

Rennaker, Joanne (DEQ)

From: Benzie, Richard (DEQ)
Sent: Friday, May 08, 2015 2:16 PM
To: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Prysby, Mike (DEQ)
Cc: Devereaux, Tracy Jo (DEQ)
Subject: FW: Ticket #23002-490657 Response Sent

I don't know if you have had any contact with this person and I am unsure that a response is necessary, as it was forwarded as an FYI.

It is difficult to determine what is being requested, but it looks like a customer of Flint asked EPA for drinking water quality and when EPA told her to contact her water system, she tried to get the information from the state but contacted WRD. It also sounds like she questions relying upon the local supplier to report monitoring results.

You could contact her to see if we can be of assistance or send her a message indicating that we (you) are the source of drinking water information if she doesn't want to get it from the city.

From: Devereaux, Tracy Jo (DEQ)
Sent: Friday, May 08, 2015 8:22 AM
To: Philip, Kris (DEQ); Benzie, Richard (DEQ)
Cc: Shekter Smith, Liane (DEQ)
Subject: FW: Ticket #23002-490657 Response Sent

fyi

Thanks,

Tracy Jo

From: Smith, Laura (DEQ)
Sent: Thursday, May 07, 2015 5:39 PM
To: Devereaux, Tracy Jo (DEQ)
Cc: Hill, Charles (DEQ); Selden, Barry (DEQ)
Subject: FW: Ticket #23002-490657 Response Sent

Please forward to the appropriate staff in the Office of Drinking Water and Municipal Assistance.

Thanks,

Laura

From: Sheila Bailey-Waddell [<mailto:sheila.bw@hotmail.com>]
Sent: Thursday, May 07, 2015 5:17 PM
To: Hill, Charles (DEQ); Selden, Barry (DEQ); Smith, Laura (DEQ)
Subject: FW: Ticket #23002-490657 Response Sent

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:

1. Go to: <http://safewater.supportportal.com/link/portal/23002/23015/Ticket/490657>
2. Log in, and you will be automatically taken to the Ticket page.

Rennaker, Joanne (DEQ)

From: Cook, Pat (DEQ)
Sent: Friday, April 24, 2015 11:16 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Rosenthal, Adam (DEQ)
Subject: RE: Flint Corrosion Control?

I agree. I'll forward this info to Miguel. However, don't be surprised if you get a call from him disagreeing with our position.

Thank you all for the quick replies.

pat

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

Rennaker, Joanne (DEQ)

From: Cook, Pat (DEQ)
Sent: Friday, April 24, 2015 8:47 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: FW: Fluoridation issues in Flint

FYI.....

pat

From: Lutey, Carol [<mailto:CarolL@mottchc.org>]
Sent: Friday, April 24, 2015 8:31 AM
To: Karlene Ketola; Deming, Susan (DCH)
Subject: Fluoridation issues in Flint

Greetings,

This was in our local news, yesterday.

Carol

<http://www.abc12.com/home/headlines/Water-activists-in-Flint-pounding-the-pavement-to-get-rid-of-Fluoride--301126961.html>

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Friday, April 10, 2015 4:49 PM
To: Rosenthal, Adam (DEQ)
Subject: Fwd: City of Flint March MOR
Attachments: 3-15 State MOR.xls

Adam,

I thought I would pass this along to you, since Prysby is off for a while.

----- Forwarded message -----

From: **Michael Glasgow** <mglasgow@cityofflint.com>
Date: Fri, Apr 10, 2015 at 4:41 PM
Subject: City of Flint March MOR
To: "Prysby, Mike (DEQ)" <prysbym@michigan.gov>

Mike,

Here is a portion of our monthly MOR. The chemical feed rates are missing due to a computer glitch. I should have the completed copy of the report Monday, which I will email to you and also send a copy in the mail. I wanted to get the lab chemical analysis, bacteriological, and distribution sampling data to you today.

Mike Glasgow
City of Flint Water Plant

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							8	12.4	47.2	5.63	1.69
2							8	4.4	15.6	5.73	1.61
3							8	4.1	13.3	5.42	1.45
4							8	2.5	3.9	5.54	1.32
5							8	3.2	6.1	5.43	1.47
6							8	2.4	3.0	5.95	1.54
7							8	2.4	3.0	5.89	1.57
8							8	4.6	15.3	5.75	1.62
9							8	4.4	7.5	5.52	1.62
10							7	6.0	8.1	5.31	1.66
11							8	8.9	15.4	4.79	1.87
12							8	4.6	5.5	4.79	1.73
13							8	3.5	4.1	4.79	1.52
14							8	4.6	5.7	6.77	1.52
15							8	15.2	38.1	1.91	2.45
16							8	15.9	21.0	2.87	2.21
17							8	12.5	28.5	2.02	1.60
18							8	10.8	16.0	1.48	1.28
19							8	20.5	35.8	1.96	33.9
20							8	11.6	13.5	2.63	4.11
21							8	11.1	12.3	1.96	2.15
22							8	13.4	19.6	1.98	1.97
23							8	11.8	21.6	1.95	1.65
24							8	9.8	10.7	2.20	1.94
25							8	11.7	17.3	1.79	1.45
26							8	8.2	9.8	1.75	1.40
27							8	8.3	10.8	1.50	1.24
28							8	6.9	8.0	1.52	1.28
29							8	11.0	30.7	1.26	1.08
30							8	9.4	13.6	1.19	1.19
31							8	15.0	42.7	1.14	0.95

[illegible]

Filter turbidity

City of Flint Water Treatment Plant

March 2015

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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	0.15	0.18	6	0	0	8	0.11	0.15	6	0	0	0.16
2	8	0.10	0.15	6	0	0	8	0.09	0.14	6	0	0	0.11
3	8	0.11	0.16	6	0	0	8	0.11	0.18	6	0	0	0.11
4	8	0.14	0.20	6	0	0	8	0.12	0.18	6	0	0	0.14
5	8	0.16	0.20	6	0	0	8	0.11	0.17	6	0	0	0.12
6	8	0.11	0.20	6	0	0	8	0.15	0.29	6	0	0	0.16
7	8	0.09	0.13	6	0	0	8	0.07	0.09	6	0	0	0.12
8	8	0.14	0.19	6	0	0	8	0.11	0.18	6	0	0	0.13
9	8	0.12	0.20	6	0	0	8	0.10	0.14	6	0	0	0.13
10	8	0.10	0.13	6	0	0	8	0.13	0.17	6	0	0	0.12
11	8	0.12	0.18	6	0	0	8	0.09	0.11	6	0	0	0.11
12	8	0.12	0.16	6	0	0	8	0.10	0.13	6	0	0	0.11
13	8	0.10	0.12	6	0	0	8	0.12	0.15	6	0	0	0.11
14	8	0.11	0.15	6	0	0	8	0.08	0.09	6	0	0	0.10
15	8	0.12	0.17	6	0	0	8	0.14	0.20	6	0	0	0.14
16	8	0.15	0.17	6	0	0	8	0.14	0.17	6	0	0	0.17
17	8	0.11	0.18	6	0	0	8	0.09	0.12	6	0	0	0.16
18	2	0.07	0.07	1	0	0	2	0.07	0.07	1	0	0	0.08
19	8	0.14	0.22	6	0	0	8	0.14	0.22	6	0	0	0.19
20	8	0.27	0.35	6	1	2	8	0.29	0.36	6	3	4	0.42
21	8	0.15	0.16	6	0	0	8	0.15	0.20	6	0	0	0.33
22	8	0.20	0.23	6	0	0	8	0.18	0.20	6	0	0	0.35
23	8	0.19	0.23	6	0	0	8	0.17	0.23	6	0	0	0.37
24	8	0.19	0.20	6	0	0	8	0.16	0.18	6	0	0	0.23
25	8	0.16	0.21	6	0	0	8	0.12	0.15	6	0	0	0.14
26	8	0.17	0.22	6	0	0	8	0.10	0.12	6	0	0	0.15
27	8	0.13	0.16	6	0	0	8	0.14	0.24	6	0	0	0.13
28	8	0.11	0.17	6	0	0	8	0.10	0.12	6	0	0	0.09
29	8	0.09	0.13	6	0	0	8	0.09	0.12	6	0	0	0.07
30	8	0.09	0.12	6	0	0	8	0.08	0.09	6	0	0	0.10
31	8	0.07	0.09	6	0	0	8	0.08	0.12	6	0	0	0.11

Avg.	8	0.13	0.17	6	0	0	8	0.12	0.16	6	0	0	
Max.	8	0.27	0.35	6	1	2	8	0.29	0.36	6	3	4	0.42
Min.	2	0.07	0.07	1	0	0	2	0.07	0.07	1	0	0	

Fluoridation &
ChlorinationCity of Flint Water Treatment Plant
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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		0.24	0.60				0.0	0.6	0.7	2.4	2.7	1.9	2.1
2		0.25	0.62				0.0	0.4	0.6	2.5	2.8	2.0	2.4
3		0.23	0.57	0.55			0.0	0.6	0.7	2.5	2.9	2.0	2.5
4		0.24	0.59				0.0	0.5	0.7	2.3	2.9	2.1	2.3
5		0.22	0.57				0.0	0.5	0.7	2.7	3.1	2.3	2.8
6		0.25	0.58				0.0	0.4	0.6	2.5	3.0	1.9	2.5
7		0.23	0.56				0.0	0.4	0.7	2.3	2.7	1.8	2.3
8		0.23	0.61				0.0	0.6	0.8	2.5	2.8	2.5	2.8
9		0.26	0.64				0.0	0.5	0.7	2.5	2.8	2.5	2.8
10		0.23	0.56				0.0	0.4	0.6	2.6	3.2	2.2	2.7
11		0.23	0.52				0.0	0.6	0.8	2.4	2.7	2.2	2.6
12		0.23	0.53	0.50			0.0	0.4	0.6	2.8	3.1	2.3	2.7
13		0.24	0.54				0.0	0.4	0.7	2.6	3.3	2.0	2.5
14		0.24	0.52				0.0	0.6	0.8	3.2	3.5	2.0	2.4
15		0.21	0.49				0.0	1.0	1.4	1.7	2.0	1.8	2.0
16		0.19	0.52				0.0	1.6	1.9	2.0	2.3	2.0	2.2
17		0.21	0.54				0.0	0.6	1.0	2.8	3.1	2.5	3.1
18		0.21	0.51	0.52			0.0	0.3	0.5	3.0	3.5	3.0	3.5
19		0.20	0.52				0.0	0.6	1.1	3.0	3.3	2.5	2.8
20		0.17	0.55				0.0	0.3	1.0	2.9	3.3	1.3	1.6
21		0.17	0.48				0.0	0.6	1.3	2.6	3.3	1.7	2.3
22		0.14	0.51				0.0	0.5	1.4	2.6	2.9	2.5	2.8
23		0.16	0.55				0.0	0.5	1.3	2.6	3.0	2.6	2.9
24		0.16	0.58				0.0	0.3	0.8	2.7	3.2	2.5	2.9
25		0.17	0.62	0.53			0.0	0.3	0.7	2.5	2.9	2.3	3.0
26		0.15	0.56				0.0	0.3	0.5	2.8	3.3	2.4	2.8
27		0.19	0.64				0.0	0.3	0.5	2.5	3.1	2.0	2.6
28		0.16	0.66				0.0	0.6	0.8	3.0	3.5	2.3	3.0
29		0.14	0.59				0.0	0.5	0.7	2.7	3.1	2.5	3.0
30		0.18	0.66				0.0	0.8	1.0	2.6	3.0	2.6	3.0
31		0.17	0.65				0.0	0.5	0.7	2.4	2.7	2.0	2.3

Avg.	#DIV/0!	0.20	0.57	0.53	#DIV/0!	#DIV/0!	0.0	0.5	0.8	2.6	3.0	2.2	2.6
Max.	0.00	0.26	0.66	0.55	0.0	0.0	0.0	1.6	1.9	3.2	3.5	3.0	3.5
Min.	0.00	0.14	0.48	0.50	0.0	0.0	0.0	0.3	0.5	1.7	2.0	1.3	1.6

Chemical
AnalysesCity of Flint Water Treatment Plant
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Date	pH (S.U.)		Total Hardness as CaCO ₃ (mg/L)		Total Alkalinity as CaCO ₃ (mg/L)		Non-Carbonate Hardness as CaCO ₃ (mg/L)		Calcium as Ca ²⁺ (mg/L)		Magnesium as Mg ²⁺ (mg/L)		Chloride as Cl ⁻ (mg/L)	
	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap	Raw	Tap
1	8.27	8.09	366	229	297	122	69	107	113.0	72.1	20.4	11.2	51	89
2	7.95	8.06	358	243	295	111	63	132	110.6	68.9	20.4	18.5	52	88
3	7.95	7.74	360	234	297	122	63	112	116.2	71.3	16.5	14.1	52	87
4	7.81	7.82	354	243	285	129	69	114	129.1	89.8	8.3	4.4	54	85
5	7.97	7.77	360	235	290	126	70	109	117.0	71.3	16.5	13.6	54	95
6	7.55	7.69	362	239	288	124	74	115	133.1	89.0	7.3	2.9	55	89
7	7.90	7.94	351	234	288	124	63	110	126.7	87.4	18.0	13.6	54	87
8	7.93	8.26	363	235	288	123	75	112	120.2	74.5	15.6	11.7	48	87
9	7.96	7.84	357	237	286	125	71	112	116.2	74.5	16.5	12.2	57	95
10	8.01	8.08	349	233	273	129	76	104	122.6	81.0	10.7	7.3	64	98
11	7.92	8.29	347	233	281	117	66	116	115.4	72.1	13.6	11.2	61	95
12	8.00	7.94	345	233	279	127	66	106	125.0	84.2	8.7	5.3	54	91
13	8.07	7.92	348	235	282	127	66	108	126.7	84.2	7.8	5.3	54	88
14	7.99	8.11	343	226	273	112	70	114	123.4	81.8	8.7	3.9	54	85
15	8.00	8.15	309	210	236	99	73	111	97.0	65.7	17.5	12.6	51	87
16	8.00	7.97	251	176	198	78	53	98	79.4	50.5	15.1	12.2	42	76
17	7.99	7.66	305	191	242	92	63	99	97.8	55.3	14.1	11.7	46	76
18	8.00	7.95	270	203	223	104	47	99	89.0	72.1	12.6	4.4	46	84
19	7.90	9.90	256	151	204	58	52	93	79.4	38.5	15.6	12.2	41	78
20	7.85	7.30	240	240	189	135	51	105	81.8	87.4	8.7	5.3	38	70
21	7.97	7.34	214	210	175	119	39	91	78.6	81.8	5.3	1.5	34	73
22	7.95	7.37	219	211	173	104	46	107	63.3	60.9	15.6	14.1	33	69
23	8.01	7.53	212	187	173	92	39	95	64.9	59.3	12.6	9.7	34	69
24	7.94	7.45	211	170	171	77	40	93	74.5	59.3	6.3	5.3	33	69
25	8.01	7.80	218	173	172	77	46	96	67.3	56.1	11.7	9.2	32	72
26	8.03	7.72	214	171	173	78	41	93	71.3	59.3	9.7	5.3	31	69
27	8.02	7.67	215	168	174	77	41	91	75.4	60.1	6.8	4.4	31	68
28	8.05	7.73	218	169	174	77	44	92	78.6	63.3	5.8	1.5	30	72
29	8.12	7.95	229	177	182	80	47	97	71.3	53.7	12.6	9.7	31	73
30	8.18	7.85	229	171	182	79	47	92	73.7	53.7	11.7	8.7	34	71
31	8.08	7.80	228	168	183	70	45	98	68.9	52.1	13.6	10.7	33	72

Avg.	7.98	7.89	290	208	233	104	57	104	97.0	68.7	12.4	8.8	45	81
Max.	8.27	9.90	366	243	297	135	76	132	133.1	89.8	20.4	18.5	64	98
Min.	7.55	7.30	211	151	171	58	39	91	63.3	38.5	5.3	1.5	30	68

Bacteriological &
Physical ParametersCity of Flint Water Treatment Plant
WSSN: 2310

March 2015

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	Tap	Raw	Tap
1	1	155	12	0	1	0	120	< 2	0.60	2.2				
2	1	135	12	0	1	0	146	< 2	0.60	2.8				
3	1	214	12	0	1	0	83	< 2	0.58	1.0				
4	1	84	12	0	1	0	100	< 2	0.61	2.5				
5	1	118	12	0	1	0	120	< 2	0.64	1.2				
6	1	79	12	0	1	0	43	< 2	0.62	1.5				
7	1	162	12	0	1	0	51	< 2	0.60	1.7				
8	1	86	12	0	1	0	100	< 2	0.62	2.6				
9	1	225	12	0	1	0	189	< 2	0.64	2.0				
10	1	205	12	0	1	0	248	< 2	0.64	2.6				
11	1	387	12	0	1	0	339	< 2	0.61	3.2				
12	1	770	12	0	1	0	440	< 2	0.31	3.7				
13	1	442	12	0	1	0	340	< 2	0.43	4.7				
14	1	4196	12	0	1	0	1120	< 2	0.58	5.7				
15	1	48392	12	0	1	0	> 14760	< 2	0.56	5.7				
16	1	> 48392	12	0	1	0	> 14760	< 2	0.43	4.2				
17	1	39726	12	0	1	0	12460	< 2	0.45	2.8				
18	1	24066	12	0	1	0	> 14760	< 2	0.55	3.6				
19	1	> 48392	12	0	1	0	11100	< 2	0.38	6.5				
20	1	34658	12	0	1	0	7100	< 2	0.56	4.8				
21	1	12262	12	0	1	0	9400	< 2	0.49	6.3				
22	1	4764	12	0	1	0	2920	< 2	0.49	4.5				
23	1	1596	12	0	1	0	1940	< 2	0.45	4.1				
24	1	1182	12	0	1	0	960	< 2	0.41	4.0				
25	1	550	12	0	1	0	1060	< 2	0.41	4.5				
26	1	399	12	0	1	0	560	< 2	0.41	5.6				
27	1	195	12	0	1	0	450	< 2	0.40	6.0				
28	1	122	12	0	1	0	400	< 2	0.41	5.9				
29	1	98	12	0	1	0	480	< 2	0.42	4.9				
30	1	201	12	0	1	0	> 738	< 2	0.40	5.9				
31	1	187	12	0	1	0	507	< 2	0.42	5.2				

Avg.									0.51	3.9				
Max.		48392					12460	< 2	0.64	6.5				
Min.									0.31	1.0				

WSSN: 2310

Date	Free Chlorine Residual at Bacteriological Monitoring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3	1.5	1.3	1.8	1.4	1.5	0.3	1.1	1.8		2.6	9
4	1.5	1.3	1.9	1.5	1.5	0.4	1.7	2.1		1.3	9
5	1.0	0.9	1.7	0.9	1.5	0.4	1.0	2.1		1.3	9
6											0
7											0
8											0
9											0
10	1.8	1.2	1.5	1.2	1.4	0.4	1.4	1.9		2.1	9
11	1.4	0.5	1.7	1.3	1.1	0.6	1.5	1.8	1.5	1.1	10
12	1.7	1.0	1.6	1.7	1.6	0.5	1.5	2.0		2.1	9
13											0
14											0
15											0
16											0
17	1.2	1.2	1.6	1.7	1.1	0.6	1.0	2.2	0.7	2.2	10
18	2.0	1.2	2.0	1.9	1.3	0.5	1.7	2.8		0.9	9
19	1.1	1.7	2.2	1.5	0.7	0.5	1.1	0.9		0.9	9
20											0
21											0
22											0
23											0
24	1.9	1.1	2.0	1.9	0.8	0.5	1.7	1.9		2.0	9
25	1.4	1.7	2.1	1.9	1.7	0.6	1.4	1.7		2.0	9
26	1.9	1.4	1.4	1.8	1.3	0.5	1.4	1.9		1.9	9
27											0
28											0
29											0
30											0
31	1.7	0.9	1.6	1.9	1.7	0.7	0.9	1.5		1.0	9

Distribution Sample Summary

Total # of routine distribution samples analyzed	119
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	1.42

Date	Total Chlorine Residual at Bacteriological Monitoring Stations mg/l										
	1	2	3	4	5	6	7	8	CS	WS	Number of Samples
1											0
2											0
3	1.7	1.6	2.2	1.6	1.6	0.4	1.5	2.0		2.8	9
4	1.8	1.6	2.2	1.7	1.8	0.6	2.0	2.3		1.6	9
5	1.7	1.3	2.2	1.2	1.8	0.5	1.7	2.5		1.5	9
6											0
7											0
8											0
9											0
10	2.1	1.5	1.7	1.5	1.6	0.5	1.7	2.2		2.4	9
11	1.7	0.7	2.0	1.6	1.5	0.7	1.7	2.4	1.7	1.4	10
12	2.0	1.2	1.9	2.0	1.9	0.6	1.7	2.3		2.3	9
13											0
14											0
15											0
16											0
17	1.7	1.5	2.0	1.9	1.4	0.7	1.5	2.7	0.9	2.6	10
18	2.3	1.4	2.3	2.2	1.5	0.6	1.9	3.0		1.1	9
19	1.4	1.9	2.7	1.8	1.0	0.7	1.4	1.5		1.1	9
20											0
21											0
22											0
23											0
24	2.4	1.4	2.3	2.3	1.1	0.7	2.0	2.4		2.5	9
25	1.6	2.3	2.7	2.5	1.9	0.8	1.7	1.9		2.5	9
26	2.4	1.8	1.9	2.1	1.6	0.7	1.8	2.2		2.3	9
27											0
28											0
29											0
30											0
31	2.2	1.2	1.9	2.6	1.9	0.9	1.3	1.8		1.3	9

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	1.7

Positive Distribution Samples

[illegible]

Rennaker, Joanne (DEQ)

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 be 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

Rennaker, Joanne (DEQ)

From: Shekter Smith, Liane (DEQ)
Sent: Tuesday, March 24, 2015 3:42 PM
To: Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: FW: Flint Water

Liane J. Shekter Smith, P.E., Chief
Office of Drinking Water and Municipal Assistance
Michigan Department of Environmental Quality
517-284-6543

From: Butler, Sonya (DEQ)
Sent: Tuesday, March 24, 2015 3:25 PM
To: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Cc: Fitzner, Wendy (DEQ); Green, Kelly (DEQ)
Subject: FW: Flint Water

<http://www.freep.com/story/news/local/michigan/2015/03/24/flint-council-votes-reconnect-detroit-water/70365106/>

Rennaker, Joanne (DEQ)

From: Shekter Smith, Liane (DEQ)
Sent: Tuesday, March 17, 2015 1:22 PM
To: Howes, Sarah (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Tommasulo, Karen (DEQ); Benzie, Richard (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Flint Drinking Water Letter?

Sarah –

I just checked with Steve, and we are not aware of any letter being issued from our Office tomorrow or in the near future.

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 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 517.282.9204

Rennaker, Joanne (DEQ)

From: Howes, Sarah (DEQ)
Sent: Thursday, March 05, 2015 5:12 PM
To: Busch, Stephen (DEQ); Wurfel, Brad (DEQ); Datema, Maggie (DEQ)
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Flint Drinking Water TTHM Standard Violation - 1st quarter 2015

I sent it to Reps Neeley and Phelps and Senator Ananich.

From: Busch, Stephen (DEQ)
Sent: Thursday, March 05, 2015 1:59 PM
To: Howes, Sarah (DEQ); Wurfel, Brad (DEQ); Datema, Maggie (DEQ)
Cc: Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Rosenthal, Adam (DEQ)
Subject: Flint Drinking Water TTHM Standard Violation - 1st quarter 2015
Importance: High

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 February 2015, which shows the locational running annual average for two of the City's eight compliance sampling locations continue to exceed MCL standard of 0.080 mg/L. It is however, important to note that all individual compliance sample results collected in February were well 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 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

Rennaker, Joanne (DEQ)

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) <BUSCHS@michigan.gov>
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

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 Cincinnati 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 collection 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

Rennaker, Joanne (DEQ)

From: Deming, Susan (DCH)
Sent: Monday, March 02, 2015 1:18 PM
To: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Prysby, Mike (DEQ)
Cc: Cook, Pat (DEQ); Farrell, Chris (DHHS)
Subject: FW: Flint-anti-fluoridation

Unsure if you guys are aware of this:

- <http://www.abc12.com/news/headlines/Concerned-Citizens-Group-hold-water-rally-outside-Flint-Water-Plant-294265781.html>
- http://www.minbcnews.com/news/story.aspx?id=1170271#.VPSdJC5i_Yg
- <https://www.youtube.com/watch?v=2ubblZB-Dz0>
- <https://www.youtube.com/watch?v=Q9Nv6qhOEMc>

Let me know if I can help with current information. Thanks!

Susan Deming RDH, RDA, BS
 Education/Fluoridation Coordinator
 Michigan Dept of Comm Health
 Oral Health Program
demings@michigan.gov
 517 373-3624
 OH Mailbox fx: 517 346-9862
 Regular Fx: 517 335-8697

From: April Stopczynski [mailto:astop@michigandental.org]
Sent: Monday, March 02, 2015 12:52 PM
To: Deming, Susan (DCH); Karlene Ketola
Subject: Flint

This message was sent securely using ZixCorp.

- <http://www.abc12.com/news/headlines/Concerned-Citizens-Group-hold-water-rally-outside-Flint-Water-Plant-294265781.html>
- http://www.minbcnews.com/news/story.aspx?id=1170271#.VPSdJC5i_Yg
- <https://www.youtube.com/watch?v=2ubblZB-Dz0>
- <https://www.youtube.com/watch?v=Q9Nv6qhOEMc>

April Stopczynski
 Michigan Dental Association
 Manager of Access and Prevention
 3657 Okemos Rd.
 Okemos, MI 48864
astop@michigandental.org
www.smilemichigan.com
 Direct Line: 517/346-9417

Fax: 517/372-0008

This message was secured by ZixCorp^(R).

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Friday, February 27, 2015 1:27 PM
To: Rosenthal, Adam (DEQ)
Subject: Re: Lead Copper Cert form
Attachments: 2014 4th qtr WQM (River source water).xls; Pb & Cu Reporting Form.pdf

Adam,

Here are the 4th Qtr WQM results & the Lead & Copper Report. This hit for 104 ppb on lead come from the current 2015 monitoring period, I am attempting to get more samples from the neighbors around this site. This is a new Pb & Cu site, that was not sampled during the 2014 monitoring period.

Mike

On Fri, Feb 27, 2015 at 9:13 AM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Morning Mike, I need your lead/copper cert form – it was due by 1/10/15. I also need your 4th quarter WQPs for 2014. EPA is asking due to your 104 hit on lead. If you can, I need them today.

thanks,

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



Water Quality Monitoring
4th Quarter 2014

SAMPLE POINT IDENTIFICATION				PARAMETERS AND RESULTS				
Distribution System Location #	Sample Point Name & Address	Sample Date	Time	Temperature (C)	Conductivity (mS)	pH (su)	Total Alkalinity (mg/L CaCO ₃)	Calcium (mg/L Ca ²⁺)
#1	Arby's 3742 Davison Rd.	11/25/2014	10:40	16.8	0.465	7.96	114	58.5
#2	BP Gas Station 822 S.Dort Hwy	11/25/2014	10:53	14.9	0.421	7.99	114	60.9
#3	Liquor Palace 3302 S. Dort Hwy	11/25/2014	11:08	11.6	0.461	7.98	118	59.3
#4	Taco Bell 3606 Corunna Rd.	11/25/2014	11:49	17.4	0.479	7.99	118	60.1
#5	University Market 2501 Flushing Rd.	11/25/2014	12:08	15.6	0.442	7.90	116	63.3
#6	Salem Housing 3216 MLK Blvd.	11/25/2014	12:34	15.0	0.437	7.85	104	58.5
#7	Rite-Aid 5018 Clio Rd.	11/25/2014	13:00	16.1	0.448	7.99	118	62.5
#8	N. Flint Automotive 6204 N. Saginaw St.	11/25/2014	13:14	16.1	0.488	8.00	114	59.3
CS	Cedar Street Reservoir & Pump Station	11/25/2014	11:25	11.1	0.442	7.99	108	60.9
WS	West Side Reservoir & Pump Station	11/25/2014	12:18	9.1	0.449	7.96	114	59.3
N/A	Russell Collection Agency 3285 Van Slyke Rd	12/2/2014	11:35	12.2	0.372	7.67	100	64.1
N/A	Southwestern Academy High School 1420 W.12th St.	12/2/2014	11:23	12.7	0.352	7.71	100	65.7
N/A	Cummings Elementary School G-2200 Walton St.	12/2/2014	11:51	11.2	0.382	7.65	108	64.1
N/A	Rite-Aid 3521 Corunna Rd.	11/28/2014	12:37	13.2	0.405	8.03	106	55.3
N/A	Clio Rd. Pharmacy 4902 Clio Rd.	12/2/2014	13:00	13.4	0.356	7.62	100	65.7
N/A	Tim Hortons 1274 Ballanger Hwy.	11/28/2014	12:58	11.7	0.404	7.95	106	50.5
N/A	Arby's 3559 S. Dort Hwy.	11/26/2014	11:07	15.5	0.443	7.87	108	68.1
N/A	Ya Ya's 519 S. Dort Hwy	11/26/2014	10:33	12.2	0.424	7.95	106	66.5
N/A	Taco Bell 1740 S. Dort Hwy	11/26/2014	10:50	9.5	0.414	7.86	108	64.1
N/A	Grandma's Recipe 3538 Richfield Rd.	11/26/2014	9:55	15.3	0.426	7.68	114	65.7
N/A	Flint City Hall 1101 S. Saginaw St.	12/3/2014	10:00	15.7	0.404	7.84	98	61.7
N/A	Quizzno's 3818 E. Court St.	11/26/2014	10:19	11.5	0.421	7.88	122	68.1
N/A	Whitehorse Tavern 621 W. Court St.	11/28/2014	12:00	12.0	0.405	8.10	104	56.9
N/A	Flint Public Library 1026 E. Kearsley Rd.	12/3/2014	11:00	18.4	0.449	7.76	100	59.3

002295

N/A	Rite-Aid 3717 Fenton Rd.	11/28/2014	11:48	10.5	0.407	7.88	102	56.1
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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: City of Flint
 2. County: Genesee 3. WSSN: 2310
 4. Population: _____ 5. Monitoring Period: From: 7/1/2014 To: 12/31/2014
 6. Minimum # of Samples Required: 100 7. # of Samples Taken: 100
 8. Name of Certified Laboratory: MDEQ Drinking Water Laboratory

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?
☒	☐	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)?

For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

Comments: The increased number of samples required has led to many new sample sites.

10. NAME:

Name: Michael Glasgow
 Title: Assistant Water Plant Supervisor Phone: (810)787-6537 Date: 2/27/15

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumb-ing ²	Lead (ppb)	Copper (ppb)	Lab #
2205 Flushing Rd.	11/19/14	1	L		N.D.	110	
3814 Whitter Ave.	11/20/14	1	L		2	N.D.	
3521 Bennett Ave	11/21/14	1	L		2	N.D.	
1914 Penbrook Ln	11/20/14	1	L		N.D.	N.D.	
305 Allendale Pl.	11/24/14	1	L		2	130	
518 Frost St.	12/1/14	1	L		1	N.D.	
3120 Norwood Dr.	12/2/14	1	L		N.D.	N.D.	
1901 Crestbrook Ln.	11/25/14	1	L		N.D.	70	
3727 Maryland Ave.	12/3/14	1	L		1	N.D.	
1220 Beard St.	12/2/14	1	L		10	60	
3718 Dolphaine Ln	12/3/14	1	L		N.D.	N.D.	
2213 Flushing Rd	12/3/2014	1	L		1	100	
721 East St.	12/10/14	1	L		9	120	
1125 Barle Ave	12/5/14	1	L		4	N.D.	
1505 Woodlawn Park Dr.	12/6/2014	1	L		5	N.D.	
2622 Windmere	12/7/14	1	L		5	N.D.	
3517 Bennett	12/10/14	1	L		3	N.D.	
927 Kensington Ave.	12/5/14	1	L		N.D.	110	
1109 Kensington Ave.	12/4/14	1	L		N.D.	N.D.	
1901 Montclair Ave.	12/5/14	1	L		4	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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumb-ing ²	Lead (ppb)	Copper (ppb)	Lab #
1809 Lynbrook	12/4/14	1	L		2	N.D.	
1130 Simcoe Ave.	12/5/14	1	L		2	50	
413 Burroughs Ave	12/4/14	1	L		N.D.	N.D.	
2079 Zimmerman	12/8/14	1	L		4	N.D.	
2615 Westwood Pkwy	12/6/14	1	L		2	280	
2441 Norbert	12/8/14	1	L		8	60	
711 Kensington Ave.	12/9/14	1	L		3	N.D.	
2015 Gold Ave.	12/4/14	1	L		2	N.D.	
618 S. Meade St.	12/8/14	1	L		2	N.D.	
2802 Westwood Pkwy.	12/5/14	1	L		1	110	
860 Schafer St.	12/8/14	1	L		N.D.	70	
1021 S. Franklin Ave.	12/5/14	1	L		4	N.D.	
1616 Durand St.	12/5/14	1	L		N.D.	200	
928 Durand	12/7/14	1	L		N.D.	N.D.	
2730 Westwood Pkwy	12/4/14	1	L		23	290	
1543 Kearsley Park Blvd.	12/4/14	1	L		1	N.D.	
2920 Parkside Dr.	12/5/14	1	L		10	220	
2721 Westwood Pkwy	12/5/14	1	L		2	110	
1002 Durand St.	12/4/14	1	L		2	110	
2560 Thomas St.	12/4/14	1	L		N.D.	N.D.	

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumbing ²	Lead (ppb)	Copper (ppb)	Lab #
815 Bradley Ave.	12/7/14	1	L		5	270	
4013 Brownell Blvd.	12/8/14	1	L		2	80	
2418 Gold Ave.	12/10/14	1	L		N.D.	N.D.	
626 Commonwealth Ave	12/5/14	1	L		3	N.D.	
920 Stocker St.	12/9/14	1	L		N.D.	N.D.	
430 Westcombe Ave.	12/9/14	1	L		2	N.D.	
1623 Neome Dr.	12/5/14	1	L		7	70	
3802 Gorey Ave.	12/8/14	1	L		1	50	
1720 Davison Rd.	12/4/14	1	L		2	130	
2110 Mountain Ave.	12/8/14	1	L		5	60	
2006 Clement St.	12/3/14	1	L		3	N.D.	
2028 Corunna Rd.	12/7/14	1	L		N.D.	N.D.	
2829 Yale St.	12/10/14	1	L		N.D.	N.D.	
1914 W. Home Ave.	12/15/14	1	L		4	N.D.	
2920 N. Dexter St.	12/15/14	1	L		N.D.	70	
2810 Kellar Ave.	12/15/14	1	L		N.D.	N.D.	
3245 Montana Ave.	12/15/14	1	L		4	N.D.	
3623 Norwood Dr.	12/15/14	1	L		1	N.D.	
2801 Reynolds	12/8/14	1	L		2	N.D.	
3510 Brandon St.	12/10/14	1	L		5	80	

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumbing ²	Lead (ppb)	Copper (ppb)	Lab #
2117 Stanford Ave.	12/11/14	1	L		3	N.D.	
5806 Leslie Dr.	12/12/14	1	L		N.D.	N.D.	
1809 W. Home Ave.	12/11/14	1	L		1	N.D.	
1414 Stone St.	12/12/14	1	L		2	N.D.	
2006 Altken Ave.	12/16/14	1	L		N.D.	N.D.	
3131 Wolcott	12/17/14	1	L		N.D.	N.D.	
983 Gainey Ave.	12/17/14	1	L		N.D.	100	
2806 Norbert St.	12/18/14	1	L		N.D.	N.D.	
912 Crawford St.	12/15/14	1	L		1	110	
4024 Sterling	12/16/14	1	L		1	N.D.	
3737 Worchester Dr.	12/16/14	1	L		N.D.	140	
1100 Stockton St.	12/16/14	1	L		6	N.D.	
1725 Lincoln Ave.	12/21/14	1	L		2	N.D.	
3139 Colorado	12/16/14	1	L		N.D.	N.D.	
1401 Gainey Ave.	12/20/14	1	L		4	N.D.	
2730 Coventry Ct.	12/19/14	1	L		N.D.	N.D.	
709 Frost St.	12/19/14	1	L		N.D.	N.D.	
2307 Radcliffe	12/20/14	1	L		37	80	
224 E. Court St.	12/15/14	1	L		4	N.D.	
3440 Rangeley	12/13/14	1	L		N.D.	N.D.	

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumbing ²	Lead (ppb)	Copper (ppb)	Lab #
3808 Brownell Blvd.	12/16/14	1	L		N.D.	90	
1006 Kensington	12/19/14	1	L		2	N.D.	
2517 Delaware Ave.	12/18/14	1	L		5	200	
1810 W. Hobson Ave.	12/21/14	1	L		N.D.	N.D.	
5805 Leslie Dr.	12/21/14	1	L		2	N.D.	
1721 Chelsea Circle	12/22/14	1	L		N.D.	N.D.	
912 Waldman Ave.	12/23/14	1	L		N.D.	N.D.	
3082 Lanning Dr.	12/24/14	1	L		N.D.	N.D.	
25151 Chicago Blvd.	12/26/14	1	L		6	N.D.	
742 Lincoln Ave.	12/26/14	1	L		3	N.D.	
1805 Ramsay Blvd.	12/27/14	1	L		4	N.D.	
1910 Ramsay Blvd.	12/20/14	1	L		N.D.	N.D.	
3009 Montana Ave.	12/29/14	1	L		1	N.D.	
1223 Campbell St.	12/30/14	1	L		1	N.D.	
3821 Delaware	12/27/14	1	L		N.D.	N.D.	
1651 Woodlawn Pk Blvd.	12/29/14	1	L		N.D.	N.D.	
1911 Corry St.	12/30/14	1	L		4	N.D.	
3507 Dearborn Ave.	12/20/14	1	L		6	N.D.	
3829 Ivanhoe Ave.	12/29/14	1	L		N.D.	N.D.	
1559 Chevrolet Ave.	12/30/14	1	L		9	N.D.	

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

Rennaker, Joanne (DEQ)

From: Philip, Kris (DEQ)
Sent: Friday, February 27, 2015 12:24 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: Flint TTHM
Attachments: 02310_Flint_TTHM_02 27 2015.xlsx

Here are Flint's most recent 4 quarters of TTHM data.

WSSN	System	Mon Prd	Collect Date	Site Code	Analyte	Result	Unit	LRAA
02310	FLINT, CITY OF	2Q2012	23-May-12	DBP1	2950	0.032	MG/L	0.008
02310	FLINT, CITY OF	2Q2012	23-May-12	DBP2	2950	0.019	MG/L	0.005
02310	FLINT, CITY OF	2Q2012	23-May-12	DBP3	2950	0.017	MG/L	0.004
02310	FLINT, CITY OF	2Q2012	23-May-12	DBP4	2950	0.02	MG/L	0.005
02310	FLINT, CITY OF	3Q2012	22-Aug-12	DBP1	2950	0.0578	MG/L	0.022
02310	FLINT, CITY OF	3Q2012	22-Aug-12	DBP2	2950	0.0324	MG/L	0.013
02310	FLINT, CITY OF	3Q2012	22-Aug-12	DBP3	2950	0.0365	MG/L	0.013
02310	FLINT, CITY OF	3Q2012	22-Aug-12	DBP4	2950	0.0419	MG/L	0.015
02310	FLINT, CITY OF	4Q2012	20-Nov-12	DBP1	2950	0.0421	MG/L	0.033
02310	FLINT, CITY OF	4Q2012	20-Nov-12	DBP2	2950	0.0152	MG/L	0.017
02310	FLINT, CITY OF	4Q2012	20-Nov-12	DBP3	2950	0.0156	MG/L	0.017
02310	FLINT, CITY OF	4Q2012	20-Nov-12	DBP4	2950	0.0195	MG/L	0.02
02310	FLINT, CITY OF	1Q2013	20-Feb-13	DBP1	2950	0.0438	MG/L	0.044
02310	FLINT, CITY OF	1Q2013	20-Feb-13	DBP2	2950	0.0122	MG/L	0.02
02310	FLINT, CITY OF	1Q2013	20-Feb-13	DBP3	2950	0.0115	MG/L	0.02
02310	FLINT, CITY OF	1Q2013	20-Feb-13	DBP4	2950	0.0127	MG/L	0.024
02310	FLINT, CITY OF	2Q2013	22-May-13	DBP1	2950	0.0312	MG/L	0.044
02310	FLINT, CITY OF	2Q2013	22-May-13	DBP2	2950	0.0155	MG/L	0.019
02310	FLINT, CITY OF	2Q2013	22-May-13	DBP3	2950	0.0157	MG/L	0.02
02310	FLINT, CITY OF	2Q2013	22-May-13	DBP4	2950	0.0175	MG/L	0.023
02310	FLINT, CITY OF	3Q2013	21-Aug-13	DBP1	2950	0.0485	MG/L	0.041
02310	FLINT, CITY OF	3Q2013	21-Aug-13	DBP2	2950	0.0308	MG/L	0.018
02310	FLINT, CITY OF	3Q2013	21-Aug-13	DBP3	2950	0.0288	MG/L	0.018
02310	FLINT, CITY OF	3Q2013	21-Aug-13	DBP4	2950	0.0297	MG/L	0.02
02310	FLINT, CITY OF	4Q2013	20-Nov-13	DBP1	2950	0.0275	MG/L	0.038
02310	FLINT, CITY OF	4Q2013	20-Nov-13	DBP2	2950	0.0172	MG/L	0.015
02310	FLINT, CITY OF	4Q2013	20-Nov-13	DBP3	2950	0.017	MG/L	0.018
02310	FLINT, CITY OF	4Q2013	20-Nov-13	DBP4	2950	0.0191	MG/L	0.02
02310	FLINT, CITY OF	1Q2014	19-Feb-14	DBP1	2950	0.0246	MG/L	0.033
02310	FLINT, CITY OF	1Q2014	19-Feb-14	DBP2	2950	0.0111	MG/L	0.014
02310	FLINT, CITY OF	1Q2014	19-Feb-14	DBP3	2950	0.01	MG/L	0.018
02310	FLINT, CITY OF	1Q2014	19-Feb-14	DBP4	2950	0.0122	MG/L	0.02
02310	FLINT, CITY OF	2Q2014	21-May-14	DBP1	2950	0.1624	MG/L	0.041
02310	FLINT, CITY OF	2Q2014	21-May-14	DBP2	2950	0.1116	MG/L	0.028
02310	FLINT, CITY OF	2Q2014	21-May-14	DBP3	2950	0.0965	MG/L	0.024
02310	FLINT, CITY OF	2Q2014	21-May-14	DBP4	2950	0.1064	MG/L	0.027
02310	FLINT, CITY OF	2Q2014	21-May-14	DBP5	2950	0.0792	MG/L	0.02
02310	FLINT, CITY OF	2Q2014	21-May-14	DBP6	2950	0.0882	MG/L	0.022
02310	FLINT, CITY OF	2Q2014	21-May-14	DBP7	2950	0.0822	MG/L	0.021
02310	FLINT, CITY OF	2Q2014	21-May-14	DBP8	2950	0.0751	MG/L	0.019
02310	FLINT, CITY OF	3Q2014	21-Aug-14	DBP1	2950	0.1453	MG/L	0.077
02310	FLINT, CITY OF	3Q2014	21-Aug-14	DBP2	2950	0.1272	MG/L	0.06
02310	FLINT, CITY OF	3Q2014	21-Aug-14	DBP3	2950	0.1183	MG/L	0.054
02310	FLINT, CITY OF	3Q2014	21-Aug-14	DBP4	2950	0.1962	MG/L	0.076

02310	FLINT, CITY OF	3Q2014	21-Aug-14	DBP5	2950	0.1813	MG/L	0.065
02310	FLINT, CITY OF	3Q2014	21-Aug-14	DBP6	2950	0.1444	MG/L	0.058
02310	FLINT, CITY OF	3Q2014	21-Aug-14	DBP7	2950	0.1124	MG/L	0.049
02310	FLINT, CITY OF	3Q2014	21-Aug-14	DBP8	2950	0.112	MG/L	0.047
02310	FLINT, CITY OF	4Q2014	19-Nov-14	DBP3	2950	0.0411	MG/L	0.064
02310	FLINT, CITY OF	4Q2014	19-Nov-14	DBP4	2950	0.0936	MG/L	0.099
02310	FLINT, CITY OF	4Q2014	19-Nov-14	DBP6	2950	0.0536	MG/L	0.072
02310	FLINT, CITY OF	4Q2014	19-Nov-14	DBP7	2950	0.0501	MG/L	0.061
02310	FLINT, CITY OF	4Q2014	20-Nov-14	DBP1	2950	0.0586	MG/L	0.092
02310	FLINT, CITY OF	4Q2014	20-Nov-14	DBP2	2950	0.0333	MG/L	0.068
02310	FLINT, CITY OF	4Q2014	20-Nov-14	DBP5	2950	0.0339	MG/L	0.074
02310	FLINT, CITY OF	4Q2014	20-Nov-14	DBP8	2950	0.0362	MG/L	0.056
02310	FLINT, CITY OF	1Q2015	17-Feb-15	DBP1	2950	0.0162	MG/L	0.096
02310	FLINT, CITY OF	1Q2015	17-Feb-15	DBP2	2950	0.0168	MG/L	0.072
02310	FLINT, CITY OF	1Q2015	17-Feb-15	DBP3	2950	0.0149	MG/L	0.068
02310	FLINT, CITY OF	1Q2015	17-Feb-15	DBP4	2950	0.0245	MG/L	0.105
02310	FLINT, CITY OF	1Q2015	17-Feb-15	DBP5	2950	0.0181	MG/L	0.078
02310	FLINT, CITY OF	1Q2015	17-Feb-15	DBP6	2950	0.0192	MG/L	0.076
02310	FLINT, CITY OF	1Q2015	17-Feb-15	DBP7	2950	0.0285	MG/L	0.068
02310	FLINT, CITY OF	1Q2015	17-Feb-15	DBP8	2950	0.0199	MG/L	0.061

Rennaker, Joanne (DEQ)

From: Philip, Kris (DEQ)
Sent: Friday, February 27, 2015 11:07 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: Flint

I'll take a look. if the earliest quarter that was dropped was low, then it can happen.

From: Rosenthal, Adam (DEQ)
Sent: Friday, February 27, 2015 11:06 AM
To: Philip, Kris (DEQ)
Subject: RE: Flint

thanks. any idea why a LRAA would go up when the current sample is way lower?

From: Philip, Kris (DEQ)
Sent: Friday, February 27, 2015 10:52 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: Flint

done

From: Rosenthal, Adam (DEQ)
Sent: Friday, February 27, 2015 10:39 AM
To: Philip, Kris (DEQ)
Subject: Flint

I just entered the 1st qtr '15, can you run CDS so I can get the current LRAA/OEL.

thanks,

Adam

Rennaker, Joanne (DEQ)

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 Cincinnati 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...

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- 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.
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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

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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

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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

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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

Rennaker, Joanne (DEQ)

From: Philip, Kris (DEQ)
Sent: Friday, February 27, 2015 10:52 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: Flint

done

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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

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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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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

Rennaker, Joanne (DEQ)

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Thursday, February 26, 2015 5:15 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Deltoral, Miguel; Poy, Thomas
Subject: HIGH LEAD: FLINT Water testing Results
Attachments: Flint lean level results Feb 2015 212 Browning (Pb Cu).pdf

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.

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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 and 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**
Collection Address: **212 BROWNING AVE, FLINT**
Collected By: **LEANNE WALTERS**
Township/Well#/Section: **//**
County: **Genesee**
Sample Point: **KITCHEN**
Water System: **Treated Public Distribution System**

WSSN/Pool ID: **2310**
Source: **TYPE I**
Site Code:
Collector: **Private Citizen**
Date Collected: **02/18/2015 07:15**
Date Received: **02/19/2015 11:13**
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

Rennaker, Joanne (DEQ)

From: Philip, Kris (DEQ)
Sent: Friday, February 06, 2015 11:15 AM
To: Rosenthal, Adam (DEQ)
Subject: flint violation

It totally worked! I re-ran CDS and (a) the query in SDWIS Standard Reports now shows averages for all 8 sites, (b) they match what you had in the letter, and (c) it created the 2 candidate violations just like it should! Perhaps making that correction to the schedule made the difference.

I migrated the 2 violations from last quarter and entered the SIA/SIE as 12/12/14 (letter date). If you have a copy of the PN they sent, you should update the SIF date. Then we are set until then end of Feb.

Have a good weekend.

Rennaker, Joanne (DEQ)

From: Drullinger, Dave (DEQ)
Sent: Thursday, January 15, 2015 12:59 PM
To: Benzie, Richard (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Flint Drinking Water

Thanks Richard. I will let your operators know. Do you see this issue continuing for a while?

=== Dave

From: Benzie, Richard (DEQ)
Sent: Thursday, January 15, 2015 12:23 PM
To: Drullinger, Dave (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: Flint Drinking Water

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

Rennaker, Joanne (DEQ)

From: Benzie, Richard (DEQ)
Sent: Thursday, January 15, 2015 12:23 PM
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Sent: Thursday, January 15, 2015 11:12 AM
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Subject: Flint Drinking Water

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Thanks.

=== Dave

Rennaker, Joanne (DEQ)

From: Benzie, Richard (DEQ)
Sent: Monday, January 12, 2015 7:44 PM
To: Bolf, Michael (DEQ); Dehtiar, Luke (DEQ); Esparsa, Brian (DEQ); Klein, Jeremy (DEQ); Sarkipato, Ernest (DEQ); Walstrom, Kimberly (DEQ); Howell, Sherri (DEQ); Peterman, Tammy (DEQ); Antil, Jeffrey (DEQ); Brennan, Patrick (DEQ); Doyle, Mark (DEQ); Drake, Jerry (DEQ); DuMont, Ralph (DEQ); Rennaker, Joanne (DEQ); Chooi, Wood (DEQ); Einhardt, Nancy (DEQ); Lachance, Amy (DEQ); Ostrander, Debbie (DEQ); Reyes, Katelyn (DEQ); Wozniak, Gary (DEQ); Busch, Stephen (DEQ); Joseph, Mark (DEQ); Prysby, Mike (DEQ); Rennaker, Joanne (DEQ); Rosenthal, Adam (DEQ); Skinker, Bethel (DEQ); Brookens, Todd (DEQ); Gotham, Daryl (DEQ); Howell, Sherri (DEQ); Kaiser, Rebecca (DEQ); London, Bob (DEQ); Peterman, Tammy (DEQ); Reinke, Joseph (DEQ); Bridges, Jeriesha (DEQ); Donaldson, Kristina (DEQ); Islam, Abuzoha (DEQ); Johnson, Stephanie (DEQ); Lopez, Amber (DEQ); Stieb, Melody (DEQ); Beauchamp, Karen (DEQ); Bushong, Kathleen (DEQ); Clark, John (DEQ); Pascoe, Doug (DEQ); Swenor, Scott (DEQ); Thomas, Chuck (DEQ); Wolfe, Rob (DEQ); Berndt, Jason (DEQ); Brun Del Re, Paul (DEQ); Comage, Renee (DEQ); Cook, Pat (DEQ); Fisher, Brant (DEQ); Koenigsknecht, John (DEQ); Kukuk, Wayne (DEQ); McDermott, Kristine (DEQ); Philip, Kris (DEQ); Schmidt, Scott (DEQ); Shekter, Jean (DEQ); Bloemker, Jon (DEQ); Conradson, Scott (DEQ); Howell, Sherri (DEQ); Peterman, Tammy (DEQ); Robinson, Krista (DEQ); Slater, Brad (DEQ); Thurston, Brian (DEQ); Graham, Lois (DEQ); Deyoung, David (DEQ)
Cc: Shekter Smith, Liane (DEQ)
Subject: RE: FOS Update

Greetings,

Well it's been four weeks since my last update, but like a lot of you, I was out for two of those weeks over the holidays. I spent one of them in the U.P., where the snow-covered evergreens on bright sunny days (yes there were several) and the outdoor Christmas tree on the neighbors deck that lit up every night provided beautiful winter scenes, almost like postcards. But the air temperatures in the morning (-19, -14, etc.) were ridiculous. I told my Dad I would already be packing for somewhere warm if I lived there all winter.

Since my last update, we have been working on a number of issues and projects. I have finally begun to update the Internal Controls Evaluation (ICE) forms for the Community PWSS Program that I mentioned in my previous message. They are due by the end of this week, so I'm on my usual schedule. I'm hoping I don't have to change much from 2012. After I complete that obligation, I hope to finish putting together a hiring package for the vacant CDWU Chief position.

I have also been working with some of the SRF staff (Isabel Hartman, Eric Pohan, and David Worthington) on developing an agenda for training the less experienced district engineers on the review of DWRF Project Plans. The 6 or so engineers that have been hired in the last few years were sent an appointment for this training session last month, as their participation is expected. Others are welcome if they wish to refresh their knowledge, or despite their length of service, have not had a lot of experience with DWRF program responsibilities. I'm sorry for the late notice, but I just didn't get a chance to publicize this opportunity until last week, and it slipped my mind until I was on my way home last Friday night.

If you would like to attend this training, the meeting is next **Thursday, January 22nd, at 9:30 in the Hale-Brake Conference Room**, Atrium level. Our plan is to spend the morning providing a brief review of the DWRF program, then explain what is expected in a final Project Plan, outline the roles and responsibilities of Project Managers and District Engineers, cover some of the problem areas we have experienced, review the typical timeline to complete a project plan, etc. In the afternoon, I plan to review the scoring system. I see this

training as very informal with a lot of time for questions and answers. If you were not invited but would like to attend, please get supervisory approval and let me know so we have enough materials available for attendees. Right now, I am expecting Jeriesha Bridges, Ernie Sarkipato, Katelyn Reyes, Stephanie Johnson, Joe Reinke, Pat Brennan and maybe Amy Lachance. But more are welcome.

I also spent quite a bit of time last week dealing with the violation of the drinking water standard for disinfection byproducts in Flint, but not as much time as the Lansing District staff of Mike Prysby, Adam Rosenthal, and Steve Busch. Flint residents were already on edge over the recurring total coliform MCL violations last summer that occurred shortly after the city switched from purchasing Detroit water to relying upon the Flint River. And they remembered the low or no pressure problems created last winter by the extreme cold and unusual depth of frost penetration that caused more water mains than usual to burst. So when the city issued the public notification for exceeding the TTHM standard, the telephones began to ring. Fortunately, the Lansing District had forewarned management, which had forewarned the executive office. As a result, advance notification was also provided to legislators that cover the Flint area. Nonetheless, Mike and I along with Sarah Howes (assistant to the legislative liaison) found ourselves in a hastily arranged meeting in the House of Representatives office building last Tuesday afternoon to explain the problem and answer questions to the Flint area representatives.

This exceedance has several possible contributing factors, not the least of which is the much higher organic loading of the Flint River compared to Lake Huron. But it was also caused in part by Flint's historic storage tank operating practices where they maintained high levels with narrow operating ranges resulting in high residence times and little tank turnover. They may have operated in that manner to provide the most volume possible in case the DWSD pipeline burst. However, doing so after converting to the river resulted in greater TTHM formation. It is also possible that the city was not optimizing their ozonation system to reduce the TTHM precursors. Changes made in their operation before the city exceeded the MCL but after significantly elevated quarterly results were available last summer reduced the TTHM levels significantly in the latest round of monitoring. But it will take multiple rounds of monitoring to return the running annual average to compliance. Mike, Steve and Adam have continued to deal with this issue throughout the last week, and I know Mike is now preparing a Log Letter on this issue for the Director or Governor to sign. Today we learned that the city is planning an evening meeting next week to improve their communication with customers and hopefully, restore some customer confidence. The Lansing District will be participating in this event.

Some of the other activities FOS staff here in Lansing and/or I worked on since my last message include:

1. Dealing with a state audit of the DWRF program, particularly the set aside uses;
2. Getting the operator examination grades for the fall exams completed and disseminated;
3. Addressing several operator certification issues resulting from unsuccessful attempts by operators to obtain the proper license;
4. Continuing efforts to ensure drinking water is an integral part of a proposed statewide, water strategy;
5. Discussions with EPA on possible funding of a source water protection seminar in Michigan to enhance cross program integration;
6. Dealing with cross connection control issues and a legislative bill to establish an inspection frequency for residential irrigation systems (more on that to come when the deadline for Governor action passes);
7. Once again explaining to other agencies the drinking water program's history and position with respect to 1,4-Dioxane contamination and a possible standard or Health Advisory Level; and
8. A successful open house and heartfelt goodbye for Diane Reck;

We have our monthly managers meeting this Thursday. Be sure to let your supervisor know if you have any issues they should raise. I hope to discuss and then start scheduling district visits after that meeting.

Finally, as I often did for the staff in the Community Drinking Water Unit, I wanted to thank you all for the great job you have been doing in working to ensure Michigan residents and visitors have safe drinking water. In appreciation of your efforts, feel free to stay home next Monday.

Richard

Rennaker, Joanne (DEQ)

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

Rennaker, Joanne (DEQ)

From: Benzie, Richard (DEQ)
Sent: Wednesday, January 07, 2015 6:22 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Tally of Flint calls

I tried to forward another call to all of you but of course, only the non-cell phone numbers can have a message forwarded. I am going to have to get that changed.

Anyway, Adam received the message, but Mike and Steve did not. It was from a Sandra Wilkes(?) from Flint at 810-449-5401. She's very concerned about her water. Would one of you please contact her. Thanks.

From: Busch, Stephen (DEQ)
Sent: Wednesday, January 07, 2015 11:43 AM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ)
Subject: FW: Tally of Flint calls

FYI. I had Mike put together a list of those who have contacted us and we have responded to regarding the Flint TTHM violation, I have added those Adam and I spoke with too. If you or your staff receive calls this should help to note whether the individual has already been in contact with staff, so share with your staff as appropriate. Hopefully, it will help avoid any mixed messages and can shorten the conversations to any additional concerns or questions the individual may have.

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 07, 2015 11:30 AM
To: Busch, Stephen (DEQ)
Subject: Tally of Flint calls

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

Rennaker, Joanne (DEQ)

From: Benzie, Richard (DEQ)
Sent: Thursday, December 11, 2014 6:28 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Flint
Attachments: Flint DBP MCL 4Q14 draft II.doc

It looked good but I've done a bit of wordsmithing. I like the tone better now as it shows we are continuing to provide compliance assistance even after identifying a violation and initiating enforcement. Be aware that compliance assistance is going to receive greater focus in the next term of this administration.

From: Prysby, Mike (DEQ)
Sent: Thursday, December 11, 2014 2:20 PM
To: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Benzie, Richard (DEQ)
Subject: Flint

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



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE



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 R325.10719I, *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.

Water systems who exceed the OEL must complete and submit an Operational Evaluation in accordance with Administrative Rule 7191(R325.101791) within 90 days of being notified since the start of the violation. We acknowledge and appreciate the city's ~~collaborative cooperation effort~~ with our department ~~recommendation to conduct~~ towards preparing an Operational Evaluation before being required to do so several months prior to OEL exceedance and submitting a draft report when the exceedance was foreseeable. 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 identified in the Operational Evaluation, including improved distribution system operation and initiating softening of the entire treatment plant flow, both of which have and has likely contributed to the reduction in TTHM levels reported 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. At the same time, ~~we~~ we will review the draft report and provide comments as needed towards assisting the city in this endeavor. The (final?) Operational Evaluation report needs to 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 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 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 public notice (PN) which contains the minimum required language. The City is encouraged to ~~include~~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 (also?) be included in your 2014 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.~~ (is the prior really sentence necessary?)

We anticipate and appreciate your continued 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
Robert 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.

Rennaker, Joanne (DEQ)

From: Benzie, Richard (DEQ)
Sent: Thursday, December 11, 2014 1:35 PM
To: Busch, Stephen (DEQ)
Cc: Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Draft Violation Notice for comment

Steve,

Will there be a cover letter with this VN? Would it be appropriate to mention the amount of cooperation and collaboration that has already occurred in responding to this matter?

Your closing on the VN mentions that we appreciate their cooperation in resolving this matter, but there is no mention of what cooperation has already occurred. I think it would be useful to mention that there has been significant collaboration between the district and the city and that some improvement (reduced levels) has already been achieved. A cover letter could mention this fact, demonstrating to the area legislators that we are not in an adversarial relationship with the city.

Richard

From: Busch, Stephen (DEQ)
Sent: Wednesday, December 10, 2014 5:11 PM
To: Wurfel, Brad (DEQ); Datema, Maggie (DEQ); Shekter Smith, Liane (DEQ)
Cc: Benzie, Richard (DEQ); Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: Draft Violation Notice for comment

Attached is a draft violation notice to the City of Flint regarding the exceedance of the drinking water standard for total trihalomethanes (TTHM).

If you have any comments please let me know by Friday, we would like to mail this out by Monday at the latest. An electronic copy of the signed letter will be provided to Maggie for forwarding to legislative members in the Flint area.

If you have any questions, please contact me directly.

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

Rennaker, Joanne (DEQ)

From: Philip, Kris (DEQ)
Sent: Monday, December 01, 2014 3:00 PM
To: Rosenthal, Adam (DEQ)
Subject: DBP

Just confirmed with Jean that even if Flint only has 3 quarters of data, if, when divided by 4, the LRAA is over 80, they are over the MCL NOW. Even if the 4th quarter results were 0, they would still be over, so we don't wait.

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Tuesday, November 18, 2014 2:54 PM
To: Rosenthal, Adam (DEQ)
Cc: Brent Wright; Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: Re:

Adam,

We were planning on sampling DBP's tomorrow &/or Thursday, following the schedule that was set up during Stage 2 DBP implementation (3rd full week of November), and samples will be mailed out Thursday. I would expect the lab to receive samples on Friday the 21st. With the Holiday next week, I don't expect results until after the first of December.

Mike Glasgow
 City of Flint Water Plant

On Tue, Nov 18, 2014 at 2:33 PM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Brent & Mike, we need to find out if you have collected the 4th quarter DBPs (TTHM & HAA5), or when you plan on collecting the samples, and when to expect results. Please let us know.

thanks,

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

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Monday, October 06, 2014 3:05 PM
To: Rosenthal, Adam (DEQ)
Subject: Re: bacti info
Attachments: August 2014 - MOR Bacteria.xlsx

Adam,

Here is the August bacteria summary.

Mike

On Mon, Oct 6, 2014 at 2:09 PM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Mike, can you send me the summary for August also.

thanks,

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

From: Michael Glasgow [mailto:mglasgow@cityofflint.com]
Sent: Monday, October 06, 2014 1:49 PM
To: Rosenthal, Adam (DEQ)
Cc: Brent Wright
Subject: Re: bacti info

Adam,

Good afternoon, I have attached the bacteria sample information you requested below. I just copied the final 3 pages of our September MOR. Let me know if there is anything else you need. I have also attached Bromate test results for September, that I just received today.

Mike Glasgow

On Mon, Oct 6, 2014 at 9:26 AM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Morning Gentlemen, we are preparing a MCL letter regarding the incidents in Aug. & Sept. and I need the total number of bacti samples collected in those months. If you can just tell me the numbers for now that will be sufficient.

thanks,

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

**Distribution System
Monitoring**
**City of Flint Water Treatment Plant
WSSN: 2310**

August 2014

Date	Free Chlorine Residual at Bacteriological Monitoring Stations mg/l										Number of Samples
	1	2	3	4	5	6	7	8	CS	WR	
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 Summary

Percentage of samples with a c residual

Average disinfectant resi

Positive Distribution Samples			
Date	Monitoring Station	Date	Repeat Monitorong Stations
	See page 9		

**Distribution System
Monitoring**

City of Flint Water Treatment
WSSN: 2310

Date	Total Chlorine Residual at Bacteriolo					
	1	2	3	4	5	6
1						
2						
3						
4						
5						
6	0.6	1.1	0.5	0.5	0.2	0.3
7	0.9	1.3	0.5	0.9	0.4	0.4
8						
9						
10						
11						
12	0.3	0.6	0.3	0.2	0.1	0.3
13	0.4	0.5	0.2	0.7	0.1	0.3
14	0.7	1.1	0.4	0.4	0.1	0.2
15						
16						
17						
18						
19	0.3	0.6	0.2	0.3	0.1	0.2
20	0.4	1.2	0.3	0.7	0.3	0.4
21	0.4	1.1	0.4	0.3	0.1	0.2
22	0.4	1.0	0.4	0.9	0.5	0.2
23						
24						
25						
26	0.3	0.9	0.9	0.6	0.1	0.5
27	0.3	0.7	0.2	0.3	0.2	0.2
28	0.5	0.7	0.3	0.8	0.3	0.5
29						
30						
31						

Total Residual Summary	
detectable disinfectant	91%
average residual this month	0.37

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	
Average disinfectant residual this month	

ent Plant

August 2014

Page 8

Distribution Sys

gical Monitoring Stations mg/l

7	8	CS	WR	Number of Samples
				0
				0
				0
				0
				0
0.2	1.2	0.5	0.3	10
0.3	1.2	0.4	2.0	10
				0
				0
				0
				0
0.2	0.7	0.1	0.1	10
0.1	1.5	0.1	1.6	10
0.1	1.4	0.9	0.6	10
				0
				0
				0
				0
0.1	1.3	0.9	1.1	10
0.5	1.5	0.7	1.0	10
0.2	1.3	0.3	1.1	10
0.1	1.1	0.8	1.4	10
				0
				0
				0
0.3	1.3	1.5	1.2	10
0.2	1.1	0.7	0.8	10
0.3	1.5	1.6	1.5	10
		1.3	1.5	2
				0
				0

Date
8/12/2014
8/12/2014
8/12/2014
8/14/2014
8/22/2014

try
100%
0.6

Positive Distribution Samples

Monitoring station	Date	Repeat Monitoring Stations	Present or Absent
3606 Corunna Rd	8/13/2014	3606 Corunna Rd	Present
	8/13/2014	3521 Corunna Rd	Present
	8/13/2014	3614 Corunna Rd.	Present
2501 Flushing Rd	8/13/2014	2501 Flushing Rd	Present
	8/13/2014	1117 N. Chevrolet	Present
	8/13/2014	2740 Flushing Rd	Present
1100 Cedar St.	8/13/2014	1100 Cedar St.	Present
	8/13/2014	1035 Ann Arbor St	Present
	8/13/2014	702 W. 12th St	Absent
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
5018 Clio Rd.	8/23/2014	5018 Clio Rd.	Absent
	8/23/2014	5005 Cloverlawn Dr.	Absent
	8/23/2014	4930 Clio Rd.	Absent

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Monday, October 06, 2014 1:49 PM
To: Rosenthal, Adam (DEQ)
Cc: Brent Wright
Subject: Re: bacti info
Attachments: Sept 2014 Bacteria - MOR.xlsx; September 2014 Bromate Results.pdf

Adam,

Good afternoon, I have attached the bacteria sample information you requested below. I just copied the final 3 pages of our September MOR. Let me know if there is anything else you need. I have also attached Bromate test results for September, that I just received today.

Mike Glasgow

On Mon, Oct 6, 2014 at 9:26 AM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Morning Gentlemen, we are preparing a MCL letter regarding the incidents in Aug. & Sept. and I need the total number of bacti samples collected in those months. If you can just tell me the numbers for now that will be sufficient.

thanks,

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

Positive Distribution Samples						
Date	Monitoring Station	Date	Repeat Monitoring Stations	Residual	Positive or Negative	
	See page 9					

Distribution System
MonitoringCity of Flint Water Treatment Plant
WSSN: 2310

September 2014

Page 8

Date	Total Chlorine Residual at Bacteriological Monitoring Stations mg/l										Number of Samples
	1	2	3	4	5	6	7	8	CS	WR	
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
31											0

Distribution Disinfectant Total Residual Summary	
Percent samples with a detectable disinfectant residual	100%
Average disinfectant residual this month	0.9

Positive Distribution Samples

Date	Monitoring station	Date	Repeat Monitoring Stations	Present or Absent
9/2/2014	2501 Flushing Rd	9/3/2014	2501 Flushing Rd	Present
			1117 N. Chevrolet	Present
			2740 Flushing Rd	Absent
		9/4/2014	2501 Flushing Rd	Present
			1117 N. Chevrolet	Present
			2740 Flushing Rd	Present
		9/5/2014	2501 Flushing Rd	Present
			1117 N. Chevrolet	Absent
			2740 Flushing Rd	Present
		9/6/2014	2501 Flushing Rd	Absent
			2205 Flushing Rd.	Absent
			1274 Ballenger Hwy	Absent
		9/7/2014	2501 Flushing Rd	Absent
			2205 Flushing Rd.	Absent
			1274 Ballenger Hwy	Present
		9/8/2014	2501 Flushing Rd	Absent
			2205 Flushing Rd.	Absent
			1274 Ballenger Hwy	Absent
9/4/2014	3216 MLK Blvd.	9/5/2014	3216 MLK Blvd.	Absent
			3317 MLK Blvd.	Present
			3110 MLK Blvd.	Present
		9/6/2014	3216 MLK Blvd.	Absent
			3317 MLK Blvd.	Absent
			3110 MLK Blvd.	Absent
		9/7/2014	3216 MLK Blvd.	Absent
			3317 MLK Blvd.	Absent
			3110 MLK Blvd.	Absent
9/10/2014	3606 Corunna Rd.	9/11/2014	3606 Corunna Rd.	Absent
			3521 Corunna Rd.	Absent
			3614 Corunna Rd.	Absent
9/16/2014	3606 Corunna Rd.	9/17/2014	3606 Corunna Rd.	Absent
			3521 Corunna Rd.	Absent
			3614 Corunna Rd.	Absent
9/17/2014	3302 S. Dort Hwy	9/18/2014	3302 S. Dort Hwy	Absent
			3124 S. Dort Hwy	Absent
			3316 S. Dort Hwy.	Absent



Live Safer™

NSF International

789 N. Dixboro Rd. Ann Arbor, MI 48105, USA
 1-800.NSF.MARK | +1-734.769.8010 | www.nsf.org

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	01-OCT-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-00148747		
Project Number	9841598 (CL01)		
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 A. LeVanseler
 Kerri Levanseler - Director, Chemistry Laboratory

Date 01-OCT-2014

**General Information**

Standard: USFDA CFR Title 21 Part 165.110

Date and Time Sampled: 9/24/2014 09:05 EDT

Product Description: Municipal Water

Test Description: Bromate - September

Sample Id: S-0001081432
Description: Municipal Water - 9/24/2014 09:05 EDT
Sampled Date: 09/24/2014
Received Date: 09/25/2014

Testing Parameter	Reporting Limit	Result	FDA SOQ	Units	P / F
Disinfection Residuals/Disinfection By-Products					
Bromate	5	9	10	ug/L	Pass



<<Additional Information>>

Sample Id: S-0001081432

Test Parameter	Date Analyzed	Time Analyzed	Date Prepared/ Processed
Disinfection Residuals/Disinfection By-Products			
Bromate (Ref: EPA 300.1)	25-SEP-2014		


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:

Michigan (# 0048)	Florida (# E-87752 FL)	California (# 03214 CA)
New York (# 11206)	Connecticut (# PH-0625)	New Jersey (# MI770)
South Carolina (# 81005)	Pennsylvania (# 68-00312)	Hawaii
Indiana	Maryland (# 201)	Nevada (# MI000302010A)
Virginia (# 00045)	Vermont (# VT 11206)	North Carolina (# 26701)
Arizona (# AZ0655)		

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 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.

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Tuesday, September 09, 2014 4:48 PM
To: Rosenthal, Adam (DEQ)
Subject: Re: September 2014 Boil Water Notice Timeline
Attachments: Boil Lift Notice.doc

Adam,

I used the boil lift notice that you sent me, and just tweaked it a little. However, now the EM would like one on DEQ letterhead and signed if possible. The adjusted copy I made is attached below.

On Tue, Sep 9, 2014 at 3:32 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:
 Thanks Adam

On Tue, Sep 9, 2014 at 3:30 PM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:
 this is generic, you can edit it for your situation.

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

From: Michael Glasgow [mailto:mglasgow@cityofflint.com]
Sent: Tuesday, September 09, 2014 9:47 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Cc: Brent Wright; Daugherty Johnson; Howard Croft
Subject: September 2014 Boil Water Notice Timeline

Gentlemen,

Attached is a timeline of events that led us to the recent boil water notice. It shows all sampling and results from 9/2 thru today.

FYI:

I was just talking with a couple of employee's from the Water Service Center who have been helping us with our investigation of the the distribution system. It seems that they have found one of the possible causes of our recent issues. A 36" transmission main not far west of the treatment plant had a valve that was closed, and the 24" transmission main that leads west also has a valve that is closed. The 36" valve was opened, however the valve on the 24" is inoperable. With these valves closed, it appears the water leaving the plant has no direct route to the west side of the city (or the West Side Reservoir)

Mike Glasgow

City of Flint Water Plant

September 9, 2014

Mr. Brent Wright
City of Flint Water Plant
4500 N. Dort Hwy
Flint, Michigan 48505

WSSN: 2310

Dear Mr. Wright:

SUBJECT: Water Supply – Lift Boil Notice for coliform MCL
Bacteriological Sampling of Public Water Supplies

This letter is written as a follow-up to our phone conversation on September 9, 2014. The 10 samples you collected for bacteriological analyses throughout the entire city on September 9th, 2014, following flushing of the distribution system, were all negative (coliform organisms not detected). Since these results all come back negative, resume your normal sampling (100 samples per month) of the distribution system.

As the results of your re-samples and other distribution samples came back negative, the "boil water" notice for the City of Flint has been lifted. You may post and/or distribute copies of the attached notice to your residents. A copy of this notice will be faxed to the Genesee County Health Department.

If you have any questions, please contact our office.

Sincerely,

Adam Rosenthal, Resource Analyst
Field Operations Section
Drinking Water and Radiological
Protection Division
517-335-9715

September 9, 2014

To: The Residents of the City of Flint

THE RECENT BOIL WATER NOTICE HAS BEEN LIFTED.

It is no longer necessary to use bottled water or boil water before drinking it.

No coliform bacteria have been detected in follow-up testing of the system's water. This, in addition to treatment and adjustments made to the system, indicates that the water is now safe to drink.

Customers with questions or concerns about the water should contact the Mr. Brent Wright Water Plant Superintendent 810-787-6537 or Adam Rosenthal, Michigan Department of Environmental Quality 517-335-9715.

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Tuesday, September 09, 2014 3:32 PM
To: Rosenthal, Adam (DEQ)
Subject: Re: September 2014 Boil Water Notice Timeline

Thanks Adam

On Tue, Sep 9, 2014 at 3:30 PM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

this is generic, you can edit it for your situation.

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

From: Michael Glasgow [mailto:mglasgow@cityofflint.com]
Sent: Tuesday, September 09, 2014 9:47 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Cc: Brent Wright; Daugherty Johnson; Howard Croft
Subject: September 2014 Boil Water Notice Timeline

Gentlemen,

Attached is a timeline of events that led us to the recent boil water notice. It shows all sampling and results from 9/2 thru today.

FYI:

I was just talking with a couple of employee's from the Water Service Center who have been helping us with our investigation of the the distribution system. It seems that they have found one of the possible causes of our recent issues. A 36" transmission main not far west of the treatment plant had a valve that was closed, and the 24' 'transmission main that leads west also has a valve that is closed. The 36" valve was opened, however the valve on the 24" is inoperable. With these valves closed, it appears the water leaving the plant has no direct route to the west side of the city (or the West Side Reservoir)

Mike Glasgow

City of Flint Water Plant

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Tuesday, September 09, 2014 9:47 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Cc: Brent Wright; Daugherty Johnson; Howard Croft
Subject: September 2014 Boil Water Notice Timeline
Attachments: Boil Water Advisory Event Timeline # 2.docx

Gentlemen,

Attached is a timeline of events that led us to the recent boil water notice. It shows all sampling and results from 9/2 thru today.

FYI:

I was just talking with a couple of employee's from the Water Service Center who have been helping us with our investigation of the the distribution system. It seems that they have found one of the possible causes of our recent issues. A 36" transmission main not far west of the treatment plant had a valve that was closed, and the 24" transmission main that leads west also has a valve that is closed. The 36" valve was opened, however the valve on the 24" is inoperable. With these valves closed, it appears the water leaving the plant has no direct route to the west side of the city (or the West Side Reservoir)

Mike Glasgow
City of Flint Water Plant

City of Flint Boil Water Advisory Event Timeline (Sept. 2014)

September 2nd – Routine distribution sampling yielded 1 sample positive for coliform bacteria.

Sample Site	Address	Free Chlorine	Total Chlorine
# 5	2501 Flushing Rd	0.0	0.1

September 3rd – Distribution repeat sampling along with upstream and downstream locations yielded 2 samples positive for coliform bacteria.

Sample Site	Address	Free Chlorine	Total Chlorine
# 5	2501 Flushing Rd.	0.0	0.2
# 5 Upstream	1117 N. Chevrolet	0.0	0.2
# 5 Downstream	2740 Flushing Rd.	0.1	0.3

September 4th – Sampling yielded four samples positive for coliform bacteria. Sampling included Site # 5 repeat sampling and the City Distribution sampling.

Sample Site	Address	Free Chlorine	Total Chlorine
# 5	2501 Flushing Rd.	0.1	0.2
# 5 Upstream	2205 Flushing Rd.	0.1	0.2
# 5 Downstream	2740 Flushing Rd.	0.1	0.3
# 6	3216 MLK Blvd.	0.1	0.2

September 5th – Notified DEQ of recent results. Resampled Site # 5 & # 6 along with upstream & downstream locations. Site # 5 and its downstream locations were positive for coliform bacteria. Site # 6 upstream & downstream locations were also positive for coliform bacteria. DEQ requires boil water notice to be issued tonight.

Sample Site	Address	Free Chlorine	Total Chlorine
# 5	2501 Flushing Rd	0.1	0.2
# 5 Upstream	2205 Flushing Rd.	0.1	0.3
# 5 Downstream	2740 Flushing Rd.	0.1	0.2
# 6	3216 MLK Blvd.	0.2	0.3
# 6 Upstream	3317 MLK Blvd.	0.1	0.2
# 6 Downstream	3110 MLK Blvd.	0.1	0.2

September 6th – Resampled Site # 5 & # 6 along with upstream & downstream locations. All samples were negative for coliform bacteria. Site #6 was closed, alternate site used.

Sample Site	Address	Free Chlorine	Total Chlorine
# 5	2501 Flushing Rd.	0.2	0.3
# 5 Upstream	2205 Flushing Rd.	0.2	0.3
# 5 Downstream	1274 Ballenger Hwy.	0.1	0.2
# 6 (alt)	104 E. Pasadena	0.1	0.2
# 6 Upstream	3317 MLK Blvd.	0.2	0.3
# 6 Downstream	3110 MLK Blvd.	0.0	0.1

September 7th – Resampled Site # 5 & # 6 along with upstream & downstream locations. . Site #6 was closed, alternate site used.

Sample Site	Address	Free Chlorine	Total Chlorine
# 5	2501 Flushing Rd.	0.2	0.3
# 5 Upstream	2205 Flushing Rd.	0.2	0.3
# 5 Downstream	1274 Ballenger Hwy.	0.0	0.2
# 6 (alt)	104 E. Pasadena	0.1	0.3
# 6 Upstream	3317 MLK Blvd.	0.1	0.3
# 6 Downstream	3110 MLK Blvd.	0.2	0.3

September 8th – Sampled all 10 sites in the distribution sampling plan, including Site # 5 downstream which was positive on the 7th.

Sample Site	Address	Free Chlorine	Total Chlorine
# 1	3742 Davison Rd.	0.1	0.2
# 2	822 S. Dort Hwy	0.2	0.4
# 3	3302 S. Dort Hwy	0.1	0.1
# 4	3606 Corunna Rd.	0.0	0.2
# 5	2501 Flushing Rd.	0.1	0.2
# 6	3216 MLK Blvd.	0.1	0.1
# 7	5018 Clio Rd.	0.1	0.1
# 8	6204 N. Saginaw St.	0.7	1.0
Cedar St. Reservoir	1100 Cedar St	0.6	0.9
West Side Reservoir	1416 Dupont St.	0.7	1.0
# 5 Downstream	1274 Ballenger Hwy	0.1	0.1

Sample results will be available @ 2pm on 9/9/15.

Rennaker, Joanne (DEQ)

From: Brent Wright <bwright@cityofflint.com>
Sent: Monday, August 18, 2014 1:01 PM
To: Prysby, Mike (DEQ)
Cc: Michael Glasgow; Rosenthal, Adam (DEQ); Busch, Stephen (DEQ)
Subject: Re: Sample results

That is correct Mike the positive was from Sample Site #5.

Thank you

On Mon, Aug 18, 2014 at 12:45 PM, Prysby, Mike (DEQ) <PRYSBYM@michigan.gov> wrote:

Brent,

I need to clarify a discrepancy in my field notes concerning the single TC Positive result obtained last Thurs Aug 14th (the second set of 9 repeat samples). I noted last Friday that the positive result on that day was from Sample Site #4 – Taco Bell; however, during our call this morning; it was mentioned that the positive result was from Sample Site #5. Please confirm.

Also, I will be out today after 2pm for physician appt. Please contact Steve Busch and/or Adam Rosenthal concerning new sample results and/or additional information. I will be back in the office tomorrow morning at 7:00am.

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

Rennaker, Joanne (DEQ)

From: Cook, Pat (DEQ)
Sent: Monday, August 18, 2014 9:41 AM
To: Rosenthal, Adam (DEQ)
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: RE: Flint - 02310 Fecal Positive / Boil order

Adam – nicely done. One thing I forgot to mention to you last Friday was that we should have also contacted both the Dept of Ag and the local health dept about Flint's boil order. Hopefully someone remembered to do it.

pat

From: Rosenthal, Adam (DEQ)
Sent: Friday, August 15, 2014 5:48 PM
To: 'bwright@cityofflint.com'; Mike Glasgow; djohnson@cityofflint.com
Cc: Busch, Stephen (DEQ); Sygo, Jim (DEQ); Wurfel, Brad (DEQ); Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Philip, Kris (DEQ); Prysby, Mike (DEQ); Joseph, Mark (DEQ); Skinker, Bethel (DEQ); Cook, Pat (DEQ)
Subject: Flint - 02310 Fecal Positive / Boil order

Summary:

8/12/14 – 3 routine samples test positive for total coliform (TC), Cedar Reservoir, Site 4 & Site 5.

Free Chlorine was 0 and Total Cl around 0.1 ppm.

8/13/14 – 9 repeat samples collected, 7 TC positive & 1 fecal positive downstream of Site 4
 Site 4 is a Taco Bell, downstream site is a repair shop with a questionable tap.

8/14/14 – 2nd set of 9 repeat samples collected, 8 repeats Non Detect and Site 4 TC positive (downstream site with the fecal positive was cleaned and is now non detect.) Chlorine has been increased and detected at 0.2 – 0.5 ppm Free Cl.

With the confirmed fecal positive, the MCL has been elevated to require a Tier 1 Public Notice to be issued within 24 hrs of notification. The DEQ is issuing a Boil Water Order to the affected area (Public Notice attached). A 2nd Tier 2 MCL PN may be necessary once the August monitoring period is complete and the situation is resolved.

The City of Flint has been instructed to issue the Tier 1 PN according to their Emergency Response Plan, flush the system, and collect 2 sets of 5 samples 24 hrs apart in the affected area before lifting the boil order.

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

Rennaker, Joanne (DEQ)

From: Benzie, Richard (DEQ)
Sent: Saturday, August 16, 2014 10:33 AM
To: Rosenthal, Adam (DEQ)
Cc: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ); Cook, Pat (DEQ)
Subject: RE: Flint - 02310 Fecal Positive / Boil order
Attachments: image001.gif

Sorry I missed your calls - I was doing yard work outside when you called and didn't get your messages until I went inside the house after 8 PM.

I don't have any concerns with the way you handled this situation. The only point of discussion I may have commented upon if I had been reached is the establishment of the "area affected." I recall having conversations with EPA on this matter some years ago, and we were not always agreeing with them because we planned to use judgment on a case by case basis in these situations. They were a bit more rigid. We can discuss more on Monday.

Richard

From: Rosenthal, Adam (DEQ)
 Sent: Friday, August 15, 2014 5:48 PM
 To: 'bwright@cityofflint.com'; Mike Glasgow; djohnson@cityofflint.com
 Cc: Busch, Stephen (DEQ); Sygo, Jim (DEQ); Wurfel, Brad (DEQ); Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Philip, Kris (DEQ); Prysby, Mike (DEQ); Joseph, Mark (DEQ); Skinker, Bethel (DEQ); Cook, Pat (DEQ)
 Subject: Flint - 02310 Fecal Positive / Boil order

Summary:

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Free Chlorine was 0 and Total Cl around 0.1 ppm.

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Site 4 is a Taco Bell, downstream site is a repair shop with a questionable tap.

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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

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Monday, June 16, 2014 3:16 PM
To: Rosenthal, Adam (DEQ)
Subject: Water Quality Monitoring

Adam,

Good afternoon, I am writing in regards to the parameters for our water quality monitoring for this quarter. In the past we analyzed for pH, temperature, alkalinity, and ortho-phosphate. However looking through the Safe Drinking Water Act, for initial monitoring it states that we should analyze pH, alkalinity, ortho-phosphate or silica, calcium, conductivity, and temperature. I was planning on following the SDWA initial monitoring parameters. I was wondering if ortho-phosphate was necessary since we are not adding any to the finished water.

Thank you,

Mike Glasgow
City of Flint Water Plant

Rennaker, Joanne (DEQ)

From: Cook, Pat (DEQ)
Sent: Thursday, June 12, 2014 9:19 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Rosenthal, Adam (DEQ); Benzie, Richard (DEQ)
Subject: RE: Flint MOR and Test Results

Will do. I tried to call him this morning to give him Ms. McCarthy's phone number. His voice mail was full so I was unable to leave a message. I'll try again later today.

pat

From: Busch, Stephen (DEQ)
Sent: Thursday, June 12, 2014 9:04 AM
To: Cook, Pat (DEQ); Prysby, Mike (DEQ)
Cc: Rosenthal, Adam (DEQ); Benzie, Richard (DEQ)
Subject: RE: Flint MOR and Test Results

Pat,

I appreciate your efforts to try and assist Mr. Jefferson, but I think at this point any further correspondence with him needs to be directed back to either Mike or I. If there are specific treatment questions we are unable to answer or need confirmation on we will let you know.

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, June 12, 2014 8:05 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Flint MOR and Test Results

Thanks Mike. Mr. Jefferson left me a message yesterday wanting the phone number of the "clean drinking water administrator of the US". That would be EPA Administrator, Gina McCarthy. I'll call him back and give him Ms. McCarthy's phone number and the latest lab results. However, he has told me that he does not trust the city or the state since Gov. Snyder placed an emergency manager in the city.

pat

From: Prysby, Mike (DEQ)
Sent: Thursday, June 12, 2014 7:56 AM
To: Cook, Pat (DEQ)
Subject: FW: Flint MOR and Test Results

Pat,

This is the Flint WTP info (April MOR and May's Unit 37 sample results) that was sent EPA late last week. I have tried to contact Mr. Jefferson, his voicemail is full and won't accept messages.

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

From: Busch, Stephen (DEQ)
Sent: Friday, June 06, 2014 3:06 PM
To: poy.thomas@epa.gov
Cc: Crooks.Jennifer@epamail.epa.gov; Prysby, Mike (DEQ)
Subject: Flint MOR and Test Results

Tom,

The April MOR you requested is attached along with the following test results sampled in May.

- TOC
- Metals
- VOC
- SOC (all 3 categories)
- Partial Chemistry

As the WTP only operated for the last few days in April the MOR results provide limited information. The Bacteriological Portion of the May Operating Period will be due next Tuesday 6/10, but the operational monitoring won't be reported until 6/30.

If you have any other questions, just let us know.

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

Rennaker, Joanne (DEQ)

From: Cook, Pat (DEQ)
Sent: Thursday, June 12, 2014 8:05 AM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Flint MOR and Test Results

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

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Sent: Friday, June 06, 2014 3:06 PM
To: poy.thomas@epa.gov
Cc: Crooks.Jennifer@epamail.epa.gov; Prysby, Mike (DEQ)
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If you have any other questions, just let us know.

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

Rennaker, Joanne (DEQ)

From: Cook, Pat (DEQ)
Sent: Thursday, June 12, 2014 7:50 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Rosenthal, Adam (DEQ)
Subject: Flint

Can you please give me an update of the latest round of Unit 37 sampling from the Flint WTP? Lathan Jefferson is still claiming that people are getting "sores and lesions" from the water. I would like to obtain the latest round of sampling if I could before I call him back.

Thnaks,

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

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Monday, May 19, 2014 10:00 AM
To: Rosenthal, Adam (DEQ)
Subject: Re: DBP locations

Adam,

We did find an additional 4 sites for TTHM & HAA5 monitoring. I went back and looked at the data used to determine our sites for Stage 2 DBP implementation. We will be using the available sites that had the highest levels of TTHM & HAA5.

Mike Glasgow
City of Flint Water Plant

On Mon, May 19, 2014 at 8:46 AM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Morning Mike, we wanted to make sure you found an additional 4 sites (8 total) for TTHM & HAA5 monitoring that is due by the end of May. Let me know.

thanks,

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

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Wednesday, May 14, 2014 2:33 PM
To: Rosenthal, Adam (DEQ)
Subject: Re: April '14 MOR
Attachments: .4-14 State Report.xls

Adam,

Attached is a copy of our MOR. It is not complete. As you will see, it is only missing the information on plant flow. That data was in Brent's office, which was unfortunately flooded due to a replaced valve mishap. Flow coming out of the plant was shut off for a brief moment (valve was originally half open, and upon repair of the controller the valve was closed fully then re-opened) stopping flow to our pump station, and flooded the front offices with over 3 foot of water causing a lot of Brent's paper work to be saturated. He is still drying things out and separating them. I have forwarded your original message to him and I expect to have the completed version of our MOR to you by the end of the week. I am in the process of altering the MOR to reflect our new operation, however for last month considering the fact we only distributed water a couple days, I tried to combine them together. During those couple days we were also supplementing the distribution system with Detroit water located in our reservoirs.

Mike Glasgow
City of Flint Water Plant

On Wed, May 14, 2014 at 8:52 AM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Morning Mike, reporters are calling and Steve is looking for the April '14 MOR, please email a copy when you get this.

Please note that since Flint submits the monthly bacti results with the MOR, it is due by the 10th of the month. Please make sure to send future MORs, or at least the bacti results so they are received by the 10th.

thanks,

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

Apr-14

[illegible]



Flouridation & Chlorination

WSSN 2310

Apr-14

D A T E	Fluorid e Applied F- mg/l	Fluoride Analyses mg/l			Chlorine App. Mg/l			Chlorine Residual mg/l							
						Chlorine (prior to filtration) mg/L OCI-	Post Chlorin e mg/L	B&P	Sta II	Dort	3MG Well		Tap		
		Free	Free	Free				Free			Free				
		Raw	Tap	Dist											
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

D A T E	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

D A T E	Total Coliform							Standard Plate Count		Wind Direction	Temp deg.C	Color		Odor	
	Plant Tap							Raw	Tap			Raw	Tap	Raw	Tap
	B&P	C.F.E.	Dort	3MG Well	C.S. #2	Lab 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				
C.F.E. = Combined Filter Effluent											9.6				
											11.7				
											7.7				

n.s. = no sample collected/tested



Distribution System Monitoring

WSSN 2310

Apr-14

[illegible]



Distribution System Monitoring

WSSN 2310

Apr-14

[illegible]



ROUTINE POSITIVE DISTRIBUTION SAMPLES

Apr-14

Total number of positive routine samples:				Total Coliform: <u>0</u>		Fecal Coliform: <u>0</u>	
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			

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Thursday, April 17, 2014 11:05 AM
To: Rosenthal, Adam (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: Re: Proposed Water Monitoring - City of Flint

Adam,

Thank you for the quick response. I assumed there would be dramatic changes to our monitoring. I have people above me making plans to distribute water ASAP. I was reluctant before, but after looking at the monitoring schedule and our current staffing, I do not anticipate giving the OK to begin sending water out anytime soon. If water is distributed from this plant in the next couple weeks, it will be against my direction. I need time to adequately train additional staff and to update our monitoring plans before I will feel we are ready. I will reiterate this to management above me, but they seem to have their own agenda.

Thank you,

Mike Glasgow
 Laboratory & Water Quality Supervisor
 City of Flint Water Plant

On Wed, Apr 16, 2014 at 2:49 PM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Mike, we have been working on a revised schedule for the City of Flint, which is being sent out today in response to your email indicating the plant startup. Mike Prysby must have been the one in contact with Mr. Croft, not sure what was discussed. Mike is out and will return 4/21/14. Until then our supervisor, Steve Bush, can be contacted at 517-643-2314 for plant operation questions.

see attached schedule.

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

From: Michael Glasgow [mailto:mglasgow@cityofflint.com]
Sent: Wednesday, April 16, 2014 12:59 PM
To: Rosenthal, Adam (DEQ)
Subject: Proposed Water Monitoring - City of Flint

Adam,

Good afternoon, I am contacting you in regards to possible changes in our monitoring for our change to full time operation out of the Flint river. I am expecting changes to our Water Quality Monitoring parameters, and possibly our DBP and lead & copper monitoring plan. Also, I am wondering about our MOR required testing. I know you have probably been in contact with Howard Croft, however I have not seen anything except the notes you or Prysby made on the last page of our 2014 monitoring schedule "that things were subject to change". Any information would be greatly appreciated, because it looks as if we will be starting the plant up tomorrow and are being pushed to start distributing water as soon as possible. As the acting F-1, I would like to make sure we are monitoring, reporting and meeting our requirements before I give the O.K to start distributing water.

Thanks,

Mike Glasgow

Laboratory & Water Quality Supervisor

City of Flint Water Plant

(810)787-6537 ext. 3512

Rennaker, Joanne (DEQ)

From: Michael Glasgow <mglasgow@cityofflint.com>
Sent: Wednesday, April 16, 2014 12:59 PM
To: Rosenthal, Adam (DEQ)
Subject: Proposed Water Monitoring - City of Flint

Adam,

Good afternoon, I am contacting you in regards to possible changes in our monitoring for our change to full time operation out of the Flint river. I am expecting changes to our Water Quality Monitoring parameters, and possibly our DBP and lead & copper monitoring plan. Also, I am wondering about our MOR required testing. I know you have probably been in contact with Howard Croft, however I have not seen anything except the notes you or Prysby made on the last page of our 2014 monitoring schedule "that things were subject to change". Any information would be greatly appreciated, because it looks as if we will be starting the plant up tomorrow and are being pushed to start distributing water as soon as possible. As the acting F-1, I would like to make sure we are monitoring, reporting and meeting our requirements before I give the O.K to start distributing water.

Thanks,

Mike Glasgow
Laboratory & Water Quality Supervisor
City of Flint Water Plant
(810)787-6537 ext. 3512

Rennaker, Joanne (DEQ)

From: McDermott, Kristine (DEQ)
Sent: Wednesday, April 02, 2014 10:50 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: Feb MOR for Flint

I do – I'll bring it down right now & give it to him.

Kris McDermott

Community Drinking Water
Office of Drinking Water and Municipal Assistance, MDEQ

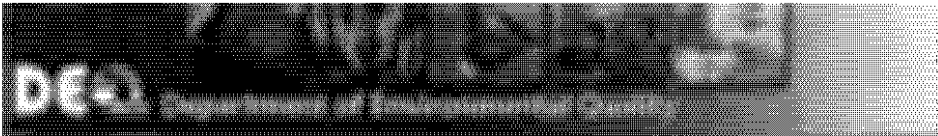
mcdermottk@michigan.gov

☎ 517-284-6538

Constitution Hall

525 W Allegan

Lansing, MI 48933



From: Rosenthal, Adam (DEQ)
Sent: Wednesday, April 02, 2014 10:12 AM
To: McDermott, Kristine (DEQ)
Subject: Feb MOR for Flint

do you still have it upstairs, Prysby needs it.

thanks,

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

Rennaker, Joanne (DEQ)

From: Benzie, Richard (DEQ)
Sent: Thursday, June 21, 2012 6:01 PM
To: Prysby, Mike (DEQ); Rosenthal, Adam (DEQ)
Subject: Flint's consecutive population

Cadmus needs to confirm populations for a few systems. Flint is one of them. We reported a population of ~124,000 for the city last year, along with another ~148,000 in consecutive customer systems for a total of ~272,000. However, Flint reported only the city's population on their 2011 Needs Survey, and they listed only 102,000 which I suspect may be the 2011 Census.

Do you have up to date values for Flint and their customers? Is 102,000 correct for the city proper? Is it from the 2011 Census? What population values are we currently listing for Flint and their consecutive customers?

Rennaker, Joanne (DEQ)

From: Julien, Tom (DEQ)
Sent: Wednesday, February 08, 2012 1:05 PM
To: Rosenthal, Adam (DEQ)
Cc: Hall, Ben (DEQ); Bennett, Charles (DEQ); Bodnar, Brent (DEQ); Vanderlaan, Mary (DEQ); VanOtteren, Bruce (DNR); Prysby, Mike (DEQ)
Subject: FW: NRC#1002464 - Genessee Cty Oil Spill

Adam,

As we discussed, not sure if spill could impact Flint River which is listed as having a public water supply intake for Flint. Spill listed as near a drain close to Sister Lake 2-3 miles from Flint River. Listed as having occurred on 2/3/12 (Friday).

Please see below PEAS incident report number NRC-1002464

Thanks!

Tom Julien, On Call
 MDEQ-PEAS
 Office: 517-335-3711
 PEAS Cell: 517-331-8599

-----Original Message-----

From: Julien, Tom (DEQ)
Sent: Wednesday, February 08, 2012 11:45 AM
To: Hall, Ben (DEQ)
Cc: VanOtteren, Bruce (DNR); Bennett, Charles (DEQ); Bodnar, Brent (DEQ); Vanderlaan, Mary (DEQ)
Subject: FW: NRC#1002464 - Genessee Cty Oil Spill

500 gal oil spill reported. Spill nearby drain which is tributary of Sister Lake. Possible water impact.

Please see below PEAS incident report number NRC-1002464

Please confirm receipt of this incident information, and if possible advise as to lead staff!

Thanks!

Tom Julien, On Call
 MDEQ-PEAS
 Office: 517-335-3711
 PEAS Cell: 517-331-8599

-----Original Message-----

From: HQS-PF-flidr-NRC@uscg.mil [mailto:HQS-PF-flidr-NRC@uscg.mil]
Sent: Wednesday, February 08, 2012 11:28 AM
To: Schleusener, Paul (DEQ); Julien, Tom (DEQ); Lawson, Autumn (DEQ); Yocum, William (DEQ); Mroczkowski, Kenneth (DEQ)
Subject: NRC#1002464

NATIONAL RESPONSE CENTER 1-800-424-8802

GOVERNMENT USE ONLYGOVERNMENT USE ONLY***

Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 1002464

INCIDENT DESCRIPTION

*Report taken by: CIV NICHOLAUS THREATT at 11:20 on 08-FEB-12

Incident Type: STORAGE TANK

Incident Cause: UNKNOWN

Affected Area: NEARBY DRAIN

Incident was discovered on 03-FEB-12 at 12:00 local incident time.

Affected Medium: WATER NEARBY DRAIN > SISTER LAKE, SOIL

REPORTING PARTY

Name: ANONYMOUS

PRIMARY Phone: (111)1111111

Type of Organization: OTHER

SUSPECTED RESPONSIBLE PARTY

Name: UNKNOWN

XX

INCIDENT LOCATION

ON FARRAND RD. County: GENESEE

ON THE NORTHSIDE OF THE ROAD

City: OTTER LAKE State: MI

BETWEEN BLUEBERRY LANE & WASHBURN RD.

RELEASED MATERIAL(S)

CHRIS Code: OUN Official Material Name: UNKNOWN OIL

Also Known As:

Qty Released: 500 GALLON(S) Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

CALLER IS MAKING A REPORT INVOLVING WHAT LOOKS TO BE A 2,000 GALLON
STORAGE TANK SITTING APPROX. 100 FEET FROM THE ROAD THAT WAS TIPPED
OVER AND SPILLING AN UNKNOWN OIL.

SENSITIVE INFORMATION

INCIDENT DETAILS

Description of Tank: 2,000 GALLON STORAGE TANK

Tank Above/Below Ground: ABOVE

Transportable Container: UNKNOWN

Tank Regulated: UNKNOWN

Tank Regulated By:

Tank ID: N/A

Capacity of Tank: 2000 GALLON(S)

Actual Amount: 0 UNKNOWN AMOUNT

---WATER INFORMATION---

Body of Water: NEARBY DRAIN

Tributary of: SISTER LAKE

Nearest River Mile Marker:

Water Supply Contaminated: UNKNOWN

IMPACT

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES: NO Hospitalized: Empl/Crew: Passenger:

FATALITIES: NO Empl/Crew: Passenger: Occupant:

EVACUATIONS:NO Who Evacuated: Radius/Area:

Damages: NO

	Hours	Direction of
Closure Type	Description of Closure	Closed Closure
N		

Air:

N

Major

Road:

Artery:N

N

Waterway:

N

Track:

Environmental Impact: UNKNOWN

Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

NONE

Release Secured: UNKNOWN

Release Rate:

Estimated Release Duration:

WEATHER

Weather: CLEAR, °F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE

State/Local: NONE

State/Local On Scene:

State Agency Number:

NOTIFICATIONS BY NRC

ATLANTIC STRIKE TEAM (MAIN OFFICE)

08-FEB-12 11:27 (609)7240008

DHS NOC (NOC)

08-FEB-12 11:27 (202)2828114

CG INVESTIGATIVE SERVICE DETROIT (RESIDENT AGENT OFFICE, DETROIT)

08-FEB-12 11:27 (586)2396759

DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)

08-FEB-12 11:27 (202)3661863

U.S. EPA V (MAIN OFFICE)

(312)3532318

MICHIGAN DEPT OF COMMUNITY HEALTH (HSEES)

08-FEB-12 11:27 (517)3358364

MI INTELLIGENCE OPERATIONS CENTER (FUSION CENTER)

08-FEB-12 11:27 (517)2418000

MI INTELLIGENCE OPERATIONS CENTER (CIP DESK)

08-FEB-12 11:27 (517)3350262

NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)

08-FEB-12 11:27 (202)2829201

NOAA RPTS FOR MI (MAIN OFFICE)

08-FEB-12 11:27 (206)5264911

MICHIGAN DEQ (MAIN OFFICE)

08-FEB-12 11:27 (800)2924706

MICHIGAN DEQ (MAIN OFFICE 2)

08-FEB-12 11:27 (517)2411252

ADDITIONAL INFORMATION

CALLER HAD NO ADDITIONAL COMMENTS.

*** END INCIDENT REPORT #1002464 ***

Report any problems by calling 1-800-424-8802

PLEASE VISIT OUR WEB SITE AT <http://www.nrc.uscg.mil>

Rennaker, Joanne (DEQ)

From: Shekter, Jean (DEQ)
Sent: Monday, October 03, 2011 3:15 PM
To: Rosenthal, Adam (DEQ); Cook, Pat (DEQ); Philip, Kris (DEQ); Howard, Brock (DEQ); Benzie, Richard (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: RE: Lead/Copper ?

Kris, please weigh in before Adam calls them back. Pat suggested they resample, but he forgot it was already October (Can't fault Pat - I can't remember what YEAR this is!) I believe the samples are improper and should not be used to calculate the 90th. The supply cannot resample because we are outside the June-Sept monitoring period. Calculate the 90th on the available proper sample results. The supply is short the minimum number of samples, so an M/R violation applies as does admin fine and PN. I could be persuaded on the admin fine.

From: Rosenthal, Adam (DEQ)
Sent: Monday, October 03, 2011 2:20 PM
To: Cook, Pat (DEQ); Philip, Kris (DEQ); Howard, Brock (DEQ); Benzie, Richard (DEQ); Shekter, Jean (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: Lead/Copper ?

I was notified by Jeff Antil that Detroit received samples from Flint, and they were 2 samples short. Actually they had all samples, but according to the last use and collection times for 2 samples, equaled 5 hrs and 5.5 hrs stagnation time. Input please.

thanks,
Adam

Rennaker, Joanne (DEQ)

From: Cook, Pat (DEQ)
Sent: Monday, October 03, 2011 2:40 PM
To: Rosenthal, Adam (DEQ); Philip, Kris (DEQ); Howard, Brock (DEQ); Benzie, Richard (DEQ); Shekter, Jean (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: RE: Lead/Copper?

I hate to say it, but since they did not meet the minimum 6 hour stagnation time, I don't think we can accept the results of those 2 samples. They will have to resample.

Pat

From: Rosenthal, Adam (DEQ)
Sent: Monday, October 03, 2011 2:20 PM
To: Cook, Pat (DEQ); Philip, Kris (DEQ); Howard, Brock (DEQ); Benzie, Richard (DEQ); Shekter, Jean (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: Lead/Copper ?

I was notified by Jeff Antil that Detroit received samples from Flint, and they were 2 samples short. Actually they had all samples, but according to the last use and collection times for 2 samples, equaled 5 hrs and 5.5 hrs stagnation time. Input please.

thanks,
Adam

Rennaker, Joanne (DEQ)

From: Antil, Jeffrey (DEQ)
Sent: Monday, October 03, 2011 1:54 PM
To: Rosenthal, Adam (DEQ)
Subject: FW: Pb and Cu update DWSD

Hey Adam;
 FYI Flint & Lapeer. pls read below. Is Almont yours too?

-----Original Message-----

From: Mary Lynn Semegen [mailto:semegen@dwsd.org]
 Sent: Monday, October 03, 2011 1:46 PM
 To: Antil, Jeffrey (DEQ)
 Subject: Pb and Cu update DWSD

Jeff,

Just to let you know I am awaiting results for 22 communities including Detroit. Flint is missing two samples, they brought their samples in on Friday but two were under the six hours I told them to call MDEQ. Everyone else that brought us their samples have complete sets. Almont, Bloomfield Twp., Fraser, Hamtramck, Lapeer, Northville, Shelby Twp., and Wixom did not bring us any samples. I assume they went to a private lab or they are on a different schedule.

--

Sincerely,

Mary Lynn Semegen, Manager II
 Water Quality Division
 Detroit Water and Sewerage Department
 Water Works Park Plant
 Room WQ104
 10100 E. Jefferson
 Detroit, Michigan 48214
 Phone: 313 926-8102
 Fax: 313 926-8104
 semegen@dwsd.org

City of Detroit
 Dave Bing, Mayor

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Friday, December 11, 2015 10:23 AM
To: Hess, Elmer (OAG) (EHess@audgen.michigan.gov); Brandon, McAndrew (OAG)
Subject: Flint lead/copper sampling pool
Attachments: Flint lead-copper history.xlsx

First sample collected for the lead/copper rule by the City of Flint was on 4/22/92.

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, December 02, 2015 2:09 PM
To: Shekter, Jean (DEQ)
Subject: RE: EPA Advisory Council article & report

already did, missed sending to you – just a fyi as to what may be coming.

From: Shekter, Jean (DEQ)
Sent: Monday, November 30, 2015 8:26 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: EPA Advisory Council article & report

Did you intend to send this to Liane?

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, November 25, 2015 10:12 AM
To: Shekter, Jean (DEQ)
Subject: FW: EPA Advisory Council article & report

Knew I forgot somebody.

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, November 25, 2015 10:02 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Philip, Kris (DEQ); Gohlke, Holly (DEQ)
Cc: Sygo, Jim (DEQ); Wurfel, Brad (DEQ); Krisztian, George (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: EPA Advisory Council article & report

Article

<http://www.wateronline.com/doc/lead-and-copper-rule-reboot-flint-s-failures-prompt-revisions-0001>

Report of the Lead and Copper Rule Working Group

To the National Drinking Water Advisory Council

<http://water.epa.gov/drink/ndwac/meetingsummaries/upload/ndwacmeetsummaug2015.pdf>

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, December 02, 2015 9:28 AM
To: Hess, Elmer (OAG)
Cc: Brandon, McAndrew (OAG)
Subject: RE: attachments

Morning Elmer, Flint doesn't have a LCR sampling plan, just the 2 initial 6 month rounds of monitoring on Detroit water back in '92. I can get you copies of the reporting forms, but that's all we have in the files. Let me know.

thanks,
Adam

From: Elmer R. Hess [<mailto:ehess@audgen.michigan.gov>]
Sent: Monday, November 30, 2015 12:34 PM
To: Rosenthal, Adam (DEQ)
Cc: Brandon, McAndrew (OAG)
Subject: RE: attachments

Adam,

Thanks for providing this information. Can you also forward the Flint LCR Sampling Site plan as well.

Elmer

From: Rosenthal, Adam (DEQ) [<mailto:ROSENTHALA@michigan.gov>]
Sent: Friday, November 20, 2015 4:25 PM
To: Brandon M. McAndrew <bmcandrew@audgen.michigan.gov>; Elmer R. Hess <ehess@audgen.michigan.gov>
Cc: Busch, Stephen (DEQ) <BUSCHS@michigan.gov>; Prysby, Mike (DEQ) <PRYSBYM@michigan.gov>
Subject: attachments

Elmer & Brandon, attached for the City of Flint is the Bacteriological Sample Siting Plan, excluded sample results for 2015 Lead/Copper monitoring, and the Lead & Copper Certification form with instructions that indicate the Tier and Sample Category definitions.

thank you,

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

Rennaker, Joanne (DEQ)

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Sent: Wednesday, November 25, 2015 10:12 AM
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Cc: Sygo, Jim (DEQ); Wurfel, Brad (DEQ); Krisztian, George (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: EPA Advisory Council article & report

Article

<http://www.wateronline.com/doc/lead-and-copper-rule-reboot-flint-s-failures-prompt-revisions-0001>

Report of the Lead and Copper Rule Working Group

To the National Drinking Water Advisory Council

<http://water.epa.gov/drink/ndwac/meetingsummaries/upload/ndwacmeetsummaug2015.pdf>

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, November 25, 2015 10:02 AM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Philip, Kris (DEQ); Gohlke, Holly (DEQ)
Cc: Sygo, Jim (DEQ); Wurfel, Brad (DEQ); Krisztian, George (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: EPA Advisory Council article & report

Article

<http://www.wateronline.com/doc/lead-and-copper-rule-reboot-flint-s-failures-prompt-revisions-0001>

Report of the Lead and Copper Rule Working Group

To the National Drinking Water Advisory Council

<http://water.epa.gov/drink/ndwac/meetingsummaries/upload/ndwacmeetsummaug2015.pdf>

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: _____
2. County: _____ 3. WSSN: _____
4. Population: _____ 5. Monitoring Period: From: _____ To: _____
6. Minimum # of Samples Required: _____ 7. # of Samples Taken: _____
8. Name of Certified Laboratory: _____

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 <i>Instructions</i> 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: _____

Title: _____ Phone: _____ Date: _____

12. **CONSUMER NOTICE OF LEAD RESULT CERTIFICATION:** Each Community Water Supply (CWS) must deliver a Consumer Notice Of Lead Result to occupants of each location sampled within 30 days of knowing the sample result under R 325.10410(5).

Not later than 3 months following the end of the monitoring period, each CWS must mail a sample copy of the Consumer Notice Of Lead Result to the DEQ along with a certification that the notice has been distributed under R 325.10710d(f)(3).

Instructions:

- A. Use the Consumer Notice template on the next page or another approved by the DEQ.
- B. Complete one Consumer Notice for each home or building that was sampled.
- C. Mail each Consumer Notice to its corresponding home or building sampled.
- D. Select **one (1) example copy** of a notice sent to a consumer. On the bottom of the Consumer Notice, certify that:
 - A Consumer Notice was sent to persons served at each of the taps that was tested
 - Delivery was by mail or another method approved by the DEQ
 - Delivery was within 30 days of knowing the result
 - Consumer Notice includes required content:
 - The result of lead tap water monitoring for the tap that was tested
 - An explanation of the health effects of lead
 - Steps consumers can take to reduce exposure to lead in drinking water
 - Contact information for the public water supply
 - The maximum contaminant level goal and the action level for lead and the definitions for these two terms
- E. Send only **one (1) certified completed example copy** to the DEQ district office*

* For district office addresses, visit www.michigan.gov/deq and click on Contacts.

Consumer Notice of Lead Result in Drinking Water

Water Supply Name: _____

County: _____ WSSN: _____

Sample Location: _____ Date Sampled: _____

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 below which there is no known or expected risk to health. MCLGs allow for a margin of safety. ppb: parts per billion or micrograms per liter.	Lead (ppb)	15	0	
	Copper (ppb)	1300	1300	

Lead can cause serious health problems 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 of lead on the brain with lowered 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 it 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 water tap; lead dissolves more easily in hot water.
- *Do not boil water to remove lead.* Boiling water will not reduce lead levels.
- *Look for 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 0.25 percent lead including those advertised or labeled 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: _____

For more information on reducing lead exposure around your home and 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.

Certification: _____ WSSN: _____
 I certify that this public water supply has provided the consumer notice of lead result to persons served at each of the taps that was tested, either by mail or by another method approved by the DEQ, within 30 days of knowing the result. The Notice includes required content.

Signature _____ Title _____ Date Sent to Consumer _____
 Reminder to water supplier: Complete this certification on only one (1) example copy of a notice sent to a consumer and submit it to the DEQ.

Instructions for Completing Lead and Copper Report Form

1. **WATER SUPPLY NAME:** Enter the name of the public water supply where sampling is being conducted.
2. **COUNTY:** Enter the name of the county in which the public water supply is located.
3. **WSSN:** Enter the 5-digit public water supply serial number (e.g., 01234 or 40123).
4. **POPULATION:** Enter the number of people served by the public water supply.
5. **MONITORING PERIOD:** Enter the beginning and end dates of the monitoring period during which the sampling took place (e.g., from 06/01/2009 to 09/30/2009).
6. **MINIMUM # OF SAMPLES REQUIRED:** This number is according to the rules based on population or set by the DEQ for lead/copper tap sampling for this public water supply.
7. **# OF SAMPLES TAKEN:** Indicate the number of tap samples taken for lead and copper analysis in the monitoring period.
8. **NAME OF CERTIFIED LABORATORY:** Enter the name of the certified laboratory performing the lead/copper analyses on samples taken in the monitoring period.
9. **SAMPLE CRITERIA:** Answer the questions accordingly, briefly explaining, where necessary, the reason for your action.
10. **NAME:** Enter the name, title, and phone of the authorized water utility official and date.
11. **TAP SAMPLING DATA:** Enter the name of the public water supply and the WSSN. Complete the remainder of the sheet as follows:

Sample Location: Enter the street address of the location where each lead and copper tap sample is taken.

Date: Enter the date the tap sample was collected.

Sample Category: Use the following numbers to designate the location criteria being met by the sample site:

	Sample Category	
Tier 1 Sites	1	Single family residence with lead service line.
	2	Single family residence with lead solder copper piping constructed after 1982.
	3	Single family residence with lead plumbing.
	4	Multiple family residence (MFR) with either lead service line, lead solder copper piping constructed after 1982, or lead plumbing (when MFR comprise at least 20 percent of the total service connections).
Tier 2 Sites	5	Buildings with lead service lines, lead solder copper piping constructed after 1982, or lead plumbing.
Tier 3 Sites	6	Single family residence with lead solder copper piping constructed before 1983.
Other		If no Tier 1, 2, or 3 sites available, sample sites that use plumbing materials commonly found at other locations in the water supply.

Additionally, if lead service lines are present, tap samples must be taken from the following:

50 percent from ...	AND 50 percent from ...
single family residences with lead service lines	single family residences with lead solder copper piping constructed after 1982 OR single family residences with lead plumbing.
Tier 1 sites should be selected for sampling over Tier 2 or 3 sites even if all samples are from lead service lines or from residences with lead solder copper piping constructed after 1982.	

Piping Materials: Designate the type of service line and building plumbing piping materials used at the location where the tap lead/copper sample was taken.

- C Copper
- G Galvanized
- L Lead
- P Plastic

Lead: Enter the concentration of lead in ppb (parts per billion) or µg/l (micrograms per liter) as reported by the certified lab.

Copper: Enter the concentration of copper in ppb or µg/l as reported by the certified lab.

Lab #: For lab purposes only, indicate a laboratory identification number or sample number.

12. CONSUMER NOTICE OF LEAD RESULT CERTIFICATION: Water supplies have until 3 months after the end of the monitoring period to submit the certification along with a sample copy of a notice sent to consumers to the appropriate DEQ district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts. However, the DEQ encourages water supplies to send the sample notice and its certification (template available on page 4) along with the Lead and Copper Report (pages 1 and 2 of this form), which is due within 10 days after the end of the monitoring period.



Michigan Department of Environmental Quality

**Replicate Laboratory Report for
Lansing Drinking Water Laboratory**

Owner/Location Information:

CITY OF FLINT
212 BROWNING AVE
FLINT MI 48507

Sample Number: LLF54945

Sample/Collection Information:

WSSN: 02310
County: Genesee
Township:
Section:
Well #:
Collection Date: 2/18/2015 7:15:00 AM
Arrival Date: 2/19/2015 11:13:00 AM

Site Code:
Water Source: Public Community Water Supply
Sample Reason: Routine Monitoring
Sample Point: Treated Public Distribution System
Point Description: KITCHEN
Collector: Private Citizen
Collected By: LEANNE WALTERS

<u>CasNo</u>	<u>Analyte</u>	<u>Result</u>	<u>Detect</u>	<u>Units</u>	<u>Method</u>
7440-50-8	COPPER (RECOVERABLE)	ND	0.05	mg/L	EPA 200.8
7439-92-1	LEAD (TOTAL)	0.104	0.001	mg/L	EPA 200.8

Laboratory Comments:

By authority of PA 368 of 1978 as amended.

Print Date: Tue Aug 4 14:16:40 EDT
2015*was whole house filter*



Michigan Department of Environmental Quality

***Replicate Laboratory Report for
Lansing Drinking Water Laboratory***

Owner/Location Information:

CITY OF FLINT
212 BROWNING AVE
FLINT MI 48507

Sample Number: LLF56229

Sample/Collection Information:

WSSN: 02310
County: Genesee
Township:
Section:
Well #:
Collection Date: 2/25/2015 10:26:00 AM
Arrival Date: 3/6/2015 11:34:24 AM

Site Code:
Water Source: Single Family Dwelling
Sample Reason: Water Quality Problem
Sample Point: Treated Public Distribution System
Point Description: KITCHEN
Collector: Public Water Supply Operator
Collected By: MIKE GLASGOW

<u>CasNo</u>	<u>Analyte</u>	<u>Result</u>	<u>Detect</u>	<u>Units</u>	<u>Method</u>
7440-38-2	ARSENIC (TOTAL)	ND	0.002	mg/L	EPA 200.8
7440-39-3	BARIUM	0.01	0.01	mg/L	EPA 200.8
7440-41-7	BERYLLIUM	ND	0.0004	mg/L	EPA 200.8
7440-43-9	CADMIUM (TOTAL)	ND	0.0003	mg/L	EPA 200.8
7440-47-3	CHROMIUM (TOTAL)	ND	0.01	mg/L	EPA 200.8
7439-97-6	MERCURY	ND	0.0001	mg/L	EPA 200.8
7440-02-0	NICKEL	ND	0.01	mg/L	EPA 200.8
7439-92-1	LEAD (TOTAL)	ND	0.001	mg/L	EPA 200.8
7440-36-0	ANTIMONY	ND	0.0006	mg/L	EPA 200.8
7782-49-2	SELENIUM (TOTAL)	ND	0.001	mg/L	EPA 200.8
7440-28-0	THALLIUM	ND	0.0002	mg/L	EPA 200.8

Laboratory Comments:

By authority of PA 368 of 1978 as amended.

Print Date: Thu Aug 27 09:25:58 EDT
2015

**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

LF57729

Official Laboratory Report

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

System Name/Owner: **CITY OF FLINT**
Collection Address: **212 BROWNING AVE, FLINT**
Collected By: **MIKE GLASGOW**
Township/Well#/Section: **//**
County: **Genesee**
Sample Point: **KITCHEN**
Water System: **Treated Public Distribution System**

WSSN/Pool ID: **2310**
Source: **Single Family Dwelling**
Site Code:
Collector: **Public Water Supply Operator**
Date Collected: **03/18/2015 11:10**
Date Received: **03/24/2015 11:05**
Purpose: **Other**

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	Not detected	03/25/2015	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.004	03/25/2015	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
810 257-3503

*Not 1st draw
whole house filter*

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

mg/L : milligram / 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 Kiszczian



Michigan Department of Environmental Quality

**Replicate Laboratory Report for
Lansing Drinking Water Laboratory**

Owner/Location Information:CITY OF FLINT
212 BROWNING AVE
FLINT MI 48607Sample Number: LLF59748

Sample/Collection Information:WSSN: 02310
County: Genesee
Township:
Section:
Well #:
Collection Date: 4/2/2015 8:00:00 AM
Arrival Date: 4/14/2015 11:07:48 AMSite Code:
Water Source: Single Family Dwelling
Sample Reason: Other
Sample Point: Treated Public Distribution System
Point Description: PRE P O S
Collector: Private Citizen
Collected By: LEEANNE WALTERS

<u>CasNo</u>	<u>Analyte</u>	<u>Result</u>	<u>Detect</u>	<u>Units</u>	<u>Method</u>
7440-50-8	COPPER (RECOVERABLE)	0.11	0.05	mg/L	EPA 200.8
7439-92-1	LEAD (TOTAL)	0.707	0.001	mg/L	EPA 200.8

Laboratory Comments:

*Basement
Tap pre filter*

By authority of PA 368 of 1978 as amended.

Print Date: Thu Aug 27 09:27:00 EDT
2015



**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

LF57732

Official Laboratory Report

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

System Name/Owner: CITY OF FLINT
Collection Address: 1383 WASHINGTON AVE, FLINT
Collected By: ANTHONY PALLADENO
Township/Well#/Section: //
County: Genesee
Sample Point: KITCHEN
Water System: Treated Public Distribution System

WSSN/Pool ID: 2310
Source: Single Family Dwelling
Site Code:
Collector: Private Citizen
Date Collected: 03/09/2015 08:00
Date Received: 03/24/2015 11:05
Purpose: Routine Monitoring

*Past 14 days
held for
for preservation*

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	0.16	03/25/2015	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.007	03/25/2015	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 Plapor
Systems Mgmt. Unit Mgr: George Krsztian



**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

LF64282

Official Laboratory Report

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

*Business
Basement Not Tier 1*

System Name/Owner:	CITY OF FLINT	WSSN/Pool ID:	2310
Collection Address:	625 S GRAND TRAVERSE, FLINT	Source:	TYPE III
Collected By:	MIKE GLASGOW	Site Code:	
Township/Well#/Section:	//	Collector:	Public Water Supply Operator
County:	Genesee	Date Collected:	05/15/2015 13:00
Sample Point:	BATHROOM	Date Received:	05/20/2015 11:24
Water System:	Treated Public Distribution System	Purpose:	Other

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	0.14	05/21/2015	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.017	05/21/2015	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 Pleper
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

LF64284



Official Laboratory Report

Report To: MIKE GLASGOW
4600 N DORT HWY
FLINT MI 48505

System Name/Owner: CITY OF FLINT
Collection Address: 625 S GRAND TRAVERSE, FLINT
Collected By: MIKE SARGENT
Township/Well#/Section: //
County: Genesee
Sample Point: UTILITY SINK
Water System: Treated Public Distribution System

WSSN/Pool ID: 2310
Source: TYPE III
Site Code:
Collector: Private Citizen
Date Collected: 05/18/2015 08:30
Date Received: 05/20/2015 11:24
Purpose: Other

*Not Tien?
Business*

Not For Compliance

TESTING INFORMATION			REGULATORY INFORMATION			
Analyte Name	Result (mg/L)	Date Tested	RL (mg/L)	MCL/AL (mg/L)	Method	CAS #
Copper	0.14	05/21/2015	0.05	1.3	EPA 200.8	7440-50-8
Lead	0.020	05/21/2015	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.

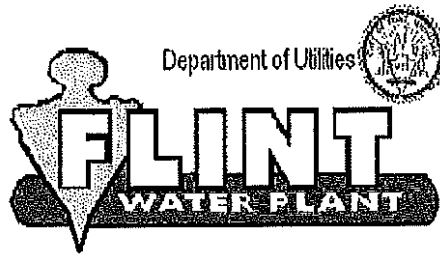
Your local health department has detailed information about the quality of drinking water in your area. If you have concerns about the health risks related to the test results of your sample, please contact the Environmental Health Section through the address and telephone number listed below:

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



Coliform Bacteria Distribution System Sample Site Plan

Table of Contents

General Information	1
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General Information

Water Supply Name:	City of Flint - Water Plant 4500 N. Dort Hwy Flint, MI 48505
Water Supply Serial Number:	2310
Population Served:	102,000
Number of monthly distribution samples required:	100
Number of Sampling Locations:	12
Sampling frequency:	At least twice weekly, varies with location.
Program Contact:	Michael Glasgow City of Flint Water Plant Laboratory & Water Quality Supervisor (810) 787-6537 ext. 3512 mglasgow@cityofflint.com

Routine Distribution System Sampling Site Locations

Site ID	Routine Site Name & Address	Up-Stream Site Name & Address	Down-Stream Site Name & Address
# 1	Arby's Restaurant	McDonalds Restaurant	Admiral Gas Station
	3742 Davison Rd.	3719 Davison Rd.	3802 Davison Rd.
	Flint, MI 48506	Flint, MI 48506	Flint, MI 48506
# 2	B & P Gas Station	Advasure Insurance	Rite Aid Pharmacy
	822 S. Dort Hwy	810 S. Dort Hwy	2838 E. Court St.
	Flint, MI 48503	Flint, MI 48503	Flint, MI 48506
# 3	7-11 Food Store	Mattress Savers	O'Rielly Auto Parts
	3302 S. Dort Hwy	3124 S. Dort Hwy.	3316 S. Dort Hwy
	Flint, MI 48507	Flint, MI 48507	Flint, MI 48507
# 4	Taco Bell Restaurant	Rite Aid Pharmacy	McFall's Collision
	3606 Courmna Rd.	3521 Courmna Rd.	3614 Courmna Rd
	Flint, MI 48532	Flint, MI 48532	Flint, MI 48532
# 5	7-11 Food Store	Serverance Service	Ambassador Bar
	2501 Flushing Rd.	2434 Flushing Rd.	1107 N. Chevrolet Ave.
	Flint, MI 48504	Flint, MI 48504	Flint, MI 48504
# 6	Salem Housing	B & P Gas Station	Hinky Dinky Market
	3216 M.L. King Blvd.	3317 M.L. King Blvd.	3110 M.L. King Blvd.
	Flint, MI 48505	Flint, MI 48505	Flint, MI 48505
# 7	Rite Aid Pharmacy	Urban League of Flint	Clio Rd. Coin Laundry
	5018 Clio Rd.	5005 Cloverlawn Dr.	4930 Clio Rd.
	Flint, MI 48504	Flint, MI 48504	Flint, MI 48504
# 8	North Flint Automotive	Al & Jerry's Mini Mart	Hutchinson's Food & Drug
	6204 N. Saginaw St.	6101 N. Saginaw St.	6509 N. Saginaw St.
	Flint, MI 48505	Flint, MI 48505	Flint, MI 48505
W.S.	West Side Reservoir & Pump Station	Water Main Sampler	Midway Market
	1416 Dupont St.	1430 Dupont St.	1360 Dupont St.
	Flint, MI 48503	Flint, MI 48504	Flint, MI 48504
C.S.	Cedar Street Reservoir & Pump Station	The Print Shop	City of Flint - Service garage
	1100 Cedar St.	1035 Ann Arbour St.	702 W. 12th St.
	Flint, MI 48503	Flint, MI 48503	Flint, MI 48503
Sta. #2 (II)	Water Plant Control Station #2	Baxter & Potter Rd. Control Station	Water Plant Laboratory Tap
	4500 N. Dort Hwy	G 12233 E. Potter Rd.	4500 N. Dort Hwy
	Flint, MI 48505	Davison, MI 48423	Flint, MI 48505
B&P	Baxter & Potter Rd. Control Station	Not Applicable*	Water Plant Control Station #2
	G 12233 E. Potter Rd.		4500 N. Dort Hwy
	Davison, MI 48423		Flint, MI 48505

* Baxter & Potter Rd. Control Station is the point at which The City of Flint takes control (& has access) on the pipeline.

Normal Sampling Frequency

Sites # 1 - # 8

Samples are collected twice weekly.

Usually collected on Wednesday by a lab analyst, & Thursday by a operator

W.S. & C.S.

Samples are collected Monday - Friday.

Usually collected along with sites # 1 - # 8 on Wednesday & Thursday to complete "city run".

Sta II and B&P

Samples are collected daily.

Positive Sample Protocol

Total Coliform Positive Sample:

- I. If a routine sample is positive for total coliform bacteria, notify Laboratory Supervisor immediately, and collect 3 repeat samples within 24 hours of determining the result. 1 repeat sample should be from the tap where the original total coliform –positive was taken. Repeat samples shall also be collected from upstream and downstream sites within 5 service connections of the original sampling site.
- II. If repeat samples are total coliform negative, no further sampling is required. Positive result and repeat results will be entered in the Monthly Operation Report (MOR).
- II. If 1 or more of the repeat samples in the set is total coliform positive, Notify Laboratory Supervisor, and collect an additional set of repeat samples. Laboratory Supervisor will notify Michigan DEQ with 24 hours or the next business day after learning the results, to determine further action.

Fecal Coliform Positive Sample:

- I. If a routine sample is positive for fecal coliform bacteria, notify Laboratory Supervisor, who will notify the DEQ immediately. Collect 3 repeat samples within 24 hours of determining the result. 1 repeat sample should be from the tap where the original fecal coliform –positive was taken. Repeat samples shall also be collected from upstream and downstream sites within 5 service connections of the original sampling site.

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, November 05, 2015 1:23 PM
To: Krisztian, George (DEQ); Busch, Stephen (DEQ)
Cc: Shekter Smith, Liane (DEQ); Smith, Carol (DEQ); Shane, Kirby (DEQ); Pieper, Julia (DEQ); Hagerman, Lisa (DEQ); Shaler, Karen (DEQ)
Subject: RE: Question

Yes it does. We do not have any 2014 results prior to November '14.

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: Krisztian, George (DEQ)
Sent: Thursday, November 05, 2015 1:20 PM
To: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Cc: Shekter Smith, Liane (DEQ); Smith, Carol (DEQ); Shane, Kirby (DEQ); Pieper, Julia (DEQ); Hagerman, Lisa (DEQ); Shaler, Karen (DEQ)
Subject: Question
Importance: High

Steve and Adam

I am trying to help the lab fill a FOIA request and we need to provide Lab reports for samples provided by the city of Flint for the period of April 1, 2014 thru October 15, 2015.

I was unable to locate any samples for the period of April 1, 2014 to November 11, 2014. Does this jive with your records?

Thank you!
 George

George L. Krisztian
 Flint Action Plan Coordinator
 Laboratory Director
 Michigan Department of Environmental Quality
 Desk ph (517) 284-6719
 Cell ph (517) 420-5897

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, November 04, 2015 4:26 PM
To: Busch, Stephen (DEQ)
Subject: FW: Flint PbCu 90th 2014

I do not have any other documentation prior to this regarding lead monitoring in Flint – other than the schedule.

From: Rosenthal, Adam (DEQ)
Sent: Friday, February 27, 2015 9:41 AM
To: Busch, Stephen (DEQ)
Subject: Flint PbCu 90th 2014

Pb 90th = 6.0 ppb with 2 samples <AL (23 & 37 ppb)
Cu 90th = 110 ppb with 0 samples <AL

Leanne Walters @ 212 Browning Ave with an individual sample of 104 ppb for lead did not participate in this 1st 6 month round of monitoring.

Adam

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Monday, November 02, 2015 4:46 PM
To: Busch, Stephen (DEQ); Wurfel, Brad (DEQ); Sygo, Jim (DEQ); Krisztian, George (DEQ)
Subject: FW:

FYI

From: Marc Edwards [<mailto:edwardsm@vt.edu>]
Sent: Sunday, November 01, 2015 12:17 PM
To: Rosenthal, Adam (DEQ)
Subject:

Here is a search

https://www.google.com/webhp?sourceid=chrome-instant&rlz=1C1PRFC_enUS565US566&ion=1&espv=2&ie=UTF-8#q=flint+blood+lead&tbm=nws

Our web page:
Flintwaterstudy.org

Marc

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, October 29, 2015 10:10 AM
To: nhenderson@cityofflint.com
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: City of Flint Revised Monitoring Schedule October 2015
Attachments: SCAN1146.pdf; 2015 Flint revised schedule-Det.pdf

Good Morning Natasha, it was brought to my attention you asked to be copied on all correspondence regarding the drinking water in the City of Flint, this was after we sent a revised monitoring schedule now that the City is receiving water from Detroit. So, attached is a copy of the letter and revised schedule. I have updated our database to make sure you are included in future correspondence.

thank you,

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



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE



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.

Mr. Brent Wright

2

October 22, 2015

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.

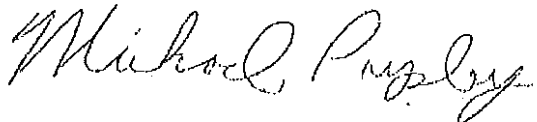
The City shall also conduct additional operational monitoring to demonstrate the effectiveness of corrosion control treatment.

Record Keeping:

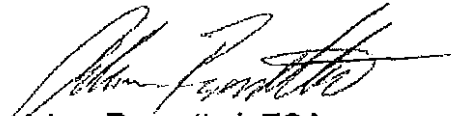
The City shall maintain all monitoring records in accordance with all applicable requirements under the Administrative Rules including Rule 720a (R325.10720a), Rule 1506 (R325.11506), and Rule 1507 (R325.11507).

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, October 15, 2015 2:15 PM
To: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ)
Subject: repeat sample 2015 PbCu Flint

3714 Beecher Rd, Melissa Mays co-founder of Water you fighting for.

3/24/15 kitchen, Pb = 2 ppb

5/14/15 main bathroom, Pb = 8 ppb

Preliminary and Deliberative not subject to FOIA

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, October 14, 2015 3:33 PM
To: Shekter Smith, Liane (DEQ)
Subject: Flint PbCu data
Attachments: 2014 Flint PbCu.pdf; 2015 Flint PbCu.pdf; Flint 90th calculation 14-15.xlsx

The excel document is sorted low to high for each parameter and are independent of each other, ie. same row doesn't mean from the same site.

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

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: City of Flint
2. County: Genesee 3. WSSN: 2310
4. Population: _____ 5. Monitoring Period: From: 7/1/2014 To: 12/31/2014
6. Minimum # of Samples Required: 100 7. # of Samples Taken: 100
8. Name of Certified Laboratory: MDEQ Drinking Water Laboratory

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?
☒	☐	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)?

For more information see *Instructions* paragraph 11, subparagraph "Sample Category."

Comments: The increased number of samples required has led to many new sample sites.

10. NAME:

Name: Michael Glasgow

Title: Assistant Water Plant Supervisor Phone: (810)787-6537 Date: 2/27/15

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumbing ²	Lead (ppb)	Copper (ppb)	Lab #
2205 Flushing Rd. ✓	11/19/14	1	L		N.D.	110	
3814 Whitter Ave. ✓	11/20/14	1	L		2	N.D.	
3521 Bennett Ave. ✓	11/21/14	1	L		2	N.D.	
1914 Penbrook Ln. ✓	11/20/14	1	L		N.D.	N.D.	
305 Allendale Pl. ✓	11/24/14	1	L		2	130	
518 Frost St. ✓	12/1/14	1	L		1	N.D.	
3120 Norwood Dr. ✓	12/2/14	1	L		N.D.	N.D.	
1901 Crestbrook Ln. ✓	11/25/14	1	L		N.D.	70	
3727 Maryland Ave. ✓	12/3/14	1	L		1	N.D.	
1220 Beard St. ✓	12/2/14	1	L		10	60	
3718 Dolphaine Ln. ✓	12/3/14	1	L		N.D.	N.D.	
2213 Flushing Rd. ✓	12/3/2014	1	L		1	100	
721 East St. ✓	12/10/14	1	L		9	120	
1125 Barrie Ave. ✓	12/5/14	1	L		4	N.D.	
1505 Woodlawn Park Dr. ✓	12/8/2014	1	L		5	N.D.	
2622 Windmere ✓	12/7/14	1	L		5	N.D.	
3517 Bennett ✓	12/10/14	1	L		3	N.D.	
927 Kensington Ave. ✓	12/5/14	1	L		N.D.	110	
1109 Kensington Ave. ✓	12/4/14	1	L		N.D.	N.D.	
1901 Montclair Ave. ✓	12/5/14	1	L		4	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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumbing ²	Lead (ppb)	Copper (ppb)	Lab #
1809 Lynbrook	12/4/14	1	L		2	N.D.	
1130 Simcoe Ave.	12/5/14	1	L		2	50	
413 Burroughs Ave	12/4/14	1	L		N.D.	N.D.	
2079 Zimmerman	12/8/14	1	L		4	N.D.	
2615 Westwood Pkwy	12/6/14	1	L		2	280	
2441 Norbert	12/8/14	1	L		8	60	
711 Kensington Ave.	12/9/14	1	L		3	N.D.	
2016 Gold Ave.	12/4/14	1	L		2	N.D.	
618 S. Meade St.	12/8/14	1	L		2	N.D.	
2802 Westwood Pkwy.	12/5/14	1	L		1	110	
860 Schafer St.	12/8/14	1	L		N.D.	70	
1021 S. Franklin Ave.	12/5/14	1	L		4	N.D.	
1616 Durand St.	12/5/14	1	L		N.D.	200	
928 Durand	12/7/14	1	L		N.D.	N.D.	
2730 Westwood Pkwy	12/4/14	1	L		23	290	
1543 Kearsley Park Blvd.	12/4/14	1	L		1	N.D.	
2920 Parkside Dr.	12/5/14	1	L		10	220	
2721 Westwood Pkwy	12/5/14	1	L		2	110	
1002 Durand St.	12/4/14	1	L		2	110	
2660 Thomas St.	12/4/14	1	L		N.D.	N.D.	

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumbing ²	Lead (ppb)	Copper (ppb)	Lab #
815 Bradley Ave. ✓	12/7/14	1	L		5	270	
4013 Brownell Blvd. ✓	12/8/14	1	L		2	80	
2418 Gold Ave. ✓	12/10/14	1	L		N.D.	N.D.	
626 Commonwealth Ave. ✓	12/5/14	1	L		3	N.D.	
920 Stocker St. ✓	12/9/14	1	L		N.D.	N.D.	
430 Westcombe Ave. ✓	12/9/14	1	L		2	N.D.	
1623 Neome Dr. ✓	12/5/14	1	L		7	70	
3802 Gorey Ave. ✓	12/8/14	1	L		1	50	
1720 Davison Rd. ✓	12/4/14	1	L		2	130	
2110 Mountain Ave. ✓	12/8/14	1	L		5	60	
2006 Clement St. ✓	12/3/14	1	L		3	N.D.	
2028 Corunna Rd. ✓	12/7/14	1	L		N.D.	N.D.	
2829 Yale St. ✓	12/10/14	1	L		N.D.	N.D.	
1914 W. Home Ave. ✓	12/15/14	1	L		4	N.D.	
2920 N. Dexter St. ✓	12/15/14	1	L		N.D.	70	
2810 Kellar Ave. ✓	12/15/14	1	L		N.D.	N.D.	
3245 Montana Ave. ✓	12/15/14	1	L		4	N.D.	
3623 Norwood Dr. ✓	12/15/14	1	L		1	N.D.	
2801 Reynolds ✓	12/8/14	1	L		2	N.D.	
3510 Brandon St. ✓	12/10/14	1	L		5	80	

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

14

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumb-ing ²	Lead (ppb)	Copper (ppb)	Lab #
2117 Stanford Ave. <u>L</u>	12/11/14	1	L		3	N.D.	
5806 Leslie Dr. <u>L</u>	12/12/14	1	L		N.D.	N.D.	
1809 W. Home Ave. <u>L</u>	12/11/14	1	L		1	N.D.	
1414 Stone St. <u>L</u>	12/12/14	1	L		2	N.D.	
2006 Altken Ave. <u>L</u>	12/16/14	1	L		N.D.	N.D.	
3131 Wolcott <u>L</u>	12/17/14	1	L		N.D.	N.D.	
983 Gainey Ave. <u>L</u>	12/17/14	1	L		N.D.	100	
2806 Norbert St. <u>L</u>	12/18/14	1	L		N.D.	N.D.	
912 Crawford St. <u>L</u>	12/15/14	1	L		1	110	
4024 Sterling <u>L</u>	12/16/14	1	L		1	N.D.	
3737 Worchester Dr. <u>L</u>	12/16/14	1	L		N.D.	140	
1100 Stockton St. <u>L</u>	12/16/14	1	L		6	N.D.	
1725 Lincoln Ave. <u>L</u>	12/21/14	1	L		2	N.D.	
3139 Colorado <u>L</u>	12/18/14	1	L		N.D.	N.D.	
1401 Gainey Ave. <u>L</u>	12/20/14	1	L		4	N.D.	
2730 Coventry Ct. <u>L</u>	12/19/14	1	L		N.D.	N.D.	
709 Frost St. <u>L</u>	12/19/14	1	L		N.D.	N.D.	
2307 Radcliffe <u>L</u>	12/20/14	1	L		37	80	
224 E. Court St. <u>L</u>	12/15/14	1	L		4	N.D.	
3440 Rangeley <u>L</u>	12/13/14	1	L		N.D.	N.D.	

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint / GeneseeWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumb-Ing ²	Lead (ppb)	Copper (ppb)	Lab #
3808 Brownell Blvd. ✓	12/16/14	1	L		N.D.	90	
1006 Kensington ✓	12/19/14	1	L		2	N.D.	
2517 Delaware Ave. ✓	12/18/14	1	L		5	200	
1810 W. Hobson Ave. ✓	12/21/14	1	L		N.D.	N.D.	
6805 Leslie Dr. ✓	12/21/14	1	L		2	N.D.	
1721 Chelsea Circle ✓	12/22/14	1	L		N.D.	N.D.	
912 Waldman Ave. ✓	12/23/14	1	L		N.D.	N.D.	
3082 Lanning Dr. ✓	12/24/14	1	L		N.D.	N.D.	
25151 Chicago Blvd. ✓	12/26/14	1	L		6	N.D.	
742 Lincoln Ave. ✓	12/26/14	1	L		3	N.D.	
1806 Ramsay Blvd. ✓	12/27/14	1	L		4	N.D.	
1910 Ramsay Blvd. ✓	12/20/14	1	L		N.D.	N.D.	
3009 Montana Ave. ✓	12/28/14	1	L		1	N.D.	
1223 Campbell St. ✓	12/30/14	1	L		1	N.D.	
3821 Delaware ✓	12/27/14	1	L		N.D.	N.D.	
1651 Woodlawn Pk Blvd. ✓	12/29/14	1	L		N.D.	N.D.	
1911 Cory St. ✓	12/30/14	1	L		4	N.D.	
3507 Dearborn Ave. ✓	12/20/14	1	L		6	N.D.	
3829 Ivanhoe Ave. ✓	12/29/14	1	L		N.D.	N.D.	
1559 Chevrolet Ave. ✓	12/30/14	1	L		9	N.D.	

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

	90 th percentile	Ave	Max	# > AL
Pb	6.0			2
Cu	110			0

Consumer Notice of Lead & Copper Results in Drinking Water

Water Supply Name: City of Flint

County: Genesee WSSN: 2310

Sample Location 2205 Flushing Rd. Date Sampled: 11/19/2014

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	Not Detected
	Copper (ppb)	1300	1300	110

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 and 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
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: City of Flint Water Plant
2. County: Genesee 3. WSSN: 2310
4. Population: 99,763 5. Monitoring Period: From: 1/1/15 To: 6/30/15
6. Minimum # of Samples Required: 60 7. # of Samples Taken: 69
8. Name of Certified Laboratory: DEQ Drinking Water Laboratory

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?
☒	☐	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)?
For more information see <i>Instructions</i> paragraph 11, subparagraph "Sample Category."		
Comments: Revised report after conference call with DEQ staff. Two samples were removed from list for not meeting sample criteria, and due to population the number of samples required was reduced to 60.		

10. NAME:

Name: Michael Glasgow
Title: Utilities Administrator Phone: 810-766-7135 Date: 8/20/2015

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint Water PlantWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumbing ²	Lead (ppb)	Copper (ppb)	Lab #
2205 Flusing Rd	2/16/15	1	L	C,P	N.D.	0.13	54883
1809 Stevenson St.	2/10/15	1	L	P	10	N.D.	54958
4202 Custer Ave.	3/4/15	1	L	C,P	6	0.27	56223
401 E. Newall St.	3/2/15	1	L	P	5	N.D.	56225
215 Browning Ave.	3/21/15	1	L	C,P	N.D.	0.16	56226
2615 Trumbull Ave.	2/27/15	1	L	C,P	3	N.D.	56227
201 Browning Ave.	3/5/15	1	L	P	N.D.	N.D.	56228
1224 Decker St.	3/17/15	1	L	C,P	13	0.10	57728
1220 Decker St.	3/17/15	1	L	P	4	N.D.	57730
1379 Washington Ave.	3/19/15	1	L	P	8	N.D.	57731
1383 Washington Ave.	3/19/15	1	L	C,P	6	0.17	57734
1372 Washington Ave.	3/19/15	1	L	C,P	2	0.14	57733
1367 Washington Ave.	3/17/15	1	L	P	1	N.D.	57735
1701 Marquette Dr.	3/14/15	1	L	C,P	1	0.19	57736
778 Bundy Ave.	3/24/15	1	L	P	N.D.	N.D.	58413
3714 Beecher Rd.	3/24/15	1	L	C	2	0.52	58414
1016 Ingleside Ave.	4/9/15	1	L	C,P	7	0.07	59749
1818 Rock Creek Ln.	4/6/15	1	L	C,P	3	0.11	59750
3010 Cheyenne St.	4/3/15	1	L	C,P	5	0.10	59751
2606 Mountain Ave.	4/15/2015	1	L	P	N.D.	N.D.	60546

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint Water PlantWSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumb-ing ²	Lead (ppb)	Copper (ppb)	Lab #
2020 Crooked Ln.	4/24/15	1	L	C,P	5	0.10	61845
310 E. Moore St.	4/22/15	1	L	P	5	N.D.	61846
631 Alvord Ave.	5/6/15	1	L	P	42	N.D.	63410
216 Browning Ave.	5/7/15	1	L	C,P	22	0.31	63411
3714 Beecher Rd.	5/14/15	1	L	C,P	8	0.15	64283
912 Lexington Ave.	5/15/15	1	L	P	6	N.D.	64285
349 Robble Ln.	5/31/15	1	L	P	2	N.D.	67428
353 Robble Ln.	5/30/15	1	L	C,P	5	0.11	67427
341 Robble Ln.	5/31/15	1	L	C,P	3	0.05	67426
328 Robble Ln.	5/30/15	1	L	C,P	2	0.09	67425
357 Robble Ln.	5/31/15	1	L	C	3	0.20	67424
344 Robble Ln.	5/31/15	1	L	C,P	4	0.11	67423
1807 Oren Ave.	6/8/15	1	L	P	21	N.D.	68023
421 Lyon St.	6/14/15	1	L	C,P	7	0.14	68788
1528 Delaware Ave.	6/12/15	1	L	P	3	N.D.	68789
3811 Brentwood Dr.	6/14/15	1	L	P	42	N.D.	68790
1815 S. Franklin Ave.	6/14/15	1	L	P	N.D.	N.D.	68791
853 E. 7th St.	6/12/15	1	L	C,P	7	0.07	68792
1150 Woodside Dr.	6/14/15	1	L	P	29	N.D.	68793
547 Copeman Blvd.	6/15/14	1	L	P	18	N.D.	68794

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint Water Plant

WSSN 2310

RESULTS:

Sample Location	Sample Date	Sample Category ¹	Service Lines ²	Bldg Plumbing ²	Lead (ppb)	Copper (ppb)	Lab #
2114 Flushing Rd.	6/30/15	1	L	P	5	0.05	71170
709 Frost St.	6/30/15	1	L	P	2	N.D.	72033
920 Stocker Ave.	6/21/15	1	L	P	1	N.D.	69622
742 Lincoln Ave.	6/19/15	1	L	P	2	N.D.	69623
3517 Bennett Ave.	6/24/15	1	L	C,P	3	0.06	69624
1730 Overhill Dr.	6/22/15	1	L	C,P	1	0.08	69625
2117 Stanford Ave.	6/23/15	1	L	C,P	5	0.08	69626
2432 Beta Ln.	6/21/15	1	L	P	N.D.	N.D.	69627
2023 Miller Rd.	6/21/15	1	L	C,P	3	0.06	69628
721 East St. Apt #2	6/25/15	4	L	C,P	10	0.16	70222
3814 Whitter	6/25/15	1	L	P	2	N.D.	70223
3120 Norwood	6/24/15	1	L	P	5	N.D.	70224
2122 Pierce St.	6/21/15	1	L	P	2	N.D.	70225
3521 Bennett Ave.	6/25/15	1	L	P	3	N.D.	70226
1602 Raspberry Ln.	6/24/15	1	L	P	N.D.	N.D.	70227
1809 Lynbrook	6/26/15	1	L	P	3	N.D.	70228
2112 Sherff	6/24/15	1	L	C,P	9	0.06	70229
1205 Blanchard Ave.	6/24/15	1	L	C,P	11	0.05	70230
860 Schafer St.	6/26/15	1	L	C,P	N.D.	0.06	70231
2110 Flushing Rd.	6/30/15	1	L	C	N.D.	0.10	71158

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County City of Flint Water Plant

WSSN 2310

RESULTS:

[illegible]

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

Consumer Notice of Lead Result in Drinking Water

Water Supply Name: City of Flint
 County: Genesee WSSN: 2310
 Sample Location: 401 E. Newall St. Date Sampled: 3/2/15

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 below which there is no known or expected risk to health. MCLGs allow for a margin of safety. ppb: parts per billion or micrograms per liter.	Lead (ppb)	15	0	5
	Copper (ppb)	1300	1300	Not Detected

Lead can cause serious health problems 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 of lead on the brain with lowered 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 it 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 water tap; lead dissolves more easily in hot water.
- *Do not boil water to remove lead.* Boiling water will not reduce lead levels.
- *Look for 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 or labeled 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 and 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.

Certification:

I certify that this public water supply has provided the consumer notice of lead result to persons served at each of the taps that was tested, either by mail or by another method approved by the DEQ, within 30 days of knowing the result. The Notice includes required content.

Michael G. Lange
 Signature

UTILITIES ADMINISTRATOR
 Title

WSSN: 2310

3/12/15
 Date Sent to Consumer

Reminder to water supplier: Complete this certification on only one (1) example copy of a notice sent to a consumer and submit it to the DEQ.

Flint 02310

For monitoring period 7/1/14 - 12/31/14

	Pb	Cu
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	1	0
39	1	0
40	1	0
41	1	0
42	1	0
43	1	0
44	1	0
45	1	0

46	1	0
47	1	0
48	1	0
49	1	0
50	2	0
51	2	0
52	2	0
53	2	0
54	2	0
55	2	0
56	2	0
57	2	0
58	2	0
59	2	0
60	2	0
61	2	0
62	2	0
63	2	0
64	2	0
65	2	0
66	2	0
67	2	0
68	3	0
69	3	50
70	3	50
71	3	60
72	3	60
73	3	60
74	4	60
75	4	70
76	4	70
77	4	70
78	4	70
79	4	80
80	4	80
81	4	80
82	4	90
83	4	100
84	5	100
85	5	110
86	5	110
87	5	110
88	5	110
89	5	110
90	6	110
91	6	120
92	6	130

93	7	130
94	8	140
95	9	200
96	9	200
97	10	220
98	10	270
99	23	280
100	37	290

90th
average
max
min
> AL

6	110
3	38
37	290
0	0
2	0

Pb	Cu	
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	1	0
15	1	0
16	1	0
17	1	0
18	2	0
19	2	0
20	2	0
21	2	0
22	2	0
23	2	0
24	2	0
25	2	0
26	2	0
27	2	0
28	2	0
29	3	0
30	3	0
31	3	0
32	3	0
33	3	0
34	3	50
35	3	50
36	3	50
37	3	50
38	3	60
39	3	60
40	4	60
41	4	60
42	5	60
43	5	60
44	5	70
45	5	70
46	5	80

02310 - Flint PbCu 1st 1/2 2015

47	5	80
48	5	80
49	5	90
50	6	100
51	6	100
52	6	100
53	6	100
54	7	110
55	7	110
56	7	110
57	8	130
58	8	140
59	9	140
60	10	150
61	10	160
62	11	160
63	13	170
64	18	190
65	21	200
66	22	270
67	29	280
68	42	310
69	42	520

90th = 62.1

90th	11.2	161 ppb
average	5.72	66.38
max	42	520
min	0	0
# > AL	6	0

Rennaker, Joanne (DEQ)

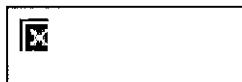
From: Rosenthal, Adam (DEQ)
Sent: Friday, October 02, 2015 1:33 PM
To: Busch, Stephen (DEQ)
Subject: Flint WQPs

Flint monitors 25 locations quarterly in the distribution system for the following WQPs:

Temperature, Conductivity, pH, Total Alkalinity, and Calcium

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, October 01, 2015 5:19 PM
To: Busch, Stephen (DEQ)
Subject: Flint Plant Tap Pb
Attachments: 7Laboratory Sample Report.htm; 6Laboratory Sample Report.htm; 5Laboratory Sample Report.htm; 4Laboratory Sample Report.htm; 3Laboratory Sample Report.htm; 2Laboratory Sample Report.htm; 1Laboratory Sample Report.htm

**Michigan Department of Environmental Quality**Replicate Laboratory Report for
Lansing Drinking Water Laboratory

Owner/Location Information:

CITY OF FLINT
4500 N DORT HWY
FLINT MI 48505

Sample Number: LLF44687

Sample/Collection Information:

WSSN: 02310

County: Genesee

Township:

Section:

Well #:

Collection Date: 10/28/2014 8:04:00 AM

Arrival Date: 10/29/2014 11:15:14 AM

Site Code:

Water Source: Public Community Water Supply

Sample Reason: Routine Monitoring

Sample Point: Treated Public Distribution System

Point Description: PLANT TAP

Collector: Public Water Supply Operator

Collected By: MIKE GLASGOW

CasNo	Analyte	Result	Detect	Units	Method
16984-48-8	FLUORIDE (AUTOMATED)	0.62	0.1	mg/L	SM 4500 FC
7439-89-6	IRON	ND	0.1	mg/L	SM 3500 FeB
HARD-00-C	HARDNESS AS CaCO ₃	143	20	mg/L	SM 2340 C
7440-23-5	SODIUM	18	5	mg/L	SM 3500 NaB
7440-38-2	ARSENIC (TOTAL)	ND	0.002	mg/L	EPA 200.8
7440-39-3	BARIUM	0.02	0.01	mg/L	EPA 200.8
7440-41-7	BERYLLIUM	ND	0.0004	mg/L	EPA 200.8
57-12-5	CYANIDE	ND	0.02	mg/L	OIA-1677
7440-43-9	CADMIUM (TOTAL)	ND	0.0003	mg/L	EPA 200.8
7647-14-5	CHLORIDE (AUTOMATED)	60	4	mg/L	SM 4500-Cl E
7440-47-3	CHROMIUM (TOTAL)	ND	0.01	mg/L	EPA 200.8

93-76-5	2,4,5-T	ND	0.002	mg/L	EPA 515.4
93-72-1	2,4,5-TP (SILVEX)	ND	0.0003	mg/L	EPA 515.4
94-75-7	2,4-D	ND	0.002	mg/L	EPA 515.4
50594-66-6	ACIFLUORFEN	ND	0.004	mg/L	EPA 515.4
25057-89-0	BENTAZON	ND	0.002	mg/L	EPA 515.4
1918-00-9	DICAMBA	ND	0.002	mg/L	EPA 515.4
88-85-7	DINOSEB	ND	0.0003	mg/L	EPA 515.4
87-86-5	PENTACHLOROPHENOL	ND	0.00006	mg/L	EPA 515.4
1918-02-1	PICLORAM	ND	0.001	mg/L	EPA 515.4
1861-32-1	TOTAL DCPA, MONO & DI-ACID DEGRADATES	ND	0.001	mg/L	EPA 515.4
116-06-3	ALDICARB	ND	0.0005	mg/L	EPA 531.2
1646-88-4	ALDICARB SULFONE	ND	0.0005	mg/L	EPA 531.2
1646-87-3	ALDICARB SULFOXIDE	ND	0.0005	mg/L	EPA 531.2
63-25-2	CARBARYL	ND	0.001	mg/L	EPA 531.2
1563-66-2	CARBOFURAN	ND	0.0005	mg/L	EPA 531.2
16655-82-6	HYDROXYCARBOFURAN,3-	ND	0.001	mg/L	EPA 531.2
2032-65-7	METHIOCARB	ND	0.001	mg/L	EPA 531.2
16752-77-5	METHOMYL	ND	0.001	mg/L	EPA 531.2
23135-22-0	OXAMYL	ND	0.001	mg/L	EPA 531.2
114-26-1	PROPOXUR (BAYGON)	ND	0.001	mg/L	EPA 531.2
34256-82-1	ACETOCHLOR	ND	0.001	mg/L	EPA 525.2
15972-60-8	ALACHLOR	ND	0.0002	mg/L	EPA 525.2
309-00-2	ALDRIN	ND	0.0004	mg/L	EPA 525.2
1912-24-9	ATRAZINE	ND	0.0002	mg/L	EPA 525.2
5103-71-9	CHLORDANE, ALPHA-	ND	0.0002	mg/L	EPA 525.2
5103-74-2	CHLORDANE, GAMMA-	ND	0.0002	mg/L	EPA 525.2
72-54-8	DDD,4,4'-	ND	0.001	mg/L	EPA 525.2
72-55-9	DDE,4,4'-	ND	0.001	mg/L	EPA 525.2

50-29-3	DDT,4,4'-	ND	0.0005	mg/L	EPA 525.2
60-57-1	DIELDRIN	ND	0.0005	mg/L	EPA 525.2
72-20-8	ENDRIN	ND	0.0001	mg/L	EPA 525.2
7421-93-4	ENDRIN ALDEHYDE	ND	0.001	mg/L	EPA 525.2
76-44-8	HEPTACHLOR	ND	0.0002	mg/L	EPA 525.2
1024-57-3	HEPTACHLOR EPOXIDE	ND	0.0001	mg/L	EPA 525.2
118-74-1	HEXACHLOROBENZENE	ND	0.0001	mg/L	EPA 525.2
319-84-6	HEXACHLOROCYCLOHEXANE (ALPHA-BHC)	ND	0.001	mg/L	EPA 525.2
319-85-7	HEXACHLOROCYCLOHEXANE (BETA-BHC)	ND	0.001	mg/L	EPA 525.2
319-86-8	HEXACHLOROCYCLOHEXANE (DELTA-BHC)	ND	0.001	mg/L	EPA 525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	0.0005	mg/L	EPA 525.2
58-89-9	LINDANE (GAMMA-BHC)	ND	0.0001	mg/L	EPA 525.2
72-43-5	METHOXYCHLOR	ND	0.0001	mg/L	EPA 525.2
51218-45-2	METOLACHLOR	ND	0.001	mg/L	EPA 525.2
21087-64-9	METRIBUZIN	ND	0.001	mg/L	EPA 525.2
2212-67-1	MOLINATE	ND	0.0005	mg/L	EPA 525.2
12674-11-2	PCB (AROCLOR 1016)	ND	0.0001	mg/L	EPA 525.2
11104-28-2	PCB (AROCLOR 1221)	ND	0.0001	mg/L	EPA 525.2
11141-16-5	PCB (AROCLOR 1232)	ND	0.0001	mg/L	EPA 525.2
53469-21-9	PCB (AROCLOR 1242)	ND	0.0001	mg/L	EPA 525.2
12672-29-6	PCB (AROCLOR 1248)	ND	0.0001	mg/L	EPA 525.2
11097-69-1	PCB (AROCLOR 1254)	ND	0.0001	mg/L	EPA 525.2
11096-82-5	PCB (AROCLOR 1260)	ND	0.0001	mg/L	EPA 525.2
59536-65-1	POLYBROMINATED BIPHENYLS	ND	0.0001	mg/L	EPA 525.2
122-34-9	SIMAZINE	ND	0.0002	mg/L	EPA 525.2
8001-35-2	TOXAPHENE	ND	0.001	mg/L	EPA 525.2
71-43-2	BENZENE	ND	0.0005	mg/L	EPA 524.2
108-86-1	BROMOBENZENE	ND	0.0005	mg/L	EPA 524.2

74-97-5	BROMOCHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
75-25-2	BROMOFORM	0.0014	0.0005	mg/L	EPA 524.2
74-83-9	BROMOMETHANE	ND	0.001	mg/L	EPA 524.2
104-51-8	BUTYLBENZENE,NORMAL-	ND	0.0005	mg/L	EPA 524.2
135-98-8	BUTYLBENZENE,SEC-	ND	0.0005	mg/L	EPA 524.2
98-06-6	BUTYLBENZENE,TERT-	ND	0.0005	mg/L	EPA 524.2
56-23-5	CARBON TETRACHLORIDE	ND	0.0005	mg/L	EPA 524.2
108-90-7	CHLOROBENZENE	ND	0.0005	mg/L	EPA 524.2
124-48-1	CHLORODIBROMOMETHANE	0.0080	0.0005	mg/L	EPA 524.2
75-00-3	CHLOROETHANE	ND	0.0005	mg/L	EPA 524.2
67-66-3	CHLOROFORM	0.012	0.0005	mg/L	EPA 524.2
74-87-3	CHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
95-49-8	CHLOROTOLUENE,2-	ND	0.0005	mg/L	EPA 524.2
106-43-4	CHLOROTOLUENE,4-	ND	0.0005	mg/L	EPA 524.2
74-95-3	DIBROMOMETHANE	ND	0.0005	mg/L	EPA 524.2
95-50-1	DICHLOROBENZENE,1,2-	ND	0.0005	mg/L	EPA 524.2
541-73-1	DICHLOROBENZENE,1,3-	ND	0.0005	mg/L	EPA 524.2
106-46-7	DICHLOROBENZENE,1,4-	ND	0.0005	mg/L	EPA 524.2
75-27-4	DICHLOROBROMOMETHANE	0.012	0.0005	mg/L	EPA 524.2
75-71-8	DICHLORODIFLUOROMETHANE	ND	0.001	mg/L	EPA 524.2
75-34-3	DICHLOROETHANE,1,1-	ND	0.0005	mg/L	EPA 524.2
107-06-2	DICHLOROETHANE,1,2-	ND	0.0005	mg/L	EPA 524.2
75-35-4	DICHLOROETHYLENE,1,1-	ND	0.0005	mg/L	EPA 524.2
156-59-2	DICHLOROETHYLENE,1,2-CIS	ND	0.0005	mg/L	EPA 524.2
156-60-5	DICHLOROETHYLENE,1,2-TRANS	ND	0.0005	mg/L	EPA 524.2
78-87-5	DICHLOROPROPANE,1,2-	ND	0.0005	mg/L	EPA 524.2
142-28-9	DICHLOROPROPANE,1,3-	ND	0.0005	mg/L	EPA 524.2
594-20-7	DICHLOROPROPANE,2,2-	ND	0.0005	mg/L	EPA 524.2
563-58-6	DICHLOROPROPENE,1,1-	ND	0.0005	mg/L	EPA 524.2
10061-01-5	DICHLOROPROPENE,1,3-CIS	ND	0.0005	mg/L	EPA 524.2
10061-02-6	DICHLOROPROPENE,1,3-TRANS	ND	0.0005	mg/L	EPA 524.2
100-41-4	ETHYLBENZENE	ND	0.0005	mg/L	EPA 524.2
75-69-4	FLUOROTRICHLOROMETHANE	ND	0.001	mg/L	EPA 524.2
87-68-3	HEXACHLOROBUTADIENE	ND	0.0005	mg/L	EPA 524.2
98-82-8	ISOPROPYL BENZENE	ND	0.0005	mg/L	EPA 524.2
99-87-6	ISOPROPYL TOLUENE, PARA-	ND	0.0005	mg/L	EPA 524.2
78-93-3	METHYL ETHYL KETONE	ND	0.005	mg/L	EPA 524.2
108-10-1	METHYL ISOBUTYL KETONE	ND	0.005	mg/L	EPA 524.2
1634-04-4	METHYL TERT-BUTYL ETHER	ND	0.001	mg/L	EPA 524.2

75-09-2	METHYLENE CHLORIDE	ND	0.0006	mg/L	EPA 524.2
91-20-3	NAPHTHALENE	ND	0.0005	mg/L	EPA 524.2
98-95-3	NITROBENZENE	ND	0.01	mg/L	EPA 524.2
103-65-1	PROPYLBENZENE, NORMAL-	ND	0.0005	mg/L	EPA 524.2
100-42-5	STYRENE	ND	0.0005	mg/L	EPA 524.2
630-20-6	TETRACHLOROETHANE,1,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-34-5	TETRACHLOROETHANE,1,1,2,2-	ND	0.0005	mg/L	EPA 524.2
127-18-4	TETRACHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
109-99-9	TETRAHYDROFURAN	ND	0.005	mg/L	EPA 524.2
108-88-3	TOLUENE	ND	0.0005	mg/L	EPA 524.2
TTHM-00-C	TOTAL TRIHALOMETHANES	0.033	NA	mg/L	EPA 524.2
87-61-6	TRICHLOROBENZENE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
120-82-1	TRICHLOROBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
71-55-6	TRICHLOROETHANE,1,1,1-	ND	0.0005	mg/L	EPA 524.2
79-00-5	TRICHLOROETHANE,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-01-6	TRICHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
96-18-4	TRICHLOROPROPANE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
95-63-6	TRIMETHYLBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
108-67-8	TRIMETHYLBENZENE,1,3,5-	ND	0.0005	mg/L	EPA 524.2
75-01-4	VINYL CHLORIDE	ND	0.0004	mg/L	EPA 524.2
XYLMP-00-C	XYLENE,META-&PARA-	0.0005	0.0005	mg/L	EPA 524.2
95-47-6	XYLENE,ORTHO-	ND	0.0005	mg/L	EPA 524.2
1330-20-7	XYLENES (TOTAL)	0.0005	NA	mg/L	EPA 524.2
7439-97-6	MERCURY	ND	0.0001	mg/L	EPA 200.8
7440-02-0	NICKEL	ND	0.01	mg/L	EPA 200.8
14797-65-0	NITRITE AS N (AUTOMATED)	ND	0.05	mg/L	10-107-04-2-B
14797-55-8	NITRATE AS N (AUTOMATED)	ND	0.4	mg/L	10-107-04-2-B
7439-92-1	LEAD (TOTAL)	ND	0.001	mg/L	EPA 200.8
7440-36-0	ANTIMONY	ND	0.0006	mg/L	EPA 200.8
7782-49-2	SELENIUM (TOTAL)	ND	0.001	mg/L	EPA 200.8
14808-79-8	SULFATE (AUTOMATED)	22	10	mg/L	SM 4500 SO4E
7440-28-0	THALLIUM	ND	0.0002	mg/L	EPA 200.8

Laboratory Comments:

A trip blank was not available for analysis with this sample.

By authority of PA 368 of 1978 as amended.

Print Date: Thu Oct 1
17:16:11 EDT 2015

**Michigan Department of Environmental Quality**Replicate Laboratory Report for
Lansing Drinking Water Laboratory

Owner/Location Information:

CITY OF FLINT -WATER
PLANT
4500 N DORT HWY
FLINT MI 48505

Sample Number: LLF19430

Sample/Collection Information:

WSSN: 02310

County: Genesee

Township:

Section:

Well #:

Collection Date: 5/22/2014 8:30:00 AM

Arrival Date: 5/22/2014 1:19:53 PM

Site Code: LAB TAP

Water Source: Public Community Water
Supply

Sample Reason: Routine Monitoring

Sample Point: Treated Public Distribution
System

Point Description: PLANT LAB

Collector: Public Water Supply Operator

Collected By: MICHAEL GLASGOW

CasNo	Analyte	Result	Detect	Units	Method
16984-48-8	FLUORIDE (AUTOMATED)	0.16	0.1	mg/L	SM 4500 FC
7439-89-6	IRON	ND	0.1	mg/L	SM 3500 FeB
HARD-00-C	HARDNESS AS CaCO ₃	209	20	mg/L	SM 2340 C
7440-23-5	SODIUM	15	5	mg/L	SM 3500 NaB
7440-38-2	ARSENIC (TOTAL)	ND	0.002	mg/L	EPA 200.8
7440-39-3	BARIUM	0.03	0.01	mg/L	EPA 200.8
7440-41-7	BERYLLIUM	ND	0.0004	mg/L	EPA 200.8
57-12-5	CYANIDE	ND	0.02	mg/L	OIA-1677
7440-43-9	CADMIUM (TOTAL)	ND	0.0003	mg/L	EPA 200.8
7647-14-5	CHLORIDE (AUTOMATED)	79	4	mg/L	SM 4500-Cl E
7440-47-					

3	CHROMIUM (TOTAL)	ND	0.01	mg/L	EPA 200.8
93-76-5	2,4,5-T	ND	0.002	mg/L	EPA 515.4
93-72-1	2,4,5-TP (SILVEX)	ND	0.0003	mg/L	EPA 515.4
94-75-7	2,4-D	ND	0.002	mg/L	EPA 515.4
50594-66-6	ACIFLUORFEN	ND	0.004	mg/L	EPA 515.4
25057-89-0	BENTAZON	ND	0.002	mg/L	EPA 515.4
1918-00-9	DICAMBA	ND	0.002	mg/L	EPA 515.4
88-85-7	DINOSEB	ND	0.0003	mg/L	EPA 515.4
87-86-5	PENTACHLOROPHENOL	ND	0.00006	mg/L	EPA 515.4
1918-02-1	PICLORAM	ND	0.001	mg/L	EPA 515.4
1861-32-1	TOTAL DCPA, MONO & DI-ACID DEGRADATES	ND	0.001	mg/L	EPA 515.4
116-06-3	ALDICARB	ND	0.0005	mg/L	EPA 531.2
1646-88-4	ALDICARB SULFONE	ND	0.0005	mg/L	EPA 531.2
1646-87-3	ALDICARB SULFOXIDE	ND	0.0005	mg/L	EPA 531.2
63-25-2	CARBARYL	ND	0.001	mg/L	EPA 531.2
1563-66-2	CARBOFURAN	ND	0.0005	mg/L	EPA 531.2
16655-82-6	HYDROXYCARBOFURAN,3-	ND	0.001	mg/L	EPA 531.2
2032-65-7	METHIOCARB	ND	0.001	mg/L	EPA 531.2
16752-77-5	METHOMYL	ND	0.001	mg/L	EPA 531.2
23135-22-0	OXAMYL	ND	0.001	mg/L	EPA 531.2
114-26-1	PROPOXUR (BAYGON)	ND	0.001	mg/L	EPA 531.2
34256-82-1	ACETOCHLOR	ND	0.001	mg/L	EPA 525.2
15972-60-8	ALACHLOR	ND	0.0002	mg/L	EPA 525.2
309-00-2	ALDRIN	ND	0.0004	mg/L	EPA 525.2
1912-24-9	ATRAZINE	ND	0.0002	mg/L	EPA 525.2
5103-71-9	CHLORDANE, ALPHA-	ND	0.0002	mg/L	EPA 525.2
5103-74-2	CHLORDANE, GAMMA-	ND	0.0002	mg/L	EPA 525.2
72-54-8	DDD,4,4'-	ND	0.001	mg/L	EPA 525.2

72-55-9	DDE,4,4'-	ND	0.001	mg/L	EPA 525.2
50-29-3	DDT,4,4'-	ND	0.0005	mg/L	EPA 525.2
60-57-1	DIELDRIN	ND	0.0005	mg/L	EPA 525.2
72-20-8	ENDRIN	ND	0.0001	mg/L	EPA 525.2
7421-93-4	ENDRIN ALDEHYDE	ND	0.001	mg/L	EPA 525.2
76-44-8	HEPTACHLOR	ND	0.0002	mg/L	EPA 525.2
1024-57-3	HEPTACHLOR EPOXIDE	ND	0.0001	mg/L	EPA 525.2
118-74-1	HEXACHLOROBENZENE	ND	0.0001	mg/L	EPA 525.2
319-84-6	HEXACHLOROCYCLOHEXANE (ALPHA-BHC)	ND	0.001	mg/L	EPA 525.2
319-85-7	HEXACHLOROCYCLOHEXANE (BETA-BHC)	ND	0.001	mg/L	EPA 525.2
319-86-8	HEXACHLOROCYCLOHEXANE (DELTA-BHC)	ND	0.001	mg/L	EPA 525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	0.0005	mg/L	EPA 525.2
58-89-9	LINDANE (GAMMA-BHC)	ND	0.0001	mg/L	EPA 525.2
72-43-5	METHOXYCHLOR	ND	0.0001	mg/L	EPA 525.2
51218-45-2	METOLACHLOR	ND	0.001	mg/L	EPA 525.2
21087-64-9	METRIBUZIN	ND	0.001	mg/L	EPA 525.2
2212-67-1	MOLINATE	ND	0.0005	mg/L	EPA 525.2
12674-11-2	PCB (AROCLOR 1016)	ND	0.0001	mg/L	EPA 525.2
11104-28-2	PCB (AROCLOR 1221)	ND	0.0001	mg/L	EPA 525.2
11141-16-5	PCB (AROCLOR 1232)	ND	0.0001	mg/L	EPA 525.2
53469-21-9	PCB (AROCLOR 1242)	ND	0.0001	mg/L	EPA 525.2
12672-29-6	PCB (AROCLOR 1248)	ND	0.0001	mg/L	EPA 525.2
11097-69-1	PCB (AROCLOR 1254)	ND	0.0001	mg/L	EPA 525.2
11096-82-5	PCB (AROCLOR 1260)	ND	0.0001	mg/L	EPA 525.2
59536-65-1	POLYBROMINATED BIPHENYLS	ND	0.0001	mg/L	EPA 525.2
122-34-9	SIMAZINE	ND	0.0002	mg/L	EPA 525.2
8001-35-2	TOXAPHENE	ND	0.001	mg/L	EPA 525.2
71-43-2	BENZENE	ND	0.0005	mg/L	EPA 524.2

108-86-1	BROMOBENZENE	ND	0.0005	mg/L	EPA 524.2
74-97-5	BROMOCHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
75-25-2	BROMOFORM	0.0010	0.0005	mg/L	EPA 524.2
74-83-9	BROMOMETHANE	ND	0.001	mg/L	EPA 524.2
104-51-8	BUTYLBENZENE,NORMAL-	ND	0.0005	mg/L	EPA 524.2
135-98-8	BUTYLBENZENE,SEC-	ND	0.0005	mg/L	EPA 524.2
98-06-6	BUTYLBENZENE,TERT-	ND	0.0005	mg/L	EPA 524.2
56-23-5	CARBON TETRACHLORIDE	ND	0.0005	mg/L	EPA 524.2
108-90-7	CHLOROBENZENE	ND	0.0005	mg/L	EPA 524.2
124-48-1	CHLORODIBROMOMETHANE	0.013	0.0005	mg/L	EPA 524.2
75-00-3	CHLOROETHANE	ND	0.0005	mg/L	EPA 524.2
67-66-3	CHLOROFORM	0.022	0.0005	mg/L	EPA 524.2
74-87-3	CHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
95-49-8	CHLOROTOLUENE,2-	ND	0.0005	mg/L	EPA 524.2
106-43-4	CHLOROTOLUENE,4-	ND	0.0005	mg/L	EPA 524.2
74-95-3	DIBROMOMETHANE	ND	0.0005	mg/L	EPA 524.2
95-50-1	DICHLOROBENZENE,1,2-	ND	0.0005	mg/L	EPA 524.2
541-73-1	DICHLOROBENZENE,1,3-	ND	0.0005	mg/L	EPA 524.2
106-46-7	DICHLOROBENZENE,1,4-	ND	0.0005	mg/L	EPA 524.2
75-27-4	DICHLOROBROMOMETHANE	0.020	0.0005	mg/L	EPA 524.2
75-71-8	DICHLORODIFLUOROMETHANE	ND	0.001	mg/L	EPA 524.2
75-34-3	DICHLOROETHANE,1,1-	ND	0.0005	mg/L	EPA 524.2
107-06-2	DICHLOROETHANE,1,2-	ND	0.0005	mg/L	EPA 524.2
75-35-4	DICHLOROETHYLENE,1,1-	ND	0.0005	mg/L	EPA 524.2
156-59-2	DICHLOROETHYLENE,1,2-CIS	ND	0.0005	mg/L	EPA 524.2
156-60-5	DICHLOROETHYLENE,1,2-TRANS	ND	0.0005	mg/L	EPA 524.2
78-87-5	DICHLOROPROPANE,1,2-	ND	0.0005	mg/L	EPA 524.2
142-28-9	DICHLOROPROPANE,1,3-	ND	0.0005	mg/L	EPA 524.2
594-20-7	DICHLOROPROPANE,2,2-	ND	0.0005	mg/L	EPA 524.2
563-58-6	DICHLOROPROPENE,1,1-	ND	0.0005	mg/L	EPA 524.2
10061-01-5	DICHLOROPROPENE,1,3-CIS	ND	0.0005	mg/L	EPA 524.2
10061-02-6	DICHLOROPROPENE,1,3-TRANS	ND	0.0005	mg/L	EPA 524.2
100-41-4	ETHYLBENZENE	ND	0.0005	mg/L	EPA 524.2
75-69-4	FLUOROTRICHLOROMETHANE	ND	0.001	mg/L	EPA 524.2
87-68-3	HEXACHLOROBUTADIENE	ND	0.0005	mg/L	EPA 524.2
98-82-8	ISOPROPYL BENZENE	ND	0.0005	mg/L	EPA 524.2
99-87-6	ISOPROPYL TOLUENE, PARA-	ND	0.0005	mg/L	EPA 524.2
78-93-3	METHYL ETHYL KETONE	ND	0.005	mg/L	EPA 524.2
108-10-1	METHYL ISOBUTYL KETONE	ND	0.005	mg/L	EPA 524.2
1634-04-					

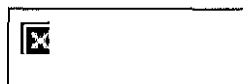
4	METHYL TERT-BUTYL ETHER	ND	0.001	mg/L	EPA 524.2
75-09-2	METHYLENE CHLORIDE	ND	0.0006	mg/L	EPA 524.2
91-20-3	NAPHTHALENE	ND	0.0005	mg/L	EPA 524.2
98-95-3	NITROBENZENE	ND	0.01	mg/L	EPA 524.2
103-65-1	PROPYLBENZENE, NORMAL-	ND	0.0005	mg/L	EPA 524.2
100-42-5	STYRENE	ND	0.0005	mg/L	EPA 524.2
630-20-6	TETRACHLOROETHANE,1,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-34-5	TETRACHLOROETHANE,1,1,2,2-	ND	0.0005	mg/L	EPA 524.2
127-18-4	TETRACHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
109-99-9	TETRAHYDROFURAN	ND	0.005	mg/L	EPA 524.2
108-88-3	TOLUENE	ND	0.0005	mg/L	EPA 524.2
TTHM-00-C	TOTAL TRIHALOMETHANES	0.056	NA	mg/L	EPA 524.2
87-61-6	TRICHLOROBENZENE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
120-82-1	TRICHLOROBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
71-55-6	TRICHLOROETHANE,1,1,1-	ND	0.0005	mg/L	EPA 524.2
79-00-5	TRICHLOROETHANE,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-01-6	TRICHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
96-18-4	TRICHLOROPROPANE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
95-63-6	TRIMETHYLBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
108-67-8	TRIMETHYLBENZENE,1,3,5-	ND	0.0005	mg/L	EPA 524.2
75-01-4	VINYL CHLORIDE	ND	0.0004	mg/L	EPA 524.2
XYLMP-00-C	XYLENE,META-&PARA-	ND	0.0005	mg/L	EPA 524.2
95-47-6	XYLENE,ORTHO-	ND	0.0005	mg/L	EPA 524.2
1330-20-7	XYLENES (TOTAL)	ND	NA	mg/L	EPA 524.2
7439-97-6	MERCURY	ND	0.0001	mg/L	EPA 200.8
7440-02-0	NICKEL	ND	0.01	mg/L	EPA 200.8
14797-65-0	NITRITE AS N (AUTOMATED)	ND	0.05	mg/L	10-107-04-2-B
14797-55-8	NITRATE AS N (AUTOMATED)	0.4	0.4	mg/L	10-107-04-2-B
7439-92-1	LEAD (TOTAL)	ND	0.001	mg/L	EPA 200.8
7440-36-0	ANTIMONY	ND	0.0006	mg/L	EPA 200.8
7782-49-2	SELENIUM (TOTAL)	ND	0.001	mg/L	EPA 200.8
14808-79-8	SULFATE (AUTOMATED)	25	10	mg/L	SM 4500 SO4E
7440-28-					

0	THALLIUM	ND	0.0002	mg/L	EPA 200.8
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Laboratory Comments:

By authority of PA 368 of 1978 as amended.

Print Date: Thu Oct 1
17:15:56 EDT 2015

**Michigan Department of Environmental Quality**

Replicate Laboratory Report for
Lansing Drinking Water Laboratory

Owner/Location Information:

CITY OF FLINT
CITY OF FLINT WATER
PLANT
FLINT MI 48505Sample Number: LLF31222

Sample/Collection Information:

WSSN: 02310
County: Genesee

Township:

Section:

Well #:

Collection Date: 8/6/2014 2:30:00 PM

Arrival Date: 8/6/2014 4:23:13 PM

Site Code:

Water Source: Other

Sample Reason: Other

Sample Point: Other

Point Description: PLANT TAP

Collector: Public Water Supply Operator

Collected By: MIKE GLASGOW

CasNo	Analyte	Result	Detect	Units	Method
16984-48-8	FLUORIDE (AUTOMATED)	0.70	0.1	mg/L	SM 4500 FC
7439-89-6	IRON	ND	0.1	mg/L	SM 3500 FeB
HARD-00-C	HARDNESS AS CaCO3	155	20	mg/L	SM 2340 C
7440-23-5	SODIUM	16	5	mg/L	SM 3500 NaB
7440-38-2	ARSENIC (TOTAL)	ND	0.002	mg/L	EPA 200.8
7440-39-3	BARIUM	0.03	0.01	mg/L	EPA 200.8
7440-41-7	BERYLLIUM	ND	0.0004	mg/L	EPA 200.8
7440-43-9	CADMIUM (TOTAL)	ND	0.0003	mg/L	EPA 200.8
7647-14-5	CHLORIDE (AUTOMATED)	61	4	mg/L	SM 4500-Cl E
7440-47-3	CHROMIUM (TOTAL)	ND	0.01	mg/L	EPA 200.8
93-76-5	2,4,5-T	ND	0.002	mg/L	EPA 515.4

93-72-1	2,4,5-TP (SILVEX)	ND	0.0003	mg/L	EPA 515.4
94-75-7	2,4-D	ND	0.002	mg/L	EPA 515.4
50594-66-6	ACIFLUORFEN	ND	0.004	mg/L	EPA 515.4
25057-89-0	BENTAZON	ND	0.002	mg/L	EPA 515.4
1918-00-9	DICAMBA	ND	0.002	mg/L	EPA 515.4
88-85-7	DINOSEB	ND	0.0003	mg/L	EPA 515.4
87-86-5	PENTACHLOROPHENOL	ND	0.00006	mg/L	EPA 515.4
1918-02-1	PICLORAM	ND	0.001	mg/L	EPA 515.4
1861-32-1	TOTAL DCPA, MONO & DI-ACID DEGRADATES	ND	0.001	mg/L	EPA 515.4
116-06-3	ALDICARB	ND	0.0005	mg/L	EPA 531.2
1646-88-4	ALDICARB SULFONE	ND	0.0005	mg/L	EPA 531.2
1646-87-3	ALDICARB SULFOXIDE	ND	0.0005	mg/L	EPA 531.2
63-25-2	CARBARYL	ND	0.001	mg/L	EPA 531.2
1563-66-2	CARBOFURAN	ND	0.0005	mg/L	EPA 531.2
16655-82-6	HYDROXYCARBOFURAN,3-	ND	0.001	mg/L	EPA 531.2
2032-65-7	METHIOCARB	ND	0.001	mg/L	EPA 531.2
16752-77-5	METHOMYL	ND	0.001	mg/L	EPA 531.2
23135-22-0	OXAMYL	ND	0.001	mg/L	EPA 531.2
114-26-1	PROPOXUR (BAYGON)	ND	0.001	mg/L	EPA 531.2
34256-82-1	ACETOCHLOR	ND	0.001	mg/L	EPA 525.2
15972-60-8	ALACHLOR	ND	0.0002	mg/L	EPA 525.2
309-00-2	ALDRIN	ND	0.0004	mg/L	EPA 525.2
1912-24-9	ATRAZINE	0.0003	0.0002	mg/L	EPA 525.2
5103-71-9	CHLORDANE, ALPHA-	ND	0.0002	mg/L	EPA 525.2
5103-74-2	CHLORDANE, GAMMA-	ND	0.0002	mg/L	EPA 525.2
72-54-8	DDD,4,4'-	ND	0.001	mg/L	EPA 525.2
72-55-9	DDE,4,4'-	ND	0.001	mg/L	EPA 525.2
50-29-3	DDT,4,4'-	ND	0.0005	mg/L	EPA 525.2

60-57-1	DIELDRIN	ND	0.0005	mg/L	EPA 525.2
72-20-8	ENDRIN	ND	0.0001	mg/L	EPA 525.2
7421-93-4	ENDRIN ALDEHYDE	ND	0.001	mg/L	EPA 525.2
76-44-8	HEPTACHLOR	ND	0.0002	mg/L	EPA 525.2
1024-57-3	HEPTACHLOR EPOXIDE	ND	0.0001	mg/L	EPA 525.2
118-74-1	HEXACHLOROBENZENE	ND	0.0001	mg/L	EPA 525.2
319-84-6	HEXACHLOROCYCLOHEXANE (ALPHA-BHC)	ND	0.001	mg/L	EPA 525.2
319-85-7	HEXACHLOROCYCLOHEXANE (BETA-BHC)	ND	0.001	mg/L	EPA 525.2
319-86-8	HEXACHLOROCYCLOHEXANE (DELTA-BHC)	ND	0.001	mg/L	EPA 525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	0.0005	mg/L	EPA 525.2
58-89-9	LINDANE (GAMMA-BHC)	ND	0.0001	mg/L	EPA 525.2
72-43-5	METHOXYCHLOR	ND	0.0001	mg/L	EPA 525.2
51218-45-2	METOLACHLOR	ND	0.001	mg/L	EPA 525.2
21087-64-9	METRIBUZIN	ND	0.001	mg/L	EPA 525.2
2212-67-1	MOLINATE	ND	0.0005	mg/L	EPA 525.2
12674-11-2	PCB (AROCLOR 1016)	ND	0.0001	mg/L	EPA 525.2
11104-28-2	PCB (AROCLOR 1221)	ND	0.0001	mg/L	EPA 525.2
11141-16-5	PCB (AROCLOR 1232)	ND	0.0001	mg/L	EPA 525.2
53469-21-9	PCB (AROCLOR 1242)	ND	0.0001	mg/L	EPA 525.2
12672-29-6	PCB (AROCLOR 1248)	ND	0.0001	mg/L	EPA 525.2
11097-69-1	PCB (AROCLOR 1254)	ND	0.0001	mg/L	EPA 525.2
11096-82-5	PCB (AROCLOR 1260)	ND	0.0001	mg/L	EPA 525.2
59536-65-1	POLYBROMINATED BIPHENYLS	ND	0.0001	mg/L	EPA 525.2
122-34-9	SIMAZINE	ND	0.0002	mg/L	EPA 525.2
8001-35-2	TOXAPHENE	ND	0.001	mg/L	EPA 525.2
71-43-2	BENZENE	ND	0.0005	mg/L	EPA 524.2
108-86-1	BROMOBENZENE	ND	0.0005	mg/L	EPA 524.2
74-97-5	BROMOCHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2

75-25-2	BROMOFORM	0.0018	0.0005	mg/L	EPA 524.2
74-83-9	BROMOMETHANE	ND	0.001	mg/L	EPA 524.2
104-51-8	BUTYLBENZENE,NORMAL-	ND	0.0005	mg/L	EPA 524.2
135-98-8	BUTYLBENZENE,SEC-	ND	0.0005	mg/L	EPA 524.2
98-06-6	BUTYLBENZENE,TERT-	ND	0.0005	mg/L	EPA 524.2
56-23-5	CARBON TETRACHLORIDE	ND	0.0005	mg/L	EPA 524.2
108-90-7	CHLOROBENZENE	ND	0.0005	mg/L	EPA 524.2
124-48-1	CHLORODIBROMOMETHANE	0.015	0.0005	mg/L	EPA 524.2
75-00-3	CHLOROETHANE	ND	0.0005	mg/L	EPA 524.2
67-66-3	CHLOROFORM	0.045	0.0005	mg/L	EPA 524.2
74-87-3	CHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
95-49-8	CHLOROTOLUENE,2-	ND	0.0005	mg/L	EPA 524.2
106-43-4	CHLOROTOLUENE,4-	ND	0.0005	mg/L	EPA 524.2
74-95-3	DIBROMOMETHANE	ND	0.0005	mg/L	EPA 524.2
95-50-1	DICHLOROBENZENE,1,2-	ND	0.0005	mg/L	EPA 524.2
541-73-1	DICHLOROBENZENE,1,3-	ND	0.0005	mg/L	EPA 524.2
106-46-7	DICHLOROBENZENE,1,4-	ND	0.0005	mg/L	EPA 524.2
75-27-4	DICHLOROBROMOMETHANE	0.024	0.0005	mg/L	EPA 524.2
75-71-8	DICHLORODIFLUOROMETHANE	ND	0.001	mg/L	EPA 524.2
75-34-3	DICHLOROETHANE,1,1-	ND	0.0005	mg/L	EPA 524.2
107-06-2	DICHLOROETHANE,1,2-	ND	0.0005	mg/L	EPA 524.2
75-35-4	DICHLOROETHYLENE,1,1-	ND	0.0005	mg/L	EPA 524.2
156-59-2	DICHLOROETHYLENE,1,2-CIS	ND	0.0005	mg/L	EPA 524.2
156-60-5	DICHLOROETHYLENE,1,2-TRANS	ND	0.0005	mg/L	EPA 524.2
78-87-5	DICHLOROPROPANE,1,2-	ND	0.0005	mg/L	EPA 524.2
142-28-9	DICHLOROPROPANE,1,3-	ND	0.0005	mg/L	EPA 524.2
594-20-7	DICHLOROPROPANE,2,2-	ND	0.0005	mg/L	EPA 524.2
563-58-6	DICHLOROPROPENE,1,1-	ND	0.0005	mg/L	EPA 524.2
10061-01-5	DICHLOROPROPENE,1,3-CIS	ND	0.0005	mg/L	EPA 524.2
10061-02-6	DICHLOROPROPENE,1,3-TRANS	ND	0.0005	mg/L	EPA 524.2
100-41-4	ETHYLBENZENE	ND	0.0005	mg/L	EPA 524.2
75-69-4	FLUOROTRICHLOROMETHANE	ND	0.001	mg/L	EPA 524.2
87-68-3	HEXACHLOROBUTADIENE	ND	0.0005	mg/L	EPA 524.2
98-82-8	ISOPROPYL BENZENE	ND	0.0005	mg/L	EPA 524.2
99-87-6	ISOPROPYL TOLUENE, PARA-	ND	0.0005	mg/L	EPA 524.2
78-93-3	METHYL ETHYL KETONE	ND	0.005	mg/L	EPA 524.2
108-10-1	METHYL ISOBUTYL KETONE	ND	0.005	mg/L	EPA 524.2
1634-04-4	METHYL TERT-BUTYL ETHER	ND	0.001	mg/L	EPA 524.2
75-09-2	METHYLENE CHLORIDE	ND	0.0006	mg/L	EPA 524.2

91-20-3	NAPHTHALENE	ND	0.0005	mg/L	EPA 524.2
98-95-3	NITROBENZENE	ND	0.01	mg/L	EPA 524.2
103-65-1	PROPYLBENZENE, NORMAL-	ND	0.0005	mg/L	EPA 524.2
100-42-5	STYRENE	ND	0.0005	mg/L	EPA 524.2
630-20-6	TETRACHLOROETHANE,1,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-34-5	TETRACHLOROETHANE,1,1,2,2-	ND	0.0005	mg/L	EPA 524.2
127-18-4	TETRACHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
109-99-9	TETRAHYDROFURAN	ND	0.005	mg/L	EPA 524.2
108-88-3	TOLUENE	ND	0.0005	mg/L	EPA 524.2
TTHM-00-C	TOTAL TRIHALOMETHANES	0.086	NA	mg/L	EPA 524.2
87-61-6	TRICHLOROBENZENE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
120-82-1	TRICHLOROBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
71-55-6	TRICHLOROETHANE,1,1,1-	ND	0.0005	mg/L	EPA 524.2
79-00-5	TRICHLOROETHANE,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-01-6	TRICHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
96-18-4	TRICHLOROPROPANE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
95-63-6	TRIMETHYLBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
108-67-8	TRIMETHYLBENZENE,1,3,5-	ND	0.0005	mg/L	EPA 524.2
75-01-4	VINYL CHLORIDE	ND	0.0004	mg/L	EPA 524.2
XYLMP-00-C	XYLENE,META-&PARA-	ND	0.0005	mg/L	EPA 524.2
95-47-6	XYLENE,ORTHO-	ND	0.0005	mg/L	EPA 524.2
1330-20-7	XYLENES (TOTAL)	ND	NA	mg/L	EPA 524.2
7439-97-6	MERCURY	ND	0.0001	mg/L	EPA 200.8
7440-02-0	NICKEL	ND	0.01	mg/L	EPA 200.8
14797-65-0	NITRITE AS N (AUTOMATED)	ND	0.05	mg/L	10-107-04-2-B
14797-55-8	NITRATE AS N (AUTOMATED)	0.5	0.4	mg/L	10-107-04-2-B
7439-92-1	LEAD (TOTAL)	ND	0.001	mg/L	EPA 200.8
7440-36-0	ANTIMONY	ND	0.0006	mg/L	EPA 200.8
7782-49-2	SELENIUM (TOTAL)	0.001	0.001	mg/L	EPA 200.8
14808-79-8	SULFATE (AUTOMATED)	23	10	mg/L	SM 4500 SO4E
7440-28-0	THALLIUM	ND	0.0002	mg/L	EPA 200.8

Laboratory Comments:

By authority of PA 368 of 1978 as amended.

Print Date: Thu Oct 1
17:15:37 EDT 2015

**Michigan Department of Environmental Quality**

Replicate Laboratory Report for
Lansing Drinking Water Laboratory

Owner/Location Information:

CITY OF FLINT
4500 N DORT HWY
FLINT MI 48505Sample Number: LLF52712

Sample/Collection Information:

WSSN: 02310

County: Genesee

Township:

Section:

Well #:

Collection Date: 1/22/2015 10:00:00 AM

Arrival Date: 1/23/2015 8:37:00 AM

Site Code:

Water Source: Public Community Water Supply

Sample Reason: Other

Sample Point: Treated Public Distribution System

Point Description: PLANT TAP

Collector: Public Water Supply Operator

Collected By: MIKE GLASGOW

CasNo	Analyte	Result	Detect	Units	Method
7440-38-2	ARSENIC (TOTAL)	ND	0.002	mg/L	EPA 200.8
7440-39-3	BARIUM	0.01	0.01	mg/L	EPA 200.8
7440-41-7	BERYLLIUM	ND	0.0004	mg/L	EPA 200.8
7440-43-9	CADMIUM (TOTAL)	ND	0.0003	mg/L	EPA 200.8
7440-47-3	CHROMIUM (TOTAL)	ND	0.01	mg/L	EPA 200.8
7439-97-6	MERCURY	ND	0.0001	mg/L	EPA 200.8
7440-02-0	NICKEL	ND	0.01	mg/L	EPA 200.8
7439-92-1	LEAD (TOTAL)	ND	0.001	mg/L	EPA 200.8
7440-36-0	ANTIMONY	ND	0.0006	mg/L	EPA 200.8
7782-49-2	SELENIUM (TOTAL)	0.001	0.001	mg/L	EPA 200.8
7440-28-					

0	THALLIUM	ND	0.0002	mg/L	EPA 200.8
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Laboratory Comments:

By authority of PA 368 of 1978 as amended.

Print Date: Thu Oct 1
17:14:07 EDT 2015



Michigan Department of Environmental Quality

Replicate Laboratory Report for Lansing Drinking Water Laboratory

Owner/Location Information:

CITY OF FLINT
4500 N DORT HWY
FLINT MI 48505

Sample Number: LLF54660

Sample/Collection Information:

WSSN: 02310

County: Genesee

Township:

Section:

Well #:

Collection Date: 2/16/2015 9:40:00 AM

Arrival Date: 2/17/2015 10:46:51 AM

Site Code:

Water Source: Public Community Water Supply

Sample Reason: Routine Monitoring

Sample Point: Treated Public Distribution System

Point Description: PLANT TAP

Collector: Public Water Supply Operator

Collected By: MIKE GLASGOW

CasNo	Analyte	Result	Detect	Units	Method
16984-48-8	FLUORIDE (AUTOMATED)	0.57	0.1	mg/L	SM 4500 FC
7439-89-6	IRON	ND	0.1	mg/L	SM 3500 FeB
HARD-00-C	HARDNESS AS CaCO ₃	180	20	mg/L	SM 2340 C
7440-23-5	SODIUM	25	5	mg/L	SM 3500 NaB
7440-38-2	ARSENIC (TOTAL)	ND	0.002	mg/L	EPA 200.8
7440-39-3	BARIUM	ND	0.01	mg/L	EPA 200.8
7440-41-7	BERYLLIUM	ND	0.0004	mg/L	EPA 200.8
57-12-5	CYANIDE	ND	0.02	mg/L	OIA-1677
7440-43-9	CADMIUM (TOTAL)	ND	0.0003	mg/L	EPA 200.8
7647-14-5	CHLORIDE (AUTOMATED)	99	4	mg/L	SM 4500-Cl E
7440-47-3	CHROMIUM (TOTAL)	ND	0.01	mg/L	EPA 200.8

93-76-5	2,4,5-T	ND	0.002	mg/L	EPA 515.4
93-72-1	2,4,5-TP (SILVEX)	ND	0.0002	mg/L	EPA 515.4
94-75-7	2,4-D	ND	0.001	mg/L	EPA 515.4
50594-66-6	ACIFLUORFEN	ND	0.004	mg/L	EPA 515.4
25057-89-0	BENTAZON	ND	0.002	mg/L	EPA 515.4
1918-00-9	DICAMBA	ND	0.002	mg/L	EPA 515.4
88-85-7	DINOSEB	ND	0.0002	mg/L	EPA 515.4
87-86-5	PENTACHLOROPHENOL	ND	0.00004	mg/L	EPA 515.4
1918-02-1	PICLORAM	ND	0.001	mg/L	EPA 515.4
1861-32-1	TOTAL DCPA, MONO & DI-ACID DEGRADATES	ND	0.001	mg/L	EPA 515.4
116-06-3	ALDICARB	ND	0.0005	mg/L	EPA 531.2
1646-88-4	ALDICARB SULFONE	ND	0.0005	mg/L	EPA 531.2
1646-87-3	ALDICARB SULFOXIDE	ND	0.0005	mg/L	EPA 531.2
63-25-2	CARBARYL	ND	0.001	mg/L	EPA 531.2
1563-66-2	CARBOFURAN	ND	0.0005	mg/L	EPA 531.2
16655-82-6	HYDROXYCARBOFURAN,3-	ND	0.001	mg/L	EPA 531.2
2032-65-7	METHIOCARB	ND	0.001	mg/L	EPA 531.2
16752-77-5	METHOMYL	ND	0.001	mg/L	EPA 531.2
23135-22-0	OXAMYL	ND	0.001	mg/L	EPA 531.2
114-26-1	PROPOXUR (BAYGON)	ND	0.001	mg/L	EPA 531.2
34256-82-1	ACETOCHLOR	ND	0.001	mg/L	EPA 525.2
15972-60-8	ALACHLOR	ND	0.0002	mg/L	EPA 525.2
309-00-2	ALDRIN	ND	0.0004	mg/L	EPA 525.2
1912-24-9	ATRAZINE	ND	0.0002	mg/L	EPA 525.2
5103-71-9	CHLORDANE, ALPHA-	ND	0.0002	mg/L	EPA 525.2
5103-74-2	CHLORDANE, GAMMA-	ND	0.0002	mg/L	EPA 525.2
72-54-8	DDD,4,4'-	ND	0.001	mg/L	EPA 525.2
72-55-9	DDE,4,4'-	ND	0.001	mg/L	EPA 525.2

50-29-3	DDT,4,4'-	ND	0.0005	mg/L	EPA 525.2
60-57-1	DIELDRIN	ND	0.0005	mg/L	EPA 525.2
72-20-8	ENDRIN	ND	0.0001	mg/L	EPA 525.2
7421-93-4	ENDRIN ALDEHYDE	ND	0.001	mg/L	EPA 525.2
76-44-8	HEPTACHLOR	ND	0.0002	mg/L	EPA 525.2
1024-57-3	HEPTACHLOR EPOXIDE	ND	0.0001	mg/L	EPA 525.2
118-74-1	HEXACHLOROBENZENE	ND	0.0001	mg/L	EPA 525.2
319-84-6	HEXACHLOROCYCLOHEXANE (ALPHA-BHC)	ND	0.001	mg/L	EPA 525.2
319-85-7	HEXACHLOROCYCLOHEXANE (BETA-BHC)	ND	0.001	mg/L	EPA 525.2
319-86-8	HEXACHLOROCYCLOHEXANE (DELTA-BHC)	ND	0.001	mg/L	EPA 525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	0.0005	mg/L	EPA 525.2
58-89-9	LINDANE (GAMMA-BHC)	ND	0.0001	mg/L	EPA 525.2
72-43-5	METHOXYCHLOR	ND	0.0001	mg/L	EPA 525.2
51218-45-2	METOLACHLOR	ND	0.001	mg/L	EPA 525.2
21087-64-9	METRIBUZIN	ND	0.001	mg/L	EPA 525.2
2212-67-1	MOLINATE	ND	0.0005	mg/L	EPA 525.2
12674-11-2	PCB (AROCLOR 1016)	ND	0.0001	mg/L	EPA 525.2
11104-28-2	PCB (AROCLOR 1221)	ND	0.0001	mg/L	EPA 525.2
11141-16-5	PCB (AROCLOR 1232)	ND	0.0001	mg/L	EPA 525.2
53469-21-9	PCB (AROCLOR 1242)	ND	0.0001	mg/L	EPA 525.2
12672-29-6	PCB (AROCLOR 1248)	ND	0.0001	mg/L	EPA 525.2
11097-69-1	PCB (AROCLOR 1254)	ND	0.0001	mg/L	EPA 525.2
11096-82-5	PCB (AROCLOR 1260)	ND	0.0001	mg/L	EPA 525.2
59536-65-1	POLYBROMINATED BIPHENYLS	ND	0.0001	mg/L	EPA 525.2
122-34-9	SIMAZINE	ND	0.0002	mg/L	EPA 525.2
8001-35-2	TOXAPHENE	ND	0.001	mg/L	EPA 525.2
71-43-2	BENZENE	ND	0.0005	mg/L	EPA 524.2
108-86-1	BROMOBENZENE	ND	0.0005	mg/L	EPA 524.2

74-97-5	BROMOCHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
75-25-2	BROMOFORM	0.0007	0.0005	mg/L	EPA 524.2
74-83-9	BROMOMETHANE	ND	0.001	mg/L	EPA 524.2
104-51-8	BUTYLBENZENE,NORMAL-	ND	0.0005	mg/L	EPA 524.2
135-98-8	BUTYLBENZENE,SEC-	ND	0.0005	mg/L	EPA 524.2
98-06-6	BUTYLBENZENE,TERT-	ND	0.0005	mg/L	EPA 524.2
56-23-5	CARBON TETRACHLORIDE	ND	0.0005	mg/L	EPA 524.2
108-90-7	CHLOROBENZENE	ND	0.0005	mg/L	EPA 524.2
124-48-1	CHLORODIBROMOMETHANE	0.0025	0.0005	mg/L	EPA 524.2
75-00-3	CHLOROETHANE	ND	0.0005	mg/L	EPA 524.2
67-66-3	CHLOROFORM	0.0018	0.0005	mg/L	EPA 524.2
74-87-3	CHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
95-49-8	CHLOROTOLUENE,2-	ND	0.0005	mg/L	EPA 524.2
106-43-4	CHLOROTOLUENE,4-	ND	0.0005	mg/L	EPA 524.2
74-95-3	DIBROMOMETHANE	ND	0.0005	mg/L	EPA 524.2
95-50-1	DICHLOROBENZENE,1,2-	ND	0.0005	mg/L	EPA 524.2
541-73-1	DICHLOROBENZENE,1,3-	ND	0.0005	mg/L	EPA 524.2
106-46-7	DICHLOROBENZENE,1,4-	ND	0.0005	mg/L	EPA 524.2
75-27-4	DICHLOROBROMOMETHANE	0.0030	0.0005	mg/L	EPA 524.2
75-71-8	DICHLORODIFLUOROMETHANE	ND	0.001	mg/L	EPA 524.2
75-34-3	DICHLOROETHANE,1,1-	ND	0.0005	mg/L	EPA 524.2
107-06-2	DICHLOROETHANE,1,2-	ND	0.0005	mg/L	EPA 524.2
75-35-4	DICHLOROETHYLENE,1,1-	ND	0.0005	mg/L	EPA 524.2
156-59-2	DICHLOROETHYLENE,1,2-CIS	ND	0.0005	mg/L	EPA 524.2
156-60-5	DICHLOROETHYLENE,1,2-TRANS	ND	0.0005	mg/L	EPA 524.2
78-87-5	DICHLOROPROPANE,1,2-	ND	0.0005	mg/L	EPA 524.2
142-28-9	DICHLOROPROPANE,1,3-	ND	0.0005	mg/L	EPA 524.2
594-20-7	DICHLOROPROPANE,2,2-	ND	0.0005	mg/L	EPA 524.2
563-58-6	DICHLOROPROPENE,1,1-	ND	0.0005	mg/L	EPA 524.2
10061-01-5	DICHLOROPROPENE,1,3-CIS	ND	0.0005	mg/L	EPA 524.2
10061-02-6	DICHLOROPROPENE,1,3-TRANS	ND	0.0005	mg/L	EPA 524.2
100-41-4	ETHYLBENZENE	ND	0.0005	mg/L	EPA 524.2
75-69-4	FLUOROTRICHLOROMETHANE	ND	0.001	mg/L	EPA 524.2
87-68-3	HEXACHLOROBUTADIENE	ND	0.0005	mg/L	EPA 524.2
98-82-8	ISOPROPYL BENZENE	ND	0.0005	mg/L	EPA 524.2
99-87-6	ISOPROPYL TOLUENE, PARA-	ND	0.0005	mg/L	EPA 524.2
78-93-3	METHYL ETHYL KETONE	ND	0.005	mg/L	EPA 524.2
108-10-1	METHYL ISOBUTYL KETONE	ND	0.005	mg/L	EPA 524.2
1634-04-4	METHYL TERT-BUTYL ETHER	ND	0.001	mg/L	EPA 524.2

75-09-2	METHYLENE CHLORIDE	ND	0.0006	mg/L	EPA 524.2
91-20-3	NAPHTHALENE	ND	0.0005	mg/L	EPA 524.2
103-65-1	PROPYLBENZENE, NORMAL-	ND	0.0005	mg/L	EPA 524.2
100-42-5	STYRENE	ND	0.0005	mg/L	EPA 524.2
630-20-6	TETRACHLOROETHANE,1,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-34-5	TETRACHLOROETHANE,1,1,2,2-	ND	0.0005	mg/L	EPA 524.2
127-18-4	TETRACHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
109-99-9	TETRAHYDROFURAN	ND	0.005	mg/L	EPA 524.2
108-88-3	TOLUENE	ND	0.0005	mg/L	EPA 524.2
TTHM-00-C	TOTAL TRIHALOMETHANES	0.008	NA	mg/L	EPA 524.2
87-61-6	TRICHLOROBENZENE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
120-82-1	TRICHLOROBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
71-55-6	TRICHLOROETHANE,1,1,1-	ND	0.0005	mg/L	EPA 524.2
79-00-5	TRICHLOROETHANE,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-01-6	TRICHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
96-18-4	TRICHLOROPROPANE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
95-63-6	TRIMETHYLBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
108-67-8	TRIMETHYLBENZENE,1,3,5-	ND	0.0005	mg/L	EPA 524.2
75-01-4	VINYL CHLORIDE	ND	0.0005	mg/L	EPA 524.2
XYLMP-00-C	XYLENE,META-&PARA-	ND	0.0005	mg/L	EPA 524.2
95-47-6	XYLENE,ORTHO-	ND	0.0005	mg/L	EPA 524.2
1330-20-7	XYLENES (TOTAL)	ND	NA	mg/L	EPA 524.2
7439-97-6	MERCURY	ND	0.0001	mg/L	EPA 200.8
7440-02-0	NICKEL	ND	0.01	mg/L	EPA 200.8
14797-65-0	NITRITE AS N (AUTOMATED)	ND	0.05	mg/L	10-107-04-2-B
14797-55-8	NITRATE AS N (AUTOMATED)	1.3	0.4	mg/L	10-107-04-2-B
7439-92-1	LEAD (TOTAL)	ND	0.001	mg/L	EPA 200.8
7440-36-0	ANTIMONY	ND	0.0006	mg/L	EPA 200.8
7782-49-2	SELENIUM (TOTAL)	0.001	0.001	mg/L	EPA 200.8
14808-79-8	SULFATE (AUTOMATED)	40	10	mg/L	SM 4500 SO4E
7440-28-0	THALLIUM	ND	0.0002	mg/L	EPA 200.8

Laboratory Comments:

Endrin Aldehyde quality control results were outside allowed limits due to matrix interferences.
Unidentified hydrocarbon peak(s) were detected.

By authority of PA 368 of 1978 as amended.

Print Date: Thu Oct 1
17:13:39 EDT 2015

**Michigan Department of Environmental Quality**Replicate Laboratory Report for
Lansing Drinking Water Laboratory

Owner/Location Information:

CITY OF FLINT
4500 N DORT HWY
FLINT MI 48505

Sample Number: LLF63412

Sample/Collection Information:

WSSN: 02310

County: Genesee

Township:

Section:

Well #:

Collection Date: 5/12/2015 11:33:00 AM

Arrival Date: 5/13/2015 11:26:43 AM

Site Code:

Water Source: Public Community Water Supply

Sample Reason: Routine Monitoring

Sample Point: Treated Public Distribution System

Point Description: PLANT TAP

Collector: Public Water Supply Operator

Collected By: MIKE GLASGOW

CasNo	Analyte	Result	Detect	Units	Method
16984-48-8	FLUORIDE (AUTOMATED)	0.87	0.1	mg/L	SM 4500 FC
7439-89-6	IRON	ND	0.1	mg/L	SM 3500 FeB
HARD-00-C	HARDNESS AS CaCO ₃	163	20	mg/L	SM 2340 C
7440-23-5	SODIUM	18	5	mg/L	SM 3500 NaB
7440-38-2	ARSENIC (TOTAL)	ND	0.002	mg/L	EPA 200.8
7440-39-3	BARIUM	0.03	0.01	mg/L	EPA 200.8
7440-41-7	BERYLLIUM	ND	0.0004	mg/L	EPA 200.8
57-12-5	CYANIDE	ND	0.02	mg/L	OIA-1677
7440-43-9	CADMIUM (TOTAL)	ND	0.0003	mg/L	EPA 200.8
7647-14-5	CHLORIDE (AUTOMATED)	90	4	mg/L	SM 4500-Cl E
7440-47-3	CHROMIUM (TOTAL)	ND	0.01	mg/L	EPA 200.8

93-76-5	2,4,5-T	ND	0.002	mg/L	EPA 515.4
93-72-1	2,4,5-TP (SILVEX)	ND	0.0002	mg/L	EPA 515.4
94-75-7	2,4-D	ND	0.001	mg/L	EPA 515.4
50594-66-6	ACIFLUORFEN	ND	0.004	mg/L	EPA 515.4
25057-89-0	BENTAZON	ND	0.002	mg/L	EPA 515.4
1918-00-9	DICAMBA	ND	0.002	mg/L	EPA 515.4
88-85-7	DINOSEB	ND	0.0002	mg/L	EPA 515.4
87-86-5	PENTACHLOROPHENOL	ND	0.00004	mg/L	EPA 515.4
1918-02-1	PICLORAM	ND	0.001	mg/L	EPA 515.4
1861-32-1	TOTAL DCPA, MONO & DI-ACID DEGRADATES	ND	0.001	mg/L	EPA 515.4
116-06-3	ALDICARB	ND	0.0005	mg/L	EPA 531.2
1646-88-4	ALDICARB SULFONE	ND	0.0005	mg/L	EPA 531.2
1646-87-3	ALDICARB SULFOXIDE	ND	0.0005	mg/L	EPA 531.2
63-25-2	CARBARYL	ND	0.001	mg/L	EPA 531.2
1563-66-2	CARBOFURAN	ND	0.0005	mg/L	EPA 531.2
16655-82-6	HYDROXYCARBOFURAN,3-	ND	0.001	mg/L	EPA 531.2
2032-65-7	METHIOCARB	ND	0.001	mg/L	EPA 531.2
16752-77-5	METHOMYL	ND	0.001	mg/L	EPA 531.2
23135-22-0	OXAMYL	ND	0.001	mg/L	EPA 531.2
114-26-1	PROPOXUR (BAYGON)	ND	0.001	mg/L	EPA 531.2
34256-82-1	ACETOCHLOR	ND	0.001	mg/L	EPA 525.2
15972-60-8	ALACHLOR	ND	0.0002	mg/L	EPA 525.2
309-00-2	ALDRIN	ND	0.0004	mg/L	EPA 525.2
1912-24-9	ATRAZINE	ND	0.0002	mg/L	EPA 525.2
5103-71-9	CHLORDANE, ALPHA-	ND	0.0002	mg/L	EPA 525.2
5103-74-2	CHLORDANE, GAMMA-	ND	0.0002	mg/L	EPA 525.2
72-54-8	DDD,4,4'-	ND	0.001	mg/L	EPA 525.2
72-55-9	DDE,4,4'-	ND	0.001	mg/L	EPA 525.2

50-29-3	DDT,4,4'-	ND	0.0005	mg/L	EPA 525.2
60-57-1	DIELDRIN	ND	0.0005	mg/L	EPA 525.2
72-20-8	ENDRIN	ND	0.0001	mg/L	EPA 525.2
7421-93-4	ENDRIN ALDEHYDE	ND	0.001	mg/L	EPA 525.2
76-44-8	HEPTACHLOR	ND	0.0002	mg/L	EPA 525.2
1024-57-3	HEPTACHLOR EPOXIDE	ND	0.0001	mg/L	EPA 525.2
118-74-1	HEXACHLOROBENZENE	ND	0.0001	mg/L	EPA 525.2
319-84-6	HEXACHLOROCYCLOHEXANE (ALPHA-BHC)	ND	0.001	mg/L	EPA 525.2
319-85-7	HEXACHLOROCYCLOHEXANE (BETA-BHC)	ND	0.001	mg/L	EPA 525.2
319-86-8	HEXACHLOROCYCLOHEXANE (DELTA-BHC)	ND	0.001	mg/L	EPA 525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	0.0005	mg/L	EPA 525.2
58-89-9	LINDANE (GAMMA-BHC)	ND	0.0001	mg/L	EPA 525.2
72-43-5	METHOXYCHLOR	ND	0.0001	mg/L	EPA 525.2
51218-45-2	METOLACHLOR	ND	0.001	mg/L	EPA 525.2
21087-64-9	METRIBUZIN	ND	0.001	mg/L	EPA 525.2
2212-67-1	MOLINATE	ND	0.0005	mg/L	EPA 525.2
12674-11-2	PCB (AROCLOR 1016)	ND	0.0001	mg/L	EPA 525.2
11104-28-2	PCB (AROCLOR 1221)	ND	0.0001	mg/L	EPA 525.2
11141-16-5	PCB (AROCLOR 1232)	ND	0.0001	mg/L	EPA 525.2
53469-21-9	PCB (AROCLOR 1242)	ND	0.0001	mg/L	EPA 525.2
12672-29-6	PCB (AROCLOR 1248)	ND	0.0001	mg/L	EPA 525.2
11097-69-1	PCB (AROCLOR 1254)	ND	0.0001	mg/L	EPA 525.2
11096-82-5	PCB (AROCLOR 1260)	ND	0.0001	mg/L	EPA 525.2
59536-65-1	POLYBROMINATED BIPHENYLS	ND	0.0001	mg/L	EPA 525.2
122-34-9	SIMAZINE	ND	0.0002	mg/L	EPA 525.2
8001-35-2	TOXAPHENE	ND	0.001	mg/L	EPA 525.2
71-43-2	BENZENE	ND	0.0005	mg/L	EPA 524.2
108-86-1	BROMOBENZENE	ND	0.0005	mg/L	EPA 524.2

74-97-5	BROMOCHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
75-25-2	BROMOFORM	0.0013	0.0005	mg/L	EPA 524.2
74-83-9	BROMOMETHANE	ND	0.001	mg/L	EPA 524.2
104-51-8	BUTYLBENZENE,NORMAL-	ND	0.0005	mg/L	EPA 524.2
135-98-8	BUTYLBENZENE,SEC-	ND	0.0005	mg/L	EPA 524.2
98-06-6	BUTYLBENZENE,TERT-	ND	0.0005	mg/L	EPA 524.2
56-23-5	CARBON TETRACHLORIDE	ND	0.0005	mg/L	EPA 524.2
108-90-7	CHLOROBENZENE	ND	0.0005	mg/L	EPA 524.2
124-48-1	CHLORODIBROMOMETHANE	0.0077	0.0005	mg/L	EPA 524.2
75-00-3	CHLOROETHANE	ND	0.0005	mg/L	EPA 524.2
67-66-3	CHLOROFORM	0.0072	0.0005	mg/L	EPA 524.2
74-87-3	CHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
95-49-8	CHLOROTOLUENE,2-	ND	0.0005	mg/L	EPA 524.2
106-43-4	CHLOROTOLUENE,4-	ND	0.0005	mg/L	EPA 524.2
74-95-3	DIBROMOMETHANE	ND	0.0005	mg/L	EPA 524.2
95-50-1	DICHLOROBENZENE,1,2-	ND	0.0005	mg/L	EPA 524.2
541-73-1	DICHLOROBENZENE,1,3-	ND	0.0005	mg/L	EPA 524.2
106-46-7	DICHLOROBENZENE,1,4-	ND	0.0005	mg/L	EPA 524.2
75-27-4	DICHLOROBROMOMETHANE	0.0099	0.0005	mg/L	EPA 524.2
75-71-8	DICHLORODIFLUOROMETHANE	ND	0.001	mg/L	EPA 524.2
75-34-3	DICHLOROETHANE,1,1-	ND	0.0005	mg/L	EPA 524.2
107-06-2	DICHLOROETHANE,1,2-	ND	0.0005	mg/L	EPA 524.2
75-35-4	DICHLOROETHYLENE,1,1-	ND	0.0005	mg/L	EPA 524.2
156-59-2	DICHLOROETHYLENE,1,2-CIS	ND	0.0005	mg/L	EPA 524.2
156-60-5	DICHLOROETHYLENE,1,2-TRANS	ND	0.0005	mg/L	EPA 524.2
78-87-5	DICHLOROPROPANE,1,2-	ND	0.0005	mg/L	EPA 524.2
142-28-9	DICHLOROPROPANE,1,3-	ND	0.0005	mg/L	EPA 524.2
594-20-7	DICHLOROPROPANE,2,2-	ND	0.0005	mg/L	EPA 524.2
563-58-6	DICHLOROPROPENE,1,1-	ND	0.0005	mg/L	EPA 524.2
10061-01-5	DICHLOROPROPENE,1,3-CIS	ND	0.0005	mg/L	EPA 524.2
10061-02-6	DICHLOROPROPENE,1,3-TRANS	ND	0.0005	mg/L	EPA 524.2
100-41-4	ETHYLBENZENE	ND	0.0005	mg/L	EPA 524.2
75-69-4	FLUOROTRICHLOROMETHANE	ND	0.001	mg/L	EPA 524.2
87-68-3	HEXACHLOROBUTADIENE	ND	0.0005	mg/L	EPA 524.2
98-82-8	ISOPROPYL BENZENE	ND	0.0005	mg/L	EPA 524.2
99-87-6	ISOPROPYL TOLUENE, PARA-	ND	0.0005	mg/L	EPA 524.2
78-93-3	METHYL ETHYL KETONE	ND	0.005	mg/L	EPA 524.2
108-10-1	METHYL ISOBUTYL KETONE	ND	0.005	mg/L	EPA 524.2
1634-04-4	METHYL TERT-BUTYL ETHER	ND	0.001	mg/L	EPA 524.2

75-09-2	METHYLENE CHLORIDE	ND	0.0006	mg/L	EPA 524.2
91-20-3	NAPHTHALENE	ND	0.0005	mg/L	EPA 524.2
103-65-1	PROPYLBENZENE, NORMAL-	ND	0.0005	mg/L	EPA 524.2
100-42-5	STYRENE	ND	0.0005	mg/L	EPA 524.2
630-20-6	TETRACHLOROETHANE,1,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-34-5	TETRACHLOROETHANE,1,1,2,2-	ND	0.0005	mg/L	EPA 524.2
127-18-4	TETRACHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
109-99-9	TETRAHYDROFURAN	ND	0.005	mg/L	EPA 524.2
108-88-3	TOLUENE	ND	0.0005	mg/L	EPA 524.2
TTHM-00-C	TOTAL TRIHALOMETHANES	0.026	NA	mg/L	EPA 524.2
87-61-6	TRICHLOROBENZENE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
120-82-1	TRICHLOROBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
71-55-6	TRICHLOROETHANE,1,1,1-	ND	0.0005	mg/L	EPA 524.2
79-00-5	TRICHLOROETHANE,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-01-6	TRICHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
96-18-4	TRICHLOROPROPANE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
95-63-6	TRIMETHYLBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
108-67-8	TRIMETHYLBENZENE,1,3,5-	ND	0.0005	mg/L	EPA 524.2
75-01-4	VINYL CHLORIDE	ND	0.0005	mg/L	EPA 524.2
XYLMP-00-C	XYLENE,META-&PARA-	ND	0.0005	mg/L	EPA 524.2
95-47-6	XYLENE,ORTHO-	ND	0.0005	mg/L	EPA 524.2
1330-20-7	XYLENES (TOTAL)	ND	NA	mg/L	EPA 524.2
7439-97-6	MERCURY	ND	0.0001	mg/L	EPA 200.8
7440-02-0	NICKEL	ND	0.01	mg/L	EPA 200.8
14797-65-0	NITRITE AS N (AUTOMATED)	ND	0.05	mg/L	10-107-04-2-B
14797-55-8	NITRATE AS N (AUTOMATED)	ND	0.4	mg/L	10-107-04-2-B
7439-92-1	LEAD (TOTAL)	ND	0.001	mg/L	EPA 200.8
7440-36-0	ANTIMONY	ND	0.0006	mg/L	EPA 200.8
7782-49-2	SELENIUM (TOTAL)	ND	0.001	mg/L	EPA 200.8
14808-79-8	SULFATE (AUTOMATED)	31	10	mg/L	SM 4500 SO4E
7440-28-0	THALLIUM	ND	0.0002	mg/L	EPA 200.8

Laboratory Comments:

By authority of PA 368 of 1978 as amended.

Print Date: Thu Oct 1
17:13:08 EDT 2015

**Michigan Department of Environmental Quality**

Replicate Laboratory Report for
Lansing Drinking Water Laboratory

Owner/Location Information:

CITY OF FLINT
4500 N DORT HWY
FLINT MI 48505Sample Number: LLF77582

Sample/Collection Information:

WSSN: 02310

County: Genesee

Township:

Section:

Well #:

Collection Date: 8/11/2015 10:00:00 AM

Arrival Date: 8/12/2015 1:21:17 PM

Site Code:

Water Source: Public Community Water Supply

Sample Reason: Routine Monitoring

Sample Point: Treated Public Distribution System

Point Description: PLANT TAP

Collector: Public Water Supply Operator

Collected By: C BEATENHEAD

CasNo	Analyte	Result	Detect	Units	Method
16984-48-8	FLUORIDE (AUTOMATED)	0.83	0.1	mg/L	SM 4500 FC
7439-89-6	IRON	ND	0.1	mg/L	SM 3500 FeB
HARD-00-C	HARDNESS AS CaCO ₃	110	20	mg/L	SM 2340 C
7440-23-5	SODIUM	18	5	mg/L	SM 3500 NaB
7440-38-2	ARSENIC (TOTAL)	ND	0.002	mg/L	EPA 200.8
7440-39-3	BARIUM	0.02	0.01	mg/L	EPA 200.8
7440-41-7	BERYLLIUM	ND	0.0004	mg/L	EPA 200.8
57-12-5	CYANIDE	ND	0.02	mg/L	OIA-1677
7440-43-9	CADMIUM (TOTAL)	ND	0.0003	mg/L	EPA 200.8
7647-14-5	CHLORIDE (AUTOMATED)	79	4	mg/L	SM 4500-Cl E
7440-47-3	CHROMIUM (TOTAL)	ND	0.01	mg/L	EPA 200.8

93-76-5	2,4,5-T	ND	0.002	mg/L	EPA 515.4
93-72-1	2,4,5-TP (SILVEX)	ND	0.0002	mg/L	EPA 515.4
94-75-7	2,4-D	ND	0.001	mg/L	EPA 515.4
50594-66-6	ACIFLUORFEN	ND	0.004	mg/L	EPA 515.4
25057-89-0	BENTAZON	ND	0.002	mg/L	EPA 515.4
1918-00-9	DICAMBA	ND	0.002	mg/L	EPA 515.4
88-85-7	DINOSEB	ND	0.0002	mg/L	EPA 515.4
87-86-5	PENTACHLOROPHENOL	ND	0.00004	mg/L	EPA 515.4
1918-02-1	PICLORAM	ND	0.001	mg/L	EPA 515.4
1861-32-1	TOTAL DCPA, MONO & DI-ACID DEGRADATES	ND	0.001	mg/L	EPA 515.4
116-06-3	ALDICARB	ND	0.0005	mg/L	EPA 531.2
1646-88-4	ALDICARB SULFONE	ND	0.0005	mg/L	EPA 531.2
1646-87-3	ALDICARB SULFOXIDE	ND	0.0005	mg/L	EPA 531.2
63-25-2	CARBARYL	ND	0.001	mg/L	EPA 531.2
1563-66-2	CARBOFURAN	ND	0.0005	mg/L	EPA 531.2
16655-82-6	HYDROXYCARBOFURAN,3-	ND	0.001	mg/L	EPA 531.2
2032-65-7	METHIOCARB	ND	0.001	mg/L	EPA 531.2
16752-77-5	METHOMYL	ND	0.001	mg/L	EPA 531.2
23135-22-0	OXAMYL	ND	0.001	mg/L	EPA 531.2
114-26-1	PROPOXUR (BAYGON)	ND	0.001	mg/L	EPA 531.2
34256-82-1	ACETOCHLOR	ND	0.001	mg/L	EPA 525.2
15972-60-8	ALACHLOR	ND	0.0002	mg/L	EPA 525.2
309-00-2	ALDRIN	ND	0.0004	mg/L	EPA 525.2
1912-24-9	ATRAZINE	ND	0.0002	mg/L	EPA 525.2
5103-71-9	CHLORDANE, ALPHA-	ND	0.0002	mg/L	EPA 525.2
5103-74-2	CHLORDANE, GAMMA-	ND	0.0002	mg/L	EPA 525.2
72-54-8	DDD,4,4'-	ND	0.001	mg/L	EPA 525.2
72-55-9	DDE,4,4'-	ND	0.001	mg/L	EPA 525.2

50-29-3	DDT,4,4'-	ND	0.0005	mg/L	EPA 525.2
60-57-1	DIELDRIN	ND	0.0005	mg/L	EPA 525.2
72-20-8	ENDRIN	ND	0.0001	mg/L	EPA 525.2
7421-93-4	ENDRIN ALDEHYDE	ND	0.001	mg/L	EPA 525.2
76-44-8	HEPTACHLOR	ND	0.0002	mg/L	EPA 525.2
1024-57-3	HEPTACHLOR EPOXIDE	ND	0.0001	mg/L	EPA 525.2
118-74-1	HEXACHLOROBENZENE	ND	0.0001	mg/L	EPA 525.2
319-84-6	HEXACHLOROCYCLOHEXANE (ALPHA-BHC)	ND	0.001	mg/L	EPA 525.2
319-85-7	HEXACHLOROCYCLOHEXANE (BETA-BHC)	ND	0.001	mg/L	EPA 525.2
319-86-8	HEXACHLOROCYCLOHEXANE (DELTA-BHC)	ND	0.001	mg/L	EPA 525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	0.0005	mg/L	EPA 525.2
58-89-9	LINDANE (GAMMA-BHC)	ND	0.0001	mg/L	EPA 525.2
72-43-5	METHOXYCHLOR	ND	0.0001	mg/L	EPA 525.2
51218-45-2	METOLACHLOR	ND	0.001	mg/L	EPA 525.2
21087-64-9	METRIBUZIN	ND	0.001	mg/L	EPA 525.2
2212-67-1	MOLINATE	ND	0.0005	mg/L	EPA 525.2
12674-11-2	PCB (AROCLOR 1016)	ND	0.0001	mg/L	EPA 525.2
11104-28-2	PCB (AROCLOR 1221)	ND	0.0001	mg/L	EPA 525.2
11141-16-5	PCB (AROCLOR 1232)	ND	0.0001	mg/L	EPA 525.2
53469-21-9	PCB (AROCLOR 1242)	ND	0.0001	mg/L	EPA 525.2
12672-29-6	PCB (AROCLOR 1248)	ND	0.0001	mg/L	EPA 525.2
11097-69-1	PCB (AROCLOR 1254)	ND	0.0001	mg/L	EPA 525.2
11096-82-5	PCB (AROCLOR 1260)	ND	0.0001	mg/L	EPA 525.2
59536-65-1	POLYBROMINATED BIPHENYLS	ND	0.0001	mg/L	EPA 525.2
122-34-9	SIMAZINE	ND	0.0002	mg/L	EPA 525.2
8001-35-2	TOXAPHENE	ND	0.001	mg/L	EPA 525.2
71-43-2	BENZENE	ND	0.0005	mg/L	EPA 524.2
108-86-1	BROMOBENZENE	ND	0.0005	mg/L	EPA 524.2

74-97-5	BROMOCHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
75-25-2	BROMOFORM	0.0013	0.0005	mg/L	EPA 524.2
74-83-9	BROMOMETHANE	ND	0.001	mg/L	EPA 524.2
104-51-8	BUTYLBENZENE,NORMAL-	ND	0.0005	mg/L	EPA 524.2
135-98-8	BUTYLBENZENE,SEC-	ND	0.0005	mg/L	EPA 524.2
98-06-6	BUTYLBENZENE,TERT-	ND	0.0005	mg/L	EPA 524.2
56-23-5	CARBON TETRACHLORIDE	ND	0.0005	mg/L	EPA 524.2
108-90-7	CHLOROBENZENE	ND	0.0005	mg/L	EPA 524.2
124-48-1	CHLORODIBROMOMETHANE	0.0052	0.0005	mg/L	EPA 524.2
75-00-3	CHLOROETHANE	ND	0.0005	mg/L	EPA 524.2
67-66-3	CHLOROFORM	0.0015	0.0005	mg/L	EPA 524.2
74-87-3	CHLOROMETHANE	ND	0.0005	mg/L	EPA 524.2
95-49-8	CHLOROTOLUENE,2-	ND	0.0005	mg/L	EPA 524.2
106-43-4	CHLOROTOLUENE,4-	ND	0.0005	mg/L	EPA 524.2
74-95-3	DIBROMOMETHANE	ND	0.0005	mg/L	EPA 524.2
95-50-1	DICHLOROBENZENE,1,2-	ND	0.0005	mg/L	EPA 524.2
541-73-1	DICHLOROBENZENE,1,3-	ND	0.0005	mg/L	EPA 524.2
106-46-7	DICHLOROBENZENE,1,4-	ND	0.0005	mg/L	EPA 524.2
75-27-4	DICHLOROBROMOMETHANE	0.0036	0.0005	mg/L	EPA 524.2
75-71-8	DICHLORODIFLUOROMETHANE	ND	0.001	mg/L	EPA 524.2
75-34-3	DICHLOROETHANE,1,1-	ND	0.0005	mg/L	EPA 524.2
107-06-2	DICHLOROETHANE,1,2-	ND	0.0005	mg/L	EPA 524.2
75-35-4	DICHLOROETHYLENE,1,1-	ND	0.0005	mg/L	EPA 524.2
156-59-2	DICHLOROETHYLENE,1,2-CIS	ND	0.0005	mg/L	EPA 524.2
156-60-5	DICHLOROETHYLENE,1,2-TRANS	ND	0.0005	mg/L	EPA 524.2
78-87-5	DICHLOROPROPANE,1,2-	ND	0.0005	mg/L	EPA 524.2
142-28-9	DICHLOROPROPANE,1,3-	ND	0.0005	mg/L	EPA 524.2
594-20-7	DICHLOROPROPANE,2,2-	ND	0.0005	mg/L	EPA 524.2
563-58-6	DICHLOROPROPENE,1,1-	ND	0.0005	mg/L	EPA 524.2
10061-01-5	DICHLOROPROPENE,1,3-CIS	ND	0.0005	mg/L	EPA 524.2
10061-02-6	DICHLOROPROPENE,1,3-TRANS	ND	0.0005	mg/L	EPA 524.2
100-41-4	ETHYLBENZENE	ND	0.0005	mg/L	EPA 524.2
75-69-4	FLUOROTRICHLOROMETHANE	ND	0.001	mg/L	EPA 524.2
87-68-3	HEXACHLOROBUTADIENE	ND	0.0005	mg/L	EPA 524.2
98-82-8	ISOPROPYL BENZENE	ND	0.0005	mg/L	EPA 524.2
99-87-6	ISOPROPYL TOLUENE, PARA-	ND	0.0005	mg/L	EPA 524.2
78-93-3	METHYL ETHYL KETONE	ND	0.005	mg/L	EPA 524.2
108-10-1	METHYL ISOBUTYL KETONE	ND	0.005	mg/L	EPA 524.2
1634-04-4	METHYL TERT-BUTYL ETHER	ND	0.001	mg/L	EPA 524.2

75-09-2	METHYLENE CHLORIDE	ND	0.0006	mg/L	EPA 524.2
91-20-3	NAPHTHALENE	ND	0.0005	mg/L	EPA 524.2
103-65-1	PROPYLBENZENE, NORMAL-	ND	0.0005	mg/L	EPA 524.2
100-42-5	STYRENE	ND	0.0005	mg/L	EPA 524.2
630-20-6	TETRACHLOROETHANE,1,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-34-5	TETRACHLOROETHANE,1,1,2,2-	ND	0.0005	mg/L	EPA 524.2
127-18-4	TETRACHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
109-99-9	TETRAHYDROFURAN	ND	0.005	mg/L	EPA 524.2
108-88-3	TOLUENE	ND	0.0005	mg/L	EPA 524.2
TTHM-00-C	TOTAL TRIHALOMETHANES	0.012	NA	mg/L	EPA 524.2
87-61-6	TRICHLOROBENZENE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
120-82-1	TRICHLOROBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
71-55-6	TRICHLOROETHANE,1,1,1-	ND	0.0005	mg/L	EPA 524.2
79-00-5	TRICHLOROETHANE,1,1,2-	ND	0.0005	mg/L	EPA 524.2
79-01-6	TRICHLOROETHYLENE	ND	0.0005	mg/L	EPA 524.2
96-18-4	TRICHLOROPROPANE,1,2,3-	ND	0.0005	mg/L	EPA 524.2
95-63-6	TRIMETHYLBENZENE,1,2,4-	ND	0.0005	mg/L	EPA 524.2
108-67-8	TRIMETHYLBENZENE,1,3,5-	ND	0.0005	mg/L	EPA 524.2
75-01-4	VINYL CHLORIDE	ND	0.0005	mg/L	EPA 524.2
XYLMP-00-C	XYLENE,META-&PARA-	ND	0.0005	mg/L	EPA 524.2
95-47-6	XYLENE,ORTHO-	ND	0.0005	mg/L	EPA 524.2
1330-20-7	XYLENES (TOTAL)	ND	NA	mg/L	EPA 524.2
7439-97-6	MERCURY	ND	0.0001	mg/L	EPA 200.8
7440-02-0	NICKEL	ND	0.01	mg/L	EPA 200.8
14797-65-0	NITRITE AS N (AUTOMATED)	ND	0.05	mg/L	10-107-04-2-B
14797-55-8	NITRATE AS N (AUTOMATED)	ND	0.4	mg/L	10-107-04-2-B
7439-92-1	LEAD (TOTAL)	ND	0.001	mg/L	EPA 200.8
7440-36-0	ANTIMONY	ND	0.0006	mg/L	EPA 200.8
7782-49-2	SELENIUM (TOTAL)	ND	0.001	mg/L	EPA 200.8
14808-79-8	SULFATE (AUTOMATED)	21	10	mg/L	SM 4500 SO4E
7440-28-0	THALLIUM	ND	0.0002	mg/L	EPA 200.8

Laboratory Comments:

Matrix spike recovery was below the acceptance criteria due to the presence of residual chlorine in the sample. This does not affect the validity of the sample result.

By authority of PA 368 of 1978 as amended.

Print Date: Thu Oct 1
17:12:44 EDT 2015

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, September 30, 2015 12:56 PM
To: Busch, Stephen (DEQ)
Subject: FW: question for ORD/Mike Schock

Importance: High

Jennifer left a message yesterday indicating that Darren Lytle is on the Flint advisory committee and wanted WQP data in preparation for a 10/7/15 meeting. please advise.

From: Crooks, Jennifer [<mailto:crooks.jennifer@epa.gov>]
Sent: Wednesday, September 30, 2015 12:51 PM
To: Rosenthal, Adam (DEQ); Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Cc: Benzie, Richard (DEQ); Philip, Kris (DEQ); Poy, Thomas
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.

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, September 29, 2015 3:17 PM
To: Busch, Stephen (DEQ)
Subject: Flint PbCu post 6/30/15
Attachments: Flint PbCu 7-1-15 on.xlsx

Flint PbCu sample results 7/1/15 - 12/31/15

Sample Date	Location	Sample Point	Pb in ppm	Cu in ppm	Purpose
7/2/2015	212 Browning	refridgerator water line	0	0	other
7/2/2015	628 Frost St	kitchen	0.009	0.06	routine
7/2/2015	202 Browning	kitchen	0.002	0.07	routine
7/6/2015	625 S. Grand Traverse	utility sink	0.003	0	other
7/6/2015	2110 Mountain Ave	kitchen	0.006	0.05	routine
7/6/2015	413 Burrough Ave	kitchen	0	0	routine
7/9/2015	2106 Pierce St	kitchen	0.007	0.06	routine
7/9/2015	818 Lyon St	kitchen	0.005	0	routine
7/11/2015	1150 Woodside Dr	kitchen	0.03	0.06	routine
7/13/2015	604 Chalmers St	kitchen	0.002	0.06	routine
7/13/2015	3710 Fox Croft Cr.	kitchen	0.002	0	routine
7/13/2015	2107 Calumet St.	bathroom	0.005	0.08	routine
7/14/2015	341 Robbie Ln	kitchen	0.003	0.14	other
7/15/2015	2553 Swayze	bathroom	0.006	0.15	routine
7/16/2015	421 Lyon St	kitchen	0.007	0.21	routine
7/17/2015	1509 E. Court St 2	small sink	0.033	0.17	routine
7/17/2015	1509 E. Court St	kitchen	0.003	0.3	routine
7/21/2015	3125 Dakota Ave	kitchen	0.003	0	routine
7/21/2015	3131 Dakota Ave	kitchen	0.002	0	routine
7/22/2015	2909 Brownell Blvd	kitchen	0.007	0.08	routine
7/28/2015	2112 Sherff	kitchen	0.011	0.05	routine
7/31/2015	1311 Woodlawn Pk.	bathroom	0.006	0.37	routine
7/31/2015	3311 Hawthorne Dr.	kitchen	0	0	other
7/31/2015	1019 E. Fork Dr.	kitchen	0	0.07	other
8/2/2015	1911 Tuscola	kitchen	0	0.06	other
8/7/2015	1623 Neome Dr.	bathroom	0.028	0	other
8/25/2015	2023 Miller Rd.	kitchen	0	0	other
8/26/2015	1201 Maxine St.	kitchen	0.002	0.08	other
9/1/2015	2553 Swayze	main bathroom	0.005	0	other
9/9/2015	1001 Dupont St.	kitchen	0.002	0.05	other
9/10/2015	914 Maxine St. 1	kitchen	0.004	0	other
9/10/2015	914 Maxine St. 2	kitchen	0.001	0	other
9/16/2015	2761 Chicago Blvd.	bathroom	0.001	0	other
9/16/2015	1422 Clancy	bathroom	0.007	0	other
9/17/2015	1614 Woodlawn Park Dr.	other	0.02	0.13	other
9/18/2015	1025 Kensington Ave.	kitchen	0.002	0.07	other
9/21/2015	2616 Hillcrest	kitchen	0.005	0	other

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, September 23, 2015 10:01 AM
To: Busch, Stephen (DEQ)
Subject: Flint lead/copper history
Attachments: Flint lead-copper history.xlsx

[illegible]

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, September 22, 2015 4:59 PM
To: Busch, Stephen (DEQ)
Subject: Flint historical data
Attachments: Flint lead-copper history.xlsx

City of Flint Lead and Copper History

All results in ppm

33 Required, 33 Taken

1/1 - 6/30/1992

33 Required, 33 Taken

7/1 - 12/

Sample Location	Sample Category	Service Line	Building Plumbing	Site Code	Pb	Cu	Site Code	Same Data?
912 Lafayette	1	L	C	A1	0.011	0.204	B1	Y
2130 Flushing	1	L	C	A2	0.003	0.023	B2	Y
1614 Woodlawn Pk	1	L	C	A3	0.004	0.145	B3	Y
919 Blanchard	1	L	G	A4	0.008	0.036	B4	Y
2322 Calumet	1	L	C	A5	0.004	0.085	B5	Y
2501 Bagley	1	L	G	A6	0.007	0.055	B6	Y
3704 Circle	1	L	C	A7	0.005	0.220	B7	Y
2110 N. Stevenson	1	L	G	A8	0.009	0.043	B8	Y
2201 Brownell	1	L	G	A9	0.008	0.162	B9	Y
2601 Mackin	1	L	G	A10	0.004	0.086	B10	Y
2101 Chippewa	1	L	G	A11	0.002	0.005	B11	Y
3613 Cassius	1	L	C	A12	0.002	0.043	B12	Y
502 Crapo	1	L	C	A13	0.004	0.025	B13	Y
2202 Joliet	1	L	G	A14	0.005	0.019	B14	Y
310 E. Foss	1	L	C	A15	0.000	0.030		
3714 Circle	1	L	C	A16	0.014	0.035	B16	Y
4317 Pengelly	1	L	C	A17	0.008	0.101	B17	Y
2214 Nebraska	1	L	C	A18	0.001	0.037	B18	Y
2937 Oklahoma	1	L	G	A19	0.013	0.082	B19	Y
734 E. Foss	1	L	C	A20	0.004	0.005	B20	Y
530 Leta	1	L	C	A21	0.004	0.085	B21	Y
1922 Barth	1	L	G	A22	0.003	0.022	B22	Y
309 Marquette	1	L	C	A23	0.017	0.073	B23	Y
318 Marquette	1	L	G	A24	0.009	0.079	B24	Y
2428 Thomas	1	L	G	A25	0.009	0.161	B25	Y
2443 Thomas	1	L	C	A26	0.006	0.200	B26	Y
2448 Thomas	1	L	G	A27	0.011	0.087	B27	Y
2463 Thomas	1	L	G	A28	0.025	0.273	B28	Y
2472 Thomas	1	L	G	A29	0.010	0.011	B29	Y
2420 Norbert	1	L	G	A30	0.006	0.027	B30	Y
2448 Nolen	1	L	C	A31	0.006	0.346	B31	Y
611 Weller	1	L	C	A32	0.016	0.075	B32	Y
1613 Woodlawn Pk	1	L	G	A33	0.024	0.025	B33	Y
238 Peer	1	L	C				B34	New
508 Avon	1	L	C					
352 Commonwealth	1	L	C					
2026 Hill	1	L	C					
2014 Leith	1	L	G					
1519 Lincoln	1	L	C					
1401 Maplewood	1	L	G					
509 Mathewson	1	L	L					
1805 Proctor	1	L	G					
2751 Swayze	1	L	L					
2467 Thomas	1	L	G					

2207 Windemere	1	L	G
2701 Yale	1	L	C
2705 Yale	1	L	C
2709 Yale	1	L	C
2710 Yale	1	L	C
2713 Yale	1	L	C
2714 Yale	1	L	C
2717 Yale	1	L	C
2718 Yale	1	L	C
2721 Yale	1	L	C
2734 Yale	1	L	C
2801 Yale	1	L	C
1701 Pennsylvania	1	L	G,C
2937 Oklahoma	1	L	C
2465 Norbert	1	L	G,C
2453 Norbert	1	L	G,C
2471 Norbert	1	L	G,C
2436 Norbert	1	L	G,C
2459 Norbert	1	L	C
2440 Norbert	1	L	C
2470 Nolen Dr.	1	L	C
3413 Brunswick	1	L	C
416 Marquette	1	L	C
2230 Winona	1	L	C
2574 Nolen	1	L	C
3714 Leith	1	L	C
915 Hughes	1	L	C
2706 Cumings	1	L	C
1922 Bagley	1	L	C
2014 Leith	1	L	C
2111 Brownell Blvd.	1	L	C
2619 Thomas	1	L	G
2522 Wolcott	1	L	C
3202 Camden	1	L	C
313 E. Stewart	1	L	G
2126 Nebraska	1	L	C
206 Baker St.	1	L	C
229 Baker St.	1	L	C
911 Hughes	1	L	C
422 W. Taylor	no data	no data	no data
1405 Maplewood	1	L	C
2306 Levern	1	L	G/C
1906 Knapman	1	L	C
2310-610 Garland	1	L	G/C
928 Garland	1	L	G/C
5801 Edwards Ave.	1	L	C
3706 Leith	1	L	C
911 Beard	1	L	G/C
830 E. 7th Street	1	L	G

841 E. 7th Street	1	L	G
849 E. 7th Street	1	L	G
857 E. 7th Street	1	L	G
903 E. 7th Street	1	L	G
906 E. 7th Street	1	L	G
909 E. 7th Street	1	L	G
911 E. 7th Street	1	L	G
915 E. 7th Street	1	L	G
921 E. 7th Street	1	L	G
924 E. 7th Street	1	L	C
925 E. 7th Street	1	L	G
932 E. 7th Street	1	L	G
937 E. 7th Street	1	L	G
942 E. 7th Street	1	L	G
2424 Thomas	1	L	G
2455 Thomas	1	L	G
2402 Altoona	1	L	G
2416 Altoona	1	L	G
2512 Altoona	1	L	G
2527 Altoona	1	L	C
2519 Norbert	1	L	G
2534 Norbert	1	L	C
2554 Norbert	1	L	C
2559 Norbert	1	L	C
2417 Thomas	1	L	G
2451 Thomas	1	L	G
1248 Niagra	1	L	G
3713 Hirrick St.	1	L	C,P
1210 Campbell St.	1	L	C,P
939 Alvord St.	1	L	C
822 E. 6th St.	1	L	C,P
1100 Stockton St.	1	L	C,P
2411 Illinois	1	L	C,P
3119 Leith St.	1	L	C,P
1422 Clancy Ave.	1	L	C,P
3022 Arizona	1	L	C
413 Burroughs Ave.	1	L	P
4205 Pengelly	1	L	C
3521 Bennett	1	L	C,P
2821 Hillcrest	1	L	C
3722 Van Buren	1	L	G,P
3009 Montana	1	L	L,C
809 E. 3rd Street	1	L	G
3602 Camden	1	L	P
722 McKinley	1	L	C
1701 Forest Hill	1	L	L,P
1505 Kensington	1	L	G
2048 Mc Phail St	1	L	C
605 Burroughs	1	L	G,C

2922 Barth St.	1	L	C
3107 Leith St.	1	L	C
3120 Norwood	1	L	C,P
111 Prospect	1	L	C,P
617 Lyon Place	1	L	G,C
2124 Wisconsin	1	L	G
1020 Wellman	1	L	C
3614 Branch	1	L	C,P
1636 Blackberry Lane	no data	no data	no data
1914 Penbrook Lane	1	L	C,P
306 S. Vernon Ave.	1	L	C
3602 N. Term St.	1	L	C,P
3405 Brunswick Ave.	1	L	C
1801 Greenbriar Lane	1	L	C
2762 Yale	1	L	C
811 Oak St.	1	L	G
616 Carrill Ct. #2	1	L	C
1651 Woodlawn Park Dr.	1	L	G
5410 Edwards Ave.	1	L	C
710 Leland St.	1	L	C
638 W. Pulaski Ave.	1	L	C
1223 Campbell St.	1	L	G
1017 Simcoe Ave.	1	L	C
1537 Lincoln	1	L	G
3314 Gratiot Ave.	1	L	C
3320 Leith St.	1	L	C,P
3227 Raskob	1	L	C,P
305 Allendale	1	L	C,P
415 W 4th Ave.	1	L	C,P
2625 Pinetree Dr.	1	L	C
3205 Cheyenne Ave	1	L	C,P
1809 E. Court Street	1	L	C,P
3821 Delaware	1	L	C,P
3517 Bennett Ave.	1	L	C,P
2617 Prospect Street	1	L	C,P
3814 Delaware Ave.	1	L	P
3005 Montana Ave.	1	L	C,P
2648 Swayze	1	L	C,P
3805 Larchmont	no data	no data	no data
2014 DATA			
2205 Flushing Rd.	1	L	C,P
3814 Whitter Ave.	1	L	P
518 Frost	1	L	no data
1901 Crestbrook Ln.	1	L	no data
3727 Maryland Ave.	1	L	no data
1220 Beard St.	1	L	no data
3718 Dolphaine Ln.	1	L	no data
2213 Flushing Rd	1	L	no data
721 East St.	1	L	C,P

1125 Barrie Ave	1	L	no data
1505 Woodlawn Park Dr.	1	L	no data
2622 Windmere	1	L	no data
927 Kensington Ave.	1	L	no data
1109 Kensington Ave.	1	L	no data
1901 Montclair Ave	1	L	no data
1809 Lynbrook	1	L	P
1130 Simcoe Ave.	1	L	no data
2709 Zimmerman	1	L	no data
2615 Westwood Pkwy	1	L	no data
2441 Norbert	1	L	no data
711 Kensington Ave	1	L	no data
2015 Gold Ave	1	L	no data
618 S. Meade St.	1	L	no data
2802 Westwood Pkwy.	1	L	no data
860 Schafer St.	1	L	C,P
1021 S. Franklin Ave.	1	L	no data
1616 Durand St.	1	L	no data
928 Durand	1	L	no data
2730 Westwood Pkwy	1	L	no data
1543 Kearsley Park Blvd.	1	L	no data
2920 Parkside Dr.	1	L	no data
2721 Westwood Pkwy	1	L	no data
1002 Durand St.	1	L	no data
2560 Thomas St.	1	L	no data
815 Bradley Ave	1	L	no data
4013 Brownell Blvd.	1	L	C,P
2418 Gold Ave.	1	L	no data
626 Commonwealth Ave	1	L	no data
920 Stocker St.	1	L	P
430 Westcombe Ave.	1	L	no data
1623 Neome Dr.	1	L	no data
3802 Gorey Ave.	1	L	no data
1720 Davison Rd.	1	L	no data
2110 Mountain Ave.	1	L	no data
2006 Clement St	1	L	no data
2028 Corunna Rd.	1	L	no data
2829 Yale St.	1	L	no data
1914 W. Home Ave.	1	L	no data
2920 N. Dexter St.	1	L	no data
2810 Kellar Ave.	1	L	no data
3245 Montana Ave.	1	L	no data
3623 Norwood Dr.	1	L	no data
2801 Reynolds	1	L	no data
3510 Brandon St.	1	L	no data
2117 Stanford Ave.	1	L	C,P
5806 Leslie Dr.	1	L	no data

1809 W. Home Ave.	1	L	no data
1414 Stone St.	1	L	no data
2006 Aitken Ave.	1	L	no data
3131 Wolcott	1	L	no data
983 Gainey Ave.	1	L	no data
2806 Norbert St.	1	L	no data
912 Crawford St	1	L	no data
4024 Sterling	1	L	no data
3737 Worchester Dr.	1	L	no data
1725 Lincoln Ave.	1	L	no data
3139 Colorado	1	L	no data
1401 Gainey Ave.	1	L	no data
2730 Coventry Ct.	1	L	no data
709 Frost St.	1	L	P
2307 Radcliffe	1	L	no data
224 E. Court St.	1	L	no data
3440 Rangeley	1	L	no data
3808 Brownell Blvd	1	L	no data
1006 Kensington	1	L	no data
2517 Delaware Ave.	1	L	no data
1810 W. Hobson Ave.	1	L	no data
5805 Leslie Dr.	1	L	no data
1721 Chelsea Circle	1	L	no data
912 Waldman Ave	1	L	no data
3082 Lanning Dr.	1	L	no data
25151 Chicago Blvd.	1	L	no data
742 Lincoln Ave.	1	L	P
1805 Ramsay Blvd.	1	L	no data
1910 Ramsay Blvd	1	L	no data
1911 Corry St.	1	L	no data
3507 Dearborn Ave.	1	L	no data
3829 Ivanhoe Ave.	1	L	no data
1559 Chevrolet Ave.	1	L	no data

2015 DATA

1809 Stevenson St.	1	L	P
5303 Custer Ave.	1	L	C,P
401 E. Newall St.	1	L	P
215 Browning Ave.	1	L	C,P
2615 Trumbull Ave.	1	L	C,P
201 Browning Ave	1	L	P
1224 Decker St.	1	L	C,P
1220 Decker St.	1	L	P
1379 Washington Ave.	1	L	P
1383 Washington Ave.	1	L	C,P
1372 Washington Ave.	1	L	C,P
1367 Washington Ave.	1	L	P
1701 Marquette Dr.	1	L	C,P

778 Bundy Ave.	1	L	P
3714 Beecher Rd.	1	L	C
1016 Ingleside Ave.	1	L	C,P
1818 Rock Creek Ln.	1	L	C,P
3010 Cheyenne St.	1	L	C,P
2606 Mountain Ave	1	L	P
2020 Crooked Ln.	1	L	C,P
310 E. Moore St.	1	L	P
631 Alvord Ave.	1	L	P
216 Browning Ave.	1	L	C,P
3714 Beecher Rd.	1	L	C,P
912 Lexington Ave.	1	L	P
349 Robbie Ln.	1	L	P
353 Robbie Ln.	1	L	C,P
341 Robbie Ln.	1	L	C,P
328 Robbie Ln.	1	L	C,P
357 Robbie Ln.	1	L	C
344 Robbie Ln.	1	L	C,P
1807 Oren Ave.	1	L	P
421 Lyon St.	1	L	C,P
1528 Delaware Ave.	1	L	P
3811 Brentwood. Dr.	1	L	P
1615 S. Franklin Ave.	1	L	P
853 E. 7th St.	1	L	C,P
1150 Woodside Dr.	1	L	P
547 Copeman Blvd.	1	L	P
1730 Overhill Dr.	1	L	C,P
2432 Beta Ln.	1	L	P
2023 Miller Rd.	1	L	C,P
2122 Pierce St	1	L	P
1602 Raspberry Ln.	1	L	P
2112 Sherff			C,P
1205 Blanchard Ave.			C,P
2110 Flushing Rd.			C
2300 Flushing Rd.			C
2202 Flushing Rd.			C,P
2429 Flushing Rd.			C,P
2414 Flushing Rd.			P
3901 Leedra St.			P
3142 McClure			P
2114 Flushing Rd.			C,P

iken
'31/1992

33 Required, 33 Taken

1/1 - 6/30/1997

Site Code	Same Data?	Pb	Cu
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Pb	Cu
0.013	0.288
0.003	0.023
0.007	0.061
0.009	0.045
0.002	0.053
0.007	0.043
0.005	0.134
0.015	0.037
0.009	0.089
0.005	0.040
0.003	0.048
0.001	0.028
0.006	0.022
0.005	<0.020

C3	Y	0.003	0.05
C4	Y	<0.002	0.19
C5	Y	<0.002	0.04

C8	Y	0.002	0.03
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C10	Y	0.003	0.02
-----	---	-------	------

C13	Y	<0.002	0.02
-----	---	--------	------

C22	Y	<0.002	0.08
-----	---	--------	------

C26	Y	<0.002	0.1
-----	---	--------	-----

C29	Y	0.025	0.02
-----	---	-------	------

C32	Y	0.005	0.06
-----	---	-------	------

C33	Y	0.003	0.01
-----	---	-------	------

C35	New	0.005	0.15
-----	-----	-------	------

C36	New	<0.002	0.02
-----	-----	--------	------

C37	New	<0.002	0.02
-----	-----	--------	------

C38	New	<0.002	<0.01
-----	-----	--------	-------

C39	New	<0.002	0.03
-----	-----	--------	------

C40	New	0.004	0.02
-----	-----	-------	------

C41	New	<0.002	0.01
-----	-----	--------	------

C42	New	0.005	0.03
-----	-----	-------	------

C43	New	<0.002	0.03
-----	-----	--------	------

C44	New	0.002	0.07
-----	-----	-------	------

33 Required, 33 Taken

7/1 - 12/31/1997

Site Code	Same Data?	Pb	Cu
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D3	Y	0.032	0.018
D4	Y	<0.002	0.146
D5	Y	<0.002	0.025

D8	Y	0.003	0.022
----	---	-------	-------

D10	Y	<0.002	0.013
-----	---	--------	-------

D13	Y	<0.002	0.018
-----	---	--------	-------

D26	Y	<0.002	0.090
-----	---	--------	-------

D29	Y	0.005	0.006
-----	---	-------	-------

D32	Y	0.005	0.042
-----	---	-------	-------

D33	Y	<0.002	0.035
-----	---	--------	-------

D34			
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D35	Y	0.004	0.105
-----	---	-------	-------

D36	Y	<0.002	0.008
-----	---	--------	-------

D37	Y	<0.002	0.006
-----	---	--------	-------

D39	Y	<0.002	0.010
-----	---	--------	-------

D40	Y	<0.002	0.017
-----	---	--------	-------

D41	Y	<0.002	0.031
-----	---	--------	-------

D43	Y	<0.002	0.014
-----	---	--------	-------

D44	Y	<0.002	0.008
-----	---	--------	-------

C45	New	0.003	0.07
C46	New	<0.002	0.02
C47	New	<0.002	0.03
C48	New	<0.002	0.03
C49	New	0.003	0.05
C50	New	<0.002	0.02
C51	New	<0.002	0
C52	New	0.003	0.03
C53	New	0.002	0.04
C54	New	<0.002	0.02
C55	New	<0.002	0.02
C56	New	0.002	0.03

D45	Y	0.005	0.047
D46	Y	<0.002	0.004

D48	Y	<0.002	0.032
-----	---	--------	-------

D50	Y	0.002	0.003
-----	---	-------	-------

D51	Y	<0.002	0.003
-----	---	--------	-------

D52	Y	0.002	0.003
-----	---	-------	-------

D53	Y	0.003	0.003
-----	---	-------	-------

D54	Y	<0.002	0.003
-----	---	--------	-------

D55	Y	<0.002	0.021
-----	---	--------	-------

D57	New	0.005	0.029
-----	-----	-------	-------

D58	New	0.003	0.138
-----	-----	-------	-------

D59	New	0.003	0.003
-----	-----	-------	-------

D60	New	<0.002	0.029
-----	-----	--------	-------

D61	New	0.003	0.027
-----	-----	-------	-------

D62	New	<0.002	0.003
-----	-----	--------	-------

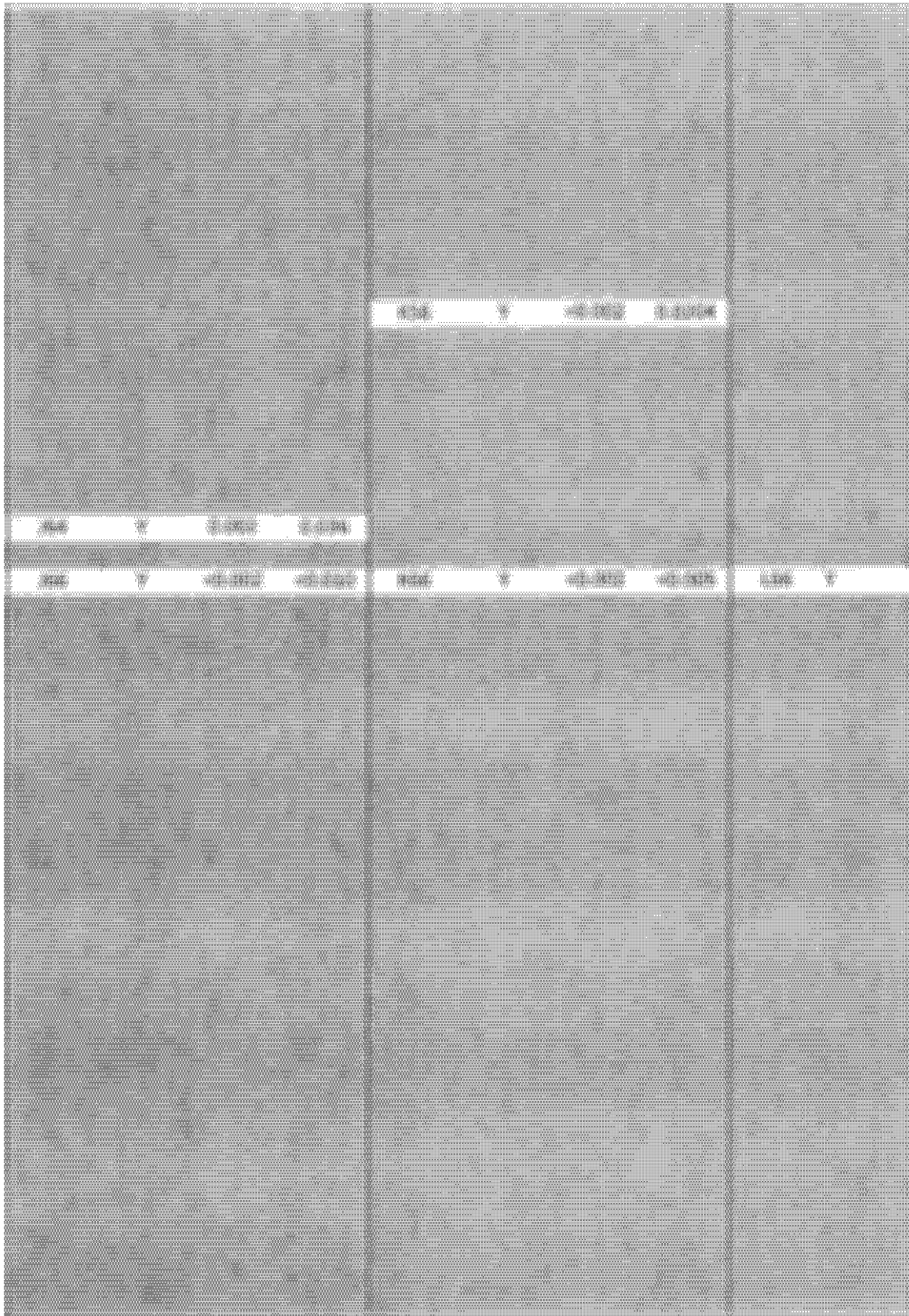
33 Required, 33 Taken 7/1 - 12/31/1998				33 Required, 33 Taken 1/1 - 6/30/1999				33 Required, 33 Taken 6/1 - 9/30/1999	
Site Code	Same Data?	Pb	Cu	Site Code	Same Data?	Pb	Cu	Site Code	Same Data?
E3	Y	0.029	0.060	F3	Y	<0.002	0.030	G3	Y
E4	Y	0.004	<0.01	F4	Y	<0.002	0.130	G4	Y
E5	Y	<0.002	0.010	F5	Y	<0.002	0.010	G5	Y
E8	Y	0.008	0.020	F8	Y	0.004	0.040		
E10	Y	0.003	<0.01	F10	Y	0.005	0.010	G10	Y
E13	Y	<0.002	0.010	F13	Y	<0.002	0.010		
E22	Y	<0.002	0.010						
E26	Y	<0.002	0.070	F26	Y	<0.002	0.110	G26	Y
E29	Y	0.013	<0.01	F29	Y	0.013	<0.01	G29	Y
E32	Y	0.006	0.040	F32	Y	0.003	0.030	G32	Y
E33	Y	0.002	0.430	F33	Y	0.01	0.530	G33	Y
E34				F34					
E35	Y	0.004	0.030	F35	Y	0.003	0.130		
E36	Y	<0.002	<0.01	F36	Y	<0.002	0.020	G36	Y
E39	Y	0.003	0.010	F39	Y	0.003	<0.01	G39	Y
E40	Y	<0.002	0.010	F40	Y	0.002	0.030	G40	Y
E41	Y	<0.002	<0.01	F41	Y	<0.002	0.060		
E42	Y	0.003	0.050	F42	Y	0.004	0.110		
E43	Y	0.003	<0.01	F43	Y	<0.002	<0.01		
E44	Y	0.004	<0.01	F44	Y	0.003	<0.01	G44	Y

en /2000		33 Required, 33 Taken 6/1 - 9/30/2001 Same				33 Required, 33 Taken 6/1 - 9/30/2002 Same			
Pb	Cu	Site Code	Data?	Pb	Cu	Site Code	Data?	Pb	Cu
0.004	0.036	H3	Y	<0.003	<0.020				
0.05	0.013	H4	Y	<0.003	0.04				
0.003	0.015	H5	Y	<0.003	<0.020				
0.005	0.011	H10	Y	<0.003	<0.020				
0.002	0.069								
0.017	0.008	H29	Y	0.003	<0.020				
0.005	0.032	H32	Y	0.006	0.04				
0.005	0.137	H33	Y	<0.003	0.27	I33	Y	<0.003	0.095
0.003	0.085								
						I37	Y	<0.003	0.025
<0.002	0.005	H39	Y	<0.003	<0.020				
0.002	0.022	H40	Y	<0.003	0.02				
0.021	0.005								

0.006	0.006						
<0.002	0.008	H49	Y	0.003	0.040		
<0.002	0.013	H50	Y	<0.003	0.03		
0.004	0.006	H59	Y	<0.003	<0.020		
0.005	0.019	H61	Y	0.003	<0.020		
		H92	Y	<0.003	<0.020		
0.004	0.009						
0.004	0.009	H66	Y	0.003	<0.020		
0.003	0.012	H68	Y	0.007	<0.020		
<0.002	0.033	H70	Y	<0.003	<0.020	I70	Y <0.003 <0.020
0.007	0.012	H71	Y	<0.003	<0.020		
<0.002	0.005	H72	Y	<0.003	0.02		
0.004	0.022	H76	Y	<0.003	<0.020		
<0.002	0.05	H78	Y	<0.003	0.05		
<0.002	0.05	H79	Y	<0.003	<0.020	I79	Y <0.003 <0.020
<0.002	0.004	H80	Y	<0.003	0.02		
<0.002	0.028	H81	Y	<0.003	0.09	I81	Y <0.003 0.116
<0.002	0.007						
0.01	0.016						
0.004	0.008	H84	Y	0.006	<0.020		
<0.002	0.051						
0.006	0.008	H86	Y	<0.003	<0.020		
		H87	New	<0.003	<0.020		
		H88	New	<0.003	<0.020		
		H89	New	0.005	<0.020		
		H90	New	<0.003	<0.020		
		H91	New	<0.003	<0.020		
		H93	New	<0.003	<0.020		
		H94	New	<0.003	<0.020		
						I95	New <0.003 <0.020

I96	New	<0.003	<0.020
I97	New	<0.003	<0.020
I98	New	0.004	0.072
I99	New	<0.003	<0.020
I100	New	0.007	<0.020
I101	New	<0.003	0.124
I102	New	<0.003	0.059
I103	New	<0.003	<0.020
I104	New	<0.003	<0.020
I105	New	<0.003	<0.020
I106	New	<0.003	<0.020
I107	New	0.021	0.029
I108	New	<0.003	0.091
I109	New	<0.003	<0.020
I110	New	<0.003	<0.020
I111	New	<0.003	<0.020
I112	New	0.004	<0.020
I113	New	<0.003	0.023
I114	New	<0.003	<0.020
I115	New	<0.003	0.05
I116	New	<0.003	0.027
I117	New	<0.003	0.304
I118	New	<0.003	0.101
I119	New	<0.003	<0.020
I120	New	<0.003	<0.020
I121	New	0.004	<0.020
I122	New	<0.003	0.026

15 Required, 25 Taken				15 Required, 25 Taken				15 Required, 25 Taken			
6/1 - 6/30/2020				6/1 - 6/30/2020				6/1 - 6/30/2020			
Name				Name				Name			
Site Code	State?	PS	CS	Site Code	State?	PS	CS	Site Code	State?	PS	CS



J123	New	<0.002	0.148								
J124	New	<0.002	0.368								
J125	New	<0.002	0.018								
J126	New	<0.002	0.118	K126	Y	<0.002	0.0858				
J127	New	<0.002	0.011								
J128	New	<0.002	0.045								
J129	New	<0.002	0.034	K129	Y	<0.002	0.0109	L129	Y		
J130	New	<0.002	0.021								
J131	New	<0.002	0.021								
J132	New	<0.002	<0.010	K132	Y	<0.002	<0.005	L132	Y		
J133	New	<0.002	0.025	K133	Y	<0.002	0.0151				
J134	New	<0.002	0.014	K134	Y	<0.002	0.0082	L134	Y		
J135	New	0.005	0.054								
J136	New	0.003	0.102								
J137	New	<0.002	<0.010	K137	Y	<0.002	0.0173	L137	Y		
J138	New	0.003	<0.010	K138	Y	<0.002	<0.005				
J139	New	<0.002	0.016								
J140	New	<0.002	0.021								
J141	New	<0.002	<0.010								
J142	New	<0.002	0.092	K142	Y	<0.002	0.0154	L142	Y		
J143	New	<0.002	0.024								
J144	New	<0.002	0.033								

J145	New	<0.002	0.077	K145	Y	<0.002	0.0176	L145	Y
J146	New	<0.002	0.031	K146	Y	<0.002	0.0175	L146	Y
J147	New	<0.002	0.016	K147	Y	<0.002	0.0202	L147	Y
J148	New	<0.002	0.046						
J149	New	<0.002	0.096						
J150	New	<0.002	0.012						
J151	New	<0.002	0.023	K151	Y	<0.002	0.0271		
J152	New	<0.002	<0.010						
				K153	New	<0.002	0.0216		
				K154	New	<0.002	<0.005	L154	Y
				K155	New	<0.002	0.0144		
				K156	New	<0.002	0.0108		
				K157	New	<0.002	0.018		
				K158	New	<0.002	0.0156		
				K159	New	<0.002	<0.005		
				K160	New	<0.002	0.0274		
				K161	New	<0.002	<0.005		
				K162	New	<0.002	0.0111	L162	Y
				K163	New	<0.002	<0.005		
				K164	New	<0.002	0.016		
				K165	New	<0.002	0.0948		
				K166	New	<0.002	0.0235		
				K167	New	<0.002	0.0293		
				K168	New	<0.002	0.0169		
				K169	New	<0.002	0.0157		
				K170	New	<0.002	<0.005		
				K171	New	<0.002	0.0269		
								L172	New
								L173	New
								L174	New
								L175	New
								L176	New
								L177	New
								L178	New
								L179	New
								L180	New
								L181	New
								L182	New
								L183	New

001

TABLE

001 Required, 001 Taken

001 - 001/001

Name

001

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Name

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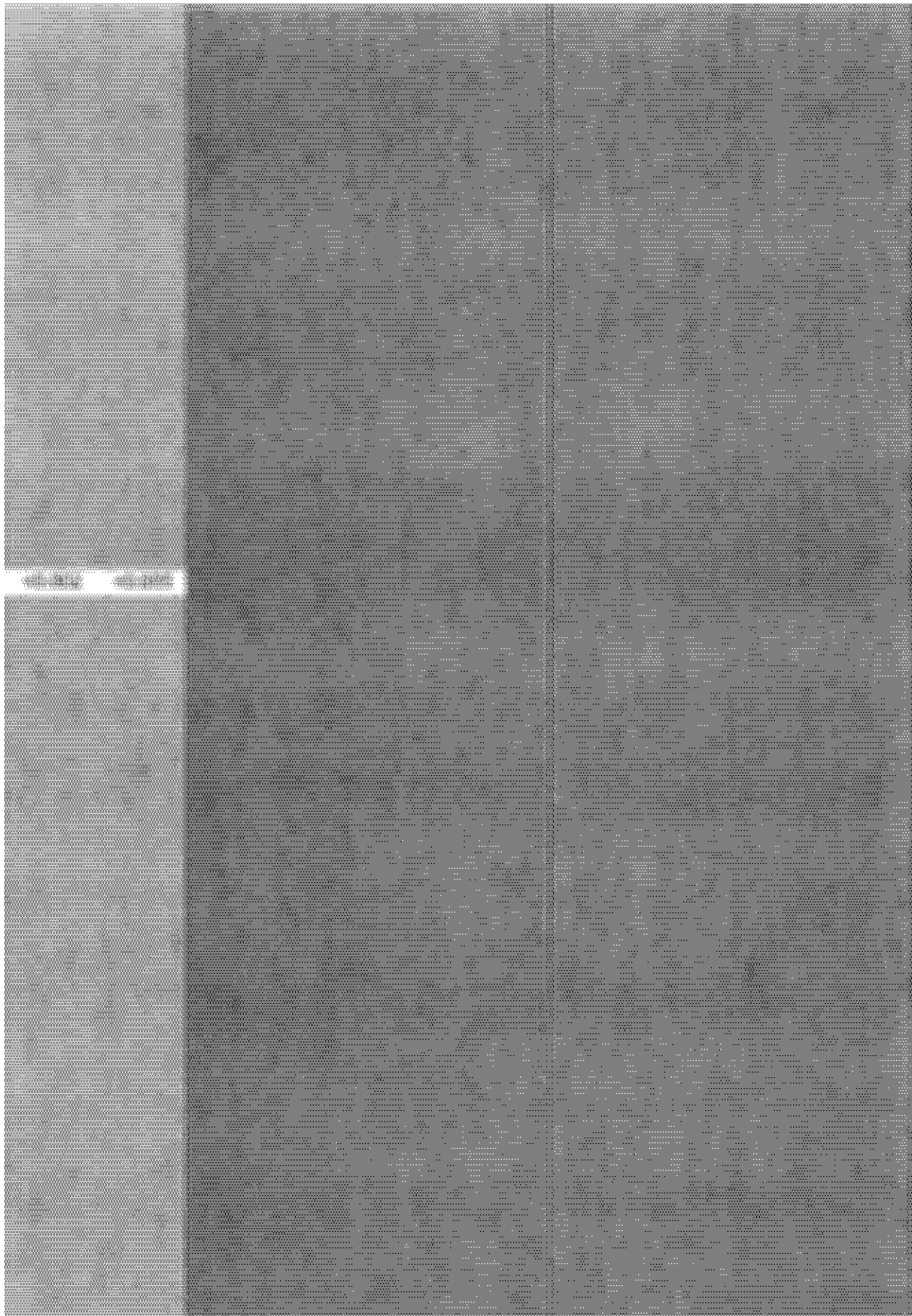
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The image shows a book cover with a dark, textured background. A vertical strip of lighter material is visible on the left edge. Several horizontal bands of lighter material are present, some containing text in Chinese characters. The text is partially obscured by the texture and lighting.

[illegible]

0.004	0
0.005	0
0.005	0
0	0.11
0	0
0.004	0.06
0.002	0
0.002	0.05
0.004	0
0.002	0.28
0.008	0.06
0.003	0
0.002	0
0.002	0
0.001	0.11
0	0.07
0.004	0
0	0.2
0	0
0.023	0.29
0.001	0
0.01	0.22
0.002	0.11
0.002	0.11
0	0
0.005	0.27
0.002	0.08
0	0
0.003	0
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0.002	0
0.007	0.07
0.001	0.05
0.002	0.13
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0.003	0
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0.001	0		
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0.002	0		
0	0		
0.004	0		
0	0		
0	0	0.002	0
0.037	0.08		
0.004	0		
0	0		
0	0.09		
0.002	0		
0.005	0.2		
0	0		
0.002	0		
0	0		
0	0		
0	0		
0.006	0		
0.003	0	0.002	0
0.004	0		
0	0		
0.004	0		
0.006	0		
0	0		
0.009	0		
		0.01	0
		0.006	0.27
		0.005	0
		0	0.16
		0.003	0
		0	0
		0.013	0.1
		0.004	0
		0.008	0
		0.006	0.17
		0.002	0.14
		0.001	0
		0.001	0.19

0	0
0.002	0.52
0.007	0.07
0.003	0.11
0.005	0.1
0	0
0.005	0.1
0.005	0
0.042	0
0.022	0.31
0.008	0.15
0.006	0
0.002	0
0.005	0.11
0.003	0.05
0.002	0.09
0.003	0.2
0.004	0.11
0.021	0
0.007	0.14
0.003	0
0.042	0
0	0
0.007	0.07
0.029	0
0.018	0
0.001	0.08
0	0
0.003	0.06
0.002	0
0	0
0.009	0.06
0.011	0.05
0	0.1
0.003	0.28
0.002	0.06
0	0.06
0	0
0	0
0.003	0
0.005	0.05

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Friday, September 18, 2015 12:00 PM
To: Kaiser, Rebecca (DEQ)
Subject: RE: DEQ-Laboratory Report-Genesee-2015-09-17

They are in compliance with the state & fed regulations.

-----Original Message-----

From: Kaiser, Rebecca (DEQ)
Sent: Friday, September 18, 2015 11:58 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: DEQ-Laboratory Report-Genesee-2015-09-17

Thanks! How if Flint, by the way? I see that Erin B. is stirring the pot again!

-----Original Message-----

From: Rosenthal, Adam (DEQ)
Sent: Friday, September 18, 2015 11:52 AM
To: Kaiser, Rebecca (DEQ)
Subject: FW: DEQ-Laboratory Report-Genesee-2015-09-17

I believe the last one is yours.

Adam

-----Original Message-----

From: DEQ-DWR-LABREPORTS
Sent: Thursday, September 17, 2015 2:12 PM
To: GCHD-EHWATER@GCHD.US; Graham, Lois (DEQ); DEQ-DWMA-Lansing
Subject: DEQ-Laboratory Report-Genesee-2015-09-17

Dear Drinking Water Laboratory Client,

A PDF file containing your analytical results has been attached to this e-mail.

Please do not reply directly to this e-mail. It is an automated account that does not respond to incoming messages.

Please contact the laboratory directly at (517) 335-8184 with questions regarding your report.

Thank you for using the MDEQ Drinking Water Laboratory.

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, September 15, 2015 11:45 AM
To: Busch, Stephen (DEQ); Skinker, Bethel (DEQ)
Subject: FW: Voice message about Flint - please return the call

is this who you talked to earlier?

From: Benzie, Richard (DEQ)
Sent: Tuesday, September 15, 2015 11:23 AM
To: Rosenthal, Adam (DEQ); Skinker, Bethel (DEQ)
Cc: Graham, Lois (DEQ)
Subject: FW: Voice message about Flint - please return the call

I know the connection to Detroit is an old issue, but one of you gets to return this call since Steve is out this week and Mike won't be back for 10 days.

From: Graham, Lois (DEQ)
Sent: Tuesday, September 15, 2015 8:05 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: Voice message about Flint - please return the call

I received a voice message overnight and request you return the call. Delores Dotson, of Flint, pleads there is an emergency about cutting off Detroit water and believes the city needs to get back on the Detroit water system. Her telephone number is 810-785-7335. She seemed upset and was quite firm.

Thanks,

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



Subscribe to our Environmental Health Email List by clicking on the red envelope

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, September 01, 2015 4:20 PM
To: Prysby, Mike (DEQ)
Subject: FW: for your records
Attachments: Flint PbCu15.doc



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE



DAN WYANT
DIRECTOR

August 17, 2015

Mr. Brent Wright
City of Flint - DPW
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

Dear Mr. Wright:

SUBJECT: Flint, City of WSSN: 02310
Lead and Copper Monitoring of Drinking Water Taps

The Department of Environmental Quality (DEQ), Office of Drinking Water and Municipal Assistance (ODWMA), received your report for the monitoring period January 1, 2015, through June 30, 2015.

Action Levels	Results this monitoring period			
	90th Percentile	# of Samples Above Action Level	# of Samples Required	# of Samples Collected
Lead 15 parts per billion (ppb)	11 ppb	6	60	69
Copper 1.3 parts per million (ppm)	0.16 ppm	0	60	69

Ninety percent or more 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 (Act 399). These results must be reported on your 2015 Consumer Confidence Report (CCR) due to our office, your customers, and the local health department, by July 1, 2016. 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://www.water.epa.gov/drink/info/lead>.

Mr. Brent Wright

2

August 17, 2015

Recent changes to the Lead and Copper Rule (LCR) require the water supply 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 three 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://www.michigan.gov/deq>. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms under the Manuals, Forms and Brochures heading. 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."

While the City's LCR compliance monitoring has continued to meet action level requirements, the LCR also requires all large systems (those serving over 50,000 people) to optimize corrosion control regardless of their 90th percentile lead concentration. One way to demonstrate fully optimized corrosion control treatment is through two consecutive six month rounds of LCR compliance monitoring in which the difference between the 90th percentile level and the highest source water lead concentration is less than the Practical Quantitative Level for lead (0.005 milligrams per liter). Since the City did not meet these criteria in both the July – December 2014, and January – June 2015, sampling periods, the City must now recommend a treatment to fully optimize corrosion control treatment within six months in accordance with requirements under Act 399, Administrative Rule 604f (R 325.10604f). **This recommendation must be provided to our office as soon as possible, but no later than January 1, 2016.**

However, given the past use of phosphate treatment by the Detroit Water and Sewerage Department (DWSD) to fully optimize corrosion control treatment when the City was a wholesale customer of DWSD, the ODWMA recommends the City select this as its recommended treatment option, and begin implementation as soon as possible to address ongoing concerns by customers regarding lead levels within their premise plumbing systems. Under the second step of this Rule, the DEQ can specify optimal corrosion control treatment.

Our office will inform you when monitoring needs to be conducted as part of the optimization of the implemented corrosion control treatment. Customer requested samples for lead shall continue to be collected and analyzed. 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.

Please contact me at 517-284-6644 or rosenthala@michigan.gov at your earliest convenience to discuss how the City will be complying with the above requirements.

Sincerely,

Adam Rosenthal, Environmental Quality Analyst
Lansing District Office
Office of Drinking Water and Municipal Assistance

cc: Mr. Michael Glasgow, City of Flint

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Monday, August 31, 2015 1:41 PM
To: Prysby, Mike (DEQ)
Subject: RE: Flint THM

yes, the codes they put on the samples don't match their plan, what we have in SDWIS, and they aren't even consistent in the errors from quarter to quarter.

From: Prysby, Mike (DEQ)
Sent: Monday, August 31, 2015 1:36 PM
To: Rosenthal, Adam (DEQ)
Subject: FW: Flint THM

Adam,

It looks like Flint is using the table with the mixed up site codes (again)....

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 LEO A DALY COMPANY

1311 South Linden Road, Suite B • Flint, MI 48532
 T 810.820.2682 C 810.333.3201
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 810.333.3201
www.lan-inc.com • JRHansen@lan-inc.com

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privileged, confidential and/or proprietary. Any unauthorized use, disclosure or copying of this Communication is strictly prohibited. If you have received this Communication in error, please contact the sender immediately and destroy any and all copies of this Communication.

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Friday, August 28, 2015 11:05 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: Flint 3Q15 TTHM
Attachments: 3rd Qtr 2015 TTHM summary.doc

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Friday, August 28, 2015 10:50 AM
To: Philip, Kris (DEQ)
Subject: RE: CDS

thank you

From: Philip, Kris (DEQ)
Sent: Friday, August 28, 2015 10:44 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: CDS

done

From: Rosenthal, Adam (DEQ)
Sent: Friday, August 28, 2015 10:23 AM
To: Philip, Kris (DEQ)
Subject: CDS

since your replacement is out, would you be a dear and run CDS so I can see Flint DBP data in the chem DB.

thanks

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Friday, August 28, 2015 10:22 AM
To: Philip, Kris (DEQ)
Subject: CDS

since your replacement is out, would you be a dear and run CDS so I can see Flint DBP data in the chem DB.

thanks

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, August 27, 2015 9:47 AM
To: Brewster, Simone (DEQ)
Cc: Prysby, Mike (DEQ); Hansen, Jeff (jrhansen@lan-inc.com)
Subject: RE: 02310 - Flint THMs

thanks,

Adam

From: Brewster, Simone (DEQ)
Sent: Thursday, August 27, 2015 9:46 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: 02310 - Flint THMs

They should report out by EOB today or for sure tomorrow

Simone Brewster
DEQ Drinking Water Laboratory
Laboratory Services Section
517.335.8184 (T)
517.335.8562 (F)
brewsters@michigan.gov

From: Rosenthal, Adam (DEQ)
Sent: Thursday, August 27, 2015 9:40 AM
To: Brewster, Simone (DEQ)
Subject: 02310 - Flint THMs

Hi Simone, could I get a status on some TTHM/HAA5 samples that were submitted from Flint last week, Aug 18th maybe.

thanks,

Adam

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, August 27, 2015 9:40 AM
To: Brewster, Simone (DEQ)
Subject: 02310 - Flint THMs

Hi Simone, could I get a status on some TTHM/HAA5 samples that were submitted from Flint last week, Aug 18th maybe.

thanks,

Adam

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, August 27, 2015 9:38 AM
To: Prysby, Mike (DEQ); Hansen, Jeff
Subject: RE: Flint THM

I checked the lab database, nothing yet.

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: Prysby, Mike (DEQ)
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 810.333.3201
www.lan-inc.com • JRHansen@lan-inc.com

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Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, August 26, 2015 11:44 AM
To: Busch, Stephen (DEQ)
Subject: FW: Flint Water Study-VT

From: Marc Edwards [<mailto:edwardsm@vt.edu>]
Sent: Wednesday, August 26, 2015 11:41 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: Flint Water Study-VT

Adam,

I am teaching a class on graduate engineering ethics at Virginia Tech, and we are using the Flint situation as our case study this semester.

Would you or someone else from DEQ, be willing to be interviewed by my class on some Wednesday between 4-6:45 pm?

Best Regards,
 Marc

From: Marc Edwards [<mailto:edwardsm@vt.edu>]
Sent: Sunday, August 23, 2015 4:57 PM
To: 'ROSENTHALA@michigan.gov'; 'bwright@cityofflint.com'; 'Ptaszenski, Rachel'
Subject: Flint Water Study-VT

Dear Adam, Mike and Rachel,

Hi there. I am a professor at Virginia Tech who specializes in research on corrosion, opportunistic premise plumbing pathogens, lead in water health effects and engineering ethics.

Over the next few months we will be studying Flint water quality issues, in conjunction with all parties who are interested in this subject.

We will be launching our web page to publicly report results of our work.

We visited Flint last week and collected a lot of samples from the distribution system, and we are also doing a lead in water study with residents, to complement that which was recently conducted by the city under the LCR.

Just giving you a heads up on this, and I hope you can give me a point of contact with each of your agencies. Dependent on what we find, it might be desirable to touch base, in advance of our releasing certain findings. We also intend to collaborate with all parties, in an open manner, to the extent that is possible, as our study progresses.

Mike, I think I met you a few years back at a Michigan AWWA event, and Rachel, you were kind enough to send me the coliform/E.Coli data last week. Adam, I am not sure if I have ever met you or not.

My cell phone is 540 320 8740, my office phone is 540 231-7236, and my e-mail is on this message. Feel free to call me at any time, if any of you should have any questions about our plans, or the Flint water quality issues that we will be studying.

Best Regards,
Marc Edwards

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Monday, August 24, 2015 8:53 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: FW: Flint Water Study-VT

From: Marc Edwards [<mailto:edwardsm@vt.edu>]
Sent: Sunday, August 23, 2015 4:57 PM
To: Rosenthal, Adam (DEQ); bwright@cityofflint.com; 'Ptaszewski, Rachel'
Subject: Flint Water Study-VT

Dear Adam, Mike and Rachel,

Hi there. I am a professor at Virginia Tech who specializes in research on corrosion, opportunistic premise plumbing pathogens, lead in water health effects and engineering ethics.

Over the next few months we will be studying Flint water quality issues, in conjunction with all parties who are interested in this subject.

We will be launching our web page to publicly report results of our work.

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Just giving you a heads up on this, and I hope you can give me a point of contact with each of your agencies. Dependent on what we find, it might be desirable to touch base, in advance of our releasing certain findings. We also intend to collaborate with all parties, in an open manner, to the extent that is possible, as our study progresses.

Mike, I think I met you a few years back at a Michigan AWWA event, and Rachel, you were kind enough to send me the coliform/E.Coli data last week. Adam, I am not sure if I have ever met you or not.

My cell phone is 540 320 8740, my office phone is 540 231-7236, and my e-mail is on this message. Feel free to call me at any time, if any of you should have any questions about our plans, or the Flint water quality issues that we will be studying.

Best Regards,
Marc Edwards

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Wednesday, August 05, 2015 4:03 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: RE: Flint Lead/copper 90th letter
Attachments: Flint PbCu15 with PC additions.doc

updated with revised 90ths

From: Cook, Pat (DEQ)
Sent: Friday, July 31, 2015 2:05 PM
To: Rosenthal, Adam (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: RE: Flint Lead/copper 90th letter

Hi Adam - I added a paragraph (in red) at the end of the letter to inform them that they will have to optimize corrosion control and we'll be contacting them in the near future to discuss in further detail.

pat

From: Rosenthal, Adam (DEQ)
Sent: Thursday, July 30, 2015 2:11 PM
To: Cook, Pat (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: Flint Lead/copper 90th letter

Attached for editing

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



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

July 27, 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 January 1, 2015, through June 30, 2015.

Action Levels	Results this monitoring period		Next monitoring period	
	90 th Percentile	# of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 parts per billion (ppb)	11 ppb	6	60	1/1 and 6/30/2017 Submit results to this office by July 10, 2017
Copper 1.3 parts per million (ppm)	0.16 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 2015 Consumer Confidence Report (CCR) due to our office, your customers, and the local health department, by July 1, 2016. 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>.

Mr. Brent Wright

2

July 27, 2015

Recent changes to the Lead and Copper Rule (LCR) 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 will mark your first six month round of monitoring after connection to the Karegnondi Water Authority (KWA). 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.

Finally, the LCR requires all large systems (those serving over 50,000 people) to optimize corrosion control regardless of their 90th percentile lead concentration, unless the difference between the 90th percentile and the highest source water lead concentration is less than the Practical Quantitative Level for lead (0.005 mg/l). Since the City of Flint did not meet this criteria in both the July – December 2014, and January – June 2015, sampling periods, the city will have to optimize corrosion control. We will be contacting you soon to discuss the items the city must complete to comply with the optimal corrosion requirements of the LCR.

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Monday, August 03, 2015 9:57 AM
To: Michael Glasgow
Subject: RE: PbCu Cert form

Morning Mike, I also need copies of all 68 consumer notices. I have 1 from 401 E. Newall St., so 67 more.

thanks,

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: Michael Glasgow [<mailto:mglasgow@cityofflint.com>]
Sent: Friday, July 31, 2015 10:28 AM
To: Rosenthal, Adam (DEQ)
Subject: Re: PbCu Cert form

Adam,

Here is the lead & copper report. I have also sent a hard copy out via USPS.

On Thu, Jul 30, 2015 at 9:33 AM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Morning Mike, I'm preparing the 90th percentile letter and I need your lead copper certification form with the cert of notification to the customers. What I have are 68 results that are routine from 1/1 – 6/30/15. The link below is for the form if you don't have one.

http://www.michigan.gov/deq/0,4561,7-135-3313_3675_3691-61640--,00.html

thanks,

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

--

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, July 30, 2015 2:11 PM
To: Cook, Pat (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: Flint Lead/copper 90th letter
Attachments: Flint PbCu15.doc

Attached for editing

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



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

July 27, 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 January 1, 2015, through June 30, 2015.

Action Levels	Results this monitoring period		Next monitoring period	
	90 th Percentile	# of Samples Above Action Level	# of Samples Required	Take Samples Within These Dates
Lead 15 parts per billion (ppb)	11 ppb	7	60	1/1 and 6/30/2017 Submit results to this office by July 10, 2017
Copper 1.3 parts per million (ppm)	0.16 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 2015 Consumer Confidence Report (CCR) due to our office, your customers, and the local health department, by July 1, 2016. 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>.

Mr. Brent Wright

2

March 30, 2015

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."

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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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, July 28, 2015 1:14 PM
To: Prysby, Mike (DEQ); Scherbarth, John (AG)
Subject: RE: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

The link below is for Flint's 2015 Consumer Confidence Report (representing 2014 data and the current TTHM numbers), which meets the PN requirements for the 2nd quarter '15 VN. This report was distributed on or before the 7/1/15 deadline.

<https://www.cityofflint.com/wp-content/uploads/CCR-2014.pdf>

Adam

From: Prysby, Mike (DEQ)
Sent: Tuesday, July 28, 2015 12:02 PM
To: Scherbarth, John (AG)
Cc: Rosenthal, Adam (DEQ)
Subject: RE: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

John,
 Attached is a copy of the 2nd quarter TTH PN that was distributed to Flint city residents around April 1, 2015. Also, included with the PN is further discussion of the TTHM levels and the trend in concentration.

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)
Subject: FW: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

Mike

Can you please send me a PDF version of the notice that the City of Flint sent on or about April 1?

John C. Scherbarth

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, July 28, 2015 11:14 AM
To: Scherbarth, John (AG)

Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ)

Subject: FW: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

John, the April 3rd letter was for a different rule and not a violation letter. The attached is the latest violation notice regarding the disinfection byproduct MCL.

thanks,

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, July 28, 2015 11:35 AM
To: Scherbarth, John (AG)
Cc: Prysby, Mike (DEQ)
Subject: RE: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

It looks like that is the correct page with a wrong date in the header. A new date of July 1st is for the 2nd PN requested for this year. We will send copies of both PNs

Adam

From: Scherbarth, John (AG)
Sent: Tuesday, July 28, 2015 11:31 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

Adam

Page 3 of what you sent to me appears to be page 3 of the March 5 letter. Please resend the complete June 9 letter.

John C. Scherbarth

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, July 28, 2015 11:14 AM
To: Scherbarth, John (AG)
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: FW: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015

John, the April 3rd letter was for a different rule and not a violation letter. The attached is the latest violation notice regarding the disinfection byproduct MCL.

thanks,

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

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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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, July 28, 2015 11:14 AM
To: Scherbarth, John (AG)
Cc: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: FW: Flint Drinking Water TTHM Standard Violation - 2nd quarter 2015
Attachments: Flint VN TTHM 6_9_15.pdf

John, the April 3rd letter was for a different rule and not a violation letter. The attached is the latest violation notice regarding the disinfection byproduct MCL.

thanks,

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.

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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



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE



DAN WYANT
DIRECTOR

June 9, 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: Violation Notice (VN) – Maximum Contaminant Level for Total
Trihalomethanes (TTHM)
2nd 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 LRAA, based on the last four quarters, ending June 30, 2015, is 0.094 mg/L which exceeds the standard, and at this time only one of the eight sample site locations exceed the LRAA standard of 0.080 mg/L.

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 June 1, 2015, and will continue until the TTHM LRAA is below the MCL at all sample sites.

Mr. Brent Wright

2

June 9, 2015

TTHM Results (mg/L)	8/21/14	11/20/14	2/17/15	5/18/15	LRAA	OEL
DBP1 McDonalds 3719 Davison	0.145	0.059	0.0162	0.0514	0.068	0.044
DBP2 Liquor Palace 3302 South Dort Highway	0.127	0.033	0.0168	0.0635	0.060	0.044
DBP3 North Flint Auto 6204 North Saginaw St.	0.118	0.041	0.0149	0.0452	0.055	0.037
DBP4 University Market 2501 Flushing Road	0.196	0.094	0.0245	0.0598	0.094	0.059
DBP5 Taco Bell 3606 Corunna Road	0.181	0.034	0.0151	0.0547	0.072	0.040
DBP6 Rite-Aid Pharmacy 5018 Clio Road	0.144	0.054	0.0192	0.0605	0.069	0.048
DBP7 Salem Housing 3216 MLK Boulevard	0.112	0.050	0.0285	0.0727	0.066	0.056
DBP8 BP Gas Station 822 South Dort Highway	0.112	0.036	0.0199	0.0461	0.054	0.037

We are encouraged by the results from the most recent round of compliance samples collected on May 18, 2015, which again show individual TTHM levels below 0.080 mg/L at all locations throughout the City's system. Operational Evaluation Reports from December 2014, February 2015, and May 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 for the most recent quarter in comparison to levels in May 2014, 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 May 29, 2015, and will provide the City and their consultant with comments, as needed, to help address this MCL violation.

Further, the TTHM operational evaluation level (OEL) calculated in accordance with R 325.10719I, *Disinfection byproducts: operational evaluation levels*, of the 1979 Administrative Code, is now below the 0.080 mg/L operational evaluation trigger at all eight sample site locations. However, our office is requesting that an operational evaluation again be conducted incorporating the most recent sample results, given the increase in TTHM levels from February 2015 results, and that the next monitoring period of August has been identified as the City's peak month for TTHM levels. **Please provide our office with an updated Operational Evaluation Report by Monday, August 31, 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 June 23, 2015.

Mr. Brent Wright

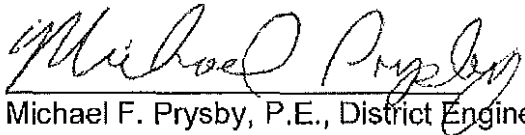
3

March 5, 2015

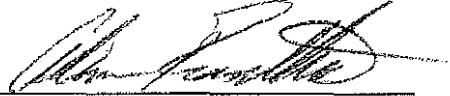
Administrative rule R 325.10403 of Act 399 requires that suppliers provide public notice (PN) as soon as practical, but no later than thirty (30) days after the supplier learns of this type of violation, by mail or direct delivery **and** by any other means reasonably calculated to reach customers not 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 July 1, 2015, and send us a signed and dated copy of the notice that you issued within ten (10) days of distributing the PN.** 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. Robert Bincsik, City of Flint
Mr. Howard Croft, City of Flint
Mr. Michael Glasgow, 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 (August 21, November 20 of 2014, and February 17 & May 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 ($\mu\text{g/L}$). The location reporting the highest TTHM level was 94 $\mu\text{g/L}$; 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 the 80 $\mu\text{g/L}$ 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 one 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.		

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, July 23, 2015 4:20 PM
To: Philip, Kris (DEQ); Busch, Stephen (DEQ)
Subject: ACLU article regarding Flint lead

<http://www.aclumich.org/democracywatch/index.php/entry/corrosive-impact-leaded-water-and-one-flint-family-s-toxic-nightmare>

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Tuesday, July 21, 2015 8:51 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: FW: 73154 - 56

Not sure why Flint keeps sending samples in, maybe anticipating a next round. So as I sent yesterday, the final 90th will be 11 ppb.

Adam

From: Brewster, Simone (DEQ)
Sent: Tuesday, July 21, 2015 8:29 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: 73154 - 56

Good Morning Adam,

LF73154 – 341 Robbie Lane - 07.14.15
 LF73155 – 2106 Pierce St - 07.09.15
 LF73156 – 413 Burroughs Ave - 07.06.15

All received Friday, 07.17.15 @ 10:30

Simone Brewster
 DEQ Drinking Water Laboratory
 Laboratory Services Section
 517.335.8184 (T)
 517.335.8562 (F)
brewsters@michigan.gov

From: Rosenthal, Adam (DEQ)
Sent: Monday, July 20, 2015 4:39 PM
To: Brewster, Simone (DEQ)
Subject: 73154 - 56

Hi Simone, can you tell me the sample date on these last 3 Pb/Cu samples from Flint 02310?

thanks,

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Monday, July 20, 2015 4:54 PM
To: Busch, Stephen (DEQ)
Cc: Prysby, Mike (DEQ)
Subject: Flint Pb 1st 1/2 2015

68 samples collected by 6/30/15.

90th = 11.4 ppb with 6 samples > AL.

waiting on a sample date for 3 more results, if collected w/in the monitoring period and are less than 10, the 90th would be 10 ppb.

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Monday, July 20, 2015 4:39 PM
To: Brewster, Simone (DEQ)
Subject: 73154 - 56

Hi Simone, can you tell me the sample date on these last 3 Pb/Cu samples from Flint 02310?

thanks,

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Friday, July 17, 2015 4:27 PM
To: Brewster, Simone (DEQ)
Subject: Flint 02310

Hi Simone, I'm looking for 3 more lead/copper samples that are not LF72033 -35. They should have been received around or at the same date/time. Let me know if you find anything.

thanks,

Adam Rosenthal, EQA
MDEQ – Office of Drinking Water and Municipal Assistance
Lansing District – Constitution Hall 1SW
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Lansing, MI 48909
517-284-6644
fax: 517-241-3571

For MORs, Lab Results & Reporting Forms:
DEQ-DWMA-Lansing@michigan.gov

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Friday, July 10, 2015 11:28 AM
To: Michael Glasgow
Cc: Brent Wright
Subject: RE: lead/copper

we are discussing options regarding this and future rounds of monitoring and will get back with you.

thanks,

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: Michael Glasgow [<mailto:mglasgow@cityofflint.com>]
Sent: Thursday, July 09, 2015 2:19 PM
To: Rosenthal, Adam (DEQ)
Cc: Brent Wright
Subject: Re: lead/copper

Adam,

I just sent the last of the samples to the lab today. Unfortunately we did not reach 100 samples. I believe the count I have is 76 total. Since we have had a few more hits this round, we are going to continue to solicit samples for our own informational purposes. I am disappointed in the turnout of sampling, we distributed close to 200 sample bottles. With this monitoring violation will we be required to collect another round of 100 samples?

Also, I have attached a copy of our June bromate test results.

On Thu, Jul 9, 2015 at 9:55 AM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Morning Mike, do you have a count on how many lead/copper samples were turned in? I know they all haven't been run at the lab yet, but if I can verify how many there will be, that would be good. So far I have 70 results and the City is below the AL for lead – current 90th = 13 ppb. All the copper results are below.

thanks,

Adam Rosenthal, EQA

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fax: 517-241-3571

For MORs, Lab Results & Reporting Forms:

DEQ-DWMA-Lansing@michigan.gov

--

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, July 09, 2015 2:22 PM
To: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: FW: lead/copper
Attachments: June 2015 Bromate Results.pdf

fyi

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Sent: Thursday, July 09, 2015 2:19 PM
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Cc: Brent Wright
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Lansing, MI 48909

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For MORs, Lab Results & Reporting Forms:

DEQ-DWMA-Lansing@michigan.gov

--

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

**NSF International**

789 N. Dixboro Rd. Ann Arbor, MI 48105, USA
1-800.NSF.MARK | +1-734.769.8010 | www.nsf.org

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	26-JUN-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-00173940		
Project Number	10005233 (CL06)		
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 Levanseler

Kerri Levanseler - Director, Chemistry Laboratory

Date 26-JUN-2015

**General Information**

Standard: USFDA CFR Title 21 Part 165.110
Date and Time Sampled: 06/22/2015 08:45 EDT
Product Description: Municipal Water
Test Description: Bromate - June 2015

Sample Id: **S-0001167921**
Description: Municipal Water - 06/22/2015 08:45 EDT
Sampled Date: 06/22/2015
Received Date: 06/23/2015

Testing Parameter	Reporting Limit	Result	FDA SOQ	Units	P / F
Disinfection Residuals/Disinfection By-Products					
Bromate	5	ND	10	ug/L	Pass



<<Additional Information>>

Sample Id: S-0001167921

Test Parameter	Date Analyzed	Time Analyzed	Date Prepared/ Processed
Disinfection Residuals/Disinfection By-Products			
Bromate (Ref: EPA 300.1)	25-JUN-2015		


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)
Pennsylvania (# 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.

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Monday, June 29, 2015 10:31 AM
To: Cook, Pat (DEQ)
Subject: RE: 6/30 & 7/1/15 deadlines

ok, thanks.

Adam

From: Cook, Pat (DEQ)
Sent: Monday, June 29, 2015 10:28 AM
To: Rosenthal, Adam (DEQ)
Subject: RE: 6/30 & 7/1/15 deadlines

Yea, that's not real clear. Other supplies are using the intake number noted in SDWIS. For Flint have them use IN001.

pat

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Sent: Monday, June 29, 2015 10:22 AM
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Morning Pat, do you have a list or more clarification to what the "source id number" is for the Flint River? The surface water folks have no idea what I'm looking for.

thanks,

Adam

From: Kammer, Stephanie (DEQ)
Sent: Monday, June 29, 2015 9:25 AM
To: Bennett, Charles (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: 6/30 & 7/1/15 deadlines

Sorry, I don't know what a source id code is.

I assume it is not referring to a HUC code?

From: Bennett, Charles (DEQ)
Sent: Monday, June 29, 2015 9:18 AM
To: Rosenthal, Adam (DEQ); Kammer, Stephanie (DEQ)
Subject: RE: 6/30 & 7/1/15 deadlines

I don't think so. Stephanie might know if they do?

Charles Bennett, PE

DEQ Water Resources Division
 Lansing District Office
BennettC4@michigan.gov
 ph 517-284-6659; fax 517-241-3571

From: Rosenthal, Adam (DEQ)
Sent: Monday, June 29, 2015 8:53 AM
To: Bennett, Charles (DEQ)
Subject: FW: 6/30 & 7/1/15 deadlines

Does your program have a source id code for the Flint river?

thanks,

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
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For MORs, Lab Results & Reporting Forms:
DEQ-DWMA-Lansing@michigan.gov

From: Michael Glasgow [<mailto:mglasgow@cityofflint.com>]
Sent: Friday, June 26, 2015 4:46 PM
To: Rosenthal, Adam (DEQ)
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ); Brent Wright
Subject: Re: 6/30 & 7/1/15 deadlines

Adam,

Just a quick question on the LT2 worksheet. What is the source identification number for the Flint River?

On Thu, Jun 25, 2015 at 10:47 AM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

Morning Mike & Brent, just wanted to remind you/confirm that Flint is on track for a few items.

1 – We hope you have 61 more lead/copper samples collected and sent to the lab by 6/30/15, and that they are will be below the AL for lead. As of now with 39 results, Flint's 90th percentile is over the AL for lead.

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Please provide an update for the above items.

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Mike Glasgow
Utilities Administrator
City of Flint

1101 S. Saginaw St.
Flint, MI 48502
(810)766-7135 ext. 2602

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To: Mike Glasgow
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ); 'bwright@cityofflint.com'
Subject: FW: 6/30 & 7/1/15 deadlines

Morning Mike, per the central office, use IN001 for the Source ID.

thanks,

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Please provide an update for the above items.

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Monday, June 29, 2015 9:39 AM
To: Kammer, Stephanie (DEQ); Bennett, Charles (DEQ)
Subject: RE: 6/30 & 7/1/15 deadlines

not sure, I'll check with central office.

thanks,

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For MORs, Lab Results & Reporting Forms:

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--

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, June 25, 2015 10:48 AM
To: Mike Glasgow; 'bwright@cityofflint.com'
Cc: Prysby, Mike (DEQ); Busch, Stephen (DEQ)
Subject: 6/30 & 7/1/15 deadlines
Attachments: Flint-2015-04-03-LT2ESWTR.pdf

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For MORs, Lab Results & Reporting Forms:
DEQ-DWMA-Lansing@michigan.gov



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE



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

Mr. Brent Wright

2

April 3, 2015

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

Rennaker, Joanne (DEQ)

From: Rosenthal, Adam (DEQ)
Sent: Thursday, June 11, 2015 12:40 PM
To: Prysby, Mike (DEQ)
Subject: RE: Monthly Bromate Results
Attachments: deq-wb-dwehs-cws-LeadCopperRptConsNotice_294663_7.doc

it's not because they never sent in their PbCu form or Pb notification – should be a MV at this point. the form is attached and at our website at the following link.

http://www.michigan.gov/deq/0,4561,7-135-3313_3675_3691-61640--,00.html

Pb 90th = 2.0 ppb with 0 samples >AL
 Cu 90th = 0.055 ppm with 0 samples >AL

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: Prysby, Mike (DEQ)
Sent: Thursday, June 11, 2015 11:33 AM
To: Rosenthal, Adam (DEQ)
Subject: Re: Monthly Bromate Results

Can u give me Cllo,s 90th on lead & copper? At the supply now ...should have something for 2014...but it's not in the red file

Sent from my iPhone

On Jun 11, 2015, at 11:30 AM, Rosenthal, Adam (DEQ) <ROSENTHALA@michigan.gov> wrote:

fyi, ND

Adam

From: Michael Glasgow [<mailto:mglasgow@cityofflint.com>]
Sent: Thursday, June 11, 2015 11:29 AM
To: Rosenthal, Adam (DEQ)
Subject: Monthly Bromate Results

Adam,

Here is a copy of the bromate test results from the month of May.

--

Mike Glasgow
Utilities Administrator
City of Flint

<May 2015 Bromate.pdf>

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: _____
2. County: _____ 3. WSSN: _____
4. Population: _____ 5. Monitoring Period: From: _____ To: _____
6. Minimum # of Samples Required: _____ 7. # of Samples Taken: _____
8. Name of Certified Laboratory: _____

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?
☐	☐	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: _____

Title: _____

Phone: _____

Date: _____

11. TAP SAMPLING DATA: (Use additional sheets as needed)

Water Supply Name/County	WSSN
--------------------------	------

RESULTS:

[illegible]

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

	90 th percentile	Ave	Max	# > AL
Pb				
Cu				

12. **CONSUMER NOTICE OF LEAD RESULT CERTIFICATION:** Each Community Water Supply (CWS) must deliver a Consumer Notice Of Lead Result to occupants of each location sampled within 30 days of knowing the sample result under R 325.10410(5).

Not later than 3 months following the end of the monitoring period, each CWS must mail a sample copy of the Consumer Notice Of Lead Result to the DEQ along with a certification that the notice has been distributed under R 325.10710d(f)(3).

Instructions:

- A. Use the Consumer Notice template on the next page or another approved by the DEQ.
- B. Complete one Consumer Notice for each home or building that was sampled.
- C. Mail each Consumer Notice to its corresponding home or building sampled.
- D. Select **one (1) example copy** of a notice sent to a consumer. On the bottom of the Consumer Notice, certify that:
 - A Consumer Notice was sent to persons served at each of the taps that was tested
 - Delivery was by mail or another method approved by the DEQ
 - Delivery was within 30 days of knowing the result
 - Consumer Notice includes required content:
 - The result of lead tap water monitoring for the tap that was tested
 - An explanation of the health effects of lead
 - Steps consumers can take to reduce exposure to lead in drinking water
 - Contact information for the public water supply
 - The maximum contaminant level goal and the action level for lead and the definitions for these two terms
- E. Send only **one (1) certified completed example copy** to the DEQ district office*

* For district office addresses, visit www.michigan.gov/deq and click on Contacts.

Consumer Notice of Lead Result in Drinking Water

Water Supply Name: _____

County: _____

WSSN: _____

Sample Location: _____

Date Sampled: _____

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 below which there is no known or expected risk to health. MCLGs allow for a margin of safety. ppb: parts per billion or micrograms per liter.	Lead (ppb)	15	0	
	Copper (ppb)	1300	1300	

Lead can cause serious health problems 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 of lead on the brain with lowered 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 it 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 water tap; lead dissolves more easily in hot water.
- *Do not boil water to remove lead.* Boiling water will not reduce lead levels.
- *Look for 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 or labeled 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: _____.

For more information on reducing lead exposure around your home and 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.

Certification: _____

WSSN: _____

I certify that this public water supply has provided the consumer notice of lead result to persons served at each of the taps that was tested, either by mail or by another method approved by the DEQ, within 30 days of knowing the result. The Notice includes required content.

Signature _____

Title _____

Date Sent to Consumer _____

Reminder to water supplier: Complete this certification on only one (1) example copy of a notice sent to a consumer and submit it to the DEQ.

Instructions for Completing Lead and Copper Report Form

1. **WATER SUPPLY NAME:** Enter the name of the public water supply where sampling is being conducted.
2. **COUNTY:** Enter the name of the county in which the public water supply is located.
3. **WSSN:** Enter the 5-digit public water supply serial number (e.g., 01234 or 40123).
4. **POPULATION:** Enter the number of people served by the public water supply.
5. **MONITORING PERIOD:** Enter the beginning and end dates of the monitoring period during which the sampling took place (e.g., from 06/01/2009 to 09/30/2009).
6. **MINIMUM # OF SAMPLES REQUIRED:** This number is according to the rules based on population or set by the DEQ for lead/copper tap sampling for this public water supply.
7. **# OF SAMPLES TAKEN:** Indicate the number of tap samples taken for lead and copper analysis in the monitoring period.
8. **NAME OF CERTIFIED LABORATORY:** Enter the name of the certified laboratory performing the lead/copper analyses on samples taken in the monitoring period.
9. **SAMPLE CRITERIA:** Answer the questions accordingly, briefly explaining, where necessary, the reason for your action.
10. **NAME:** Enter the name, title, and phone of the authorized water utility official and date.
11. **TAP SAMPLING DATA:** Enter the name of the public water supply and the WSSN. Complete the remainder of the sheet as follows:

Sample Location: Enter the street address of the location where each lead and copper tap sample is taken.

Date: Enter the date the tap sample was collected.

Sample Category: Use the following numbers to designate the location criteria being met by the sample site:

	Sample Category	
Tier 1 Sites	1	Single family residence with lead service line.
	2	Single family residence with lead solder copper piping constructed after 1982.
	3	Single family residence with lead plumbing.
	4	Multiple family residence (MFR) with either lead service line, lead solder copper piping constructed after 1982, or lead plumbing (when MFR comprise at least 20 percent of the total service connections).
Tier 2 Sites	5	Buildings with lead service lines, lead solder copper piping constructed after 1982, or lead plumbing.
Tier 3 Sites	6	Single family residence with lead solder copper piping constructed before 1983.
Other		If no Tier 1, 2, or 3 sites available, sample sites that use plumbing materials commonly found at other locations in the water supply.

Additionally, if lead service lines are present, tap samples must be taken from the following:

50 percent from ...	AND 50 percent from ...
single family residences with lead service lines	single family residences with lead solder copper piping constructed after 1982 OR single family residences with lead plumbing.
Tier 1 sites should be selected for sampling over Tier 2 or 3 sites even if all samples are from lead service lines or from residences with lead solder copper piping constructed after 1982.	

Piping Materials: Designate the type of service line and building plumbing piping materials used at the location where the tap lead/copper sample was taken.

C Copper
G Galvanized
L Lead
P Plastic

Lead: Enter the concentration of lead in ppb (parts per billion) or $\mu\text{g/l}$ (micrograms per liter) as reported by the certified lab.

Copper: Enter the concentration of copper in ppb or $\mu\text{g/l}$ as reported by the certified lab.

Lab #: For lab purposes only, indicate a laboratory identification number or sample number.

12. **CONSUMER NOTICE OF LEAD RESULT CERTIFICATION:** Water supplies have until 3 months after the end of the monitoring period to submit the certification along with a sample copy of a notice sent to consumers to the appropriate DEQ district office. For district office addresses, visit www.michigan.gov/deq and click on Contacts. However, the DEQ encourages water supplies to send the sample notice and its certification (template available on page 4) along with the Lead and Copper Report (pages 1 and 2 of this form), which is due within 10 days after the end of the monitoring period.