface-water sSource sSensitivity aAnalyses and sSusceptibility dDetermination for the ~~Ann Arbor~~Flint emergency water-treatment-plant source-water areas.

compounds (nitrates and metals), organic compounds (solvents, petroleum compounds, pesticides), and disinfection by-product precursors (trihalomethanes, haloacetic acids).

It is important to remember that sites and areas identified by this process are only potential contaminant sources used and managed properly. In addition, assumptions were made about particular types of land uses and risks associated with those land uses. Assumptions are discussed further in the results portion of this report.

The process for completing the inventory included several steps, which are summarized as follows:

1. Reviewed readily available land use maps and historical/current aerial photographs.
2. Plotted relevant information from applicable state and federal regulatory databases including the following lists:
   - MDEQ leaking underground storage tank (LUST) sites;
   - MDEQ registered underground storage tank (UST) sites;
   - MDEQ Environmental Cleanup Site Information System (ECSI) sites;

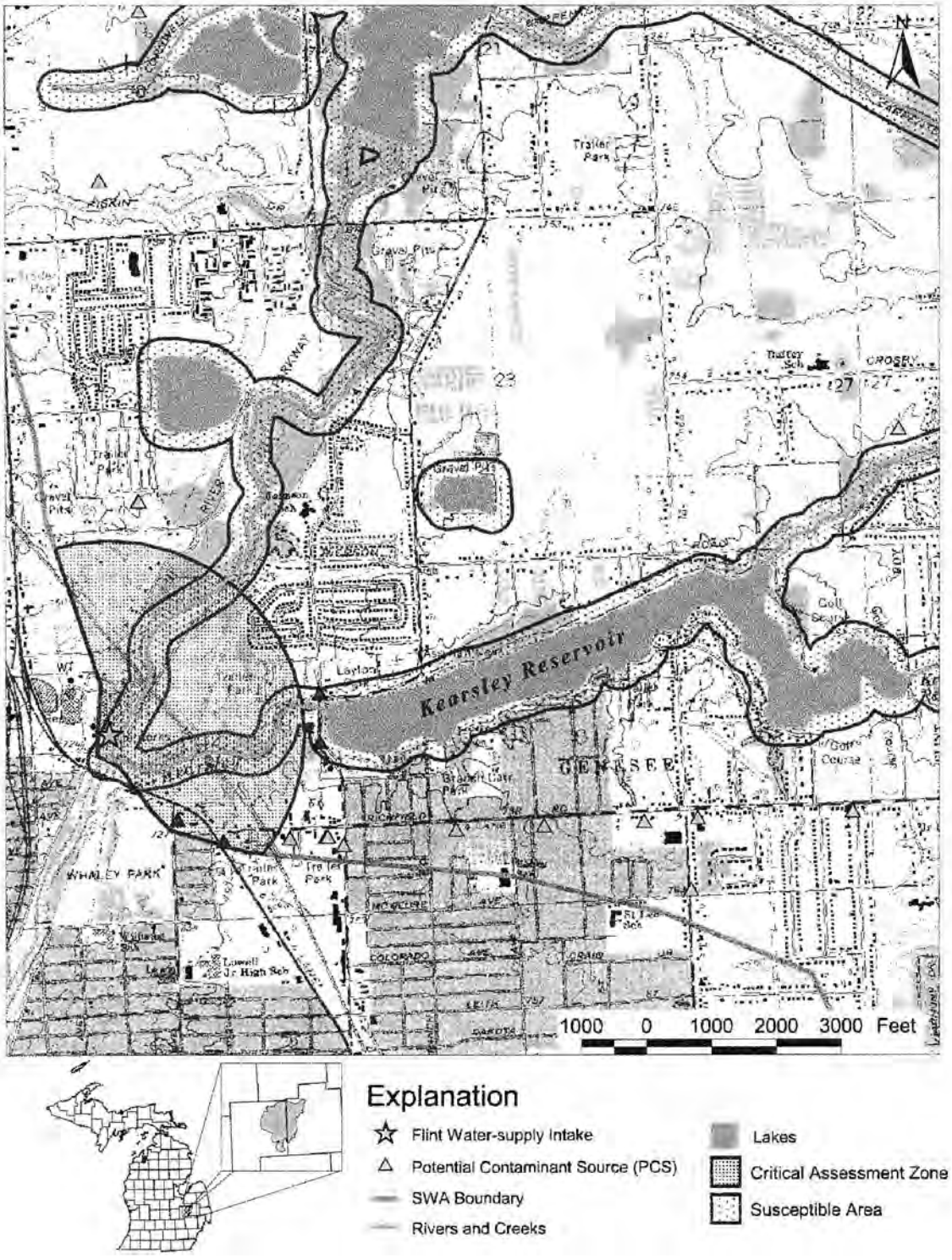

Figure 4. Critical Assessment Zone (CAZ) for the Flint emergency water-supply intake, Flint, MI.

- ·MDEQ Source Information System (for water discharge permit sites including National Pollutant Discharge Elimination System (NPDES) permits, Water Pollution Control Facility (WPCF) permits, storm water discharge permits, and on-site sewage (septic) system permits);
- ·MDEQ Underground Injection Control (UIC) database;
- ·MDEQ Active Solid Waste Disposal Permits list;
- ·Michigan Department of Transportation (MDOT) - Hazardous Materials database;
- ·State Fire Marshall registry of above-ground fuel storage tank sites;
- ·State Fire Marshall Hazardous Material Handlers and Hazardous Material Incidents (HAZMAT) sites;
- ·U.S. EPA BASINS software, version 2.1,
- ·U.S. EPA Envirofacts database;
- ·U.S. EPA Resource Conservation Recovery Act (RCRA) generators or notifiers list;
- ·U.S. EPA RCRA Treatment, Storage, and Disposal Facility (TSDF) Permits list;
- ·U.S. EPA National Priorities List (NPL);
- ·U.S. EPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLA) List;
- ·U.S. EPA RCRA Corrective Action Activity List (CORRACTS);
- ·U.S. Department of Transportation (DOT) Hazardous Materials Information Reporting System (HMIRS);
- ·U.S. EPA Toxic Chemical Release Inventory System (TRIS); and
- ·U.S. EPA Oil Pollution Act of 1990 Spill Response Atlas

3. Met with public water supply and community officials on June 11, 2003 to identify potential sources not listed elsewhere in databases or on maps and completed a preliminary inventory form to be used in completing the SWA base map. Subsequent contacts by email and telephone on numerous occasions to request additional data, clarify data, and discuss results.
4. Land use and/or ownership (for example, residential/municipal; commercial/industrial; agricultural/forest; and other land uses) was mapped and evaluated in relation to PCS, soil characteristics, and proximity to the intake(s).
5. Conducted an informal field inventory to locate additional PCS.
6. Completed final inventory form of PCS and plotted locations of PCS on the base map.

The purpose of the inventory is three fold: first, to provide information on the location of PCS, especially those within the susceptible area; second, to provide an effective means of educating the public about PCS; and third, to provide a reliable basis for developing a management plan to reduce potential contaminant risks to the Flint water supply.

The inventory process attempts to identify potential point-source contaminants within the SWA. It does not include an attempt to identify specific potential contamination problems at specific sites, such as facilities that do not safely store potentially hazardous materials. However, assumptions were made about particular types of land use. For example, it is assumed that rural residences associated with farming operations have specific potential contamination sources such as fuel storage, chemical storage and mixing areas, and machinery repair shops. It should also be noted that although the inventory depicts existing agricultural uses (crops grown), these are likely to undergo continual change due to normal crop rotation practices. What is irrigated farmland now may be non-irrigated farmland next year, or vice versa.

The results of the inventory were analyzed in terms of current, past, and future land uses and their relationship to the susceptible area and the supply intake. In general, land uses and PCS that are closest to the supply intake pose the greatest threat to a safe drinking water supply. Inventory results are summarized in table 1, and are shown on figure 5.

Many PCS are readily identifiable because they have a single discharge point, and often a permit is required for these discharges. However, other PCS have diffused, poorly defined discharge locations. These are known as non-point discharges because they occur over large areas and may not be quantifiable by readily accepted methods. These non-point source discharges are difficult to identify and control, and consequently to quantify, yet they are a major source of water pollution (Carpenter and others, 1998). Non-point sources also include atmospheric deposition over water and land, and include urban, rural, and

Table 1. Potential contaminant sources in the source water area

Type of Potential Contaminant Source (PCS)	Number of PCS	Number of PCS in Susceptible Area
Hazardous or solid waste site permits	71	11
Industrial facility discharge site permits	9	3
National priority list sites	1	0
Permit compliance system	12	2
Toxic release inventory permits	3	0
TOTALS	96	16

agricultural runoff from areas such as lawns, golf courses, farm fields, pastures, parking lots, and roadways. Runoff from these areas can contain many types of pollutants including sediments, metals, organic and inorganic chemicals, viral and bacterial pathogens, pharmaceuticals, and animal wastes. Transportation also represents a non-point source of contamination. Trucking and railroads transport potential contaminants through the SWA. An accident causing a spill could lead to potential contaminants entering a storm sewer, or in the case of boaters or rail transportation, directly to the Flint River. Petroleum pipeline crossing the upper reaches of the Flint River also pose contaminant threats.

Non-point sources of concern to the Flint water supply are primarily from storm sewers and from industrial, commercial, and residential sources in the SWA and communities upstream of the intake. A railroad bridge immediately upstream in the CAZ of the intake carries occasional train traffic described as hazardous. The West Boulevard storm sewer which discharges in the CAZ provides drainage to the Flint River from an industrialized area.

Railroad Trestle over Flint River Immediately Upstream of Flint WTP

The Michigan Department of Agriculture is working to identify dairies and concentrated animal feedlots (greater than 1000 animal units) in the Flint River watershed upstream of the intake.

The U.S. Environmental Protection Agency (USEPA) has identified one impaired water body in the Flint SWA on its Clean Water Act 303(d) list. The parameter of concern within the Holloway Reservoir is fish consumption advisories for PCBs. An additional impaired water body exists upstream of the SWA but not within the SWA itself. This water body is the collective of unnamed drains in Metamora, and the parameters of concern are untreated sewage discharge and pathogens (MDEQ, 2002).

In general, PCS within the susceptible area pose greater risks than those outside the susceptible area. The presence of PCS within the SWA indicates potential sources of chemicals that could, if improperly managed or released, impact the water quality at the intake. Small quantities of these chemicals, in some

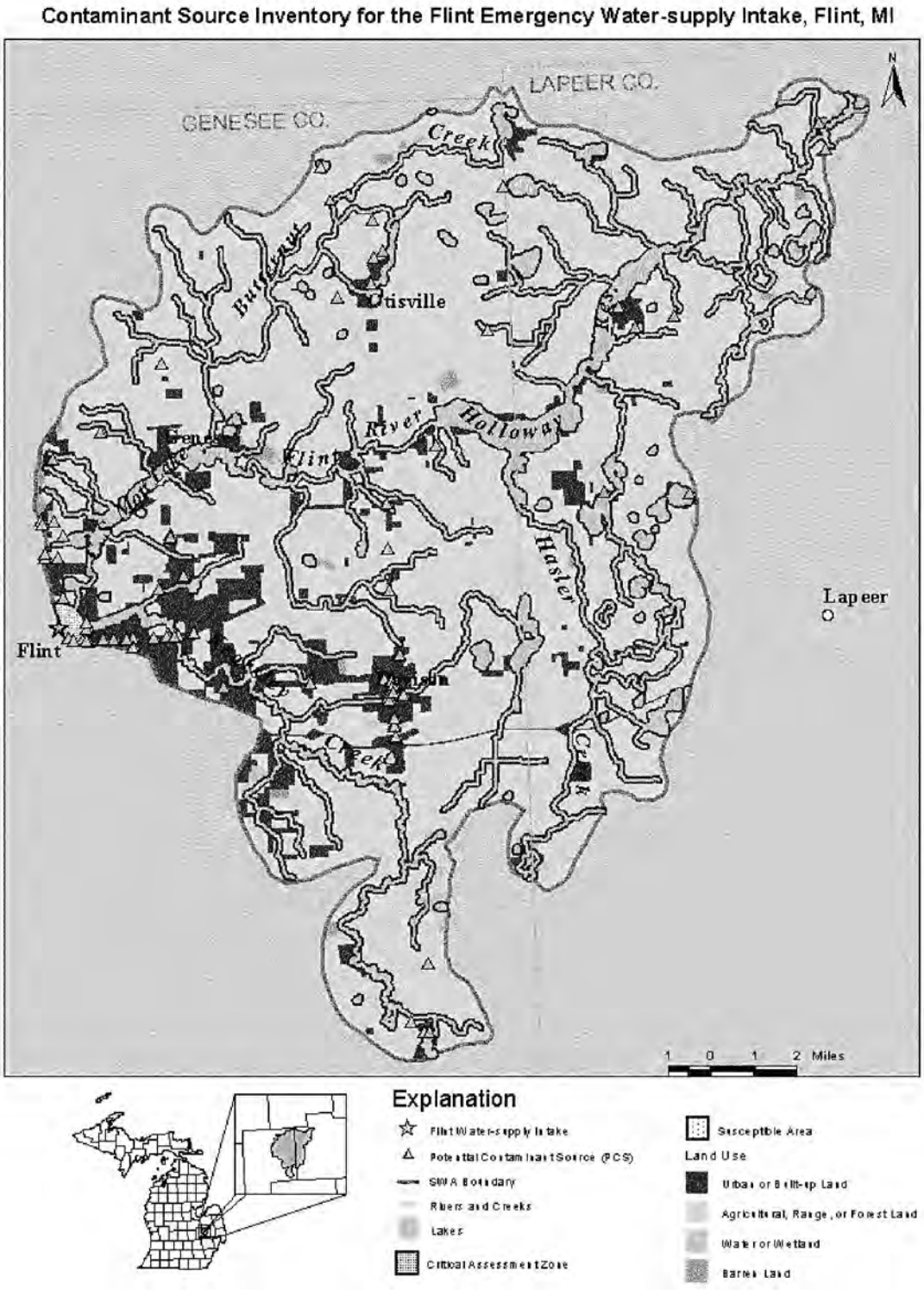

Figure 5. Potential Contaminant Sources in City of Flint Source Water Area, Flint, Michigan

cases less than a liter, can significantly affect the supply. Also of concern is the location and distribution of these sources with respect to highly permeable soils. The susceptible area consists of primarily agricultural and forested land with some urban areas. Overlaying the PCS locations and the moderately rapid to rapidly permeable soil map for the Flint SWA indicates that 21 of the located PCS are located on or very near to

areas with moderately rapid to rapidly-permeable soils. All PCS within the SWA should be addressed; the susceptibility determination, however, provides the water supply with the tools to focus resources where the greatest risk occurs. The results of the PCS inventory performed for Flint water supply is shown on figure 5 and is summarized as a function of PCS locations relative to the susceptible area. The inventory results indicate that there are 7 PCS, holding 8 permits for discharge, within the susceptible area (table 2).

Table 2. Contaminant source inventory.

Site Name	Identification Number	Reason for Permit	Reason for Listing as Potential Contaminant Source
DAVISON OIL AND GAS BURTON STA 7	MI0000540310	On-Site Storage	Hazardous and Solid Waste Site
H AND M SVC	MID985612225		
KINNIES PARTY STORE	MID985597657		
ZACK CO	MID002975225		
EVERGREEN CLEANERS	MID981539711		
DORT HWY INC	MID985579945		
SUPER GO MARKETERS INC	MID985583053		
PIONEER CABINETRY INC	MID985605849		
DAVISON CITY OF	MID985625136		
MID MICHIGAN AUTO PARTS INC	MID985654789		
CLARK STORE 1849	MI0001853613		
FORD-NORTHVILLE PLT	MI0024643	Process, Treatment, and Waste Waters	Industrial Facilities Discharge Site
FOREST WASTE PRODUCTS	YCRCLA276		
OTISVILLE WWTP [a]	MI0028720		
ORCHARD COVE WWTP	MI0054755	Waste Water, Dust, and Process Water	Permit Compliance System
OTISVILLE WWTP [a]	MI0028720		

Note: Subscript denotes multiple permits

Sensitivity Analysis

Sensitivity is the natural ability of a SWA to provide protection against the contamination of the water supply intake, and includes physical attributes of lakes, rivers, and soils. The sensitivity analysis requires consideration of several different variables related to the natural environment, for example:

- ·Water quality history of the source.
- ·Distribution of moderately to highly-permeable soils.
- ·Amount of available water from precipitation or runoff.
- ·Potential for runoff to affect the intake.
- ·Nature of the intake, including: depth, distance from shore, age, and materials used.
- ·Surface water flow patterns in vicinity of intake.

To perform this analysis, USGS, MDEQ, and the operator of the Flint WTP collected, researched, and analyzed information from the WTP, monthly operator reports, sanitary surveys, soil maps, published reports, and historical plant operation and raw water quality data. The Michigan SWAP has three categories of sensitivity for surface water sources ranging from moderately sensitive to very highly sensitive. Analysis of this information, using guidelines provided in Brogren (1999) and Sweat and others (2000, in press), indicates that the Flint intake is at the high end of this range or very highly sensitive (fig. 3). This means that the natural environment offers little protection against contamination of the water supply intake.

Susceptibility Determination

Susceptibility is the relative potential for contamination to reach the public water supply intake used for drinking water purposes. Whereas the sensitivity of a water supply is the natural ability of the area to protect the intake against contamination, the susceptibility determination also takes into account other factors that will affect whether a contaminant reaches the intake. Whether or not a particular drinking water source becomes contaminated depends on three factors:

(1) The distribution of PCS;
(2) The source water area; and
(3) The natural protection, or sensitivity, of the source.

In conducting a susceptibility determination, the part of the SWA that yields water to the water supply-system intake is identified by establishment of the susceptible area within the source water area. PCS within the susceptible area are then located. Based on the distribution of PCS within the susceptible area, the type of PCS, and the nature of the chemicals they use or store. PCS are analyzed for the risk they may represent to the water supply intake. Along with the presence and distribution of PCS, the sensitivity analysis is then used to determine the susceptibility of the water supply (fig. 3). This leads to a determination of whether the drinking water source is moderately susceptible, highly susceptible, or very highly susceptible to contamination (Brogren, 1999; Sweat and others, in press). It is important to understand that a system can have low sensitivity relative to some conditions (for example, intake construction and location), and high susceptibility because of other conditions (for example, the type of PCS). In Michigan, surface water sources of drinking water range from moderately-low to very-high susceptibility.

When a public water supply is determined to have a moderate, high, or very high susceptibility because of a particular condition or set of conditions, there is a significant risk of contamination of the drinking water source because of that condition or set of conditions. Although the susceptibility determination does not predict when or if contamination will actually occur, it does recognize conditions that are highly favorable for contamination of the supply. In the event of a contaminant release to soils or surface water within the susceptible area, it is very likely that contamination at the intake would occur without completion of remedial actions.

If a public water supply's drinking water source is determined to be highly susceptible, it is recommended that the system identify the condition(s) that lead to the high susceptibility. Immediate steps should be taken to protect the source, and action should be considered to remedy the condition (for example, repairing or replacing faulty intake construction, working directly with facility operators to implement sound management practices, etc.).

All water supplies, regardless of their susceptibility, should consider identified factors that could lead to higher susceptibility in the future, and should prepare a strategy to protect the water supply source. Raising public awareness through signs and other education programs, encouraging proper intake construction and the use of best management practices in existing facilities are good ways of ensuring that a surface water source maintains its moderate susceptibility rating.

Summary and Recommendations

The actual susceptibility of the drinking water source of a water supply depends on a number of contributing factors, some of which are only slightly related. Sensitivity is determined from the natural setting of the source and identifies the natural protection afforded to the source water. Susceptibility is determined by identifying those factors within the community's SWA that may pose a risk to the source water. The susceptibility determination provides information with respect to facilities within the SWA or land areas within the SWA that should be given greater priority and oversight in the implementation of a drinking water protection program.

Sensitivity Analysis: Based on criteria adopted in the Great Lakes Protocol of the Michigan Source Water Assessment Program, the emergency intake for the Flint Water Treatment Plant has a very high degree of sensitivity to potential contaminants.

Susceptibility Determination: The SWA for the Flint intake includes 8 listed potential contaminant sources within the susceptible area, numerous storm drains discharging upstream of the intake, a railroad crossing plus urban, agricultural, and industrial runoff from the Flint River watershed. Combining these potential contaminant sources with the very highly sensitive intake yields a very highly susceptible determination for Flint source water (fig. 5).

Effective Treatment:

The results of this assessment and the recommendations based on these results are summarized as follows:

- ***Intake*** - The Flint Water WTP intake was installed in 1948 and draws water from the Flint River from a shoreline structure making the intake very highly sensitive.
- ***Soils*** - Using a mean, area-weighted, depth-integrated permeability estimation, the soil and subsoil permeability in the SWA range from 0.6 in/hr to as much as 7.7 in/hr. The mean permeability is 3.1 in/hr (Schneider and Erickson, undated, series of 5 maps; BASINS, 1998; MIRIS, 2000). About two thirds of the soils in the Flint SWA are moderately rapid or rapidly permeable. Sixteen (16) PCS are located on these soils. These factors combine to make the SWA, and thus the intake, very highly sensitive. The community should take steps to evaluate current and future land use in areas of highly permeable soils, particularly those occurring within the susceptible area. Those PCS that have been identified either on or in close proximity to these soils should be informed of the sensitive nature of the area and encouraged to adopt best management practices designed to minimize the risk of a ground release. Residential areas that have been developed on these soils should be targeted for educational programs identifying steps that residents can take to protect the water supply.
- ***Historical Contaminant Detections*** – Since the Flint WTP has not utilized the Flint River since 1967 as a source of public drinking water, extensive raw water quality data is not available. However, as is typical for river water, the periodic presence of coliform bacteria is indicative of a relationship between runoff and soil conditions, causing the presence of bacteria at detectable levels in river source water. Background turbidity has recently been reported in the range of 2.4 to 7.6 NTU. These factors indicate that the SWA, and thus the intake, is very highly susceptible.
- ***Sanitary Survey*** – Defects reported as requiring repair either have been corrected or are scheduled for repair. The Flint WTP is undergoing extensive upgrades to improve treatment and reliability. It is important that the water supply continue to follow good management practices.
- ***Potential Contaminant Sources*** - A review of the PCS inventory and the rapidly and very rapidly permeable soil distribution indicates that the Flint SWA has 21 PCS located on moderately rapid to rapidly permeable soils. Within the susceptible area, there are 7 PCS with 8 discharge permits. In addition, there are numerous storm drains within the vicinity of the intake. A railroad crossing immediately upstream of the intake also poses a potential contaminant threat. It is recommended that the community focus initially on PCS that are within the susceptible area as they pose the greatest potential threat to the water supply. These facilities should be made aware of free technical assistance that is available through MDEQ's pollution prevention programs. Through chemical inventory, waste reduction, and by increasing awareness of best management practices, the risk these facilities pose to source waters can be reduced. The PCS inventory indicates that the source is very highly susceptible.
- ***Source Water Assessment*** - The Flint source water assessment is based on these site-specific parameters:
  1. Definition of a Critical Assessment Zone around both intake for a very highly sensitive source;
  2. Definition of a SWA for the Flint River, and shoreline near the intake;
  3. Flow duration and discharge in the Flint River upstream of the intake, and the effects of upstream contaminant discharges on the source water quality; and
  4. Listed and nonlisted potential contaminant sources.
- ***Source Water Protection*** - The City has initiated source water protection activities with an Industrial Pretreatment Program incorporating management plans, chemical containment, and spill response, spill response training, plus storm sewer and street cleaning programs.

The Flint WTP and/or the community should assemble a team to assist in the development and implementation of a source water protection program that uses this assessment to further protect the Flint source water area.

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-----, 1982, Soil survey of Oakland County, Michigan: 167 p., 135 sheets.

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GLOSSARY

Critical Assessment Zone (CAZ) - the area from the intake structure to the shoreline and inland, including a triangular water surface and a land area encompassed by an arc from the endpoint of the shoreline distance on either side of the on shore intake pipe location

Geographic Information System (GIS) - a system to capture, store, update, manipulate, analyze, and display all forms of geographically referenced information

Impaired water bodies - As defined by USEPA and listed on the 303 (d) list of the federal Clean Water Act.

Intake - the point at which source (raw) water is drawn into a pipe to be delivered to a water treatment plant

Lignins - an amorphous, cellulose-like, organic substance that acts as a binder for the cellulose fibers in wood and adds strength and stiffness to cell walls

Maximum Contaminant Level (MCL) - the maximum permissible level of a contaminant in water that is delivered to any user of a public water system

Potential Contaminant Sources (PCS) - listed and non-listed agricultural sites, businesses, and industries that have the potential to cause contaminants to be introduced into source water

Sensitivity - a measure of the physical attributes of the source area and how readily they protect the intake from contaminants

Source - the water body from which a water supplier gets its water

Source Water Area (SWA) - the land and water area upstream of an intake that has the potential to directly influence the quality of the water at the intake

Source Water Assessment Program (SWAP)- in Michigan, the process defined by the state Department of Environmental Quality to complete assessments of all the state's public water supplies

Susceptibility - the Susceptibility identifies factors that may pose a risk within the community's SWA

Susceptible Area - the area defined by the critical assessment zone and a buffer on either side of any drainages that contribute water to an intake

Synthetic Organic Contaminants (SOC) - Manmade organic chemical compounds such as pesticides, etc.

Tannins - naturally occurring phenolic compounds that precipitate proteins, alkaloids, and glucosides from solution that has a yellowish appearance

Volatile Organic Contaminants (VOC) - Unnatural, volatile organic chemical compounds such as gasoline components, solvents, degreasers, etc

From: Prysby, Mike (DEQ)
Sent: Thursday, February 12, 2015 11:44 AM
To: 'bwright@cityofflint.com';'rbincsik@cityofflint.com'
Subject: Residential customers

Brent, Rob....

I need Flint's most recent number of active residential service connections as part of updating MDEQ's estimated population served. Also, add in commercial and industrial accounts; however, keep them separate. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Saturday, February 14, 2015 12:21 PM
To: Busch, Stephen (DEQ)
Subject: Fwd: City Water Tech Team

Steve,
Not sure if this is something I can (or should) participate in.

Sent from my iPhone

Begin forwarded message:

> **From:** Howard Croft <hcroft@cityofflint.com>
> **Date:** February 14, 2015 at 8:44:52 AM EST
> **To:** "Prysby, Mike (DEQ)" <prysbym@michigan.gov>
> **Subject: City Water Tech Team**
>
> Mike,
>
> The City of Flint has contracted with Veolia North America in order to have an additional review of the water system. As part of this review, we are working to develop a Technical Advisory Committee (TAC) that will that will receive reports and interact with the technical staff from Veolia. The City has identified 8 - 12 entities or individuals that we are extending an invitation to participate on this committee.
>
> I would like to extend this invitation to you or your designee to be a representative on the TAC team which we hope to have established by early next week.
>
> I understand that this is short notice but if you would consider the offer and confirm or deny your participation I would greatly appreciate it. We are hoping to announce the names of this team at a Public Works Committee meeting Wednesday February 18th. The details of the first meeting and the ongoing agenda which is anticipated to extend through the implementation of the Karegnondi Water Authority as a water source will also be unveiled next week..
>
> Thank you,
>
> --
> **Howard Croft**
> Public Works Director
> City of Flint
> 1101 S. Saginaw Street
> Flint, MI 48502
> PH# 810.766.7135 Ext.2043
> hcroft@cityofflint.com

From: Prysby, Mike (DEQ)
Sent: Tuesday, February 17, 2015 8:18 AM
To: rfonger1@mlive.com
Subject: TTHM info

Ron,

I received your voicemail with additional questions concerning the TTHM violations with the listed supplies. Please summarize your questions, I can then forward them to the appropriate staff to best answer them, thanks. Also, many of the systems on the list are overseen by Bob London – Saginaw Bay District Office. Bob's email is.. londonr@michigan.gov

Michael Prysby, P.E...
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Tuesday, February 17, 2015 2:18 PM
To: London, Bob (DEQ)
Subject: RE: questions from Ron Fonger

Thanks Bob

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: London, Bob (DEQ)
Sent: Tuesday, February 17, 2015 2:15 PM
To: Prysby, Mike (DEQ)
Subject: RE: questions from Ron Fonger

Mike,

Because the 2009 exceedance occurred under Stage 1, when I refer to "Bay City", I mean the entire service area (City plus customer communities). We had Bay City sampling both inside and outside the City in order to represent the system as a whole. Two sites represented maximum residence time, and two represented "at least average residence time", which was the criteria for Stage 1. The system as a whole was out of compliance during the 2nd, 3rd, and 4th calendar quarters of 2009, and it returned to compliance during the 1st quarter of 2010. After that, the system as a whole remained in compliance for the rest of the time that Stage 1 was in effect.

Since Stage 2 started, only the listed customer communities exceeded the MCL. The City of Bay City itself has always been in compliance with Stage 2.

Bob London

From: Prysby, Mike (DEQ)
Sent: Tuesday, February 17, 2015 2:03 PM
To: London, Bob (DEQ)
Subject: RE: questions from Ron Fonger

Bob,

I am assuming Bay City re-achieved compliance under Stage I and has maintained compliance under Stage 2....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance

517 290-8817

From: London, Bob (DEQ)
Sent: Tuesday, February 17, 2015 1:39 PM
To: Prysby, Mike (DEQ)
Subject: RE: questions from Ron Fonger

Mike,

Populations served:

Beaver Road Association serves 786
Beaver Township serves 1109
Portsmouth Township serves 525
Buena Vista Township serves 8676

The above are the only systems to exceed the MCL since 1/1/2010. In 2009, under Stage 1, Bay City exceeded the TTHM MCL, with a duration of 3 calendar quarters. Since this occurred under Stage 1, compliance was based on a system-wide RAA (of four locations) rather than LRAAs. The highest system-wide RAA during this time was 99.6 ppb.

I will leave it to you to decide what, if any, of the above information should be passed along. I'm sure you have a better idea of what, specifically, he is looking for.

Bob London

From: Prysby, Mike (DEQ)
Sent: Tuesday, February 17, 2015 11:32 AM
To: London, Bob (DEQ); Philip, Kris (DEQ)
Subject: FW: questions

Here are the additional ?s from Ron Fonger concerning the systems that exceeded the TTHM MCL.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Fonger, Ronald [mailto:RFONGER1@mlive.com]
Sent: Tuesday, February 17, 2015 10:58 AM
To: Prysby, Mike (DEQ)
Subject: questions

Mike:
Here's what I need to clarify:
What period of time is covered by the TTHM exceedances in your email (are theses the only violations since Jan. 1, 2010) ?
How many customers are served by each of the five water systems that had TTHM exceedances?
What's the best way to describe "Highest LRAA" that's listed for each of the water systems?

When did TTHM become a part of required monitoring? Since that time, have there been changes in allowable levels, and if so, when?
Thanks again for your help,

Ron Fonger
MLive Media Group
Reporter

mobile PPI
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Prysby, Mike (DEQ)
Sent: Tuesday, February 17, 2015 2:25 PM
To: Busch, Stephen (DEQ)
Subject: FW: questions

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Fonger, Ronald [mailto:RFONGER1@mlive.com]
Sent: Tuesday, February 17, 2015 10:58 AM
To: Prysby, Mike (DEQ)
Subject: questions

Mike:
Here's what I need to clarify:
What period of time is covered by the TTHM exceedances in your email (are theses the only violations since Jan. 1, 2010) ?
How many customers are served by each of the five water systems that had TTHM exceedances?
What's the best way to describe "Highest LRAA" that's listed for each of the water systems?
When did TTHM become a part of required monitoring? Since that time, have there been changes in allowable levels, and if so, when?
Thanks again for your help,

Ron Fonger
MLive Media Group
Reporter

mobile PPI
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Prysby, Mike (DEQ)
Sent: Thursday, February 19, 2015 4:00 PM
To: Busch, Stephen (DEQ)
Subject: Fwd: Technical Advisory Committee Update
Attachments: Technical Advisory Team List.pdf; ATT00001.htm

Steve,
The city of Flint has formed their TAC with me included...fyi...see attached list....they put the wrong title for me...

Sent from my iPhone

Begin forwarded message:

From: Howard Croft <hcroft@cityofflint.com>
Date: February 19, 2015 at 3:52:07 PM EST
To: "donna. cole" <donna.cole@genesys.org>, <gdn2@aol.com>, John O'Brien <jfobrien@gcdcwws.com>, Kirk Smith <ksmith@flint.org>, <larry.koehler@mcc.edu>, <mgavulil@hurleymc.com>, Mike Lane <mjlane@umflint.edu>, "Mike Prysby (DEQ)" <prysbym@michigan.gov>, Pete Levine <plevine@gcms.org>, <rosejo@msu.edu>, <Russell.Hudson@mclaren.org>, "Brent Wright" <bwright@cityofflint.com>, Daugherty Johnson <djohnson@cityofflint.com>, Howard Croft <hcroft@cityofflint.com>, "Michael Glasgow" <mglasgow@cityofflint.com>, <rob.nicholas@veolia.com>
Cc: Flint Mayor <dwalling@cityofflint.com>, Gerald Ambrose <gambrose@cityofflint.com>, Elizabeth Murphy <emurphy@cityofflint.com>, David Gadis <david.gadis@veolia.com>, Jason Lorenz <jlorenz@cityofflint.com>
Subject: Technical Advisory Committee Update

Team,

I have include a list of all of the current participants in the Technical Advisory Team. We are targeting Wednesday March 4th as the first meeting and the time and place are yet to be determined. I have listed a few items to help craft the direction that we are hoping to go with this team;

1. We will likely have a conference number as well as a physical meeting place in case someone is not able to be there.

2. We will define as we go along how often to hold meetings, but we plan to continue throughout the implementation of the KWA.

2. We will start with a general scope and set of deliverables but will look for open input from the group in order to develop additional specifics as to what each member would like to accomplish.

3. Certainly with this assembled team we would want to develop a set of medical FAQ's that would assist the medical community with current and future details of chemicals and risk assessments.

4. We will discuss the treatment process and look at the national discussion on whether or not to use fluoride as well as what additional regulations are possibly being considered the EPA for the future.

5. We will look at what is upcoming with the KWA and water from Lake Huron. What will the chemical challenges be? What will the final product entail?

6. We will evaluate testing options or partners and determine if there is an avenue or demand for such.

These are some of the topics that I plan to delve into and I believe that we have assembled a professional team that can bring enlightenment to all of us. I look forward to working with each of you.

Respectfully Submitted,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

City of Flint / Veolia Technical Advisory Committee

	COMPANY	NAME	TITLE	PHONE	DESIGNEE	CONTACT INFO	
1	General Motors	Randy Tanner	Head of Engineering	810-577-8552			Yes
2	MSU - Lansing	Dr. Joan Rose	Chair in Water Research	517-432-4412	Dr. Joan Rose	rosejo@msu.edu	Yes
3	Greater Flint Health Coalition	Kirk Smith	President	810-232-2228	Kirk Smith	ksmith@flint.org	Yes
4	County Drain Commissioner	Jeff Wright	Deputy Drain Commissioner	810-732-7870	John O'Brien	jfobrien@gcdcwws.com	Yes
5	U of M Flint	Michael Lane	Dir. Environmental Health & Safety	810-766-6763	Michael Lane	milane@umflint.edu	Yes
6	Mott Community	Larry Kohler	Executive Director		Larry Koehler	larry.koehler@mcc.edu	Yes
7	Genesys Pace Hospital	Donna Cole	Property Manager	810-606-5611	Donna Cole	donna.cole@genesys.org	Yes
8	Hurley Hospital	Melanie Gavulic	President / CEO		Norb Birchmier	mgavuli1@hurleymc.com	Yes
9	McLaren Hospital	Don Kooy	President / CEO		Russell Hudson	don.kooy@mclaren.org	Yes
10	Genesee County Medical Society	Pete Levine	Executive Director	810-733-9925	Gerald Natzke	plevine@gcms.org	Yes
11	Dept. of Environemental Quality	Mike Prysby	District Supervisor	517-290-8817	Mike Prysby	prysbym@michigan.gov	Yes
	City of Flint	Howard Croft	DPW Director	810-577-1202	Howard Croft	hcroft@cityofflint.com	Yes
	City of Flint	Daugherty Johnson	Utilities Administrator	810-577-8906	Duffy Johnson	djohnson@cityofflint.com	Yes
	City of Flint	Brent Wright	Plant Supervisor	810-787-6537	Brent Wright	bwright@cityofflint.com	Yes
	City of Flint	Mike Glasgow	Asstant Plant Supervisor		Mike Glasgow	mglasgow@cityofflint.com	Yes

From: Prysby, Mike (DEQ)
Sent: Friday, February 20, 2015 1:43 PM
To: Shekter Smith, Liane (DEQ);Benzie, Richard (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

I will make myself available on Monday to discuss further.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Shekter Smith, Liane (DEQ)
Sent: Friday, February 20, 2015 1:40 PM
To: Benzie, Richard (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: FW: Steve Carmody interview. Can you do Friday?

You should discuss with Steve and Mike.

From: Wurfel, Brad (DEQ)
Sent: Friday, February 20, 2015 11:05 AM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: FW: Steve Carmody interview. Can you do Friday?

Hey, all. Michigan Radio's Steve Carmody is looking to do a piece with us next Tuesday on Flint's water.
The angle is looking at the Flint River as a source. I've been parsing this out with Mike Alexander in WRD – looking at the waters, what they flow through upstream of the intake, what that means for the quality of the source.
Carmody also wants to look at it comparatively. As in, what other municipalities around the state are using rivers? I'm aware of Manistique, Blissfield, Alma (?), and … ??? What is the quality of those sources, comparatively?
I know, tough story to do. I need some counsel from Drinking water people, collaborating with WRD counterparts, to get us prepped. And I think we'll need one of you three to be part of this interview on Tuesday.
Let me know when the drawing of straws is over. Thanks! ☺
b

From: Alexander, Michael (DEQ)
Sent: Friday, February 20, 2015 10:56 AM
To: Wurfel, Brad (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

We are all set for Tuesday afternoon at 3 PM. Let me know if that time doesn't work and where should we have it? I can get a conference room if you want me to.

Michael Alexander, WRD
Department of Environmental Quality
Phone 517-449-7971
alexanderm2@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Friday, February 20, 2015 10:10 AM
To: Alexander, Michael (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

Hmmmm. Not what he imparted when I talked to him, but I get what you're saying. Drinking water intake, or drinking water source? Blissfield, Manistique and (I think) Alma use surface water as sources. Is that what he's looking for? Comparative water quality discussion?

From: Alexander, Michael (DEQ)
Sent: Friday, February 20, 2015 9:54 AM
To: Wurfel, Brad (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

Just got off the phone with Steve Carmody. He wants to know how the Flint River water quality is as it relates to a drinking water intake, which is not necessarily the type of water quality assessment we conduct in WRD. We can certainly be part of the discussion if the topic of typical types of inputs to the Flint compared to other Michigan watersheds, but we wouldn't be able to make any statements as to how it compares to other drinking water intakes around MI. I would think someone from Office of Drinking Water and Radiological Protection would be better to answer that question. Thoughts?

Michael Alexander, WRD
Department of Environmental Quality
Phone 517-449-7971
alexanderm2@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Friday, February 20, 2015 8:55 AM
To: Alexander, Michael (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

You in today? Call my cell or tell me where you're sitting and I'll come see you.
b

From: Alexander, Michael (DEQ)
Sent: Friday, February 20, 2015 8:17 AM
To: Wurfel, Brad (DEQ)
Subject: RE: Steve Carmody interview. Can you do Friday?

Hi Brad,

Sometime later this afternoon would be best. It will give us a little more time to prep. I was home with a sick child and the rest of WRD was in training yesterday. Can you please verify for me that he wants to talk about water quality for Flint River, not drinking water treatment? Are there any particular items other than Flint's treatment system you want us to stay away from?

Michael Alexander, WRD
Department of Environmental Quality
Phone 517-449-7971
alexanderm2@michigan.gov

From: Wurfel, Brad (DEQ)
Sent: Thursday, February 19, 2015 2:55 PM
To: Alexander, Michael (DEQ)
Subject: Steve Carmody interview. Can you do Friday?

Hey, Mike. Steve wants to do the interview in person. He can be here Friday, optimally any time between 10 a.m. and 4 p.m.
Can this work for you (and whomever you want to join the conversation)?
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
PPI cell

From: Prysby, Mike (DEQ)
Sent: Monday, February 23, 2015 9:16 AM
To: suki bur
Subject: RE:

Can you get on the internet...if so....just do a search on M-Live Flint news....and look at past articles...I will see if I can email you some stories....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: suki bur [mailto:maylingcat@hotmail.com]
Sent: Monday, February 23, 2015 8:10 AM
To: Prysby, Mike (DEQ)
Subject:

I can't find the article about Flint water. Can you Email me one?

From: Prysby, Mike (DEQ)
Sent: Tuesday, February 24, 2015 9:43 AM
To: Pieper, Julia (DEQ)
Subject: RE: TTHMs and unidentified peaks in Flint

Julia,

Flint was on Detroit water Dec. of 2103. They switched to the Flint River on May 1, 2014.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Pieper, Julia (DEQ)
Sent: Tuesday, February 24, 2015 9:41 AM
To: Prysby, Mike (DEQ)
Subject: TTHMs and unidentified peaks in Flint
Importance: High

Mike,
I have examined the data more thoroughly and compared it with the November 2014 data. I don't want to cause undue concern. The most recent chromatograms may show some increase in concentration compared to November, but this is still fairly low level background. Was the City of Flint still on the Detroit system in December 2013? I have some chromatograms from that sampling that I can use to show you the difference we are seeing.

Julia Pieper
Drinking Water Coordinator
Organic Sub-Unit Manager
DEQ-RRD-Laboratory Services
pieperj2@michigan.gov
(517)-335-8076 phone
(517)-335-8562 fax

From: Prysby, Mike (DEQ)
Sent: Thursday, February 26, 2015 1:54 PM
To: Busch, Stephen (DEQ)
Subject: Performance Objectives

Steve,

I have reviewed the draft P.O. for FY 15. No major changes that I see; however, I may wish to add in Objective 3 (Special Assignments) my involvement with the Flint Technical Advisory Committee towards solving water related problems with the Flint water system. Preparation and participation in the TTHM Roundtable discussion could also fall under Objective 3....although attendance at the Annual Conference is part of Objective 2; thus, the roundtable assignment could go either way. We can discuss this further. I will also complete my training plan prior to 3/31 along with my IDP.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Tuesday, March 10, 2015 1:47 PM
To: Busch, Stephen (DEQ)
Subject: FW: City of Flint February 2015 MOR
Attachments: February 2015 MOR.pdf

Steve,

The cold water and high flows challenged the city's ability to maintain acceptable treatment. Although they met standards according to our rules, the high treatment rate later in the month and low water temp did have some impact.

Michael Prysby, P.E.
District Enginee
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Michael Glasgow [mailto:mglasgow@cityofflint.com]
Sent: Tuesday, March 10, 2015 9:46 AM
To: Prysby, Mike (DEQ)
Subject: City of Flint February 2015 MOR

Mike,

Good morning, I just wanted to get you a copy of the February MOR. A copy will go out in the mail today

Mike Glasgow
City of Flint Water Plant

CITY of FLINT WATER TREATMENT PLANT MONTHLY OPERATION REPORT

SUPPLY NAME: CITY of FLINT WATER PLANT
WSSN: 2310

Michael Glasgow
Operator-in-Charge

February 2015
Month/Year

F-1R, F-2
Certification of Operator-in-Charge

F-1
Water Plant Classification

Signature of Operator-in-Charge

Genesee
County

Treatment Rate and Filter Data

Maximum Treatment Rate:	25.3	Million Gallons per Day
Rated Plant Capacity:	36	Million Gallons per Day
Average Filter Run:	86	Hours
Average Head Loss:	n/a	Feet *(filter head loss meters not operational)
Average Filtration Rate:	2.4	Gallons Per Square Feet per Minute
Maximum Filtration Rate:	3.3	Gallons Per Square Feet per Minute
Average Wash Water Use:	2.4%	Percent of Treated Water

Chemical Data

Chlorine on hand:	8,000	lb.	Est. supply:	8 days
Primary Coagulant (Ferric Chloride) on hand:	125,000	lb.	Est. supply:	3 days
Lime (CaO) on hand:	397	tons	Est. supply:	31 days
Fluoride on Hand:	26,600	lb.	Est. supply:	40 days
Cost of All Chemicals per Million Gallons:	n/a	dollars		
Total Power Cost per Million Gallons:	n/a	dollars		

Remarks	Confluence Point # 1 (N)	Confluence Point # 2 (S)
Number of filter confluence samples > 0.3 NTU:	1	0
Number of filter confluence samples collected:	218	218
Percent of filter confluence samples > 0.3 NTU:	0.5%	0.0%
Number of filter confluence samples > 1 NTU	0	0

Did any individual filter exceed:

1.0 NTU in two consecutive measurements taken 15 minutes apart? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

0.5 NTU in two consecutive measurements taken 15 minutes apart after 4 hours of operation? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

1.0 NTU in two consecutive measurements taken 15 minutes apart for 3 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

2.0 NTU in two consecutive measurements taken 15 minutes apart for 2 consecutive months? NO
If yes, attach specific filter(s) information and indicate required follow-up status.

Was continuous (every 15 minutes) filter monitoring equipment off-line during the month? NO
If yes, indicate date(s), duration, and individual filter grab sampling frequency on a separate sheet.

Did POE disinfectant residual fall below 0.2 ppm during the month? NO
If yes, indicate date(s) and duration on a separate sheet.

Was minimum C*T credit achieved for the entire month? YES
If no, indicate on a separate sheet the date(s) not achieved.

Was continuous POE chlorine residual monitoring equipment off-line during the month? NO
If yes, indicate date(s) and duration on a separate sheet.

Coagulation Parameters & Softening Chemical Application City of Flint Water Treatment Plant February 2015 Page 2

WSSN: 2310

Date	Million Gallons Treated	Ferric as Fe^{3+} mg/L	Lime Dosage (mg/L)	PW-340 Catioinc Polymer Dosage (mg/L)	P-142PWG Anionic Polymer Dosage (mg/L)	Turbidity, Units				
						Raw			Plate Settler	Applied
						Number of Samples	Avg.	Max.	Effluent Avg.	Applied Avg.
1	15.9	21.6	189.2	4.9	0.98	8	2.8	4.1	2.25	1.53
2	18.1	16.3	169.3	4.3	0.70	8	3.1	7.2	1.57	2.25
3	18.3	15.4	254.4	6.8	0.86	8	2.8	5.9	1.71	2.45
4	18.3	16.0	222.8	5.7	0.82	8	2.9	5.1	1.65	1.69
5	18.2	16.2	188.4	5.9	0.76	8	3.0	5.1	1.58	2.01
6	18.1	18.3	205.7	6.3	0.80	7	3.3	3.8	1.39	1.57
7	18.1	17.9	178.8	6.3	0.81	8	3.0	5.1	1.39	1.20
8	18.0	17.9	175.9	6.4	0.87	8	2.6	4.1	1.36	1.34
9	18.1	17.4	162.4	6.1	0.69	8	2.5	4.8	1.37	1.56
10	18.4	16.5	185.7	6.6	0.88	7	2.1	2.4	1.49	1.97
11	18.5	15.4	179.0	6.3	0.86	8	2.2	2.7	1.39	1.82
12	19.4	16.0	195.7	6.2	0.87	8	2.5	3.1	1.65	1.75
13	20.1	17.5	209.7	6.3	0.87	8	2.6	2.8	2.04	1.59
14	20.0	18.2	198.9	6.2	0.89	7	2.6	2.8	1.74	1.34
15	20.1	17.0	178.9	6.3	0.84	8	2.9	3.7	1.70	1.52
16	20.1	18.1	183.7	6.5	0.82	8	3.0	4.8	1.79	1.85
17	20.6	16.7	192.1	5.6	0.85	8	4.2	8.5	2.18	2.11
18	22.7	15.9	131.2	3.8	0.78	8	2.8	3.4	3.97	2.14
19	23.0	14.9	137.5	3.8	0.50	8	3.7	7.6	3.81	1.80
20	23.2	14.1	138.3	3.9	0.55	8	3.2	7.2	3.66	1.50
21	23.5	14.8	132.4	3.8	0.54	8	2.5	2.7	4.35	1.66
22	23.4	14.8	128.7	3.9	0.54	8	2.9	3.9	4.28	1.51
23	24.1	14.4	121.2	3.7	0.58	8	3.2	6.2	4.98	1.76
24	24.3	15.1	132.0	3.7	0.52	8	2.7	3.5	5.90	2.56
25	24.5	15.1	124.8	3.8	0.64	8	7.1	22.5	6.32	1.64
26	24.5	14.5	124.6	3.8	0.52	8	2.6	3.3	6.03	1.56
27	24.5	15.2	123.2	3.8	0.52	8	2.6	3.3	6.00	1.45
28	24.3	14.6	129.2	3.8	0.42	8	2.5	3.1	5.80	1.64
Avg.	20.7	16.3	167.6	5.2	0.72	8	3.0			1.74
Max.	24.5	21.6	254.4	6.8	0.98	8	7.1	22.5	6.32	2.56
Min.	15.9	14.1	121.2	3.7	0.42	7	2.1			1.20
Total	580.3									

Filter turbidity

City of Flint Water Treatment Plant

WSSN: 2310

February 2015 Page 3

Date	Turbidity, Units												
	Confluence Point. No.1 (N) North						Confluence Point. No.2 (S) South						Point of Entry
	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Number of Samples	Avg.	Max	No. of 4 Hr. Compliance periods	No. of 4 Hr. Compliance periods >0.3 NTU	No. of Samples >0.3 NTU	Plant Tap NTU
1	8	0.07	0.09	6	0	0	8	0.06	0.09	6	0	0	0.07
2	7	0.06	0.10	6	0	0	7	0.06	0.07	6	0	0	0.07
3	8	0.07	0.15	6	0	0	8	0.06	0.07	6	0	0	0.08
4	8	0.05	0.08	6	0	0	8	0.05	0.07	6	0	0	0.07
5	8	0.07	0.10	6	0	0	8	0.06	0.07	6	0	0	0.07
6	7	0.06	0.08	6	0	0	7	0.06	0.08	6	0	0	0.07
7	8	0.06	0.07	6	0	0	8	0.06	0.06	6	0	0	0.07
8	8	0.06	0.07	6	0	0	8	0.06	0.07	6	0	0	0.06
9	8	0.07	0.09	6	0	0	8	0.05	0.06	6	0	0	0.09
10	7	0.06	0.07	6	0	0	7	0.05	0.06	6	0	0	0.08
11	8	0.06	0.07	6	0	0	8	0.05	0.07	6	0	0	0.07
12	8	0.06	0.08	6	0	0	8	0.06	0.08	6	0	0	0.06
13	8	0.06	0.09	6	0	0	8	0.09	0.18	6	0	0	0.08
14	8	0.06	0.09	6	0	0	8	0.06	0.10	6	0	0	0.05
15	8	0.06	0.08	6	0	0	8	0.07	0.09	6	0	0	0.07
16	8	0.06	0.08	6	0	0	8	0.05	0.07	6	0	0	0.06
17	8	0.06	0.08	6	0	0	8	0.07	0.09	6	0	0	0.07
18	8	0.07	0.09	6	0	0	8	0.07	0.09	6	0	0	0.07
19	8	0.07	0.09	6	0	0	8	0.06	0.08	6	0	0	0.07
20	8	0.07	0.08	6	0	0	8	0.07	0.10	6	0	0	0.07
21	8	0.08	0.14	6	0	0	8	0.08	0.10	6	0	0	0.08
22	8	0.09	0.12	6	0	0	8	0.10	0.13	6	0	0	0.08
23	8	0.13	0.16	6	0	0	8	0.07	0.10	6	0	0	0.10
24	7	0.19	0.36	6	1	1	7	0.14	0.18	6	0	0	0.17
25	8	0.08	0.10	6	0	0	8	0.10	0.12	6	0	0	0.11
26	8	0.13	0.17	6	0	0	8	0.13	0.18	6	0	0	0.14
27	8	0.19	0.29	6	0	0	8	0.15	0.18	6	0	0	0.15
28	8	0.20	0.27	6	0	0	8	0.13	0.18	6	0	0	0.15
Avg.	8	0.08	0.12	6	0	0	8	0.07	0.10	6	0	0	
Max.	8	0.20	0.36	6	1	1	8	0.15	0.18	6	0	0	0.17
Min.	7	0.05	0.07	6	0	0	7	0.05	0.06	6	0	0	

Fluoridation & Chlorination City of Flint Water Treatment Plant February 2015 Page 4

WSSN: 2310

Date	Fluoriode Applied as F- mg/L	Fluoride Analysis (mg/L)			Chlorine Application (mg/L)			Chlorine Residual (mg/L)					
					Intermediate Chlorine	Post Chlorine	Total Chlorine	Filtered		3 MG Well		Tap	
		Raw	Tap	Dist.				Free	Total	Free	Total	Free	Total
1	0.3	0.23	0.53		1.6	3.1	4.7	0.3	0.6	2.6	3.0	2.5	2.9
2	0.3	0.22	0.48		1.8	2.9	4.7	0.3	0.5	2.4	2.7	2.2	2.5
3	0.3	0.23	0.51	0.52	1.9	3.0	4.9	0.8	1.2	2.6	2.9	2.4	2.7
4	0.4	0.22	0.53		1.9	3.0	4.9	0.6	0.8	2.8	3.0	2.7	3.0
5	0.3	0.22	0.53		1.9	2.9	4.8	0.5	0.7	2.6	3.0	2.2	2.5
6	0.4	0.22	0.57		2.0	3.0	5.0	0.8	1.0	2.7	3.0	2.3	2.8
7	0.3	0.22	0.58		2.1	2.7	4.8	0.3	0.6	2.6	2.9	2.1	2.4
8	0.4	0.23	0.56		2.1	2.7	4.8	0.6	0.8	2.7	3.0	2.2	2.5
9	0.4	0.22	0.64		1.9	2.8	4.7	0.4	0.6	2.7	3.0	2.3	2.6
10	0.4	0.24	0.63	0.56	2.2	2.9	5.1	0.5	0.7	2.8	3.1	2.1	2.4
11	0.4	0.21	0.55		2.2	2.8	5.0	0.7	0.9	2.6	2.8	1.9	2.4
12	0.4	0.21	0.58		2.2	2.7	4.9	0.6	0.8	2.5	2.8	2.1	2.5
13	0.4	0.23	0.59		2.2	2.4	4.6	0.4	0.6	2.0	2.5	1.7	2.2
14	0.4	0.22	0.55		2.2	2.2	4.4	0.6	0.8	2.3	2.6	1.5	2.1
15	0.4	0.21	0.60		2.1	2.2	4.3	0.4	0.6	2.0	2.4	1.9	2.2
16	0.4	0.23	0.59		2.1	2.2	4.3	0.4	0.6	2.1	2.4	1.8	2.1
17	0.4	0.21	0.61	0.54	2.1	2.3	4.4	0.8	1.0	2.0	2.4	1.3	1.7
18	0.3	0.23	0.58		2.0	2.2	4.2	0.3	0.6	1.9	2.4	1.5	2.0
19	0.3	0.24	0.64		2.2	2.1	4.3	0.6	0.8	2.0	2.4	1.7	2.2
20	0.4	0.23	0.56		2.2	2.1	4.3	0.7	1.0	2.0	2.5	1.5	1.9
21	0.4	0.24	0.61		2.2	2.1	4.3	0.5	0.7	1.7	2.2	1.5	2.0
22	0.4	0.23	0.55		2.2	2.1	4.3	0.4	0.6	2.0	2.3	1.7	1.9
23	0.3	0.24	0.64		2.2	2.2	4.4	0.5	0.6	2.0	2.1	1.5	1.6
24	0.3	0.24	0.56	0.54	2.3	2.6	4.9	0.4	0.6	2.5	3.3	2.1	2.5
25	0.3	0.23	0.62		2.3	2.6	4.9	0.5	0.7	2.5	2.9	2.4	2.7
26	0.3	0.23	0.54		2.3	2.7	5.0	0.5	0.7	2.7	3.1	2.5	3.0
27	0.3	0.24	0.56		2.3	2.5	4.8	0.6	0.8	2.3	2.9	2.1	2.5
28	0.3	0.24	0.56		2.3	2.5	4.8	0.6	0.8	2.3	2.8	1.9	2.5
Avg.	0.35	0.23	0.57	0.54	2.1	2.6	4.7	0.5	0.7	2.4	2.7	2.0	2.4
Max.	0.40	0.24	0.64	0.56	2.3	3.1	5.1	0.8	1.2	2.8	3.3	2.7	3.0
Min.	0.30	0.21	0.48	0.52	1.6	2.1	4.2	0.3	0.5	1.7	2.1	1.3	1.6

Chemical Analyses City of Flint Water Treatment Plant February 2015 Page 5

WSSN: 2310

Date	pH (S.U.)		Total Hardness as CaCO3 (mg/L)		Total Alkalinity as CaCO3 (mg/L)		Non-Carbonate Hardness as CaCO3 (mg/L)		Calcium as Ca2+ (mg/L)		Magnesium as Mg2+ (mg/L)		Chloride as Cl- (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	7.78	7.91	339	198	273	60	66	138	109.0	56.9	17.5	14.1	51	98
2	7.92	7.64	343	203	274	77	69	126	110.6	60.1	15.6	12.6	52	91
3	7.75	8.69	344	176	276	62	68	114	113.8	54.5	13.6	10.2	57	90
4	8.04	7.88	346	176	277	62	69	114	114.6	54.5	14.6	10.2	49	88
5	7.77	7.56	349	183	284	63	65	120	118.6	60.9	12.6	7.3	55	89
6	7.92	7.63	350	180	276	52	74	128	117.8	52.9	13.6	11.7	54	95
7	8.07	7.76	348	185	282	68	66	117	113.8	54.5	15.6	11.7	52	92
8	8.05	7.57	347	181	278	50	69	131	111.4	51.3	16.5	12.6	51	91
9	8.11	7.66	349	183	280	62	69	121	112.2	52.9	16.5	12.2	53	94
10	7.95	7.65	350	168	284	47	66	121	113.0	57.7	16.5	6.8	56	95
11	7.97	7.76	345	173	274	54	71	119	109.0	49.7	17.9	12.6	51	92
12	7.85	7.66	342	169	274	51	68	118	117.8	59.3	12.2	5.3	55	92
13	7.77	7.70	345	170	267	53	78	117	121.0	57.7	11.2	4.9	54	90
14	7.86	7.54	344	173	269	52	75	121	125.0	63.3	7.3	3.9	56	93
15	8.00	7.73	349	176	280	53	69	123	113.0	50.5	16.0	12.2	50	94
16	7.89	7.68	353	169	285	47	68	122	123.4	53.7	10.7	8.7	55	95
17	8.05	7.92	360	172	281	49	79	123	118.6	48.9	15.6	11.7	53	92
18	7.96	7.97	352	218	282	102	70	116	125.9	78.6	8.7	5.3	54	91
19	8.11	7.82	358	208	291	91	67	117	120.2	59.3	14.6	13.1	53	92
20	7.93	7.90	362	207	286	94	76	113	133.1	76.2	7.3	4.4	55	87
21	8.00	8.06	362	214	284	98	78	116	133.9	76.2	6.8	4.4	54	86
22	7.98	8.03	366	227	294	113	72	114	116.2	67.3	18.5	14.1	52	88
23	8.07	8.31	361	225	293	112	68	113	121.8	68.9	14.1	12.6	52	86
24	7.95	7.85	361	227	289	101	72	126	133.9	78.6	5.8	6.8	54	88
25	8.03	8.14	365	244	295	127	70	117	118.6	77.8	16.5	11.7	55	89
26	7.91	7.88	365	235	288	108	77	127	132.3	86.6	8.3	4.9	55	89
27	7.96	7.85	354	241	291	117	63	124	131.5	91.4	6.3	2.9	57	89
28	7.90	7.72	358	228	228	115	130	113	127.5	84.2	9.7	3.9	54	87
Avg.	7.95	7.84	352	197	280	76	73	120	119.9	63.7	12.9	9.0	54	91
Max.	8.11	8.69	366	244	295	127	130	138	133.9	91.4	18.5	14.1	57	98
Min.	7.75	7.54	339	168	228	47	63	113	109.0	48.9	5.8	2.9	49	86

Bacteriological & Physical Parameters | City of Flint Water Treatment Plant | February 2015 | Page 6

WSSN: 2310

Date	Total Coliform						Standard Plate Count (Simplate MPN)		Conductivity (mS)	Temp. C	Color		Odor	
	Raw (Colilert MPN)		Filter Confluence (N&S)		Plant Tap									
	# Samples	Count	# Samples	# pos	# Samples	# pos	Raw	Tap	Tap	Raw	Raw	Tap	Raw	Tap
1	1	41	12	0	1	0	150	< 2	0.53	4.0				
2	1	117	12	0	1	0	132	< 2	0.55	4.2				
3	1	96	12	0	1	0	146	< 2	0.49	4.3				
4	1	86	12	0	1	0	90	< 2	0.51	4.1				
5	1	105	12	0	1	0	183	< 2	0.51	3.5				
6	1	276	12	0	1	0	128	< 2	0.50	2.4				
7	1	124	12	0	1	0	97	< 2	0.50	3.8				
8	1	120	12	0	1	0	80	< 2	0.48	3.8				
9	1	104	12	0	1	0	90	< 2	0.51	4.2				
10	1	93	12	0	1	0	132	< 2	0.50	4.0				
11	1	115	12	0	1	0	83	< 2	0.47	4.3				
12	1	115	12	0	1	0	93	< 2	0.46	3.8				
13	1	153	12	0	1	0	80	< 2	0.50	4.5				
14	1	154	12	0	1	0	93	< 2	0.48	3.6				
15	1	138	12	0	1	0	83	< 2	0.52	0.5				
16	1	179	12	0	1	0	137	< 2	0.50	0.7				
17	1	365	12	0	1	0	166	< 2	0.50	1.2				
18	1	219	12	0	1	0	177	< 2	0.51	1.7				
19	1	153	12	0	1	0	112	< 2	0.45	2.2				
20	1	192	12	0	1	0	62	< 2	0.56	1.9				
21	1	142	12	0	1	0	116	< 2	0.51	4.1				
22	1	160	12	0	1	0	146	< 2	0.55	2.1				
23	1	129	12	0	1	0	112	< 2	0.58	1.0				
24	1	135	12	0	1	0	100	< 2	0.61	3.4				
25	1	145	12	0	1	0	156	< 2	0.61	2.0				
26	1	115	12	0	1	0	108	< 2	0.61	1.2				
27	1	86	12	0	1	0	74	< 2	0.61	3.3				
28	1	84	12	0	1	0	65	< 2	0.56	3.3				

Avg.									0.52	3.0				
Max.		365					183	0	0.61	4.5				
Min.									0.45	0.5				

Distribution System Monitoring

City of Flint Water Treatment Plant

February 2015

WSSN: 2310

Date	Free Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3	0.7	1.5	1.5	1.5	1.5	0.2	1.7	1.7	1.3	2.0	10
4											0
5	1.0	1.7	1.7	1.7	1.1	0.2	1.8	2.0	0.7	1.4	10
6											0
7											0
8											0
9											0
10	1.0	1.2	1.5	1.3	1.0	0.2	2.0	1.9	0.7	1.0	10
11	1.0	1.3	1.7	1.7	0.9	0.3	1.7	2.3	0.5	0.9	10
12	0.4	1.4	2.3	1.8	0.7	0.2	1.9	2.2	0.5	1.2	10
13											0
14											0
15											0
16											0
17	1.1	0.7	1.2	1.5	0.7	0.2	1.1	1.3		1.5	9
18	1.2	0.8	1.6	1.2	0.8	0.2	1.8	1.7		1.4	9
19	0.9	0.7	1.3	1.0	0.7	0.2	0.8	1.3		1.0	9
20											0
21											0
22											0
23	1.3	0.8	1.3	1.1	0.6	0.2	0.6	1.5		0.8	9
24	1.5	1.1	1.7	1.2	1.0	0.2	2.5	2.2		2.3	9
25											0
26	1.7	1.4	2.0	1.5	1.1	0.3	1.8	1.8		2.1	9
27											0
28											0

Distribution Sample Summary	
Total # of routine distribution samples analyzed	104
Total # of routine distribution samples required	100

Distribution Bacteriological Summary	
Total # of positive routine distribution samples	0
Percent of routine distribution samples positive	0%

See page 9 for positive sample information.

Distribution Disinfectant Total Residual Summary	
Percentage of samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.22

Distribution System Monitoring

City of Flint Water Treatment Plant

WSSN: 2310

February 2015

Date	Total Chlorine Residual at Bacteriological Montioring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3	1.0	1.8	1.8	1.9	1.8	0.3	2.0	1.9	1.7	2.4	10
4											0
5	1.3	2.1	2.0	2.0	1.3	0.4	2.1	2.3	1.0	1.6	10
6											0
7											0
8											0
9											0
10	1.3	1.5	1.9	1.6	1.3	0.4	2.4	2.2	1.0	1.3	10
11	1.2	1.5	1.8	1.9	1.1	0.4	1.9	2.6	0.7	1.2	10
12	0.5	1.6	2.4	2.0	0.9	0.4	2.1	2.4	0.6	1.4	10
13											0
14											0
15											0
16											0
17	1.3	1.0	1.4	1.8	0.9	0.3	1.5	1.8		1.7	9
18	1.5	1.0	1.9	1.5	1.0	0.3	2.1	2.0		1.7	9
19	1.3	1.1	1.6	1.5	1.0	0.3	1.0	1.7		1.3	9
20											0
21											0
22											0
23	1.5	1.0	1.6	1.3	0.8	0.3	0.8	1.8		1.2	9
24	1.7	1.3	1.9	1.4	1.2	0.4	2.8	2.4		2.5	9
25											0
26	1.9	1.6	2.4	1.7	1.4	0.5	2.1	2.0		2.5	9
27											0
28											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.5

Positive Distribution Samples

Date	Monitoring station	Date	Repeat Monitoring Stations	Residual (mg/L) Free / Total	Present or Absent

From: Prysby, Mike (DEQ)
Sent: Wednesday, March 11, 2015 7:35 AM
To: Busch, Stephen (DEQ);Benzie, Richard (DEQ)
Subject: Fwd: Information Request and Documentation
Attachments: image001.gif; ATT00001.htm; FOIA Request Flint Water.doc; ATT00002.htm

I am out today and will return tomorrow. Having trouble getting the attachment to open on my phone...but since it appears to be a FOIA regarding Legionella, I felt it is prudent to get this message to you. I will be available tomorrow to discuss or compile any info that we have.

Sent from my iPhone

Begin forwarded message:

From: "Henry, James" <jhenry@gchd.us>
Date: March 10, 2015 at 6:40:17 PM EDT
To: Howard Croft <hcroft@cityofflint.com>, "Mike Prysby (DEQ)" <prysbym@michigan.gov>, Elizabeth Murphy <emurphy@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, Jerry Ambrose <gambrose49@gmail.com>, Dayne Walling <dwalling@cityofflint.com>
Cc: "Valacak, Mark" <MVALACAK@gchd.us>, "Cupal, Suzanne" <scupal@gchd.us>, "Hasan, Shurooq" <shasan@gchd.us>, "Childs, Bonnie" <BCHILDS@gchd.us>, "Hallwood, Dawn" <dhallwood@gchd.us>, "Johnson, M.D., Gary" <GJOHNSON@gchd.us>
Subject: Information Request and Documentation

Hello everyone,

The Genesee County Health Department has made several written and verbal requests for specific information since October, 2014, including a Freedom of Information Act Request on January 27, 2015. The information still has not been received and the city's lack of cooperation continues to prevent my office from performing our responsibilities.

The Genesee County Health Department has the responsibility to conduct illness investigations and consider all potential sources, this is not optional. In 2014, Genesee County experienced a significant increase of confirmed Legionella illnesses relative to previous years. Legionella can be a deadly, waterborne disease that typically affects the respiratory system.

The increase of the illnesses closely corresponds with the timeframe of the switch to Flint River water. The majority of the cases reside or have an association with the city. Also, McLaren Hospital identified and mitigated Legionella in their water system. This is rather glaring information and it needs to be looked into now, prior to the warmer summer months when Legionella is at its peak and we are potentially faced with a crisis.

This situation has been explicitly explained to MDEQ and many of the city's officials. I want to make sure, in writing that there are no misunderstandings regarding this significant and urgent public health issue. The Trihalomethane issues "pale in comparison" to the potential public health risks of Legionella.

I am submitting the attached FOIA request again and requesting that the legal obligations of the request are met. If the information is not available, please let me know. In the past, I have requested to meet with the water plant staff and MDEQ regarding Legionella concerns. I did not receive a response from the water plant staff and MDEQ declined. I think it is in the best interest for all stakeholders that we meet and discuss the issues.

Respectfully,

Jim

Jim Henry
Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

From: Prysby, Mike (DEQ)
Sent: Thursday, March 12, 2015 7:47 AM
To: Busch, Stephen (DEQ);Benzie, Richard (DEQ)
Subject: RE: Information Request and Documentation

Steve, Richard,

I did not receive a meeting request from Jim or the LHD concerning this matter.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Wednesday, March 11, 2015 9:37 AM
To: Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Subject: RE: Information Request and Documentation

Mike,

I am not aware of a meeting request from Jim Henry or the Genesee County Health Department as indicated in his email below. Did you receive any such request?

The FOIA is specifically directed to the City of Flint not the DEQ. If requested some of the information asked for regarding Total Coliform and E.Coli compliance sampling could be provided, but there may also be additional construction repair sampling data.

We can respond to Jim when you get back in, but at this point while the change in source may have created water quality conditions that could provide additional organic nutrient source to support legionella growth, there is no evidence or confirmation of legionella coming directly from the Water Treatment Plant or in the community water supply distribution system at this time.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Wednesday, March 11, 2015 7:35 AM
To: Busch, Stephen (DEQ); Benzie, Richard (DEQ)
Subject: Fwd: Information Request and Documentation

I am out today and will return tomorrow. Having trouble getting the attachment to open on my phone...but since it appears to be a FOIA regarding Legionella, I felt it is prudent to get this message to you. I will be

available tomorrow to discuss or compile any info that we have.

Sent from my iPhone

Begin forwarded message:

From: "Henry, James" <jhenry@gchd.us>
Date: March 10, 2015 at 6:40:17 PM EDT
To: Howard Croft <hcroft@cityofflint.com>, "Mike Prysby (DEQ)" <prysbym@michigan.gov>, Elizabeth Murphy <emurphy@cityofflint.com>, "Natasha Henderson" <nhenderson@cityofflint.com>, Jerry Ambrose <gambrose49@gmail.com>, Dayne Walling <dwalling@cityofflint.com>
Cc: "Valacak, Mark" <MVALACAK@gchd.us>, "Cupal, Suzanne" <scupal@gchd.us>, "Hasan, Shurooq" <shasan@gchd.us>, "Childs, Bonnie" <BCHILDS@gchd.us>, "Hallwood, Dawn" <dhallwood@gchd.us>, "Johnson, M.D., Gary" <GJOHNSON@gchd.us>
Subject: Information Request and Documentation

Hello everyone,

The Genesee County Health Department has made several written and verbal requests for specific information since October, 2014, including a Freedom of Information Act Request on January 27, 2015. The information still has not been received and the city's lack of cooperation continues to prevent my office from performing our responsibilities.

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Respectfully,

Jim

Jim Henry
Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

From: Prysby, Mike (DEQ)
Sent: Tuesday, March 17, 2015 4:26 PM
To: Howard Croft;Brent Wright;Daugherty Johnson;Dayne Walling;donna. cole;gdn2 @aol.com;James Henry;jmikewright;JoAnne Herman;John O'Brien;Kirk Smith;larry.koehler@mcc.edu;Laura Sullivan;Michael Glasgow;Mike Lane;Natasha Henderson;Norb Birchmeier;Pete Levine;rob.nicholas@veolia.com;Robert Nicholas;rosejo@msu.edu;Russell Hudson;Samir Matta;Warren Green
Cc: Busch, Stephen (DEQ)
Subject: RE: TTHM Draft Letter
Attachments: Draft - Flint Letter to Healthcare Providers.docx

Howard,

I made a few changes to the draft letter...in red (see attached)....mainly to make a more clear distinction between the locational running annual average and the stand-alone quarter (February 2015) results and how it affects the number of sites in compliance. If you have any questions, feel free to call me.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Monday, March 16, 2015 4:28 PM
To: Brent Wright; Daugherty Johnson; Dayne Walling; donna. cole; gdn2@aol.com; Howard Croft; James Henry; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Mike Lane; Prysby, Mike (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; rob.nicholas@veolia.com; Robert Nicholas; rosejo@msu.edu; Russell Hudson; Samir Matta; Warren Green
Subject: TTHM Draft Letter

Team,

We have received our notice from the DEQ and our next step is to have this group preview the letter that we intend to send to the public along with it. I have forwarded everyone a draft of the letter for any comments and I am also sending again all of the literature that was forwarded from Mr. Wright of the EPA and DR. Rose of MSU.

We expect to have an additional FAQ ready and out to this group on Tuesday and we anticipate the violation notice going out in the near future.

The **citizens advisory group** will meet again on this Thursday, we are currently looking to have another **Technical Advisory Committee** with this group in early April.

Thank you,
--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

DRAFT Letter to Flint Healthcare Providers

The safety and quality of Flint's water has been in the news for months. We have worked hard to address these issues and have succeeded in bringing Flint's water within the state's safety guidelines on all measures, including TTHM (total trihalomethanes). Excess TTHM triggered the initial letter to our customers earlier this year.

Even though Flint water now meets the standards and is testing significantly below the state's allowable contamination levels, we are required to send out another letter to residents because the *annual* quarterly testing average is not yet below the state's allowable average.

Flint tests for TTHM – a byproduct of the water chlorination process – at eight different sites in the city. When we began using the Flint River as a source in April of 2014, our first round of quarterly testing for TTHM was conducted in May. At that time, only two testing sites were below the allowable maximum; in August, every site was above the allowable maximum.

The City, with the help of LAN engineering, developed an Operation Evaluation Report (OER) which contained an action plan to address the issue. That plan was implemented with steps including upgrading the ozone treatment process at the Water Treatment Plant (WTP), **complete softening,** increasing water main/hydrant flushing to decrease stagnation, small scale testing of treatment to identify areas of improvement, applying overall improvements to the WTP through operational changes and to the distribution system through water circulation modeling

Because the public notice is based on a **locational running** annual average of quarterly results a notice was not required until November, at which time all but one testing **location** was below the allowable levels. **Our most recent testing in February 2015 showed all locations well below state allowable levels; however, the locational running annual average (based on the four most recent quarters – May 2014 – Feb. 2015) results in all but two locations being below the allowable level.** (See the attached graph outlining our progress.)

We have taken many steps to continue to improve the safety and quality of Flint's water, including bringing in international urban water system consultants, Veolia North America, and establishing two advisory committees: a Citizens Advisory Committee, along with a Technical Advisory Committee made up of representatives from the University of Michigan, Michigan State University, Kettering University, Mott Community College, Genesys, McLaren, and Hurley Hospitals along with local health officials including the Genesee Medical Society the Genesee County Public Health Department, the Michigan Department of Environmental Quality and the U.S. Environmental Protection Agency.

We have also established a hotline 810-787-6537 and a place for continuing updates on the city's website cityofflint.com and have encouraged residents who are concerned about their water to report it to us immediately so that we can make arrangements for on-site testing. Although we have been offering this for more than a month, to date only a few residents have requested on-site testing. All residents wishing to have their water tested can call the hotline number or send an email to flintwater@cityofflint.com.

Despite our progress, we are required by law to once again advise residents about what *was* an excess of TTHM in Flint's water system at the eight testing sights last year. The letter – a draft of which is enclosed for your information – includes legally required language recommending that residents who have (severely compromised immune systems, have an infant, or are elderly) should contact their

physician. This is standard language from the U.S. EPA which is included in every water quality or water related report the City publishes, regardless of whether there are specific health or quality concerns, and is used by other municipalities nationwide. We failed to alert you in advance of our original letter we were required to send out earlier this year – and we don't want to make that mistake again. We have enclosed a fact sheet and a list of Frequently Asked Questions in an effort to help you respond to any inquiries you may get from patients.

We recognize that Flint's water system may still be challenged with *quality* issues such as discoloration or odor but we assure you the *safety* of the water meets all state standards. You should also know that the City also publishes its monthly tests for a wide variety of water treatment components, including chloride levels, on its website at cityofflint.com/?page_id=5643.

We urge you to contact the City of Flint Water Treatment Plant with any specific questions or concerns you may have on this issue. We will do our absolute best to get you the answers you need.

Sincerely,

DRAFT

From: Prysby, Mike (DEQ)
Sent: Thursday, April 02, 2015 2:38 PM
To: Cook, Pat (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: RE: LT2 letter for Flint

Pat,
I will finalize the LT2 letter and send to WTP OIC by tomorrow. I will also email them the templates. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Cook, Pat (DEQ)
Sent: Thursday, April 02, 2015 2:04 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: LT2 letter for Flint

Hi Mike,

Attached is the information that you will have to mail to the Flint WTP ASAP pertaining to the 2nd round of source water monitoring as required by the LT2 Rule. The first attachment is a letter that you will have to place on Lansing District letterhead with an appropriate signature block. The next 3 attachments are documents that you will need to print out and include with the letter.

You should also consider emailing the sampling plan template, calendar and example schematics to them so they can complete those forms electronically if they choose to do so. I'll email you the example schematics in a separate email.

If you have any questions, please give me a call.

Patrick Cook, P.E.
Community Drinking Water Unit
Office of Drinking Water & Municipal Assistance
Michigan Department of Environmental Quality
Phone: (517) 284-6514
cookp@michigan.gov

From: Prysby, Mike (DEQ)
Sent: Friday, April 03, 2015 1:39 PM
To: Rennaker, Joanne (DEQ)
Subject: Letter 4 final
Attachments: LT2 letter 2nd round Sch 2 plants.docx

Joanne,

Attached is a letter 4 final to the city of Flint. Thanks!

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

April 3, 2015

Mr. Brent Wright, Water Plant Superintendent
City of Flint Water Plan
4500 North Dort Highway
Flint, Michigan 48505

Dear: Mr. Wright

SUBJECT: Long Term 2 Enhanced Surface Water Treatment Rule
2nd Round of Source Water Monitoring Requirements

The Long Term 2 Enhanced Surface Water Treatment Rule (LT2 Rule) was promulgated by the U.S. Environmental Protection Agency on January 5, 2006. The Michigan Department of Environmental Quality adopted this rule into the Michigan Administrative Rules in December, 2009. All public water systems that are supplied by a surface water source and systems supplied by a ground water source under the direct influence of surface water (GWUDI) are subject to this rule.

According to the LT2 Rule, systems are required to conduct an initial and a second round of source water monitoring for each plant that treats a surface water or GWUDI source. Please keep in mind that Grandfathering data will not be accepted for the second round of monitoring. This monitoring includes at least one source water *Cryptosporidium*, *E. coli*, and turbidity sample per month for a period of 24 months for systems serving populations greater than 10,000 people. Systems will be assigned to a "treatment bin" based on the results of source water monitoring. The treatment bin specifies the level of *Cryptosporidium* removal and/or inactivation that the system must achieve.

Our records indicate that your system is required to comply with the source water monitoring requirements on **Schedule 2** as stated below in Table 1. Therefore, your system is required to submit to the DEQ a source water monitoring plan for each plant by July 1, 2015, and start the 2nd round of monitoring in October, 2015.

Table 1 – LT2 Milestone Dates for 2nd Round of Source Water Sampling

System Population	Schedule	Must submit Source Water Sampling Plan by…	Must begin second round of source water monitoring…
At least 100,000	1	January 1, 2015	April 1, 2015
50,000 – 99,999	2	July 1, 2015	October 1, 2015
10,000 – 49,999	3	July 1, 2016	October 1, 2016
<10,000	4	July 1, 2017	October 1, 2017

Enclosed with this letter is a Source Water Sampling Plan template that you can complete and submit to this office to comply with the July 1, 2015 deadline. The template includes instructions and a worksheet that will assist the DEQ in determining if your plan meets the requirements of the LT2 Rule.

If you have any questions about this subject, feel free to contact me at (517) 290-8817; prysbym@michigan.gov; or Department of Environmental Quality, Office of Drinking Water and

Municipal Assistance, Lansing District Office, 525 West Allegan Street, 1st Floor South, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Field Operations Section
Office of Drinking Water and
Municipal Assistance

Enclosures
mfp/jlr
cc: Mr. Howard Kroft, Utilities Director, City of Flint

From: Prysby, Mike (DEQ)
Sent: Monday, April 06, 2015 9:48 AM
To: Benzie, Richard (DEQ)
Subject: RE: City of Flint Water

Richard,

I will summarize and respond....thanks for your input..

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Benzie, Richard (DEQ)
Sent: Monday, April 06, 2015 9:35 AM
To: Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Butler, Sonya (DEQ); Schneider, Robert (DEQ)
Subject: Re: City of Flint Water

I too know nothing about the city's rate setting methodology. You should confirm again that the public water supply program and Act 399 do not regulate water rates.

For questions about the DWRF, direct inquiries to the SRF Section.

You could also say that spills of this nature are reported to a separate division (Water Resources). The Office of Drinking Water and Municipal Assistance gets notified of such events if WRD or the person receiving the notification believes there may be a public water supply downstream that may be impacted. You should also let her know that surface water treatment plants like Flint are designed to handle microbial contamination including spikes caused by runoff and overflows. It is one of the primary reasons we require a certified operator be present during all periods of operation so they can react appropriately to changing raw water quality.

I would stay away from providing dollar amounts for the loans. Let SRF staff answer that question.

I'm home today with a doctor appointment shortly so I'm copying others that may be of assistance to you.

Sent using OWA for iPhone

From: Prysby, Mike (DEQ)
Sent: Monday, April 6, 2015 9:06:59 AM
To: Benzie, Richard (DEQ)
Subject: FW: City of Flint Water

Richard,

I am not in the position to offer much detail into Flint's water rates and how they are established. Those type of complaints or inquiries are best answered by the city. I can inform Sheila about the city's DWRF loan (early 2000s) used to renovate the WTP and I will suggest that Sheila ask the city how the DWRF debt balance is factored into the water rate structure. I recall the original DWRF loan amount (approx $35 million) for treatment plant upgrades and a current balance of approx $20 million. If I am off on these numbers...let me know. Thanks..

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Sheila Bailey-Waddell [mailto:sheila.bw@hotmail.com]
Sent: Friday, April 03, 2015 4:34 PM
To: Prysby, Mike (DEQ)
Subject: RE: City of Flint Water

Michael,

I refuse to believe that you were unaware of this incident. I have provided a link below for your reference and that you were informed. Although you have stated that you do not regulate the rates, there, perhaps, is an indirect relationship with Michigan DEQ components and rates charged (i.e revolving funds, loans, etc...). Somewhere in your agency's organization structure these two elements must cross.

http://www.mlive.com/news/flint/index.ssf/2015/04/flushing_discharges_nearly_100.html

Thank you,
Sheila

From: PRYSBYM@michigan.gov
To: sheila.bw@hotmail.com
Subject: City of Flint Water
Date: Fri, 3 Apr 2015 19:57:28 +0000

Sheila,

To better help address your first concern pertaining to the spill of sewage into the Flint, I will need to know the location of the spill and when it occurred. Your second concern, pertaining to the high cost of water cannot be answered by our department since we do not regulate how a water utility charges its customers. It is the city's obligation, as part of building good public relations and perception, to provide an informative response to customers concerned over high water rates.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
MDEQ

From: Prysby, Mike (DEQ)
Sent: Tuesday, April 07, 2015 12:47 PM
To: Busch, Stephen (DEQ);Henry, James
Cc: Benzie, Richard (DEQ);Shekter Smith, Liane (DEQ)
Subject: RE: Legionella Conference Call w/ MDCH

I am available

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Tuesday, April 07, 2015 12:10 PM
To: Henry, James
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Legionella Conference Call w/ MDCH

I am out of the office on Sick Leave today.

Mike Prysby will try to call in.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Tuesday, April 07, 2015 12:06 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: Legionella Conference Call w/ MDCH

Hello Mr. Busch,

If possible would you or a representative from your office please attend the conference call that is being hosted by MDCH regarding the Legionella cases in Genesee County. Your knowledge and experiences may help us better understand the Flint municipal water system and municipal water in general, relative to Legionella. I understand that this is short notice, the meeting is today at 2:30pm and the call line is below.

PPI
Access code: **PPI**

Thank you

Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/.

From: Hasan, Shurooq
Sent: Tuesday, April 7, 2015 10:25 AM
To: Henry, James
Subject: FW: Conference call line

From: Johnson, Shannon (DCH) [mailto:JohnsonS61@michigan.gov]
Sent: Monday, April 06, 2015 8:40 AM
To: Hasan, Shurooq
Subject: Conference call line

Hi Shurooq,

The conference call line for tomorrow's call from 2:30-3:30pm is:

PPI
Access code: **PPI**

Thanks,
Shannon

Shannon Andrews Johnson, MPH
Infectious Disease Epidemiologist

Michigan Dept. of Community Health
201 Townsend St., CVB 5th Floor
Lansing, MI 48913
Phone: 517-335-8165
Fax: 517-335-8263

From: Prysby, Mike (DEQ)
Sent: Tuesday, April 07, 2015 2:23 PM
To: Shekter Smith, Liane (DEQ)
Subject: FW: RE: Flint Water Age map
Attachments: Flint 20in & 16in Water Age Map 2015-03-04.pdf; Flint 24in Water Age Map 2015-03-04.pdf

Liane,

Flint water age map attached...I can explain when I come up....on my way

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Daugherty Johnson [mailto:djohnson@cityofflint.com]
Sent: Thursday, March 19, 2015 9:43 AM
To: Prysby, Mike (DEQ)
Subject: Fwd: RE: Flint Water Age map

Hello Mike. Here are the referenced exhibits in the 24 in. main reduction letter

Daugherty

---------- Forwarded message ----------
From: "Mack, Melissa" <MCMack@lan-inc.com>
Date: Mar 19, 2015 9:34 AM
Subject: RE: Flint Water Age map
To: "Daugherty Johnson" <djohnson@cityofflint.com>
Cc:

Hi Duffy,

Please see attached.

Melissa

Melissa C. (Henderson) Mack, PE

Associate, Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive, Suite 400 • Houston, TX 77042-3720

T 713.266.6900 **x** 2436 **D** 713.821.0436

www.lan-inc.com • MCMack@lan-inc.com

From: Daugherty Johnson [mailto:djohnson@cityofflint.com]
Sent: Thursday, March 19, 2015 6:57 AM
To: Mack, Melissa
Subject: RE: Flint Water Age map

For clarification, I need the exhibits referenced in the letter you sent me discussing the downsizing of the 24 inch transmission main.

On Mar 19, 2015 7:55 AM, "Daugherty Johnson" <djohnson@cityofflint.com> wrote:

Hello Melissa. Could you send the exhibits referenced in the letter. DEQ wants to see them.

Thanks
Duffy

On Mar 15, 2015 5:26 PM, "Mack, Melissa" <MCMack@lan-inc.com> wrote:

You should be able to print to any size. Try 11x17 portrait. I'm attaching again in case the file got corrupt when it was sent last time.

Melissa C. (Henderson) Mack, PE

Associate, Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive, Suite 400 • Houston, TX 77042-3720

T 713.266.6900 **x** 2436 **D** 713.821.0436

www.lan-inc.com • MCMack@lan-inc.com

From: Daugherty Johnson [mailto:djohnson@cityofflint.com]
Sent: Friday, March 13, 2015 1:46 PM
To: Mack, Melissa
Subject: RE: Flint Water Age map

I cannot print the map in its entirety. Do I need to scale a specific way?

On Mar 13, 2015 8:54 AM, "Mack, Melissa" <MCMack@lan-inc.com> wrote:

Duffy,

As discussed here is the water age map from January showing the water sample locations.

Thanks,

Melissa

Melissa C. (Henderson) Mack, PE

Associate, Project Manager

Lockwood, Andrews & Newnam, Inc.
A MEAD & HUNT COMPANY

2925 Briarpark Drive, Suite 400 • Houston, TX 77042-3720

T 713.266.6900 **x** 2436 **D** 713.821.0436

www.lan-inc.com • MCMack@lan-inc.com

From: Mack, Melissa
Sent: Thursday, March 12, 2015 1:12 PM
To: Daugherty Johnson; Green, Warren; Matta, Samir
Subject: Re: Flint Water Age map

Duffy,

We heard back from Innovyze. The model file got corrupted, but they are walking us through a fix. We are documenting the process so we'll know what do do if it happens in the future.

We expect to have fixed this afternoon and have the maps to you thereafter.

Thank you,

Melissa

Sent from my iPhone

On Mar 11, 2015, at 5:04 PM, Mack, Melissa <MCMack@lan-inc.com> wrote:

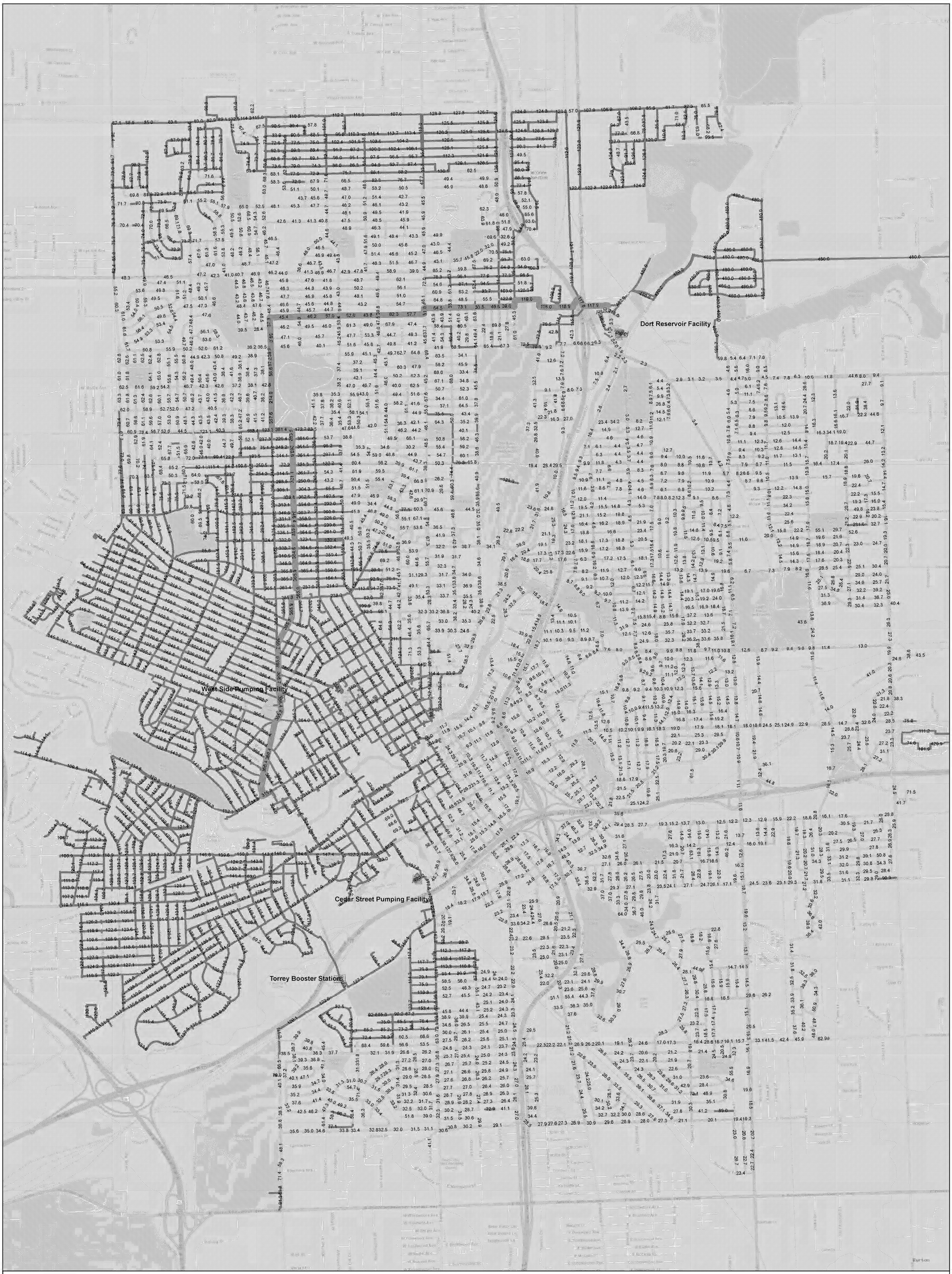
> Duffy,
>
> We ran into a technical issue with the model creating the water age maps without the 24-inch highlighted. We have to send the model to Innovyze. They weren't able to help us over the phone. We will get you the maps as soon as possible.
>
> Thanks,
>
> Melissa
>
> **Melissa C. (Henderson) Mack**, PE
>
> Associate, Project Manager
>
> <image001.gif>
>
> 2925 Briarpark Drive, Suite 400 • Houston, TX 77042-3720
>
> **T** 713.266.6900 **x** 2436 **D** 713.821.0436
>
> www.lan-inc.com • MCMack@lan-inc.com

From: Daugherty Johnson [mailto:djohnson@cityofflint.com]
Sent: Wednesday, March 11, 2015 9:07 AM
To: Mack, Melissa; Green, Warren; Matta, Samir
Subject: Flint Water Age map

Hello Melissa. Would you please send me a copy of the latest Water Age map for Flint.

Thanks

Duffy



CITY OF FLINT WATER LINE REPLACEMENT

20 / 16 INCH WATER LINE WATER AGE MAP

15 MGD

March 04, 2015

EXHIBIT B

Legend
Water Age

- less than 24.0 hrs
- 24.0 to 72.0 hrs
- 73.0 to 144.0 hrs
- greater than 144.0 hrs

- 16-inch Water Line Replacement
- 20-inch Water Line Replacement

N

0 550 1,100 2,200 3,300 4,400 Feet

From: Prysby, Mike (DEQ)
Sent: Wednesday, April 15, 2015 11:34 AM
To: Busch, Stephen (DEQ);Shekter Smith, Liane (DEQ);Benzie, Richard (DEQ)
Subject: FW: Questionnaire / FOIA
Attachments: Final Genesee supplemental questionnaire 2-23-15.docx; FOIA Request Jan 27, 2015 Flint Water.doc; FOIA Request Flint Water April 2 2015.doc

Importance: High

Attached are FOIA and questionnaire documents that we requested.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Wednesday, April 15, 2015 10:45 AM
To: Prysby, Mike (DEQ)
Subject: FW: Questionnaire / FOIA
Importance: High

Mike, I apologize for the delay regarding the attached FOIA's and questionnaire.

The information that you shared during the conference call last week was very helpful. I have not received a response yet from the April 2, FOIA.

Thank you

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

NOTICE: This e-mail, including attachments, is intended for the exclusive use of the addressee and may contain proprietary, confidential or privileged information. If you are not the intended recipient, any disclosure, use, distribution, copying, or taking of any action in reliance of the contents of this e-mail is strictly prohibited. If you have received this e-mail in error, please notify me via e-mail and permanently delete the original and destroy all copies. Thank you.

For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/

MDSS ID _____

Legionellosis Questionnaire
Genesee County, 2014-2015

Interviewer Identification

Date of Interview: _____ Interviewer's Name: _____
Health Dept.: _____ Phone Number: _____ E-mail: _____

What was the patient's outcome? ☐ *RECOVERED* ☐ *STILL ILL* ☐ *DIED* ☐ *UNK*

Patient Contact Information

Name: _____ Age: _____ Sex: ☐ M ☐ F
Street address: _____ City: _____
State: _____ Zip: _____ County: _____
Daytime Phone: _____ Evening Phone: _____

Surrogate Contact Information <*List surrogate contact information if patient is too unwell or has died*>

Name: _____
Daytime Phone: _____ Evening Phone: _____
Relationship to Patient: _____

Hello, my name is _____ and I'm calling from _____ (health department). We are investigating a cluster of respiratory illnesses in Genesee County. At this point, the source of these illnesses is still under investigation. We are hoping this interview will provide further information and answers about the illnesses. I'd like to ask you a few questions about your home and your exposures during the 2 weeks before you got sick. You do not have to answer any of the questions, but any assistance you can provide is appreciated. Do you have about 30 minutes to talk? If not now, when would be a good time for me to call back? _____

<If the case is from more than 1 month prior, the following text may be used: >
It might be helpful for you to collect documents such as a calendar, receipts, credit card or bank statements to jog your memory about your activities and where you were in the 2 weeks prior to getting sick. The only information we would ask you to share from these are dates and locations. Would you like me to call you back after you have time to collect these materials? When would be a convenient day and time for me to call you back? _____

I have that your first symptom started on *<insert onset date>* _____. Is this correct?

☐ Yes ☐ No ☐ Not sure

If no, what was the first date you started feeling sick? ____/____/_____

List dates of exposure period: from ____/____/____ *to* ____/____/____ *<The exposure period includes the 2 weeks before the date of illness onset>*

MDSS ID _____

Illness Information

1.) During your illness, did you have any of the following symptoms?

	Check one:		
	YES	NO	UNK
Diagnosis of pneumonia			
Fever If yes, highest temp:_____			
Chills			
Cough			
Nausea			
Vomiting			
Diarrhea			
Aches or muscle pains			
Chest pain			
Shortness of breath			
Sore throat			
Headaches			
Other symptoms (*specify*):			

Exposure Information

2.) How long have you lived at your current residence? _____

<If they have moved since the listed exposure period, indicate that you are asking about the house they lived in prior to becoming sick>

a.) If you moved after the exposure period/illness, what was your previous residence address? _____

3.) Where did you get your tap (drinking and other household use) water from between ___/___/___ and ___/___/___ ? *<Exposure period from above>*

- ☐ 1. City of Flint Water
- ☐ 2. City of Flint Township Water
- ☐ 3. Other municipal water system
- ☐ 4. Private well
- ☐ 5. Unknown
- ☐ 6. Other _____

4.) During the last year, has the water pressure at your residence changed? ☐ Yes ☐ No ☐ Not Sure

a.) If yes, did the water pressure: ☐ Increase ☐ Decrease

b). If yes, when did the water pressure change occur? _____

MDSS ID _____

5.) During the last year, has the water quality (appearance, taste, smell) at your residence changed?
☐Yes ☐No ☐Not Sure
a.) If yes, please describe the change in the water quality:_____
_____
b). If yes, when did the water quality change occur? _____

6.) Prior to your illness, did you make any recent plumbing changes or repairs at your residence?
☐Yes ☐No ☐Not sure
a.) If yes, please describe the changes/repairs and give the dates the work was done.
_____
_____

7.) Prior to your illness, were there any water main breaks or other water line issues that affected the water at your residence, including boil water advisories? ☐Yes ☐No ☐Not sure
a.) If yes, please describe the water main/line issues or boil water advisories and give the dates they occurred.
_____
_____

I'd like to ask you some questions about what you did during the 2 weeks **before** you got sick.
The time period I'm asking about is between ___/___/___ and ___/___/___.*<Exposure period>*
During this 2 week period, did you:

8.) Work or volunteer, either full or part time? ☐Yes ☐No ☐Not sure
a.) If yes, complete the following table:

Job description	Company	Location	Any exposure to misty water?

9.) Spend any time in a hospital, doctor's office, clinic, or dentist office as a patient, visitor, employee, or volunteer? ☐Yes ☐No ☐Not sure
a.) If yes, check all that apply:

Exposure	Date(s)	Reason for Visit	Name & City of Hospital/ Office/ Clinic	Name of Doctor
Inpatient ☐	Admission_____ Discharge_____			
Outpatient ☐				
Visitor ☐				
Employee ☐				
Volunteer ☐				

10.) Visit, reside, or work in a long term care facility, nursing home, assisted living facility, or senior living facility? ☐Yes ☐No ☐Not sure

MDSS ID _____

a.) If yes, complete the following table:

Exposure	Date(s)	Name & City of Facility
Resident ☐		
Visitor ☐		
Employee ☐		

11.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you spend any nights away from home (excluding healthcare settings)? ☐Yes ☐No ☐Not sure

a.) If yes, complete the following table: *<prompts: hotel, campground, cabin, cruise, second home, with family, etc.>*

Accommodation Type/Name	Address Street, City, State	Floor/Room No.	Dates of Stay	
			Arrival	Departure

12.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you visit any of the following community venues?

	Check one:					
Venue	YES	NO	UNK	Date(s)	Name of Venue	Address
Hotel (*without* staying overnight – e.g. dinner, wedding)						
Auditorium						
Barbershop or Hair salon						
Car wash						
Casino						
Church or Place of worship						
Gym or Work out facility						
Grocery store						
Home improvement store						
Spa or Nail salon						
Mall or Department store						
Movie theater						
Other (*specify*)						

13.) In the 2 weeks before you before you got sick (___/___/___ to ___/___/___), did you have exposure to any of the following water sources, either ***at home*** or while ***away from home***?

MDSS ID _____

Exposures ***at home***	Check one: YES	NO	UNK	Dates (s)	Description: Name (or Type)/Location
Shower					
Use a detachable shower head or hose					
Hot tub, whirlpool spa, Jacuzzi tub					
Sat NEAR a working hot tub or whirlpool spa but did not get in					
Steam room or wet sauna					
Humidifier (whole house or portable)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Respiratory therapy machine (e.g. nebulizer, CPAP, BiPAP, etc.)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Other (*specify*)					

Exposures ***away from home***	YES	NO	UNK	Dates (s)	Description: Name (or Type)/Location
Shower at gym, work, other location					
Use a detachable shower head or hose					
Hot tub, whirlpool spa, Jacuzzi tub					
Sat NEAR a working hot tub or whirlpool spa but did not get in					
Humidifier (whole house or portable)					If yes, specify type: If yes, what type of water is used in device? □Bottled □Tap □Other:_____
Pool/splash pad/waterpark					
Recreational or cooling misters					
Steam room or wet sauna					
Decorative fountain					
Outdoor watering hose or sprinkler					
Beach, lake, pond, river, creek, etc.					
Other (*specify*)					

Medical History

Now I'm going to ask a few questions about your medical history and health behaviors.

14.) Have you ever been told by a healthcare provider that you had any of the following conditions:

MDSS ID _____

Condition	Check one: YES	NO	UNK	Comments
Chronic kidney disease				
Weakened immune system (due to cancer, chemotherapy , radiation therapy, immunosuppressive meds, HIV, organ transplant, etc.)				
Diabetes				
Chronic lung disease (COPD, emphysema)				
Asthma or chronic bronchitis				
Heart disease or congestive heart failure				
Liver disease				
Other conditions (*specify*)				

15.) Health behaviors:

	Check one: YES	NO	Quantity per day (packs or drinks)	Duration (years)
Are you currently a smoker?				
Are you a former smoker?				
Do you drink alcohol?				

16.) Do you know anyone else with similar symptoms? ☐ Yes ☐ No ☐ Not sure

a.) If yes, complete the following table:

Name	Phone	State of Residence	Details of Shared Exposure

Additional Comments _____

_____

_____

_____

_____

Thank you so much for taking the time to answer these questions. Do you have any questions that I can help answer? If you have any questions or remember any further details later, please contact the _____ (health department) at phone: _____.

Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

January 27, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Water Plant Information Request

Dear FOIA Coordinator,

Under provisions of the Michigan Freedom of Information Act (MCLA 15.231 et seq; MSA 4.1801 (1) et seq) please provide copies of the following:

Provide specific water testing locations and laboratory results within the City of Flint public water system for Coliform, E-coli, Heterotrophic Bacteria and Trihalomethanes from January 1, 2010 to January 27, 2015. Provide any additional water testing that has been conducted for identifying potential public health risks. Include any available mapping of the water testing areas.

Provide a map delineating the boundaries of the City of Flint water distribution system. Include any changes to the boundaries, along with corresponding dates from January 1, 2014 to January 27, 2015.

Provide a map or list of locations, detailing dead ends, pooling, low pressure and any additional areas of concern within the City of Flint water distribution system. Include any modifications to the water distribution system addressing concerns, along with corresponding dates from January 1, 2014 to January 27, 2015.

If you determine that any of the requested information is exempt from disclosure, please detail what is being withheld and cite the exemption under FOIA. I anticipate the request being filled within five working days of receipt of this letter, as provided under FOIA. Please contact me at (810) 257-3618 if there are fees associated to comply with this request.

Sincerely,

Jim Henry
Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

Genesee County Health Department

Mark Valacak, M.P.H., Health Officer
Gary K. Johnson, M.D., M.P.H., Medical Director

April 2, 2015

FOIA Coordinator, City of Flint
1101 S. Saginaw Street, 3rd floor
Flint, MI 48502

RE: Flint Municipal Water Information Request

Dear FOIA Coordinator,

Under provisions of the Michigan Freedom of Information Act (MCLA 15.231 et seq; MSA 4.1801 (1) et seq) please provide the following:

Please provide the dates and specific locations of the water main breaks for 2014. Please provide an electronic version with the address data file, if possible.

Please provide dates and specific locations of flushing activities within a mile radius around McLaren Hospital, Flint for 2014.

Please provide a copy of the Veolia presentation that was displayed at the Technical Advisory Committee on March 4, 2015. If possible please provide an electronic version.

Please provide the monitoring locations and results for heterotrophic bacteria for 2013 through 2014.

If you determine that any of the requested information is exempt from disclosure, please detail what is being withheld and cite the exemption under FOIA. I anticipate the request being filled within five working days of receipt of this letter, as provided under FOIA. Please contact me at (810) 257-3618 if there are fees associated to comply with this request.

Sincerely,

Jim Henry
Environmental Health Supervisor
Genesee County Health Department
630 S. Saginaw Street
Flint, MI 48502

cc: Crystal Olmstead, Flint City
Howard Croft, Flint City

From: Prysby, Mike (DEQ)
Sent: Monday, April 20, 2015 10:15 AM
To: Busch, Stephen (DEQ)
Subject: Accepted: Hurley Hospital Water System

From: Prysby, Mike (DEQ)
Sent: Friday, April 24, 2015 10:55 AM
To: Busch, Stephen (DEQ)
Subject: RE: Flint Corrosion Control?

Migual has me on the phone

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Friday, April 24, 2015 10:54 AM
To: Prysby, Mike (DEQ); Cook, Pat (DEQ)
Cc: Rosenthal, Adam (DEQ)
Subject: RE: Flint Corrosion Control?

Based on the matrix of recommended corrosion control study components for Large PWS's for both Lead and Copper, there are no additional requirements for the City of Flint based on the levels of lead and copper in the current source water and the results of the lead and copper distribution monitoring.

"The only provision of the Rule which classifies the existing treatment of large PWSs as optimized for corrosion control is when the difference between the 90% Pb-TAP and Pb-POE is less than the lead PQL for each six-month period of the initial monitoring program. By definition, the PQL for lead is 0.005 mg/L; and the lead value for the source water used in this determination is the highest source water lead concentration. If this condition is met, then no study or testing is required. However States may consider the presence of copper in tap samples when determining whether the existing treatment is optimized."

I believe this condition has been met.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Friday, April 24, 2015 10:32 AM
To: Cook, Pat (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Flint Corrosion Control?

Pat,

As we discussed, Flint is not practicing corrosion control treatment at the WTP. They are conducting lead & copper monitoring at 100 locations. WQ monitoring is also being conducted. The first round of samples after switch-over (July 1, 2014 – Dec 31, 2014) had 90th percentile results as follows: Lead: 6 ppb, Copper 110 ppb

The second round of samples (Jan 1, 2015 – June 30, 2015) is underway with approx. 20 of the 100 sample site results in. The highest lead result out of the 20 received thus far is 13 ppb.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Cook, Pat (DEQ)
Sent: Thursday, April 23, 2015 12:48 PM
To: Prysby, Mike (DEQ)
Subject: Flint Corrosion Control?

Hi Mike – I have a quick question for you: what is Flint doing now (post Detroit) for corrosion control treatment?

Pat

From: Prysby, Mike (DEQ)
Sent: Friday, May 01, 2015 10:01 AM
To: 'rbincsik@cityofflint.com'
Subject: Watermain breaks

Robert,

Based upon the discussion during our April 29th site visit, you have forwarded available information concerning the occurrence (location & date) of watermain breaks in the city of Flint during 2014. Please provide us with a copy of this information at your earliest convenience. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Thursday, May 07, 2015 3:02 PM
To: Busch, Stephen (DEQ)
Subject: CCCP letter to Flint
Attachments: Visit Ltr - April 2015.doc

Steve,

Attached is a draft letter for your review to the city of Flint regarding their CCCP.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

May 7, 2015

Mr. Howard Kroft, Director of Public Works
City Of Flint
1101 South Saginaw Street
Flint, MI 48502

WSSN: 02310

Dear Mr. Kroft:

SUBJECT: Flint Cross Connection Control Program

This letter confirms my site visit on April 29, 2015 with Mr. Glen Thomas, Utilities/Cross Connection Division Inspector for the City of Flint. Mr. Stephen Busch from our office was also present. The purpose of the visit was to discuss with and assist Mr. Thomas in identifying larger commercial and industrial customers with extensive premise plumbing systems equipped with ancillary components such as cooling towers and chillers. Some time was also spent discussing the status of the city's Cross Connection Control Program (CCCP). Concerns regarding implementation of the CCCP are discussed in more detail below.

Flint's CCCP has maintained good standing due in part to the effort put forth by the Utilities/Cross Connection Division staff. Although Flint's most recent water system Sanitary Survey did not reveal deficiencies the CCCP, the importance of maintaining an adequate level of CCCP staffing was communicated to the city. Our review of the city's 2014 Cross Connection Report and discussion with Mr. Thomas; however, confirms that the CCCP's inspection and device testing objectives were not met in 2014.

The shortfall in meeting the CCCP objectives appears to be the result of the vacancy in the Plumbing Inspector position; however, given the importance of the CCCP and the potential liability for non-compliance, the full implementation of the CCCP needs to resume in 2015. We realize that implementing a program of this magnitude requires a significant commitment of time and personnel and it has been noted that additional staffing may be needed to maintain its effectiveness. We encourage the city to review CCCP staffing needs and authorize additional workforce as needed in order to prevent the program from declining to a **Deficient** status.

Should you require further information, please contact me at the telephone number below; via e-mail at prysbym@michigan.gov; or Department of Environmental Quality, P.O. Box 30242, Lansing, Michigan 48909.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Office of Drinking Water and
Municipal Assistance
Lansing District Office

(517) 290-8817

mfp/jlr
cc Mr. Glen Thomas
Mr. Stephen Busch, P.E.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Prysby, Mike (DEQ)
Sent: Thursday, May 07, 2015 4:09 PM
To: Busch, Stephen (DEQ)
Subject: FW: AWWA Dist Practices Seminar - Eagle Eye

It looks like I will be going to the Flint TAC meeting now....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Eric [mailto:ejohnson@mi-water.org]
Sent: Thursday, May 07, 2015 4:02 PM
To: Thurston, Brian (DEQ); Prysby, Mike (DEQ)
Cc: 'Bonnifer Ballard'
Subject: RE: AWWA Dist Practices Seminar - Eagle Eye

Good afternoon!

Mike, you must have caught this right as I was taking the seminar off the calendar.

The Distribution Practice Seminar has been postponed for now.

I'm sorry for the inconvenience it caused you.

Regards,

Eric

Eric Johnson, CMP, CMM
MI AWWA Meetings Coordinator
(517) 292-2912 Ext 2

From: Thurston, Brian (DEQ) [mailto:THURSTONB@michigan.gov]
Sent: Thursday, May 7, 2015 2:32 PM
To: Prysby, Mike (DEQ)
Cc: Eric Johnson
Subject: Re: AWWA Dist Practices Seminar - Eagle Eye

Yes, the course date is May 20th.

Brian Thurston
231-590-3430
Sent from my iPhone

On May 7, 2015, at 2:12 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Brian,

I registered for the Distribution Practices Seminar to be held at Eagle Eye in May. My confirmation e-mail from AWWA states the seminar is on May 20th which what I anticipated; however, the AWWA Calendar within the Training/Events tab shows the seminar was on May 4th. I am assuming the correct date is May 20th; however, I would like to confirm this. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Friday, May 08, 2015 9:47 AM
To: Howard Croft
Subject: RE: May_Technical Advisory Meeting

Howard,

The May 20th Distribution Practices Seminar that I am registered for has been postponed; thus, I will be available to participate in the TAC meeting on Wed. May 20th in Flint. See you on the 20th.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Monday, May 04, 2015 2:06 PM
To: Brent Wright; Daugherty Johnson; donna. cole; Elizabeth Murphy; gdn2@aol.com; Gerald Ambrose; Howard Croft; James Henry; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Michael Wright; Mike Lane; Prysby, Mike (DEQ); Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Warren Green; Michael Sargent
Cc: Natasha Henderson
Subject: May_Technical Advisory Meeting

Technical Advisory team,

We are planning to hold our next advisory meeting on Wednesday May 20th 2:00 pm at City Hall. The focus points of the meeting will be to convey the advancements in the current water quality, the summer implementation plans and timelines, and the latest information on test results.

We continue to offer testing and to look for any residential concerns about the water. I encourage all of the hospital and college representatives to bring forward any recent issues that may have arisen and we will look to discuss those as well as any other situations that we are aware of. I will send out an agenda early next week and we will plan on having a conference line available to call in.

Please send any questions or comments to me if there are items that you would like to see addressed.

Thank you,

--
Howard Croft
Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Prysby, Mike (DEQ)
Sent: Friday, May 08, 2015 10:26 AM
To: dczarnecki@cityoffenton.org
Subject: Fenton Distribution Survey
Attachments: Eval 2012 Fenton-Dist.doc; Conclusions & Recc 2012.doc

Dan,

Attached is the most recent water system (Distribution portion) Sanitary Survey. Please print the document and make any necessary revisions as this will help to expedite the review. Also, attached are the 2012 Conclusions & Recommendations containing both treatment plant and distribution system items. I will plan to discuss Distribution related material with you from this document also. I will plan on meeting with you on May 20th at 9:30am at City Hall.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

CITY OF FENTON
2012 WATER SYSTEM REVIEW
DISTRIBUTION{PRIVATE }

WSSN 2270 Supply City of Fenton County Genesee

Date 04/04/12 Reviewed by MFP District 11

Primary Contact:	Don Fralick	Copy To:	Dan Czarnecki
Title:	Distribution Supt.	Title:	Dir of Pub Works
Telephone	(810) 629-4605	Telephone:	(810) 629-2261
Address:	310 South Leroy Fenton, MI 48430	Address:	same

Population: 11,746 Year: 2010 Basis: 2010 Census

Distribution Classification: S-2 Cert.

Operator in charge: Donald Fralick S-1

Other Distribution System Operators:

Al Maddox S-3
Thomas Wright S-2 (Back-up operator)

Complete Treatment (Lime-soda softening) – F-2 required
Operator Certification: - See WTP Sanitary Survey

Comments:

The water system serving the city of Fenton consists of four wells piped to a 4.0 MGD lime-soda softening treatment facility. The water treatment plant was constructed in 2003 and placed into service in 2004. Information pertaining to the water treatment plant can be referenced from Fenton's Water Treatment Plant Sanitary Survey.

Treated water is distributed to a net work of transmission and distribution mains providing service to a population of approximately 12,000. System storage is provided at the top of Denton Hill by use of two ground storage tanks (1.0 MGAL & 0.5 MGAL). A small in line booster pump station is also provided for a subdivision in the vicinity of the ground storage tanks to help provide sufficient operating pressure.

WELL INFORMATION - See WTP Sanitary Survey

WELL ISOLATION:

Well Number	5	6	7	8
Approved Standard Isolation Radius	100 ft.	100 ft.	100 ft.	100 ft.
Available Isolation Radius	>100 ft.	>100 ft.	>100 ft.	>100 ft.
Type of Isolation Control	Mun. own	Mun. own	Mun. own	Mun. own
Approved WHP Plan?	Yes	Yes	Yes	Yes
GW Flows from				
+Basis				
Important Potential Source				
Dist. and Dir. from Well				
Important Major Source				
Dist. and Dir. from Well				
Detects	None	None	None	None

Vulnerability Assessment:

Fenton's wells are determined to be "moderately" vulnerable to volatile organics, pesticides and herbicides. The associated chemical monitoring guidelines are discussed in previous correspondence.

PRODUCTION AND STORAGE REQUIREMENTS

Production History (MGD) - See WTP Sanitary Survey

Five year Max Day 2.25 MGD Date 2007
Five year Avg Day 1.13 MGD

Max Day for capacity requirements 2.25 MGD

Comments:

Water usage has decreased over the past five years and is attributed to a decline in the economy and higher water rates. The city continues to maintain adequate source capacity.

Well Capacity

Total Well Capacity 3,570 gpm 5.14 mgd

Firm Well Capacity 2,450 gpm 3.53 mgd

Firm Well Capacity/Max Day 64%

Total Auxiliary Power
Well Capacity 1,450 gpm 2.09 mgd

Avg. Day/Auxiliary Power Well Capacity 54 %

Comments:
Fenton's total well and firm well capacities have decreased due to a loss of capacity at Well #5; however, available source capacity remains capable of meeting the city's average and maximum day water usage since the city's water usage has also decreased. Peerless Midwest has recommended chemical cleaning, complete overhaul, and installation of a VFD at Well #5. The city intends to proceed with work on Well #5 later in 2012 along with exploring the possibility of constructing a new well at a different depth and/or location. The objective of a new well is to obtain a new source of water with lower hardness; thus, reducing the overall cost of treatment.

PRODUCTION AND STORAGE REQUIREMENTS

STORAGE CAPACITY

	Location: Denton Hill Fac. ID #	Location: Denton Hill Fac. ID #
Volume	1,000,000	500,000
+Type	Gd. Reserv	Gd. Reserv
O.F. Elevation		
Date Constructed	1959	1999
Date Inspected	2000	1999
Date Painted Inside	Concr	Concr
Paint System	NA	NA
Date Painted Outside	NA	NA
Cathodic Protection	NA	NA
High Alarm	Yes	Yes
Low Alarm	Yes	Yes
Average Usable Volume (MGAL)	0.94	0.5

Total Usable Storage 0.94 mil. gal. 0.50 mil. gal.

Total Usable Storage/Max Day 62 %

Total Usable Storage/Avg Day >100 %

Comments:

The total usable storage is slightly less than actual construction due to a 14-inch elevation difference between both tanks. The larger tank is approximately 14 inches higher than the smaller tank, thus the top 60,000 gallons of the larger tank cannot be utilized.

Both tanks are due for a structural inspection. A bid specification for an inspection is being prepared and the intent is to have the inspection out for bid before the end of the city's fiscal year (FY12 – June 30, 2012). The city has included funds in their FY 12 budget for the tank inspection.

DISTRIBUTION

Pumping Stations -

One small in-line booster pump station operates continuously to provide sufficient pressures to the subdivision (55 homes) east of Adelaide Street and Manchester Drive in the vicinity of the ground storage tank. The station consists of 2 in-line submersible pumps each rated at 200 GPM at 50 feet of TDH.

The station operates by manual control only and one pump runs continuously. There is no telemetry to indicate pump status and plant personnel must rely on low pressure complaints from residents of the subdivision to alert them of a pump failure.

This station is not designed to provide fire protection to this area. The primary pump was rebuilt by Layne-Northern in 2005 and there has been no operational problems with the station.

Interconnections With Other Supplies - NA

Distribution Piping

Identify distribution piping materials -

PVC	0 %
D.I.	65%
C.I.	25%
A.C.	10%
Concrete	0 %

Estimated percent of piping with coal tar linings: 0 %

Identify distribution pipe sizes -

2-in	10%
4-in	15%
6-in	20%
8-in	20%
10-in	0%
12-in	30%
14-in	5%
16-in	some

Are there areas where water main breaks are frequent? Yes

Still some areas, however much of the older piping in the south areas of town have been replaced.

Comments:

Significant distribution system improvements were completed during two DWRF projects (late 1990s and again in the early 2000s). The above distribution system percent by pipe sizes does not reflect these most recent projects.

A third DWRF project was eligible for funding in 2006 and a construction permit was issued for the project which consisted of replacement of deficient mains in the northern portions of the city (Adelaide Street to North Road & several side streets). The project; however, did not proceed in 2006 as a result of higher than expected water rate increases associated with the cost of the water treatment plant and its operation. The city; however, acquired bonding through a separate source and completed the project in 2011.

Are there areas where customers complain of low pressure? Yes

Residents at the top of Denton Hill and in the Jane Hill Subdivision are subject to low pressure when the small booster pump station is not in operation.

Are there areas where aesthetic water quality complaints are frequent? Few areas

Softened water scoured out portions of the water system piping and caused short-term complaints. These complaints subsided several years ago with institution of corrosion control treatment and chemical equilibrium becoming established within the distribution system.

Comments:

Are there areas where fire flows cannot be maintained? Few

Comments:

Last ISO report date? 2006 Rating? Class 4

Which, if any, of the above listed areas has the supply prioritized for main replacement, upgrading or looping? Also, if a definite schedule for capital improvement has been established, list the proposed completion date.

General Distribution Comments:

The city needs to update their water system Reliability Study. The updated study needs to re-

access the hydraulic capability of the distribution system. An updated water system general plan also needs to be included with the reliability study. Additional distribution system improvements that are identified in the analysis will also need to be discussed in the study.

Distribution Appurtenances

Hydrants

Number of hydrants app. 602
Number without auxiliary shut-off valves 6
Number that are self-draining app. 10%
Number of inoperable hydrants fixed upon discovery

Frequency of hydrant inspection: yearly or after a fire

Inspection staff: Water dept.

Comments:

System hydrant information is stored in a computer database.

Are there areas where additional hydrants are needed? Some

+If yes, list locations:

A few additional hydrants are needed in the SE portions of the city.

Hydrant location system? Map, database Accurate? Yes
Are hydrants color-coded for capacity? Yes – based on main size

Has this information been provided to the fire department? Yes

Frequency and seasons of hydrant flushing? 1/Yr. Fall

Purpose of flushing? Flush out iron deposits

Is the public notified prior to flushing? Yes

Does flushing follow a specific format? Yes

Is the volume of water used during flushing estimated? Yes

Is a record maintained of hydrant activities? Yes

Comments:
A GIS locating system is in place for maintaining hydrant and valve information.

Valves (excluding hydrant shut-offs)

Number of valves 904
Number of inoperable valves varies
Are there areas where additional valves are needed? Yes

+If yes, list locations:

Additional valving was installed where watermains were replaced.

Valve location system? GIS records Accurate? Yes - 839 valves are located and entered in GIS

Valve Turning Frequencies: No valve turning program is in place. Valves are exercised whenever possible.

Records maintained? Yes

Comments:

The water department has added valve location information to their GIS system and the work is over 90% complete. Operating and maintenance records; however, need to be completed.

Routine valve turning has also not commenced at this time although some valves are turned before a watermain project to verify proper operation. Additional time and/or staffing needs to be dedicated towards establishing an effective valve turning program.

Customer and Service Information

Total number of service connections 4,147

Residential connections 3,627

Commercial/Industrial connections	520
Number of metered service connections	4,147

Identify service line materials and estimate percentages:

+ Lead	0%
Copper	>84%
Galvanized	<15%
Plastic	<1%

The use of plastic pipe for residential service lines has increased recently. The piping material used meets the requirements of the state plumbing code.

Pumpage Distribution (Estimate)

% Residential	80
% Commercial	20
% Industrial	<1

Ownership of Service

From Corp Stop to Curb Stop	City
From Curb Stop to Property Line	NA
From Curb Stop to Meter	Customer
Meter	City

Customer Meters

Types of Meters Used	Sensus – Pos. Displ.
Number of meters w. touch pads or other Remote reading devices	4147
Size of Meters	
Residential	5/8, 3/4, & 1"
Industrial/Commercial	1-1/2 through 4"
Meter Testing/Maintenance Program	tested upon complaint
Average age of meter in system	wide variance
Criteria for change-out	age, poor access, non remote read
Number of Percent Change out per year	5 – 10%

Master Meter Locations — One – Fenton Oaks MHP

Calibration of Master meters — Annually

Meter Reading Staff/Contract — Water Dept.

The city is investigating use of Sensus plastic meters or switching to Neptune or SLC meters in order to meet the new lead-free meter requirement.

Approximately 10% of the city's meters are radio read. There are no plans or program to switch to 100% radio read at this time.

System Growth

Year	No. of Res. Meters Installed	No. of Comm/Ind Meters Installed	No. of CPs Issued	Permitted Amt of WM Feet
2001	241	49	1	2,003 LF
2002	199	62	3	31,251 LF
2003	198	27	4	20,382 LF
2004	142	30	2	1,445 LF
2005	102	11	5	5,095 LF
2006	232	60	3	18,456 (8,879 LF 06DWRF – not done)
2007	46	34	3	640 plus PO4 feed at WTP
2008	52	7	1	Repl exist wm
2009	3	2	1	541 LF
2010	2	4	1	8,261 LF -WM repl.
2011	2	5	2	758 LF

Water Rates

What is your current rate schedule? $5.20 per 1000 Gallons

Are current rates adequate to support O&M And CIPs? Yes

When were the last time rates were adjusted? 2010

Water rate study? When? Yes, March 2005

Meter or ready to serve charge? Yes

Water rate sched/Ordinance available? Yes

Comments:

Fenton's tap-in fee is $1,650 for a residential connection. A substantial increase in water rates occurred

in 2005 due to higher than expected treatment costs. A water rate study has been proposed in the city's FY 13 budget.

Repair Parts Inventory

Extra Mains (sect. For each size in service)	Yes – one for each
Repair clamps (2 or more for each size)	Yes – two for each
Tees, Crosses & Elbows	Some
Hydrants	Few
Valves	Some
Services (corps, curb stops, clamps & lines)	Yes

Hydrants, valves, tees, crosses & elbows are available 24/7 from Michigan Pipe & Valve in Flushing, MI.

Safety Issues

Confined space entry program in place % followed (Y/N) Yes – 100%

Trench safety program in place & followed (Y/N) Yes

Comments:

Hydraulic shoring is used in dangerous situations.

PROGRAMS AND PLANS

Cross Connection Program

Ordinance No. Div. 2 of Fenton Code of Ordinances , Sec. 33-31 through 33-37

Date of Ordinance 01/22/01

Approved Program? Yes Date 01/22/01

Staff assigned to program Hydro-Design, Inc. (HDI)

Is Annual Cross Connection Report Required? Yes

Was previous year's annual report received? Yes Date 03/1/12

Was previous year's annual report acceptable? Yes

Inspection Status: An adequate number of inspections are completed each year

Device Testing Frequency: Yearly

Recordkeeping:

Cross connection recordkeeping is adequate.

Comments:

Fenton has maintained an adequate CCCP through contractual services with HDI. HDI continues to perform routine and follow-up inspections, maintains recordkeeping, and prepares the annual report. Approximately 100 – 120 inspections are completed each year and all high priority accounts are inspected.

Annual Pumpage Reports

Is Annual Pumpage Report Required? Yes

Date received? 01/04/12

Monthly Operation Reports

Are Monthly Operation Reports required? Yes

Were all previous year MOR's received? yes Timely? yes

Are previous year's MOR's Acceptable? yes

Consumer Confidence Reports

Is the annual CCR required? Yes

Was the previous year's report received? Yes

Was the previous year's certification form received? Yes

Emergency Response Plan

Date of most recent plan ...Contingency Plan - Oct, 2008 Acceptable? No

Filed where? Water Dept, MDEQ

Comments:

The city's 2008 water system contingency plan needs to be replaced with a water system Emergency Response Plan

General Plan

Date of most recent plan 2008 Acceptable? Yes

Filed where? Water Department, MDEQ

Comments:

Fenton's most recent water system general plan is kept updated in the city's GIS system. A copy of the general plan printed from the city's GIS system was provided to us.

Reliability Study

Date of most recent study Dec. 1993 Acceptable? No
2001, 2005 – DWRF Project Plans

Filed where? Basic data.

Comments

An updated water system Reliability Study needs to be completed.

Bacteriological Sample Site Plan

Date of approved plan January 2010

Are samples still being collected in accordance with the plan? Yes

The city uses their certified laboratory for total coliform analysis in drinking water.
The sampling site plan needs to be updated to reflect staffing changes in the water department.

Lead/Copper Monitoring Status:

The city has remained in compliance with Pb/Cu regulations and has met both action levels in all applicable rounds (6 rounds conducted). Triennial monitoring is in effect and the next round of samples will cover the three year period from 2012 through 2014. 20 samples are due from the distribution system and these samples need to be collected prior to September 30, 2014.

Conclusions and Recommendations

In general, the Fenton Water System Review (WSR) covers the major aspects of the Fenton water supply including: source, treatment, transmission, distribution, and storage. Each one of the above categories are evaluated on the basis of adequacy, maintenance, reliability, and operation. The WSR also includes a check on the status of Fenton's operator certification and the cross connection control programs. Finally, water quality and Fenton's monitoring programs are reviewed.

Based upon the Fenton 2012 WSR , Fenton's water system shall maintain a "**Satisfactory**" rating. Further discussion regarding existing facilities, reliability, operation, and maintenance are discussed below:

Source:

The city has four production wells available for service with a total and firm capacity of 5.14 million gallons per day (MGD) and 3.53 MGD respectively. This continues to represent a modest reduction in source capacity from 5.4 MGD (total capacity) and 3.8 MGD (firm capacity) noted in 2005. The reduction in source capacity is attributed to a reduction in capacity of Well #5. Also, some loss in capacity was noted at Well #8.

Although Fenton's source capacity has decreased, water usage has also continued to decrease. The average day demand has decreased from 1.5 MGD (2000-2004) to 1.08 MGD (2009-2011). Maximum day demands that ranged between 2.4 to 3.3 MGD (2000-2004) have decreased to between 1.5 and 1.9 MGD after 2007.

Additional source capacity will not pose a critical need provided that the city's maximum day demand remains below 2.80 MGD and the existing source capacity can be maintained. The city has investigated measures to restore or, at least, maintain its current source capacity and includes chemical clean of Well #5 and installation of a variable frequency drive to control pump output. Chemical cleaning was also recommended for Well #8 within the next several years to help improve well performance and prevent further loss of specific capacity. Although the rate of residential and commercial development remains limited, we encourage the city to proceed with the recommended work in order to maintain source capacity.

Next, the city has authorized a consultant to investigate several potential wellsites with the overall objective of acquiring a new source of water having less non-carbonate hardness; thus, reducing treatment cost and residuals. Please keep us updated concerning the status of this investigation. Finally, as a reminder, any test-well drilling needs to be approved by our office prior to proceeding with the work.

Next, Wellhouses #6 and #7 have been refurbished including replacement of the roofs. These buildings are in adequate structural condition.

Finally, it was noted that the city utilizes Peer-Less Midwest to perform annual maintenance on all 4 production wells which includes conducting pump performance tests on a yearly basis. We encourage the city to maintain this level of annual maintenance as it will help to increase the useful service life of this infrastructure. Finally, routine pump and motor maintenance is due for Well #6.

Filters:

The water treatment plant (WTP) includes four mixed media filters. Since the repainting of the filter boxes (2006 and 2007), there have been no significant operational problems associated with the filters.

The WTP operators continue to gain the operating experience and knowledge unique to this treatment facility. Staff maintains filter performance profiles including time turbidity graphs and the information is maintained in the WTP's SCADA system. A preventative maintenance program has also been started with the assistance of Utility Services. The maintenance program included collection of filter core samples. Also, a chemical cleaning of the filter media was recommended. Please provide us with a copy of the core analysis report and the procedure proposed for the cleaning of the filter media.

Finally, WTP operators should continue to work towards expanding their filter maintenance program to include other filter investigation techniques. This should include; rodding and raking the filter media. Partial excavation of filter media can also be performed while a filter is out of service for routine maintenance. We encourage WTP operators to continue to develop and maintain a preventative maintenance program for the WTP filters.

Unaccounted Water Use (loss):

Fenton's unaccounted water use (loss) ranges between 26 and 28 percent. Typical unaccounted water loss in municipal water systems should not exceed 10-15%. Unaccounted water loss greater than 15% could be attributed to undetected leakage in the distribution system, flushing & fire fighting activities, water theft, and un-metered customers.

Next, a portion of the unaccounted water use is attributed to several unmetered customers including process water used for production at the WTP. It is our understanding that metering will be provided at the WTP to account for process water usage. There are; however, several un-metered municipal buildings that also contribute to unaccounted water use. These buildings need to be metered in order to obtain a more accurate determination of unaccounted water loss in Fenton's water system.

WTP Residuals/Sludge Disposal:

Lime sludge produced during clarification is discharged to the WTP's sludge lagoon under the provisions of the renewed groundwater discharge permit GW 1010298 issued in January 2011. The city has maintained compliance with the renewed groundwater discharge permit. The renewed permit allows a maximum volume discharge of 22,000 gal/day (volume based – 40% metering flow and 60% solids). The new permit also allows for a maximum 100,000 gal/day discharge for clean out operations. The renewed permit will allow for greater flexibility for clarifier clean out operation.

Chemical Feed:

WTP staff continues to maintain a split treatment process; thus the ferric feed system has remained out of operation. WTP staff are considering the possibility of utilizing the ferric feed room for fluoride feed since the ferric chloride bulk storage tank is more capable for accepting required delivery volumes of hydrofluosilicic acid.

The ferric chloride feed room may be utilized for fluoride feed; however, the existing ferric chloride will need to be properly disposed. Next, although the downtime needed for routine cleaning of each clarifier will be reduced as part of the revised groundwater discharge permit requirements, operators will need to confirm that treatment plant's objectives are not compromised without the addition of ferric during routine cleaning of a clarifier.

Finally, the repairs to the caustic soda bulk storage tank and the fittings appear to be intact. The structural condition of the bulk storage tank will need to be closely monitored and any further repairs that are necessary should be completed in a timely manner.

Treated Water Storage:

The WTP has a 130,000 gallon treated water clearwell. The clearwell is located in the northeast corner of the WTP underneath the high service pumps. The structure was constructed in 2003 along with the WTP and is in good condition. WTP operators should plan for a routine inspection of the clearwell within the next 3 to 5 years.

High Service Pumping:

The WTP has four high service pumps ; however, a lightning strike in July 2011 took 3 of the 4 pumps out of service. The electrical surge damaged the pump drivers and these units needed to be replaced. Although, this occurrence did not cause failure of WTP operation, it jeopardized the WTP's overall reliability during the time that the three high service were out of service.

We encourage the city to investigate and proceed with installing full lighting surge

protection at the WTP in order to protect the electrical components and controls that are critical to the operation of the WTP.

WTP Security:

Improved security measures should be provided at the WTP; however, the city has had limited success at securing funding toward providing additional security fencing and cameras around the front of the WTP site. Given the importance of improving overall treatment plant security, it may be worthwhile for the city to pursue other funding sources to complete this project.

Distribution System:

Distribution Piping:

The city has maintained an active watermain replacement program since the late 1990s. Completion of two Drinking Water Revolving Fund (DWRF) projects and other distribution system projects has resulted in significant improvements in the southeastern and northern portion of the city's distribution system.

We are pleased with the effort taken towards improving the water distribution system. The city; however, will need to update their most recent water system Reliability Study. Administrative Rule 1203 of the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), requires a public water supply to submit and update a reliability study once every 5 years. Our records show that the city of Fenton's most recent reliability study was completed in 2005 as part of the Drinking Water Revolving Fund Project Plan submittal; thus, in accordance with Act 399 requirements, an updated reliability study needs to be completed. The updated study needs to review the city's 5-year and 20-year water use projections and assess the hydraulic capability of the distribution system. An updated water system general plan and capital improvements program also needs to be prepared as part of the updated study. A list of items that needs to be included in the reliability study was provided to you. Finally, we would be available, as needed, to meet with you and your consultant to discuss the scope of the study in more detail.

Treated Storage:

Treated water storage is provided by two ground storage tanks located at the top of Denton Hill. According to our records, approximately 12 years has elapsed since an inspection of these tanks has been performed. It is our understanding that the tank inspections have been

included in the city's fiscal year (FY) 2012 budget and that the project may be placed out to bid prior to the end of Fenton's FY 2012. Please inform us as to when the tank inspections will be conducted. Finally, we would be interested in receiving a copy of each tank inspection report when they become available.

Isolation Valves:

There has been some improvement noted in the water department's valve program, specifically with the establishment of valve records. Some valves are also being turned prior to proceeding with routine flushing and water distribution projects to verify proper operation; however, a percentage of these valves are left compromised after being turned. As we discussed, these valves will need to be repaired or eventually replaced. Finally, the water department needs to continue to increase the time and effort towards establishing an effective valve turning program. Isolation valves should be turned once every several years and this may best be accomplished by splitting the city's distribution system into quadrants. Valve turning should then be conducted within a specific quadrant each year.

General Plan:

Fenton's most recent water system general plan is kept updated in the water department's GIS system. As part of updating Fenton's 2005 Reliability Study, an updated general plan also needs to be prepared (discussed above).

Emergency Response Plan:

The city's water system contingency plan was updated, at our request, late in 2008. The 2008 contingency plan; however, needs to be replaced with an Emergency Response Plan (ERP). A recent revision to the Administrative Rules of Act 399 now requires an ERP in place of the contingency plan. The ERP provides an outline to follow in the event of a water related emergency (loss of pressure, contamination, etc.). The ERP is similar to a water system contingency plan; however, the ERP calls for discussion of various types of water utility operational plans that may be utilized during a water related emergency. An ERP template was provided to you and can be used for preparing Fenton's ERP. We will review the completed ERP during our next routine surveillance visit.

Sample Site Plan:

Fenton's most recent bacteriological sampling site plan (updated in 2010) needs a minor revision to reflect staffing/contact changes. A sampling site plan template was provided to you and this template can be used in preparing an updated plan. Please provide us with a copy of the updated sampling site plan.

Closing Remarks:

We recognize the number of water system improvements completed by the city since 2000. We encourage the city to continue to provide the resources necessary for water department and WTP staff to continue to operate and maintain the water system in an effective manner. We will follow-up with you on the above items during future site visits.

Report Summary

The following is a list of items discussed in this report which needs to be addressed by the city. No priority is implied by the order. Page references are in parentheses.

1. Proceed with the recommended work on Well #5 to maintain its capacity. Perform routine pump/motor maintenance on Well #6. Budget for chemical cleaning of Well #8. (4, 5, 32, 33)

2. Install metering for the WTP's process water. Eliminate any remaining un-metered accounts. Update Fenton's unaccounted water (loss). (1, 33)

3. Install remaining security fencing and cameras at the WTP. (2, 34)

4. Investigate – install lightning surge protection at the WTP. (6, 34)

5. Maintain – expand the on-going filter maintenance program. (11, 33)

6. Inspect the WTP clearwell within the next 3 to 5 years. (12, 34)

7. Inspect both ground storage tanks and provide us with a copy of the inspection report. (22, 35)

8. Update Fenton's most recent water system Reliability Study. (24, 30, 35)

9. Expand the water distribution system valve program. (26, 35, 36)

10. Prepare a water system Emergency Response Plan. (30, 36)

From: Prysby, Mike (DEQ)
Sent: Monday, May 11, 2015 10:28 AM
To: Rennaker, Joanne (DEQ)
Subject: letter for final
Attachments: Visit Ltr - April 2015-revised.doc

Joanne,

Attached is a letter for final to the city of Flint. Thanks!

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

May 11, 2015

Mr. Howard Kroft, Director of Public Works
City Of Flint
1101 South Saginaw Street
Flint, MI 48502

WSSN: 02310

Dear Mr. Kroft:

SUBJECT: Flint Cross Connection Control Program

This letter confirms my site visit on April 29, 2015 with Mr. Glen Thomas, Utilities/Cross Connection Division Inspector for the City of Flint. Mr. Stephen Busch from our office was also present. The purpose of the visit, in part, was to discuss the city's Cross Connection Control Program (CCCP).

The City of Flint has made significant progress in recent years regarding the implementation of the City's approved CCCP. This effort has included identification of accounts, inspection and re-inspection of accounts at the approved frequencies, and ensuring the testing of backflow prevention assemblies in accordance with approved frequencies. However, the City's most recent report of annual CCCP activities for 2014 indicates a significant decrease in these activities below minimum requirements, and this deficiency must be address.

Our office fully recognizes the recent staffing loss of the City's previous plumbing inspector and the importance of these plumbing inspection services in providing public health protection, but these activities should not be borne at the cost of the City's CCCP and the protections it provides. Given the bacterial detections that occurred in the City's water distribution system in August and September 2014, along with customer complaints regarding aesthetic water quality, the need for protection through cross connection control are very evident.

We also realize that implementing a CCCP of for a community water system of this magnitude requires a significant commitment of time and personnel. We encourage the city to review CCCP staffing needs and authorize the workforce necessary to comply with the City's approved CCCP requirements.

Should you require further information, please contact me at the telephone number below; via e-mail at prysbym@michigan.gov; or Department of Environmental Quality, P.O. Box 30242, Lansing, Michigan 48909.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Office of Drinking Water and
Municipal Assistance

Lansing District Office
(517) 290-8817

mfp/jlr
cc Mr. Glen Thomas
Mr. Stephen Busch, P.E.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Prysby, Mike (DEQ)
Sent: Tuesday, May 19, 2015 3:42 PM
To: Hansen, Jeff (jrhansen@lan-inc.com)
Subject: FW: Flint OEL - MDEQ Comments
Attachments: March 1st, 2015 OEL Report - DEQ Comments.doc

Jeff,

I am trying this address....your old one was undeliverable.....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Tuesday, May 19, 2015 3:36 PM
To: Jeff Hansen
Subject: Flint OEL - MDEQ Comments

Jeff,

In looking at some of the Flint TTHM material for tomorrow's TAC meeting.....I noted our March 1, 2015 comments pertaining to the most recent Operation Evaluation Report prepared for Flint. I didn't see an electronic "sent date" to you on this document. It may be that I hand delivered our comments to LAN during our first TAC meeting on March 4th. If not, attached are our comments and I apologize in the delay. These comments can be addressed in the next report due on May 29, 2015.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

City of Flint
Operational Evaluation Report
March 1, 2015
MDEQ Comments

1. Revise Tables 2 and 3 on Page 7 to account for proper alignment of DDBP samples (results, location, site code). Also, revise statement on Page 1 regarding the number of sites exceeding the TTHM MCL following the 4th quarter sample cycle.

2. The ozone system was recently repaired. (Page 10 & 19). What is the ozone system's current production rate?

3. The city's hydraulic model (prepared by Potter Consulting) is being updated (Page 16). Is the model currently sufficient in determining proper sizing for the transmission main replacement in DuPont & Bishop Street corridor? (currently sized at 24-inch) (Pages 5, 16, and 20)

4. Are the potassium permanganate results & conclusions available? (Pages 4 and 17)

5. We agree that some reduction in storage volume could be achieved without compromising reliability; however given high usage, main breaks, and "let runs" during the winter, storage volume remains important. We agree with the need to determine adequate storage volume which will likely differ between summer and winter. (Page 15)

6. We agree with the concern of re-circulation of water pumped from the booster pump stations; however, we were recently informed of existing distribution system check valves to prevent recirculation. These appurtenances and their condition need to be confirmed. The hydraulic model may also need to be updated to include these valves. (Page 15)

7. We concur with the recommendation to provide the ability to monitor raw water TOC and PTAP TTHM. (Pages 17 & 18)

8. Page 20 provides 2 options to manage water age and each option includes reducing the utilized storage volume of the 3 MGAL well to 2 MGAL. The reduction in storage volume limits the WTP's ability to meet CT under worst case conditions (low temp, high pH, 30 MGD pumping rate from reservoir).

9. Table 11 on Page 21 outlines an Action Plan for Stage 1 and Stage 2 actions. Several actions listed in Stage 2 including; repair of ozone system, continued valve replacement, and replacement of deteriorated watermains are longer term solutions; however, they need to proceed regardless of the outcome of TTHM reduction.

From: Prysby, Mike (DEQ)
Sent: Thursday, May 21, 2015 11:34 AM
To: Hansen, Jeff (jrhansen@lan-inc.com);sfmatta@lan-inc.com
Subject: Flint WTP - GAC

Jeff, Samir

Steve and I are available next Tues at our office to discuss the GAC proposal and basis of design. Steve may have commitments in the morning.....so afternoon is a better bet.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Thursday, May 21, 2015 4:11 PM
To: Busch, Stephen (DEQ)
Subject: FW: Flint Filter Media Change to GAC
Attachments: GAC-basis-of-design.pdf

Steve,

Below is Jeff's message regarding the use of GAC (Filtrasorb series) at some of our WTPs in Michigan.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Hansen, Jeff [mailto:jrhansen@lan-inc.com]
Sent: Wednesday, May 20, 2015 11:20 AM
To: Prysby, Mike (DEQ)
Cc: Matta, Samir; Green, Warren; Brent Wright (bwright@cityofflint.com); mglasgow@cityofflint.com
Subject: Flint Filter Media Change to GAC

Hi Mike,

Attached is our preliminary basis of design. We are currently working through details with GAC suppliers to determine the best specific media for Flint, but the Filtrasorb 300 and 400 series from Calgon or equivalent appear to be the best suited. Please note that both meet AWWA B604, but are questionable by Ten States Standards (TSS) as TSS are non-specific for GAC capping. According to Calgon, their Filtrasorb product has been approved by DEQ at numerous plants including Ann Arbor, Grosse Pointe Farms, Manistique, and Alpena.

Also note we intend to add a chlorine feed point following filtration while maintaining the intermediate feed point, with valving, so chlorine can be added at either point. The intermediate feed point prior to filtration can then be used as a means of disinfecting the filters in the future, if necessary.

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 **C** PPI
www.lan-inc.com • JRHansen@lan-inc.com

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CITY OF FLINT WTP
Filter Media Replacement
Basis of Design

					Notes
Max. Expected Flow Rate =	30.0 mgd =		20,833 gpm =	2,785 cft/min	
Max. Day May 2014 - April 2015 =	25.4 mgd =		17,639 gpm =	2,358 cft/min	
Avg. Day May 2014 - April 2015 =	18.3 mgd =		12,708 gpm =	1,699 cft/min	
Design Flow Rate =	24.0 mgd =		16,667 gpm =	2,228 cft/min	
Min. Expected Flow Rate =	8.0 mgd =		5,556 gpm =	743 cft/min	
Area / Filter =	700 sft				
Number of Filters =	12				

mgd	30.0	24.0	8.0
Loading (gpm/sft) =	2.48	1.98	0.66

Top of Underdrain elev =	723.58			
Washwater Trough Weir elev =	730.67			
Operating Water Level =	734.00			
Top of Filter Basin / Floor elev =	736.00			
Filter BW Dimensional D =	7.08			
Existing Sand D =	12.00 inches =		1.00 ft	
Existing Anthracite D =	18.00 inches =		1.50 ft	
Proposed Sand D =	12.00 inches =		1.00 ft	
Proposed GAC D =	18.00 inches =		1.50 ft	See following pages for details
Proposed Water Depth =			7.92 ft	
Max Cold BW Flow rate / filter =	9800 gpm =		14.0 gpm/sft	To match current BW flow rate
Max Warm BW Flow rate / filter =	14000 gpm =		20.0 gpm/sft	Use when water temp > 65 degrees
Max Sand Expanded D =	14.2 inches =		1.18 ft =	18% Occurs at cold temps
Max GAC Expanded D =	34.20 inches =		2.85 ft =	90%
Total BW Expanded D =	48.40 inches =		4.03 ft	
Proposed BW Freeboard =			3.05 ft	
Proposed # of Filters to Replace	12			
GAC Volume =	12,600 cft			
GAC apparent density =	33.7 lbs/cft			
GAC Total Weight =	424,620 lbs =		212.3 tons	

mgd	30.0	24.0	8.0
EBCT (min) =	4.5	5.7	17.0

Propose to relocate intermediate chlorine feed to inlet side of weir chamber following filtration
Intermediate CL2 feed point to remain in place as means to disinfect filters in the future, if needed

mgd	30.0	24.0	8.0	
Contact time (min) =	55.0	68.8	206.3	
CT =	99.0	123.8	371.4	Calculations attached separately

Required CT at 1.8 mg/l chlorine, less than 0.5 degrees C, and pH of 8.0 = 56 OK

Lockwood, Andrews & Newnam, Inc.
A LAN & DAVY COMPANY

CITY OF FLINT- DEPARTMENT OF PUBLIC UTILITIES

GAC Filter Evaluation
Filter Media Analysis 2015 1st Stage

Date: 05/20/15
By: JRH
Data Entry:

WATER INPUT DATA	
Backwash Rate (gpm/sf)	14.0
Water Temperature (F°)	32
Viscosity (centipoise)	1.79355
Dynamic Viscosity (# -sec/sf)	3.746E-05
Water Density (#/cf)	62.42
Mass Density (# -sec/ft^4)	1.940

COMMENTS

SITE LOCATION	10 States		10 States Interpreted		Filtrasorb 400		Filtrasorb 300		Alt	
Media Type	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC
Bed Depth (in)	12	18	12	18	12	18	12	18	12	18
Uniformity Coefficient	2.30	1.65	2.30	1.40	2.30	1.90	2.30	2.10	2.30	1.50
Effective Size (mm)	0.400	0.550	0.40	0.800	0.40	0.650	0.40	0.800	0.40	0.650
d60% Size (mm)	0.920	0.908	0.920	1.120	0.920	1.235	0.920	1.680	0.920	0.975
d90% Size (mm)	1.607	1.269	1.607	1.403	1.607	1.899	1.607	2.762	1.607	1.279
Porosity	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50
Specific Gravity	2.554	1.45	2.554	1.45	2.554	1.45	2.554	1.45	2.554	1.45
Media Density (#/cf)	159.4	90.5	159.4	90.5	159.4	90.5	159.4	90.5	159.4	90.5
Min. Fluidization Rate (gpm/sf)	7.03	2.14	7.03	3.13	7.03	3.74	7.03	6.55	7.03	2.43
Reynolds Number	2.447	0.734	2.447	1.329	2.447	1.750	2.447	4.168	2.447	0.899
Correction Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Min. Fluidization Rate (gpm/sf)	7.03	2.14	7.03	3.13	7.03	3.74	7.03	6.55	7.03	2.43
Unhindered Settling Vel. (ft/sec)	20.68	6.20	20.68	11.23	20.68	14.79	20.68	35.22	20.68	7.59
Expansion Coefficient (n)	3.287	3.708	3.287	3.494	3.287	3.399	3.287	3.117	3.287	3.633
Bed Porosity Coefficient (k)	142.82	27.92	142.82	35.31	142.82	39.49	142.82	56.85	142.82	30.22
Porosity (expanded)	0.493	0.830	0.493	0.767	0.493	0.737	0.493	0.638	0.493	0.809
Bed Depth Expanded (in)	14.2	53.0	14.2	38.7	14.2	34.2	14.2	24.9	14.2	47.2
% Expanded Bed	18.4	194.4	18.4	115.0	18.4	90.1	18.4	38.1	18.4	162.0
d90gac/d10s Ratio	3.173		3.508		4.746		6.905		3.198	
Discussion/Notes										

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

CITY OF FLINT- DEPARTMENT OF PUBLIC UTILITIES

GAC Filter Evaluation
Filter Media Analysis 2015 1st Stage

Date: 05/20/15
By: JRH
Data Entry:

WATER INPUT DATA	
Backwash Rate (gpm/sf)	20.0
Water Temperature (F°)	80
Viscosity (centipoise)	0.86134
Dynamic Viscosity (# -sec/sf)	1.799E-05
Water Density (#/cf)	62.22
Mass Density (# -sec/ft^4)	1.927

COMMENTS

SITE LOCATION	10 States		10 States Interpreted		Filtrasorb 400		Filtrasorb 300		Alt	
Media Type	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC	Ex. Sand	GAC
Bed Depth (in)	12	18	12	18	12	18	12	18	12	18
Uniformity Coefficient	2.30	1.65	2.30	1.40	2.30	1.90	2.30	2.10	2.30	1.50
Effective Size (mm)	0.400	0.550	0.400	0.800	0.400	0.650	0.400	0.800	0.400	0.650
d60% Size (mm)	0.920	0.908	0.920	1.120	0.920	1.235	0.920	1.680	0.920	0.975
d90% Size (mm)	1.607	1.269	1.607	1.403	1.607	1.899	1.607	2.762	1.607	1.279
Porosity	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50	0.40	0.50
Specific Gravity	2.554	1.45	2.554	1.45	2.554	1.45	2.554	1.45	2.554	1.45
Media Density (#/cf)	159.4	90.5	159.4	90.5	159.4	90.5	159.4	90.5	159.4	90.5
Min. Fluidization Rate (gpm/sf)	13.38	4.09	13.38	6.00	13.38	7.16	13.38	12.54	13.38	4.66
Reynolds Number	9.640	2.905	9.640	5.259	9.640	6.928	9.640	16.499	9.640	3.557
Correction Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.828	1.000	1.000
Min. Fluidization Rate (gpm/sf)	13.38	4.09	13.38	6.00	13.38	7.16	13.38	10.39	13.38	4.66
Unhindered Settling Vel. (ft/sec)	81.46	24.55	81.46	44.44	81.46	58.54	81.46	139.42	81.46	30.06
Expansion Coefficient (n)	2.866	3.231	2.866	3.045	2.866	2.962	2.866	2.716	2.866	3.166
Bed Porosity Coefficient (k)	184.94	38.40	184.94	49.50	184.94	55.84	184.94	68.25	184.94	41.83
Porosity (expanded)	0.460	0.817	0.460	0.743	0.460	0.707	0.460	0.636	0.460	0.792
Bed Depth Expanded (in)	13.3	49.2	13.3	35.0	13.3	30.7	13.3	24.8	13.3	43.3
% Expanded Bed	11.2	173.5	11.2	94.3	11.2	70.7	11.2	37.5	11.2	140.5
d90gac/d10s Ratio	3.173		3.508		4.746		6.905		3.198	
Discussion/Notes										

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

CITY OF FLINT WTP

CT CALCS

TIME FROM FILTERS EFFLUENT TO 1ST TAP

Label	Location	Diameter m	Diameter ft	L ft	W ft	D ft	Bottom elev	Vol cft	Flow mgd	Flow cfs	Baffle Factor	Time hr	Velocity fps	Flow mgd	Flow cfs	Time hr	Flow Rate mgd	Flow Rate cft/s	Time min
A	Weir chamber, pre-baffle			26.75	13.08	15.5	709.00	5423	30.0	46.4	1.0	1.95	0.23	24.0	37.1	2.43	8.0	12.4	7.30
B	Weir chamber, post-baffle			26.75	8.5	10.0	709.00	2274	30.0	46.4	1.0	0.82	0.55	24.0	37.1	1.02	8.0	12.4	3.06
	Effluent pipe																		
C	wc - bldg face	48	4.00	16.00				201	30.0	46.4	1.0	0.07	3.69	24.0	37.1	0.09	8.0	12.4	0.27
D	bldg face - junct well	48	4.00	401.00				5039	30.0	46.4	1.0	1.81	3.69	24.0	37.1	2.26	8.0	12.4	6.79
	Res. 3																		
E	Junct well			12.00	18.00	15.0	704.00	3240	30.0	46.4	1.0	1.16	0.17	24.0	37.1	1.45	8.0	12.4	4.36
F	Clear well			140.00	177	10.0	709.00	247,800	30.0	46.4	0.5	44.49	0.05	24.0	37.1	55.61	8.0	12.4	166.83
G	Transfer chamber			7.00	55.25	15.0	704.00	5,801	30.0	46.4	1.0	2.08	0.06	24.0	37.1	2.60	8.0	12.4	7.81
H	Suction well			9.00	25.75	15.0	704.00	3,476	30.0	46.4	1.0	1.25	0.12	24.0	37.1	1.56	8.0	12.4	4.68
	Pump																		
I	Suction pipe	36	3.00	12.00				85	30.0	46.4	1.0	0.03	6.57	24.0	37.1	0.04	8.0	12.4	0.11
J	Discharge pipe	30	2.50	20.00				98	30.0	46.4	1.0	0.04	9.46	24.0	37.1	0.04	8.0	12.4	0.13
K	Dis. pipe (to bldg face)	42	3.50	34.00				327	30.0	46.4	1.0	0.12	4.82	24.0	37.1	0.15	8.0	12.4	0.44
	Finish main 1																		
L1	bldg face - 1st tee	42	3.50	208.00				2001	30.0	46.4	1.0	0.72	4.82	24.0	37.1	0.90	8.0	12.4	2.69
M1	tee - WTP tap	42	3.50	223.00				2146	30.0	46.4	1.0	0.77	4.82	24.0	37.1	0.96	8.0	12.4	2.89
N1	WTP tap - bldg face	12	1.00	19.00				15	30.0	46.4	1.0	0.005	59.10	24.0	37.1	0.01	8.0	12.4	0.02
	Subtotal											1.49				1.87			5.60
	Finish main 2																		
L2	bldg face - 1st tee	42	3.50	73.00				702	30.0	46.4	1.0	0.25	4.82	24.0	37.1	0.32	8.0	12.4	0.95
M2	tee - 1st split	42	3.50	277.00				2665	30.0	46.4	1.0	0.96	4.82	24.0	37.1	1.20	8.0	12.4	3.59
	Subtotal											1.21				1.51			4.53
							Total CT time		@ 36 mgd =			55.0		@ 24 mgd =		68.8	@ 12 mgd =		206.3

	2014								2015							
Month	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr		Min	Avg	Max
Cl2	5.0	4.7	3.9	3.3	3.1	2.5	2.0	1.8	1.8	2.1	2.4	2.0		1.8	2.9	5.0
pH	7.37	7.48	7.62	7.78	7.82	7.71	7.87	8.07	7.74	7.84	7.89	7.83		7.4	7.8	8.1
Flow (mgd)	30.0	24.0	24													
CT =	30.0	122.8	251.4													

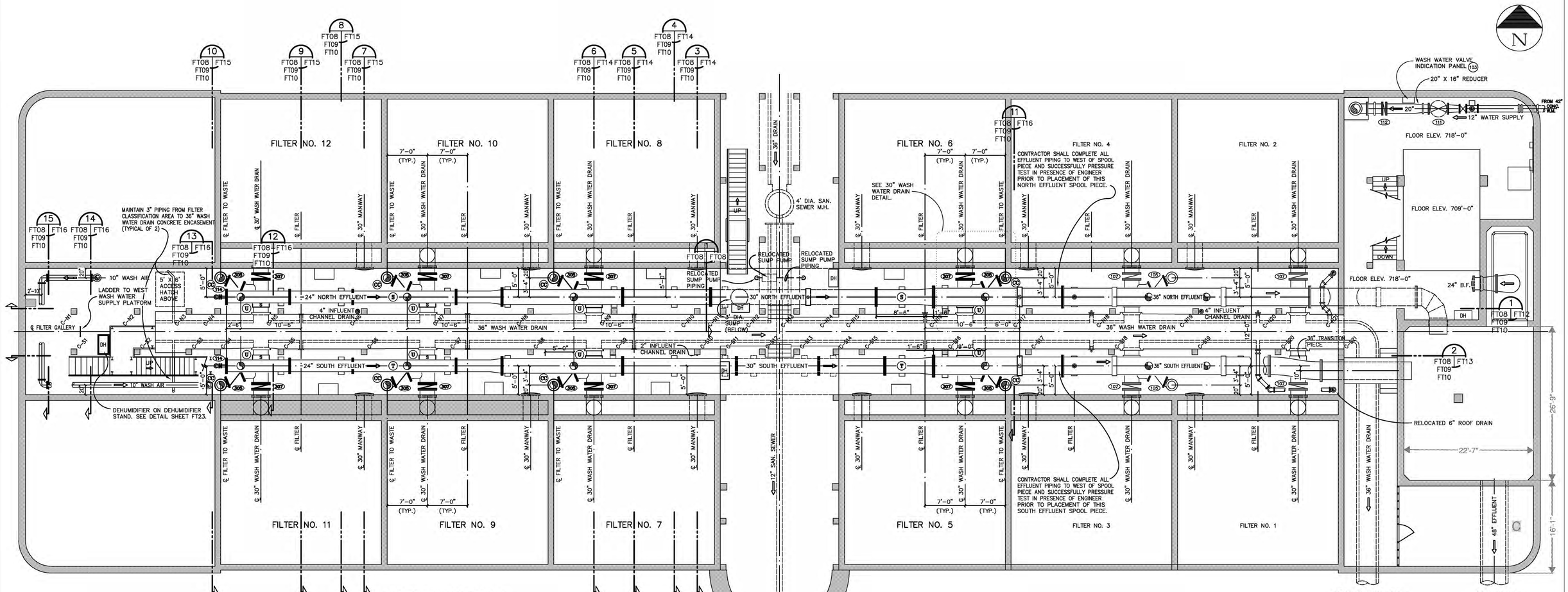
Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

Table C-1. CT Values for Inactivation of *Giardia* Cysts by Free Chlorine at 0.5°C or Lower

CHLORINE CONCENTRATION	pH<=6 Log Inactivation						pH=6.5 Log Inactivation						pH=7.0 Log Inactivation						pH=7.5 Log Inactivation					
(mg/L)	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0
<=0.4	23	46	69	91	114	137	27	54	82	109	136	163	33	65	98	130	163	195	40	79	119	158	198	237
0.6	24	47	71	94	118	141	28	56	84	112	140	169	33	67	100	133	167	200	40	80	120	159	199	239
0.8	24	48	73	97	121	145	29	57	86	115	143	172	34	68	103	137	171	205	41	82	123	164	205	246
1	25	49	74	99	123	148	29	59	88	117	147	176	35	70	105	140	175	210	42	84	127	169	211	253
1.2	25	51	76	101	127	152	30	60	90	120	150	180	36	72	108	143	179	215	43	86	130	173	216	259
1.4	26	52	78	103	129	155	31	61	92	123	153	184	37	74	111	147	184	221	44	89	133	177	222	266
1.6	26	52	79	105	131	157	32	63	95	126	155	189	38	75	113	151	188	226	46	91	137	182	228	273
1.8	27	54	81	108	135	162	32	64	97	129	161	193	39	77	116	154	193	231	47	93	140	186	233	279
2	28	55	83	110	138	165	33	66	99	131	164	197	39	79	118	157	197	236	48	95	143	191	238	286
2.2	28	56	85	113	141	169	34	67	101	134	169	201	40	81	121	161	202	242	50	99	149	198	248	297
2.4	29	57	86	115	143	172	34	68	103	137	171	205	41	82	124	165	206	247	50	99	149	199	248	298
2.6	29	58	88	117	146	175	35	70	105	139	174	209	42	84	126	168	210	252	51	101	152	203	253	304
2.8	30	59	89	119	148	178	36	71	107	142	178	213	43	86	129	171	214	257	52	103	155	207	258	310
3	30	60	91	121	151	181	36	72	109	145	181	217	44	87	131	174	218	261	53	105	158	211	263	316
CHLORINE CONCENTRATION	pH=8.0 Log Inactivation						pH=8.5 Log Inactivation						pH=9.0 Log Inactivation											
(mg/L)	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0	0.5	1.0	1.5	2.0	2.5	3.0						
<=0.4	46	92	139	185	231	277	55	110	165	219	274	329	65	130	195	260	325	390						
0.6	48	95	143	191	238	286	57	114	171	228	285	342	68	136	204	271	339	407						
0.8	49	98	148	197	246	295	59	113	177	236	295	354	70	141	211	281	352	422						
1	51	101	152	203	253	304	61	122	183	243	304	365	73	146	219	291	364	437						
1.2	52	104	157	209	261	313	63	125	188	251	313	376	75	150	226	301	376	451						
1.4	54	107	161	214	268	321	65	129	194	258	323	387	77	155	232	309	387	464						
1.6	55	110	165	219	274	329	66	132	199	265	331	397	80	159	239	318	398	477						
1.8	56	113	169	225	282	338	68	136	204	271	339	407	82	163	245	326	408	489						
2	55	115	173	231	288	346	70	139	209	278	348	417	83	167	250	333	417	500						
2.2	59	118	177	235	294	353	71	142	213	284	355	426	85	170	256	341	426	511						
2.4	60	120	181	241	301	361	73	145	218	290	363	435	87	174	261	348	435	522						
2.6	61	123	184	245	307	368	74	148	222	296	370	444	89	178	267	355	444	533						
2.8	63	125	188	250	313	375	75	151	226	301	377	452	91	181	272	362	453	543						
3	64	127	191	255	318	382	77	153	230	307	383	460	92	184	276	369	460	552						

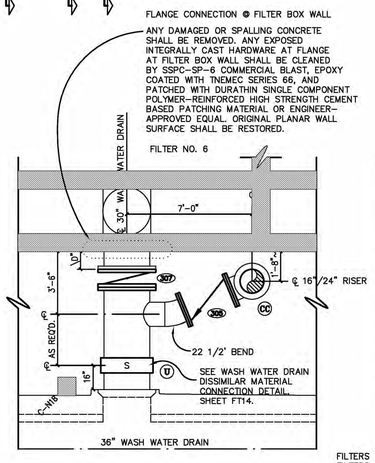
Source: AWWA, 1991.

004725



FILTER GALLERY PIPING LEGEND

ID	DESCRIPTION	EXISTING	NEW
P	WASH WATER SUPPLY – GALLERY SERVING FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
Q	REWASH FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	NO
R	EFFLUENT FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
S	NORTH EFFLUENT	YES	YES
T	SOUTH EFFLUENT	YES	YES
U	WASH WATER DRAIN FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
V	INFLUENT FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	YES
W	SURFACE WASH FILTERS NO. 5 – NO. 12, INCLUSIVE	YES	NO
X	PLANT WATER AND SURFACE WASH	YES	NO
AA	WASH AIR SUPPLY – GALLERY	YES	NO
BB	WASH AIR SUPPLY FILTERS NO. 5 – NO. 12, INCLUSIVE	NO	YES
CC	FILTER TO WASTE SERVING FILTERS NO. 5 – NO. 12, INCLUSIVE	NO	YES
DD	PROCESS WATER	NO	YES
EE	WASH WATER SUPPLY – WEST	NO	YES



FILTERS NO. 7, 9, & 11 SIMILAR.
FILTERS NO. 5, 8, 10, & 12 OPPOSITE HAND.

30" WASH WATER DRAIN DETAIL
SCALE : 1/4" = 1'-0"

EXISTING CAST IRON WASH WATER DRAIN DISTANCE FROM FILTER BOX WALL TO FLANGE/ FLANGE FACE	
FILTER NO.	DISTANCE "D"
5	8.5"±
6	10"±
7	8.5"±
8	8.5"±
9	9.5"±
10	8"±
11	9.75"±
12	9.5"±

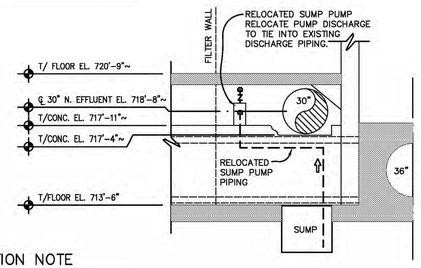
FILTER PLAN – EL. 720'-0"
SCALE : 1/8" = 1'-0"

GENERAL NOTE
ALL DRAWINGS ARE A REPRESENTATION OF ACTUAL CONDITIONS BASED ON 1952 CONSTRUCTION PLAN DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, SIZES, AND LOCATIONS OF ALL RELEVANT ITEMS.

GENERAL NOTE NO. 1
THIS NOTE APPLIES TO DRAWINGS FT01 THROUGH FT28
THE WORK ARE FOR ALL CONCRETE SURFACES THAT ARE REPAIRED, INFILLED OR PATCHED SHALL BE SMOOTH AND FLUSH WITH SURROUNDING CONCRETE SURFACES. IF NECESSARY THE CONTRACTOR SHALL GRIND THE NEW SURFACES TO BE FLUSH WITH THE ADJOINING SURFACES.

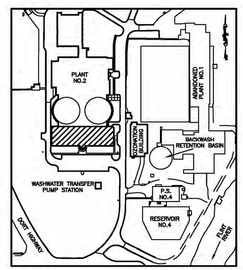
GENERAL CONSTRUCTION NOTE
NO MOUNTING OR FASTENING OF ANY TEMPORARY OR PERMANENT EQUIPMENT, SUPPORTS, OR DEVICES TO THE CONCRETE OF THE FILTER BOXES OR INFLUENT CHANNEL IS PERMITTED.

PIPE END CONFIGURATION LEGEND
- FLANGE
- GROOVED END COUPLING
- SLEEVE TYPE COUPLING



SECTION 1
SCALE : 1/4" = 1'-0" FT08 | FT08

NOTES :
1. FILTER INTERNALS NOT SHOWN FOR CLARITY.
2. SUPPORT MECHANISMS FOR VALVES, ACTUATORS, & PIPING NOT SHOWN FOR CLARITY. REFER TO 1/4 SCALE SECTIONS FOR SUPPORT LOCATIONS.
3. HANDRAIL NOT SHOWN FOR CLARITY. SEE NEW FILTER GALLERY SECTION FOR NEW HANDRAIL AT FLOOR ELEV. 718'± AT TOP OF 36" WASH WATER DRAIN CONCRETE ENCASEMENT.



KEY PLAN
NTS

THE DLZ TEAM
ENGINEERS · ARCHITECTS · SCIENTISTS · PLANNERS · SURVEYORS
1425 KEYSTONE AVE., LANSING, MI 48911
TELE. (517) 393-4080 • FAX (517) 272-7390

FLINT MICHIGAN

CITY OF FLINT
DEPARTMENT OF PUBLIC WORKS & UTILITIES

WATER TREATMENT PLANT REHABILITATION
PHASE I, SEGMENT 4

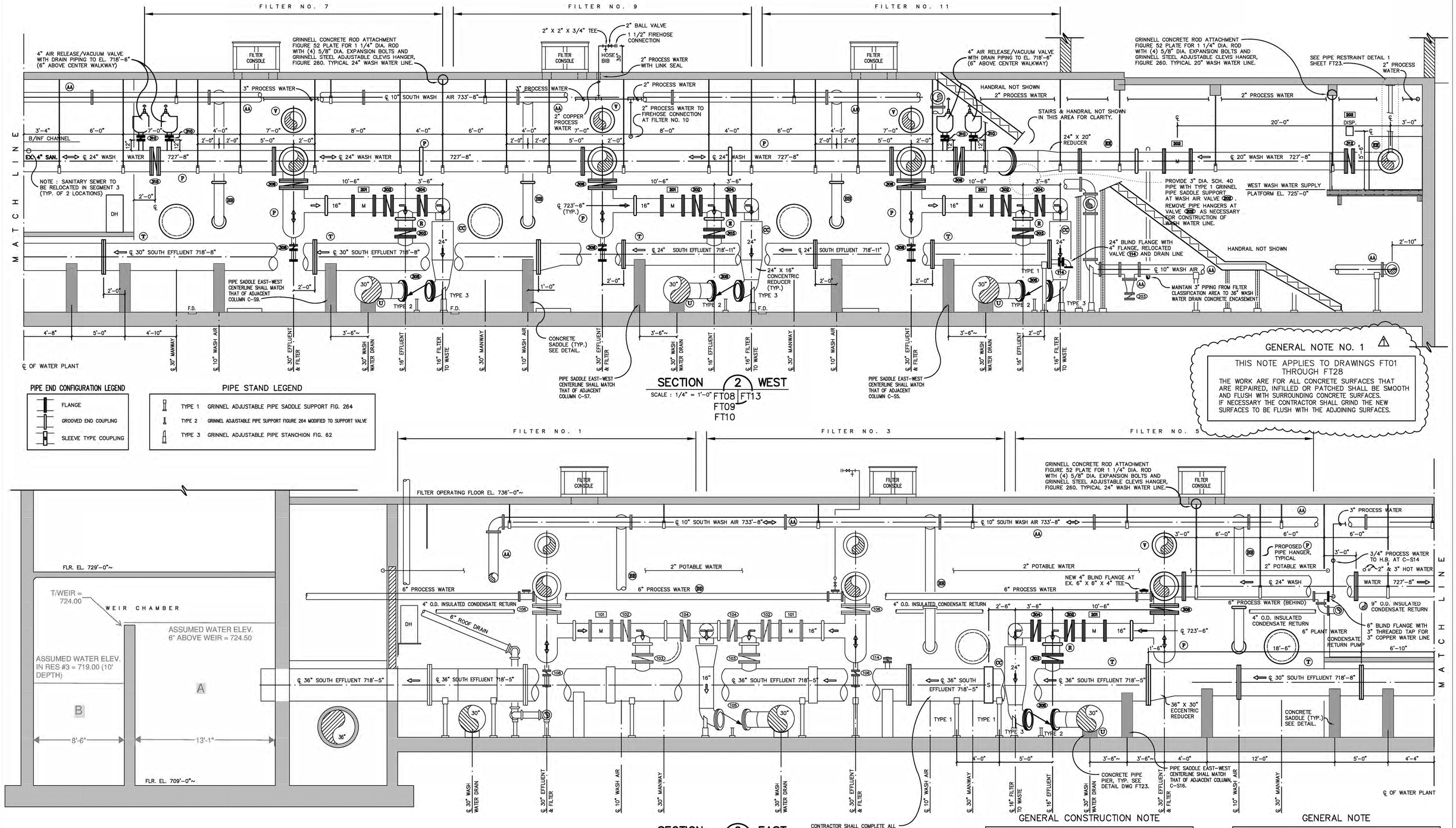
FILTER REHABILITATION
NEW FILTER PLAN – EL. 720'-0"

DRAWN	J.B.P.
CHK'D.	C.A.P.
APPRV'D	C.A.P.
DATE	JUNE 2002
PROJECT NUMBER	7019-04

NO.	REVISION	BY	DATE
1	ADDENDUM NO. 1 REVISION	JO	10/03
	AS-BUILT	DJV	8/05

SHEET
OF
DRAWING NUMBER
FT08

004726



SECTION 2 WEST
SCALE : 1/4" = 1'-0"
FT08 | FT13
FT09
FT10

GENERAL NOTE NO. 1

THIS NOTE APPLIES TO DRAWINGS FT01 THROUGH FT28

THE WORK ARE FOR ALL CONCRETE SURFACES THAT ARE REPAIRED, INFILLED OR PATCHED SHALL BE SMOOTH AND FLUSH WITH SURROUNDING CONCRETE SURFACES. IF NECESSARY THE CONTRACTOR SHALL GRIND THE NEW SURFACES TO BE FLUSH WITH THE ADJOINING SURFACES.

PIPE END CONFIGURATION LEGEND

- FLANGE
- GROOVED END COUPLING
- SLEEVE TYPE COUPLING

PIPE STAND LEGEND

- TYPE 1 GRINNEL ADJUSTABLE PIPE SADDLE SUPPORT FIG. 264
- TYPE 2 GRINNEL ADJUSTABLE PIPE SUPPORT FIGURE 264 MODIFIED TO SUPPORT VALVE
- TYPE 3 GRINNEL ADJUSTABLE PIPE STANCHION FIG. 62

SECTION 2 EAST
SCALE : 1/4" = 1'-0"
FT08 | FT13
FT09
FT10

GENERAL CONSTRUCTION NOTE

NO MOUNTING OR FASTENING OF ANY TEMPORARY OR PERMANENT EQUIPMENT, SUPPORTS, OR DEVICES TO THE CONCRETE OF THE FILTER BOXES OR INFLUENT CHANNEL IS PERMITTED.

GENERAL NOTE

ALL DRAWINGS ARE A REPRESENTATION OF ACTUAL CONDITIONS BASED ON 1952 CONSTRUCTION PLAN DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, SIZES, AND LOCATIONS OF ALL RELEVANT ITEMS.

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FLINT MICHIGAN

CITY OF FLINT
DEPARTMENT OF PUBLIC WORKS & UTILITIES

WATER TREATMENT PLANT REHABILITATION PHASE I, SEGMENT 4

FILTER REHABILITATION NEW FILTER GALLERY SECTIONS

DRAWN	J.B.P.
CHK'D.	C.A.P.
APPRV'D	C.A.P.
DATE	JUNE 2002
PROJECT NUMBER	7019-04

NO.	REVISION	BY	DATE
1	ADDENDUM NO. 1 REVISION	JO	10/03
	AS-BUILT	DJV	8/05

SHEET
OF
DRAWING NUMBER
FT13

004727

OZONE BLDG

PLANT NO. 1
(ABANDONED)

CHLORINE CONTACT

LOADING RAMP

GATE

GATE

GROUND OBSCURED

N1

M1

M2

L1

L2

D

E

F

ST

SA

MH #50
RIM = 727.21

MH #51
RIM = 726.18

MH #88
RIM = 725.08

WVMH #04
RIM = 726.35

HV7
720.31

54" RAW WATER

48" WATER

42" RAW WATER

42" H.S. DISCHARGE HEADER

14" F.M.

8" DECANT

36" STORM

6" SS

8" SS

6" WATER

42" WATER

36" WATER

24" WATER

36" SEWER

24" TO PARK

6" SLUDGE FORCE MAIN

6" WATER (ABD.)

24" DD CI WATER

6" (6" DEEP)

8"-50

72" INTAKE CONDUIT

48" RAW WATER LOW SERVICE

36" OVERFLOW DRAIN

24" W

21"

24" DISTRIBUTION LINE

12" SAN SEWER

24"-SD

6" SLUDGE FORCE MAIN

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

GENERAL PLAN

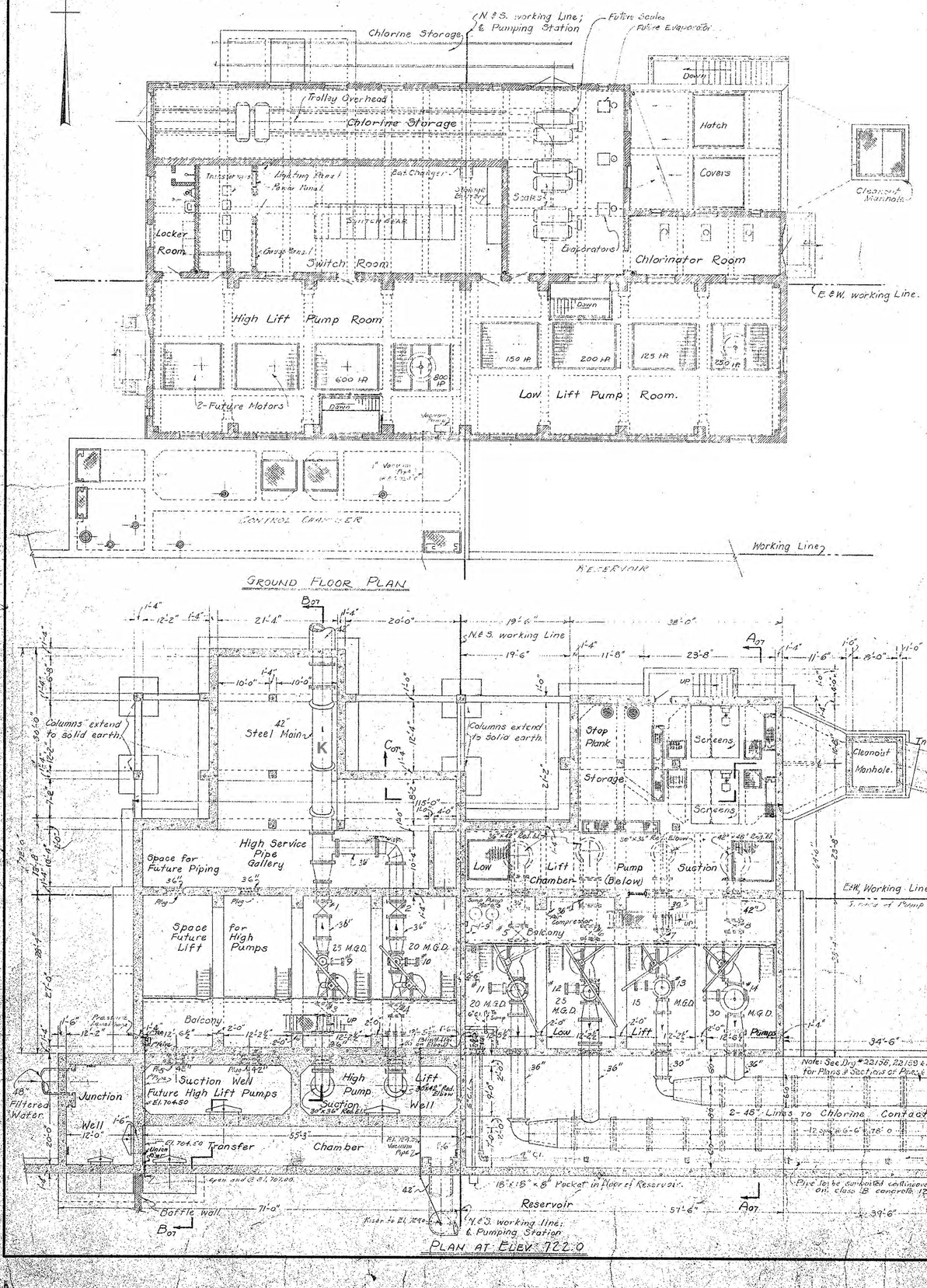
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

SCALE: 1"=20'-0"

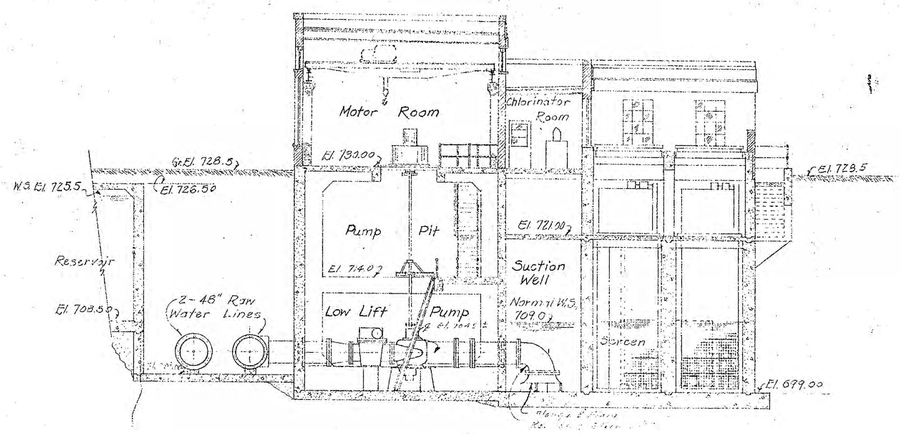
JUNE 1948

22101-2

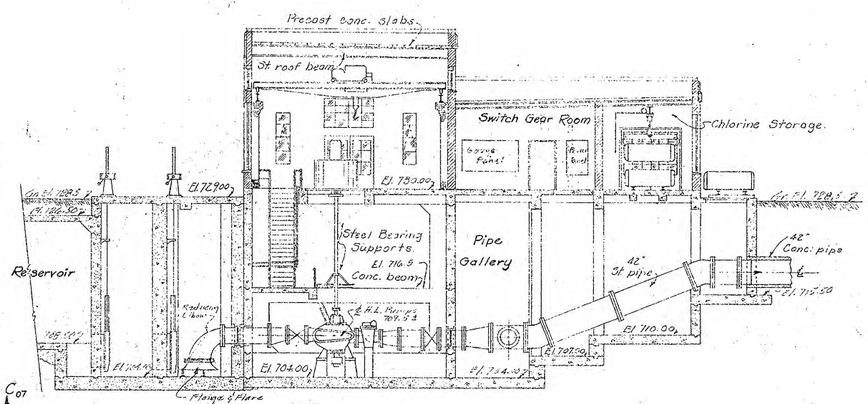
004729



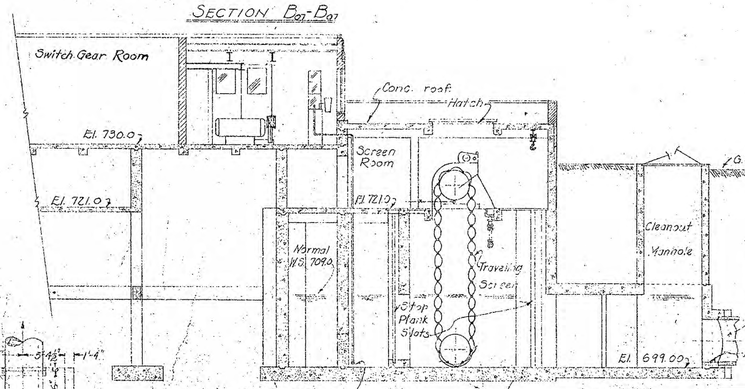
GROUND FLOOR PLAN



SECTION A_{07}-A_{07}



SECTION B_{07}-B_{07}



SECTION C_{07}-C_{07}

PLAN AT ELEV. 722.0

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

PUMPING STATION NO. 3
GENERAL PLAN

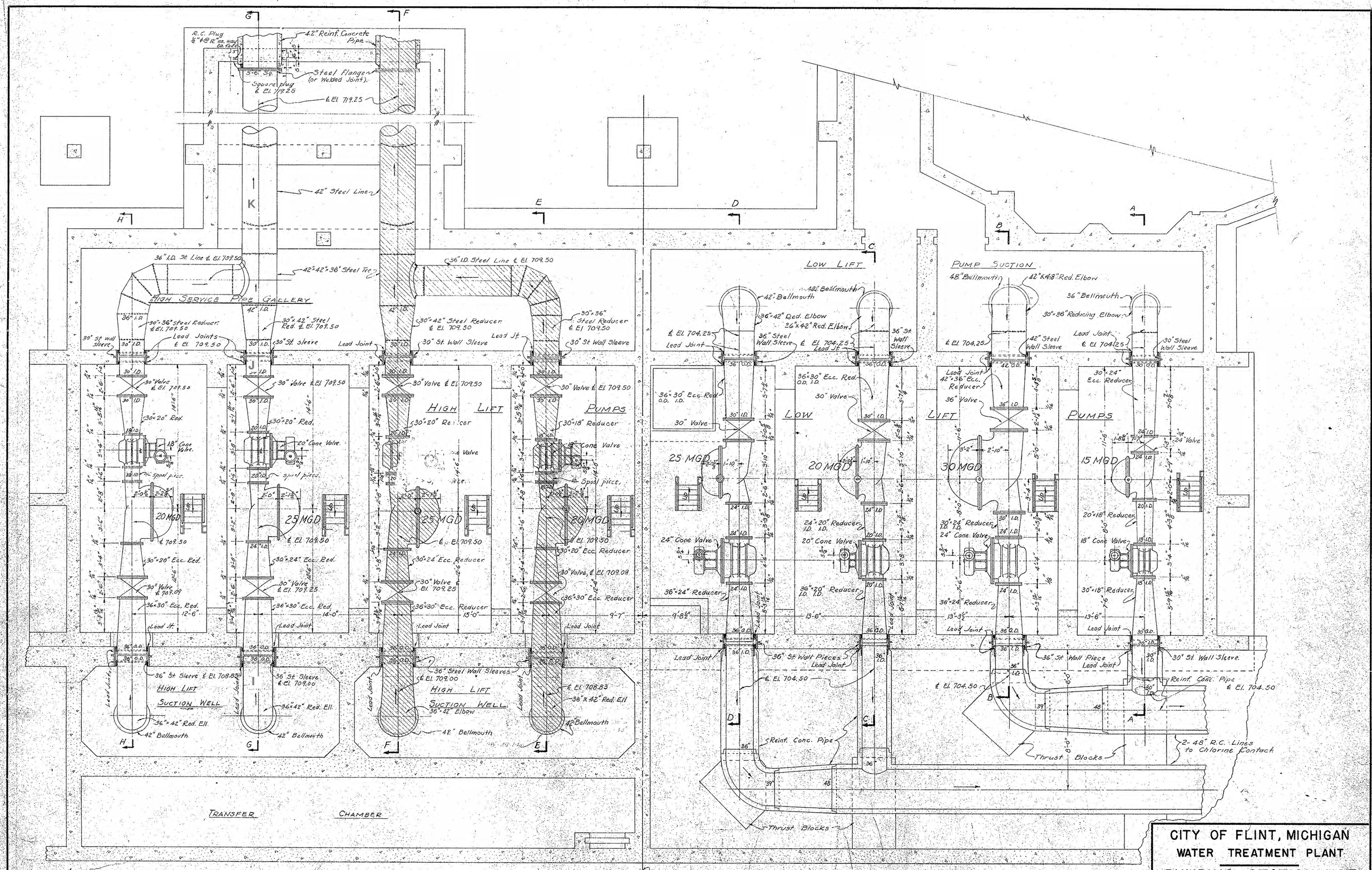
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

REV. 2	8-12-48	REVISED TO CONFORM ADDENDUM #2 AS ISSUED
REV. 1	6-8-48	ORIGINAL ISSUE

DRAWN BY: M.R.D. CHECKED BY:

SCALE: 1"= 10'-0" JUNE 1948

22107-2



PARTIAL SECTIONAL PLAN @ El. 711±
(SHOWING HIGH & LOW LIFT PIPING)
Scale: 1/4" = 1'-0"

NOTE:
Layout of pipe in Pump Station is for Steel pipe.
Denotes Future High Lift Pumps & Pipes

REV.	5	MAR '49	Dimension Changes S.B.M.
REV.	4	FEB '49	Relocate High Lift Pumps M.A.D.
REV.	3	JAN '49	Relocate L. Lift Valves M.A.D.
REV.	2	DEC '48	Complete Details M.A.D.
REV.	1	Oct '48	Original Issue
DRAWN BY:		M.A.D.	CHECKED BY:

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

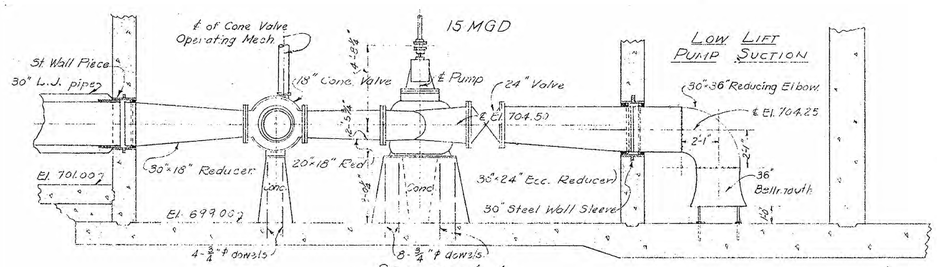
PUMPING STATION NO. 3
PLAN OF PUMP PIPING

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

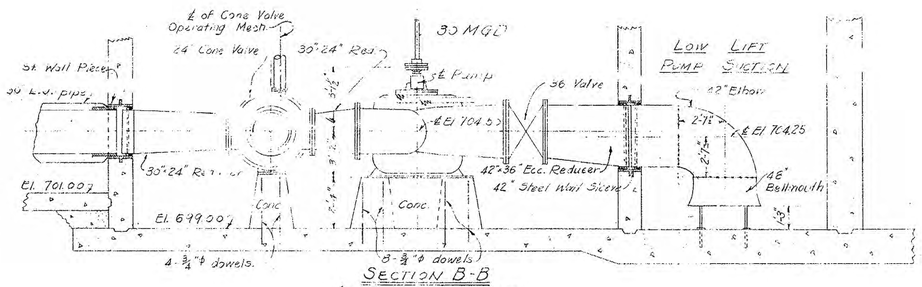
SCALE: AS SHOWN NOV. 1948

S 22107-A4

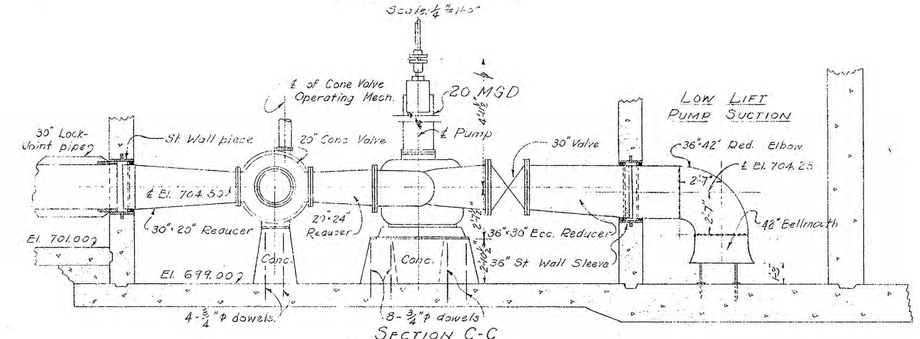
004731



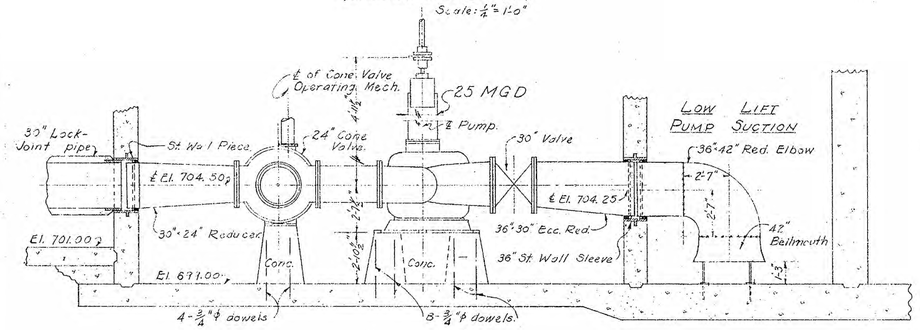
SECTION A-A
(SHOWING 15 MGD PUMP)
Scale: ¼"=1'-0"



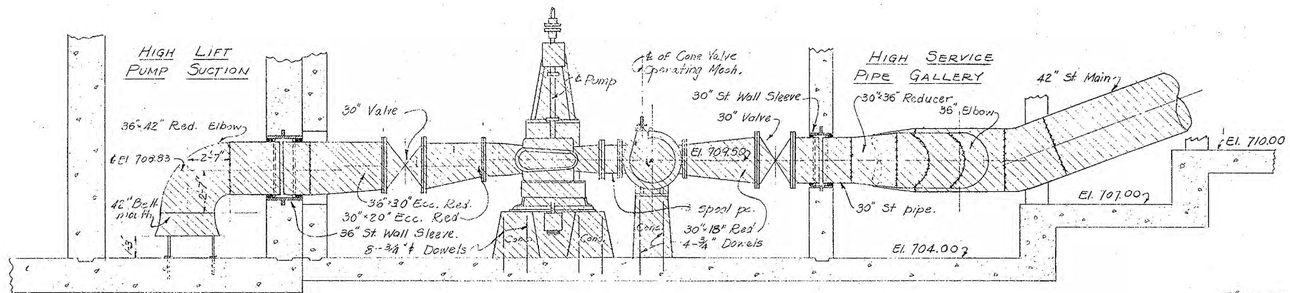
SECTION B-B
(SHOWING 30 MGD PUMP)
Scale: ¼"=1'-0"



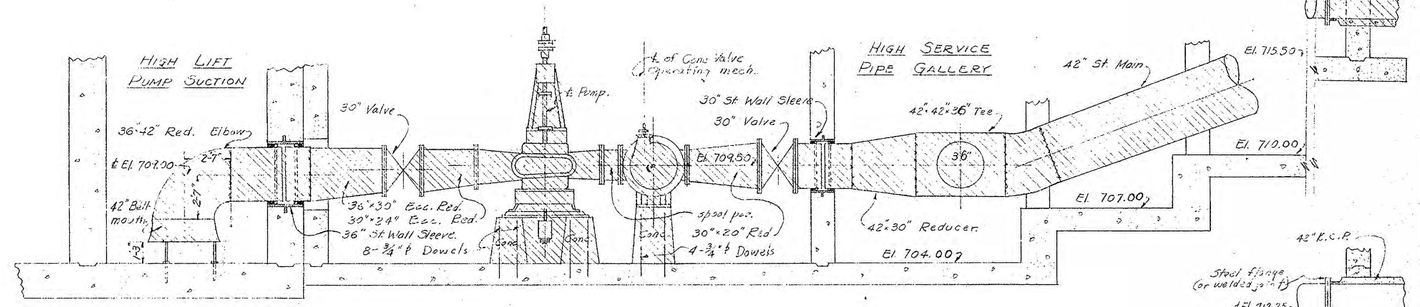
SECTION C-C
(SHOWING 20 MGD PUMP)
Scale: ¼"=1'-0"



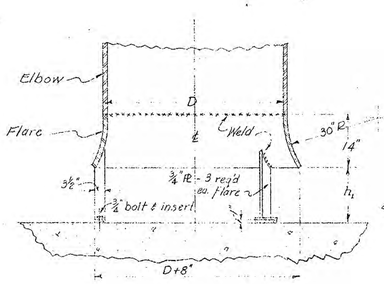
SECTION D-D
(SHOWING 25 MGD PUMP)
Scale: ¼"=1'-0"



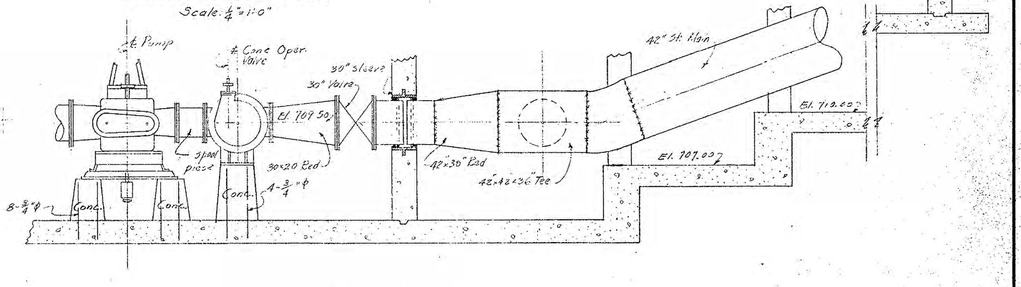
SECTION E-E
(SHOWING 20 MGD PUMP)
Scale: ¼"=1'-0"



SECTION F-F
(SHOWING 25 MGD PUMP)
Scale: ¼"=1'-0"

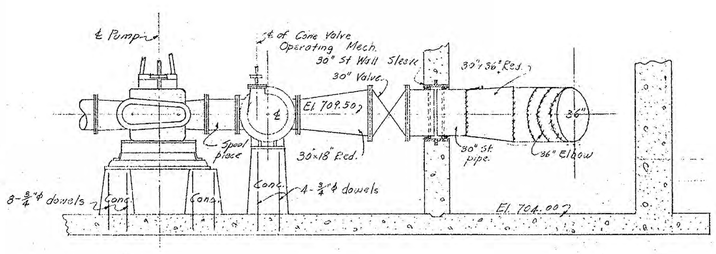


BELLMOUTH & SUPPORT DETAILS
No Scale



SECTION G-G
(SHOWING 25 MGD PUMP DISCHARGE)
Scale: ¼"=1'-0"

HIGH SERVICE	D	D+8"	h_1
25 M.G.D. Pump	42"	50"	1'-3"
20 M.G.D. Pump	42"	50"	1'-3"
LOW SERVICE	D	D+8"	h_1
15 M.G.D Pump	36"	44"	1'-0"
20 M.G.D. Pump	42"	50"	1'-3"
25 M.G.D. Pump	42"	50"	1'-3"
30 M.G.D. Pump	48"	56"	1'-3"



SECTION H-H
(SHOWING 20 MGD Pump DISCHARGE)
Scale: ¼"=1'-0"

NOTE:
1. ▨ Denotes Future HIGH LIFT Pumps & PIPES.
2. Suction piping for HIGH LIFT Pumps is as shown in SECTS E-E & F-F.

REV.	5	MAR. '49	Spool Piece Notations S.B.M.
REV.	4	FEB. '49	Relocate H Lift Pumps M.A.M.
REV.	3	JAN. '49	Relocate L Lift Valves M.A.M.
REV	2	DEC. '48	Complete Details M.A.M.
REV	1	Oct '48	Original Issue
DRAWN BY:		M.A.M.	CHECKED BY:

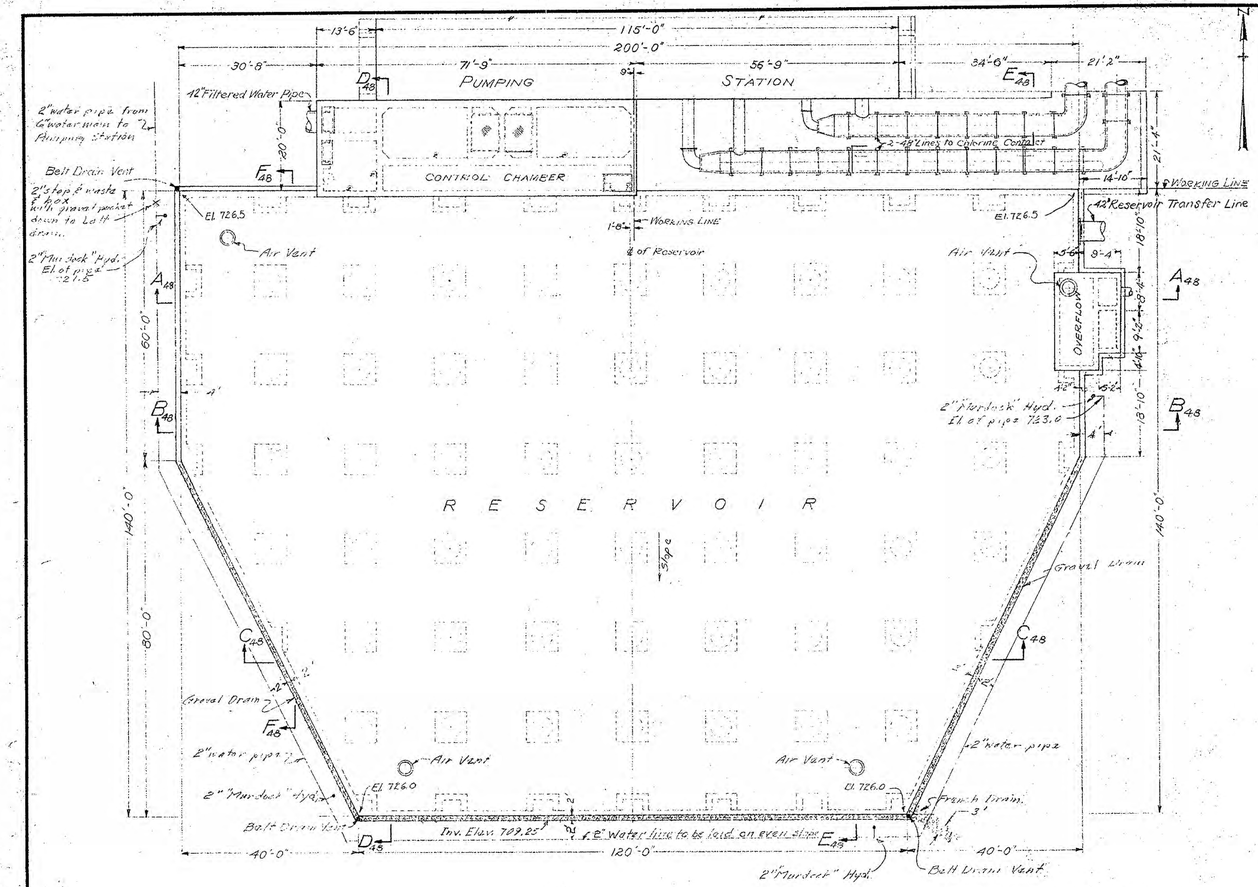
CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

PUMPING STATION NO. 3
SECTIONS OF PUMP PIPING

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

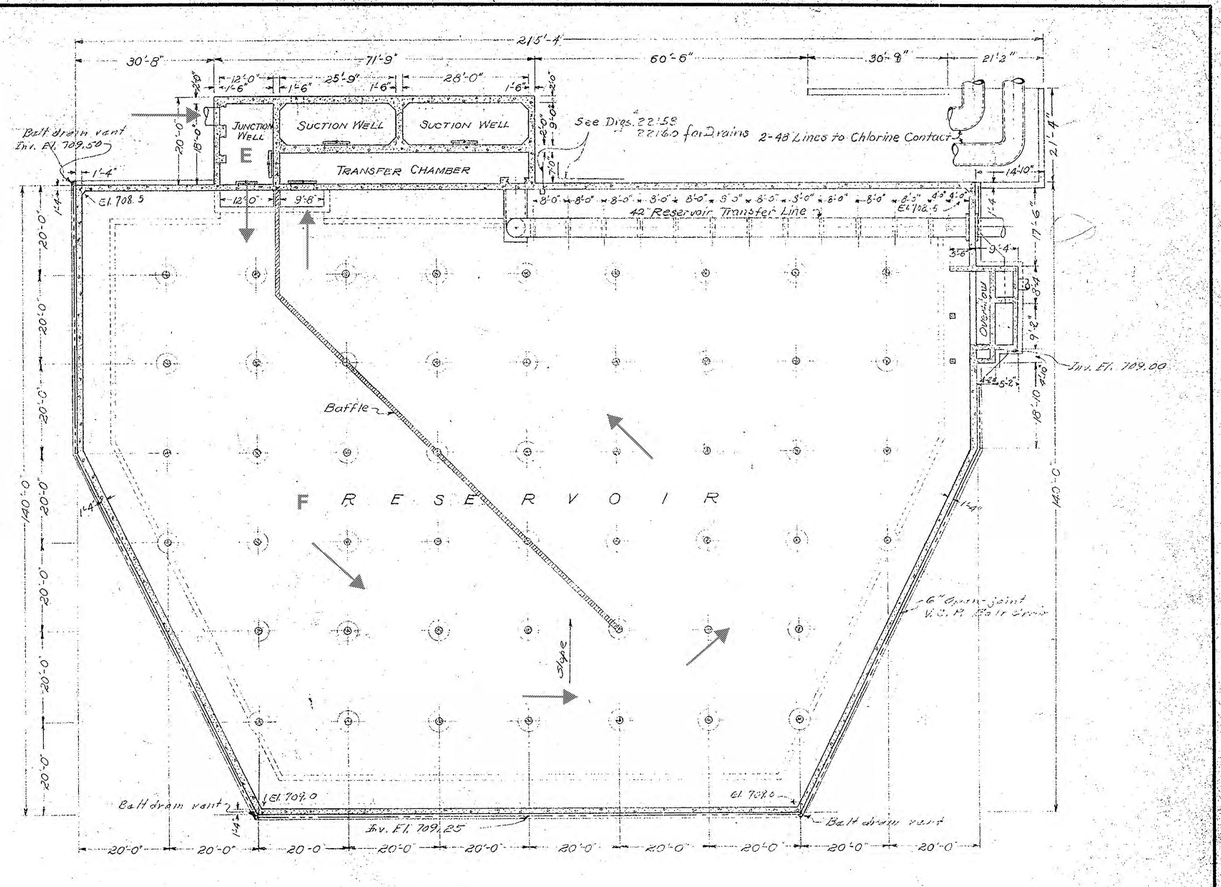
SCALE: AS SHOWN NOV. 1948

S 22107-B4

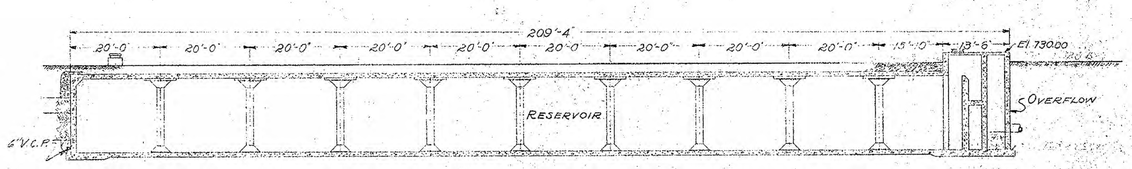


PLAN VIEW OF RESERVOIR

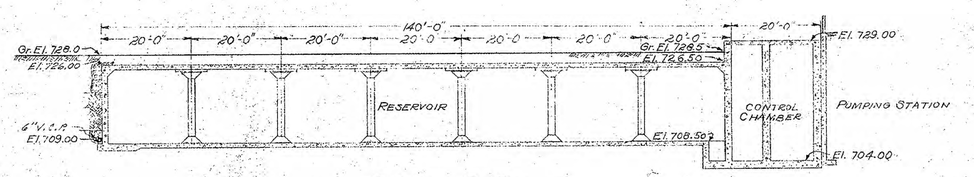
AVG W = $\frac{(200' \times 60') + [(200'+120')/2 \times (80')]}{140'} = 177'$



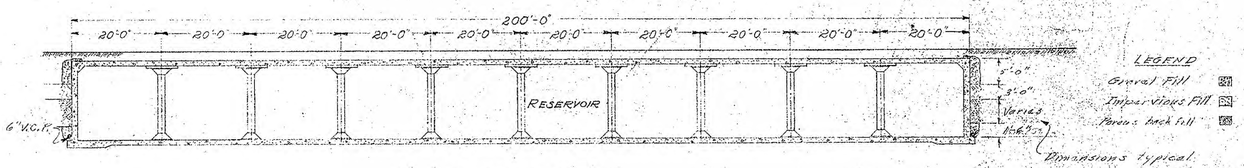
PLAN OF FLOOR-SLAB



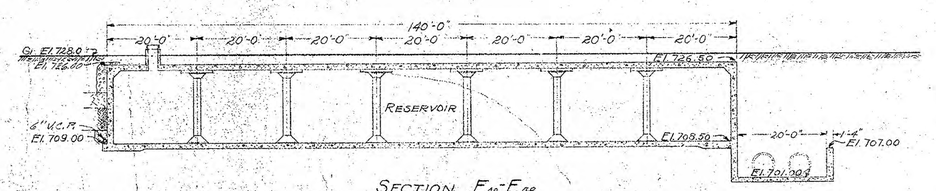
SECTION A_{48}-A_{48}



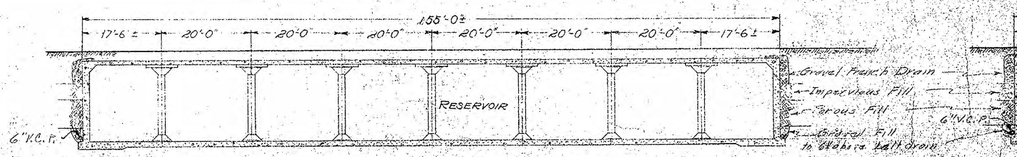
SECTION D_{48}-D_{48}



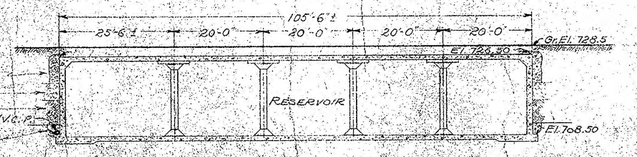
SECTION B_{48}-B_{48}



SECTION E_{48}-E_{48}



SECTION C_{48}-C_{48}



SECTION F_{48}-F_{48}

REV. 2	6-18-48	ADD DRAINS & VENTS	C.E.S.
REV. 1	6-8-48	ORIGINAL ISSUE	
DRAWN BY R.T.		CHECKED BY	

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

RESERVOIR NO. 3
GENERAL PLANS & SECTIONS

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

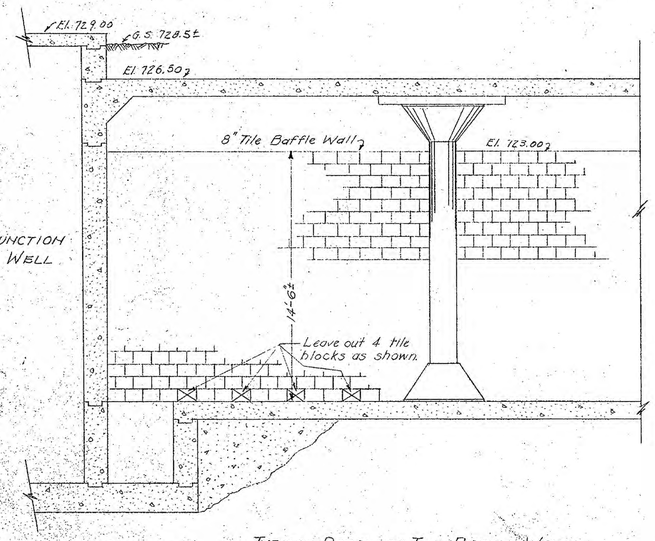
SCALE: 1/16" = 1'-0"

JUNE 1948

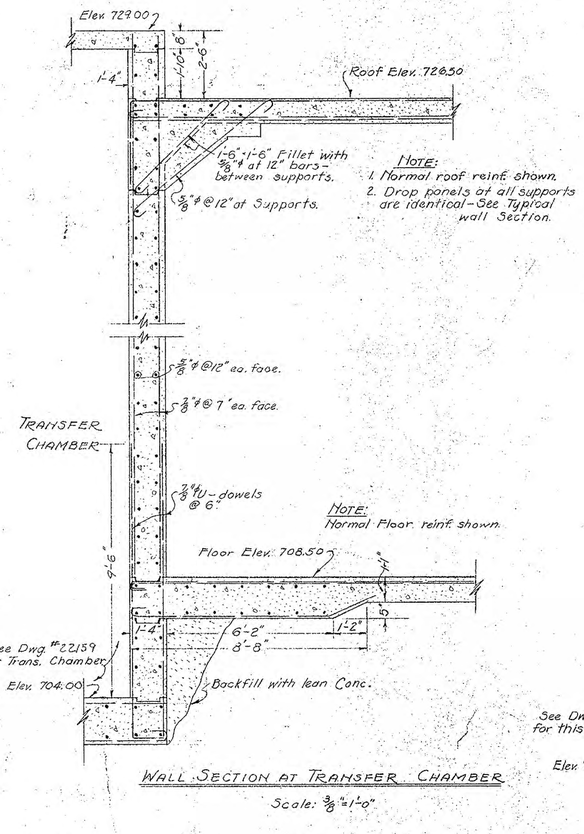
22148-2

FLINT-W.T.P.-RESERVOIR-PLANS-SECTIONS-16

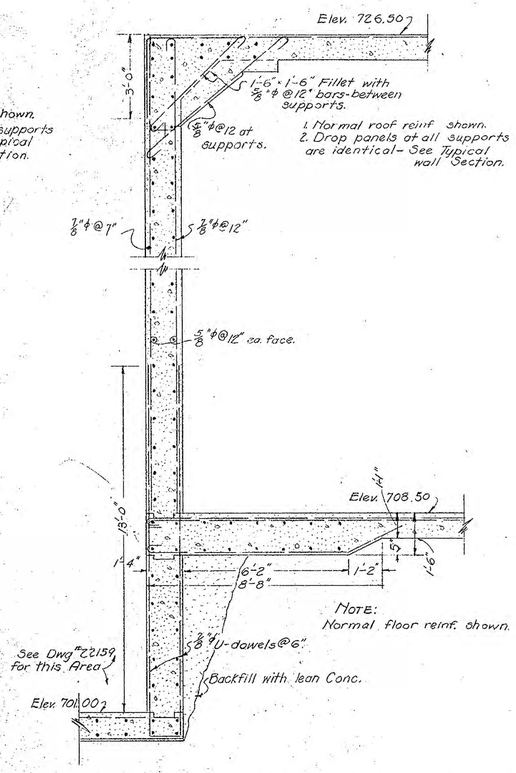
004733



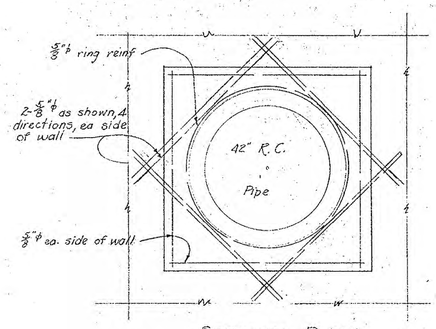
TYPICAL DETAIL OF TILE BAFFLE WALL
Scale: ½"=1'-0"



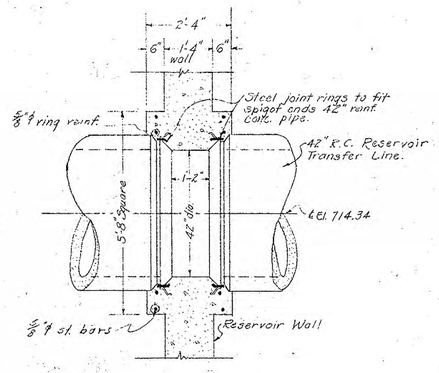
WALL SECTION AT TRANSFER CHAMBER
Scale: ⅜"=1'-0"



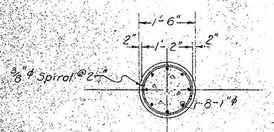
WALL SECTION EAST OF TRANSFER CHAMBER
Scale: ⅜"=1'-0"



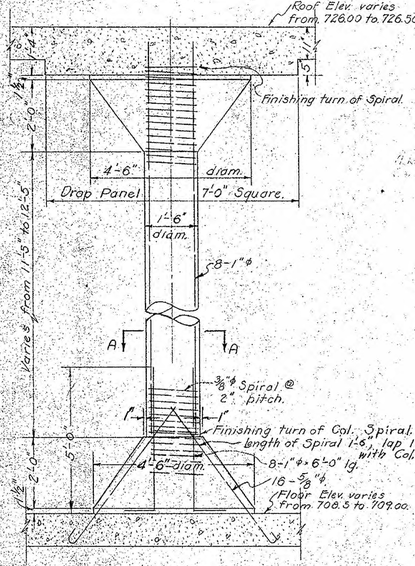
SECTIONAL PLAN
42" TRANSFER LINE AT RESERVOIR WALL
Scale: ½"=1'-0"



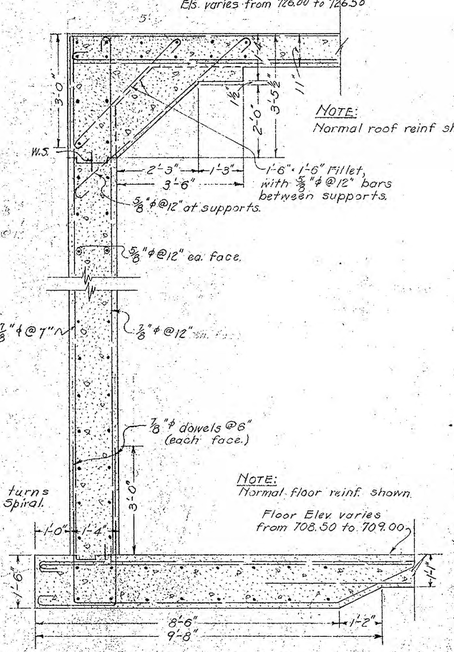
SECTIONAL ELEVATION
DETAIL 42" R.C. TRANSFER LINE AT RESERVOIR WALL
Scale: ½"=1'-0"



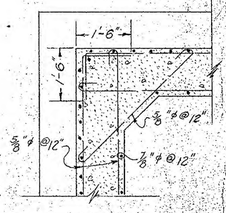
SECTIONAL PLAN A-A



ELEVATION OF TYPICAL COLUMN
Scale: ½"=1'-0"

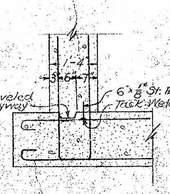


TYPICAL WALL SECTION
(Where wall varies, See other Sections)
Scale: ½"=1'-0"

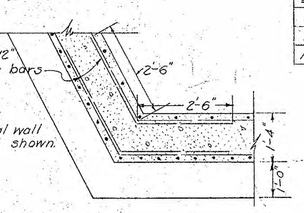


TYPICAL NORTH CORNER DETAILS
Scale: ½"=1'-0"

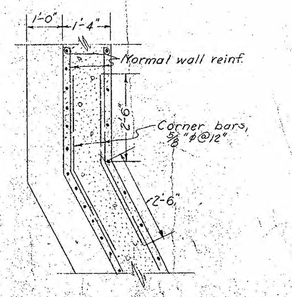
TYPICAL VERTICAL JOINT
Scale: ½"=1'-0"



HORIZONTAL WATER STOP
Scale: ½"=1'-0"

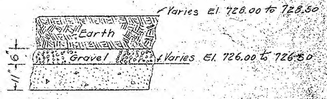


TYPICAL FOR CORNERS 1 & 6
Scale: ½"=1'-0"

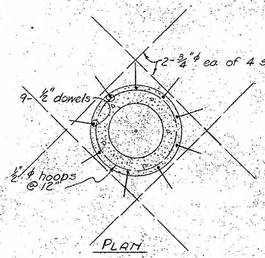


TYPICAL FOR CORNERS 2 & 5
Scale: ½"=1'-0"

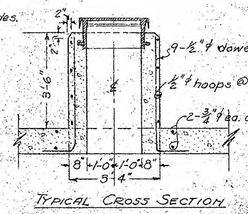
CONCRETE COVER FOR REINFORCING STEEL	
3"	For bottom face of all footings & base slabs
2"	For all slabs and vertical walls.
1½"	For all faces of exposed dry slabs & beams



ROOF FILL DETAIL
No Scale



PLAN



TYPICAL CROSS SECTION

NOTE:
For location of Air Vents see Dwg #22148

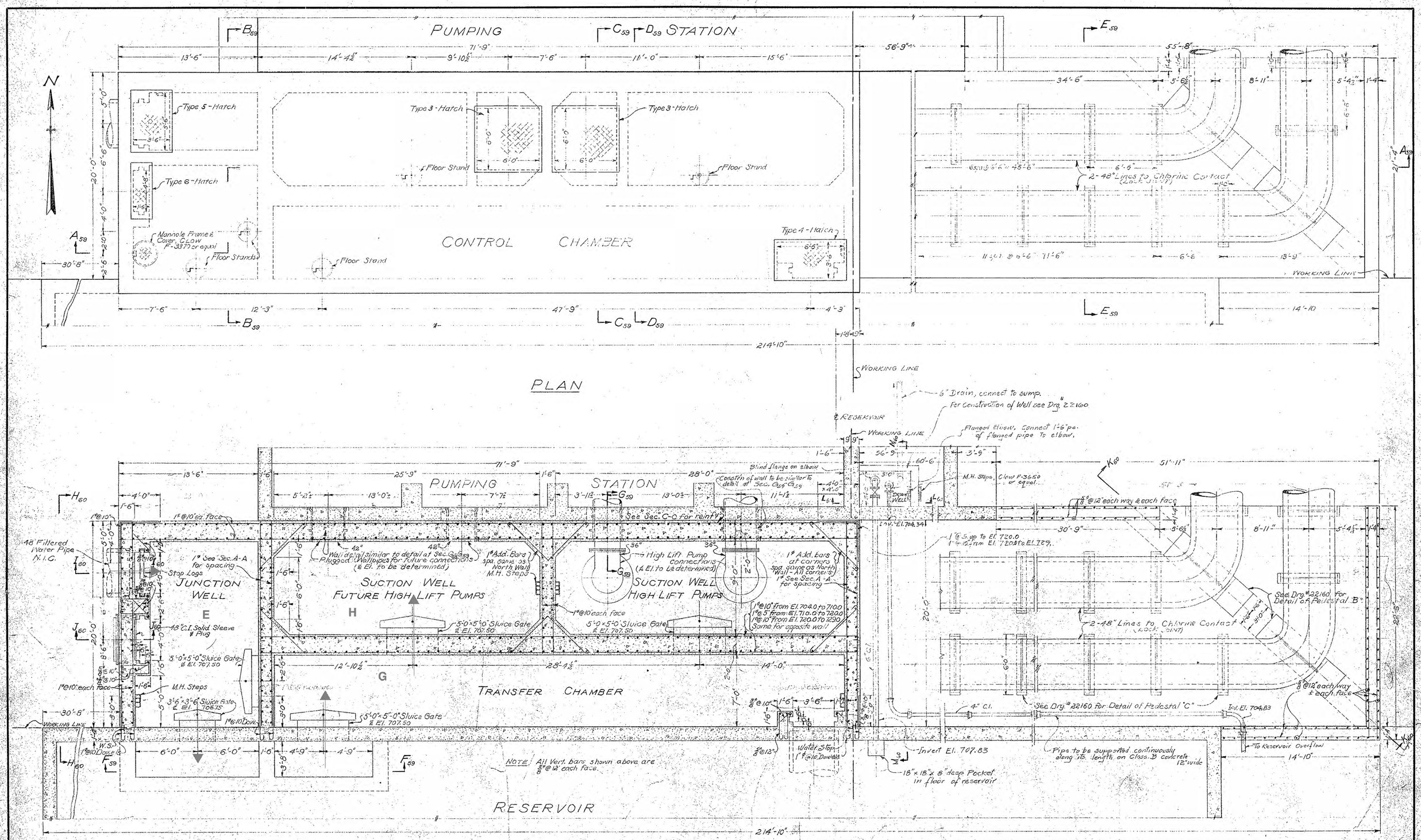
AIR VENT DETAIL
Scale: ¾"=1'-0"

Note: See concrete cover for reinforcing steel this sheet.

REV.		ORIGINAL ISSUE
DRAWN BY: M.A.D.		CHECKED BY:

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT
RESERVOIR NO.3
DETAILS
AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN
SCALE: AS NOTED JULY 1948

22157 - 1



CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT

RESERVOIR NO.3
CONTROL CHAMBER PLANS

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

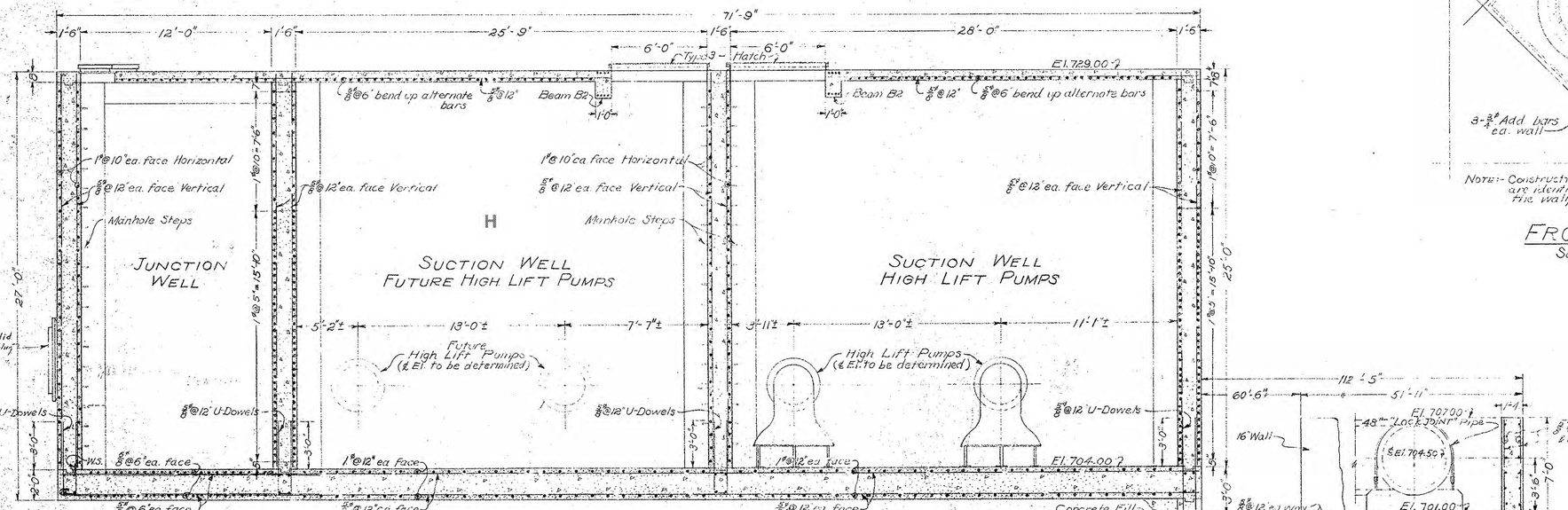
REV.	2	8-16-48	Drain Well & Piping Added
REV.	1		ORIGINAL ISSUE
DRAWN BY: K.T.			CHECKED BY:

SCALE: 1/4"=1'-0"

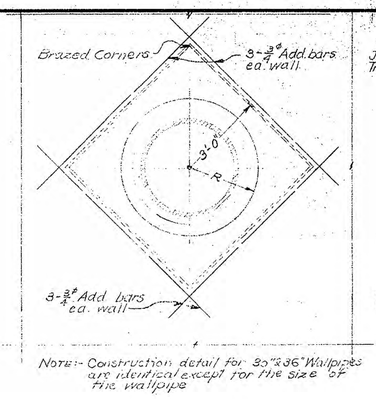
JULY 1948

22158-2

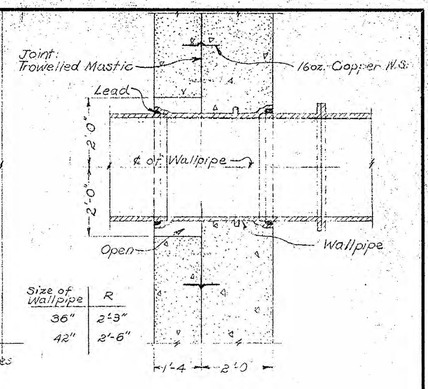
004735



SECTION A_{59}-A_{59}

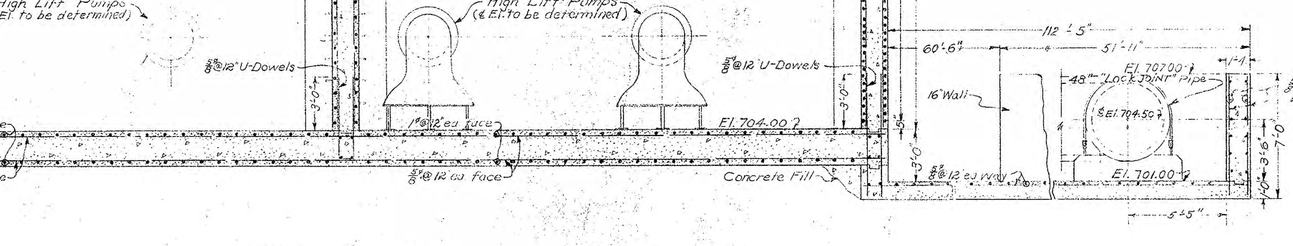


FRONT VIEW
Scale: ½"=1'-0"

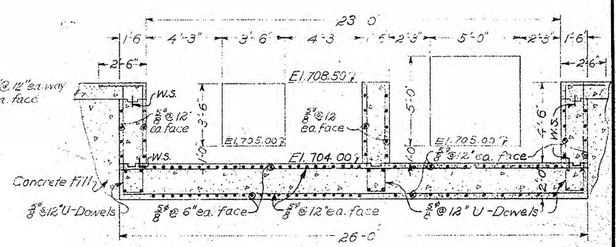


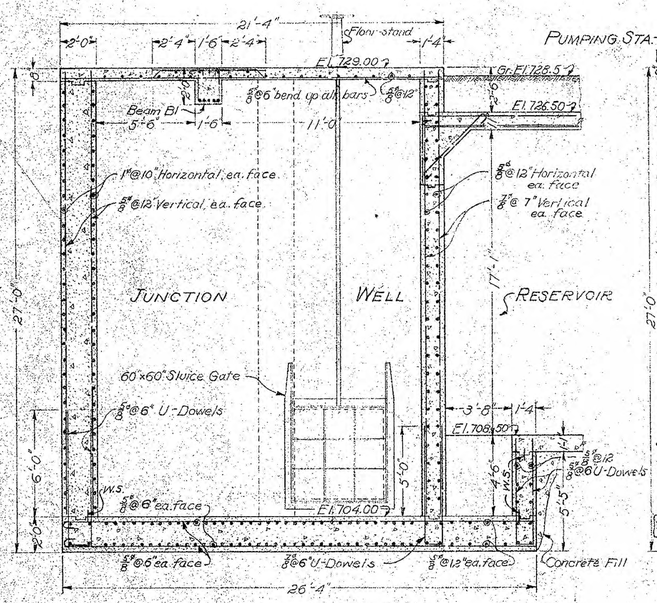
Size of Wallpipe	R
36"	2'-3"
42"	2'-6"

SECTION G_{59}-G_{59}
Scale: ½"=1'-0"

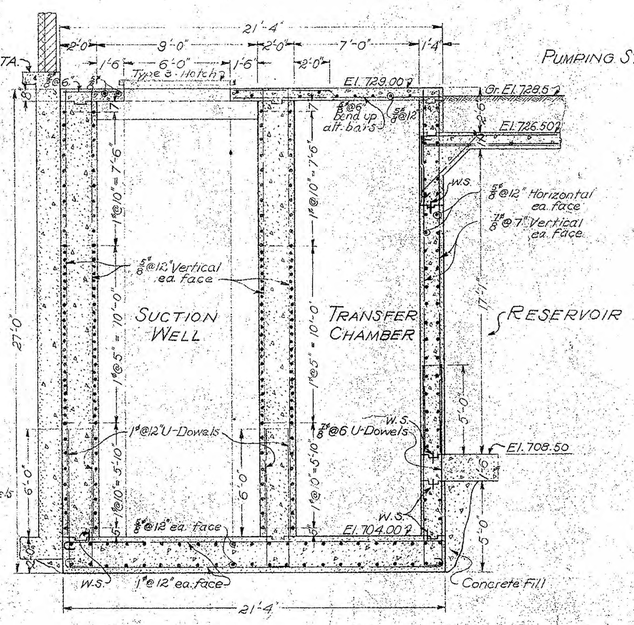


SECTION F_{59}-F_{59}

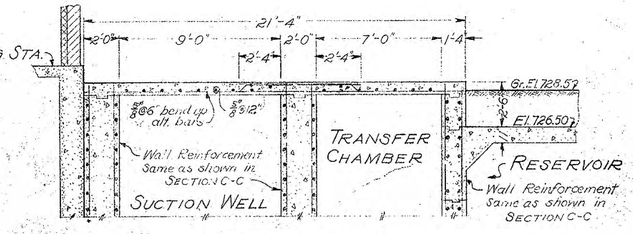




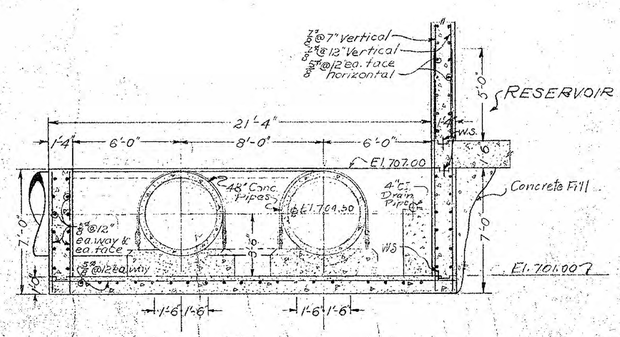
SECTION B_{59}-B_{59}



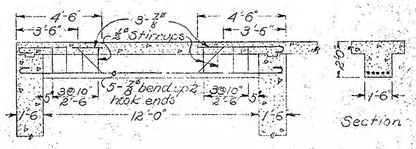
SECTION C_{59}-C_{59}



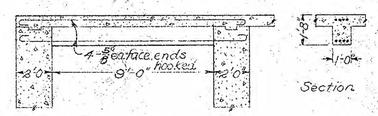
SECTION D_{59}-D_{59}



SECTION E_{59}-E_{59}



DETAIL OF BEAM B1



DETAIL OF BEAM B2

CITY OF FLINT, MICHIGAN
WATER TREATMENT PLANT
RESERVOIR NO. 3
CONTROL CHAMBER SECTIONS

AYRES, LEWIS, NORRIS & MAY
CONSULTING ENGINEERS
ANN ARBOR, MICHIGAN

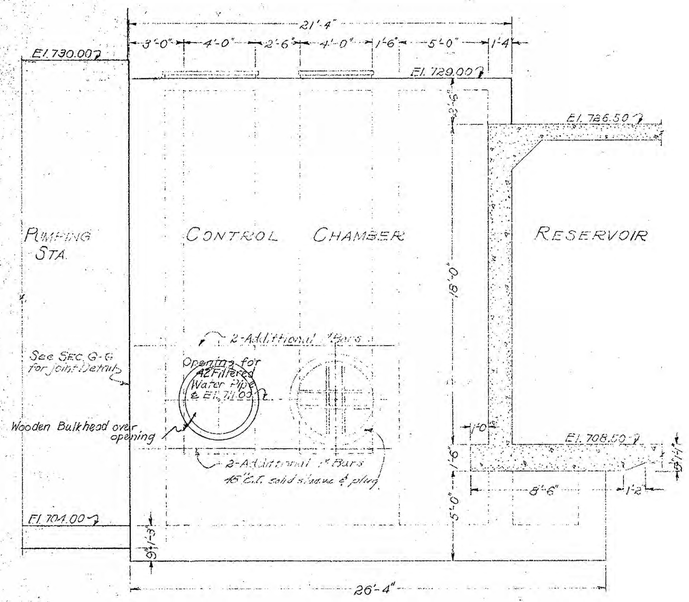
SCALE: ¼"=1'-0" UNLESS NOTED — JULY, 1948

REV. 2	6-6-49	4" Drain Pipe in Sec. E-E added
REV. 1		ORIGINAL ISSUE
DRAWN BY: K.T.		CHECKED BY:

22159 -2

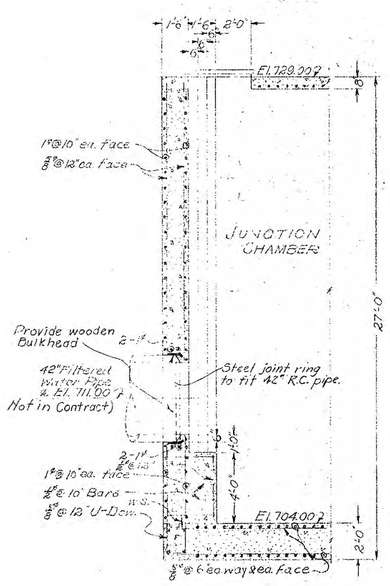
FLINT-W.T.P.-TRANSFER CHAMBER SECTIONS

004736



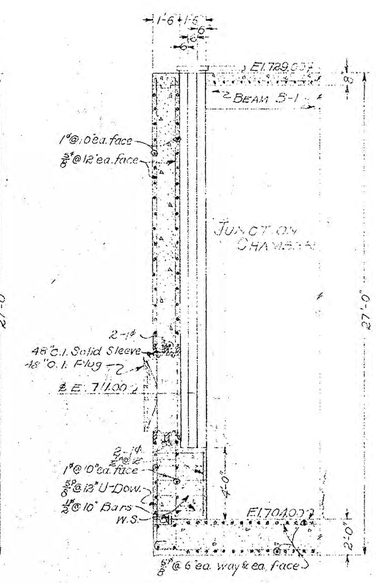
SECTION H_{60}-H_{60}

Scale: $\frac{1}{4}$"=1'-0"



SECTION I_{60}-I_{60}

Scale: $\frac{1}{4}$"=1'-0"



SECTION J_{60}-J_{60}

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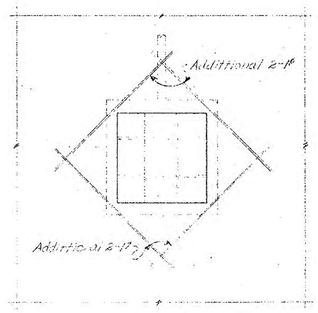
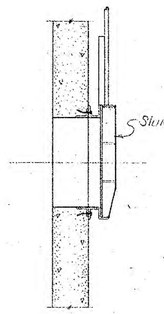
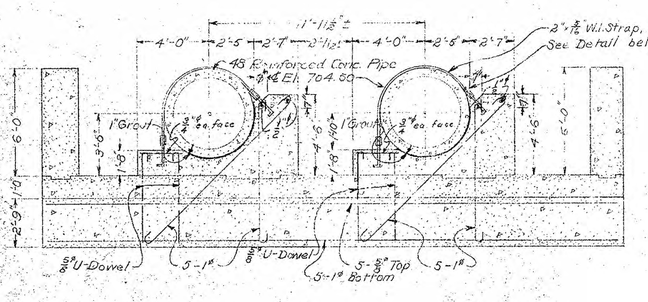


FRONT VIEW



SECTION

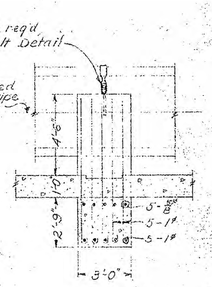
TYPICAL SLUICE GATE INSTALLATION



PEDESTAL "B"

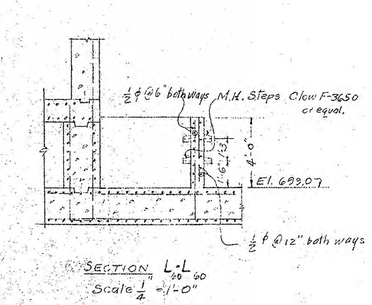
SECTION K_{60}-K_{60}

Scale: $\frac{1}{4}$"=1'-0"



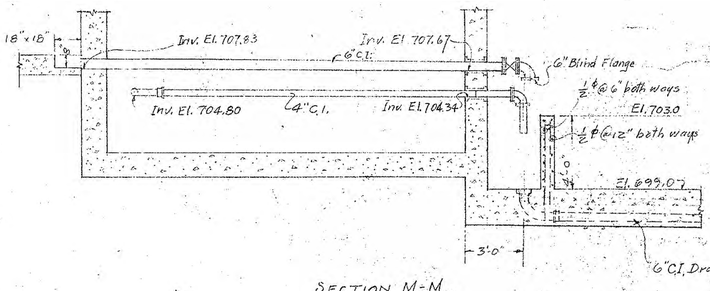
SECTIONAL VIEW

Scale: $\frac{1}{2}$"=1'-0"



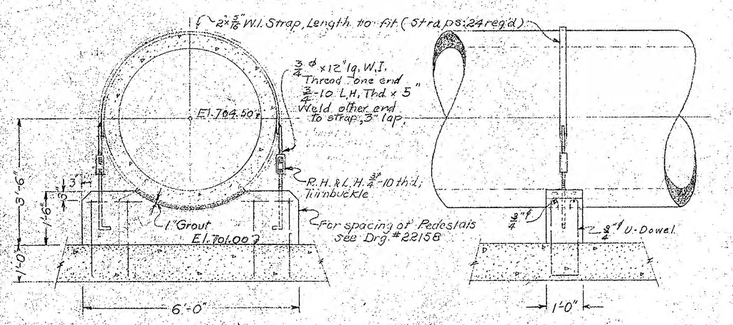
SECTION L_{60}-L_{60}

Scale: $\frac{1}{4}$"=1'-0"



SECTION M_{60}-M_{60}

Scale: $\frac{1}{4}$"=1'-0"



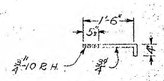
FRONT VIEW

SIDE VIEW

(24 Required)

DETAIL OF PEDESTAL "C"

Scale: $\frac{1}{2}$"=1'-0"



(48 Required)

ANCHOR BOLT DETAIL

Scale: $\frac{1}{2}$"=1'-0"

Rev.	2	8-16-48	Sec L_{60}-L_{60} & Sec M_{60}-M_{60} Added.
Rev.	1		ORIGINAL ISSUE

DRAWN BY: K.T. CHECKED BY:

CITY OF FLINT, MICHIGAN

WATER TREATMENT PLANT

RESERVOIR NO. 3

CONTROL CHAMBER DETAILS

AYRES, LEWIS, NORRIS & MAY

CONSULTING ENGINEERS

ANN ARBOR, MICHIGAN

SCALE: $\frac{1}{4}$"=1'-0" UNLESS NOTED JULY 1948

22160 - 2

Subject:	Flint WTP - GAC addition
Location:	CH-1S-FRANK-BALCER
Start:	Tue 5/26/2015 2:30 PM
End:	Tue 5/26/2015 3:30 PM
Show Time As:	Tentative
Recurrence:	(none)
Meeting Status:	Not yet responded
Organizer:	Prysby, Mike (DEQ)
Required Attendees:	Busch, Stephen (DEQ); Cook, Pat (DEQ)
Resources:	CH-1S-FRANK-BALCER

Meeting with LAN to discuss filter media replacement (w. GAC) basis of design. I have a copy of the basis of design in my cube for review as needed.

From: Prysby, Mike (DEQ)
Sent: Tuesday, May 26, 2015 10:10 AM
To: Busch, Stephen (DEQ)
Subject: McLaren letter
Attachments: McClaren Visit Ltr - May 2015.doc

Steve,

Attached is a draft letter to McLaren Flint concerning the chemical feed system for your review and comment.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

May 25, 2015

Mr. Russell Hudson, Director of Engineering Services
McLaren Flint
401 South Ballenger Highway
Flint, MI 48532

Dear Mr. Hudson:

SUBJECT: McLaren Flint – Potable Water System – Supplemental Treatment

This letter confirms my site visit on April 29, 2015 with you and other representatives of McLaren Flint. Mr. Stephen Busch from our office was also present. The purpose of the visit was to discuss risk management for McLaren's potable water plumbing system and to provide guidance towards achieving a more comprehensive risk management program. The visit also included an inspection of the existing chlorine feed system located at the point of entry into McLaren's potable water system.

Our inspection of the chemical feed system revealed several deficiencies that need to be corrected and are discussed in more detail below.

- The chlorine feed pump is not controlled by operation of a pump (electrically interlocked with a water supply feed pump) or by the rate of water flow (flow-paced). The pump operates at a constant feed rate which does not allow for uniform dosage and must be manually shut-off during periods of low usage (overnight) to prevent an overfeed of chlorine.

  The chlorine feed pump rate needs to be controlled by the incoming water flow rate (flow-paced). Flow paced pumps typically operate at all times and allow chemical feed systems to maintain consistent chemical feed dosage with varying water flow rates.

- A means to measure the amount of chorine used needs to be provided and is typically accomplished by use of a weigh scale. A scale with a digital readout is recommended. The amount of water used each day (based on the incoming meter) and amount of liquid chlorine used will allow determination of chorine dosage on a daily basis (typically expressed in milligrams per liter (mg/l)).

- Chlorine residuals are being measured with a Hach Model CN-66 test kit that uses DPD powder (chemistry) with a color disc as the method of readout. We recommend upgrading to a test kit with a colorimeter as method for residual readout. The colorimeter test kit (depending on selected model) provides a larger range of measurement which will be useful for hyper-chlorination events.

Next, prior to proceeding with alteration of the chlorine feed system, approval of the proposed work by our office is required. Please provide us with a description of the proposed work for our review.

Finally, operations staff should establish and maintain chemical feed records that include the following: amount (volume and weight) of water treated, amount and strength of liquid chlorine added, chlorine dosage, and chlorine residual (free and total) measurements. Records should be maintained on a monthly basis. Enclosed is an operation report template that can be used for establishing water treatment records. We are also available to assist you, as needed, towards completing these reporting forms.

Should you require further information, please contact me at the telephone number below; via e-mail at prysbym@michigan.gov; or Department of Environmental Quality, P.O. Box 30242, Lansing, Michigan 48909.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Office of Drinking Water and
Municipal Assistance
Lansing District Office
(517) 290-8817

mfp/jlr
cc Mr. Glen Thomas
Mr. Stephen Busch, P.E.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice / certification must be sent to the DEQ.

From: Prysby, Mike (DEQ)
Sent: Wednesday, May 27, 2015 3:54 PM
To: Busch, Stephen (DEQ)
Subject: Flint letters
Attachments: Flint CP.pdf; Flint CCR.pdf; Flint PB CU.pdf; Flint VN.pdf

See attached Letters to Flint

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

2310

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT APPLICATION FOR WATER SUPPLY SYSTEMS

(CONSTRUCTION - ALTERATION - ADDITION OR IMPROVEMENT) AS DESCRIBED HEREIN

Required under the Authority of 1976 PA 399, as amended

This application becomes an Act 399 Permit only when signed and issued by authorized Michigan Department of Environmental Quality (DEQ) Staff. See instructions below for completion of this application.

. Municipality or Organization, Address and WSSN that will own or control the water facilities to be constructed. This permit is to be issued to:

City of Flint
Water Service Center
3310 E. Court Street
Flint, MI 48506
WSSN: 2310

. Owner's Contact Person (provide name for questions):

Contact: Rob Bincsik

Title: Supervisor of Water Distribution & Sewer

Phone: (810)766-7202

Permit Stamp Area (DEQ use only)

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. W 151018 APR 3 2015

EXAMINED AND APPROVED FOR COMPLIANCE WITH ACT 399, P.A. 1976

MFP

. Project Name (Provide phase number if project is segmented):

4-Inch Water Main Replacement (contract/phase 1)

4. Project Location (City, Village, Township):
City of Flint

5. County (location of project):
Genesee

ISSUED UNDER THE AUTHORITY OF THE DIRECTOR OF THE DEPARTMENT OF ENVIRONMENT QUALITY

cc:

Issued by: Michael Prysby

Reviewed by: Michael Prysby

☐ **If this box is marked see attached special conditions.**

Instructions: Complete items 1 through 5 above and 6 through 21 on the following pages of this application. Print or type all information except for signatures. Mail completed application, plans and specifications, and any attachments to the DEQ District Office having jurisdiction in the area of the proposed construction.

Please Note:

a. This **PERMIT** only authorizes the construction, alteration, addition or improvement of the water system described herein and is issued solely under the authority of 1976 PA 399, as amended.
b. The issuance of this **PERMIT** does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other DEQ permits, or approvals from other units of government as may be required by law.
c. This **PERMIT** expires two (2) years after the date of issuance in accordance with R 325.11306, 1976 PA 399, administrative rules, unless construction has been initiated prior to expiration.
d. Noncompliance with the conditions of this permit and the requirements of the Act constitutes a violation of the Act.
e. Applicant must give notice to public utilities in accordance with 1974 PA 53, (MISS DIG), being Section 460.701 to 460.718 of the Michigan Compiled Laws, and comply with each of the requirements of that Act.
f. All earth changing activities must be conducted in accordance with the requirements of the Soil Erosion and Sedimentation Control Act, Part 91, 1994 PA 451, as amended.
g. All construction activity impacting wetlands must be conducted in accordance with the Wetland Protection Act, Part 303, 1994 PA 451, as amended.
h. Intentionally providing false information in this application constitutes fraud which is punishable by fine and/or imprisonment.
i. Where applicable for water withdrawals, the issuance of this permit indicates compliance with the requirements of Part 327 of Act 451, Great Lakes Preservation Act.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit Application for Water Systems (Continued)

6. **Facilities Description** – In the space below provide a detailed description of the proposed project. Applications without adequate facilities descriptions **will be returned**. SEE EXAMPLES BELOW. Use additional sheets if needed.

8400 Feet of 24-inch water main from Pasadena Avenue and Iroquois Avenue, South, 20 blocks, along Iroquois Avenue from Pasadena Ave. to Stockdale St.
East, Jog of Approx. 100 feet, along Stockdale Street from Iroquois Ave. to Euclid Ave.
South, 1 block, along Euclid Avenue from Stockdale St. to Welch Blvd.
West, 1 block, along Welch Boulevard from Euclid Ave. to Seminole St.
South Southwest, 3 blocks, along Seminole Street from Welch Blvd. to DuPont St.
South, 10 blocks, along Dupont Street from Seminole St. to Mackin Road.
Water main is stubbed south of Mackin Road for future additions.

EXAMPLES – EXAMPLES – EXAMPLES – EXAMPLES – EXAMPLES – EXAMPLES	
Water Mains	500 feet of 8-inch water main in First Street from Main Street north to State Street. **OR** 250 feet of 12-inch water main in Clark Road from an existing 8-inch main in Third Avenue north to a hydrant.
Booster Stations	A booster station located at the southwest corner of Third Avenue and Main Street, and equipped with two, 15 Hp pumps each rated 150 gpm @ 200 feet TDH. Station includes backup power and all other equipment as required for proper operation.
Elevated Storage Tank	A 300,000 gallon elevated storage tank located in City Park. The proposed tank shall be spherical, all welded construction and supported on a single pedestal. The tank shall be 150 feet in height, 40 feet in diameter with a normal operating range of 130 – 145 feet. The interior coating system shall be ANSI/NSF Standard 61 approved or equivalent. The tank will be equipped with a cathodic protection system, and includes a tank level control system with telemetry.
Chemical Feed	A positive displacement chemical feed pump, rated at 24 gpd @ 110 psi to apply a chlorine solution for Well No. 1. Chlorine is 12.5% NaOCL, ANSI/NSF Standard 60 approved and will be applied at a rate of 1.0 mg/l of actual chlorine.
Water Supply Well	Well No. 3, a 200 foot deep well with 170 feet of 8-inch casing and 30 feet of 8-inch, 10 slot screen. The well will be equipped with a 20 Hp submersible pump and motor rated 200 gpm @ 225 feet TDH, set at 160 feet below land surface.
Treatment Facilities	A 5 million gpd water treatment plant located at the north end of Second Avenue. The facility will include 6 low service pumps, 2 rapid mix basins, 4 flocculation/sedimentation basins, 8 dual media filters, 3 million gallon water storage reservoir and 6 high service pumps. Also included are chemical feed pumps and related appurtenances for the addition of alum, fluoride, phosphate and chlorine.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit Application for Water Systems (Continued)

General Project Information – Complete all boxes below.

7. Design engineer's name, engineering firm, address, phone number, and email address:

Jeffrey B. Markstrom, P.E.
ROWE Professional Services Company
P.O. Box 3748
Flint, MI 48502
(810)341-7500 jmarkstrom@rowepsc.com

8. Indicate who will provide project construction inspection:
☐Organization listed in Box 1.
☒Engineering firm listed in Box 7.
☐Other - name, address, and phone number listed below.

9. Is a basis of design attached?
☐YES ☒NO

If no, briefly explain why a basis of design is not needed.

10. Are sealed and signed engineering plans attached?
☒YES ☐NO

If no, briefly explain why engineering plans are not needed.

11. Are sealed and signed construction specifications attached?
☒YES ☐NO

If specifications are not attached, they need to be on file at DEQ.

12. Were Recommended Standards for Water Works, Suggested Practice for Water Works, AWWA guidelines, and the requirements of Act 399 and its administrative rules followed?
☒YES ☐NO

If no, explain which deviations were made and why.

13. Are all coatings, chemical additives and construction materials ANSI/NSF or other adequate 3rd party approved?
☒YES ☐NO

If no, describe what coatings, additives or materials did not meet the applicable standard and why.

14. Are all water system facilities being installed in the public right-of-way or a dedicated utility easement? (For projects not located in the public right-of-way, utility easements must be shown on the plans.)
☒YES ☐NO

If no, explain how access will be obtained.

15. Is the project construction activity within a wetland (as defined by Section 324.30301(d)) of Part 303, 1994 PA 451?
☐YES ☒NO

If yes, a wetland permit must be obtained.

16. Is the project construction activity within a 100-year floodplain (as defined by R 323.1311(e)) of Part 31, 1994 PA 451, administrative rules?
☐YES ☒NO

If yes, a flood plain permit must be obtained.

17. Is the project construction activity within 500 feet of a lake, reservoir, or stream?
☒YES ☐NO

If yes, a Soil and Erosion Control Permit must be obtained or indicate if the owner listed in box 2 of this application is an Authorized Public Agency (Section 10 of Part 91, 1994 PA 451) ☐ Owner is APA.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit Application for Water Systems (Continued)

18. Will the proposed construction activity be part of a project involving the disturbance of five (5) or more acres of land?
☐YES ☒NO
If yes, is this activity regulated by the National Pollutant Discharge Elimination System storm water regulations?
☐YES: NPDES Authorization to discharge storm water from construction activities must be obtained.

☐NO: Describe why activity is not regulated:
Please call 517-241-8993 with questions regarding the applicability of the storm water regulations.

19. Is the project in or adjacent to a site of suspected or known soil or groundwater contamination?
☐YES ☒NO

If yes, attach a copy of a plan acceptable to the DEQ for handling contaminated soils and/or groundwater disturbed during construction. Contact the local DEQ district office for listings of Michigan sites of environmental contamination.

20. IF YOU ARE A CUSTOMER/WHOLESALE/BULK PURCHASER, COMPLETE THE FOLLOWING

1) Name and WSSN of source water supply system (seller) City of Flint

2) Does the water service contract require water producer/seller to review and approve customer/wholesale/bulk purchaser water system construction plans?
☐YES ☒NO

If yes to #2, the producer/seller approval letter must be attached when submitted to DEQ.

21. **Owner's Certification** The owner of the proposed facilities or the owner's authorized representative shall complete the owner's certification. It is anticipated that the owner will either be a governmental agency (city, village, township, county, etc.) or a private owner (individual, company, association, etc.) of a Type I public water supply.

OWNER'S CERTIFICATION

I, Daugherty Johnson (print) (name), acting as the Utilities Administrator (print) (title/position) for

City of Flint (print) (entity owning proposed facilities) certify that this project has been reviewed and approved as detailed by the Plans and Specifications submitted under this application, and is in compliance with the requirements of 1976 PA 399, as amended, and its administrative rules.

Daugherty Johnson — Signature* | 3/20/15 — Date | 810 766-7135 — Phone

*Original signature only, no photocopies will be accepted.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit Application for Water Systems (Continued)

PROJECT BASIS OF DESIGN – FOR WATER MAIN PROJECTS

PROJECT NAME: _____

For this PROJECT the following information must be provided per Act 399 unless waived by the Department. For projects other than water main installation, or if additional space is needed, attach separate sheet(s) with detailed Basis of Design calculations.

A. A general map of the initial and ultimate service areas
☐ Included on engineering plans ☐ Attached separately

B. Number of service connections served by this permit application _____

C. Total number of service connections ultimately served by entire project _____

D. Residential Equivalent Units (REUs) served by this permit application _____

E. Total Residential Equivalent Units (REUs) ultimately served by entire project _____

F. Water flow rates for proposed project based on REUs listed in "D' and "E" above

1. Initial design average day flow (mgd) _____
2. Initial design maximum day flow (mgd) _____
3. Total design average day flow (mgd) _____
4. Total design maximum day flow (mgd) _____
5. Required fire flows: (1) _____ gpm for _____ hours

G. Actual flows and pressures of existing system at the connection point(s) (2)

_____ gpm at _____ psi
_____ gpm at _____ psi
_____ gpm at _____ psi
_____ gpm at _____ psi

H. Estimated minimum flows and pressures within the proposed water main system (3)

_____ gpm at _____ psi

(1) Every water system must decide what levels of fire fighting flows they wish to provide. Fire flow should be appropriate for the area (residential, commercial, industrial) being served by the project. Typical fire flow rates can be obtained from the water supply, local fire dept., ISO or AWWA. The water system must then be designed to be able to provide the required fire flows while maintaining at least 20 psi in all portions of the distribution system.

(2) Flows and pressures at the connection points must be given to determine if the existing water main(s) are able to deliver water to the new service area. These numbers can be obtained from a properly modeled and calibrated distribution system hydraulic analysis or hydrant flow tests performed in the field. If more than one connection is proposed, list as needed.

(3) List what the estimated minimum flows can be expected in the proposed water mains based on estimated water demands, head losses, elevation changes and other factors that may affect flows, such as dead end mains.

ROWE PROFESSIONAL SERVICES COMPANY

Large Firm Resources. Personal Attention.℠

LETTER OF TRANSMITTAL

TO: Michigan Department of Environmental Quality
525 W. Allegan (Constitution Hall 4th Floor)
Lansing, MI 48909-7742
Attn: Mike Prysby, P.E.

DATE: 01-9-15

JOB NO.: 14C0259

RE: Permit Application

Shipped via:
- ☐ By 10:30am next business day
- ☐ By end of next business day
- ☒ Standard delivery

If shipping via UPS please provide Recipient's Phone No.

cc:

DEQ
RESOURCE MANAGEMENT DIVISION
JAN 13 2015
LANSING DISTRICT

WE ARE SENDING YOU:

☐ Attached ☐ Under separate cover via _____

COPIES	DATE	NO	DESCRIPTION
2	01-09-15	30	City of Flint 24"- Water Main Replacement full set of plans, sealed and signed
1	03-18-13	25	Copy of Permit #131020

THESE ARE TRANSMITTED:

☒ For your use ☐ As requested ☐ Other: _____

REMARKS:

Mike,

Attached are the final plans for the first 1.6 mile section of the previously permitted 24" main replacement in the City of Flint. We have highlighted this section of main proposed for construction on the attache permit. If you have any questions just call (810-341-7500) or send an e-mail (doparka@rowepsc.com).

Thanks,

Signed: _____

Dean A. Oparka, P.E.
Sr. Project Engineer

This communication contains privileged or confidential information intended exclusively for the use of the Person(s) or Entity named above. If the reader of this cover page is not the intended Recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please telephone (collect) the Sender immediately. Thank you very much.

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

DAN WYANT
DIRECTOR

TO: Water Supply Superintendent or Operator-in-Charge

FROM: Adam Rosenthal, Office of Drinking Water and Municipal Assistance, Lansing District Office

DATE: May 6, 2015

SUBJECT: New Lansing District e-mail address for all submittals
2014 Consumer Confidence Report Reminder
Updated Lansing District Responsibilities

New Lansing District e-mail address for all submittals:
The Lansing District Office has created a new e-mail account to be used for all future submittals: **DEQ-DWMA-Lansing@michigan.gov**

Please forward future electronic submittals to the above e-mail address. This includes monthly operating reports, laboratory reports, reporting forms and siting plans. No further submittals will be accepted into an individual's e-mail inbox after May 31, 2015. Please make sure to inform any laboratory or consultant who has agreed to submit documents on your behalf of this change. Mailed hard copies and faxed documents will still be accepted.

2014 Consumer Confidence Report Reminder:
Your annual Consumer Confidence Report (CCR) is due to be delivered by July 1st.

You may use any combination of mail, door-to-door, or electronic methods to deliver to bill paying customers. This means you may mail and/or e-mail a message that the CCR is available on the internet or attached to the e-mail. If using the internet, the CCR must be on the internet when customers receive the message and the internet address displayed in the message must lead directly to the entire CCR. The message should tell customers how to request a paper copy. If you normally publish a non-English language CCR, then the notification of CCR availability should also be in that language.

Refer to last year's report and your most recent sample results when preparing this year's report. For more information on preparing your CCR, visit http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Consumer Confidence Report Rule.

In addition to delivering your CCR to your consumers by July 1st, you are required to send a copy to the Department of Environmental Quality and to your local health department. Also send us documentation certifying how you delivered the CCR. Certification of delivery is due to us by October 1st, but we encourage you to send it to us when you deliver the CCR by July 1st. You can download the *CCR Certificate of Distribution Form* from the web page noted above. **If you e-delivered the CCR, send**

us a sample copy of the notification of CCR availability. For example, you may have put the notification on a water bill.

Did anybody monitor UCMR in 2014? Did the United States Environmental Protection Agency (U.S. EPA) direct you to monitor for unregulated contaminants during 2014? Report the average and range of each contaminant detected. Also, provide an explanation of this required monitoring, such as, "Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. Monitoring helps the U.S. EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. We monitored for these contaminants and results of monitoring are available on request."

Please contact us with your questions. We would like to be available to answer all your questions as you draft your CCR, but we have found that our office is inundated with questions as the deadline nears. You might be best served if you contact us before the end of May.

Failure to deliver the CCR by July 1st is a reporting violation and will result in an administrative fine. Contact our office for more information.

Updated Lansing District Responsibilities:
Please make note of the following updates to the Lansing staff and their responsible areas:

Michael Prysby, P.E., is responsible for District 11, which includes Genesee County. Mike can be reached on his cell phone at 517-290-8817.

Bethel Skinker, P.E., is responsible for District 12, which includes the counties of Eaton, Ingham, and Clinton (minus manufactured housing). Bethel can be reached on her cell phone at 517-290-0686.

Mark Joseph, P.E., is responsible for District 13, which includes Livingston County and the City of Ann Arbor in Washtenaw County. Mark can be reached on his cell phone at 517-290-0170.

Kurt Swendsen, Engineer, is responsible for District 14, which includes the counties of Gratiot, Lapeer, Shiawassee, and all manufactured housing community supplies in Clinton County. Kurt can be reached at 517-525-1487.

All Livingston County water supplies are again regulated through the Lansing District Office.

2310

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

March 30, 2015

Mr. Brent Wright
City Of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

Dear Mr. Wright:

Subject: City Of Flint WSSN: 02310
Lead and Copper Monitoring of Drinking Water Taps

We received your report for the monitoring period July 1, 2014, through December 31, 2014.

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	# of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 parts per billion (ppb)	6.0 ppb	2	100	1/1 and 6/30/2015 Submit results to this office by July 10, 2015
Copper 1.3 parts per million (ppm)	0.11 ppm	0		

Ninety percent of the sites you tested are within action levels under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended. These results must be reported on your 2014 Consumer Confidence Report (CCR) due to our office, your customers, and the local health department, by July 1, 2015. Also include the following statement in the CCR, regardless of the lead and copper levels:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Flint is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://water.epa.gov/drink/info/lead.

Recent changes to the Lead and Copper Rule require you to provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected, within 30 days of learning of results. You must also send us a certification that you met all the delivery requirements along with a sample copy of your customer notice by 3 months after the end of the monitoring period. To download the *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Microsoft Word or PDF format, visit http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms. Water supplies that fail to distribute the Consumer Notice of Lead Results must include the following statement in their CCR, "During the year, we failed to provide lead results to persons served at the sites that were tested as required by the Lead and Copper Rule."

Samples due the next monitoring period mark your second six month round of monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria. We strongly encourage you to sample early in the monitoring period.

Bottles will NOT be mailed automatically. To order bottles, call the Department of Environmental Quality laboratory at 517-335-8184, or download the form EQP 2301 *Requisition for Water Sample Units* from www.michigan.gov/deq. Click on Key Topics, Laboratory Services, Drinking Water, Obtaining the Necessary Sampling Units, and test list.

Sincerely,

Adam Rosenthal, EQA
Office of Drinking Water and Municipal Assistance
Lansing District
517-284-6644
rosenthala@michigan.gov

ar/jlr
Enclosures

cc: Mr. Michael Glasgow, City of Flint

2310

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

March 5, 2015

Mr. Brent Wright, Operations Supervisor
City Of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Violation Notice (VN) – Maximum Contaminant Level for Total Trihalomethanes (TTHM)
Operational Evaluation – Total Trihalomethanes
1st Quarter 2015 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the city of Flint (City) is in violation of the Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels for disinfection byproducts (MCLs)*, of the 1979 Administrative Code.

In accordance with R 325.10610, *MCLs*, of the 1979 Administrative Code, the MCL for disinfection byproduct TTHM is 0.080 milligrams per liter (mg/L) as a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the City's highest TTHM locational running annual average (LRAA), based on the last four quarters, ending February 28, 2015, is 0.105 mg/L which exceeds the standard, and that two of the eight sample site locations exceed the standard of 0.080 mg/L.

Further, in accordance with R 325.10719l, *Disinfection byproducts: operational evaluation levels*, of the 1979 Administrative Code, when an operational evaluation level (OEL) at a monitoring location for TTHM exceeds 0.080 mg/L, a supply shall conduct an operational evaluation and submit a written report of the evaluation to the DEQ not later than 90 days after being notified of the analytical result that causes the supply to exceed the operational evaluation level. As listed in the table below, our records show that the TTHM OELs for the City exceed 0.080 mg/L at one of the City's eight sample site locations.

TTHM Results (mg/L)						
	5/21/14	8/21/14	11/20/14	2/17/15	LRAA	OEL
DBP1 McDonalds 3719 Davison	**0.162**	**0.145**	0.059	0.0162	**0.096**	0.059
DBP2 Liquor Palace 3302 S. Dort Highway	**0.112**	**0.127**	0.033	0.0168	0.072	0.049
DBP3 North Flint Auto 6204 N. Saginaw St.	**0.097**	**0.118**	0.041	0.0149	0.068	0.047
DBP4 University Market 2501 Flushing Road	**0.106**	**0.196**	**0.094**	0.0245	**0.105**	**0.085**
DBP5 Taco Bell 3606 Corunna Road	0.079	**0.181**	0.034	0.0151	0.078	0.063
DBP6 Rite-Aid Pharmacy 5018 Clio Road	**0.088**	**0.144**	0.054	0.0192	0.076	0.059
DBP7 Salem Housing 3216 MLK Boulevard	**0.082**	**0.112**	0.050	0.0285	0.068	0.055
DBP8 BP Gas Station 822 S. Dort Highway	0.075	**0.112**	0.036	0.0199	0.061	0.047

Our investigation consisted of a review of ODWMA files for laboratory reports received for compliance monitoring. Our investigation is considered complete. This violation began on March 1, 2015, and will continue until TTHM LRAA is below the MCL at all sample sites.

We are encouraged by the results from the most recent round of compliance samples collected on February 17, 2015, which now show individual TTHM levels at less than half of the 0.080 mg/L standard at all locations throughout the City's system. Operational Evaluation Reports from December 2014, and February 2015, have identified possible causes and corrective measures for the previous elevated TTHM levels which we encourage the City to continue implementing. These modifications have likely contributed in part to the reduction in TTHM levels reported in the most recent quarter, and suggest the City may be able to achieve compliance with the TTHM standard at all sites by continuing these efforts.

Our office is currently reviewing the Operational Evaluation Report dated February 27, 2015, and will provide the City and their consultant with comments, as needed, to help address this MCL violation.

Water systems that exceed the OEL must complete and submit an Operational Evaluation in accordance with Administrative Rule 719l (R 325.10719l) within 90 days of being notified of the violation. **An updated Operational Evaluation report, which incorporates the most recent sample results, must now be completed and received by our office by no later than Friday, May 29, 2015.**

If you have any other factual information you would like us to consider regarding the violation identified in this VN, please provide them in a written response by March 19, 2015.

Administrative rule R 325.10403 of Act 399 requires that suppliers provide public notice (PN) as soon as practical, but no later than thirty (30) days after the supplier learns of this type of violation, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not normally reached by mail. Enclosed is a sample PN which contains the minimum required language. The City is encouraged to include additional information regarding its response efforts to this violation. **Please notify your consumers by April 1, 2015, and send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the public notice.** This violation must also be included in your 2015 Consumer Confidence Report, due by July 1, 2016. The PN must be repeated every quarter until you no longer exceed the TTHM standard. Failure to issue a PN for this violation will result in a fine of at least $1,000 per event, with a maximum of $5,000 per violation.

We anticipate and appreciate your continued cooperation in resolving this matter. If you have any questions regarding this VN, please contact us at the numbers below; at prysbym@michigan.gov; or rosenthala@michigan.gov; or at DEQ, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and Municipal Assistance
517-290-8817

Adam Rosenthal, Environmental Quality Analyst
Lansing District Office
Office of Drinking Water and Municipal Assistance
517-284-6644

Enclosure

cc: Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Mr. Jerry Ambrose, Emergency Manager, City of Flint
Mr. Robert Bincsik, City of Flint
Mr. Howard Croft, City of Flint
Mr. Daughtry Johnson, City of Flint
Genesee County Health Department
Ms. Liane Shekter Smith, DEQ
Mr. Richard Benzie, DEQ
Mr. Stephen Busch, DEQ

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (May 21, August 21, November 20 of 2014, and February 17, 2015). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the MCL. The standard for TTHMs is 80 micro grams per liter (µg/L). The location reporting the highest TTHM level was 105 ug/L; thus, our water system exceeds the TTHM MCL.

What should I do?

- There is nothing you need to do unless you have a severely compromised immune system, have an infant, or are elderly. These people may be at increased risk and should seek advice about drinking water from their health care providers.
- You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What does this mean?

This is not an emergency. If it had been an emergency, you would have been notified within 24 hours.

People who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

What is being done?

We are currently working on solutions to correct the problem. We anticipate resolving the problem in 2015. Our most recent individual sample results were all less than half the 80 µg/L standard, however since compliance is calculated using a locational running annual average (LRAA) of the most recent four quarters, we are still out of compliance with the MCL at two of eight locations.

For more information, please contact Mr. Brent Wright at 517-787-6537, or the Flint Water Plant at 4500 North Dort Highway, Flint, Michigan 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice/certification must be sent to the Department of Environmental Quality.

From: Prysby, Mike (DEQ)
Sent: Friday, May 29, 2015 10:06 AM
To: Busch, Stephen (DEQ)
Subject: Flint

Steve,
Got ur message re All Engineers meeting and give an update on Flint...I will plan on presenting the update...

Sent from my iPhone

From: Prysby, Mike (DEQ)
Sent: Friday, June 05, 2015 10:20 AM
To: Michael Taubitz (leanjourney@charter.net)
Subject: FW: Chateaux Du Lac scanned documents
Attachments: Chateaux Du Lac Correspondence file documents.pdf; Chateaux Du Lac Lead and Copper documents.pdf; Chateaux Du Lac Lead and Copper file documents.pdf

Michael,

Attached are general correspondence and lead & copper records from our files pertaining to the Chateau Du Lac water system.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Rennaker, Joanne (DEQ)
Sent: Tuesday, June 02, 2015 11:01 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ)
Subject: Chateaux Du Lac scanned documents

Jo Anne Rennaker
Secretary
Department of Environmental Quality - Lansing District Office
Office of Drinking Water & Municipal Assistance
Office of Waste Management & Radiological Protection
517-284-6643

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

December 17, 2013

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Realty
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Chateau Du Lac Condominium – Lead & Copper Action Level Exceedance

This letter will confirm my visit with Mr. Robert Stucker, your operator-in-charge (OIC), on December 5, 2013, at Chateau Du Lac Condominiums (CDLC). The purpose of the site visit was to confirm installation of the raw water meter and elimination of the cross connection on the pool fill line.

Based upon our site inspection and your February 21, 2013, response letter, raw water metering has been provided and an approved reduced pressure zone backflow preventer device was installed on the pool fill line. Since raw water metering has been provided, water usage will need to be monitored and reported on a yearly basis (annual pumpage report). Your OIC can assist you in completing the annual pumpage report each year.

Next, the insulation around each hydropneumatic storage tank should be removed in order to perform a visual inspection of each tank and to complete any necessary maintenance and/or repairs. We also question the need to insulate the tanks since the wellhouse room temperature does not fall below freezing. We recommend that the insulation be permanently removed.

Next, the CDLC exceeded the Action Level (AL) for lead in 2011 and has continued to exceed the lead AL in all subsequent 6-month monitoring periods. Our records show that the CDLC has failed to meet the lead AL for seven routine monitoring periods since establishment of the lead and copper monitoring program in1993.

Given the number of lead AL exceedances, the CDLC no longer has the option to conduct additional rounds of lead and copper monitoring in an attempt to meet future ALs. The CDLC must minimize lead and copper in the drinking water by reducing the corrosion of water pipes and household plumbing that contain lead and copper. The CDLC must propose a corrosion control treatment plan by January 31, 2014. Potential

types of corrosion control treatment may include; addition of phosphate or silica based-based corrosion inhibitor, pH and alkalinity adjustment, or calcium adjustment. We encourage you to retain a consultant who specializes in water treatment for further assistance in selecting the optimal type of corrosion control treatment. After treatment is installed, monitoring for lead and copper will resume to ensure the lead and copper ALs are consistently met. Finally, prior to installing corrosion control treatment, an Act 399 construction permit must be issued by our office authorizing the proposed work.

Finally, the CDLC must provide customer notice of the most recent lead sample results and continue to distribute public education materials in accordance to the guidelines provided in our June 19, 2012, letter (copy enclosed).

If you have any questions, feel free to contact me at the number listed below, at prysbym@michigan.gov; or Department of Environmental Quality, Office of Drinking Water and Municipal Assistance, Lansing District Office, 525 West Allegan Street, 1st Floor South, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael Prysby

Michael F. Prysby, P.E.
District Engineer
Field Operations Section
Office of Drinking Water and
Municipal Assistance
517-290-8817

mfp/jlr
enclosure

cc: Mr. Robert Stucker, OIC, Chateau Du Lac
Mr. Mike Duncan, Caretaker, Chateau Du Lac

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

December 3, 2012

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Reality
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Chateau Du Lac Condominium - Water System Sanitary Survey

This letter will confirm my visit with Mr. Robert Stucker, your operator-in-charge (OIC), on November 15, 2012, and summarize the subsequent review and discussion of the water supply facilities serving Chateau Du Lac Condominium. The purpose of this meeting was to evaluate the water system with respect to the requirements of the Michigan Safe Drinking Water Act 1976 PA 399, as amended (Act 399). In addition, the enclosed Water System Review form was updated to gather information on the Chateau Du Lac Condominium water supply system.

This most recent evaluation confirms that the water system Emergency Response Plan (ERP) was completed. Aside from a few minor revisions that will be completed by your OIC, the ERP meets our requirements. A copy of the ERP should be kept in the wellhouse for use in the event of a water related emergency. The ERP should also be updated every two to three years or if there are any water related changes. Also, dehumidification was provided inside the wellhouse as a means to reduce moisture and the rate of corrosion.

Next, the following table summarizes our findings from our survey of the water system:

Survey Element	Findings
Source	**Deficiencies Identified**
Treatment	No deficiencies/recommendations
Distribution System	**Deficiencies Identified**
Finished Water Storage	Recommendations made
Pumps	Recommendations made
Monitoring & Reporting	**Deficiencies Identified**
Management & Operations	No deficiencies/recommendations
Operator Compliance	No deficiencies/recommendations
Security	No deficiencies/recommendations
Financial	No deficiencies/recommendations
Other	Not evaluated

The following deficiencies are violations of the Act 399, and must be resolved in order to return the water system to compliance.

1. The raw water meter inside the wellhouse is not functioning and has not been repaired or replaced as we requested in our previous correspondence. This is a violation of Act 399, Rule 325.10829(a).

2. Annual pumpage reports are not being prepared and submitted to the Department of Environmental Quality (DEQ) by March 30th of the following year as required in Act 33, Rule 325.11504(1)(2). The lack of a functioning raw water meter contributes to this violation.

3. A cross connection exists between the clubhouse domestic plumbing and the swimming pool fill line. Although the connection is physically disconnected during the winter months, an acceptable backflow prevention device needs to be installed in the vicinity of the connection since this line is re-connected during the summer months. An approved vacuum breaker is the type of device that will be required for this application. Enclosed is a list of approved vacuum breakers.

Next, it is hoped that the following recommendations will prove useful in enhancing the operation and maintenance of your water supply.

4. Establish accurate hydrant and valve records. Accurate records are essential for effective operation and maintenance of the distribution system and they also play an important role in mitigating water system emergencies.

5. Remove the insulation (temporarily) from each hydro-pneumatic tank and inspect their external surface for corrosion. If the tanks are showing signs of corrosion, their surface should be re-coated with an epoxy coating system suitable for potable water storage tanks. The surface of each tank should be adequately prepared (abrasive removal of old paint system and corrosion) prior to applying the new epoxy coating system.

Please submit a letter by January 15, 2013, that outlines Chateau Du Lac's plans and schedule to address the above items.

Additionally, there were a number of changes made to Act 399 in 2009 that place new or modified requirements on water systems as of January 1, 2016. These changes are summarized below:

- General Plans: Now required for manufactured housing communities, health care facilities, and community water system serving less than 50 living units or 200 people. Chateau Du Lac has been reminded of the need to provide an accurate water system general plan. An "as-built" copy of the general plan needs to be compiled and may be available from the consultant who designed the water system.

Please ensure that *Chateau Du Lac Condominium* is in compliance with the requirement listed above.

Finally, additional lead and copper monitoring is being conducted to address the lead action level exceedance in 2011. Both the lead and copper action levels must be met for two consecutive six month periods in order to forgo the public education requirement and the need to pursue corrosion control treatment. Please reference the June 19, 2012, letter (copy enclosed) that provides guidance concerning the most recent lead action level exceedance.

Based upon the monitoring conducted in 2012 thus far, the lead action level has not been met. Lead and copper monitoring will need to continue through June 30, 2013, in order to determine compliance with the lead and copper action level. The specific lead and copper monitoring requirement will be discussed in Chateau Du Lac's 2013 monitoring schedule.

If you have any questions, feel free to contact me at the number listed below, at prysbym@michigan.gov, or Department of Environmental Quality, Office of Drinking Water and Municipal Assistance, Lansing District Office, 525 West Allegan Street, 4th Floor North, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E.
Acting District Supervisor
Field Operations Section
Office of Drinking Water and
Municipal Assistance
517-335-6122

mfp/jlr
enclosures

cc: Mr. Robert Stucker, OIC, Chateau Du Lac
Mr. Mike Duncan, Caretaker, Chateau Du Lac

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

November 1, 2011

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Reality
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Water System, Chateau Du Lac Condominium

This letter confirms my visit on October 21, 2011, with Mr. Robert Stucker, your operator-in-charge (OIC). The purpose of the visit was to conduct routine water system surveillance at Chateau Du Lac condominiums. We are somewhat disappointed in the lack of progress made towards correcting the water related concerns that were noted in the Chateau Du Lac 2009 Water System Review. These concerns are discussed in more detail below.

1. Chateau Du Lac's most recent water system general plan is clearly outdated and the plan has not been updated as we requested. As we discussed, an "as-built" copy of the general plan needs to be obtained and may be available from the consultant who designed the water distribution system. An updated water system general plan needs to be prepared and a copy sent to us by no later than January 31, 2012.

2. A water system Emergency Response Plan (ERP) has not been prepared as we requested. The ERP provides an outline to follow in the event of a water related emergency (loss of pressure, contamination, etc.). A template that can be used for preparing the ERP was provided to your OIC. We will review the completed ERP during our next routine site visit.

3. Dehumidification has not been provided as a means to control moisture and limit corrosion within the wellhouse.

4. The raw water meter inside the wellhouse is not functioning and has not been replaced as we requested. The raw water meter needs to be repaired or replaced such that accurate water usage information can be obtained by no later than January 31, 2012.

5. Chateau Du Lac's lead action level was exceeded during routine lead and copper monitoring in 2011. Two consecutive six-month rounds of lead and copper monitoring will be required, along with water quality parameter monitoring and public education. Specific monitoring & reporting details will be covered in a separate letter. Finally, the 2011 exceedance represents the 4th exceedance in the lead and copper action level since the start of the lead and copper monitoring program. We will be reviewing the history of Chateau Du Lac's lead and copper monitoring program to determine whether a corrosion control study needs to be conducted and/or treatment needs to be provided.

Finally, according to our records, routine pump and motor maintenance for Well #2 has not been performed within the last 12 years. As we discussed, Type-I wells (pump & motor) should be scheduled for routine maintenance once every 5 to 10 years. This type of preventative maintenance is an accepted standard that is practiced in the waterworks industry and is essential in minimizing the chance of an unexpected failure of the well pump/motor and the potential for a loss of water service. Routine pump and motor maintenance should be performed for Well #2 during 2012

We look forward to working with you on these and on any other water related matters. Should you require further information, please contact me at the telephone number below; via e-mail at prysbym@michigan.gov; or Department of Environmental Quality P.O. Box 30242, Lansing, Michigan 48909.

Sincerely,

Michael Prysby

Michael F. Prysby, P.E.
District Engineer
Resource Management Division
Lansing District Office
(517) 335-6122

cc: Mr. Robert Stucker, Operator, Chateau Du Lac
Mr. Mike Duncan

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

November 25, 2008

Mr. Larry Carter
C/o Chateau Du Lac Condominium
Piper Reality
5454 Gateway Center
Flint, Michigan 48507

WSSN: 1353

Dear Mr. Carter:

SUBJECT: Water System, Chateau Du Lac Condominium

This letter confirms my visit on November 6, 2008 with your contract operator, Robert Stucker. The purpose of the visit was to conduct routine water system surveillance. Specific water system concerns that need attention are discussed below in more detail.

1. Our most recent copy of Chateau Du Lac's water system general plan was prepared in 1984, and the plan is clearly outdated. An updated water system general plan was not available at the time of the site visit. Also, it does not appear that an updated plan was prepared as we requested in our previous visits and correspondence (copy of our January 8, 2007 letter enclosed).

   An updated water system general plan needs to be prepared and a copy of the plan sent to our office by no later that January 31, 2009. As we discussed, the updated general plan needs to show the location and size of all watermains, hydrants, valves, service lines, etc. The plan should also show the location of the wells, discharge piping, wellhouse, and storage facilities.

2. Chateau Du Lac's bacteriological sample site plan was updated as we requested. As we discussed, a third repeat sampling location needs to be added to the plan since one distribution system sample is collected each month. The updated sample site plan is approved with the condition that a third repeat sampling location is added to the plan.

3. Our inspection of the wellhouse (west half of the clubhouse basement) revealed that this area is being used to store much of the swimming pool equipment. These items make it cumbersome to perform routine wellhouse activities.

   The purpose of a Type-I wellhouse is to allow for flexibility of operation of the water system. The west half of the basement is dedicated for the wellhouse piping and appurtenances and is not intended to be used as a storage area for typical outdoor maintenance equipment including pool supplies and parts. This area must also be accessible only to the water system operator. These miscellaneous items need to be stored in an area that is separate from the wellhouse piping and appurtenances.

4. The lead action level was exceeded during routine lead and copper monitoring in 2008. Exceedence of the lead action level will require Chateau Du Lac to perform water quality parameter monitoring and to revert to full-scale monitoring for at least two consecutive six-month rounds in 2009. Also, public education information will need to be provided to your customers. More detailed information regarding this exceedence and subsequent action that will be required will be provided to you in a separate letter.

If you have any questions, please call me at the number provided below.

Sincerely,

Michael F. Prysby P.E., District Engineer
Field Operations Section
Lansing District Office
Water Bureau
(517) 335-6122

enclosure

cc: Mr. Robert Stucker, Operator, Chateau Du Lac

[redacted] [redacted] File # 1353

From: Adam Rosenthal
To: Mike Prysby; Robert Stucker
Date: 9/16/2008 2:15:41 PM
Subject: Re: Chateaux Du Lac lead and copper report form

Hi Bob, I just saw the results - 115 ppb for lead is a bit high, any major issue, outside hose bib, basement slop sink, vacant home, etc? Since this is an annual round of monitoring which ends 9/30/08, there is still time to collect more samples and possibly bump this one out - I would suggest a minimum of 5 more samples. Since compliance is based on the 90th percentile, the 9th highest sample would count, 20 samples total would be the 18th highest for the 90th, and so on. Otherwise we're back to water quality parameters and lead public notice. Let me know if you have any questions.

thanks,

Adam Rosenthal, EQA
MDEQ-Drinking Water
Lansing District Office
4th Floor North
PO Box 30242
Lansing, MI 48909
517-335-6131
Fax 517-241-3571
rosenthala@michigan.gov

>>> Robert Stucker <inhousewaterlab@sbcglobal.net> 9/16/2008 1:45 PM >>>
9-16-08
13:45

Adam

I have attached the lead and copper report form for Chateaux Du Lac, WSSN: 1353.

Thanks

Bob

Robert H. Stucker
Laboratory Director
In-House Water Lab
210 N. Center St
Howell MI 48843
Ph/Fax: 517-548-7363
e-mail: inhousewaterlab@sbcglobal.net

004769

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF DRINKING WATER AND MUNICIPAL ASSISTANCE

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399, MCL 325.1001 *et al.*, and Administrative Rules, as amended.
Failure to submit this information is a violation of Act 399 and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Locations.

1. Water Supply Name: Chateaux Du Lac Condominiums
2. County: Genesee 3. WSSN: **01353**
4. Population: 50 5. Monitoring Period: From: 7-1-14 To: 12-31-14
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 12
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☒	☐	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	

Comments: 14 Chateaux Du Lac Dr was retested on 12-29-14

DEQ
RESOURCE MANAGEMENT DIVISION
FEB 05 2015
LANSING DISTRICT

10. NAME:

Name: Robert H. Stucker

Title: Operator-in Charge Phone: 517-548-7363 Date: 1-29-14

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac WSSN 01353

RESULTS:

Sample Location	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
6 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
14 Chateaux Du Lac Dr	10-23-14	Other	C	C	188	170	MI00003
14 Chateaux Du Lac Dr	12-29-14	Other	C	C	95	740	MI00003
23 Chateaux Du Lac Dr	10-21-14	Other	C	C	13	60	MI00003
45 Chateaux Du Lac Dr	12-29-14	Other	C	C	6	80	MI00003
54 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
59 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
60 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
71 Chateaux Du Lac Dr	10-23-14	Other	C	C	2	ND	MI00003
72 Chateaux Du Lac Dr	10-22-14	Other	C	C	ND	ND	MI00003
72 Chateaux Du Lac Dr	12-29-14	Other	C	C	2	ND	MI00003
82 Chateaux Du Lac Dr	10-23-14	Other	C	C	1	ND	MI00003

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	78.6			2
Cu	152			0

004771

Chateaux Du Lac

WSSN: 1353

Water Quality Parameters for February 2014

2/4/2015

5:00 PM

POE

pH	7.20	
Alkalinity	340	as $CaCO_3$
Calcium	122	as $CaCO_3$
Conductivity	617	µS
Temp °C	13.1	

2/4/2015

5:00 PM

57 Chateaux Du Lac Dr

pH	7.37	
Alkalinity	312	as $CaCO_3$
Calcium	2	as $CaCO_3$
Conductivity	694	µS
Temp °C	16.3	

DEQ
RESOURCE MANAGEMENT DIVISION
FEB 10 2015
LANSING DISTRICT

2/5/2015

5:00 PM

POE

pH	7.17	
Alkalinity	342	as $CaCO_3$
Calcium	126	as $CaCO_3$
Conductivity	622	µS
Temp °C	13.2	

2/5/2015

5:00 PM

57 Chateaux Du Lac Dr

pH	7.32	
Alkalinity	316	as $CaCO_3$
Calcium	4	as $CaCO_3$
Conductivity	690	µS
Temp °C	16.2	

Robert H. Stucker

Robert H. Stucker

In-House Water Lab

P.O. Box 116

Blissfield MI 49228

517-548-7363

inhousewaterlab@sbcglobal.net

004772

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
RESOURCE MANAGEMENT DIVISION

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.
Failure to submit this information is a violation of the Act and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts.

1. Water Supply Name: Chateaux Du Lac
2. County: Genesee 3. WSSN: **1353**
4. Population: 50 5. Monitoring Period: From: 7-1-13 To: 12-31-13
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 18 22
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☐	☒	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	
Comments: Original 5 sample sites plus extra samples due to testing all lots for lead and copper			

10. NAME:

Name: Robert H. Stucker

Title: Operator-in-Charge Phone: 517-548-7363 Date: 10-8-13

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac WSSN 1353

RESULTS:

Sample Location	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumbing[2]	Lead (ppb)	Copper (ppb)	Lab #
3 Chateau	11-15-13				60	60	
23 Chateaux Du Lac Dr	7-19-13	Other	C	C	66	180	MI00003
45 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
51 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
53 Chateaux Du Lac Dr	7-11-13	Other	C	C	1	ND	MI00003
54 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
55 Chateaux Du Lac Dr	7-11-13	Other	C	C	4	ND	MI00003
62 Chateaux Du Lac Dr	7-5-13	Other	C	C	ND	ND	MI00003
63 Chateaux Du Lac Dr	7-11-13	Other	C	C	2	ND	MI00003
64 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
65 Chateaux Du Lac Dr	7-5-13	Other	C	C	ND	140	MI00003
71 Chateaux Du Lac Dr	7-11-13	Other	C	C	2	ND	MI00003
72 Chateaux Du Lac Dr	7-11-13	Other	C	C	ND	ND	MI00003
73 Chateaux Du Lac Dr	7-11-13	Other	C	C	9	ND	MI00003
76 Chateaux Du Lac Dr	7-11-13	Other	C	C	1	60	MI00003
81 Chateaux Du Lac Dr	7-11-13	Other	C	C	6	60	MI00003
84 Chateaux Du Lac Dr	7-11-13	Other	C	C	4	320	MI00003
82 Chateaux Du Lac Dr	7-11-13	Other	C	C	1	ND	MI00003
13 Chateaux Du Lac Dr	8-8-13	Other	C	C	1	ND	MI00003
14 Chateau	9-24-13				3	0	
43 Chateau	11-15-13				1	60	
22 Chateau	11-15-13				?	60	

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	8.4			1
Cu	124			0

90th = 19.8

004774

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
RESOURCE MANAGEMENT DIVISION

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.
Failure to submit this information is a violation of the Act and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts.

1. Water Supply Name: Chateaux Du Lac
2. County: Genesee 3. WSSN: **1353**
4. Population: 50 5. Monitoring Period: From: 1-1-13 To: 6-30-13
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 15
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☐	☒	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☒	e. Is the minimum number of lead service line samples taken (when applicable)?	

Comments:

NOTE: Lot 13 was sampled on 5-29-13, lead was 85 ppb.
Lot 13 was re-sampled on8-8-13, lead result was1 ppb

10. NAME:

Name: Robert H. Stucker

Title: Operator-in-Charge Phone: 517-548-7363 Date: 12-17-13

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac WSSN 1353

RESULTS:

Sample Location	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
1 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	1350	MI00003
4 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
5 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	100	MI00003
6 Chateaux Du Lac Dr	5-29-13	Other	C	C	4	310	MI00003
13 Chateaux Du Lac Dr	5-29-13	Other	C	C	85	1500	MI00003
14 Chateaux Du Lac Dr	5-29-13	Other	C	C	4	ND	MI00003
15 Chateaux Du Lac Dr	5-29-13	Other	C	C	14	ND	MI00003
21 Chateaux Du Lac Dr	5-29-13	Other	C	C	15	ND	MI00003
24 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
41 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
44 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
46 Chateaux Du Lac Dr	5-29-13	Other	C	C	10	270	MI00003
60 Chateaux Du Lac Dr	5-29-13	Other	C	C	ND	ND	MI00003
11 Chateaux Du Lac Dr	6-15-13	Other	C	C	51	260	MI00003
42 Chateaux Du Lac Dr	6-15-13	Other	C	C	ND	60	MI00003

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	33			2
Cu	830			1

004776

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
RESOURCE MANAGEMENT DIVISION

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.
Failure to submit this information is a violation of the Act and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts.

1. Water Supply Name: Chateaux Du Lac Condominiums
2. County: Genesee 3. WSSN: **1353**
4. Population: 50 5. Monitoring Period: From: 7-1-12 To: 12-31-12
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 5
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☒	☐	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	
Comments:			

10. NAME:

Name: Robert H. Stucker

Title: Operator-in-Charge Phone: 517-548-7363 Date: 11-9-12

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac Condominiums Genesee WSSN 1353

RESULTS:

Sample Location	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
14 Chateaux Du Lac Dr	9-26-12	Other	C	C	5	ND	MI00003
23 Chateaux Du Lac Dr	9-25-12	Other	C	C	74	240	MI00003
54 Chateaux Du Lac Dr	9-25-12	Other	C	C	2	ND	MI00003
71 Chateaux Du Lac Dr	9-26-12	Other	C	C	2	ND	MI00003
72 Chateaux Du Lac Dr	9-26-12	Other	C	C	ND	ND	MI00003

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	39.5			1
Cu	120			0

Chateaux Du Lac

WSSN: 1353

Water Quality Parameters for October 2012

10/19/2012

8:00 AM

Well 1

pH	7.53	
Alkalinity	316	as $CaCO_3$
Calcium	250	as $CaCO_3$
Conductivity	380	µS
Temp °C	13.1	

10/19/2012

8:00 AM

Well 2

pH	7.46	
Alkalinity	330	as $CaCO_3$
Calcium	248	as $CaCO_3$
Conductivity	386	µS
Temp °C	13.4	

10/20/2012

9:00 AM

Well 1

pH	7.50	
Alkalinity	312	as $CaCO_3$
Calcium	244	as $CaCO_3$
Conductivity	388	µS
Temp °C	13.1	

10/20/2012

9:00 AM

Well 2

pH	7.44	
Alkalinity	322	as $CaCO_3$
Calcium	246	as $CaCO_3$
Conductivity	398	µS
Temp °C	13.3	

Robert H. Stucker

Robert H Stucker

In-House Water Lab

P.O. Box 116

Blissfield MI 49228

517-548-7363

inhousewaterlab@sbcglobal.net

004779

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
RESOURCE MANAGEMENT DIVISION

LEAD AND COPPER REPORT AND CONSUMER NOTICE OF LEAD RESULT CERTIFICATE FOR COMMUNITY WATER SUPPLY

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.
Failure to submit this information is a violation of the Act and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within 10 days after the end of the monitoring period. This form may be used to meet this requirement. Submit the information to the appropriate Department of Environmental Quality (DEQ) district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts.

1. Water Supply Name: Chateaux Du Lac Condominiums
2. County: Genesee 3. WSSN: **1353**
4. Population: 50 5. Monitoring Period: From: 1-1-12 To: 6-30-12
6. Minimum # of Samples Required: 5 7. # of Samples Taken: 10
8. Name of Certified Laboratory: State of Michigan MI00003

9. SAMPLE CRITERIA:

Yes	No	Explain No responses in Comments block.	
☒	☐	a. Are the same sampling points used as in the previous monitoring period?	
☐	☒	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 11, subparagraph "Sample Category."
☐	☒	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☒	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	
Comments:			

10. NAME:

Name: Robert H. Stucker Robert H. Stucker

Title: : Operator in charge Phone: 517-548-7363 Date: 7-25-12

DEQ
RESOURCE MANAGEMENT DIVISION
JUL 27 2012
LANSING DISTRICT

EQP 5942 (Rev. 06/2012)

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County Chateaux Du Lac Condominiums Genesee WSSN 1353

RESULTS:

Sample Location	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
6 Chateaux Du Lac Dr	6-29-12	Other	C	C	1	ND	MI00003
14 Chateaux Du Lac Dr	6-29-12	Other	C	C	6	ND	MI00003
23 Chateaux Du Lac Dr	6-29-12	Other	C	C	9	70	MI00003
45 Chateaux Du Lac Dr	6-29-12	Other	C	C	2	120	MI00003
54 Chateaux Du Lac Dr	6-29-12	Other	C	C	ND	ND	MI00003
59 Chateaux Du Lac Dr	6-29-12	Other	C	C	25	240	MI00003
60 Chateaux Du Lac Dr	6-29-12	Other	C	C	ND	ND	MI00003
71 Chateaux Du Lac Dr	6-29-12	Other	C	C	122	620	MI00003
72 Chateaux Du Lac Dr	6-29-12	Other	C	C	ND	ND	MI00003
82 Chateaux Du Lac Dr	6-29-12	Other	C	C	1	ND	MI00003
59 Chateaux Du Lac Dr	6-29-12	POE	C	C	ND	ND	MI00003
59 Chateaux Du Lac Dr	6-29-12	WELL 1	C	C	ND	ND	MI00003
59 Chateaux Du Lac Dr	6-29-12	WELL 2	C	C	ND	ND	MI00003

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic.

TO BE DETERMINED BY DEQ

	90th percentile	Ave	Max	# > AL
Pb	25			2
Cu	240			0

Chateaux Du Lac

WSSN: 1353

Water Quality Parameters for July 2012

6/29/2012		
6:00 AM		
Well 1		
Lead	ND	**ppb**
Copper	ND	**ppb**

6/29/2012		
6:00 AM		
Well 2		
Lead	ND	**ppb**
Copper	ND	**ppb**

Robert H. Stucker

In-House Water Lab
P.O. Box 116
Blissfield MI 49228
517-548-7363
inhousewaterlab@sbcglobal.net

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: **Genesee**

3. Population: **50** 4. Monitoring Period: From: **7-1-11** **To: 12-31-11**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
X		a. **Are the same sampling points used as in the previous monitoring period?**	
☐	**X**	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

9. SIGNATURE:

Signature	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **10-26-11**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
14 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**3**	**ND**	**MI00003**
23 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**43**	**170**	**MI00003**
54 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**ND**	**ND**	**MI00003**
71 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**2**	**ND**	**MI00003**
72 Chateaux Du Lac	**J925**	9-27-11	**Other**	**C**	**C**	**ND**	**ND**	**MI00003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	26				1
Cu	85				0

13. WATER QUALITY PARAMETER DATA (when applicable):

System Name/County Chateau Du Lac Condominiums WSSN 01353

Distribution System

Sample Location	Date	pH	Alk. (mg/l)	Ca as CaCO3 (mg/l)	Cond. (mmhos)	Temp. (°F)	PO4/Si
57 Chateau Du Lac Dr	12-20-11	7.50	94	4	548	11.3	
57 Chateau Du Lac Dr	12-21-11	7.52	90	4	542	11.3	

Entry Point to the Dist System

Location	Site Code	Date	pH	Alk. (mg/l)	Ca as CaCO3 (mg/l)	Cond. (mmhos)	Temp. (°F)	PO4/Si
POE	DIST	12-20-11	7.36	320	260	449	10.7	
POE	DIST	12-21-11	7.41	310	268	400	10.7	

14. SOURCE WATER QUALITY DATA (when applicable):

Sample Location	Site Code	Date	Lead (ppb)	Copper (ppb)	Lab #
Well 1		12-20-11	1	ND	MI00003
Well 2		12-20-11	ND	ND	MI00003

13. WATER QUALTIY PARAMETER MONTORING (if applicable): Enter the water supply name, WSSN and corresponding related information from the water quality parameter monitoring carried out, if applicable. Indicate the street address of the sampling point (and the site code for entry point sampling points), date of sample collection and the results of chemical analyses. Note: alkalinity and calcium analyses should be reported as mg/l as CaCO3; conductivity should be reported in mmhos; temperature in degrees Fahrenheit; and where applicable, phosphate as PO4 and silicates a Si.

14. SOURCE WATER QUALITY DATA (if applicable): Enter the water supply name, WSSN and corresponding related information from source water quality monitoring carried out, if applicable. Indicate the location of the sampling point (i.e. well number, name of the entry point [aka, plant tap], etc.), site code, date of sample, lead concentration in ppb, copper concentration in ppb and lab number or sample number.

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

June 19, 2012

Mr. Larry Carter
5454 Gateway Boulevard
Flint, Michigan 48507

Dear Mr. Carter:

Subject: Chateau Du Lac Condominiums WSSN 01353
Lead and Copper Monitoring - Action Level (AL) Exceedance

The Chateau Du Lac Condominiums exceeded the AL(s) for lead during the most recent round of lead and copper monitoring of drinking water taps from June 1 to September 30, 2011, as summarized below.

Contaminant	AL	90% of samples at or below this level	Number of samples above the AL
Lead	15 parts per billion (ppb)	26 ppb	1
Copper	1.3 parts per million (ppm)	0.085 ppm	0

An AL exceedance is not a violation, but triggers other requirements under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended. Requirements include water quality parameter (WQP) monitoring, source water monitoring, corrosion control treatment, and public education.

Deliver Customer Notice of Lead Result

Recent changes to the Lead and Copper Rule require you to provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected, within 30 days of learning of results. You must also send us a certification that you met all the delivery requirements along with a sample copy of your customer notice. These items were received October 26, 2011.

Distribute Public Education (PE)

A certificate that the PE materials were distributed to all consumers was received. Repeat each year until the lead AL is no longer exceeded. This material is intended to educate consumers about lead health effects, sources, and steps to minimize exposure. Note that the PE material must include information about the exceedance in your water supply, information about what you are doing to reduce lead levels, information about lead service lines in your distribution system, and information about the history of lead levels in your water supply.

Conduct WQP Monitoring
Water Quality Parameter monitoring was completed December 2011, in which two WQP samples were collected 24 hours apart from the entry point to the distribution system and two samples 24 hours apart from 57 Chateau Du Lac Drive in the distribution system. The WQP samples were analyzed for pH, alkalinity, calcium, conductivity, and temperature. Continue sampling for WQP during each lead and copper monitoring period until at least 90% of lead and copper tap results meet both ALs.

To order bottles, call the Department of Environmental Quality (DEQ) laboratory at 517-335-8184, or download the form EQP 2301 *Requisition for Water Sample Units* from http://michigan.gov/deq. Click on Key Topics, Laboratory Services, Drinking Water, Obtaining the Necessary Sampling Units, and test list. The tests are analyzed from one sample bottle per location. Request the analyses using the following test codes:

Test Code	Cost (as of 06/15/2007)	Bottle Number	Test Description
CORR	$51.00	33	Conductivity, Alkalinity, Phosphate, and Calcium
CPH	$13.00	33	pH Determination

Conduct Source Water Monitoring
Source water monitoring was conducted in December 2011. Repeat every third year until both lead and copper ALs are met during the entire three year period.

Correct the Problem
Minimize lead and copper in drinking water by reducing corrosion of water pipes and household plumbing that contain lead and copper. To accomplish this, you must propose a corrosion control treatment plan or propose to perform a corrosion control study by July 31, 2012. If treatment is found to be necessary, it must be installed and samples collected to ensure the lead and copper ALs are consistently met. Contact us for guidance on corrosion control options.

Lead and Copper Monitoring
You are not required to conduct lead and copper tap monitoring until after you install corrosion control treatment. However, at your option, you may conduct additional rounds of monitoring. If the action levels are met during future rounds of monitoring, you may discontinue the corrosion control study and installation of treatment. If the lead action level is met in two consecutive six month monitoring periods, you may discontinue your public education activities. It is recommended that you collect another round of lead and copper tap samples during the January 1-June 30, 2012, monitoring period. Select the same sites used in previous monitoring periods, giving Tier 1 sites first priority. Within 30 days of learning of results, provide individual lead tap results to people who receive water from sites that were sampled, even if lead was not detected. All monitoring, reporting, customer notification and DEQ certification requirements remain in effect.

Consumer Confidence Report (CCR)
Include this AL exceedance in your CCR, which is due to our office, your customers, and the local health department, by July 1, 2012. Also include the following statement in the CCR, regardless of the lead and copper levels:

> *If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Chateau Du Lac Condominiums is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://water.epa.gov/drink/info/lead.*

What's Next?
If you can show that both lead and copper ALs are met in two consecutive six month periods, then many of the requirements outlined in this letter will no longer apply. However, in the meantime, you must propose a corrosion control treatment plan or propose to perform a corrosion control study. If treatment is found to be necessary, it must be installed. We will work with you to complete these corrosion control steps to optimize your corrosion control treatment.

Timetable of Requirements

Complete By	Requirement	Comments
Right away	Deliver *Customer Notice Of Lead Result* to persons served at each site tested within 30 days of knowing the result.	Download *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Word or PDF format from http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms.
November 30, 2011	Collect WQP samples.	Collect 2 samples at least 24 hours apart from each entry point to the distribution system. Collect 2 samples at least 24 hours apart from the distribution system. Repeat each lead and copper monitoring period until both ALs are met.
November 30, 2011	Perform PE activities including delivering PE materials to all consumers.	PE required activities are listed in enclosed template and checklist. Repeat every year until the lead AL is met in the most recent round of sampling.
December 10, 2011	Send us certification of PE compliance along with a sample copy of the materials delivered.	Sample certification enclosed. Required whenever PE required.
December 31, 2011	Send us certification of customer notice of lead result compliance along with a sample copy of the notice delivered.	Download *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Word or PDF format from http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms.
March 31, 2012	Collect one lead and copper sample from each entry point to the distribution system.	Repeat every third year until both ALs are met for the whole 3 year period.

Complete By	Requirement	Comments
July 31, 2012	Submit a proposal for optimal corrosion control treatment or a corrosion control study.	Contact us for guidance on corrosion control options. Corrosion control study and treatment installation may cease if both ALs are met during 2 consecutive 6 month monitoring periods.
Between January 1 and June 30, 2012	Collect 10 samples from the distribution system and have them analyzed for lead and copper.	Report the results to the DEQ and deliver the customer notice of individual lead results using the downloadable *Lead and Copper Report and Consumer Notice of Lead Result Certificate*.
July 1, 2012	Report the 2011 AL exceedance in the Consumer Confidence Report.	Specific lead health effects language must be included.

We recognize that the Lead and Copper Rule is complex and may be confusing. We will continue to offer assistance in implementing these regulations.

Michael F. Prysby, P.E., District Engineer
Resource Management Division
prysbym@michigan.gov
517-335-6122

Adam Rosenthal, EQA
Resource Management Division
rosenthala@michigan.gov
517-335-6131

cc: Mr. Robert Stucker, Contract Operator

1353

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

June 9, 2011

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, Michigan 48507

Dear Mr. Carter:

Subject: Chateaux Du Lac Condominiums; WSSN: 01353
Lead and Copper Monitoring of Drinking Water Taps

We received your report for the monitoring period June 1, 2010, through September 30, 2010.

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	# of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 parts per billion (ppb)	14 ppb	1	5	6/1 and 9/30/2011 Submit results to this office by October 10, 2011
Copper 1.3 parts per million (ppm)	0.080 ppm	0		

Ninety percent of the sites you tested are within action levels under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended. These results must be reported on your 2010 Consumer Confidence Report (CCR) due to our office, your customers and the local health department by July 1, 2011. Also include the following statement in the CCR, regardless of the lead and copper levels:

> *If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Chateaux Du Lac Condominiums is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.*

You must also provide individual lead tap results to the people who receive water from sites that were sampled, even if lead was not detected. This is a new requirement under United States Environmental Protection Agency revisions to the Lead and Copper Rule of October 10, 2007.

The new rule requires you to deliver notices of lead results to customers within 30 days of learning of each individual result and to deliver a certification that delivery requirements were met along with a sample copy of your customer notice to this office within 3 months of the end of the monitoring period. A template and certificate is downloadable in Microsoft Word and PDF formats from www.michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, Reporting Forms, and *Lead and Copper Report and Consumer Notice of Lead Result Certificate*.

Samples due the next monitoring period mark your second annual round of monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria. We strongly encourage you to sample early in the monitoring period.

Bottles will NOT be mailed automatically. To order bottles, call the Department of Environmental Quality laboratory at 517-335-8184 or download the form EQP 2301 *Requisition for Water Sample Units* from www.michigan.gov/deq. Click on Key Topics, Laboratory Services, Drinking Water, Obtaining the Necessary Sampling Units, and test list.

Sincerely,

Adam Rosenthal, EQA
Resource Management Division
Field Operations
517-335-6131
rosenthala@michigan.gov

ar/jlr
Enclosures

cc: Mr. Robert Stucker, Contract Operator

1353

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: **Genesee**

3. Population: **50** 4. Monitoring Period: From: **7-1-09** **10** To: **12-31-09** **10**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
X		a. **Are the same sampling points used as in the previous monitoring period?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	X	b. **Are all samples from Tier 1 sites?**	
☐	X	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	NA	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

9. SIGNATURE:

Signature Robert H. Stucker	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **11-12-10**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
14 Chateaux Du Lac	**I925**	9/25/10	**Other**	**C**	**C**	**ND**	**ND**	**MI00003**
23 Chateaux Du Lac	**I925**	9/25/10	**Other**	**C**	**C**	**24**	**110**	**MI00003**
54 Chateaux Du Lac	**I925**	9/26/10	**Other**	**C**	**C**	**4**	**50**	**MI00003**
71 Chateaux Du Lac	**I925**	9/26/10	**Other**	**C**	**C**	**2**	**ND**	**MI00003**
72 Chateaux Du Lac	**I925**	9/25/10	**Other**	**C**	**C**	**ND**	**ND**	**MI00003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	14				1
Cu	80				0

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **7-1-09** **To: 12-31-09**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	**X**	a. **Are the same sampling points used as in the previous monitoring period?**	
☐	**X**	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

One different site was used due to a resident unable to participate in this round.

9. SIGNATURE:

Signature	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **10-31-09**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
14 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**9**	**ND**	**0003**
23 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**16**	**90**	**0003**
54 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**1**	**50**	**0003**
71 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**3**	**ND**	**0003**
72 Chateaux Du Lac	**H925**	**9-23-09**	**Other**	**C**	**C**	**ND**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	13				1
Cu	70				0

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **1-1-09** **To: 6-30-09**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	**X**	a. **Are the same sampling points used as in the previous monitoring period?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	b. **Are all samples from Tier 1 sites?**	
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Two different sites were used due to residents unable to participate in this round.

9. SIGNATURE:

Signature	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **7-27-09**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
23 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**9**	**ND**	**0003**
54 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**ND**	**ND**	**0003**
64 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**3**	**210**	**0003**
71 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**5**	**ND**	**0003**
72 Chateaux Du Lac	**G925**	**6-24-09**	**Other**	**C**	**C**	**ND**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	7				0
Cu	105				0

Drinking Water
Lead & Copper Report Form

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **7-1-08** **To: 12-31-08**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	**X**	a. **Are the same sampling points used as in the previous monitoring period?**	
☐	**X**	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Two different sites were used due to residents unable to participate in this round.

9. SIGNATURE:

Signature	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **9-16-08**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
23 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**115**	**150**	**0003**
54 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**1**	**ND**	**0003**
64 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**2**	**ND**	**0003**
71 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**2**	**ND**	**0003**
72 Chateaux Du Lac	**F925**	**9-2-08**	**Other**	**C**	**C**	**ND**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb					
Cu					

PUBLIC SERVICE ANNOUNCEMENT

Recent tests of distribution system tap water show that some homes in Chateaux Du Lac, exceed the federal government's limit for lead. Therefore, the Chateaux Du Lac Water System has begun a program to reduce lead in drinking water. Since much of the lead contamination of drinking water comes from individual home plumbing systems, there is action you can take in your home.

Please call your water utility operator in charge at 517-548-7363 for information on how to reduce exposure to lead in drinking water and how to have your home's water tested for lead.

Your lead and copper test results for 23 Chateaux Du Lac Dr are:

Copper	150 ppb	Maximum Contaminant Level is 1,300 ppb
Lead	115 ppb	Maximum Contaminant Level is 15 ppb

Thank you

Robert H. Stucker
Operator in Charge
In-House Water Lab
210 N. Center St
Howell MI 48843
517-548-7363

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

June 2, 2009

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, MI 48507

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Carter:

SUBJECT: Lead and Copper Action Level Exceeded for Chateaux Du Lac Condominiums

The United States Environmental Protection Agency (USEPA) has established action levels of 15 parts per billion (ppb) for lead and 1300 ppb for copper. Chateaux Du Lac Condominiums has exceeded the action level for lead during the monitoring period from June 1, 2008 to September 30, 2008. Lead and copper sampling was conducted on September 2, 2008. The results are outlined in the table below:

Samples: 5 required / 5 collected, for the Monitoring Period of: June 1, 2008 – September 30, 2008

Results:	Lead		Copper	
Action levels	15	ppb	1300	ppb
90th percentile	**59**	**ppb**	**75**	**ppb**
Average	24	ppb	30	ppb
Maximum	115	ppb	150	ppb
Minimum	0	ppb	0	ppb
Action Level Exceeded	**1**	**Sites**	**0**	**Sites**

The Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the Administrative Rules promulgated there under (Act 399) requires the following steps to be taken in response to the lead exceedance:

Distribute Public Education Notice / Public Service Announcement

Rule 325.10410 (1) of Act 399 requires that public education with specific educational language on the health effects of lead, must be mailed or delivered to all residents of Chateaux Du Lac Condominiums within 60 days of the exceedance. **Therefore, Chateaux Du Lac Condominiums was required to deliver the public education to every customer no later than November 2, 2008.**

Our records show that the Public Education Notice/Public Service Announcement was completed as required and the Certificate of Distribution was received December 12, 2008. As a reminder, this information must be redistributed by June 30, 2009. Please submit the Certificate of Distribution to this office by July 10, 2009

Enclosed is mandatory language for a Public Service Announcement / Public Education Notice with information regarding the health effects of lead. Also, enclosed is a Certificate of Distribution. Please indicate the method of delivery, sign, and date the Certificate of Distribution (retain a copy for your records) and return a copy as noted above.

The Public Service Announcement / Public Education Notice must be repeated every 6 months, as long as action levels are still being exceeded. Please note that new customers must receive a copy of the public education when water service is established.

Report the Lead and Copper Exceedances in the 2008 Consumer Confidence Report (CCR)

In addition to distributing the public education notice described above, the exceedance for lead must be included in the Water Quality Data section of your 2008 CCR which is due to our office, your customers, and the local health department by July 1, 2009.

You must include the following informational statement regarding lead:
"Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline at 800-426-4791."

Conduct Water Quality Parameter (WQP) Monitoring

Sampling for several water quality parameters (WQP) is required every six months. This includes two samples (collected at least 24 hours apart) from the point of entry to the distribution system after treatment, and two samples (collected at least 24 hours apart) from one location in the distribution system. This location must be representative of water quality throughout the distribution system.

WQP samples were collected on November 29, 2008 and November 30, 2008 in response to the Lead exceedance as discussed with your contract operator, Mr. Robert Stucker. **The next set of WQP samples must be collected by June 30, 2009.**

WQP monitoring includes measurements for pH, alkalinity, calcium, conductivity, and temperature. The pH and temperature must be measured at the time of sample collection for the most accurate results. However, you may have the pH measured at a nearby laboratory or the State lab. To order bottles from the State lab, call 517-335-8184. If using the State lab in Lansing, use the following test codes for requesting the required sampling:

Test Code	Cost (as of 1/1/05)	Bottle Number	Test Description
CORR	$51.00	33	Conductivity, Alkalinity, Phosphate, and Calcium
CPH	$13.00	33	pH Determination

The above tests are analyzed from one sample (or from one bottle, number 33).

The results of Lead and Copper monitoring, and WQP monitoring, are to be reported on the attached reporting form.

Conduct Source Water Monitoring

The requirement for sampling lead and copper in the source water was also completed on November 29, 2008 and November 30, 2008 in response to the Lead exceedance.

Correct the Problem

The presence of lead and/or copper is an indicator of corrosive water. If two consecutive six month rounds of sampling results are below the action levels for both lead and copper, your system will be considered to have optimized corrosion control and not be required to take the steps below. However, Act 399 requires that when a water system exceeds either the lead or copper action level, an optimal corrosion control program must be developed to correct the problem.

In response to the previous lead exceedance noted in a letter dated April 26, 2005, Chateaux Du Lac Condominiums sampled into compliance, however the 1st annual round of monitoring exceeded the action level for lead. Therefore, based on the 2005 and 2008 exceedances, an optimal corrosion control program must be developed under one of the options below.

A.) Make a proposal to this office by September 30, 2009 for an optimal corrosion control treatment program. By December 31, 2009 we will either approve the plan, require you to do a study, or designate some other corrosion control plan. If we require a study, it must be completed within 18 months after we request it.

B.) You can propose that you do a study to determine the best method of optimal corrosion control for your system. The proposal to do a study must be made by September 30, 2008. Once the proposal is accepted by this office, you will then have one year to complete the study and recommend a treatment option to us.

Once a treatment plan has been approved by our office, you will have one year to install the treatment equipment and an additional year to collect follow-up samples. Using that data, our office will designate optimal water quality control parameters under which your system must operate. At that time, you will continue with regular lead and copper sampling.

Please note that although continued lead and copper sampling is not required by Act 399 until after corrosion control treatment has been installed, we recommend that you continue to sample every six months in conjunction with your WQP monitoring. With proper sampling techniques and site selection, Chateaux Du Lac Condominiums may find that lead and copper levels will be below action levels in the future. Remember that if Chateaux Du Lac Condominiums can show that lead and copper levels are below the action levels during two consecutive six month monitoring periods, then many of the requirements outlined in the this letter will no longer be applicable. If Chateaux Du Lac Condominiums plans to continue lead and copper sampling, the next round of five samples must be collected by June 30, 2009.

Following is a table which outlines your requirements for the next year.

Time Period	Requirement	Comments
By June 30, 2009	Issue Public Service Announcement and Public Education Notices	Notices must be mailed/delivered to every customer
By July 10, 2009	Forward a signed copy of the Public Education Notice and Certificate of Distribution to this office	
By June 30, 2009	Collect Water Quality Parameter (WQP) samples	Collect 2 samples (collected 24 hours apart) from the point of entry to the distribution system. And collect 2 samples (collected 24 hours apart) from one location in the distribution system.
By July 1, 2009	Report the lead exceedance in the 2008 Consumer Confidence Report	
By September 30, 2009	A.) Propose an Optimal Corrosion Control Program or B.) Propose to do a study to determine the best method of corrosion control	
Every 6 Months	Collect Water Quality Parameter (WQP) samples	Collect 2 samples (collected 24 hours apart) from the point of entry to the distribution system. And collect 2 samples (collected 24 hours apart) from one location in the distribution system.
Every 6 Months	Public Service Announcement	The Public Service Announcement must be repeated every 6 months.
Every 6 Months	Forward a signed copy of the Public Education Notice to this office	Signed copies of the public education notice are due to our office 10 days after you deliver the annual notices

We recognize that the Lead and Copper Rule is complex and may be confusing. We propose a conference call with you and your operator before the end of June 2009 to discuss further. We will continue to offer assistance in implementing these regulations.

If you have any questions, call us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Field Operations, Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations, Water Bureau
517-335-6131

Enclosures

cc: Mr. Robert Stucker, Contract Operator

004805

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

October 8, 2007

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, MI 48507

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Carter:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **January 1, 2007 through June 30, 2007**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	15 ppb	1	5	**June 1 and September 30, 2008** Submit results and reporting form by October 10, 2008
Copper 1.3 ppm	0.14 ppm	0		

ppm = parts per million ppb = parts per billion

Your results are less than the action levels stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended. If your 90th Percentile is greater than zero and/or you have one or more samples Above the Action Level, these results must be reported on your *2007 Consumer Confidence Report* due by July 1, 2008.

Samples due during the next period mark your first round of annual monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Enclosed are report and bottle ordering forms for your next round of monitoring. Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

FOR Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB

Enclosures

cc: Mr. Robert H. Stucker, In-House Water Lab

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **1-1-07** To: **6-30-07**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	**X**	a. **Are the same sampling points used as in the previous monitoring period?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	b. **Are all samples from Tier 1 sites?**	
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Repeated lead and copper testing per Mike Prysby due to a high lead result in March.
23 Chateau Du Lac 225 ppb lead.

9. SIGNATURE:

Signature Robert H. Stucker	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date: **7-24-07**

MP

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
23 Chateaux Du Lac	**E925**	**3-2-07**	**Other**	**C**	**C**	**225**	**480**	**0003**
59 Chateaux Du Lac	**E925**	**3-2-07**	**Other**	**C**	**C**	**2**	**ND**	**0003**
64 Chateaux Du Lac	**E925**	**3-1-07**	**Other**	**C**	**C**	**15**	**100**	**0003**
71 Chateaux Du Lac	**E925**	**3-1-07**	**Other**	**C**	**C**	**2**	**ND**	**0003**
73 Chateaux Du Lac	**E925**	**3-2-07**	**Other**	**C**	**C**	**2**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb					
Cu					

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
12 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**14**	**ND**	**0003**
14 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**2**	**ND**	**0003**
15 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**4**	**ND**	**0003**
63 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**13**	**140**	**0003**
74 Chateaux Du Lac	**E925**	**6-28-07**	**Other**	**C**	**C**	**ND**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	15	27.9	225	0	1
Cu	140	72	480	0	0

004809

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40134

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353	
Collection Address:	73 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II	
Collected By:	HOMEOWNER	Site Code:	DIST	
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	03/02/2007	07:30
Sample Point:	KITCHEN	Date Received:	03/07/2007	13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring	

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	Not detected	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.002	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40131

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353	
Collection Address:	59 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II	
Collected By:	HOMEOWNER	Site Code:	DIST	
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	03/02/2007	07:00
Sample Point:	KITCHEN	Date Received:	03/07/2007	13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring	

Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	Not detected	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.002	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

004811

PB & Cu, File # 1353

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY

USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40133

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353
Collection Address:	23 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II
Collected By:	HOMEOWNER	Site Code:	DIST
Township/Well#/Section:	//	Collector:	Private Citizen
County:	Genesee	Date Collected:	03/02/2007 07:00
Sample Point:	KITCHEN	Date Received:	03/07/2007 13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	0.48	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.225	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

Bob Stuckers #
(517) 548-7363
6

248-613-7147
(517) 267-7328

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40132

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353	
Collection Address:	64 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II	
Collected By:	HOMEOWNER	Site Code:	DIST	
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	03/01/2007	06:00
Sample Point:	KITCHEN	Date Received:	03/07/2007	13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring	

Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	0.10	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.015	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

004813

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER LABORATORY
USEPA Region V Drinking Water Cert. No. MI00003
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-8184
FAX: (517) 335-8562

Sample Number
LB40135

Official Laboratory Report

Report To: ROBERT STUCKER
210 N CENTER ST
HOWELL MI 48843

System Name/Owner:	CHATEAUX DU LAC	WSSN/Pool ID:	1353	
Collection Address:	71 CHATEAUX DU LAC DR,FENTON	Source:	TYPE II	
Collected By:	HOMEOWNER	Site Code:	DIST	
Township/Well#/Section:	//	Collector:	Private Citizen	
County:	Genesee	Date Collected:	03/01/2007	07:00
Sample Point:	KITCHEN	Date Received:	03/07/2007	13:53
Water System:	Untreated Public Distribution System	Purpose:	Routine Monitoring	

Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	Not detected	03/12/2007	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.002	03/12/2007	0.001	0.015	EPA 200.8	7439-92-1

The analyses performed by the MDEQ Drinking Water Laboratory were conducted using methods approved by the U.S. Environmental Protection Agency in accordance with the Safe Drinking Water Act, 40 CFR parts 141-143, and other regulatory agencies as appropriate.

Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

Genesee County Health Dept.
630 South Saginaw
Flint, MI 48502-1540
810 257-3603

CAS# : Chemical Abstract Service Registry Number
MCL : Maximum Contaminent Level
AL : Action Level
RL : Reporting Limit

mg/L : milligrams / Liter (ppm)
ppm : parts per million
MPN : Most Probable Number
CFU : Colony Forming Unit

Laboratory Contacts
Drinking Water Unit Mgr: Julia Pieper
Systems Mgmt. Unit Mgr: George Krisztian

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

February 21, 2007

Mr. Larry Carter
Piper Realty Company
5454 Gateway Blvd
Flint, MI 48507

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Carter:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **July 1, 2006 through December 31, 2006**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	12 ppb	1	5	**January 1 and June 30, 2007** Submit results and reporting form by July 10, 2007
Copper 1.3 ppm	0 ppm	0		

ppm = parts per million ppb = parts per billion

Your results are less than the action levels stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended. If your 90th Percentile is greater than zero and/or you have one or more samples Above the Action Level, these results must be reported on your *2006 Consumer Confidence Report* due by July 1, 2007.

Samples due during the next period mark your **second consecutive 6 month** round of monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Enclosed are report and bottle ordering forms for your next round of monitoring. Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

FOR Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB

Enclosures

cc: Mr. Robert H. Stucker, In-House Water Lab

004815

Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: Genesee

3. Population: **50** 4. Monitoring Period: From: **7-1-06** **To: 12-31-06**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **State of Michigan MI00003**

8. SAMPLE CRITERIA:

Yes	No		
☐	**X**	a. **Are the same sampling points used as in the previous monitoring period?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	**X**	b. **Are all samples from Tier 1 sites?**	
☐	**X**	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	**NA**	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Two different sites were used due to residents unable to participate this round.

9. SIGNATURE:

Signature Robert H. Stucker	Phone: **517-548-7363**
Title: **Robert H. Stucker Operator in charge**	Date:

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du Lac Condominiums** WSSN **01353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumbing[2]	Lead (ppb)	Copper (ppb)	Lab #
23 Chateaux Du Lac	**D925**	**12-30-06**	**Other**	**C**	**C**	**21**	**ND**	**0003**
59 Chateaux Du Lac	**D925**	**12-29-06**	**Other**	**C**	**C**	**3**	**ND**	**0003**
63 Chateaux Du Lac	**D925**	**12-29-06**	**Other**	**C**	**C**	**3**	**ND**	**0003**
64 Chateaux Du Lac	**D925**	**12-29-06**	**Other**	**C**	**C**	**2**	**ND**	**0003**
73 Chateaux Du Lac	**D925**	**12-29-06**	**Other**	**C**	**C**	**2**	**ND**	**0003**

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	12	0.2	21	2	1
Cu	0	0	0	0	0

Lead – Lead & Copper Report Form CDL July 2006.doc
Drinking Water
Lead & Copper Report Form

DEQ

1. System Name: **Chateaux Du Lac Condominiums** 2. WSSN: **01353**

1a. County: **Genesee**

3. Population: **50** 4. Monitoring Period: From: **1-1-06** To: **6-30-06**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **Brighton Analytical 9404**

8. SAMPLE CRITERIA:

Yes	No		
☐	X	a. **Are the same sampling points used as in the previous monitoring period?**	
☐	X	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	X	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
X	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	NA	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

Robert H. Stucker
Laboratory Director
In-House Water Lab
210 N. Center St
Howell MI 48843
Ph & Fax: 517-548-7363
e-mail: inhousewaterlab@sbcglobal.net

9. SIGNATURE:

Signature Robert H. Stucker	Phone: 517-548-7363
Title: Operator in charge	Date: 8-11-06

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County Chateaux Du Lac Condominiums WSSN 01353

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
Well 1		6-30-06	Other	C	C	ND	ND	9404
Well 2		6-30-06	Other	C	C	ND	ND	9404
63 Chateaux		6-30-06	Other	C	C	10	50	9404
64 Chateaux		6-30-06	Other	C	C	1	ND	9404
73 Chateaux		6-30-06	Other	C	C	8	ND	9404

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	9	3.8	10	0	9
Cu	0.025	0.01	0.05	0	0

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

December 15, 2005

Mr. Robert Stucker
In-House Water Lab
210 North Center Street
Howell, MI 48843

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Stucker:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **January 1, 2005 through June 30, 2005**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	12 ppb	1	5	**6/1 and 12/31/2005** Submit results and reporting form by January 10, 2006
Copper 1.3 ppm	0.13 ppm	0		

ppm = parts per million ppb = parts per billion

Your results are less than the action levels stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended. If your 90th Percentile is greater than zero and/or you have one or more samples Above the Action Level, these results must be reported on your *2005 Consumer Confidence Report* due by July 1, 2006.

Samples due during the next period mark your second 6 month round of monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Enclosed are report and bottle ordering forms for your next round of monitoring. Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

Michael Prysby

Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB

Enclosures

cc: Genesee County Health Department

004820

#1353
PB/CY

RECEIVED
OCT 04 2005
MDEQ-Water Bureau
Lansing District Office

DEQ

Drinking Water
Lead & Copper Report Form

1. System Name: **Chateaux Du-Lac/Genesee** 2. WSSN: **1353**

1a. County: **Genesee**

3. Population: **?** 4. Monitoring Period: From: **9-30-04** To: **9-30-05**

5. Minimum # of Samples Required: **5** 6. # of Samples Taken: **5**

7. Name of Certified Laboratory: **MDEQ**

8. SAMPLE CRITERIA:

Yes	No		
Y		a. **Are the same sampling points used as in the previous monitoring period?**	
	N	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
	N	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
Y		d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
NA		e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

9. SIGNATURE:

Signature Robert H. Stuart	Phone:**517-548-7363**
Title: **Operator in Charge**	Date: **9-28-05**

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County **Chateaux Du-Lac/Genesee** WSSN **1353**

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category [1]	Service Lines [2]	Bldg Plumb-ing [2]	Lead (ppb)	Copper (ppb)	Lab #
1 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	1.0	1300	MDEQ
1 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	19	1300	MDEQ
64 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	ND	ND	MDEQ
59 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	4	ND	MDEQ
73 Chateaux Du-Lac Dr		6-11-05	OTHER	C	C	ND	ND	MDEQ

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
Pb	11.5 → 12	4.8	19	0	1
Cu	0.13	0.052	0.13	0	0

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

April 26, 2005

Mr. Robert Stucker
In-House Water Lab
210 North Center Street
Howell, MI 48843

WSSN: 01353
Chateaux Du Lac Condominiums

Dear Mr. Stucker:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **June 1, 2004 through September 30, 2004**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	20 ppb	1	**5**	**1/1 and 6/30/2005** Submit results and reporting form by July 10, 2005
Copper 1.3 ppm	0.035 ppm	0		
Raw Water Monitoring (one sample from each well)			**2**	**Same as above**
Water Quality Parameters - 2 sets (only required if an AL is exceeded)			**4 (2 distribution and 2 POE)**	**Same as above**

ppm = parts per million ppb = parts per billion

Your results for lead is greater than the action level stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended. Since your 90th Percentile for lead is above the Action Level, these results must be reported on your *2004 Consumer Confidence Report* due by July 1, 2005.

The federal Lead and Copper Rule requires that water quality parameter (WQP's) samples must be collected when the action level is exceeded. Two sets of WQP's were collected from the distribution system and the well house as required on January 17th and 18th, 2005. The WQP samples should have been collected within the same monitoring period as the lead/copper samples, however Chateau Du-Lac was not notified until after the monitoring period ended, thus there will be no penalty assessed for the system.

You will have to collect a lead and copper sample from each well along with the distribution monitoring this sampling period.

Public Education material must be distributed to all residents of the facility within 60 days of the date of this letter. A sample public education brochure with the mandatory language was

E-mailed and is enclosed for your use. This public education material must be distributed to your residents every 12 months, as long as the lead action level is exceeded. Also enclosed is a copy of an affidavit to be included in your federal tracking file at this office. Please indicate method of delivery, sign, and date the form (retain a copy for your records) and return a copy to this office.

We encourage you to continue attempting to sample back into compliance. Compliance is achieved after 2 *consecutive* full rounds are below the action levels. The next round of sampling is between January 1 and June 30, 2005. You will have to collect 5 samples and have them analyzed for lead and copper during that time frame.

Enclosed are report and bottle ordering forms for your next round of monitoring. Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Field Operations
Water Bureau
517-335-6122

Adam Rosenthal, EQA
Field Operations
Water Bureau
517-335-6131

MFP:AR:SB

Enclosures

cc: Mr. George Rasch
Genesee County Health Department

Drinking Water
Lead & Copper Report Form

DEQ

Please return completed form to the DEQ Water Division district office. Addresses on last page.

1. System Name: Chateaux Du Lac

1a. County: Genesee 2. WSSN: 01353

3. Population: 4. Monitoring Period: From: To: 9-30-04

5. Minimum # of Samples Required: 5 6. # of Samples Taken: 5

7. Name of Certified Laboratory: State of MI

8. SAMPLE CRITERIA:

Yes	No		
☐	☒	a. **Are the same sampling points used as in the previous monitoring period?**	
☐	☒	b. **Are all samples from Tier 1 sites?**	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	☒	c. **Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?**	
☒	☐	d. **If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?**	
☐	☐ NA	e. **Is the minimum number of lead service line samples taken (when applicable)?**	

Comments:

9. SIGNATURE:

Robert H. Stucker

Signature Robert H. Stucker	Phone: 517-548-7363
Title: Operator in Charge	Date: ~~9-20-04~~ 10-6-04

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County Chateaux Du Lac WSSN 01353

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumb-ing[2]	Lead (ppb)	Copper (ppb)	Lab #
59 Chateaux Dr	1	9-20-04	other	C	C	ND	ND	
64 Chateaux Dr	2	↓	↓	↓	↓	33	ND	
23 Chateaux Dr	3					2	70	
63 Chateaux Dr	4					ND	ND	
1 Chateaux Dr	5					6	ND	

[1] Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

[2] Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY DEQ

		90th %ile	Ave	Max	# > AL
ppb	Pb	20	8.2	33	1
ppb	Cu	35	14	70	0

From: Adam Rosenthal
To: Bob Stucker
Date: 1/12/2005 2:59PM
Subject: Chateau Du Lac

Hello Bob, I finally had a chance to write some lead/copper result letters and realized that Chateau Du Lac exceeded the Action Level for Lead. The 90th percentile calculated to be 20 ppb and the AL is 15 ppb. I do not recall whether we spoke about this situation before or not, at any rate I need to find out if you tested for any water quality parameters, and if so please send me copies. These parameters should have been tested in the same monitoring period as the original samples were collected.

If samples were not collected, please perform the following ASAP.

Collect Water Quality Parameters, (WQPs) in the distribution system, at the Point of Entry, (POE) and distribute Public Education about Lead.

You will need to order 4 unit 33 bottles, then collect 2 samples from your POE collected 24hrs apart, and 2 samples in the distribution system collected 24hrs apart. These samples will be tested for pH, alkalinity, calcium, conductivity, orthophosphate, and temperature. Temp is taken at the time of the sample, and if you have meters for any other parameters you can test those yourself also.

Enclosed is our lead/copper reporting form with instructions and the public education you will need. Please fill out the WQP page and send a copy to us when you get your results.

Let Mike or me know if you have any questions,

Adam Rosenthal, EQA
MDEQ-Drinking Water
Lansing District Office
4th Floor North
PO Box 30242
Lansing, MI 48909
517-335-6131
Fax 517-241-3571
rosentha@michigan.gov

CC: Mike Prysby

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SHIAWASSEE DISTRICT OFFICE

JOHN ENGLER
GOVERNOR

RUSSELL J. HARDING
DIRECTOR

July 8, 2002

Mr. Robert Yarbrough Caretaker
Chateaux Du Lac Condominiums
611 Mill Street
Fenton, MI 48430

WSSN: 01353

Dear Mr.Yarbrough:

SUBJECT: Lead and Copper Monitoring - For Compliance with the Michigan Safe Drinking Water Act

We received your report for the monitoring period: **June 1, 2002 through September 30, 2002**

Action Levels	Results this monitoring period		Next monitoring period	
	90th Percentile	Number of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 ppb	5.0 ppb	0	5	**6/1 and 9/30/2004** Submit results by October 10, 2004
Copper 1.3 ppm	0.055 ppm	0		

ppm = parts per million ppb = parts per billion

Your results are within the action levels stated in the Michigan Safe Drinking Water Act, 1976 P.A. 399, as amended, and the rules promulgated there under. If your 90th percentile is greater than zero and/or you have one or more samples Above the Action Level, these results must be reported on your *2002 Consumer Confidence Report* due by July 1, 2003.

Samples due during the next period continue your **triennial** monitoring. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

Enclosed are report forms and bottle ordering forms (bottles will NOT be mailed automatically). Please sample early in the monitoring period. If you have questions, please call us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Field Operations Section
Drinking Water and Radiological
Protection Division
517-625-4670

Adam Rosenthal, Resource Analyst
Field Operations Section
Drinking Water and Radiological
Protection Division
517-625-4625

MFP:AR:LW
Enclosures
cc: Mr. George Rasch
Genesee County Health Department

Drinking Water
Lead & Copper Report Form

DEQ

Please return completed form to:
Michigan Department of Environmental Quality
Drinking Water and Radiological Protection Division
10660 S. Bennett Dr., Morrice, MI 48857-9782
Fax: 517-625-5000

1. System Name: CHATEAUX DU LAC

1a. County: GENESEE 2. WSSN: 1353

3. Population: 90 4. Monitoring Period: From: 1-1-01 To: 12-31-01

5. Minimum # of Samples Required: 5 6. # of Samples Taken: 5

7. Name of Certified Laboratory: DEQ

8. SAMPLE CRITERIA:

Yes	No		
☒	☐	a. Are the same sampling points used as in the previous monitoring period?	
☒	☐	b. Are all samples from Tier 1 sites?	For more information see *Instructions* paragraph 10, subparagraph "Sample Category".
☐	☐	c. Are all samples from Tier 1, 2, or 3 sites giving Tier 1 priority?	
☐	☐	d. If no Tier 1, 2, or 3 sites are available, do all sites have plumbing materials commonly found at other locations in the water system?	
☐	☐	e. Is the minimum number of lead service line samples taken (when applicable)?	

Comments:

9. SIGNATURE:

Signature: George B. Rasch	Phone: (810) 733-2808
Title: George B. RAsch	Date: 6/11/02

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name/County CHATEAUX DU LAC/ GENESEE WSSN 1353

RESULTS:

Sample Location	Site Code	Sample Date	Sample Category[1]	Service Lines[2]	Bldg Plumbing[2]	Lead (ppb)	Copper (ppb)	Lab #
Unit 1	F-1	8/20/01	—	C	C	0.001	ND	DEQ
Club House	F-2	Same		C	C	0.001	ND	DEQ
Unit 23	F-3	Same		C	C	0.003	0.11	DEQ
Unit 21	F-4	Same		C	C	0.005	ND	DEQ
Unit 13	F-5	Same		C	C	0.005	ND	DEQ

1 Sample Category: Enter a number 1 through 6 to designate the category of tap sample site. For more information see *Instructions* paragraph 10, subparagraph "Sample Category".

2 Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or P = plastic

TO BE DETERMINED BY MDEQ

	90th %ile	Ave	Max	Min	# > AL
ppb Pb	5	3	5	1	0
ppb Cu	55	22	110	0	0

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
Drinking Water and Radiological Protection Division
10650 Bennett Drive
Morrice, Michigan 48857-9792

Atlas Investments
Chateaux Du Lac
3918 Fenton Road
Flint, Michigan 48507

November 23, 1998
WSSN # 1353

LEAD AND COPPER MONITORING
for compliance with U.S. EPA lead and copper regulations

We have received your report for the June 1, 1997, to September 30, 1997, monitoring period.

RESULTS:

90th percentile for lead:	8.5	ppb
90th percentile for copper:	90.0	ppb

These results do not exceed the action levels of 15 ppb for lead or 1300 ppb for copper.

We have received your report for the June 1, 1998, to September 30, 1998, monitoring period.

RESULTS:

90th percentile for lead:	0.0	ppb
90th percentile for copper:	75.0	ppb

These results do not exceed the action levels of 15 ppb for lead or 1300 ppb for copper.

NEXT MONITORING PERIOD: October 1, 1998 to September 30, 2001

Samples required: Lead/Copper Monitoring: 5 distribution sites sampled analyzed for lead and copper.

Comments: Samples must be collected during June, July, August, or September of the same calendar year. Samples due by 2001 mark your first round of reduced triennial monitoring.

Enclosed are report forms and bottle ordering forms (bottles will NOT be mailed automatically). Please sample early to avoid last minute problems. If you should have any questions, please feel free to contact William Smith.

Michael F. Prysby, P.E.
District Engineer
517-625-4670

William K. Smith
Resource Analyst
517-625-4625

MFP:WKS:lw
Enclosures
cc: Mr. Brian McKenzie, Genesee County Health Department
Mr. Robert Yarbrough, Caretaker

10. Tap Sampling Data (use additional sheets as needed)

Chateau Du Lac Condos
WSSN: 1353
11/5/98

Round: 3
From: 6/1/97
To: 9/30/97

Lab Used: MDEQ

	Sample Location	Site Code	Collect Date:	Sample Category *	Piping Materials Serv. Line **	Bldg. Plumb. **	LEAD ppb	COPPER ppb	Lab Number
1	15 Chateaux Du Lac		9/24/97		C	C	0	130	C1997044390
2	13 Chateaux Du Lac		9/24/97		C	C	0	0	C1997044391
3	22 Chateaux Du Lac		9/24/97		C	C	6	0	C1997044392
4	23 Chateaux Du Lac		9/24/97		C	C	11	50	C1997044393
5	12 Chateaux Du Lac		9/24/97		C	C	0	0	C1997044394
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

90TH% LEAD:	8.5
90TH%COPPER:	90.0
Ave. LEAD:	3.4
Ave. COPPER:	12.5
Max. LEAD:	11.0
Max. COPPER:	130.0
Low LEAD:	0.0
Low COPPER:	0.0

* Sample Category: Enter a number 1 through 6 to designate the category of tap sample site (see instructions for definitions).
** Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or, P = plastic

004832

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investments
3918 Fenton Road
Flint MI 48507

Sample Number: C1998043763
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353 7/26/98
Collection Address:	1-chateaux Drive, Fenton 48430	Sampled:	~~09/26/~~1998 0:00:00AM
Collected By:	WEISS	Received:	07/30/1998 02:41PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
0.09 mg/L	COPPER (RECOVERABLE)	08/10/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	08/10/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

~~Note~~ 1
none

1 upstream
3 downstream

5 aw Problems

✓

Michigan Department of Environmental Quality
Drinking Water Laboratory - DWRP Division
3500 N. M.L. King Blvd. Lansing MI 48909
517/335-8184

Official Laboratory Report

Report To:

Atlas Investments
3918 Fenton Road
Flint MI 48507

Sample Number: C1998043766
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353
Collection Address:	22 Chateaux Drive, Fenton 48430	Sampled:	07/26/1998 0:00:00AM
Collected By:	SANDSTROM	Received:	07/30/1998 02:41PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
Not Detected	COPPER (RECOVERABLE)	08/10/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	08/10/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

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004834

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investments
3918 Fenton Road
Flint MI 48507

Sample Number: C1998043765
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353
Collection Address:	15 Chateaux Drive, Fenton 48430	Sampled:	07/26/1998 0:00:00AM
Collected By:	FAUGHT	Received:	07/30/1998 02:41PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
Not Detected	COPPER (RECOVERABLE)	08/10/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	08/10/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

Michig[redacted] Department of Environmental C[redacted]ity

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investments
3918 Fenton Road
Flint MI 48507

Sample Number: C1998043764
Customer Number: 70682000

System Name/Owner:	CHATEAU DU LAC.	WSSN / Pool ID:	1353
Collection Address:	23 Chateaux Drive, Fenton 48430	Sampled:	09/26/1998 0:00:00AM
Collected By:	SUMMONS	Received:	07/30/1998 02:41PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
Not Detected	COPPER (RECOVERABLE)	08/10/1998		0.05 mg/L	CCU 19970416
0.168 mg/L	LEAD (TOTAL)	08/10/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

① downstream of water softener.
② was this from an active tap?

9/14 → Bob said water was held for 7 days
→ will ② put it in writing and send us replacement
→ Spoke with Tim. He said it was ok.
WKS

By authority of PA 368 1978 as amended.

Process Batch #: 8082762 | 96 | 08/27/1998 11:45:20AM

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investment
3918 Fenton Road
P O Box 7403
Flint MI 48507

Sample Number: C1998054492
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353
Collection Address:	5 Chateaux Drive, Fenton 48430	Sampled:	09/29/1998 7:30:00AM
Collected By:	HU	Received:	09/30/1998 02:49PM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

		Supplemental Information Related To Reported Result			
Test Result	**Analyte Name**	**Tested**	**Health Limit MCL**	**Minimum Rpt. Limit**	**Test Code**
Not Detected	COPPER (RECOVERABLE)	10/05/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	10/27/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

Michigan Department of Environmental Quality
Drinking Water Laboratory - DWRP Division
3500 N. M.L. King Blvd. Lansing MI 48909
517/335-8184

Official Laboratory Report

Report To:

Atlas Investment
3918 Fenton Road
Flint MI 48507

Sample Number: C1998052077
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353
Collection Address:	23 Chateaux Drive. Fenton 48430	Sampled:	09/15/1998 8:00:00AM
Collected By:	SOMMERS	Received:	09/16/1998 10:39AM
Twp/Sec/Well #:	? / ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

Supplemental Information Related To Reported Result

Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
0.50 mg/L	COPPER (RECOVERABLE)	09/21/1998		0.05 mg/L	CCU 19970416
1.155 mg/L	LEAD (TOTAL)	09/23/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

Spoke with MP about it:

004838

Michigan Department of Environmental Quality

Drinking Water Laboratory - DWRP Division

3500 N. M.L. King Blvd. Lansing MI 48909

517/335-8184

Official Laboratory Report

Report To:

Atlas Investment
3918 Fenton Road
Flint MI 48507

Sample Number: C1998052078
Customer Number: 70682000

System Name/Owner:	CHATEAUX DU LAC	WSSN / Pool ID:	1353 9/16/98
Collection Address:	13 Chateaux Drive, Fenton 48430	Sampled:	~~10/15/1998~~ 8:00:00AM
Collected By:	EH/LEN	Received:	09/16/1998 10:39AM
Twp/Sec/Well #:	Fenton/ ? / ?	Source:	Type I
County:	Genesee	Purpose:	Routine Monitoring
Collector:	Private Citizen	Water System:	Untreated Public Distribution
Sample Kit #:	36CC	Sample Point:	KITCHEN
Chlorination:	None	Site Code:	

Supplemental Information Related To Reported Result

Test Result	Analyte Name	Tested	Health Limit MCL	Minimum Rpt. Limit	Test Code
0.06 mg/L	COPPER (RECOVERABLE)	09/21/1998		0.05 mg/L	CCU 19970416
Not Detected	LEAD (TOTAL)	09/23/1998		0.003 mg/L	CPB 19970417

Laboratory Comments and Result Notes: None

/

004839

LEAD AND COPPER REPORTING

1. System Name: Chateaux Du Lac 2. WSSN: 1353

2. Population: 50 Living Units 4. Monitoring Period From: 6/1/98 To : 9/30/98

5. Minimum Number of Samples Required: 5 6. Number Of Samples Taken: 5

7. Name of Certified Laboratory: Michigan Department of Environmental Quality

8. Sample Criteria:

a. Tier 2 or 3 Sites used? Yes ___X___ No _____
(If Yes, explain below)

b. Same sampling points used as in previous monitoring period (for 2nd and all subsequent monitoring periods)? Yes _____ No _____
(If No, explain below)

c. Minimum required number of lead service line samples taken (when applicable)?
Yes _____ No _____ (If No, explain why below)

Explanations:

9. Certification:

I hereby certify that to the best of my knowledge, all tap samples were collected in the manner specified by EPA lead/copper regulations (i. e., one liter first draw samples following at least six hours of stagnation and that where necessary, proper instructions were given for homeowner collection).

Signature: Robert Yarbrough

Title: Case Taker Chateaux Dulac

Date: 11-10-98

10. Tap Sampling Data (use additional sheets as needed)

Chateau Du Lac Condos
WSSN: 1353
11/5/98

Round: 3
From: 6/1/98
To: 9/30/98

Lab Used: MDEQ

	Sample Location	Site Code	Collect Date:	Sample Category *	Piping Materials Serv. Line **	Bldg. Plumb. **	LEAD ppb	COPPER ppb	Lab Number
1	15 Chateaux Du Lac		7/26/98		C	C	0	0	C1998043765
2	13 Chateaux Du Lac		9/15/98		C	C	0	60	C1998052078
3	22 Chateaux Du Lac		7/26/98		C	C	0	0	C1998043766
4	1 Chateaux Du Lac		7/26/98		C	C	0	90	C1998043763
5	5 Chateaux Du Lac		9/29/98		C	C	0	0	C1998054492
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

90TH% LEAD:	0.0
90TH%COPPER:	75.0
Ave. LEAD:	0.0
Ave. COPPER:	37.5
Max. LEAD:	0.0
Max. COPPER:	90.0
Low LEAD:	0.0
Low COPPER:	0.0

* Sample Category: Enter a number 1 through 6 to designate the category of tap sample site (see instructions for definitions).
** Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or, P = plastic

MICHIGAN DEPARTMENT OF PUBLIC HEALTH - Division of Laboratory Services
Water Analysis Section - Lansing Laboratory
3500 N.L. King Jr. Lansing MI 48909

Laboratory report for sample : C95017542
System name/owner: CHATEAUX DU LAC
Collection address: 22 CHATEAUX DU LAC DR
City: FENTON MI 48430
TWP-SEC/Key#: FENTON
County: GENESEE

CUMMINGS PROPERTY MGMT
1119 RANFIELD LANE
FLINT MI 48532

WSSN/Pool# : 1353 Approved: SGK
Collected: 04/20/95 8:00
Entered: 04/21/95
Chlorinated: NO
Sample unit: 36CC
Collector: SANDSTROM (22)
Who collected: (3) PRIVATE CITIZEN
Source: (1) TYPE I
Purpose: (0) ROUTINE MONITORING
Point code: (3) UNTREATED PUBLIC DISTRIBUTION
Point description: KITCHEN WELL#:
Site:

ANALYTE	RESULT	DATE TESTED	MAXIMUM CONTAMINANT LEVEL	TEST	DETECTION LIMIT
COPPER (RECOVERABLE)	NOT DETECTED	04/25/95 15:16		CCU	0.05 mg/L
LEAD (TOTAL)	0.018 mg/L	04/28/95 15:52		CPB	0.001 mg/L

By authority of PA 368 1978 as amended

Printed : 05/12/95 02:06:49 PAGE 01 (END OF REPORT)

004842

Prysby

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF PUBLIC HEALTH

3423 N. LOGAN / MARTIN L. KING JR. BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909

VERNICE DAVIS ANTHONY, MPH, Director

March 2, 1995

Ms. Kay Cummings
Cummings Management Company
1119 Ranfield Lane
Flint, Michigan 48532

WSSN: 2273

Subject: Lead/Copper Monitoring
Chatuau-Du-Lac Condominiums

Dear Ms. Cummings:

This letter is a reminder of your monitoring requirements for the Lead & Copper Regulation for the fourth monitoring period (1/01/95-6/30/95). As we discussed during our September 15, 1994 meeting and in our September 26, 1994 letter, a second series of "Water Quality Parameter" (WQP) sampling must be conducted. This will consist of collecting samples twice from one distribution system location and twice from your point-of-entry location (clubhouse basement) prior to June 30, 1995. The specific WQP samples were discussed in our previous letter.

Next, we have not heard from you or the condominium association as to which direction this supply will proceed towards achieving optimal corrosion control. The owner of this supply, however, is responsible for achieving optimal corrosion control. To be in compliance with this regulation, our department must be informed as to what course of action will be taken towards completing this objective. Several alternatives were discussed in our previous letter.

Finally, the results of your third round samples showed that both action levels were not exceeded. Thus, you will be eligible to forgo the public education program and the corrosion control study if a second acceptable round can be obtained. If either action level is exceeded, steps towards optimal corrosion control must continue as detailed in our previous letter.

Specifically, you will need to collect five samples for lead and copper from your participating residents. This sampling round must be completed by June 30, 1995.

PRINTED ON RECYCLED PAPER

Arrangements have been made for the lead and copper sampling units to be sent to you. You should receive these bottles in several weeks.

If you have any questions about this regulation, please call me immediately at (517) 335-8605.

Sincerely,

Michael Prysby

Michael F. Prysby, P.E.
District Engineer
Division of Water Supply
Bureau of Environmental and
Occupational Health

MFP:im
cc: Mr. Bill Freas
cc: Genesee County Health Department
Attention: Mr. Brian McKenzie

CUMMINGS PROPERTY MANAGEMENT, INC.
1119 RANFIELD LANE
FLINT, MICHIGAN 48532
733-5690

December 18, 1994

Michael Presby
Michigan Department of Public Health
3423 North Martin Luther King Jr. Blvd.
P.O. Box 30195
Lansing, MI 48908

Dear Mr. Presby,

I am writing on behalf of the Chateaux Du Lac Condominium Association, in reference to the corrosion control study that you and I discussed at our meeting of September 15, 1994. At this date in 1994, it is difficult to make any binding statements reference what a future management company and or condominium Association Board of Directors will do in the future regarding a possible study. The study, as I understand it from our September meeting would be necessary for the Association to initiate based upon the results of our water quality parameter tests that are currently being taken and the last round of lead and copper samples obtained from Mr. Bill Freas.

My assumption is that the Board of Directors will be cooperative regarding restrictions that may be placed on them by the EPA, but I am not in a position currently to make any binding statements for a Board that may or may not be in office in 1996.

To date we have provided cooperative efforts in the sampling as we have been required, and at the point we are notified of our need to conduct a study I will certainly provide that information to the Board of Directors.

Thank you for your on-going diligence in this matter, and we will wait to hear from you regarding the latest sampling.

Sincerely,

Kay Cummings Bushey
Cummings Property Management

KCB/hp

Copy

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF PUBLIC HEALTH

3423 N. MARTIN L. KING JR. BLVD.
P.O. BOX 30195, LANSING, MICHIGAN 48909
VERNICE DAVIS ANTHONY, MPH, Director

September 26, 1994

Mrs. Kay Cummings
Chateau Du Lac Condominiums
c/o Cummings Management Company
1119 Ranfield Lane
Flint, Michigan 48532

WSSN: 1353

Dear Mrs. Cummings:

This letter confirms my visit on September 15, 1994, with you and Bill Freas. The purpose of the visit was to discuss Chateau Du Lac's second round of lead and copper monitoring.

Specifically, the calculated 90th percentile for Chateau Du Lac was 49.0 parts per billion (ppb) for lead and 105.2 ppb for copper. Although your supply met the copper action level of 1300 ppb, the 15 ppb action level for lead was exceeded.

Since your supply exceeded the lead action level, "Water Quality Parameter" (WQP) monitoring needs to be conducted. The first round of WQP monitoring will need to be completed prior to December 31, 1994. WQP monitoring shall consist of collecting samples twice from one distribution system location and twice from your point-of-entry location (clubhouse basement) during each six month monitoring period. Each set of WQP samples must be done on separate dates.

WQP monitoring shall include measurements for pH, temperature, calcium, alkalinity, and conductivity. In addition, an analysis for orthophosphate and silica must be conducted if these are utilized as part of your current treatment technique. pH and temperature must be measured at the time of sample collection for the most accurate result. pH may be measured at a nearby laboratory provided that the temperature of the sample can be held constant and the analysis can be completed within 30 minutes of sample collection. WQP monitoring shall be repeated in the next six month monitoring period (January 1, 1995 - June 30, 1995). Finally, one sample for a lead and copper analysis will need to be collected from each well prior to December 31, 1994. The appropriate sampling containers were sent to you several days prior to this letter, please call me if you do not receive them.

Next, the supplier of water must provide public education materials to each customer. A sample public education brochure with the mandatory language that must be mailed to each water user was sent to you prior to our meeting. This brochure was then distributed to each resident prior to the September 10, 1994, or 60 day deadline following the end of the round in which the lead action level was exceeded. This public education brochure must be mailed to your water users every 12 months as long as the lead action level is exceeded.

Next, enclosed is a timeline that outlines future responsibilities under this regulation. Specifically, this supply will be required to evaluate and identify "optimal corrosion control treatment" (OCCT). We would recommend that you retain a consultant who specializes in corrosion control for assistance. You may also choose to repeat the lead and copper monitoring in the next period (July 1 -December 31, 1994) to see if the results confirm the need to pursue OCCT. If, however, two consecutive six month monitoring periods comply with the action levels for lead and copper, you may forego installing any treatment. However, you may not delay the implementation of treatment beyond the times that are indicated on the schedule if subsequent monitoring confirms the corrosivity of the water. In addition, the two rounds of WQP monitoring are still required if you choose to repeat the lead and copper monitoring in the subsequent monitoring periods. Any subsequent monitoring shall include both lead and copper.

Next, the regulation will require you to make a recommendation to us as to your course of action towards achieving optimal corrosion control. Several alternatives are discussed below:

1. Recommend to our department by December 31, 1994, as to what corrosion control treatment plan you intend to follow. Our department will either approve the plan, will require you to do a study, or designate some other type of corrosion control.

2. You can indicate to us by December 31, 1994, that you intend to conduct a corrosion control study. Our department can then accept the proposal and you then have until December 31, 1996, to complete the study and make a recommendation to us for corrosion control.

3. You may also choose to begin treatment prior to actually completing a study or making a proposal for OCCT. This treatment would likely be a trial and error method but should utilize the facts obtained from your WQP monitoring, available equipment and chemical manufacturers, and the assistance from your consultant. As always, a construction permit is required prior to making any additions or changes in your treatment process. Also, any chemical that is used must be approved for use under ANSI/NSF Standard 60.

The lead and copper regulation is extremely complex and confusing. Hopefully, this letter provides you with some guidance. We look forward to assisting you further in meeting the requirements of this regulation. If you have any additional questions regarding this or any other water related matter, feel free to call me at (517) 335-8605.

Very truly yours,

Michael Prysby

Michael F. Prysby, P.E.
District Engineer
Division of Water Supply
Bureau of Environmental and
Occupational Health

MFP:im
cc: Mr. Bill Freas
cc: Genesee County Health Department
Attention: Mr. Brian McKenzie

004848

LEAD/COPPER REPORTING

1. SYSTEM NAME: Chateaux Du Lac 2. WSSN: 1353

3. Population: 36 4. MONITORING PERIOD: From: 7/93 To: 12/93

5. Minimum # of Samples Required: 8 6. # of Samples Taken: 8

7. NAME OF CERTIFIED LABORATORY: State Lab + Price Newhouse

8. SAMPLE CRITERIA:

   a. Tier 2 or 3 Sites Used? Yes _____ No X
   (If yes, explain why below)

   b. Same sampling points used as in previous monitoring period (for 2nd and all subsequent monitoring periods)? Yes ✓ No _____
   (If no, explain why below)

   c. Minimum required number of lead service line samples taken (when applicable)? Yes N/A No _____ (If no, explain why below)

   Explanations:

9. CERTIFICATION:

I hereby certify that to the best of my knowledge, all tap samples were collected in the manner specified by EPA lead/copper regulations (i.e., one liter first draw samples following at least six hours of stagnation and that where necessary, proper instructions were given for homeowner collection).

Signature: Kay Cunningham Buckley

Title: Manager Date: 1/28/94

004849

10. TAP SAMPLING DATA: (Use additional sheets as needed)

System Name: Chateau Du Lac WSSN: 1353

Results:

Sample Location	Site Code	Date	Sample Category *	Piping Materials Serv. Line **	Piping Materials Bldg. plmb. **	PB (ppb)	CU (ppb)	LAB #
15 Chateau Du Lac	A1	7/2/93	1	C	C	ND	ND	State Lab
23 Chateau Du Lac	A1	7/2/93	1	C	C	ND	ND	State Lab
						0.034 mg/L	ND	MFP
11 Chateau Du Lac	A1	7/8/93	1	C	C	~~ND~~	~~.034~~ mg/L	State Lab
60 Chateau Du Lac	A2	7/8/93	1	C	C	mg/L .009	ND	State Lab
13 Chateau Du Lac	A1	7/1/93	1	C	C	ND	ND	State Lab
retests								
12 Chateau Du Lac	A1	10/28/93	1	C	C	0	0	Price Newhouse
22 Chateau Du Lac	A1	10/28/93	1	C	C	0	.077	Price Newhouse
24 Chateau Du Lac	A1	10/28/93	1	C	C	.009 mg/L	.274 mg/L	Price Newhouse

TO BE DETERMINED BY MDPH

90th % tile PB: 14.0 ppb

90th % tile CU: 116.4 ppb

TAB

5/25/94

* Sample Category: Enter a number 1 through 6 to designate the category of tap sample site (see instructions for definitions)

** Materials used for service line and building plumbing: Enter C = copper; G = galvanized; L = lead; or, P = plastic

From: Prysby, Mike (DEQ)
Sent: Friday, June 05, 2015 5:10 PM
To: Busch, Stephen (DEQ)
Subject: Fwd: Legionellosis Outbreak Investigation
Attachments: image001.png

Steve,
Forwarding you the latest discussions concerning legionella. We can discuss further as needed next week.

Sent from my iPhone

Begin forwarded message:

From: "Henry, James" <jhenry@gchd.us>
Date: June 5, 2015 at 4:36:44 PM EDT
To: "Collins, Jim (DCH)" <CollinsJ12@michigan.gov>, "Garrison, Laurel (CDC/OID/NCIRD)" <lee5@cdc.gov>
Cc: "Cupal, Suzanne" <scupal@gchd.us>, "Hasan, Shurooq" <shasan@gchd.us>, "Childs, Bonnie" <BCHILDS@gchd.us>, "Valacak, Mark" <MVALACAK@gchd.us>, "Yoder, Jonathan S. (CDC/OID/NCEZID)" <jey9@cdc.gov>, "Langley, Gayle E. (CDC/OID/NCIRD)" <fez7@cdc.gov>, "Fialkowski, Veronica (DCH)" <FialkowskiV@michigan.gov>, "Weinberg, Meghan (DCH)" <WeinbergM1@michigan.gov>, "Tyndall Snow, Leigh (DCH)" <TyndallSnowL@michigan.gov>, "Johnson, Shannon (DCH)" <JohnsonS61@michigan.gov>, "Fiedler, Jay (DCH)" <FiedlerJ@michigan.gov>, "Bohm, Susan (DCH)" <bohms@michigan.gov>, <GJOHNSON@gchd.us>, "Wright, Michael" <Wright.Michael@epa.gov>, <PRYSBYM@michigan.gov>, "Connolly, Stephanie" <sconnolly@gchd.us>
Subject: Legionellosis Outbreak Investigation

Hello Team,

The executive summary regarding the Legionella outbreak is appreciated, but I don't know if there is consensus that it is over. We have been collaborating with our local, state and federal partners regarding the next steps and efforts to improve methods to obtain adequate clinical and environmental isolates.

Genesee County has had three confirmed Legionella cases, since the beginning of May 2015. The most recent cases on 6 /1/15 and 6/2/15 have provided sputum samples to McLaren Hospital for analysis. We have discussed concerns regarding the hospitals' lack of success isolating the bacteria and MDCH and CDC have expressed interest to assist with the process.

Below is a brief summary of the recent cases.

Patient #1 MDSS 7117888505 Patricia Schaffer, 408 Sharon Dr. Flushing, MI 48433. Ms. Schaffer is 81 years old. She was admitted to McLaren Hospital on 4/18/15 and discharged on 4/29/15. She returned to McLaren on 5/4/15 and was diagnosed with Legionella. McLaren attempted, but was unable to collect an adequate respiratory specimen. Ms. Schaffer does not receive Flint water at her residence.

Patient #2 MDSS #7208825131 Robert Skidmore, 576 Melrose Ln., Mt. Morris, MI 48458. Mr. Skidmore is 84 years old. He was admitted to McLaren Hospital on 5/13/15 and discharged on

5/19/15. He returned to McLaren on 6/1/15 and diagnosed with Legionella. Mr. Skidmore does not receive Flint water at his residence.

Patient #3 MDSS 7202952890 Gradine Rogers, 2314 Barth Street, Flint MI, 48504. Ms. Rogers is 74 years old. She was admitted to Hurley Hospital on 2/8/15, and discharged on 3/1/15. Hurley Hospital receives Flint water. Ms. Rogers went to McLaren on 5/29/15 and was diagnosed with Legionella. She resides approximately 2-3 miles North of McLaren Hospital. She receives Flint water at her residence. Her son, Dr. Antrick Johnson indicated that she has been ill since returning home from Hurley Hospital on 3/1/15. He also mentioned that there has been low water pressure events at their residence.

GCHD is prepared to collect environmental samples, as previously discussed, but without the clinical isolate the environmental samples may not have much value.

If there are recommendations, questions or concerns, please reply to the group, as we all have different roles with the investigation.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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For a copy of the Health Department's Notice of Information Practices, contact the Health Department or visit the Health Department's website at http://www.gchd.us/

From: Collins, Jim (DCH) [mailto:Collins112@michigan.gov]
Sent: Thursday, June 4, 2015 3:17 PM
To: Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Henry, James; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Weinberg, Meghan (DCH); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (DCH); Bohm, Susan (DCH)
Subject: Flint, Michigan - Legionellosis Outbreak Investigation Summary

Good Afternoon,

As we enter summer (finally) here in Michigan, I wanted to share a summary of the analysis of the data around this past year's increase in legionella cases identified in proximity to the city of Flint. As you'll recall, while there were no clinical specimens available for testing from the 45 cases included in the investigation, there was a significant outreach to gather more patient information from cases. I've attached an executive summary of the investigation and analysis to this post.

Please feel free to contact us is you have any questions,
Jim

Jim Collins MPH, RS
Director, CD Division
MDHHS
Desk: 517-335-8586
Cell: PPI

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From: Prysby, Mike (DEQ)
Sent: Friday, June 05, 2015 5:11 PM
To: Busch, Stephen (DEQ)
Subject: Fwd: Legionellosis Outbreak Investigation
Attachments: image001.png

Sent from my iPhone

Begin forwarded message:

From: "Garrison, Laurel (CDC/OID/NCIRD)" <lee5@cdc.gov>
Date: June 5, 2015 at 5:05:04 PM EDT
To: "'Henry, James'" <jhenry@gchd.us>, "Collins, Jim (CDC michigan.gov)" <collinsj12@michigan.gov>
Cc: "Cupal, Suzanne" <scupal@gchd.us>, "Hasan, Shurooq" <shasan@gchd.us>, "Childs, Bonnie" <BCHILDS@gchd.us>, "Valacak, Mark" <MVALACAK@gchd.us>, "Yoder, Jonathan S. (CDC/OID/NCEZID)" <jey9@cdc.gov>, "Langley, Gayle E. (CDC/OID/NCIRD)" <fez7@cdc.gov>, "Fialkowski, Veronica (DCH)" <FialkowskiV@michigan.gov>, "Meghan Weinberg (CDC michigan.gov)" <WeinbergM1@michigan.gov>, "Tyndall Snow, Leigh (DCH)" <TyndallSnowL@michigan.gov>, "Johnson, Shannon (DCH)" <JohnsonS61@michigan.gov>, "Fiedler, Jay (CDC michigan.gov)" <fiedlerj@michigan.gov>, "Bohm, Susan (CDC michigan.gov)" <bohms@michigan.gov>, "GJOHNSON@gchd.us" <GJOHNSON@gchd.us>, "Wright, Michael" <Wright.Michael@epa.gov>, "PRYSBYM@michigan.gov" <PRYSBYM@michigan.gov>, "Connolly, Stephanie" <sconnolly@gchd.us>
Subject: RE: Legionellosis Outbreak Investigation

Thanks, Jim. I'm concerned about the hospital. I can get our folks together for a call to discuss next week if you'd like. Do you have the details of what they've been doing to address the colonization there?

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Friday, June 05, 2015 4:37 PM
To: Collins, Jim (CDC michigan.gov); Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Meghan Weinberg (CDC michigan.gov); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (CDC michigan.gov); Bohm, Susan (CDC michigan.gov); GJOHNSON@gchd.us; Wright, Michael; PRYSBYM@michigan.gov; Connolly, Stephanie
Subject: Legionellosis Outbreak Investigation

Hello Team,

The executive summary regarding the Legionella outbreak is appreciated, but I don't know if there is consensus that it is over. We have been collaborating with our local, state and federal partners regarding the next steps and efforts to improve methods to obtain adequate clinical and environmental isolates.

Genesee County has had three confirmed Legionella cases, since the beginning of May 2015. The most recent cases on 6 /1/15 and 6/2/15 have provided sputum samples to McLaren Hospital for

analysis. We have discussed concerns regarding the hospitals' lack of success isolating the bacteria and MDCH and CDC have expressed interest to assist with the process.

Below is a brief summary of the recent cases.

Patient #1 PHI years old. She was admitted to McLaren Hospital on PHI and discharged on PHI. She returned to McLaren on PHI and was diagnosed with Legionella. McLaren attempted, but was unable to collect an adequate respiratory specimen. PHI does not receive Flint water at her residence.

Patient #2 PHI PHI years old. He was admitted to McLaren Hospital on PHI and discharged on PHI He returned to McLaren on PHI and diagnosed with Legionella. PHI does not receive Flint water at his residence.

Patient #3 PHI years old. She was admitted to Hurley Hospital on PHI and discharged on PHI. Hurley Hospital receives Flint water. PHI went to McLaren on PHI and was diagnosed with Legionella. She resides PHI. She receives Flint water at her residence. Her son, PHI indicated that she has been ill since returning home from Hurley Hospital on PHI. He also mentioned that there has been low water pressure events at their residence.

GCHD is prepared to collect environmental samples, as previously discussed, but without the clinical isolate the environmental samples may not have much value.

If there are recommendations, questions or concerns, please reply to the group, as we all have different roles with the investigation.

Thanks Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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Sent: Thursday, June 4, 2015 3:17 PM
To: Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Henry, James; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Weinberg, Meghan (DCH); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (DCH); Bohm, Susan (DCH)
Subject: Flint, Michigan - Legionellosis Outbreak Investigation Summary

Good Afternoon,

As we enter summer (finally) here in Michigan, I wanted to share a summary of the analysis of the data around this past year's increase in legionella cases identified in proximity to the city of Flint. As you'll recall, while there were no clinical specimens available for testing from the 45 cases included in the investigation, there was a significant outreach to gather more patient information from cases. I've attached an executive summary of the investigation and analysis to this post.

Please feel free to contact us is you have any questions,
Jim

Jim Collins MPH, RS
Director, CD Division
MDHHS
Desk: 517-335-8586
Cell: PPI

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From: Prysby, Mike (DEQ)
Sent: Monday, June 08, 2015 8:31 AM
To: Busch, Stephen (DEQ)
Subject: FW: Legionellosis Outbreak Investigation

Steve,

A heads up on further communication from Jim Henry to all concerned parties. CDC may have some concern regarding the recent uptick in cases and may schedule a conference call. I will inform you if ODWMA is asked to participate.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Friday, June 05, 2015 7:06 PM
To: Garrison, Laurel (CDC/OID/NCIRD); Collins, Jim (DCH)
Cc: Cupal, Suzanne; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Weinberg, Meghan (DCH); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (DCH); Bohm, Susan (DCH); Johnson, M.D., Gary; Wright, Michael; Prysby, Mike (DEQ); Connolly, Stephanie
Subject: RE: Legionellosis Outbreak Investigation

A conference call sounds great. We have a good rapport with the hospitals and some details of their activities. McLaren sampled, identified Legionella and hyper chlorinated, which brought most levels to "less than 1". Hurley has increased filtration (reverse osmosis) and ion exchange in certain areas, but are not sampling. I'll try to get an update of their activities on Monday.

Have a good weekend.
Jim

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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From: Garrison, Laurel (CDC/OID/NCIRD) [mailto:lee5@cdc.gov]
Sent: Friday, June 5, 2015 5:05 PM
To: Henry, James; Collins, Jim (CDC michigan.gov)
Cc: Cupal, Suzanne; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Meghan Weinberg (CDC michigan.gov); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (CDC michigan.gov); Bohm, Susan (CDC michigan.gov); Johnson, M.D., Gary; Wright, Michael; PRYSBYM@michigan.gov; Connolly, Stephanie
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Thanks, Jim. I'm concerned about the hospital. I can get our folks together for a call to discuss next week if you'd like. Do you have the details of what they've been doing to address the colonization there?

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To: Collins, Jim (CDC michigan.gov); Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Meghan Weinberg (CDC michigan.gov); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (CDC michigan.gov); Bohm, Susan (CDC michigan.gov); GJOHNSON@gchd.us; Wright, Michael; PRYSBYM@michigan.gov; Connolly, Stephanie
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Below is a brief summary of the recent cases.

Patient #1 MDSS 7117888505 Patient #1 was admitted to McLaren Hospital. Approximately one week after being discharged, returned to McLaren and was diagnosed with Legionella. McLaren attempted, but was unable to collect an adequate respiratory specimen. Patient #1 does not receive Flint water at residence.

Patient #2 MDSS #7208825131 Patient #2 was admitted to McLaren Hospital. Approximately 10 days after being discharged, returned to McLaren and was diagnosed with Legionella. Patient #2 does not receive Flint water at residence.

Patient #3 MDSS 7202952890 Patient #3 was admitted to Hurley Hospital. Approximately two months after being discharged, went to McLaren and was diagnosed with Legionella. Patient #3 resides approximately 2-3 miles North of McLaren Hospital and receives Flint water. A family memeber of Patient #3, indicated that illnesses lingered after returning home from Hurley Hospital and also mentioned that there has been low water pressure events at their residence.

GCHD is prepared to collect environmental samples, as previously discussed, but without the clinical isolate the environmental samples may not have much value.

If there are recommendations, questions or concerns, please reply to the group, as we all have different roles with the investigation.

Thanks Jim

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To: Garrison, Laurel (CDC/OID/NCIRD)
Cc: Cupal, Suzanne; Henry, James; Hasan, Shurooq; Childs, Bonnie; Valacak, Mark; Yoder, Jonathan S. (CDC/OID/NCEZID); Langley, Gayle E. (CDC/OID/NCIRD); Fialkowski, Veronica (DCH); Weinberg, Meghan (DCH); Tyndall Snow, Leigh (DCH); Johnson, Shannon (DCH); Fiedler, Jay (DCH); Bohm, Susan (DCH)
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Please feel free to contact us is you have any questions,
Jim

Jim Collins MPH, RS
Director, CD Division
MDHHS
Desk: 517-335-8586
Cell: PPI

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---

From: Prysby, Mike (DEQ)
Sent: Tuesday, July 28, 2015 12:55 PM
To: Howard Croft (hcroft@cityofflint.com)
Subject: City of Flint TTHM Public Notice - April 1, 2015

Howard,

A quick question....the second TTHM public notice that was sent to city residents on or around April 1, 2015 included a Water Quality Update. Were both documents sent out at the same time?

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Wednesday, July 29, 2015 1:56 PM
To: Brent Wright
Subject: RE: Flint TTHM Public Notice - April 1, 2015

Yes....however, our AG keeps asking if they went out at the same time...I would assume so...however, I haven't heard back from Howard K. to confirm this.....

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Brent Wright [mailto:bwright@cityofflint.com]
Sent: Wednesday, July 29, 2015 1:54 PM
To: Prysby, Mike (DEQ)
Subject: Re: Flint TTHM Public Notice - April 1, 2015

Mike what is on the web site is what was mailed to all water customers.

On Wed, Jul 29, 2015 at 1:40 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Thanks Brent....do you know if the Water Quality Update sheet was also sent to each resident and at the same time....or was this just posted on the website?

Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

From: Brent Wright [mailto:bwright@cityofflint.com]
Sent: Tuesday, July 28, 2015 2:41 PM
To: Prysby, Mike (DEQ)
Cc: Michael Glasgow; Rosenthal, Adam (DEQ)
Subject: Re: Flint TTHM Public Notice - April 1, 2015

Mike

I have attached the information that was sent to all water customers and what was sent to your office. Let me know if any thing else is needed. You should be receiving the CCR report this week.

On Tue, Jul 28, 2015 at 11:42 AM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Brent, Michael

Can you send us a copy of the second TTHM public notice that the city distributed to city residents on or about April 1, 2015? This PN would reflect TTHM levels from monitoring through Feb. of 2015. Thanks.

Michael Prysby, P.E.

District Engineer

Office of Drinking Water and Municipal Assistance

517 290-8817

--

Brent Wright

Water Plant Supervisor

City of Flint

4500 N. Dort Hwy.

Flint, MI. 48505

Ph: 810.787.6537 ext. 3510

Fx: 810.787.3710

--

Brent Wright
Water Plant Supervisor
City of Flint
4500 N. Dort Hwy.
Flint, MI. 48505
Ph: 810.787.6537 ext. 3510
Fx: 810.787.3710

From: Prysby, Mike (DEQ)
Sent: Wednesday, July 29, 2015 3:45 PM
To: Scherbarth, John (AG)

Attorney-Client Privilege

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Scherbarth, John (AG)
Sent: Wednesday, July 29, 2015 3:44 PM
To: Prysby, Mike (DEQ)

Attorney-Client Privilege

From: Prysby, Mike (DEQ)
Sent: Wednesday, July 29, 2015 1:44 PM
To: Scherbarth, John (AG)

Attorney-Client Privilege

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Scherbarth, John (AG)
Sent: Tuesday, July 28, 2015 12:51 PM
To: Prysby, Mike (DEQ)

Attorney-Client Privilege

Attorney-Client Privilege

From: Prysby, Mike (DEQ)
Sent: Tuesday, July 28, 2015 12:37 PM
To: Scherbarth, John (AG)
Cc: Rosenthal, Adam (DEQ); Busch, Stephen (DEQ)

Attorney-Client Privilege

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Scherbarth, John (AG)
Sent: Tuesday, July 28, 2015 12:12 PM
To: Prysby, Mike (DEQ)

Attorney-Client Privilege

John C. Scherbarth

From: Prysby, Mike (DEQ)
Sent: Tuesday, July 28, 2015 12:02 PM
To: Scherbarth, John (AG)
Cc: Rosenthal, Adam (DEQ)

Attorney-Client Privilege

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Scherbarth, John (AG)
Sent: Tuesday, July 28, 2015 11:26 AM
To: Prysby, Mike (DEQ)
Cc: Rosenthal, Adam (DEQ)

Attorney-Client Privilege

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, July 28, 2015 11:14 AM
To: Scherbarth, John (AG)
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ)

Attorney-Client Privilege

Adam Rosenthal, EQA
MDEQ – Office of Drinking Water and Municipal Assistance
Lansing District – Constitution Hall 1SW
PO Box 30242
Lansing, MI 48909
517-284-6644
fax: 517-241-3571

For MORs, Lab Results & Reporting Forms:

DEQ-DWMA-Lansing@michigan.gov

From: Busch, Stephen (DEQ)
Sent: Tuesday, June 09, 2015 12:39 PM
To: Howes, Sarah (DEQ); Pallone, Maggie (DEQ); Wurfel, Brad (DEQ)
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Rosenthal, Adam (DEQ); Thelen, Mary Beth (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

Attached is a copy of the Violation Notice and Public Notice Template being mailed to the City of Flint by the DEQ Office of Drinking Water and Municipal Assistance regarding an exceedance of the Maximum Contaminant Level (MCL) standard for Total Trihalomethanes at certain locations within the City's drinking water distribution system.

This violation notice is in response to updated monitoring completed in May 2015, which shows the locational running annual average for one of the City's eight compliance sampling locations continues to exceed MCL standard of 0.080 mg/L. It is however, important to note that all individual compliance sample results collected in both May and February were below the 0.080 mg/L levels.

You are being provided an electronic copy of this notice as exceedance of this drinking water standard is expected to generate inquiries from water system customers, news media, and the general public.

Sarah Howes or Maggie Pallone will be informing members of the Michigan legislature.

If you have any questions or would like any additional information, you may contact Michael Prysby, District Engineer, DEQ-ODWMA at 517-290-8817, or you may contact me at the number below.

Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

From: Prysby, Mike (DEQ)
Sent: Wednesday, July 29, 2015 6:12 PM
To: Howard Croft
Subject: Re: City of Flint TTHM Public Notice - April 1, 2015

Thanks Howard...

Sent from my iPhone

On Jul 29, 2015, at 4:55 PM, Howard Croft <hcroft@cityofflint.com> wrote:

> Mike,
>
> Yes,
>
> We mailed the update along with the notice.
>
> On Tue, Jul 28, 2015 at 12:55 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:
>
> Howard,
>
> A quick question....the second TTHM public notice that was sent to city residents on or around April 1, 2015 included a Water Quality Update. Were both documents sent out at the same time?
>
> Michael Prysby, P.E.
>
> District Engineer
>
> Office of Drinking Water and Municipal Assistance
>
> 517 290-8817
>
> --
> **Howard Croft**

Public Works Director
City of Flint
1101 S. Saginaw Street
Flint, MI 48502
PH# 810.766.7135 Ext.2043
hcroft@cityofflint.com

From: Prysby, Mike (DEQ)
Sent: Monday, August 31, 2015 1:44 PM
To: Hansen, Jeff
Subject: RE: Flint THM

Jeff,

The table you sent me, prepared by the city, is not correct. We will send you a copy of the table with the addresses that correspond to the correct site codes.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Hansen, Jeff [mailto:jrhansen@lan-inc.com]
Sent: Monday, August 31, 2015 1:33 PM
To: Prysby, Mike (DEQ)
Subject: RE: Flint THM

Mike,

I received the attached info from the City. I wanted to confirm the right numbers are lined up with the right sample sites since we had problems with that before and also because I thought you told me Salem Housing was the highest location at site 7. However, we have Salem housing as site 6.

Please let me know if the attached table is correct compared to your records.

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A AECOM COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 **C** PPI
www.lan-inc.com • JRHansen@lan-inc.com

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Monday, August 31, 2015 9:05 AM
To: Hansen, Jeff
Subject: RE: Flint THM

Jeff,

Just tried to call you...please call me at your earliest convenience.

Michael Prysby, P.E.

District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Hansen, Jeff [mailto:jrhansen@lan-inc.com]
Sent: Monday, August 31, 2015 8:44 AM
To: Prysby, Mike (DEQ)
Subject: RE: Flint THM

Hi Mike,

Still nothing?

Jeffrey R. Hansen
Senior Project Manager

From: Prysby, Mike (DEQ) [mailto:PRYSBYM@michigan.gov]
Sent: Thursday, August 27, 2015 9:27 AM
To: Hansen, Jeff
Cc: Rosenthal, Adam (DEQ)
Subject: Re: Flint THM

Not yet....I will check with Adam Rosenthal, our EQA, when I return from to office this afternoon.

Sent from my iPhone

On Aug 27, 2015, at 8:19 AM, Hansen, Jeff <jrhansen@lan-inc.com> wrote:

> Hi Mike,
>
> Have you seen any results from the DEQ lab for Flint TTHM yet?
>
> **Jeffrey R. Hansen**
> Senior Project Manager
>
> <image001.gif>
> 1311 South Linden Road, Suite B • Flint, MI 48532
> **T** 810.820.2682 **C** **PPI**
> www.lan-inc.com • JRHansen@lan-inc.com

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From: Prysby, Mike (DEQ)
Sent: Monday, August 31, 2015 2:29 PM
To: Busch, Stephen (DEQ)
Subject: Flint TTHM draft letter, Fenton Sanitary Survey - draft letter
Attachments: Flint DBP 3Q15.doc; Evalltr 2015.doc

Steve,

Attached are draft letters for you review and comment as needed. City of Flint – Return to Compliance, City of Fenton – Sanitary Survey. Thanks.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

August 31, 2015

Mr. Brent Wright, Operations Supervisor
City Of Flint – Department of Public Works
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Total Trihalomethanes (TTHM) **Return to Compliance**
3rd Quarter 2015 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the city of Flint (City) has returned to compliance with the Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels for disinfection byproducts (MCLs)*, of the 1979 Administrative Code.

In accordance with R 325.10610, *MCLs*, of the 1979 Administrative Code, the MCL for disinfection byproduct TTHM is 0.080 milligrams per liter (mg/L) as a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the City's highest TTHM LRAA, based on the last four quarters, ending August 31, 2015, is 0.062 mg/L which meets the standard. All eight sample site locations meet the LRAA standard of 0.08 mg/l.

Our investigation consisted of a review of ODWMA files for laboratory reports received for compliance monitoring. Our investigation is considered complete. The return to compliance began on August 31, 2015, and will continue as long as the TTHM LRAA remain below the MCL at all sample sites.

TTHM Results (mg/L)						
	11/20/14	2/17/15	5/18/15	8/18/15	LRAA	OEL
DBP1 McDonalds 3719 Davison	0.059	0.0162	0.0514	0.0755	0.050	0.055
DBP2 Liquor Palace 3302 South Dort Highway	0.033	0.0168	0.0635	0.0532	0.042	0.047
DBP3 North Flint Auto 6204 North Saginaw St.	0.041	0.0149	0.0452	0.0426	0.036	0.036
DBP4 University Market 2501 Flushing Road	**0.094**	0.0245	0.0598	0.0706	0.062	0.056
DBP5 Taco Bell 3606 Corunna Road	0.034	0.0151	0.0547	0.0619	0.042	0.049
DBP6 Rite-Aid Pharmacy 5018 Clio Road	0.054	0.0192	0.0605	0.0595	0.048	0.050
DBP7 Salem Housing 3216 MLK Boulevard	0.050	0.0285	0.0727	**0.0903**	0.060	0.070
DBP8 BP Gas Station 822 South Dort Highway	0.036	0.0199	0.0461	0.0549	0.039	0.044

We are pleased with the corrective measures that the city has taken, including the installation of granular activated carbon (GAC) at the water treatment plant (WTP) as recommended in the Operational Evaluation Reports. Installation of the GAC played a major role in reducing the TTHM LRAA below 0.080 mg/L at all eight locations. We encourage the city to continue to implement corrective measures discussed in Operational Evaluation Reports from December 2014, February 2015, and May 2015 as a means to maintain compliance with the TTHM standard.

Further, the TTHM operational evaluation level (OEL) calculated in accordance with R 325.10719l, *Disinfection byproducts: operational evaluation levels*, of the 1979 Administrative Code, remained below the 0.080 mg/L OEL trigger at all eight sample site locations. Since the OEL has been met for a second consecutive quarter and that the peak month for TTHM levels was met, the city will not be required to provide our office with an updated OEL Report.

The city may proceed with providing a public notice (PN) to their customers of the return to compliance. While the city meets the LRAA at all eight sites, the individual TTHM concentration exceeded 0.08 mg/l at one location (0.09 mg/l at DBP 7 – Salem Housing 3216 MLK Boulevard) during the August 2015 sampling event. Although this individual result does not cause an exceedance of the LRAA at this site, the city encouraged to include discussion of this result in their return to compliance notification to city residents.

We encourage the city to utilize the same routes of notification, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not normally reached by mail. The City is also encouraged to include additional information regarding its response efforts that resulted in the return to compliance. **Please send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the PN**. Finally, as a reminder, the TTHM violation must also be included in your 2015 Consumer Confidence Report, due by July 1, 2016.

We anticipate and appreciate your continued cooperation in resolving this matter. If you have any questions regarding this letter, please contact us at the numbers below; at prysbym@michigan.gov; or rosenthala@michigan.gov; or at DEQ, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-290-8817

Adam Rosenthal, Environmental Quality Analyst
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-284-6644

cc: Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Mr. Robert Bincsik, City of Flint
Mr. Howard Croft, City of Flint
Mr. Michael Glascow, City of Flint
Genesee County Health Department
Ms. Liane Shekter Smith, DEQ
Mr. Richard Benzie, DEQ
Mr. Stephen Busch, DEQ

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

City of Flint Has Returned to Compliance

Our water system recently returned to compliance for total trihalomethanes. As our customers, we will inform you as to the corrective measures that were taken to return to compliance.

We routinely monitor for the presence of drinking water contaminants. Samples were collected for total trihalomethanes (TTHM) analysis from eight locations on a quarterly basis (November 20 of 2014 and February 17 & May 18 & August 18 of 2015). The average of the results at **ANY** of the eight locations must not exceed the maximum contaminant level (MCL) for TTHMs, otherwise our water system exceeds the MCL. The standard for TTHMs is 80 micro grams per liter (µg/L). The location reporting the highest TTHM level was 62 ug/L; thus, our water system has returned to compliance with the TTHM MCL.

For more information, please contact Mr. Brent Wright at 517-787-6537, or the Flint Water Plant at 4500 North Dort Highway, Flint, Michigan 48505.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the City of Flint.

CERTIFICATION: WSSN: 02310

I certify that this water supply has fully complied with the public notification requirements in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature	Title	Date Distributed

Reminder to water supplier: This notice/certification must be sent to the Department of Environmental Quality.

From: Prysby, Mike (DEQ)
Sent: Tuesday, September 01, 2015 3:44 PM
To: Busch, Stephen (DEQ)
Subject: Flint Lead

Steve,

Ron Fonger left me a voicemail concerning questions he has concerning the lead issue in Flint. Specifically, he is aware of the increased discussion of lead in Flint's drinking water and the home tests recently performed at residents request in corroboration with V Tech and concerned groups. Ron discussed this issue w. Mr. Kroft and has the impression that the DEQ has had discussions with the city about the lead issue; however, Mr. Kroft declined to discuss the issue any further. Mr. Fonger wishes to discuss with the DEQ as to what discussions the DEQ has had with the city concerning the lead issue. Our only discussion (written) that I am aware of...is our 90% PB/CU letter sent to the city and the need for the city to install optimal corrosion control. Should I return his call or pass this on to Brad?

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Prysby, Mike (DEQ)
Sent: Tuesday, September 01, 2015 3:50 PM
To: Hansen, Jeff;'bwright@cityofflint.com';Michael Glasgow
Subject: RE: Flint OER - Response to May 2015 TTHM Sampling
Attachments: 3rd Qtr 2015 TTHM summary.doc

Jeff, Brent, Michael

Attached is DEQ's summary of TTHM concentrations for the past 4 quarters including the LRAA and OEL calculation. This table is aligned correctly between locations (addresses) and site codes and needs to be used by city.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Hansen, Jeff [mailto:jrhansen@lan-inc.com]
Sent: Tuesday, September 01, 2015 3:42 PM
To: Prysby, Mike (DEQ)
Cc: hcroft@cityofflint.com; mglasgow@cityofflint.com; Brent Wright (bwright@cityofflint.com); Robert Bincsik (rbincsik@cityofflint.com); Matta, Samir; Green, Warren; Luoma, Steve
Subject: Flint OER - Response to May 2015 TTHM Sampling

Hi Mike,

On behalf of the City of Flint, attached is a PDF version of the latest Operational Evaluation Report required in response to the TTHM violation in May 2015. Hard copies will be sent out today.

Jeffrey R. Hansen
Senior Project Manager

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
1311 South Linden Road, Suite B • Flint, MI 48532
T 810.820.2682 **C** PPI
www.lan-inc.com • JRhansen@lan-inc.com

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02310 – City of Flint 3rd Quarter 2015 TTHMs August 28, 2015

TTHM Results (mg/L)						
	11/20/14	2/17/15	5/18/15	8/18/15	LRAA	OEL
DBP1 McDonalds 3719 Davison	0.059	0.0162	0.0514	0.0755	0.050	0.055
DBP2 Liquor Palace 3302 South Dort Highway	0.033	0.0168	0.0635	0.0532	0.042	0.047
DBP3 North Flint Auto 6204 North Saginaw St.	0.041	0.0149	0.0452	0.0426	0.036	0.036
DBP4 University Market 2501 Flushing Road	**0.094**	0.0245	0.0598	0.0706	0.062	0.056
DBP5 Taco Bell 3606 Corunna Road	0.034	0.0151	0.0547	0.0619	0.042	0.049
DBP6 Rite-Aid Pharmacy 5018 Clio Road	0.054	0.0192	0.0605	0.0595	0.048	0.050
DBP7 Salem Housing 3216 MLK Boulevard	0.050	0.0285	0.0727	**0.0903**	0.060	0.070
DBP8 BP Gas Station 822 South Dort Highway	0.036	0.0199	0.0461	0.0549	0.039	0.044

From: Prysby, Mike (DEQ)
Sent: Wednesday, September 02, 2015 3:39 PM
To: Busch, Stephen (DEQ)
Subject: Flint PBCU 90th letter
Attachments: PB-CU 90th Q1-2 2015.pdf

Steve,

Attached is a signed PDF of our PBCU 90th letter to Flint.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

DAN WYANT
DIRECTOR

September 2, 2015

Mr. Brent Wright, Operations Supervisor
City Of Flint – Department of Public Works
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310

Dear Mr. Wright:

SUBJECT: City of Flint – Water Supply
Return to Compliance Total Trihalomethanes (TTHM)
3rd Quarter 2015 Monitoring Period

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), records show that the City of Flint (City) has returned to compliance with the Michigan Safe Drinking Water Act,1976 PA 399, as amended (Act 399); R 325.10610, *Maximum contaminant levels for disinfection byproducts (MCLs)*, of the 1979 Administrative Code.

In accordance with Administrative Rule 610 (R 325.10610, *MCLs for disinfection byproducts*), the MCL for the disinfection byproduct TTHM is 0.080 milligrams per liter (mg/L). Compliance is determined based on a Locational Running Annual Average (LRAA) at each monitoring location. As listed in the table below, our records show that the LRAA all eight of the City's TTHM compliance sampling sites now comply with this standard based on the last four quarterly monitoring periods, ending August 31, 2015. This return to compliance regarding TTHM's began on September 1, 2015, and will continue as long as the LRAA at each of the City's TTHM compliance sampling sites remain below this standard.

TTHM Results (mg/L)						
	11/20/14	2/17/15	5/18/15	8/18/15	LRAA	OEL
DBP1 McDonalds 3719 Davison	0.059	0.0162	0.0514	0.0755	0.050	0.055
DBP2 Liquor Palace 3302 South Dort Highway	0.033	0.0168	0.0635	0.0532	0.042	0.047
DBP3 North Flint Auto 6204 North Saginaw St.	0.041	0.0149	0.0452	0.0426	0.036	0.036
DBP4 University Market 2501 Flushing Road	**0.094**	0.0245	0.0598	0.0706	0.062	0.056
DBP5 Taco Bell 3606 Corunna Road	0.034	0.0151	0.0547	0.0619	0.042	0.049
DBP6 Rite-Aid Pharmacy 5018 Clio Road	0.054	0.0192	0.0605	0.0595	0.048	0.050
DBP7 Salem Housing 3216 MLK Boulevard	0.050	0.0285	0.0727	**0.0903**	0.060	0.070
DBP8 BP Gas Station 822 South Dort Highway	0.036	0.0199	0.0461	0.0549	0.039	0.044

Corrective measures by the City have been successful in achieving compliance with this standard. These measures have included replacement of anthracite filter media with granular activated carbon as well as the optimization of water treatment plant and distribution system processes and operations as recommended through Operational Evaluations conducted by the City. It is important that the City continue to follow these recommendations in order to limit disinfection byproduct formation and maintain compliance with the MCL LRAA standards. While the MCL LRAA standard has now been met at all eight compliance sampling sites, an individual TTHM concentration above 0.080 mg/L was measured at one location, DBP 7, during peak month sampling in August 2015.

The DEQ encourages the City to continue informing customers about this updated water quality information and compliance with the TTHM MCL standard.

If you have any questions regarding this letter, please contact us at the numbers below; at prysbym@michigan.gov; or rosenthala@michigan.gov.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-290-8817

Adam Rosenthal, Environmental Quality
Analyst
Lansing District Office
Office of Drinking Water and
Municipal Assistance
517-284-6644

cc: Ms. Jennifer Crooks, U.S. Environmental Protection Agency, Region 5
Mr. Robert Bincsik, City of Flint
Mr. Howard Croft, City of Flint
Mr. Michael Glascow, City of Flint
Genesee County Health Department
Mr. Stephen Busch, DEQ

From: Prysby, Mike (DEQ)
Sent: Thursday, September 03, 2015 7:56 AM
To: Rennaker, Joanne (DEQ)
Subject: letter for final
Attachments: Evalltr 2015.doc

Joanne,

Attached is a letter for final to the city of Fenton. Certain paragraphs appear to have different line spacing such as Paragraphs #15 and 16...and others. See if u can fix this.... Thanks!

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

September 3, 2015

Mr. Dan Czarnecki, Public Works Director
City of Fenton
301 South Leroy Street
Fenton, Michigan 48430

WSSN: 2270

Dear Mr. Czarnecki:

SUBJECT: 2015 Sanitary Survey; City of Fenton Water System

This letter confirms my visits with Mr. Steve Guy, Water Plant Superintendent, on April 27, 2015 and May 28, 2015 and with you on May 20, 2015.

Below is a summary of the subsequent review and discussion of the water supply facilities serving the City of Fenton (Fenton) water system. The purpose of the meetings was to evaluate the water system with respect to the requirements of the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399) and the Administrative Rules adopted from Act 399. In addition, the enclosed Water System Sanitary Survey was updated to gather information on the Fenton water system.

Our updated survey visit confirms that Fenton completed rehabilitation of Well #5. The work included overhauling the pump and motor, chemical cleaning of the well screen, and replacement of the drop pipe. A variable frequency drive controller was also installed. Based upon the pump installation report, Well #5's original capacity has been restored. This work demonstrates Fenton's commitment towards maintaining investment in its groundwater source. We encourage Fenton to maintain a proactive well maintenance program on all four production wells. The next wells due for routine maintenance in the next one to two years include Wells #7 and #8.

The following table summarizes our findings from our survey of the water system:

Survey Element	Findings
Source	Recommendations made
Treatment	Recommendations made
Distribution System	Recommendations made
Finished Water Storage	Recommendations made
Pumps (All dist. Pumping)	Recommendations made
Monitoring & Reporting	Recommendations made
Management & Operations	**Deficiency Identified**
Operator Compliance	No Deficiencies/Recommendations
Security	No Deficiencies/Recommendations
Financial	Recommendation made
Other	Not applicable

The following deficiency is a violation of Act 399 and must be resolved in order to return the water system to compliance.

R 325.11203 of the Administrative Rules of Act 399 requires Type-I public water supplies to conduct a water system Reliability Study (RS) and update the study every five years. The city has been requested to update their most recent RS (2005 Drinking Water Revolving Loan Project Plan) on several occasions and it is our understanding that an updated RS is being prepared and a draft copy will be provided to us for review and comment. Fenton will re-achieve compliance with R 325.11203 following our review and approval of the updated RS.

Next, it is hoped that the following recommendations will prove useful in enhancing the operation and maintenance of your water supply.

1. Update Fenton's most recent (2008) water system General Plan (GP) by January 1, 2016. The updated GP needs to include the following information in accordance to the revisions in the Michigan Safe Drinking Water Act's Rules.

    - General layout of the entire waterworks system, including distribution system piping and the location of valves, hydrants, storage tanks, and master meter connections.

    - A hydraulic analysis of the distribution system showing pressure contours under peak demands and inventory of watermain by size, material, and age. The hydraulic model used in the updated RS can be used for the GP. The hydraulic model needs to reflect the water distribution system's current configuration and include the most recent improvements.

    - Service area map including existing and future service area boundaries.

    - Water System Capital Improvement Program (WSCIP) for the 5-year and 20-year planning periods. The WSCIP should be based upon recommended improvements that are presented in the updated RS.

2. Since both the RS and the GP need to be completed within the next six months and they contain overlapping elements, it may be worthwhile to update them concurrently.

3. Re-implement Fenton's Wellhead Protection Program (WHPP). Fenton's WHPP approval status expired on January 2, 2015. Given the resources and effort put forth to establish the program, we encourage Fenton to re-establish the program and maintain all WHPP activities. For further information and/or assistance in re-implementing the WHPP, please contact Mr. Jason Berndt from our Community Drinking Water Unit at (989) 705-3420.

4. Install meters in the remaining un-metered governmental buildings in the downtown area. A fully metered system will help to further refine future un-accounted water use (loss) determination.

    We also recommend that Fenton upgrade their metering system to a radio-read system. A full radio read system is a significant water system improvement, as it significantly reduces the time needed to conduct routine meter reads and allows water utility operators to focus on other O&M programs. Radio read also enhances leak detection

and improves customer service by providing the water utility the ability to inform customers of leaks and other abnormal conditions.

5. Operate the stand-by power generators under load for each production well on a yearly basis to confirm proper operation of all the electrical components. This practice also helps water utility operators remain familiar with the procedures in switching to and from stand-by power generation.

6. Pursue full electrical surge protection for the main pumping components at the water treatment plant (WTP). This provision will increase the operating reliability of the WTP, help avoid costly repair to the electrical components, and minimize disruption of routine treatment plant operation.

7. Repair or replace the aeration unit's air-intake screens. These screens are essential in preventing insects and other foreign objects from entering the aerator unit. Routine inspection of the intake screens and repair/replacement on an "as-needed" basis is essential in maintaining the sanitary integrity of the aeration system.

8. Deterioration of the treatment plant's solids contact unit epoxy coating system was noted. Replacement of the epoxy coating system on each contact clarifier is recommended within the next one to two years. The city shall obtain an Act 399 construction permit for this work. The new epoxy coating system must be an approved product under ANSI/NSF Standard 61 suitable for contact with potable water.

9. Continue to work towards expanding the WTP filter maintenance program to include a broad scope of filter investigation techniques. This should include:

    - General filter inspections
    - Review of water quality and operational information
    - Filter media expansion measurements
    - Gravel mounding measurements
    - Free board to media measurements
    - Box excavations (media profile)
    - Core sampling and media examination

    WTP operators continue to gain operating experience and knowledge unique to this facility. Further filter preventative maintenance activities will continue to increase their familiarity with overall treatment plant maintenance. Finally, filter media cleaning (recommended by Utility Services) should also be completed. If the city proceeds with filter media cleaning, the procedure to clean the filters will need to be reviewed and approved by our office.

10. Inspect filter gullets and clearwell as individual treatment trains are taken out of service as part of routine operation. Any cracks that are discovered should be properly repaired to prevent cross connection. A more comprehensive inspection of the clearwell should be completed within the next one to two years.

11. Adjust the treatment plant's fluoride (FL) dosage to meet the recently revised optimal FL concentration in drinking water of 0.7 parts per million (ppm) as established by the US Department of Health and Human Services. Dosages should be based on Fenton's raw water fluoride concentration.

12. Sodium Hexametaphosphate and Orthophosphate are added for filter aid and corrosion control treatment respectively; however, Page 5 of the monthly operation report (MOR) reports total phosphate (PO4) applied in pounds and milligrams per liter (mg/l). Each compound; however, shall be reported separately in the MOR. Also, the total phosphate concentration in mg/l shall be monitored at the plant tap and distribution system and reported in the MOR. The minimum monitoring frequency for total phosphate should be weekly at the plant tap and at distribution system locations in conjunction with total coliform monitoring.

13. Recoat the exterior portion of both ground storage tanks and repair the roof hatch hinge based on Utility Service's recommendations. Also, tank site visits should be conducted by water operators on a weekly basis to check tank appurtenance (vents and overflows) and security conditions.

14. Provide stand-by power and upgrade telemetry control at the Adelaide Road pump station to improve the level of water service for residents in the Jane Hill Subdivision.

15. Establish a comprehensive valve operation and maintenance program. An active valve program helps to keep valves in good operating condition, reduces interruptions in service during emergency repairs, and reduces water loss and property damage. Given the number of isolation valves in the water distribution system, we recommend establishing a segmented approach (prioritize valve turning by quadrants). This methodology has worked well for other water utilities and allows most isolation valves to be operated over a four to five year period. Fenton is encouraged to implement this approach as a means to expand their valve program.

16. Update the 2010 Bacteriological Sampling Site Plan. The updated plan needs to reflect changes in system contacts (local and DEQ). A bacteriological sampling site plan template was provided to the water utility and can be used for preparing an updated plan. A copy of the updated sampling site plan needs to be provided to the Department of Environmental Quality (DEQ) for review and approval.

Please submit a letter by September 30, 2015, that outlines Fenton's plans and schedule to address the above items.

If you have any questions, feel free to contact me at (517) 290-8817; prysbym@michigan.gov; or Department of Environmental Quality, Office of Drinking Water and Municipal Assistance, Lansing District Office, 525 West Allegan Street, 1st Floor South, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Michael F. Prysby, P.E.
District Engineer
Field Operations Section
Office of Drinking Water and
Municipal Assistance

mfp/jlr
Enclosures

cc: Mr. Stephen Guy, Water Plant Superintendent, City of Fenton
cc: Mr. Lynn Markland, City Manager, City of Fenton

From: Prysby, Mike (DEQ)
Sent: Wednesday, September 30, 2015 3:23 PM
To: Busch, Stephen (DEQ)
Subject: FW: School Supply Line Information - Invitation to view
Attachments: School water supply lines.xls

Steve,

Below is the information that Robert compiled concerning number of schools served by Flint and their service line material. I couldn't the Goggle map application to open...it will be interesting to compare the listing of schools from LHD's lead sampling.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Robert Bincsik [mailto:rbincsik@cityofflint.com]
Sent: Wednesday, September 30, 2015 3:17 PM
To: Prysby, Mike (DEQ)
Subject: Fwd: School Supply Line Information - Invitation to view

Mike please find attached of list of what I believe to be all the active school buildings in Flint. Also there is a google map of their location. Hope this is what you're looking for if you need anything else please let me know and I will try to help in any way I can.

aroberts@cityofflint.com has invited you to view the following map.

School Supply Line Information

Open

Google My Maps is an easy-to-use map app for collaboratively authoring, maintaining or making decisions around maps.

--
Thank you,

Robert Bincsik
Water Service Center Supervisor

City of Flint
3310 E. Court Street
Flint, MI 48506
Ph: 810.766.7202 ext. 3413
Fx: 810.743.5758

	A	B	C	D	E	F	G	H	I
1	Row #	School Name	Street Address	Supply line size, inches	Supply line material	Map page	Street name	house no.	Notes
2	1	Brownell K2 Stem Academy	6302 Oxley Dr., Flint, MI 48504	4	cast iron	D-2 mains	Oxley Dr.	6302	
3	2	Doyle Ryder Elementary School	1040 N. Saginaw St., Flint, MI 48503	4	cast iron	H-10 mains	N. Saginaw St.	1040	
4	3	Durant-Tuuri-Mott Elementary School	1518 University Ave., Flint, MI 48504	6	cast iron	F-12 mains	University Ave.	1518	
5	4	Eisenhower Elementary School	1235 Pershing St., Flint, MI 48503	4	cast iron	F-14 mains	Pershing St.	1235	
6	5	Freeman Elementary School	4001 Ogema Ave., Flint, MI 48507	4	cast iron	K-17 mains	Ogema Ave.	4001	
7	6	Holmes 3-6 Stem Academy	6602 Oxley Dr., Flint, MI 48504	6	cast iron	D-2 mains	Oxley Dr.	6602	
8	7	Neithercut Elementary School	2010 Crestbrook Ln., Flint, MI 48507	4	cast iron	F-17 mains	Crestbrook Ln.	2010	
9	8	Pierce Elementary School	1101 W. Vernon Dr., Flint, MI 48503	(n/a)	(n/a)	K-12 mains	W. Vernon Dr.	1101	only the 8 inch fire line noted on dwg.
10	9	Potter Elementary School	2500 N. Averill Ave., Flint, MI 48506	4	cast iron	M-8 mains	N. Averill Ave.	2500	
11	10	Northridge Academy	530 W. Pierson Rd., Flint, MI 48505	4	cast iron	F-4 mains	W. Pierson Rd.	530	noted on dwg as St. Agnes Church and School
12	11	International Academy of Flint	2820 S. Saginaw St., 48503	4	cast iron	I-15 mains	S. Saginaw St.	2820	noted on dwg as Lincoln School
13	12	Richfield Public School Academy	3807 N. Center Rd., Flint, MI 48506	2	copper	N-6 curb box	N. Center Rd.	3807	
14	13	Powers Catholic High School	1505 W. Court St., Flint, MI 48503	8	cast iron	F-14 mains	W. Court St.	1505	Also see G-14 mains
15	14	Michigan School for the Deaf	1235 W. Court St., Flint, MI 48503	8	cast iron	F-14 mains	W. Court St.	1235	Also see G-14 mains
16	15	Mott Middle College High School	1401 E. Court St., Flint, MI 48503	8	ductile iron	J-11 mains	E. Court St.	1401	noted on dwg as "Student Center"

From: Prysby, Mike (DEQ)
Sent: Friday, October 02, 2015 9:16 AM
To: Busch, Stephen (DEQ)
Subject: FW: Flint Elementary School water supply lines
Attachments: School water supply lines.xls; School water supply lines.xls

Steve,

See updated school list.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Robert Bincsik [mailto:rbincsik@cityofflint.com]
Sent: Thursday, October 01, 2015 5:22 PM
To: Prysby, Mike (DEQ)
Subject: Fwd: Flint Elementary School water supply lines

---------- Forwarded message ----------
From: **Alan Roberts** <aroberts@cityofflint.com>
Date: Thu, Oct 1, 2015 at 12:37 PM
Subject: Fwd: Flint Elementary School water supply lines
To: Robert Bincsik <rbincsik@cityofflint.com>

Rob,

Here is the spreadsheet updated with the Northwestern, Southwestern, Admin building and food service facility information.

Cordially,

Alan Roberts

---------- Forwarded message ----------
From: **Alan Roberts** <aroberts@cityofflint.com>
Date: Wed, Sep 30, 2015 at 3:03 PM
Subject: Flint Elementary School water supply lines
To: Robert Bincsik <rbincsik@cityofflint.com>

Rob,

Per your instructions, please find attached a spreadsheet of data for the listing of selected schools you provided.

Also, see the link for the Google map.

Cordially,

Alan Roberts

--
Thank you,

Robert Bincsik
Water Service Center Supervisor
City of Flint
3310 E. Court Street
Flint, MI 48506
Ph: 810.766.7202 ext. 3413
Fx: 810.743.5758

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15	14	Michigan School for the Deaf	1235 W. Court St., Flint, MI 48503	8	cast iron	F-14 mains	W. Court St.	1235	Also see G-14 mains
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16	15	Mott Middle College High School	1401 E. Court St., Flint, MI 48503	8	ductile iron	J-11 mains	E. Court St.	1401
17	16	Northwestern High School	2138 W. Carpenter Rd.	8	ductile iron	E-1 mains	W. Carpenter Rd.	2138
18	17	Southwestern High School	1420 W. Twelfth St.	6	ductile iron	G-15 mains	W. Twelfth St.	1420
19	18	Flint City Schools Admin Building	923 E. Kearsley St.	4	cast iron	I-11	E. Kearsley St.	923
20	19	Main Kitchen - Flint Schools	305 Walnut St.	2	copper	J-10 curb box	Walnut St.	305

	I
1	Notes
2	
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8	
9	only the 8 inch fire line noted on dwg.
10	
11	noted on dwg as St. Agnes Church and School
12	noted on dwg as Lincoln School
13	
14	Also see G-14 mains
15	Also see G-14 mains
16	noted on dwg as "Student Center"
17	
18	
19	
20	

From: Prysby, Mike (DEQ)
Sent: Friday, October 02, 2015 10:16 AM
To: schock.michael@epa.gov
Cc: Busch, Stephen (DEQ)
Subject: FW: question for ORD/Mike Schock
Attachments: SCAN0912.pdf

Michael,

Attached is the flow schematic for the Flint WTP....the schematic shows UV disinfection; however, this is not in place....and the operators are using lime for softening. Soda ash is not being used at this time.

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Thursday, October 01, 2015 5:57 PM
To: Rosenthal, Adam (DEQ); Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Cc: Benzie, Richard (DEQ); Philip, Kris (DEQ); Poy, Thomas
Subject: RE: question for ORD/Mike Schock

I'm out of the office tomorrow, so if you've been able to track down a schematic of the Flint's treatment plant, perhaps you can forward it to Mike Schock in Cincinnati? His email is schock.michael@epa.gov.

If not, I'm back in the office on Monday and maybe you can steer me toward the City to obtain a schematic. I'll check in with you then.

Thank you all.

Jennifer

From: Crooks, Jennifer
Sent: Wednesday, September 30, 2015 11:51 AM
To: Rosenthal, Adam (DEQ); Prysby, Mike (DEQ); 'Busch, Stephen (DEQ)'
Cc: Richard Benzie; kris philip; Thomas Poy
Subject: question for ORD/Mike Schock
Importance: High

Tom P told me that your Director, Dan Wyatt, asked that his staff work with ORD/Mike Schock and Darren Lytle. Mike and Darren are both working on getting up to speed on the basics of the Flint water treatment scheme. I had a request from Mike Schock this morning about information about treatment and various sample results for Flint. So, I sent them the final OEL report from Flint that is on their website. as well as the 5 MORs that are also on Flint's website.

Mike had an additional question; he's looking for a schematic of the Flint treatment process to help him evaluate the possible successfulness of phosphate treatment at Flint. See Mike's brief explanation below.

I don't want to make this a big project if it's not handy; would Mike Glasgow have this schematic?

Thank you all! I know your time is very valuable right now.

Jennifer

From: Schock, Michael
Sent: Wednesday, September 30, 2015 10:57 AM
To: Crooks, Jennifer
Cc: Lytle, Darren
Subject: RE: more pdfs

Jennifer;

Thank you so much!

Would you happen to know if any other report has, or that you might have somewhere, a currently-valid process schematic for the entire set of treatments done at the Flint plant? It would be helpful to have a better picture of where things like softening, type of coagulant and GAC fit into the picture. There are several potential interrelationships that would affect the successfulness of the phosphate treatment proposed and dosage, and the instability cause by the major chemistry change from Detroit finished water (which I understand was from their Lake Huron-fed plant).

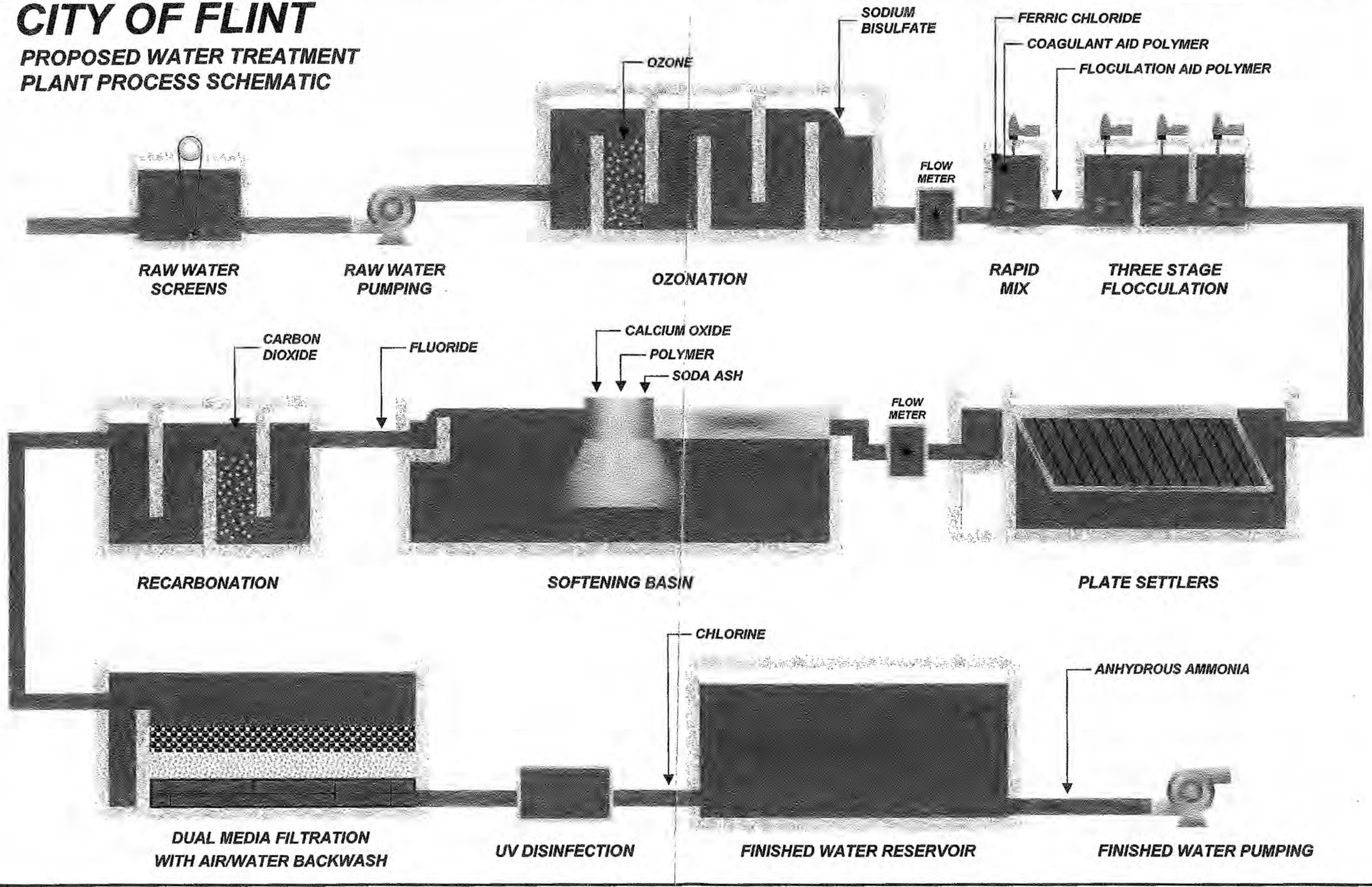
--Mike

From: Crooks, Jennifer
Sent: Wednesday, September 30, 2015 9:29 AM
To: Schock, Michael; Lytle, Darren
Subject: more pdfs

April 2015 MOR is not on the website.

CITY OF FLINT

PROPOSED WATER TREATMENT PLANT PROCESS SCHEMATIC



From: Prysby, Mike (DEQ)
Sent: Tuesday, October 06, 2015 1:49 PM
To: Henry, James
Cc: Krisztian, George (DEQ)
Subject: RE: Flint Schools

Jim,

I will refer you to our Drinking Water Laboratory Director – Mr. George Krisztian for the status of the lead sample results from the Flint schools. George's contact number is 517-335-8812

Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Henry, James [mailto:jhenry@gchd.us]
Sent: Tuesday, October 06, 2015 12:31 PM
To: Prysby, Mike (DEQ)
Subject: Flint Schools

Mike, do you have water results for Flint schools?

Jim Henry RS, MBA
Environmental Health Supervisor
Genesee County Health Department www.gchd.us
630 S. Saginaw St., Suite 4
Flint, MI 48502-1540
Phone (810) 257-3618 Fax (810) 257-3125
E-mail jhenry@gchd.us

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