

Koryzno, Edward (Treasury)

From: Workman, Wayne (TREASURY)
Sent: Sunday, February 01, 2015 8:31 PM
To: Byrne, Randall (Treasury)
Cc: Koryzno, Edward (Treasury); Cline, Richard (Treasury)
Subject: Re: Veolia Proposal to City of Flint - Invitation to Bid - Proposal No.: 15-573

Lets talk Monday, back to the game has the storm let up? Leaving very early in the am

Sent from my iPhone

On Feb 1, 2015, at 8:28 PM, Byrne, Randall (Treasury) <ByrneR1@michigan.gov> wrote:

Wayne:

I reviewed the Proposal. The total cost is not known. They will charge the City \$225 per hour (not sure if this is per person) for the core team plus expenses. There is no limit such as "not to exceed" indicated in the Proposal. They talk about a lump sum for longer term services through 2016. I cannot determine how many hours are necessary, it depends on the extent of the problems and how difficult they are to resolve.

Randy,

From: Workman, Wayne (TREASURY)
Sent: Friday, January 30, 2015 5:00 PM
To: Byrne, Randall (Treasury); Cline, Richard (Treasury); Koryzno, Edward (Treasury)
Subject: Fwd: Veolia Proposal to City of Flint - Invitation to Bid - Proposal No.: 15-573

Can you figure cost and scope of work from all this?

Sent from my iPad

Begin forwarded message:

From: "Gerald Ambrose" <gambrose@cityofflint.com>
To: "Byrne, Randall (Treasury)" <ByrneR1@michigan.gov>, "Koryzno, Edward (Treasury)" <KoryznoE@michigan.gov>, "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>
Subject: Fwd: Veolia Proposal to City of Flint - Invitation to Bid - Proposal No.: 15-573

Veolia

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

From: Elizabeth Murphy
<emurphy@cityofflint.com<<mailto:emurphy@cityofflint.com>>>
Date: Fri, Jan 30, 2015 at 4:34 PM
Subject: Fwd: Veolia Proposal to City of Flint - Invitation to Bid - Proposal No.: 15-573
To: Gerald Ambrose

<gambrose@cityofflint.com<<mailto:gambrose@cityofflint.com>>>

Attached to this thread is the Veolia Proposal for Flint.

LIZ

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

From: Derrick Jones <djones@cityofflint.com<<mailto:djones@cityofflint.com>>>

Date: Thu, Jan 29, 2015 at 3:35 PM

Subject: Fwd: Veolia Proposal to City of Flint - Invitation to Bid - Proposal No.: 15-573

To: Elizabeth Murphy

<emurphy@cityofflint.com<<mailto:emurphy@cityofflint.com>>>

Please find attached an electronic version of the proposal from Veolia that was requested. Please disseminate to the appropriate parties. Thanks.

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

From: Crehan, Frank

<frank.crehan@veolia.com<<mailto:frank.crehan@veolia.com>>>

Date: Thu, Jan 29, 2015 at 3:32 PM

Subject: Veolia Proposal to City of Flint - Invitation to Bid - Proposal No.: 15-573

To: djones@cityofflint.com<<mailto:djones@cityofflint.com>>

Cc: David Gadis <david.gadis@veolia.com<<mailto:david.gadis@veolia.com>>>, Jonathan Carpenter

<jonathan.carpenter@veolia.com<<mailto:jonathan.carpenter@veolia.com>>>

Mr. Jones:

Thank you for your call today regarding our Proposal response.

Attached please find the requested PDF (digital) copy of our complete Proposal that was delivered to you in hard copy form yesterday.

If you need anything else in this regard, or require any additional information, you may contact me or Mr. Gadis.

Mr. Gadis can be reached as follows:

- * Telephone: 317/ [REDACTED]
- * Email: david.gadis@veolia.com<<mailto:david.gadis@veolia.com>>

My contact information is provide below.

Regards,

--

Francis P. Crehan

Vice President - Proposal Development

Veolia North America Operating Services, LLC
101 West Washington Street, Suite 1400 East
Indianapolis, Indiana 46204

E-Mail: frank.crehan@veolia.com<<mailto:frank.crehan@veolia.com>>
Telephone: 317-917-3718
Fax: 317-686-9519 (Or same as phone number - 317-917-3718)
Cell: 713- [REDACTED]

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Derrick Jones,
Purchasing Manager
City of Flint
1101 S. Saginaw St., Rm. 304
Flint, MI 48502
Ph: 810-766-7340 #2
Fax: 810-766-7240

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Liz Murphy
Assistant to the Emergency Manager
City of Flint
810 237 2025

Stanton, Terry A. (Treasury)

From: Stanton, Terry A. (Treasury)
Sent: Monday, February 02, 2015 12:38 PM
To: Workman, Wayne (TREASURY)
Cc: Dempkowski, Angela (Treasury)
Subject: Fwd: Backgrounder on Tuesday Flint water event
Attachments: Briefing Flint grant announcement.docx; ATT00001.htm

Most recent info from Gov's Comms. Will fwd latest draft releases.

TS

Begin forwarded message:

From: "Murray, David (GOV)" <MurrayD1@michigan.gov>
Date: January 30, 2015 at 6:04:32 PM EST
To: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>, "Clement, Elizabeth (GOV)" <clemente@michigan.gov>, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov>, "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>, "Walsh, John (GOV)" <WalshJ@michigan.gov>, "Brownfield, Michael (GOV)" <BrownfieldM2@michigan.gov>, "Allard, Claire (GOV)" <allardc1@michigan.gov>, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>, "Posthumus, Dick (GOV)" <Posthumusd@michigan.gov>, "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>, "Clayton, Stacie (GOV)" <claytons3@michigan.gov>, "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>, "Biehl, Laura (GOV)" <BiehlL@michigan.gov>
Cc: "Wisniewski, Wendy (GOV)" <wisniewskiw@michigan.gov>, "Rospond, Laurie (GOV)" <rospondl@michigan.gov>
Subject: Backgrounder on Tuesday Flint water event

Team,

Here is background on the planned Tuesday event in Flint regarding the \$2 million Distressed Cities grant and other issues connected to the water issue.

There are plans for two press releases on Tuesday. The first will detail the two Flint grants and will be released by the governor's communications office. The other release, which would detail the other grants, would follow from Treasury with a quote from the governor.

Mayor Walling has agreed to speak at the event, with Harvey Hollins and Dan Wyant representing the governor's office. Sen. Ananich has asked to speak, and it has been suggested that Rep. Neeley would speak and it might be better to add him to the program. Others, such as Deputy Director Workman and Emergency Manager Ambrose, would be present and available.

The attached document includes details about the planned event, as well as background on the grants from Treasury and on the entire water issue from DEQ as well as Mayor Walling's Facebook post about the governor and links to the stories in the media about the issue.

We have a room reserved and are working with the communications team in Flint to have microphones and other items needed for the event.

Please let me know if there is any information you think should also be included, or anything that should be changed. Once everyone has had the opportunity to review, we can forward to the governor.

Thank you, everyone, for your assistance. I know there are lots of moving pieces and many people involved.

Dave

Dave Murray

Deputy Press Secretary | Executive Office of Governor Rick Snyder

MurrayD1@michigan.gov

517-335-6397, office

517- [REDACTED] mobile

Twitter: @michigandmurray

Lamphier, Wendy (Treasury)

From: Gelisse, Ashley (TREASURY)
Sent: Monday, February 02, 2015 3:08 PM
To: Posthumus, Dick (GOV);Wurfel, Sara (GOV);Clement, Elizabeth (GOV) (clemente@michigan.gov);Muchmore, Dennis (GOV);Allard, Claire (GOV);Hollins, Harvey (GOV);Clayton, Stacie (GOV)
Cc: Workman, Wayne (TREASURY);Stanton, Terry A. (Treasury)
Subject: Independent Water Analysis - Flint
Attachments: Independent Water Analysis.PDF

Follow Up Flag: Follow up
Flag Status: Flagged

FYI only – a helpful article about the water situation in Flint, offers a good independent assessment. Thanks.

Ashley Gelisse

Senior Policy Advisor to State Treasurer Kevin Clinton
Richard H Austin Building
430 West Allegan Street
Lansing, MI 48922
Direct: 517-241-2474
Cell: 517-
gelissea@michigan.gov

Stanton, Terry A. (Treasury)

From: Stanton, Terry A. (Treasury)
Sent: Monday, February 02, 2015 12:39 PM
To: Workman, Wayne (TREASURY)
Cc: Dempkowski, Angela (Treasury)
Subject: Fwd. DRAFT releases for Flint grants, other Distressed Cities grants
Attachments: 2 FDCVT Grant Awards draft.docx; ATT00001.htm; RELEASE Flint water grants.docx; ATT00002.htm

Releases for tomorrow.

TS

Begin forwarded message:

From: "Murray, David (GOV)" <MurrayD1@michigan.gov>
Date: February 1, 2015 at 3:37:44 PM EST
To: "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Wurfel, Sara (GOV)" <Wurfels@michigan.gov>, "Biehl, Laura (GOV)" <BiehlL@michigan.gov>, "Stanton, Terry A. (Treasury)" <StantonT@michigan.gov>, "Rexford, Tori (GOV)" <rexfordt@michigan.gov>, "Paciorek, Josh (GOV)" <Paciorekj@michigan.gov>
Subject: DRAFT releases for Flint grants, other Distressed Cities grants

Team,

Here are pair of drafts for Tuesday regarding the Distressed Cities grants. One highlights the work in Flint and would be released in conjunction with the event, the other would come from Treasury shortly afterward.

I've made some changes to Terry's draft – thank you, Terry! – and prepared one for Flint. We can approach Mayor Walling or EM Ambrose to add a quote, if you think that would be appropriate.

Thank you for taking a look.

Dave

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
517- mobile
Twitter: @michigandmurray

Stanton, Terry A. (Treasury)

From: Murray, David (GOV)
Sent: Monday, February 02, 2015 1:34 PM
To: Agen, Jarrod (GOV); Stanton, Terry A. (Treasury); Wurfel, Sara (GOV); Wurfel, Brad (DEQ); Biehl, Laura (GOV); Hollins, Harvey (GOV); Clayton, Stacie (GOV); Walsh, John (GOV); Brownfield, Michael (GOV); Allard, Claire (GOV); Rexford, Tori (GOV)
Subject: Flint event on Tuesday
Attachments: 2 FDCVT Grant Awards draft.docx; Briefing Flint grant announcement.docx; RELEASE Flint water grants.docx

Good afternoon team,

Just wanted to touch base on Tuesday's event in Flint. Unless told otherwise, I'm continuing to prepare for the event.

I touched base with Harvey and Stacie, who recommended we proceed. Harvey is approaching some stakeholders about appearing at the event, and will forward those names to me later today.

I left a message with Dick Posthumus to see if he has any concerns about proceeding.

The Senate Democrats said Sen. Ananich will want to appear. Katie Carey from the House said she would forward information to Rep. Neeley and Phelps. I have not heard back from her yet.

I've attached the backgrounder and the draft releases from Governor's Communications and Treasury. I've sent a message to the mayor's office about a quote, but have not heard back yet.

Brad and I spoke about Director Wyant's role and potential comments. He will point out that there are things the state can do to help monitor the situation, but also will note that the city's water infrastructure is aging, which contributes to the problems.

We need some direction on an advisory. Should this be listed on a typical advisory from the governor's office, or come from Treasury? Do we even issue an advisory in favor of just contacting media directly in the morning?

Please give the draft releases a read for potential changes, or let me know of other concerns.

Thank you!

Dave

Dave Murray
Deputy Press Secretary | Executive Office of Governor Rick Snyder
MurrayD1@michigan.gov
517-335-6397, office
517- [REDACTED] mobile
Twitter: @michigandmurray



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

R. KEVIN CLINTON
STATE TREASURER

February 3, 2015

FOR IMMEDIATE RELEASE
www.michigan.gov/treasury

Contact: Terry Stanton, Treasury
(517) 335-2167
Dave Murray, Governor
(517) 335-6397

Gov. Rick Snyder announces grants helping distressed municipalities with water, public safety, appraisal issues
\$8 million awarded for projects to improve services, quality of life

Gov. Rick Snyder today awarded \$8 million to eleven municipalities to fund various improvement projects, including water system and street lighting enhancements and technology upgrades through the Financially Distressed Cities, Villages, and Townships Grant Program.

Municipalities are eligible for the grants if they are experiencing one or more conditions indicative of "probable financial stress," as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

"Municipalities receiving this special funding are some of the areas hardest hit by the Great Recession," Snyder said. "I am pleased we can offer funding assistance to help these local governments improve various public services their taxpayers and residents expect and deserve."

Under the grant program, funding may be used to pay for specific projects, services, or strategies that move a city, village, or township toward financial stability. There was \$8 million appropriated for the program with a \$2 million cap, per local unit.

The following communities will receive funding this year, with projects and amounts noted (alphabetical order):

Local Unit	Project Description	Amount
City of Benton Harbor	Complete a property reappraisal to provide updated and accurate assessing records. Additionally, community enhancement through blight management and sidewalk replacement.	\$475,000
City of Benton Harbor	Water system enhancement through water main replacements and fire hydrant repairs.	\$434,960
City of Ecorse	Public safety enhancement through improved street lighting.	\$350,000
City of Flint	Water system enhancement through improved waste management.	\$1,100,000

City of Flint	Water system enhancement through leak detection and pipe assessments.	\$900,000
City of Hamtramck	Complete a property reappraisal to provide updated and accurate assessing records.	\$167,860
City of Hamtramck	Upgrade City Hall security.	\$50,000
City of Hamtramck	Public safety enhancement through improved street lighting.	\$404,600
City of Highland Park	Water system enhancement through meter replacement, leak detection, and system repairs.	\$2,000,000
City of Inkster	Complete a property reappraisal to provide updated and accurate assessing records.	\$73,460
City of Inkster	Water system enhancement through fire hydrant repairs.	\$150,000
City of Inkster	Provide a backup power source for public safety.	\$30,000
City of Inkster	Public safety enhancement through the creation of a multi-jurisdictional narcotic team.	\$240,000
City of Inkster	Public safety enhancement through police officer training.	\$41,970
City of Inkster	Public safety enhancement through the deployment of an additional police officer.	\$320,000
City of Lincoln Park	Public safety enhancement through updated technology.	\$143,490
City of Melvindale	Public safety enhancement through fleet replacement of police vehicles and updated technology.	\$88,000
City of Pontiac	Community enhancement through blight management.	\$125,000
City of River Rouge	Public safety enhancement through improved street lighting. Additionally, infrastructure replacements to City Hall.	\$591,508
Royal Oak Township	Public safety enhancement through improved street lighting	\$86,559
Royal Oak Township	Public safety enhancement of police services.	\$217,593

All appropriated funding has been spent. No future rounds will occur in FY 2015.

###

Briefing: Grant announcement in Flint

Tuesday, Feb. 3, 2015, 3-4 p.m.

Haskell Community Center, 2201 Forest Hills Ave. Flint

Governor's communications: Dave Murray, murrayd1@michigan.gov, 517 [REDACTED]

DEQ communications: Brad Wurfel, wurfelb@michigan.gov, [REDACTED]

Treasury communications: Terry Stanton, stantont@michigan.gov, [REDACTED]

Purpose

The state government is providing support for the Flint government as it addresses issues with its water system. The state on Tuesday is announcing that Flint is receiving two grants totaling \$2 million related to water system improvements through the Financially Distressed Cities, Villages and Townships grant program. DEQ Director Dan Wyant will address ongoing efforts with his agency to test Flint water and explain why the city is facing some of its problems. Senate Minority Leader Jim Ananich, D-Flint, will discuss his appreciation for the ongoing support for the city and its residents.

Attending

- Harvey Hollins, director of the Michigan Office of Urban Initiatives
- Dan Wyant, director of the Michigan Department of Environmental Quality
- Wayne Workman, deputy treasurer, Michigan Department of Treasury
- Jerry Ambrose, Flint emergency manager
- Dayne Walling, Flint mayor
- State Sen. Jim Ananich
- State Rep. Sheldon Neeley
- State Rep. Phil Phelps

Agenda

- | | |
|--------------------|--|
| 3:00 PM – 3:05 PM: | Harvey Hollins announces that Flint has received two grants totaling \$2 million. |
| 3:05 PM – 3:10 PM: | Dan Wyant discusses the state's ongoing role in monitoring Flint's water and any assistance that has been provided and will continue to be provided. |
| 3:10 PM – 3:15 PM: | Mayor Dayne Walling remarks about appreciation for state assistance. |
| 3:15 PM – 3:20 PM: | Sen. Jim Ananich remarks about appreciation for state assistance. |
| 3:20 PM – 3:25 PM: | Rep. Neeley remarks. |
| 3:25 PM – 3:35 PM: | Harvey Hollins closing remarks, opens floor to media questions. |
| 3:35 PM | Event ends, though this might be optimistic. |

Background

- The quality of Flint water has been a high-profile concern in recent weeks, with residents complaining about the color, taste and smell of tap water since a switch to Flint River water as a temporary source as a pipeline is built to Lake Huron as a water source starting in 2016.
 - Residents have attended meetings with jugs of brownish water.
 - U.S. Kildee has worked with labor and community groups to distribute bottled water.

- Mayor Walling has issued a letter (included below) calling for state and federal assistance for the city, including forgiveness of some \$20 million in debt through the Drinking Water Revolving Loan Fund and calling for the governor to come to Flint personally.
 - Walling also submitted a guest column to the Flint Journal with similar requests.
 - He said the loan forgiveness is needed for the city to upgrade its water treatment process.
 - Governor and Mayor Walling had a telephone conversation on Friday, and the mayor has pledged to work together on solutions.
- Rep. Sheldon Neeley also has sent the governor a letter, saying that his constituents “are on the verge of civil unrest.”
- The Department of Environmental Quality has been monitoring the water situation, with a detailed backgrounder and talking points attached below.
- The Treasury Department is announcing Tuesday that Flint is among the cities receiving a combined \$8 million the Financially Distressed Cities, Villages and Townships grant program.
 - The announcement of the other grants will follow the Flint announcement.
 - The Flint grants are \$1.1 million to allow the city to replace the functions of the old incinerator with new water pollution control facility allowing for the disposal of waste to landfills.
 - The other is \$900,000 to allow the city to hire a contractor to perform a leak detection survey, which will lead to prioritizing repairs.
 - A breakdown of the grants is included below.

Treasury breakdown of Flint grants

Flint Incinerator: The grant project entails shutting down the current Water Pollution Control Facility Incinerator (due to the incinerator not being up to new EPA standards). In order to meet EPA standards, it would cost roughly \$8.8M in upgrades to the current incinerator. The grant funding will allow them to replace the functions of the old incinerator by constructing new facilities which will allow for the disposal of waste to landfills.

Budget Breakdown

Construction Contractor	\$1,050,000
Project Management	<u>\$50,000</u>
Total	\$1,100,000

Flint Leak Detection: The grant project will allow the city to hire a contractor to perform a leak detection survey of the city water lines. The city will receive a map of leak locations and an assessment of leak severity. This data will allow the city to prioritize leak repair. The project also covers the expense of conducting a water pipe line wall thickness condition assessment on a portion of the city’s pipes. The assessment will guide the city’s water main replacement program.

Budget Breakdown

Project Planning	\$90,000
Mobilization of Crew to Site	\$27,000
Leak Detection < 16” diameter	\$378,000

Leak Detection 16" diameter or >	\$270,000
Pipe Condition Assessments	<u>\$135,000</u>
Total	\$900,000

DEQ backgrounder on Flint water

Following the formal approval of Flint into the KWA in 2012, DWSD sent Flint a letter saying their contract was thereby terminated (by early 2013).

Genesee County has been using DWSD water without a contract since May 2014. But Flint took the letter to imply a water cutoff, and promptly turned to DEQ with a proposal to use the Flint River (their historic backup system).

This proposed shift was pitched primarily as a money saver. But it put the city in the business of water production, where they historically had been in the business of water transmission. DEQ approved the use of the river as a source, based on the treatment plant's past performance as a standby facility and the improvements we outlined prior to a switchover.

Several municipalities around the state use surface water supplies (rivers): Blissfield near Monroe, Manistique, and Alma to name a few.

The city completed the upgrades at the water plant the facility and DEQ approved it April 2014.

There were some initial hiccups. Last summer, there were a couple of 'boil water' notices issued. One for a water test that showed e. coli, one for a break in the water main.

The challenge to using the Flint River as a source is that the condition of the water is variable and changes with season and weather. It has substantially more organic matter than deep lake sources like Lake Huron. This organic matter is mobilized by high water events, and warm weather also can account for more organic material in the water.

The treatment of the organic matter is done with chlorine. One might conclude that the continual answer is just to use more chlorine to achieve water safety. However, at some point on the continuum, the chlorine and organic matter create TTHM – total trihalomethanes – as a byproduct. When the standard for those is exceeded over several consecutive quarters of testing, the supply is required by law to issue public notice and submit an approved plan for addressing the situation.

You'll note that this regulatory approach means TTHM testing is done quarterly. That means people who use the system are exposed to TTHM for several months before the public notice is required. It's because TTHM is a chronic health threat. Over the long term (measured in decades), continued exposure can contribute to some known health problems. If this were an immediate health threat, customers would receive immediate notification to boil their water or not use it.

Put in context, the EPA (which established the standard and the rule) estimates the existence of the TTHM standard prevents an estimated 280 bladder cancer cases each year ... out of more than 330 million people who use public water supplies around the country.

It's not "nothing." State and federal law requires quarterly testing for TTHM and that the public be informed of it when the annual average of four quarters' worth of consecutive testing shows TTHM

levels exceeding 80 parts per billion. Flint's results managed to exceed the annual average in three quarters, and they must develop a plan to address it.

But it's not like an eminent threat to public health. Unlike an e. Coli or even total coliform bacteria maximum contaminant level, which require immediate public notification and response and are part of daily / hourly testing of public water supplies, TTHMs pose a public health concern with chronic, long-term exposure.

It's clear the nature of the threat was communicated poorly. It's also clear that folks in Flint are concerned about other aspects of their water – taste, smell and color being among the top complaints.

The Safe Drinking Water Act requires public water supplies be tested for more than 90 regulated contaminants, including microbial contaminants. The act, and the program here in Michigan, work to ensure that water is safe to drink. The act does not regulate aesthetic values of water. Here are some factors affecting the aesthetics of water in Flint.

1. It's the Flint River. The water supplied by DWSD historically came from Lake Huron. It's softer. With hard water, you get a different flavor and feel. It's why General Motors suspended use of Flint Water – it was rusting their parts. Also, there's the 'organics' factor (discussed previously).
2. The system is old. Flint has more than 500 miles of water pipes. More than half of those pipe miles are more than 75 years old. Much of it is cast iron. Hard water can react with cast iron and exacerbates the rusty factor, which creates that brown water that angry residents were holding up in jugs for the media cameras last week. Valve failure has also been a key challenge. The system has an estimated 7,500+ valves. When they stick open or stick shut, it affects the hydraulics of the system and increase areas of stagnation. The city has a backlog of valves that need to be addressed. They've done half a dozen or so since November.
3. Flint is old. Many of the homes served by the system are old. Brown water complaints may also be attributable to cast iron pipes in customers' service connection to the city lines. The DEQ has been encouraging people with water coloration concerns to contact the city and see whether it is the service line or the City's line causing the issue. Again, discoloration is not an indicator of water quality or water safety, but we recognize that nobody likes it.

In summary, the City of Flint has tremendous need to address its water delivery system. We are not aware that they have any capital improvement funds for preventative maintenance in place, much less line replacement project monies that will require hundreds of millions.

The City was approved for a Revolving Fund loan in 2008 or 2009. As a Distressed Community, they qualified for flexible terms and 2 percent interest rate Revolving Fund Loan. After they were notified they were approved for the loan, they declined it. Previous SRF loans from the state to Flint bear an outstanding balance of \$20.7 million today.

The DEQ continues working with the city to address the TTHM issue. They can take interim steps – from scrubbing the insides of transmission lines to carefully monitoring the hydraulic challenges in their system – to address customers' aesthetic concerns. Their TTHM numbers already are showing dramatic improvement; the November testing showed only one of seven sample points exceeding the standard.

The key now is that the standard is an average of three quarters' worth of results. It will be some time before they are officially "not in violation." However, depending on weather in 2015, it's not unforeseeable that we will be having this conversation again by next Christmas.

The key to the conversation is that TTHM is not a top health concern. That's key because residents need to understand TTHM in context, and it is key because it appears the mayor has seized on the public panic (sparked, frankly, by their poor communication of the violation notice) to ask the state for loan forgiveness and more money for their infrastructure improvement.

Another key thing to remember is that once the city connects to the new KWA system in 2016, this issue will fade in the rearview.

Key messages:

1. The DEQ Drinking Water program works with communities around the state to ensure that municipalities provide customers with clean, safe drinking water.
2. Municipal water supplies are tested rigorously and regularly for more than 90 regulated contaminants, including microbial contaminants that pose an immediate public health concern.
3. Flint's exceedance of the TTHM standard should reassure residents that the testing program is effective.
4. TTHM is not an immediate health threat. It is a chronic concern, one that can be problematic over the course of several decades of exposure. The public was notified because the law requires the city to make public notification, so that everyone can make informed decisions. This is particularly true for people with infants or those with compromised immune systems.
5. The DEQ is working with the City to address the situation. Recent tests show the TTHM numbers dropping rapidly. The department will continue working with the city in the months ahead, and residents should feel confident that their water is safe to drink unless the DEQ or City notifies them otherwise.
6. The discoloration and odor issues some Flint residents are experiencing are separate issues from the TTHM issue. TTHM is odorless, colorless and measured in parts per billion.
7. Flint water customers who have questions or concerns about their water should first contact the city to get answers and help. They also can contact the Michigan DEQ.

Mayor Walling's Facebook post

Friend,

Access to clean, safe, affordable water is a basic human right.

That's why I just sent Gov. Snyder my Flint Water Improvement Plan. It focuses on the areas of safety, quality, access, investment and education. My letter urges the governor to quickly implement these ideas so that Flint's water is 100% safe.

Please contact Gov. Snyder by calling (517) 335-6397 (or by clicking [here](#)) and ask him to take action immediately to implement my plan and ensure Flint's water is safe.

My plan offers new ideas and also builds on successful models of utility, energy and assistance programs at the state and federal levels. Here is my plan:

Safety & Quality

- 100% Safety is the standard

- City of Flint releases testing data to assure safety and expands testing to households with support from the Michigan Department of Environmental Quality
- Support alternatives for those advised not to drink the water by their doctors through the Michigan Health Endowment Fund and community partners to protect the vulnerable like seniors and infants
- Bring on experienced river water treatment operational management in the City of Flint
- Require water testing data to be released quarterly by law in all Michigan communities

Access

- Announce an amnesty program for turn-ons and reduce the turn-on cost in Flint
- Develop a revised payment plan policy to allow customers to come back on to the Flint system
- New Federal and State partnership to establish new Drinking Water Emergency Assistance Fund for customers (modeled on Federal and State energy utility programs: Low Income Home Energy Assistance Program; Michigan Energy Assistance Program; State Emergency Relief)

Investment

- Accelerate water system improvements outlined in the City of Flint Capital Improvement Plan through Federal and State Investments
- State approves City of Flint's Distressed Cities Fund applications
- Federal and State forgiveness of payment to Drinking Water Revolving Loan Fund
- Federal and State financing for future improvements
- City Water Department implements budgeted FY15 projects including leak detection, valve repairs, new pipes and meter replacements

Education

- Develop a community partnership to provide household and business customers with information on testing and conservation
- Ongoing partnership with Michigan Department of Human Services, United Way, Salvation Army and community organizations to provide information on water assistance
- Expand youth energy initiative to assist households with conservation and efficiency (piloted in summer 2014 with Northwestern High School students, EcoWorks and Consumers Energy)

The struggle with our water has gone on for too long. The state must take action and do its part. Please ask Gov. Snyder to take action immediately to implement my plan and ensure Flint's water is safe. Thank you for your ongoing support.

Links to coverage

- [Mayor, governor have 'long, productive' talk about Flint's water problems](#), Jan. 30
- [2,000 more gallons of water headed to Flint for giveaway](#), Jan. 30, 2015
- [Flint emergency manager says there are two big reasons not to reconnect Detroit water](#), Jan. 29
- [Flint Democracy Defense League plans four meetings on city's water problems](#), Jan. 29
- [Environmentalist sends out new warnings about Flint water](#), NBC, Jan. 27
- [Erin Brockovich says on Facebook she's prepared to come to Flint](#), MLive, Jan. 27
- [Mott Community College not waiting for Flint to ensure safe water](#), MLive, Jan. 26
- [Detroit water chief says she's willing to sell emergency water to Flint -- no strings attached](#), Jan. 26
- [Mayor says governor needs to visit Flint to see water crisis first hand](#), MLive, Jan. 26
- [Need water? Flint groups collect 600 cases, plan distribution this week](#), MLive, Jan. 26

- Incoming Flint water expert would have 'continual oversight' until new pipeline connected, Jan. 25
- Looking back at Flint's water problems (photo gallery), MLive, Jan. 25
- Flint water problems: Switch aimed to save \$5 million -- but at what cost?, MLive, Jan. 23
- State says its already 'working diligently' on Flint's water problems, MLive, Jan. 22
- Officials say Flint water is getting better, but many residents unsatisfied, MLive, Jan. 21



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
EXECUTIVE OFFICE
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CONTACTS: <u>Sara Wurfel</u> or <u>Dave Murray</u> , Governor's Office 517-335-6397 <u>Terry Stanton</u> , Department of Treasury 517-335-2167	FOR IMMEDIATE RELEASE February 24, 2016
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Gov. Rick Snyder awards Flint \$2 million in Distressed Cities grants for water system infrastructure improvements

Funding to be used for leak detection, waste incinerator replacement

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##

Ryan, Howard (Treasury)

From: Connors, Paul (Treasury)
Sent: Monday, February 02, 2015 3:11 PM
To: Gelisse, Ashley (TREASURY)
Cc: Ryan, Howard (Treasury); Workman, Wayne (TREASURY)
Subject: Re: Independent Water Analysis - Flint

Thanks Me and Terry will see Rep Neely prob tomorrow

On Feb 2, 2015, at 3:09 PM, Gelisse, Ashley (TREASURY) <GelisseA@michigan.gov> wrote:

Paul and Howard,

Can one of you please share this with whomever you deem appropriate from the Flint legislative delegation? Thanks.

Ashley

From: Gelisse, Ashley (TREASURY)
Sent: Monday, February 02, 2015 3:08 PM
To: Posthumus, Dick (GOV); Wurfel, Sara (GOV); 'Clement, Elizabeth (GOV) (clemente@michigan.gov)'; Muchmore, Dennis (GOV); Allard, Claire (GOV); Hollins, Harvey (GOV); Clayton, Stacie (GOV)
Cc: Workman, Wayne (TREASURY); Stanton, Terry A. (Treasury)
Subject: Independent Water Analysis - Flint

FYI only – a helpful article about the water situation in Flint, offers a good independent assessment. Thanks.

Ashley Gelisse

Senior Policy Advisor to State Treasurer Kevin Clinton
Richard H. Austin Building
430 West Allegan Street
Lansing, MI 48922
Direct: 517-241-2474
Cell: 517-420-8079
gelissea@michigan.gov

<Independent Water Analysis.PDF>

Koryzno, Edward (Treasury)

From: Gelisse, Ashley (TREASURY)
Sent: Tuesday, February 03, 2015 8:02 AM
To: Workman, Wayne (TREASURY); Koryzno, Edward (Treasury); Saxton, Thomas (Treasury)
Subject: Agenda.01.20.15
Attachments: Agenda.01.20.15.docx

The last LG agenda – for our meeting this morning.

Local Government Meeting
January 20, 2015

Key Updates

Royal Oak Township

- Burgess issuing a consent agreement order to clarify invoicing process, and awarding a pending bid for legal services

Highland Park

- Water leak has been shut off following pipes bursting
- Kathy Square learning the issues of the water system
- Still working through issues related to engaging a third party operator for water system
- Call Friday on blight certificate related to high school sale

Flint

- Jerry Ambrose began as EM on 1/13/15
- Mayor's letter to Governor on water issue amid increasing public concern
- 50% of assessments are manual overrides

Pontiac

- Economic Development Director hired recently
- Meeting in late January with legal team to discuss OPEB approach - here and in other communities

Hamtramck

- First RTAB meeting scheduled during the week of January 26th

Ecorse

- 5 year budget proposed by council not balanced
- Ongoing issues with interim City Manager

Wyandotte

- 93% of assessments are manual overrides

Stanton, Terry A. (Treasury)

From: Stanton, Terry A. (Treasury)
Sent: Tuesday, February 03, 2015 10:51 AM
To: Murray, David (GOV)
Subject: RE: Flint event on Tuesday
Attachments: RELEASE Flint water grants.docx; 2 FDCVT Grant Awards draft.docx; RELEASE Flint water grants TS.docx; FDCVT Grant Awards TS.docx

Importance: High

Follow Up Flag: Follow up
Flag Status: Completed

Not a problem.

BTW...attached are the draft releases with **track changes** showing...and a second set with **changes accepted**. I sent them to my grant folks to ensure accuracy, etc., and the changes reflect their input.

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 10:41 AM
To: Stanton, Terry A. (Treasury)
Subject: RE: Flint event on Tuesday

Thank you, Terry!

We should be set. We'll send out our release at 3, if you folks want to follow that.

Thank you for EVERYTHING on this. I know I took up a lot of your time. Appreciated!

From: Stanton, Terry A. (Treasury)
Sent: Tuesday, February 03, 2015 10:13 AM
To: Murray, David (GOV)
Subject: RE: Flint event on Tuesday

Let me know what, if anything, you need from me today...

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 10:12 AM
To: Stanton, Terry A. (Treasury)
Subject: Re: Flint event on Tuesday

Perfect!!! Thank you!

Sent from my iPhone

On Feb 3, 2015, at 10:11 AM, Stanton, Terry A. (Treasury) <StantonT@michigan.gov> wrote:

Jerry Ambrose is planning to be at the press event..

From: Murray, David (GOV)
Sent: Tuesday, February 03, 2015 9:04 AM
To: Stanton, Terry A. (Treasury)
Subject: RE: Flint event on Tuesday

Terry, just wanted to double-check. Have you connected with Jerry Ambrose to make sure he's aware of the event and is attending?

Thanks!

Dave

From: Stanton, Terry A. (Treasury)
Sent: Tuesday, February 03, 2015 8:45 AM
To: Murray, David (GOV)
Subject: Re: Flint event on Tuesday

Ok. Cool. Unfortunately I can't help w the Reps☹

TS

On Feb 3, 2015, at 8:29 AM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:

Hi Terry,

I think we'll be OK. Brad will be there, too. I'm worried about the state reps, but I think we'll be OK.

From: Stanton, Terry A. (Treasury)
Sent: Tuesday, February 03, 2015 8:25 AM
To: Murray, David (GOV)
Subject: Re: Flint event on Tuesday

Dave...

Given my schedule, I wasn't planning to be in Flint today...unless you feel there is a need for me to be there.

Please advise.

TS

On Feb 2, 2015, at 1:34 PM, Murray, David (GOV) <MurrayD1@michigan.gov> wrote:

Good afternoon team,

Just wanted to touch base on Tuesday's event in Flint. Unless told otherwise, I'm continuing to prepare for the event.

I touched base with Harvey and Stacie, who recommended we proceed. Harvey is approaching some stakeholders about appearing at the event, and will forward those names to me later today.

I left a message with Dick Posthumus to see if he has any concerns about proceeding.

The Senate Democrats said Sen. Ananich will want to appear. Katie Carey from the House said she would forward information to Rep. Neeley and Phelps. I have not heard back from her yet.

I've attached the backgrounder and the draft releases from Governor's Communications and Treasury. I've sent a message to the mayor's office about a quote, but have not heard back yet.

Brad and I spoke about Director Wyant's role and potential comments. He will point out that there are things the state can do to help monitor the situation, but also will note that the city's water infrastructure is aging, which contributes to the problems.

We need some direction on an advisory. Should this be listed on a typical advisory from the governor's office, or come from Treasury? Do we even issue an advisory in favor of just contacting media directly in the morning?

Please give the draft releases a read for potential changes, or let me know of other concerns.

Thank you!

Dave

Dave Murray

Deputy Press Secretary | Executive Office of Governor Rick Snyder

MurrayD1@michigan.gov

517-335-6397, office

517-449-8343, mobile

Twitter: @michigandmurray

<2 FDCVT Grant Awards draft.docx>

<Briefing Flint grant announcement.docx>

<RELEASE Flint water grants.docx>



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FOR IMMEDIATE RELEASE

April 5, 2016~~February 3, 2015~~

Gov. Rick Snyder awards Flint \$2 million in Distressed Municipalities grants for water system infrastructure improvements

Funding to be used for leak detection, waste incinerator replacement

LANSING, Mich. – Gov. Rick Snyder today awarded Flint \$2 million in grants for water system infrastructure improvements, part of an overall \$8 million plan to help municipalities through the Financially Distressed Cities, Villages, and Townships Grant Program.

Flint is among eleven municipalities receiving grants through the program. The city will use the funding to detect leaks in its water lines and replace its Water Pollution Control Facility Incinerator.

"There are opportunities for state government to assist Flint city leaders as they address issues related to the city's water system," Snyder said. "These grants will help recovering cities improve public services and infrastructure, improving the quality of life for all residents."

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We suggest moving the two paragraphs below up under the first paragraph

Municipalities are eligible for the grants if they are experiencing one or more conditions indicative of “probable financial stress,” as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

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STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

R. KEVIN CLINTON
STATE TREASURER

February 3, 2015

FOR IMMEDIATE RELEASE
www.michigan.gov/treasury

Contact: Terry Stanton, Treasury
(517) 335-2167
Dave Murray, Governor
(517) 335-6397

draft

Gov. Rick Snyder announces grants helping distressed municipalities with water, public safety, appraisal issues
\$8 million awarded for projects aimed at improving services, quality of life

LANSING, Mich. -- Gov. Rick Snyder today awarded \$8 million to ~~eleven~~ ^{six} municipalities to fund various improvement projects, including water system and street lighting enhancements and technology upgrades through the Financially Distressed Cities, Villages, and Townships Grant Program.

Municipalities are eligible for the grants ~~if~~ ^{if} they are experiencing one or more conditions indicative of "probable financial stress," as defined by Public Act 436 of 2012, the Local Financial Stability and Choice Act.

"Municipalities receiving this special funding are some of the areas hardest hit by the Great Recession," Snyder said. "I am pleased we can offer funding assistance to help these local governments improve various public services their taxpayers and residents expect and deserve."

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The following communities will receive funding this year, with projects and amounts noted (alphabetical order):

Local Unit	Project Description	Amount
City of Benton Harbor	Complete a property reappraisal to provide updated and accurate assessing records. Additionally, community enhancement through blight management and sidewalk replacement.	\$475,000
City of Benton Harbor	Water system enhancement through water main replacements and fire hydrant repairs.	\$434,960
City of Ecorse	Public safety enhancement through improved street lighting.	\$350,000

City of Flint	Water system enhancement through improved waste management.	\$1,100,000
City of Flint	Water system enhancement through leak detection and pipe assessments.	\$900,000
City of Hamtramck	Complete a property reappraisal to provide updated and accurate assessing records.	\$167,860
City of Hamtramck	Upgrade City Hall security.	\$50,000
City of Hamtramck	Public safety enhancement through improved street lighting.	\$404,600
City of Highland Park	Water system enhancement through meter replacement, leak detection, and system repairs.	\$2,000,000
City of Inkster	Complete a property reappraisal to provide updated and accurate assessing records.	\$73,460
City of Inkster	Water system enhancement through fire hydrant repairs.	\$150,000
City of Inkster	Provide a backup power source for public safety.	\$30,000
City of Inkster	Public safety enhancement through the creation of a multi-jurisdictional narcotic team.	\$240,000
City of Inkster	Public safety enhancement through police officer training.	\$41,970
City of Inkster	Public safety enhancement through the deployment of an additional police officer.	\$320,000
City of Lincoln Park	Public safety enhancement through updated technology.	\$143,490
City of Melvindale	Public safety enhancement through fleet replacement of police vehicles and updated technology.	\$88,000
City of Pontiac	Community enhancement through blight management.	\$125,000
City of River Rouge	Public safety enhancement through improved street lighting. Additionally, infrastructure replacements to City Hall.	\$591,508
Royal Oak Township	Public safety enhancement through improved street lighting	\$86,559
Royal Oak Township	Public safety enhancement of police services.	\$217,593

All appropriated funding has been spent. No future rounds will occur in FY 2015.

Applications for the next round of Financially Distressed Cities, Villages, and Townships Grant Program will be available on the Department of Treasury website this spring. Applications must be submitted to Treasury by the close of business on XXX, XXX 31, 2015.

Preference is generally given to applicants from local units in which:

- A financial emergency has been declared in the past five years;
- An approved deficit elimination plan for the general fund is currently in place; or,
- Two or more conditions indicating "probable financial distress" currently exist.

For more information about FDCVI grants, including an application for cities, villages, and townships, visit www.michigan.gov/revenuesharing.

###

We do not think this footnote is needed (however if you leave it in, you need to put the * at the point of reference and change "distress" to "stress").

*Conditions of "probable financial distress" relating solely to school districts are not included as conditions for FDCVI, as school districts are not eligible.



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CONTACTS:

Sara Wurfel or Dave Murray, Governor's Office
517-335-6397
Terry Stanton, Department of Treasury
517-335-2167

FOR IMMEDIATE RELEASE

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DEPARTMENT OF TREASURY
LANSING

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February 3, 2015

FOR IMMEDIATE RELEASE
www.michigan.gov/treasury

Contact: Terry Stanton, Treasury
(517) 335-2167
Dave Murray, Governor
(517) 335-6397

draft

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####

Byrne, Randall (Treasury)

From: Maxine Murray <mmurray@cityofflint.com>
Sent: Tuesday, February 03, 2015 1:48 PM
To: Kapp, Gene (MSP); Muchmore, Dennis (GOV); Roberts, John (DTMB); Dempkowski, Angela (Treasury); Baird, Richard (GOV); Carter, Jerry (MSP); Deasy, Thomas (MSP); Koryzno, Edward (Treasury); Clement, Elizabeth (GOV); Elizabeth Murphy; Etue, Kriste (MSP); Hollins, Harvey (GOV); Hill, Darryl (MSP); James Tolbert; Jerry Ambrose; Klotz, Josephine (MSP); Lee, Nichole (MSP); McGowan, Emmitt (MSP); Smith, Paul (GOV); Byrne, Randall (Treasury); Sands, Thomas (MSP); Sipes, Stephen (MSP); O'Neill, Stephen (MSP); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); West, Samantha (GOV)
Subject: Bi-Weekly Conference Call Agenda
Attachments: Agenda for Conference Call with Treasury 020415 (1).pdf

Good afternoon,

Please find attached the agenda for the conference call scheduled for **Wednesday, February 4th at 9:00 am.**

Thank you.

--

Maxine Murray
Executive Assistant to
Mayor Dayne Walling
Gerald Ambrose, Emergency Manager
1101 S. Saginaw Street
Flint, MI 48502
810.237.2035 Telephone
810.766.7218 Fax

February 4, 2015

City of Flint Wednesday 9:00am Phone Conference Agenda

1- [REDACTED], Access code [REDACTED]
Last Report

Status

**1) Public Safety Update –
FPD, MSP, (FFD, if needed)**

a) FPD

- * Police and Fire studies have been presented to the Public Safety Committees. Evaluation of recommendations underway.
- * SRMS MOA has been signed, project charter development is underway. Last item for which Flint needed to provide a sign-off has been completed.
- * Evidence Room and Police Equipment Audit have been media items last week.
- * SAFER Grant - Considering whether or not to apply.
- * City applied for \$999,103 grant from the FEMA Assistance to Firefighters Grant Program to purchase a new aerial truck.

b) FFD

Update

No Change

New
New

Awaiting decision

c) Other update from
Chief Tolbert and MSP

2) Governor's Office

Update – R. Baird, H. Hollins,

B. Clement

a) District Court
Consolidation

County Commissioners voted on 12/10/14 to approve "pursuant to the terms and conditions set forth in a MOU to be approved between City of Flint and Gen. Cty."

Waiting for proposed MOU
from County.

b) Local Income Tax
Initiative

Additional source of funds still needed for City. H. Hollins working to find a new sponsor.

No Change

c) Grant Announcement

Decision regarding Distressed Cities Grant announced 2/3/15

New

3) Finance and Administrative Update	Last Report		Status
a) Financial Ordinances	City Council approved Fund Balance Policy, OPEB, BSF and strategic planning processes ordinances. Purchasing Ordinance to be enacted.	Update	
b) Management Vacancies	MML has been selected to recruit candidates for Treasurer, HR Director and Finance Director. Search for Fire Chief to be added - effective date 7/1/15	Update	
c) Budget	Mid-year budget amendment is enacted. Dr. Scorsone to assist with updating financial projections by Feb. 13.	New	
e) Strategic Planning Workshops	Two workshops, facilitated by Dr. Scorsone have been completed. Updated VMG by Council scheduled for Feb. 9	Update	
f) DEP/RAP	Progress under DEP/RAP being revised.	New	
4) City Council Update			
a) EM Order	An Order has been issued establishing a new Council and Committee meeting schedule - a move toward transition. An Order also being developed defining organizational reporting relationships to new City Administrator.	New	
b) Council/Mayor Compensation	Asked MML to provide comparisons of MI cities' Council and Mayor compensation packages.	New	

	Last Report	Status
5) Water Issues		
a) MDEQ Violation Notice	Two separate, independent testing results by news media find Flint water within EPA/MDNR guidelines, as does most recent internal testing.	Update
b) Distressed Cities Grants	Announcements of awards due Feb. 3 for Flint's two grant requests: Leak Detection and Sewage sludge Load Out Facility.	Update
c) Drinking Water Revolving Fund	Discussing possible restructuring of loans.	New
d) Consultant	RFP process resulted in a proposal from Veolia. Agreement being finalized for initial evaluation phase, to begin next week and to take a week or so to complete.	New
6) 9-1-1 Reconsolidation Plan		
a) Tower Transfer to Consortium	Tower built with C-GAP funds. Procedure necessary to transfer asset to Consortium? Need to have assessment of value? Value exceeds \$50,000, the intent to transfer was included in the last two updates to the Financial and Operating Plan. Responses send to R. Byrne last week.	Update
7) Transition Activities		
a) Update of Transition Management Plan	A planning calendar for the next three months is being developed.	NEW

8) Other Items

Last Report	Status
MDNR and Purchase of CSX rail area Requesting DNR authorize full amount of appraised property value to be paid by DNR grant. Note from Planning and Development Director: In brief, the City hired an appraiser for the Grand Traverse Greenway trail to complete acquisition of the CSX properties. We forwarded the appraisal of \$170,000 to the DNR for approval to proceed with negotiations with CSX. During our negotiations, CSX disputed the appraisal and submitted their own appraisal for the property of \$330,000. After reviewing the CSX appraisal, DNR told the City that they would be willing to increase the grant up to \$215,000 for acquisition, but the City would have to make up the difference. After doing additional research on similar properties including acquisition of the Genesee Valley Trail in the City of Flint, we realize that CSX offer is not unreasonable. We asked DNR to reconsider and allow us to have our appraisal amended so that we can fully use the DNR grant for the \$330,000 asking price. (Our DNR grant allocation is \$700,000 more than enough to cover the \$330,000 asking price. Thus far, DNR has been unwilling to provide the additional funding and suggested we talk to MDOT about making up the difference. I think the MDNR is concerned about setting precedent for future trail acquisition, but I don't think it matters if MDOT is routinely paying more.	Awaiting update from Treasury. Randy will get back to us on this.

Byrne, Randall (Treasury)

From: Gerald Ambrose <gambrose@cityofflint.com>
Sent: Wednesday, February 04, 2015 2:50 PM
To: Byrne, Randall (Treasury)
Subject: Re: FW: Selection of Water Quality Consultant

Thanks!

On Wed, Feb 4, 2015 at 2:41 PM, Byrne, Randall (Treasury) <ByrneR1@michigan.gov> wrote:

Jerry:

For your information. Let me know if you have any other questions.

Randy,

From: Byrne, Randall (Treasury)
Sent: Wednesday, February 04, 2015 2:09 PM
To: Workman, Wayne (TREASURY); Koryzno, Edward (Treasury)
Subject: FW: Selection of Water Quality Consultant

Wayne and Ed:

I have reviewed the documentation and conclude that the City does not have to get Treasurer approval to proceed because they solicited proposals from eight consulting firms as per PA 436 12(3). Please let me know if you have any questions.

Randy,

From: Gerald Ambrose [<mailto:gambrose@cityofflint.com>]
Sent: Wednesday, February 04, 2015 12:46 PM
To: Workman, Wayne (TREASURY); Byrne, Randall (Treasury); Koryzno, Edward (Treasury)
Subject: Selection of Water Quality Consultant

Per conversation this morning, I am confirming that the City of Flint utilized a competitive process in the selection of a Water Quality consultant.

The attached RFP was released on January 15, with an initial response date of January 26. However, the response date was changed to January 29.

The RFP was posted on the City's website and invitations to respond were sent to the following firms:

Greeley and Hansen

Black and Veatch

CDM Smith

Arcadis

Hazen and Sawyer

Stantec

Fleis & Vandenbrink

HDR Inc.

The City received one response from Veolia. After review, it was determined that the respondent firm met the qualifications, and following initial discussion with the firm, it was also determined that the firm could initiate work quickly. We are in the process of finalizing a initial phase agreement at a cost not to exceed \$40,000. This initial phase will allow the firm to be on site and to conduct an initial evaluation of the City's current situation. Future phases will be negotiated consistent with their proposal and the requirements set forth in the RFP.

I am pleased with the proposal we received, and believe that it will provide us with that "extra set of eyes" to assure us and the public that we provide safe water and that we are taking the necessary steps to improve water quality.

Jerry Ambrose, Emergency Manager

City of Flint

INVITATION TO BID

OWNER:

THE CITY OF FLINT
DEPARTMENT OF PURCHASES AND SUPPLIES
1101 S. SAGINAW ST., 3RD FLOOR
FLINT, MI 48502

PROPOSAL NO.: 15-573

SCOPE OF WORK:

The City of Flint (The City), Department of Purchases & Supplies, is soliciting sealed proposals for the following:

Water Quality Consultant

per the attached specification.

If your firm is interested in providing the requested services, please submit 1 original and 2 copies of your detailed proposal to the City of Flint, Department of Purchases and Supplies, 1101 S. Saginaw St. Rm. 304, Third Floor, Flint, MI, 48502, by **Monday, January 26, 2015 @ 12:00 PM (EST)**. Please note: all detailed proposals received after 12:00 PM (EST) will not be considered. Faxed proposals into the Purchasing Department are not accepted.

The City of Flint may hold proposals for a period of 120 days from opening, for the purpose of reviewing the results and investigating the qualifications of proposals prior to making an award. The City of Flint reserves the right to waive any irregularities and accept or reject any or all proposals submitted. Vendors located within the corporate city limits of Flint, Michigan may be given a seven percent (7%) competitive price advantage. Additionally, if the lowest responsible bidder is not located within the limits of the City of Flint, but is located within the county of Genesee, and said Genesee County responsible bidder does not exceed the bid of the lowest non-local bidder by more than three and one-half percent (3 ½ %), the County vendor may have a competitive advantage.

The City reserves the right to waive any irregularities and accept or reject any or all

proposals submitted.

The City is an equal opportunity employer.

The successful bidder must comply with all requirements and pay prevailing wages and fringe benefits on this project per the City's Resolution R-12 adopted 4/8/91.

Pursuant to the requirements of 1976 P.A. 453 (Michigan Civil Rights Act) and 1976 P.A. 220 (Michigan Handicapped Rights Act), the local unit and its agent agree not to discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment or a matter directly or indirectly related to employment because of race, color, religion, national origin, age, sex, height, weight, marital status or because of a handicap that is unrelated to the person's ability to perform the duties of nondiscrimination provision identical to this provision and binding upon any and all contractors and subcontractors. A breach of this covenant shall be regarded as a material breach of this contract.

All materials furnished must be new, of latest model and standard first grade quality, or best workmanship and design, unless otherwise expressly specified. Bidder, if required, must furnish satisfactory evidence of quality materials, offers of experimental or unproven equipment may be disregarded.

Bidder shall protect against expense of any nature, shall bear costs of any suits which arise, and shall pay all damages which may be awarded against the City for the use, under this specification, of any patented device, process, apparatus, material or invention.

Bidder is not permitted to take advantage of any obvious errors or omissions in specifications.

The City reserves the right to reject any or all bids, or split awards by items, unless otherwise stipulated, or to accept any bid which will best serve its interests.

The Director shall not knowingly accept a proposal from a vendor /contractor who is in default on the payment of taxes, licenses, fees or other monies due the City. Purchase agreements with bidders who are found to have been in default at the time of award of such agreement shall be voided.

The bidder acknowledges that by signing this document that he/she is duly authorized to make said offer on behalf of the company he/she represents and that said proposal is genuine and not sham or collusive and not made in the interests or on behalf of any person not therein named, and that he/she and said bidder have not directly induced or solicited any other person(s) or corporation to refrain from responding to this solicitation and that he/she and said bidder have not in any manner sought by collusion to secure to himself/herself and said bidder any advantage over any other bidder.

Any questions regarding this proposal should be submitted by either fax (810-766-7240) or e-mail djones@cityofflint.com by Tuesday, January 20, 2015 by 5:00 PM. Responses to any questions will be posted to the City's website under this project number no later Wednesday, January 21, 2015.

Sincerely,

Derrick F. Jones
Department of Purchases & Supplies

Enclosure

All additional proposal documents, requirements, addendums, specifications and plans/drawings (if utilized) are available on the Purchasing page of the City of Flint's web site at "http://cityofflint.spudsoftware.com/?page_id=4694" under "open bids" and the specific bid or proposal number assigned to this notice.

INSTRUCTIONS TO VENDORS

General

- 1) **PRE-BID INFORMATION AND QUESTIONS:** Each bid that is timely received will be evaluated on its merit and completeness of all requested information. In preparing bids, Bidders are advised to rely only upon the contents of this Request for Proposal (RFP) and accompanying documents and any written clarifications or addenda issued by the City of Flint. If a Bidder finds a discrepancy, error or omission in the RFP package, or requires any written addendum thereto, the Bidder is requested to notify the Purchasing contact noted on the cover of this RFP, so that written clarification may be sent to all prospective Bidders. **THE CITY OF FLINT IS NOT RESPONSIBLE FOR ANY ORAL INSTRUCTIONS.**
- 2) **RFP MODIFICATIONS:** The City of Flint has the right to correct, modify or cancel the RFP, in whole or in part, or to reject any Bid, in whole or in part, within the discretion of the City of Flint, or their designee. If any such changes are made, all known recipients of the RFP will be sent a copy of such changes. If any changes are made to this RFP document by any party other than the City of Flint, the original document in the City of Flint's files takes precedence.
- 3) **BID SUBMISSION:**
 - a) The Bidder must include the following items, or the bid may be deemed non-responsive:
 - i e. All forms contained in this RFP, fully completed.
 - b) Bids must be submitted to the Purchasing Department, City of Flint, 1101 S. Saginaw Street – Room 304, Flint, Michigan 48502 by the date and time indicated as the deadline. The Purchasing Department's time stamp will determine the official receipt time. It is each Bidder's responsibility to insure that its bid is time stamped by the Purchasing Department by the deadline. This responsibility rests entirely with the Bidder, regardless of delays resulting from postal handling or for any other reasons. Bids will be accepted at any time during the normal course of business only, said hours being 8:00 a.m. to 5:00 p.m. Local Time, Monday through Friday, legal holidays as exception.
 - c) Bids must be enclosed in a sealed opaque envelope, box or package, and clearly marked on the outside with the following: RFP Title, RFP Number, Deadline and Bidder's name.
 - d) Submission of a bid establishes a conclusive presumption that the Bidder is thoroughly familiar with the Request for Bids (RFP), and that the Bidder understands and agrees to abide by each and all of the stipulations and requirements contained therein.
 - e) All prices and notations must be typed or printed in ink. No erasures are permitted. Mistakes may be crossed out and corrections must be initialed in ink by the person(s) signing the bid.
 - f) Bids sent by telegraph, facsimile, or other electronic means will not be considered unless specifically authorized in this RFP.
 - g) All costs incurred in the preparation and presentation of the bid are the Bidder's sole responsibility; no pre-bid costs will be reimbursed to any Bidder. All documentation submitted with the bid will become the property of the City of Flint.
 - h) Bids must be held firm for a minimum of 120 days.
 - i) Term - Contract and/or all other procurement documents shall be effective until completed to the satisfaction of the City of Flint. The City of Flint reserves the right to cancel or not renew all or any part of the procurement agreement/contract at any time

- 4) **EXCEPTIONS:** Bidder shall clearly identify any proposed deviations from the Terms or Scope in the Request for Bid. Each exception must be clearly defined and referenced to the proper paragraph in this RFP. The exception shall include, at a minimum, the Bidder's proposed substitute language and opinion as to why the suggested substitution will provide equivalent or better service and performance. If no exceptions are noted in the Bidder's bid, the City of Flint will assume complete conformance with this specification and the successful Bidder will be required to perform accordingly. Bids not meeting all requirements may be rejected
- 5) **DUPLICATE BIDS:** No more than one (1) bid from any Bidder, including its subsidiaries, affiliated companies and franchises will be considered by the City of Flint. In the event multiple bids are submitted in violation of this provision, the City will have the right to determine which bid will be considered, or at its sole option, reject all such multiple bids.
- 6) **WITHDRAWAL:** Bids may only be withdrawn by written notice prior to the date and time set for the opening of bids. No Bid may be withdrawn after the deadline for submission.
- 7) **REJECTION/GOOD STANDING:** The City of Flint reserves the right to reject any or all bids, or to accept or reject any bid in part, and to waive any minor informality or irregularity in bids received if it is determined by the City of Flint, or their designee, that the best interest of the City will be served by doing so. No Bid will be considered from any person, firm or corporation in arrears or in default to the City on any contract, debt, taxes or other obligation, or if the Bidder is debarred by the City of Flint from consideration for a contract award.
- 8) **PROCUREMENT POLICY:** Procurement for the City of Flint will be handled in a manner providing fair opportunity to all businesses. This will be accomplished without abrogation or sacrifice of quality and as determined to be in the best interest of the City. The City of Flint and their officials have the vested authority to execute a contract, subject to City Council and Mayoral approval where required.
- 9) **BID SIGNATURES:** Bids must be signed by an authorized official of the Bidder. Each signature represents binding commitment upon the Bidder to provide the goods and/or services offered to the City of Flint if the Bidder is determined to be the lowest Responsive and Responsible Bidder.
- 10) **CONTRACT AWARD/SPLIT AWARDS:** The City of Flint reserves the right to award by item, group of items, or total bid to the lowest responsive, responsible Bidder. The Bidder to whom the award is made will be notified at the earliest possible date. Tentative acceptance of the bid, intent to recommend award of a contract, and actual award of the contract will be provided by written notice sent to the Bidder at the address designated in the bid if a separate Agreement is required to be executed. After a final award of the Agreement by the City of Flint, the Contractor/Vendor must execute and perform said Agreement. All bids must be firm for at least 120 days from the due date of the bid. If, for any reason, a contract is not executed with the selected Bidder within 14 days after notice of recommendation for award, then the City may recommend the next lowest responsive and responsible Bidder.
- 11) **NO RFP RESPONSE:** Bidders who receive this RFP but who do not submit a bid should return this RFP package stating the reason(s) for not responding. Failure to return this form may result in removal of the Bidder's name from all bidder lists.

- 12) **FREEDOM OF INFORMATION ACT REQUIREMENTS:** Bids are subject to public disclosure after the deadline for submission in accordance with state law.
- 13) **ARBITRATION:** Contractor/Vendor agrees to submit to arbitration all claims, counterclaims, disputes and other matters in question arising out of or relating to this agreement or the breach thereof. The Contractor's agreement to arbitrate shall be specifically enforceable under the prevailing law of any court having jurisdiction to hear such matters. Contractor's obligation to submit to arbitration shall be subject to the following provisions:
- (a) Notice of demand for arbitration must be submitted to the City in writing within a reasonable time after the claim, dispute or other matter in question has arisen. A reasonable time is hereby determined to be fourteen (14) days from the date the party demanding the arbitration knows or should have known the facts giving rise to his claim, dispute or question. In no event may the demand for arbitration be made after the time when institution of legal or equitable proceedings based on such claim dispute or other matters in question would be barred by the applicable statute of limitation.
 - (b) Within fourteen (14) days from the date demand for arbitration is received by the City, each party shall submit to the other the name of one person to serve as an arbitrator. The two arbitrators together shall then select a third person; the three together shall then serve as a panel in all proceedings. Any decision concurred in by a majority of the three shall be a final binding decision.
 - (c) The final decision rendered by said arbitrators shall be binding and conclusive and shall be subject to specific enforcement by a court of competent jurisdiction.
 - (d) The costs of the arbitration shall be split and borne equally between the parties and such costs are not subject to shifting by the arbitrator.
- 14) **BID HOLD:** The City of Flint may hold bids for a period of 120 days from opening, for the purpose of reviewing the results and investigating the qualifications of bidders prior to making an award.
- 15) **NONCOMPLIANCE:** Failure to deliver in accordance with specifications will be cause for the City of Flint and they may cancel the contract or any part thereof and purchase on the open market, charging any additional cost to the Contractor/Vendor.
- 16) **DISCLAIMER OF CONTRACTUAL RELATIONSHIP:** Nothing contained in these documents shall create any contractual relationship between the City and any Subcontractor or Sub-subcontractor.
- 17) **ERRORS AND OMISSIONS:** Bidder is not permitted to take advantage of any obvious errors or omissions in specifications
- 18) **INTERPRETATION:** In the event that any provision contained herein shall be determined by a court of competent jurisdiction or an appropriate administrative tribunal to be contrary to the provision of law or to be unenforceable for any reason, then, to the extent necessary and possible to render the remainder of this Agreement enforceable, such provision may be modified or severed by such court or administrative tribunal having jurisdiction over this Agreement and the interpretation thereof, or the parties hereto, so as to, as nearly as possible, carry out the intention of the parties hereto, considering the purpose of the entire Agreement in relation to such provision.

- 19) **LAWS AND ORDINANCES:** The bidder shall obey and abide by all of the laws, rules and regulations of the Federal Government, State of Michigan, Genesee County and the City of Flint, applicable to the performance of this agreement, including, but not limited to, labor laws, and laws regulating or applying to public improvement, local government, and its operational requirements.
- 20) **LOCAL PREFERENCE:** Bidders located within the corporate city limits of Flint, Michigan may be given a seven percent (7%) competitive price advantage and those located in Genesee County, MI may be given a three and a half percent (3 ½%) competitive price advantage.
- 21) **MATERIAL WORKMANSHIP AND STANDARDS OF PERFORMANCE:** The bidder agrees to exercise independent judgment and to complete performance under this Agreement in accordance with sound professional practices. In entering into this Agreement, the City is relying upon the professional reputation, experience, certification and ability of the bidder. The bidder agrees that all of the obligations required by him pursuant to this Agreement shall be performed by him or by other employed by him and working under his direction and control. The continued effectiveness of this Agreement during its term or any renewal term shall be contingent, in part, upon the bidder maintaining his operating qualifications in accordance with the requirements of federal, state and local laws. All materials furnished must be new, of latest model and standard first grade quality, or best workmanship and design, unless otherwise expressly specified. Bidder, if required, must furnish satisfactory evidence of quality materials, offers of experimental or unproven equipment may be disregarded.
- 22) **MODIFICATIONS/CHANGES/PRICE VARIATIONS:** Any modification to this agreement must be in writing and signed by the authorized employee, officer, board or council representative authorized to make such modifications pursuant to the State law and local ordinances. Commodities subject to market price variation shall be considered on all term agreements subject to a 30-day advance written notification from the vendor. Such notice must be substantiated by a written price change from the manufacturer and shall be required for both price increases and decreases.
- 23) **NON-COLLUSION:** The bidder acknowledges that by signing this document that he/she is duly authorized to make said offer on behalf of the company he/she represents and that said bid is genuine and not sham or collusive and not made in the interests or on behalf of any person not therein named, and that he/she and said bidder have not directly induced or solicited any other person(s) or corporation to refrain from responding to this solicitation and that he/she and said bidder have not in any manner sought by collusion to secure to himself/herself and said bidder any advantage over any other bidder.
- 24) **NON-DISCRIMINATION:** Pursuant to the requirements of 1976 P.A. 453 (Michigan Civil Rights Act) and 1976 P A 220 (Michigan Handicapped Rights Act), the local unit and its agent agree not to discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment or a matter directly or indirectly related to employment because of race, color, religion, national origin, age, sex, height, weight, marital status or because of a handicap that is unrelated to the person's ability to perform the duties of nondiscrimination provision identical to this provision and binding upon any and all contractors and subcontractors. A breach of this covenant shall be regarded as a material breach of this contract.

- 25) **SUBCONTRACTING:** No subcontract work shall be started prior to the written approval of the subcontractor by the City. The City reserves the right to accept or reject any subcontractor.
- 26) **UNION COMPLIANCE:** Contractor agrees to comply with all regulations and requirements of any national or local union(s) that may have jurisdiction over any of the materials, facilities, services or personnel to be furnished by the City.
- 27) **WAIVER:** Failure of the City to insist upon strict compliance with any of the terms, covenants or conditions of this Agreement shall not be deemed a waiver of that term, covenant or condition or of any other term, covenant or condition. Any waiver or relinquishment of any right or power hereunder at any one or more times shall not be deemed a waiver or relinquishment of that right or power at any other time.
- 28) **JURISDICTION OF OMBUDSMAN:** Any person, business or other entity submitting a bid or bid in response to a request by the City consents to be subject to the jurisdiction of the Ombudsman of the City of Flint and to comply with the respective Charter provisions governing the Ombudsman's duties, jurisdiction and powers.
- 29) **PREVAILING WAGE:** The successful bidder providing any contractual labor services must comply with all requirements and pay prevailing wages and fringe benefits on this project per the City's Resolution R-12 adopted 4/8/91. The bidder is aware of City of Flint Resolution #R-12 dated April 8, 1991, a copy of which is annexed hereto and incorporated herein, and agrees to abide by all of the applicable covenants and requirements set forth in said resolution. Not applicable to this project.
- 30) **CITY INCOME TAX WITHHOLDING:** Contractor and any subcontractor engaged in this contract shall withhold from each payment to his employees the City income tax on all of their compensation subject to tax, after giving effect to exemptions, as follows:
- (a) Residents of the City:
At a rate equal to 1% of all compensation paid to the employee who is a resident of the City of Flint.
 - (b) Non-residents:
At a rate equal to 1/2% of the compensation paid to the employee for work done or services performed in the City of Flint.
- These taxes shall be held in trust and paid over to the City of Flint in accordance with City ordinances and State law. Any failure to do so shall constitute a substantial and material breach of this contract.**
- 31) **CONTRACT/PROCUREMENT DOCUMENTS:** The invitation for bids, instructions to bidders, bid, affidavit, addenda (if any), statement of bidder's qualifications (when required), general conditions, special conditions, performance bond, labor and material payment bond, insurance certificates, (if required), technical specifications, and drawings, together with this agreement, form the contract, and they are as fully a part of the contract as if attached hereto or repeated herein
- 32) **DISCLAIMER OF CONTRACTUAL RELATIONSHIP WITH SUBCONTRACTORS:** Nothing contained in the Contract Documents shall create any contractual relationship between the City and any Subcontractor or Sub-subcontractor.
- 33) **EFFECTIVE DATE:** Any agreement between the City and the contractor shall be effective upon the date that it is executed by all parties hereto.

- 34) **FORCE MAJEURE:** Neither party shall be responsible for damages or delays caused by Force Majeure or other events beyond the control of the other party and which could not reasonably have anticipated the control of the other party and which could not reasonably have been anticipated or prevented. For purposes of this Agreement, Force Majeure includes, but is not limited to, adverse weather conditions, floods, epidemics, war, riot, strikes, lockouts, and other industrial disturbances, unknown site conditions, accidents, sabotage, fire, and acts of God. Should Force Majeure occur, the parties shall mutually agree on the terms and conditions upon which the services may continue.
- 35) **INDEMNIFICATION:** To the fullest extent permitted by law, Contractor agrees to defend, pay on behalf of, indemnify, and hold harmless the City of Flint, its elected and appointed officials, employees and volunteers and other working on behalf of the City of Flint, including the Project Manager, against any and all claims, demands, suits, or losses, including all costs connected therewith, and for any damages which may be asserted, claimed, or recovered against or from the City of Flint, its elected and appointed officials, employees, volunteers or others working on behalf of the City of Flint, by reason of personal injury, including bodily injury or death and/or property damage, including loss of use thereof, which may arise as a result of Contractor's acts, omissions, faults, and negligence or that of any of his employees, agents, and representatives in connection with the performance of this contract. Should the Contractor fail to indemnify the City in the above-mentioned circumstances, the City may exercise its option to deduct the cost that it incurs from the contract price forthwith.
- 36) **INDEPENDENT CONTRACTOR:** No provision of this contract shall be construed as creating an employer-employee relationship. It is hereby expressly understood and agreed that Contractor is an "independent contractor" as that phrase has been defined and interpreted by the courts of the State of Michigan and, as such, Contractor is not entitled to any benefits not otherwise specified herein.
- 37) **NO THIRD-PARTY BENEFICIARY:** No contractor, subcontractor, mechanic, material man, laborer, vendor, or other person dealing with the principal Contractor shall be, nor shall any of them be deemed to be, third-party beneficiaries of this contract, but each such person shall be deemed to have agreed (a) that they shall look to the principal Contractor as their sole source of recovery if not paid, and (b) except as otherwise agreed to by the principal Contractor and any such person in writing, they may not enter any claim or bring any such action against the City under any circumstances. Except as provided by law, or as otherwise agreed to in writing between the City and such person, each such person shall be deemed to have waived in writing all rights to seek redress from the City under any circumstances whatsoever.
- 38) **NON-ASSIGNABILITY:** Contractor shall not assign or transfer any interest in this contract without the prior written consent of the City provided, however, that claims for money due or to become due to Contractor from the City under this contract may be assigned to a bank, trust company, or other financial institution without such approval. Notice of any such assignment or transfer shall be furnished promptly to the City.
- 39) **NON-DISCLOSURE/CONFIDENTIALITY:** Contractor agrees that the documents identified herein as the contract documents are confidential information intended for the sole use of the City and that Contractor will not disclose any such information, or in any other way make such documents public, without the express written approval of the City or the order of the court of appropriate jurisdiction or as required by the laws of the State of Michigan.
- 40) **RECORDS PROPERTY OF CITY:** All documents, information, reports and the like prepared or generated by Contractor as a result of this contract shall become the sole property of the City of Flint.
- 41) **SEVERABILITY:** In the event that any provision contained herein shall be determined by a court or administrative tribunal to be contrary to a provision of state or federal law or to be unenforceable for any reason, then, to the extent necessary and possible to render the remainder of this Agreement enforceable, such provision may be modified or severed by such court or administrative tribunal so as

to, as nearly as possible, carry out the intention of the parties hereto, considering the purpose of the entire Agreement in relation to such provision. The invalidation of one or more terms of this contract shall not affect the validity of the remaining terms.

- 42) **TERMINATION:** This contract may be terminated by either party hereto by submitting a notice of termination to the other party. Such notice shall be in writing and shall be effective 30 days from the date it is submitted unless otherwise agreed to by the parties hereto. Contractor, upon receiving such notice and prorated payment upon termination of this contract shall give to the City all pertinent records, data, and information created up to the date of termination to which the City, under the terms of this contract, is entitled.
- 43) **TIME PERFORMANCE:** Contractor's services shall commence immediately upon receipt of the notice to proceed and shall be carried out forthwith and without reasonable delay.
- 44) **EVALUATION OF BIDS/BIDS:** The City's evaluation of these proposals will be based on the criterion of price, experience, qualifications, capacity, and ability to produce the required deliverables at an accelerated pace

Insurance/Worker's Compensation: Contractor shall not commence work under this contract until he has procured and provided evidence of the insurance required under this section. All coverage shall be obtained from insurance companies licensed and authorized to do business in the State of Michigan unless otherwise approved by the City's Risk Manager. Policies shall be reviewed by the City's Risk Manager for completeness and limits of coverage. All coverage shall be with insurance carriers acceptable to the City of Flint. Contractor shall maintain the following insurance coverage for the duration of the contract

(a) Commercial General Liability coverage of not less than one million dollars (\$1,000,000) combined single limit with the City of Flint, and including all elected and appointed officials, all employees and volunteers, all boards, commissions and/or authorities and their board members, employees and volunteers, named as "Additional Insured." This coverage shall be written on an ISO occurrence basis form and shall include Bodily Injury, Personal Injury, Property Damage, Contractual Liability, Products and Completed Operations, Independent Contractors; Broad Form Commercial General Liability Endorsement, (XCU) Exclusions deleted and a per contract aggregate coverage. This coverage shall be primary to the Additional Insured, and not contributing with any other insurance or similar protection available to the Additional Insured, whether said other available coverage be primary, contributing, or excess.

(b) Workers Compensation Insurance in accordance with Michigan statutory requirements, including Employers Liability coverage.

(c) Commercial Automobile Insurance in the amount of not less than \$1,000,000 combined single limit per accident with the City of Flint, and including all elected and appointed officials, all employees and volunteers, all boards, commissions and/or authorities and their board members, employees and volunteers, named as "Additional Insured." This coverage shall be written on ISO business auto forms covering Automobile Liability, code "any auto."

(d) Professional Liability - Errors and Omissions. All projects involving the use of Architects, civil engineers, landscape design specialists, and other professional services must provide the City of Flint with evidence of Professional Liability coverage in an amount not less than one million dollars (\$1,000,000). Evidence of this coverage must be provided for a minimum of three years after project completion. Any deductibles or self-insured retention must be declared to and approved by the City. In addition, the total dollar value of all claims paid out on the policy shall be declared. At the option of the City, either the insurer shall reduce or eliminate such deductibles or self-insured retention with respect to the City, its officials, employees, agents and volunteers; or Contractor shall procure a bond guaranteeing payment of losses and related investigation, claim, administration, and defense expenses.

Contractor shall furnish the City with two certificates of insurance for all coverage requested with original endorsements for those policies requiring the Additional Insured. All certificates of insurance must provide the City of Flint with not less than 30 days advance written notice in the event of cancellation, non-payment of premium, non-renewal, or any material change in policy coverage. In addition, the wording "Endeavor to" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives" must be removed from the standard ACORD cancellation statement. These certificates must identify the City of Flint, as the "Certificate Holder." Contractor must provide, upon request, certified copies of all insurance policies. If any of the above policies are due to expire during the term of this contract, Contractor shall deliver renewal certificates and copies of the new policies to the City of Flint at least ten days prior to the expiration date. Contractor shall ensure that all subcontractors utilized obtain and maintain all insurance coverage required by this provision.

Background Information

On May 1, 2014 the City of Flint (the City) completed a transition to using water provided by Detroit Water and Sewer Department to drawing water from the Flint River and utilizing our plant to treat and distribute the water. In the subsequent months, many of the eight testing sites around the City were returning low chlorine residual levels and several of those sites developed into positive tests for total coliform and resulted in the issuance of boil water notices for precautionary measures. Numerous valve replacements and additional chlorination resulted in more consistent chlorine residuals throughout the system.

Quarterly reporting to the Michigan Department of Environmental Quality (MDEQ) of Disinfectant Byproduct Levels resulted in trihalomethane levels above the maximum contaminant level (MCL). Seven of eight test sites are currently below the MCL but the annual average has triggered a violation notice from the MDEQ dated December 16, 2014. The City has worked with an engineering team to develop an Operational Evaluation Report (see Exhibit A) as required by the violation and has submitted that report to the MDEQ. The next testing period is scheduled for the middle of February 2015 and an updated Operational Evaluation report which incorporates the results of that test is due to the MDEQ no later than March 1, 2015.

The City is anticipating during the middle of 2016 to begin receiving and treating raw water from Lake Huron via the Karegnondi Water Authority (KWA). The City's Water Plant will still be capable of drawing water from the Flint River and will need to be proficient in treating both bodies of water. It is planned that the Flint River will be a permanent back-up source in providing water to the citizens of Flint.

Scope of Services

The City is seeking a consultant to review and evaluate the water treatment process and distribution system, provide recommendations to maintain compliance with both state and federal agencies, and assist in implementing accepted recommendations. The City will have the selected vendor provide reports to reflect their findings and provide continual oversight in implementing any approved recommended practices to improve the quality of water until implementation of the KWA project.

Deliverables

The City is requesting that the selected vendor provide the following reports in their order of appearance:

- Evaluation of the City's processes and procedures to maintain and improve water quality;
- Report that outlines recommendations that will improve the water treatment and distribution system.

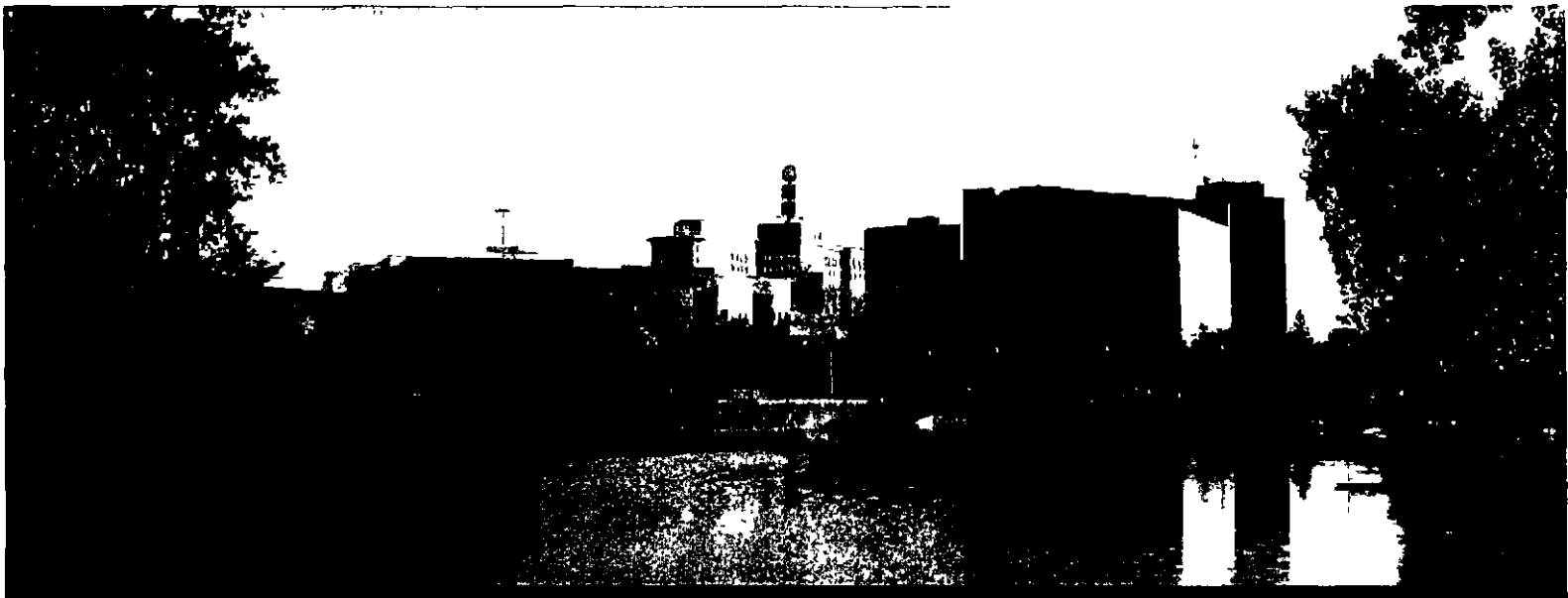
The City is requesting that the selected vendor provide coordination in implementing any selected recommendations that will result in improving the overall process of treating and distributing water until such time that the City is receiving and successfully treating Lake Huron water.

Information Required to Submit Proposal

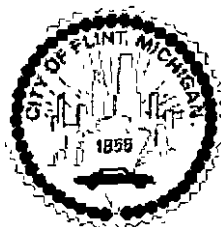
The City has deemed this project a priority and will be requesting the selected firm to produce the requested information in an expedient manner. Firms interested in submitting a proposal based on the information requested in this document must submit the following information:

- **Company's Information**-The proposal shall list the legal name of the firm, its address and phone number, and firm's history.
- **Firm Qualifications, Experiences and References**-The proposal should state the size of the firm, personnel that will be assigned to this project, and other significant projects performed in the past five years that are similar to this request for proposal. Indicate the scope of work provided and the name and telephone number of the client.
- **Staff Experience**-The proposal should provide information on each staff member to include experience, relevant education, degrees, certifications and any other pertinent information or a resume.
- **Project Scope** – Provide a statement discussing the firm's understanding of the requested services, potential obstacles that may occur during this project, and a work plan and timeline in preparing and submitting the requested deliverables.
- **Price for Services**-Vendor is to provide a pricing schedule to perform the requested services. Pricing should include a lump sum to provide the requested reports, an hourly rate schedule of personnel that will be utilized to perform the requested services, and a detail timeline that articulate the completion of the requested reports.
- **Other**-Please include any other information that you think would be helpful in allowing the

City to make an informed decision in the selection process.



Submitted to:



**City of Flint, Michigan
Department of Purchases & Supplies**

**Response to
Invitation to Bid
Water Quality Consultant
Proposal No.: 15-573**

January 29, 2015

The information contained on each page of this document which has been stamped with the legend "Company Confidential - Trade Secret and Proprietary Information - Veolia" is confidential and proprietary information which constitutes a trade secret of Veolia Water North America Operating Services, LLC (Veolia). Veolia asserts a business confidentiality claim covering all data and information contained on each page of this document bearing this legend. The information contained on the pages in this document marked with the confidentiality statement shall not be duplicated, used in whole or in part for any purpose other than to provide information and data to City for the purposes set forth herein. Further, Veolia acknowledges that the documents identified in the Invitations to Bid as the contract documents are confidential information intended for the sole use of the City, and that Contractor (Veolia) will not disclose any such information, or in any other way make such documents public, without the express written approval of the City or the order of the court of appropriate jurisdiction or as required by the laws of the State of Michigan.





January 29, 2015

Mr. Derrick F. Jones
Purchasing Manager
City of Flint
Department of Purchases and Supplies
1101 S. Saginaw Street, Room 304, Third Floor
Flint, Michigan 48502

Subject: Response to Invitation to Bid – Proposal No.: 15-573
Water Quality Consultant

Dear Mr. Jones:

In response to your Request for Bid/Proposal (RFP), **Veolia Water North America Operating Services, LLC** (Veolia) is pleased to have the opportunity to provide this letter submittal. We have prepared a response that is focused on providing the **City of Flint** with a complete solution to address the immediate reliability and operational needs of your water system throughout your continuous operations – whether under the current draw from Flint River or future draw from Lake Huron.

In reviewing the challenges that the City of Flint is facing, we present a longer-term approach for the Operational Evaluation Report, which involves implementation and monitoring through 2016 and the transition to Lake Huron supply. Our commitment to the City of Flint is to make sure the utility can identify the immediate issues through the proposed report, and also secure its future by addressing and fixing these issues identified in the report, build capacity for the future, and better manage the change in water sources in 2016.

Depending on the City's preference, Veolia's expertise to reinforce operations is available to Flint through performance advisory services using our innovative Peer Performance Solutions (PPS), or through longer-term contract operation and maintenance (O&M) type services. Both approaches are designed to help the City of Flint benefit from operational reliability and utility-wide efficiencies.

With the PPS approach, Veolia addresses fundamental issues from the ground-up to deliver improved reliability, compliance and efficiencies for major water and wastewater agencies. Under this model, our Subject Matter Experts (SMEs) would work in collaboration with the City's management team, your line managers and your operators to develop the path forward that suits your needs – both now and into the future. Over the course of this process the City remains in control of all levels of management at all times and benefits from Veolia's expertise through the support of a small team of on-site experts, who in turn can access the rest of our company's worldwide resources.

Veolia's PPS approach is highly data-driven to identify and implement cost savings and deliver utility optimization and organizational best practices. One key example of this model at work is in our ongoing contract with the Pittsburgh Water & Sewer Authority (PWSA). That partnership began in 2012 and was just (this past month) extended for a new term. Working with PWSA, Veolia is implementing a long-term strategy to improve water quality and customer service, increase efficiency, and overcome financial challenges.

PWSA serves the needs of more than 310,000 people in the greater Pittsburgh area, and Veolia assisted them in realizing more than \$5.5 million annually in recurring revenue and efficiencies. This involved working with PWSA to establish a Distribution System Optimization Plan with the State of Pennsylvania, to implement a Process Control Management Plan at their water treatment plant, to identify early warnings for non-compliance trends, to update their laboratory Quality Control/Quality Assurance (QA/QC) program, to initiate performance monitoring methods, and to initiate the use of compliance metrics in order to improve relationships with regulatory agencies. We also implemented a Community Outreach Program to improve the public's perception of PWSA and create positive media attention for the agency.

Veolia is also applying the PPS model for New York City's water and wastewater operations. Under a contract that began in 2011, Veolia has reviewed all aspects of that utility's practices to assess potential improvements. Working collaboratively with the City's water and wastewater operators and managers, Veolia focused on areas including: chemical use and pricing; labor productivity; inventory management; sludge process optimization; and overall O&M activities. Under this approach, our firm identified opportunities that are expected to yield annual recurring financial benefits of more than \$100 million by 2016 -- to date, more than \$90 million in savings and revenue enhancements have been reported by New York City.

The highly collaborative PPS partnership model evolved as an alternative to Veolia's traditional O&M services delivery approach, an approach that our firm first applied over 42 years ago under the first municipal contract operations partnership in the U.S. -- an ongoing partnership with the City of Burlingame, California. Today, our firm continues to use this model to provide water and wastewater services to over 160 municipal clients. To demonstrate the depth of our firm's award-winning experience in the operation of surface water plants we have included a list of Veolia-operated plants as an attachment to this letter. Veolia's contract operations services are also available to Flint, as an alternative to PPS.

In the remainder of this letter, we outline our approach to: providing immediate assistance related to the review and evaluation of the water treatment process and distribution system; development of recommendations and a report for maintaining compliance with both State of Michigan and federal agencies; and assistance in implementing accepted recommendations from the report. The report that Veolia would develop for the City would outline findings and provide recommendations for continual oversight of the approved recommended practices to improve the quality of water until the implementation of the Karegnondi Water Authority (KWA) project.

Veolia's Understanding and Proposed Approach to Providing the Water Quality Consultant Scope

Our longer-term approach would begin by addressing the immediate assistance outlined in your RFP, and then service beyond that scope. Under this expanded scope, Veolia would help with the transition from the Flint River source to Lake Huron water to avoid a repeat of this scenario. That transition is expected to be in place in 2016 and will complete the City's transition from using water provided by the Detroit Water and Sewerage Department (DWSD) to drawing water from the Flint River, using the City-owned water plant.

With a Notice of Proceed issued, Veolia would mobilize a team of experts, including our two prominent water SMEs, from our corporate Technical Services Group (an in-house team of technical and management experts that support the company's projects and operations throughout North America). These experts would include:

- **Marvin Gnagy, P.E. - Water Process and Quality Manager** -- He has more than 37 years of water quality management experience, and is a certified Water Operator in Ohio and a registered Professional Engineer. Mr. Gnagy has completed projects that have involved the set of tasks that the City as defined under this contract, and was most recently engaged as a part of a Veolia team of experts that worked with DWSD and the City of Detroit on a program to evaluate their water and wastewater operations and proposed solutions. This included conducting an intensive due diligence examination of Detroit's water and wastewater facilities and operations, and the development of two reports, a Peer Review Report, which looked at the current operations with a focus on identifying immediate and long term needs, and a Transition Plan: Retail Services for the City of Detroit, which outlined the issues facing the DWSD and the City as the water and wastewater operations changed under a new regionalization approach. Through that work, Mr. Gnagy understands the City of Flint's drivers for this new project, and will be able to use the work that Veolia has done to date for the DWSD to aid in identifying the optimal solution for your water system and the transition from DWSD to your own operations.

Mr. Gnagy's background and key experience that relates directly to the work scope outlined for Water Quality Consultant tasks includes:

- River Water & Groundwater Treatment and Disinfection Byproducts (DBP) Reduction -- Mr. Gnagy has very broad experience with both river water and groundwater treatment on project work involving unit process design and operations to meet drinking water standards and water quality goals. Indeed, he has

conducted numerous studies involving DBP (particularly THM) reduction to meet drinking water standards, establishing treatment alternatives and process targets for THM compliance solutions.

- **Master Plan Development and Unit Process Improvements** – Mr. Gnagy prepared the master plan and performed plant evaluations for unit process improvements to meet future drinking water standards for the City of Adrian, Michigan's 10-MGD water treatment plant. That plan discussed multiple options for process improvements and chemical feed adjustments, specifically targeted for THM control treatment. Jar testing was used to define the chemical dosing and treatment scheme that resulted in the most effective THM reduction solution for the city. He also served as Project Manager for a DBP Reduction Study for the City of Akron, Ohio's 67-MGD water supply plant. That study reviewed jar testing evaluations and historical monitoring records to develop the necessary treatment process adjustments to effectively reduce THMs in the drinking water. Computer models were developed using the data obtained to predict the chemical treatment needs based on source water quality, and to predict THM concentrations following treatment adjustments using the chemical treatments selected. Recommendations included chemical feed adjustments and further study related to advanced treatment technologies.

Other work in this area included serving as the Project Manager for an optimization study for the Village of Blissfield, Michigan's 2.2-MGD water treatment plant to determine needs for improved turbidity and THM concentrations. All major unit processes and chemical feed systems were evaluated for optimal treatment needs. Jar testing and plant operating adjustments were made weekly to improve water quality and process control. Implementation of organics control treatment was accomplished that successfully achieved compliance with both the turbidity and THM compliance requirements.

Mr. Gnagy also conducted plant reviews, performed process design changes, designed new flocculation equipment replacements, and designed and started-up new washwater handling operations for several of DWSD's water treatment plants. That work involved three plants, the Southwest, Lake Huron and Springwells water plants, and focused on improving operations and to meet drinking water compliance.

A full resume for Mr. Gnagy is provided as an attachment at the end of this letter.

- **Theping Chen, P.E. - Process and Operations Optimization Manager** - He has close to 30 years of water engineering, operations and research experience, and he spent 15 years as a water consulting engineer in Michigan and is a registered Professional Engineer in the State of Michigan. Mr. Chen's experience includes working with DWSD on various projects related to master plan, source water protection, water quality management, treatment process optimizations including PAC and ozone design criteria development, taste and odor control, residual management and capital improvement program development. He has also worked extensively with the Michigan Department of Environmental Quality (MDEQ) on compliance issues with focus on water quality compliance, and is a well-published author at the national and state level conferences.

With Veolia, Mr. Chen has been engaged in supporting the ongoing operations and management contract for the City of Buffalo, New York's water operations, and in providing technical support for Veolia's water plant operations at the cities of Gloucester and Brockton, Massachusetts; with that work including jar testing evaluation and compliance strategies development for DBPs.

Mr. Chen's background and key experience that relates directly to the work scope outlined for Water Quality Consultant tasks includes:

- **River Water and Groundwater Treatment** – Mr. Chen has broad experience with both river water and groundwater softening treatment on projects including: on-call engineering, comprehensive needs assessment, filter and chemical system rehabilitation projects for the City of Marion, Ohio's 9.1-MGD water treatment plant (treating combined groundwater and river source water), under a scope of work that involved investigating DBP control strategies and conceptual design of a UV treatment system; a comprehensive regulatory review and capacity evaluation for the City of Dayton, Ohio's two groundwater water treatment plants (96-MGD each); and a comprehensive disinfection and DBPs compliance strategy review for the City of Ann Arbor, Michigan's water treatment plant (a combined surface and groundwater softening plant with at rated capacity of 27-MGD) as part of an overall Water Master Plan project.

- Ozone and Disinfection Technologies - His experience in this area included completing ozone system study, design, construction management and optimization projects for more than 10 municipal water treatment plants.
- DBP Compliance – Mr. Chen's experience in this area includes: optimizing and upgrading ozone systems, and proposing the use of biological filtration to enhance the TOC removal to control DBPs for the City of Shreveport, Louisiana's water treatment plant; optimizing chlorination application, conducting a review of contact time calculation to minimize DBP formation, and proposing UV system upgrades for the City of Marion, Ohio's water treatment plant; evaluating a commercial (self-fabricated) aeration system for installation in elevated and ground-level water storage tanks to reduce the hot spots in Northern Kentucky water treatment plant's water distribution system; and development of tracer test program to calibrate the water quality model for the City of Akron, Ohio.

A full resume for Mr. Chen is provided as an attachment to this letter.

These staff will be responsible for delivering on the immediate tasks that the City has defined:

- Reviewing and evaluating the City's water treatment process and distribution system. This will include evaluating the City's processes and procedures to maintain and improve water quality.
- Developing a report on the finding of the evaluation, with specific recommendations to maintain compliance with both State of Michigan and federal agencies. This will include outlining recommendations that will improve the water treatment and distribution system.
- Assisting the City in implementing accepted recommendations. This will include providing continual oversight and support for the implementation of any approved recommended practices. Recommendations will focus on those areas that will improve the overall process of treating and distributing water, including improvements to water quality until the implementation of the KWA project (anticipated to be by mid-2016) under which the City will be receiving and treating Lake Huron water.

In addition to Mr. Gnagy and Mr. Chen, our core staff group, would be assisted by other technical, operations, management and communications experts from Veolia to proceed promptly into implementation simultaneously.

We believe that addressing the fundamental issues concerning water quality compliance and operational reliability is much more complex than the recommendations study and advisory services approach outlined in your RFP.

We want to ensure that the utility can fix these immediate issues effectively and without delays, while at the same helping the City to begin to build capacity for the future and better manage the 2016 water source change in a systematic way – with all the relevant stakeholders engaged along the way.

In undertaking these tasks, Veolia understands that in 2014 the City completed the transition from using water provided by DWSD to drawing water from the Flint River – utilizing your own water plant to treat and distribute water to those served by your system. Since that transition process was completed, it was found that many of the City's eight water quality testing sites exhibited low chlorine residual levels, and several of those sites developed had positive tests for total coliform, which resulted in issuance of boil water notices for precautionary measures. To address this, the City implemented valve replacements and additional chlorination that yielded consistent chlorine residuals throughout the system. However, quarterly reporting to the MDEQ of Disinfectant Byproduct Levels resulted in trihalomethane levels above the maximum contaminant level (MCL), with an annual average level that triggered a violation notice from the MDEQ.

To date the City, working with an outside engineering team, developed and submitted to the MDEQ an Operational Evaluation Report. The next testing period is scheduled for the middle of February and an update to this report will be required by March 1, 2015. That update will incorporate the results of the tests required by the MDEQ.

The City is expecting to work with the selected Water Quality Consultant to complete the required testing and prepare the updated Operational Evaluation Report. As a secondary element of this task, the City is seeking to retain the selected Consultant to aid in the implementation of these suggestions.

Veolia excels at the day-to-day operation issues and understands how to fix them using diverse and subject matter expertise in a structured, bottom-up type, staff engagement process. That is why we designed the PPS approach to help convert the report findings into actionable items for the City of Flint's staff and then help them implement those changes. This would involve making sure that your staff understand why changes are being made, ensuring that they have the training necessary to make the changes, and then following up to be certain what is planned works or if not then provide help making adjustments. This will involve also a monitoring process to make certain the changes are on track for management and the public.

All of this can then be used to help the City to be prepared to begin receiving and treating raw water from Lake Huron through the KWA. The end goal of this process will be to develop within the City's staff a better understanding and capability to handle the changes in water, whether drawing water from the City of Flint's or the new KWA supply sources.

Veolia's Anticipated Level of Effort

In order to respond to the immediate needs of your defined scope of work, we anticipate mobilizing a team of technical, operations, maintenance and communications SMEs to: calibrate daily water quality samples with the City's hydraulic model; refine the operational strategies for the plant and distribution system; coordinate daily efforts across plant, operations and maintenance staff; and to alleviate continued concerns from the public through a public communications process. The elements of this approach would be delivered under a management and staffing approach which allows for collaboration between the City and Veolia's technical and management team.

For purposes of the scope of services outlined in the City's RFP, Veolia's core staff would be charged at a common rate of \$225/hour, plus expenses.

For the longer-term type of approach, Veolia would set a single lump sum price for the study, implementation and long term services after review and discussion with the City on selecting your preferred approach – the PPS approach or the contract O&M approach. At that time, we can also explore an incentive-based (risk/reward) type of approach, one which is common under PPS contracts, where Veolia's fee is based on achieving performance targets that we would mutually agree upon. As demonstrated in our work with water and wastewater clients, Veolia's PPS model has provided great insight into working with large utility staffs to change the culture and ensure implementation of ideas that improve the utility's performance.

The methodology for implementing a PPS approach, as outlined on Figure 1 (below), includes each of the following steps:

- **Preparation** – This stage involves the mobilization of resources (Veolia and the City), a joint project kickoff meeting (Veolia and the City), development and implementation of a communications plan (Veolia and the

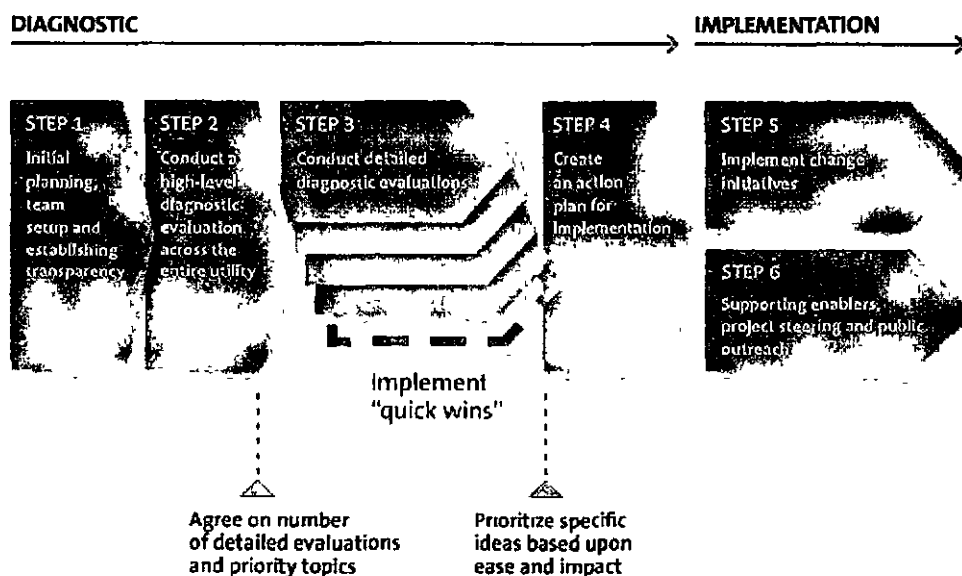
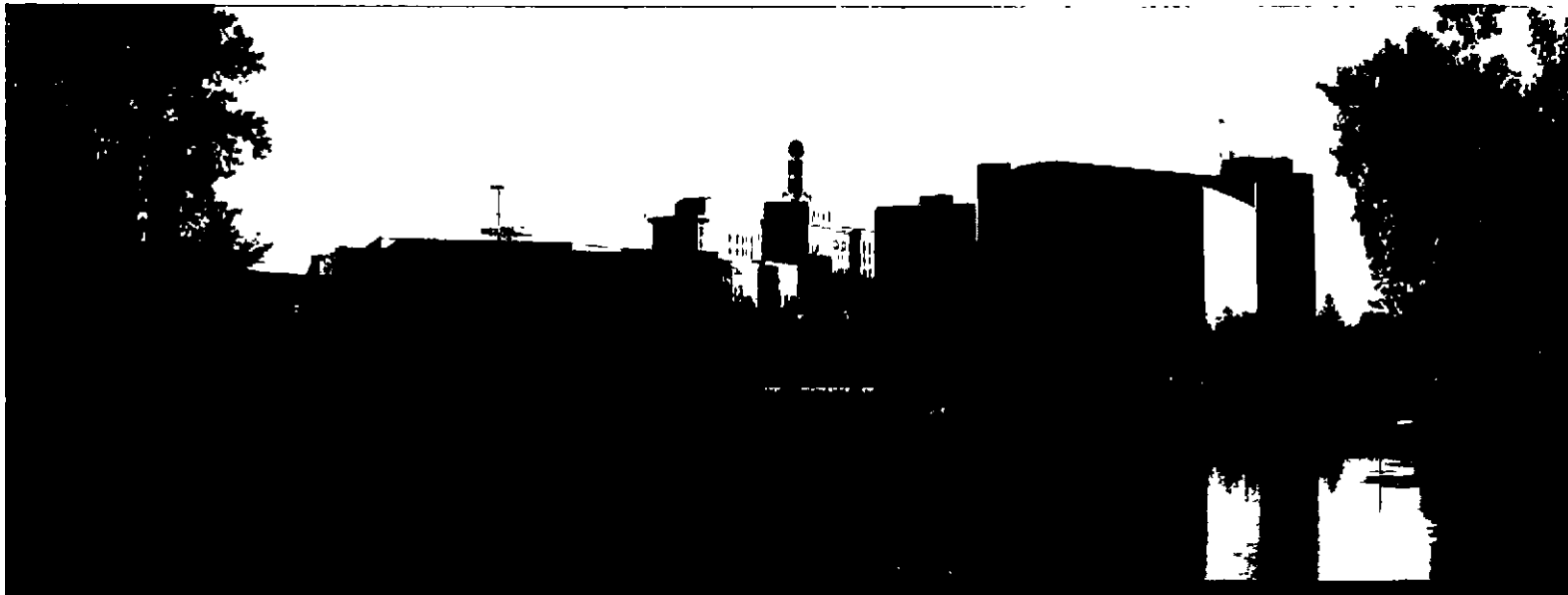
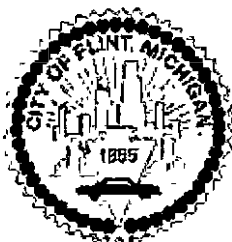


Figure 1.
Veolia
Peer Performance
Solutions (PPS) –
Service Delivery Model



Submitted to:



**City of Flint, Michigan
Department of Purchases & Supplies**

**Response to
Invitation to Bid
Water Quality Consultant
Proposal No.: 15-573**

January 29, 2015

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January 29, 2015

Mr. Derrick F. Jones
Purchasing Manager
City of Flint
Department of Purchases and Supplies
1101 S. Saginaw Street, Room 304, Third Floor
Flint, Michigan 48502

Subject: Response to Invitation to Bid – Proposal No.: 15-573
Water Quality Consultant

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Veolia's Understanding and Proposed Approach to Providing the Water Quality Consultant Scope

Our longer-term approach would begin by addressing the immediate assistance outlined in your RFP, and then service beyond that scope. Under this expanded scope, Veolia would help with the transition from the Flint River source to Lake Huron water to avoid a repeat of this scenario. That transition is expected to be in place in 2016 and will complete the City's transition from using water provided by the Detroit Water and Sewerage Department (DWSD) to drawing water from the Flint River, using the City-owned water plant.

With a Notice of Proceed issued, Veolia would mobilize a team of experts, including our two prominent water SMEs, from our corporate Technical Services Group (an in-house team of technical and management experts that support the company's projects and operations throughout North America). These experts would include:

- **Marvin Gnagy, P.E. - Water Process and Quality Manager** -- He has more than 37 years of water quality management experience, and is a certified Water Operator in Ohio and a registered Professional Engineer. Mr. Gnagy has completed projects that have involved the set of tasks that the City as defined under this contract, and was most recently engaged as a part of a Veolia team of experts that worked with DWSD and the City of Detroit on a program to evaluate their water and wastewater operations and proposed solutions. This included conducting an intensive due diligence examination of Detroit's water and wastewater facilities and operations, and the development of two reports, a Peer Review Report, which looked at the current operations with a focus on identifying immediate and long term needs, and a Transition Plan: Retail Services for the City of Detroit, which outlined the issues facing the DWSD and the City as the water and wastewater operations changed under a new regionalization approach. Through that work, Mr. Gnagy understands the City of Flint's drivers for this new project, and will be able to use the work that Veolia has done to date for the DWSD to aid in identifying the optimal solution for your water system and the transition from DWSD to your own operations.

Mr. Gnagy's background and key experience that relates directly to the work scope outlined for Water Quality Consultant tasks includes:

- River Water & Groundwater Treatment and Disinfection Byproducts (DBP) Reduction -- Mr. Gnagy has very broad experience with both river water and groundwater treatment on project work involving unit process design and operations to meet drinking water standards and water quality goals. Indeed, he has

conducted numerous studies involving DBP (particularly THM) reduction to meet drinking water standards, establishing treatment alternatives and process targets for THM compliance solutions.

- **Master Plan Development and Unit Process Improvements** – Mr. Gnagy prepared the master plan and performed plant evaluations for unit process improvements to meet future drinking water standards for the City of Adrian, Michigan's 10-MGD water treatment plant. That plan discussed multiple options for process improvements and chemical feed adjustments, specifically targeted for THM control treatment. Jar testing was used to define the chemical dosing and treatment scheme that resulted in the most effective THM reduction solution for the city. He also served as Project Manager for a DBP Reduction Study for the City of Akron, Ohio's 67-MGD water supply plant. That study reviewed jar testing evaluations and historical monitoring records to develop the necessary treatment process adjustments to effectively reduce THMs in the drinking water. Computer models were developed using the data obtained to predict the chemical treatment needs based on source water quality, and to predict THM concentrations following treatment adjustments using the chemical treatments selected. Recommendations included chemical feed adjustments and further study related to advanced treatment technologies.

Other work in this area included serving as the Project Manager for an optimization study for the Village of Blissfield, Michigan's 2.2-MGD water treatment plant to determine needs for improved turbidity and THM concentrations. All major unit processes and chemical feed systems were evaluated for optimal treatment needs. Jar testing and plant operating adjustments were made weekly to improve water quality and process control. Implementation of organics control treatment was accomplished that successfully achieved compliance with both the turbidity and THM compliance requirements.

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A full resume for Mr. Gnagy is provided as an attachment at the end of this letter.

- **Theping Chen, P.E. - Process and Operations Optimization Manager** - He has close to 30 years of water engineering, operations and research experience, and he spent 15 years as a water consulting engineer in Michigan and is a registered Professional Engineer in the State of Michigan. Mr. Chen's experience includes working with DWSD on various projects related to master plan, source water protection, water quality management, treatment process optimizations including PAC and ozone design criteria development, taste and odor control, residual management and capital improvement program development. He has also worked extensively with the Michigan Department of Environmental Quality (MDEQ) on compliance issues with focus on water quality compliance, and is a well-published author at the national and state level conferences.

With Veolia, Mr. Chen has been engaged in supporting the ongoing operations and management contract for the City of Buffalo, New York's water operations, and in providing technical support for Veolia's water plant operations at the cities of Gloucester and Brockton, Massachusetts; with that work including jar testing evaluation and compliance strategies development for DBPs.

Mr. Chen's background and key experience that relates directly to the work scope outlined for Water Quality Consultant tasks includes:

- **River Water and Groundwater Treatment** – Mr. Chen has broad experience with both river water and groundwater softening treatment on projects including: on-call engineering, comprehensive needs assessment, filter and chemical system rehabilitation projects for the City of Marion, Ohio's 9.1-MGD water treatment plant (treating combined groundwater and river source water), under a scope of work that involved investigating DBP control strategies and conceptual design of a UV treatment system; a comprehensive regulatory review and capacity evaluation for the City of Dayton, Ohio's two groundwater water treatment plants (96-MGD each); and a comprehensive disinfection and DBPs compliance strategy review for the City of Ann Arbor, Michigan's water treatment plant (a combined surface and groundwater softening plant with at rated capacity of 27-MGD) as part of an overall Water Master Plan project.

- Ozone and Disinfection Technologies - His experience in this area included completing ozone system study, design, construction management and optimization projects for more than 10 municipal water treatment plants.
- DBP Compliance – Mr. Chen’s experience in this area includes: optimizing and upgrading ozone systems, and proposing the use of biological filtration to enhance the TOC removal to control DBPs for the City of Shreveport, Louisiana’s water treatment plant; optimizing chlorination application, conducting a review of contact time calculation to minimize DBP formation, and proposing UV system upgrades for the City of Marion, Ohio’s water treatment plant; evaluating a commercial (self-fabricated) aeration system for installation in elevated and ground-level water storage tanks to reduce the hot spots in Northern Kentucky water treatment plant’s water distribution system; and development of tracer test program to calibrate the water quality model for the City of Akron, Ohio.

A full resume for Mr. Chen is provided as an attachment to this letter.

These staff will be responsible for delivering on the immediate tasks that the City has defined:

- Reviewing and evaluating the City’s water treatment process and distribution system. This will include evaluating the City’s processes and procedures to maintain and improve water quality.
- Developing a report on the finding of the evaluation, with specific recommendations to maintain compliance with both State of Michigan and federal agencies. This will include outlining recommendations that will improve the water treatment and distribution system.
- Assisting the City in implementing accepted recommendations. This will include providing continual oversight and support for the implementation of any approved recommended practices. Recommendations will focus on those areas that will improve the overall process of treating and distributing water, including improvements to water quality until the implementation of the KWA project (anticipated to be by mid-2016) under which the City will be receiving and treating Lake Huron water.

In addition to Mr. Gnagy and Mr. Chen, our core staff group, would be assisted by other technical, operations, management and communications experts from Veolia to proceed promptly into implementation simultaneously.

We believe that addressing the fundamental issues concerning water quality compliance and operational reliability is much more complex than the recommendations study and advisory services approach outlined in your RFP.

We want to ensure that the utility can fix these immediate issues effectively and without delays, while at the same helping the City to begin to build capacity for the future and better manage the 2016 water source change in a systematic way – with all the relevant stakeholders engaged along the way.

In undertaking these tasks, Veolia understands that in 2014 the City completed the transition from using water provided by DWSD to drawing water from the Flint River – utilizing your own water plant to treat and distribute water to those served by your system. Since that transition process was completed, it was found that many of the City’s eight water quality testing sites exhibited low chlorine residual levels, and several of those sites developed had positive tests for total coliform, which resulted in issuance of boil water notices for precautionary measures. To address this, the City implemented valve replacements and additional chlorination that yielded consistent chlorine residuals throughout the system. However, quarterly reporting to the MDEQ of Disinfectant Byproduct Levels resulted in trihalomethane levels above the maximum contaminant level (MCL), with an annual average level that triggered a violation notice from the MDEQ.

To date the City, working with an outside engineering team, developed and submitted to the MDEQ an Operational Evaluation Report. The next testing period is scheduled for the middle of February and an update to this report will be required by March 1, 2015. That update will incorporate the results of the tests required by the MDEQ.

The City is expecting to work with the selected Water Quality Consultant to complete the required testing and prepare the updated Operational Evaluation Report. As a secondary element of this task, the City is seeking to retain the selected Consultant to aid in the implementation of these suggestions.

Veolia excels at the day-to-day operation issues and understands how to fix them using diverse and subject matter expertise in a structured, bottom-up type, staff engagement process. That is why we designed the PPS approach to help convert the report findings into actionable items for the City of Flint's staff and then help them implement those changes. This would involve making sure that your staff understand why changes are being made, ensuring that they have the training necessary to make the changes, and then following up to be certain what is planned works or if not then provide help making adjustments. This will involve also a monitoring process to make certain the changes are on track for management and the public.

All of this can then be used to help the City to be prepared to begin receiving and treating raw water from Lake Huron through the KWA. The end goal of this process will be to develop within the City's staff a better understanding and capability to handle the changes in water, whether drawing water from the City of Flint's or the new KWA supply sources.

Veolia's Anticipated Level of Effort

In order to respond to the immediate needs of your defined scope of work, we anticipate mobilizing a team of technical, operations, maintenance and communications SMEs to: calibrate daily water quality samples with the City's hydraulic model; refine the operational strategies for the plant and distribution system; coordinate daily efforts across plant, operations and maintenance staff; and to alleviate continued concerns from the public through a public communications process. The elements of this approach would be delivered under a management and staffing approach which allows for collaboration between the City and Veolia's technical and management team.

For purposes of the scope of services outlined in the City's RFP, Veolia's core staff would be charged at a common rate of \$225/hour, plus expenses.

For the longer-term type of approach, Veolia would set a single lump sum price for the study, implementation and long term services after review and discussion with the City on selecting your preferred approach – the PPS approach or the contract O&M approach. At that time, we can also explore an incentive-based (risk/reward) type of approach, one which is common under PPS contracts, where Veolia's fee is based on achieving performance targets that we would mutually agree upon. As demonstrated in our work with water and wastewater clients, Veolia's PPS model has provided great insight into working with large utility staffs to change the culture and ensure implementation of ideas that improve the utility's performance.

The methodology for implementing a PPS approach, as outlined on Figure 1 (below), includes each of the following steps:

- **Preparation** – This stage involves the mobilization of resources (Veolia and the City), a joint project kickoff meeting (Veolia and the City), development and implementation of a communications plan (Veolia and the

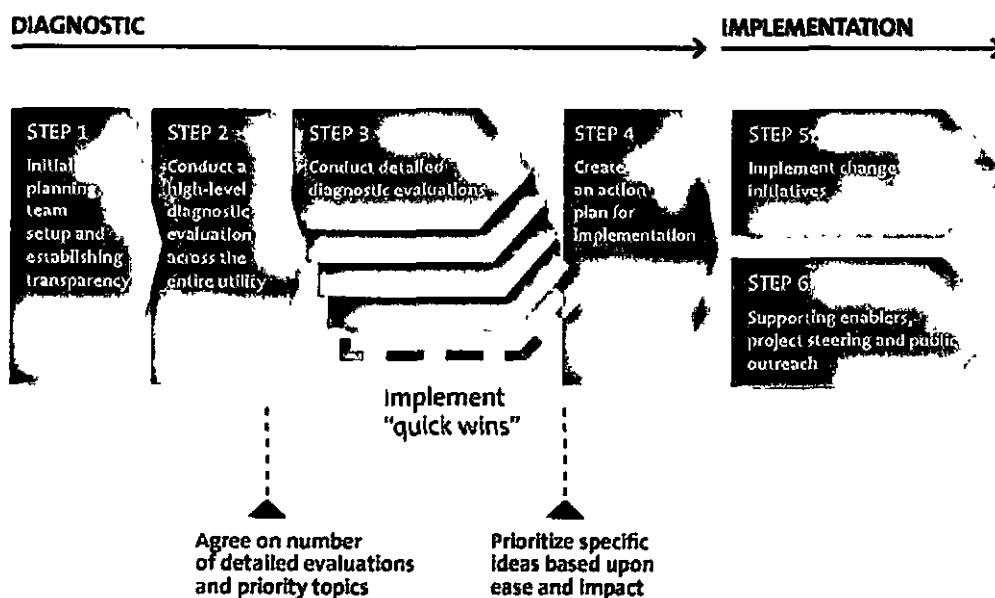


Figure 1.
Veolia
Peer Performance
Solutions (PPS) –
Service Delivery Model

City), and data collection (Veolia). The City and its consultants have already done a lot of work on the problem and are achieving some success.

- **Top-down Analysis** – This stage involves data analysis, benchmarking, field observations, interviews and idea generation workshops. This would be done to assure how effective current changes have been and if there are any additional actions to be taken.
- **Bottom-up Analysis** – This stage involves detailed analysis and modeling of the available options, working in collaboration with the City's management team and staff.
- **Action Plan** – This stage involves defining specific steps for a recommendation based on the actual, current state and desired state performance of an asset.
- **Plan and Report** – This stage involves the final development and delivery of a written report summarizing findings and presenting analyses and recommendations

These actions are what we would provide during the study phase of the project, and the following actions are what we would do to implement study recommendations

- **Implementation** – Putting plans into action. This involves working with O&M and management staff to carry out the proposed plan. This effort I focused on building capacity and confidence within the staff to solve the problem.
- **Monitoring and Repeat** – Monitoring the process and then repeating it, digging even deeper into the organization for additional savings and improvements.

Using this type of plan and approach, Veolia can address the immediate scope/needs defined for the Water Quality Consultant task, and work with the City of Flint to provide a long-term and sustainable approach for the needs of your water treatment and supply system.

Addressing the Requirements of the Invitation for Bid

Veolia recognizes that we are submitting this Proposal as an alternative approach for the City of Flint to consider within the procurement process that you have defined, and in that regard we are providing the other specific information that your have requested as part of the formal RFP response, including:

- **Company's Information** – Veolia Water North America Operating Services, LLC is the respondent, and the contact information for our firm is as follows: Veolia - 101 West Washington Street, Suite 1400 East, Indianapolis, IN 46204 - **Telephone:** 317/917-3700
- **Firm Background and History** – Veolia is a company that traces our history in providing operations and related services to municipal clients back more than 42 years. Today our firm ranks as the leader in the delivery of O&M and related services, including those under the PPS model. This include serving as the operator and manager of over 180 municipal wastewater systems (processing over 1.66 billion gallons a day of flow) and some 90 municipal water systems (providing over 715 million gallons a day of water).

Today, Veolia ranks grown as the leading water services provider in North American market, with more projects, operations, resources, expertise and demonstrated success than any other services provider. This record of performance and market leadership is affirmed in the most recent survey from the publication **Public Works Financing** (opposite), which shows Veolia's better than 40% market share, with revenues and a renewal rate that lead the industry. What these market leading indicators serve to show is that we can meet the standards of experience and capabilities that the City of Flint is requiring under this new contract.

Water operators ranked by 2013 revenues
O&M and DBO market share reported by Public Works Financing (PWF) | March 2014

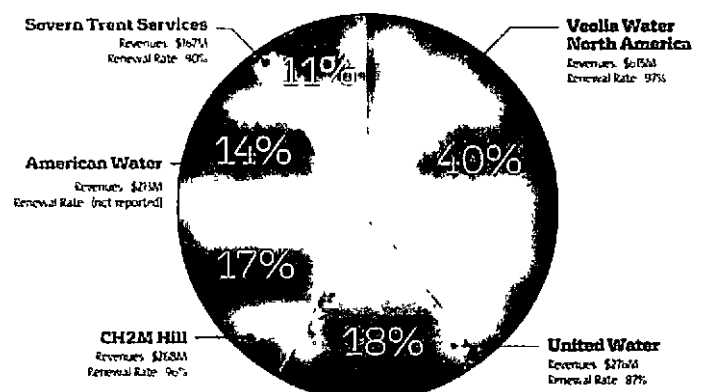


Figure 2.
Veolia Service
Delivery Models
and Experience

Options → Criteria ↓	NYC	Buffalo	Milwaukee	Indian- apolis	Baltimore Compost	Rialto California	Franklin Ohio
	PPS	Delegated Manage- ment	Single Activity O&M	Full O&M	DBO or T	Concesalon	Privatiza- tion
Ease of Procurement	●	○	●	○	●	○	●
Agreeable to Employees	●	●	●	●	●	●	●
Ease of Cancellation	●	○	○	○	●	●	●
Public Rate Control	●	○	○	○	○	●	●
Speed of Implementation	●	○	●	●	●	●	●
Ease of Permitting	●	○	○	○	●	○	●
Ease of Continued Use of Alternative Project Delivery	●	○	○	○	●	○	●
Ease of Acceptance by Other Stakeholders	●	○	○	○	●	●	●

- **Firm Qualifications, Experiences and References** - Like the City of Flint, we are at our core utility managers and service providers, and Veolia understands the need for high quality, efficient service and dependable reliability. We also work with communities like yours to deliver services under a variety of contract models, each focused on providing our municipal partners with the best value under a long-term and sustainable approach and customized to their objectives. Figure 2, above, outlines our experience with various service delivery models, each of which involves working with clients to develop a customized approach to meet their particular needs and objectives. This table also shows the key advantages of each type of service delivery approach, with green being optimal in terms of ease of execution and delivery and red being the most challenging and complicated in terms of delivery. This table also highlights example projects where our firm has successfully delivered each of these approaches (and many of those are highlighted under the reference projects section of this letter). What this table also shows is that Veolia can offer alternative transaction structures, including long-term lease, concession arrangement or sale/purchase.

As we discussed above, Veolia currently operates and manages 90 municipal water systems (providing over 715 million gallons a day of water); at the end of this letter we have provided a summary table of this experience.

Following here we provide some of the specific clients/projects as the core references that we are submitting for the City of Flint's consideration:

- **Pittsburgh Water and Sewer Authority (PWSA), Pittsburgh, Pennsylvania** - The PWSA's Board of Directors unanimously selected Veolia in 2011 to deliver an innovative approach to managing the system, provide measurable results to customers and demonstrate an ability to quickly and easily collaborate with employees. In 2014, this management assistance/PPS contract was extended for a new term, recognizing the success of the effort to date.

Since the beginning of this partnership, Veolia has assisted the PWSA in realizing more than \$5.5 million in annually recurring revenue and efficiencies.

PWSA provides water and sewer services to 310,000 people in the City of Pittsburgh and surrounding areas. The agency hired Veolia to: 1) provide interim executive management services, leading 270 public employees in the delivery of water and wastewater services in the greater Pittsburgh area; and, 2) conduct a study to identify ways to cut costs and improve service. Under a management assistance scope, Veolia has worked with the PWSA to establish financial controls that limit spending and increase accountability, foster competition among companies seeking to do business with and on behalf of the PWSA, and identify opportunities for operational efficiencies having a direct impact on the utility's bottom line.

Under this contract, Veolia's management team is integrated into PWSA's organization to manage the agency's staff at their offices and operations sites, while another team of experts jointly identifies and evaluates improvement opportunities. This joint effort aims to help the PWSA improve the utility's customer service and performance levels.

The study phase of this project (Phase 1) was completed, and that work effort helped PWSA improve the customer service and performance levels by utilizing in-depth diagnostics of current operations. Veolia also developed recommendations for improvement that were approved by the PWSA board, and we are now supporting PWSA employees in implementing initiatives aimed at reaching new performance metrics. The Phase 1 report identified measures that will lead to annually recurring savings. During the partnership's first year, a team of water and wastewater experts from Veolia helped PWSA improve the utility's customer service and performance levels by

conducting in-depth diagnostics of current operations, developing recommendations for improvement and supporting PWSA employees in implementing initiatives aimed at reaching new performance metrics. The analysis and resulting operational changes helped PWSA reduce its cost of operations and increase the utility's revenue by, among other things, re-securing a large commercial customer. The total impact of these changes has allowed the PWSA to approve an annual budget without a water rate increase.

Early quick-wins under Phase 1 work for this project involved optimizing water production run-times at the membrane plant, which will reduce chemical costs by \$350,000 annually, and implementing enhancements at the customer service call center that slashed the call-abandonment rate almost immediately and reduced customer call waiting time by half. A key focus of the work is on identifying efficiencies in O&M practices for over \$3 billion in above- and below-ground infrastructure that serves the water and sewer conveyance needs of customers across 54 square miles. The initial tasks in this area involved working with the PWSA's managers and staff to meet Consent Decree (CD) obligations to state and county regulators. Under this initiative, Veolia's management and support teams worked to organize the department and create a culture of responsibility and accountability for the success or failure of projects. Veolia also worked with the PWSA's local and national engineering consultants and contractors to get them back on schedule, clearing a backlog of potentially litigious disputes, which allowed projects to move forward. Other tasks included working on the feasibility of creating a stormwater authority to better assess stormwater usage and create additional revenue for increased levels of service. Additionally, Veolia assisted with the planning for a more than \$150 million Capital Improvement Program (CIP) covering three years. This initial program addressed the PWSA's most critical infrastructure needs. The underground (water and sewer) pipelines in Pittsburgh are 80 to 100 years old and winter line breaks are a constant occurrence, so the PWSA is continually replacing underground assets.

Throughout these efforts, Veolia's Pittsburgh-based team worked side-by-side with the PWSA's staff, helping them execute the utility-approved initiatives and training them to sustain the work after the work of this partnership is complete.

- Client Reference: Alex Thomson, Chairman of the Board, PWSA c/o Houston Harbaugh, P.C. - Three Gateway Center, 401 Liberty Avenue, 22nd Floor, Pittsburgh, PA 15222
- Telephone: 412/281-5060 - Email: athomson@hh-law.com

Veolia in North America – Experience Profile

- 188 Municipal and Commercial Clients
 - 90 Municipal Water Treatment Facilities
 - 2,952 Miles of Distribution System Lines
 - 87 Water Pump Stations
 - 171 Water Wells
 - 183 Municipal Wastewater Treatment Facilities
 - 5,286 Miles of Collection System Lines
 - 1,158 Wastewater Pump Stations
 - 31 Industrial Pretreatment Programs
 - 13 Billing/Collection Operations
 - 23 Meter Reading Operations - 147,399 Meters Read
 - 4 Public Works Operations (other than Water/Wastewater)
 - 6 Operations Assistance/Peer Performance Solutions Projects
 - 53 Energy Installations (owned/operated/managed)
 - 631.6 MW of Energy Generation/Supply Capacity
 - 290,394 tons per day of Chilled Water Capacity
 - 443 MMBTU/hour Total Hot Water Capacity
 - 13.2 million pounds/hour of Total Steam Capacity
- 95 Industrial Clients
 - 60 Industrial Wastewater Treatment Facilities
 - 23 Industrial Water Treatment Facilities
 - 913.3 Million Gallons Water Treated Daily
 - 1.7 Billion Gallons Wastewater Treated Daily
 - 293,089 Dry Tons of Biosolids Processed/Year
 - 19.2 Million+ Population Served Daily

- **City of Buffalo, New York** - In 2010, Veolia began a 10-year partnership with the City for O&M of their water supply system which serves more than 77,000 customer accounts. This is the largest water system under contract O&M in New York State, with facilities and operations that include: a 160-MGD surface water treatment plant; 814 miles of water distribution system, customer service management (meter reading, billing and collections); capital program management; and underground asset management (UGAM) and above-ground asset management programs.

In addition, Buffalo was one of the first cities in the U.S. to use the Veolia North American Meter Testing Facility. Under that approach, some 400 meters from the City have been sent to the facility on an annual basis for accuracy testing and evaluation of remaining life. On average, Veolia repairs/replaces more than 3,400 meters annually in Buffalo, and customer service metrics involve answering

up to 7,000 calls a month in one minute or less and collecting 96% of meter revenue. Some 96% of all meters in the City are true-read type, with only 4% being estimated, and over 3,000 commercial and industrial accounts in Buffalo are now on mobile-read AMR systems.

Veolia transitioned the City's water operations to our firm under a delegated management type of contract, with the O&M staff remaining direct City employees working under supervision of Veolia's management team. Under this arrangement, Veolia has worked with the City and the staff to establish new work disciplines and procedures and to drive performance and enhance the quality of service. A core part of this effort involved establishing some 20 performance metrics to track and determine performance and accountability under this partnership.

In the area of customer service, Veolia implemented new customer service phone/information systems and partnered with the Water Authority service center staff to implement a process of a customer service cultural change that have enhanced performance and provided a better customer experience.

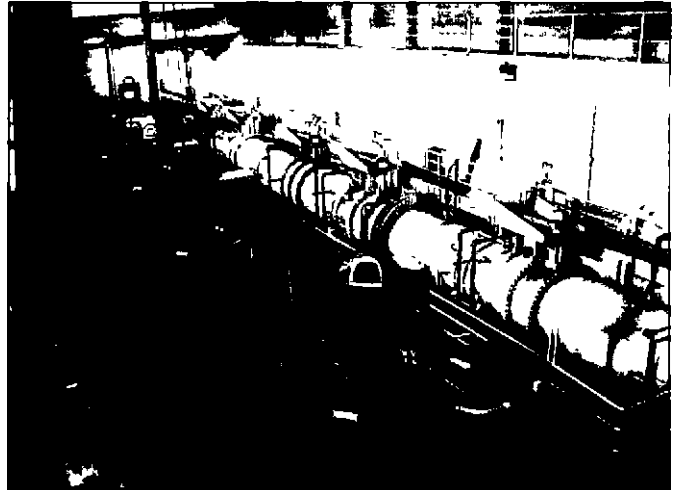
- **Client Reference:** O.J. McFoy, Water Board Chairperson, City of Buffalo, City Hall, 65 Niagara Street, Rm. 1101, Buffalo, NY 14202 - **Telephone:** 716/851-4333 - **Email:** omcfoy@sa.ci.buffalo.ny.us

- **Tampa Bay Water, Florida** - Veolia has worked with this agency since 2000 under multiple contracts that have focused on water treatment, storage and supply.

Tampa Bay Water, a regional water authority, serves the needs of over 2.5 million people in the communities of Tampa and St. Petersburg, and this agency ranks as the largest wholesale treated water supplier in Florida.

Veolia's initial project with Tampa Bay Water began in April 2000 when, following a year-long selection process among four competitive teams, they awarded our company a \$135 million, 15-year (with a 5-year option) contract to design, build and then operate a new 60-MGD Regional Surface Water Treatment Facility.

Since that time, the Tampa Bay Water-Veolia Water Public-Private Partnership has constantly expanded over the years – a testament to the quality of our work and our client's trust and satisfaction.



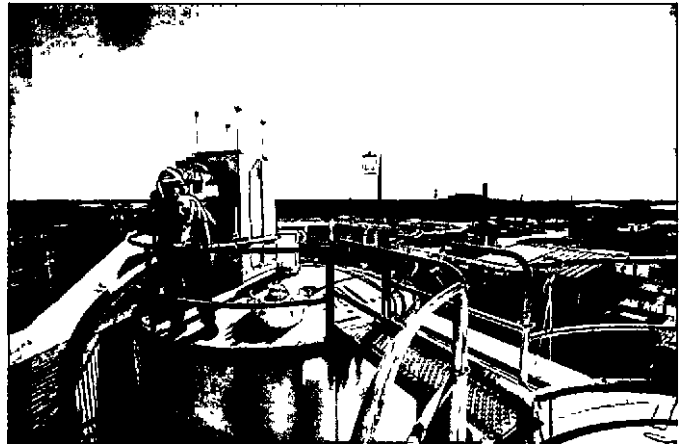
"The Buffalo Water Board... is confident that we have selected the best operator for our system ... Veolia Water's demonstrated focus on service has convinced us that our long-term partnership will result in notable advances ... We expect Veolia Water to move us forward through the next decade with marked efficiency improvements and technological advances while maintaining our exceptional water quality."

**– Oluwale McFoy, Chairperson, Buffalo Water Board
Speaking at the start of the contract in 2010.**

Veolia's initial design-build-operated (DBO) contract was for a 66-MGD surface water treatment plant, and that was followed by additional service agreements for the maintenance of a 30-MGD groundwater treatment facility, O&M of a 15-billion reservoir, and an engineering-procurement-construction management (EPCM) type contract for a new 45-MGD hydrogen sulfide treatment plant and 20-MGD high-lift pumping station.

Tampa Bay Water also awarded Veolia Water a second DBO contract to expand (nearly doubling the size) the original surface water plant from 66-MGD to 120-MGD.

Today the Public-Private Partnership between Tampa Bay Water and Veolia Water is the largest in Florida, and the surface water treatment plant is among the most technologically sophisticated in the world.



The Public-Private Partnership between Tampa Bay Water and Veolia Water, which began in 2000 and now encompasses multiple projects for the water treatment and supply, ranks as the largest and most successful of its type in the State of Florida. The project has been recognized with numerous awards, including the 2013 Plant Operations Excellence Award from the Florida Department of Environmental Protection.

- **Client Reference:** Mr. Matt Jordan, General Manager, Tampa Bay Water - 2575 Enterprise Road, Clearwater, FL 33763 - **Telephone:** 727/796-2355 - **Email:** mjordan@tampabaywater.org.
- **DeKalb County Department of Watershed Management (DWM), Georgia** - DeKalb County is Georgia's third-largest county, with more than 700,000 residents. The DWM hired Veolia in 2014 to assist in identifying cost savings and customer service improvement, and work completed to date has involved conducting a comprehensive and independent review of their water and wastewater operations.

DWM's operations include: a 140-MGD water treatment plant; 65 pump stations; two wastewater treatment plants (20-MGD and 36-MGD in capacity); more than 5,000 miles of water and sewer pipe; and a customer service operation that provides services to 700,000 residents in the Atlanta metropolitan region.

The County and Veolia estimate that this review could produce as much as \$8 million in savings annually for DeKalb ratepayers, reducing costs and helping mitigate rate increases.

After a thorough analysis of existing operations, Veolia has presented a proposal to transform the entire customer service organization and leverage existing technological solutions to reduce wait times and increase satisfaction for customers. In addition to customer service, Veolia will support implementation of best practices across the utility's administration, planning, operations, maintenance and capital programs, and billing and collections.

In tandem with the assessment, Veolia is working with the DWM to implement County-approved operations and management initiatives focused on achieving measurable operational, revenue and organizational enhancements to ultimately reduce operating costs and improve service levels, allowing DWM to provide more efficient and sustainable services.

Some of the early wins under this contract have included: construction and maintenance wrench-time findings that offer the potential for more than \$1 million in annual impacts; efficiency studies of field operations crews at the wastewater plant that identified more than \$1 million in annual savings through in-sourcing current contractor spend; and more than \$500,000 in annual savings identified in the areas of chemicals and power at the water treatment plant. Veolia continues to work with the County as we focus on shaping a long-term approach to meeting their needs.

- **Client Reference:** Dr. James M. Chansler, P.E., Director DWM, DeKalb County - 1580 Roadhaven Drive, Stone Mountain, GA 30083 - **Telephone:** 770/621-7234 - **Email:** jmchansler@dekalbcountyga.gov

- **New York City, Department of Environmental Protection (DEP), New York** - Veolia began working with the DEP in 2011 to optimize their operations and help implement savings initiatives. New York City's water and wastewater operations that serve over 9 million people daily, delivering over 1 billion gallons of clean water and treating more than 1.3 billion gallons of wastewater per day. These operations include: 13 wastewater treatment plants; a new 290-MGD water treatment plant; 6,000 miles of sewers; and 7,400 miles of distribution lines.

The primary scope of this PPS program involved reviewing all aspects of this utility's operations to assess potential improvements in areas including: chemical use and pricing; labor productivity; inventory management; sludge process optimization; and overall O&M. Additionally, the project identified such enabling steps as public outreach, legislative initiatives and other processes for the implementation of recommendations.

Veolia's final report for the Phase 1 work ultimately identified over 100 implementable measures for the City's consideration. Throughout the first phase of this innovative partnership, the City's employees worked alongside our project team under a joint management and governance structure to identify operational and organizational efficiencies. In order to capture "quick wins," our joint team identified and implemented several cost-saving initiatives within the first three months: chemical procurement modifications, for example, yielded million dollars in annual recurring savings.

Under this approach, Veolia has identified opportunities that are expected to yield annually recurring financial benefits of more than \$100 million by 2016, and, to date, over \$90 million in savings and revenue enhancements have been reported by New York City's DEP. These benefits represented between 9% and 11% of the agency's \$1.2 billion fiscal year 2012 budget.

In June 2012, Veolia received notice to proceed with the official implementation phase, Phase 2, which involves implementing the approved recommendations of the assessment phase (Phase 1) under a four-year contract. To implement this phase of the project, we mobilized a world-class team to work with the City's staff in their offices and at their water and wastewater operations locations.

Veolia's unique partnership, New York City's Operational Excellence (OpX) program, is focused on enhancing water and wastewater services, streamlining workflows, boosting efficiency and continuously identifying opportunities for improvements that will allow DEP to maintain its high level of customer service, safety and productivity while minimizing rate increases for its roughly 836,000 ratepayers. To achieve this, DEP set an ambitious goal for the OpX program right from the start – to achieve significant operating benefits by 2016. The program goes beyond individual projects and encompasses transformational initiatives, including enhancing performance management, strengthening core capabilities in human resources and procurement and fostering an organizational culture focused on performance and continual improvement. To reach these goals, the Veolia-led team worked with DEP to:

- Review current O&M practices for potential improvements in terms of energy usage and production opportunities, chemical usage and pricing, labor productivity, inventory management and optimal sludge processes.
- Recommend implementable measures to improve and/or streamline operations and maintenance, increase efficiencies, enhance productivity and reduce costs.
- Support public outreach, legislative initiatives, and other processes required to implement recommendations.
- Work with DEP staff to implement the recommended initiatives.

During the top-down and bottom-up analysis work conducted in Phase 1, which continues in the Phase 2 work, the Veolia team identified current strengths within DEP's operation and noted five key areas where improvements will have significant financial benefits for the agency: efficient and sustainable use of resources and materials; enhanced workforce effectiveness; improved revenue collection; development of a metrics-based performance culture; and strengthening DEP's support services. The OpX program confirmed that DEP is a world leader in meeting drinking water and wastewater compliance, performing

well above the average of similar utilities. In the first six months of the OpX program, 100+ individual improvement ideas were identified and evaluated.

- **Client Reference:** Mr. Steve Lawitts, Chief Financial Officer, New York City DEP - 59-17 Junction Boulevard, 8th Floor, Flushing, NY 11373 - **Telephone:** 718/595-6576 - **Email:** slawitts@dep.nyc.gov.gov
- **City of Indianapolis, Indiana** - From 2002 to August 2011 (when the City completed the sale of its water system assets to a quasi-governmental utility services provider), Veolia operated what was (at the time) the largest water system O&M contract in the U.S. The Indianapolis water system is a regional operation, serving the needs of almost one million people in central Indiana, and included: four surface water treatment plants, ranging in size from 16-MGD to 96-MGD; five groundwater treatment plants, ranging in size from 2-MGD to 24-MGD; a 4,300-mile water distribution system; and pumps, storage tanks and reservoirs. The City's water system includes 38,000 fire hydrants, 300,000+ customer accounts, meter reading (310,000 meters – residential, commercial and fire), meter replacement program, and billing & collection (600,000 accounts). A key element of the project focused on customer service improvements, and over the nine years of work in managing this system (prior to the sale of the utility by the City), Veolia achieved a customer satisfaction rate of at least 90% (independent survey) and answering 88% of 70,000 monthly calls within 30 seconds. Improvements that were implemented by Veolia in the area of customer service includes empowering customer service employees to resolve most issues on the first call ("One and Done"); responding to 99% of emergency calls within 60 minutes; maintaining the operations ranking in the top quartile for performance in billing accuracy, customer complaints and O&M (AWWA benchmarking survey); ensuring customers were not without water for more than 12 hours; providing customers with 24-hour access to their billing and account information.

Over the course of this nine-year contract, Veolia stopped a trend of substantial annual customer rate increases and had achieved a cumulative \$83.1 million in savings at contract completion in 2011. At the end of the contract, our annual operating costs were some \$2 million less than the previous management's had been when we started in 2002. We also improved the quality of operations by simultaneously achieving ISO 9001 and 14001 certifications, making the City the only major U.S. city to achieve both certifications.

Veolia also worked with this client to establish a set of key performance indicators (KPIs) that formed the basis for the award of a portion of our fee. Under the incentive plan, a portion of our fees were paid only if we met specified customer service, water quality, operations and other performance measures. By directly linking performance to compensation, this partnership established a new model in the water outsourcing industry. Over the nine-year life of this agreement, Veolia achieved over 90% of incentive payment fees.

- **Client Reference:** Mr. Sam Odle, Past Chairman, Board of Waterworks - City of Indianapolis, 3939 Priority Way S. Drive, #400, Indianapolis, IN 46220 - **Telephone:** 317/706-6349 - **Email:** samuallodle@gmail.com
- **Atlanta/Fulton County, Georgia** - Veolia, in a 50-50 joint venture with a minority-owned business enterprise, began operating the Atlanta-Fulton County Treatment Plant (which opened in November 1990). Over the term of this contract, Veolia has worked with the facility owner, the Atlanta/Fulton County Water Resources Commission (AFCWRC), to triple the capacity of this water treatment plant using a variety of process improvement and capital improvement approaches.

The scope of work for this project has involved all aspects of facility O&M, as well as working with the AFCWRC for facility expansion and upgrade. Over the past decade, Veolia implemented a pilot program to increase the plant's 30-MGD production capability to meet its rated flow of 45-MGD (as rated by the Georgia Environmental Protection Division, GEPD), with no capital expenditures. Subsequent efforts increased the plant's rated capacity to 56-MGD; with an ultimate treatment capacity of 135-MGD. Water demand is so great that the AFCWRC began Phase II earlier than planned to upgrade the plant to 90 MGD. The plant has been running at this new flow capacity since March 1998.

Veolia's O&M program has also reduced the power, chemicals, and overall operations costs, with savings passed on 100% to the AFCWRC. In addition, we have had no change orders to the contract even though the plant capacity expanded to 90 MGD under our current agreement.

The project also includes O&M responsibility for a 200-MGD raw water pumping station, dual 54-inch raw water pipe, more than 800 million gallons of reservoir capacity, and the treatment plant. The raw water pumping station—located on the Chattahoochee River—and raw water mains connect it to the surface water treatment plant. Major process equipment at the plant includes raw water traveling screens, grit removers, pumps, chemical addition/feed systems, meters, rapid-mix and flocculation chambers, declining-rate filters, clearwell storage, and finished-water pumps.

The success of the water operations project also led to a new contract with Fulton County for the O&M of their regional wastewater facilities, as highlighted above, and in 2014 Veolia was again selected for the renewal of the water operation contract under a competitive renewal process.

- **Client Reference:** Ms. Kathy Crews, General Manager - Atlanta-Fulton County Water Resources Commission - 9750 Spruill Road, Alpharetta, GA 30202 - Telephone: 678/942-2790
- Email: kcrews@afcwrc.com
- **District of Columbia Water and Sewer Authority (DC Water), Washington, DC** - DC Water is the largest wholesale customer of the Washington Aqueduct (Aqueduct), a federally-owned public water supplier operated by the U.S. Army Corps of Engineers. Veolia was retained to conduct a comprehensive evaluation of the Washington Aqueduct operations and related organization processes, and then recommend improvements that will add value to the delivery of services to its wholesale customers.

Working in collaboration with Aqueduct staff, Veolia brought in experts to complete the evaluation phase (Phase 1), focused on identifying ways to ensure that DC Water is receiving reliable, quality drinking water at efficient production cost. More than 25 individual improvement ideas were identified and thoroughly evaluated during the four-month study phase, and up to 15% in savings were identified by the Veolia at the Aqueduct. The cumulative annual impact of successfully transforming operations is projected to be between \$8 million and \$12 million total (OPEX and CAPEX) recurring yearly saving.

Veolia worked to review every aspect of the Aqueduct's operations, including the treatment process, maintenance and support functions. This review included the Aqueduct's capital program and also included an assessment of the key financial metrics and a high-level asset valuation.

Additionally, our team worked to benchmark the Aqueduct operations against some of Veolia's own operations, as well as other publicly operated utilities in order to identify gaps in performance and efficiency. This comprehensive analysis work involved site visits to the treatment facilities, discussions with staff, hands-on observations of the work performed, and in-depth review and analysis of all of the documentation provided. For example, the maintenance assessment involved over 100 hours of wrench-time observations, and for the procurement scope, we reviewed all of the contract specifications, terms and conditions. As part of this work, our teams conducted over a dozen one-on-one discussions and workshops with leadership and staff.

Veolia's team also analyzed data available across the organization and built new databases where necessary to generate insight. For instance, we used the CMMS data to develop the Pareto analysis in the maintenance section of the final report. To recommended implementable measures, Veolia facilitated workshops to generate, prioritize and refine initiatives across the different scope areas of the assessment. Most of the prioritization took place during the Steering Committee meetings, which included both Washington Aqueduct and DC Water participation and input. The Wholesale Customer Board was also involved in the review process through a presentation in September 2013 that summarized the primary findings and recommendations of the study. Working with the Washington Aqueduct and DC Water, Veolia identified approximately 10 improvement initiatives for maintenance, six initiatives in capital planning, five initiatives for water treatment, three initiatives for operations and two initiatives for support functions, including procurement. All of these more than 25 initiatives are supported by proposed enhancements in communications, training and performance management. These activities are often referred to as "enablers," which help organizations get the most out of their initiatives by properly supporting them with investments in these three overlapping activities.

Veolia has been selected to continue into Phase 2, Implementation, and that work (which will begin in 2015) will involve advising Aqueduct management and staff, coaching them on how to perform the recommended enhancements, measuring progress and refining approaches. The focus of this approach will be on ensuring that the staff can carry on this work and that the Washington Aqueduct can continue to benefit from our expertise long after our contract concludes.

- Client Reference: Thomas P. Jacobus, General Manager - Washington Aqueduct, Baltimore District, U.S. Army Corps of Engineers, 10 South Howard Street, Baltimore, MD 21201
- Telephone: 202/764-0031 - Email: thomas.p.jacobus@usace.army.mil
- Staff Experience – Veolia has provided resumes for the two core staff proposed for this project as an attachment to this letter. These resumes provide the requested information on each staff member, including experience, relevant education, degrees, certifications and any other pertinent information related to the base of experience they bring to this partnership with the City of Flint.
- Project Scope – At the start of this letter we provided a statement discussing our firm's understanding of the requested services and our approach to providing the services requested.
- Price for Services – With our proposed approach, presented earlier in this letter, Veolia provide a pricing schedule (hourly rates for key staff) to perform the requested services.
- Affidavit – Veolia has completed the required Affidavit and it is provided as part of our submittal (as an attachment to this letter).

Finally, as we discussed at the start of this letter, Veolia is offering this as an Alternative Bid/Proposal, which is being submitted to you in the requested form and format – an executed original and two copies of our letter proposal submittal – and remains a valid offer for 120 days from the date of submittal. Further, our Bid/Proposal is based on the City's RFP and other documents and information provided as part of the procurement process, as well as on the contractual concepts under which Veolia normally provides the services outlined in this letter. Veolia's Bid/Proposal also assumes the negotiation and execution of a mutually acceptable contract consistent with those concepts. We would note that contractual provisions that often require discussion and further agreement include, among other provisions, warranties, indemnities, casualty risks, insurance, environmental liability, ownership of wastes, consequential damages, contractual limits of liability and remedies for breach or default and termination. We do not believe that these matters should present any serious obstacles to the negotiation of a contract, and we are prepared to meet with you to discuss them at your convenience.

As the Veolia Executive Sponsor for this proposed work with the City of Flint, I will be the key contact as we move forward with this process. Further, as we discussed in our meetings with you, my background for this key role includes a combination of utility management experience, as well as experience in leading Veolia's PPS work with other major communities and water utility operations in the U.S.

I am also the former President and Manager of the water system for the City of Indianapolis, which Veolia operated and managed for over nine years. Under that O&M contract, our firm achieved an industry-first in performance standards and quality management.

My contact information for the purposes of this Proposal is as follows:

Mr. David Gadis – Senior Vice President – Sales – Municipal and Commercial Development
Veolia Water North America Operating Services, LLC
101 West Washington Street, Suite 1400 East, Indianapolis, Indiana 46204
Telephone: 317/716-5683 – Fax: 317/917-3718 – Email: david.gadis@veolia.com

I invite you to contact me should you have any questions with regard to our Bid/Proposal, or if you need any additional information.

We very much look forward to your review of this submittal and the next steps in this procurement process for this proposed new partnership.

Sincerely yours,



David Gadis
Senior Vice President
Veolia Water North America Operating Services, LLC

Attachments:

- 1 - Resumes for Key Staff
- 2 - Experience Summary Table
- 3 - Affidavit for Corporation

Attachment 1
Resumes for Key Staff



Education:

BS, Chemical and
Environmental
Engineering,
University of Toledo

**Registrations/
Certifications:**

F-1 Waterworks
Operator,
Michigan

Registered
Professional Engineer,
Ohio

Class IV,
Water Supply
Operator,
Ohio

Class III,
Wastewater Operator,
Ohio

**Memberships/
Affiliations:**

American Water
Works Association

Operator Training
Committee of Ohio
(OTCO)

Background:

Mr. Gnagy is the Water Process Manager with the Engineering and Optimization group of Veolia Environnement North America (Veolia)'s Municipal and Commercial Technical Support Group. In this role he provides support for Veolia's design/build, design/build/operate (DBO) and operations, maintenance and management (O&M) projects in the U.S. and Canada. This includes providing technical and capital project support to municipal, commercial and other projects in the water and energy business lines.

Mr. Gnagy joined Veolia in 2010, and prior to his current role he worked as the Municipal Water Technical Manager with Veolia Water North America Operating Services, LLC (Veolia Water)'s Technical Direction Group. In these technical leadership roles, he has provided engineering and operational expertise to projects related to troubleshooting process and equipment problems, achieving water quality goals, maintaining regulatory compliance, optimizing treatment and chemical processes, maintaining system water quality and participating in the development of new projects throughout North America.

Mr. Gnagy has also worked as part of the teams engaged in the delivery of projects under Veolia Water's Peer Performance Solutions (PPS) project approach. This new approach involves working with large water and wastewater utilities in to conduct detailed operations evaluations that lead to operations efficiencies and cost saving for their operations. In this work, Mr. Gnagy has provided support for some of the largest water and wastewater utility operations in the U.S., including that for New York City, New York.

Mr. Gnagy has over 33 years of experience in management, operation, maintenance, design and construction of water treatment systems. He is experienced with chemical treatment operations and troubleshooting for the optimization of treatment processes and operational sequencing.

Mr. Gnagy also has experience in conventional and advanced treatment technologies, and has been involved with solving treatment issues and providing regulatory compliance. His experience includes: water supply development and monitoring; chemical treatment; mixing applications; taste and odor control; oxidation and coagulation treatment; chemical softening; ion exchange softening; clarification; filtration techniques; membrane filtration and membrane softening; disinfection methods; pumping operations; bench-scale, pilot testing and demonstration studies; high-rate treatment technologies; dewatering and solids handling; and process monitoring and optimization. His design experience has provided operator-friendly solutions to solve both regulatory and operational issues for a number of water treatment systems in the U.S.

In addition, Mr. Gnagy has specific knowledge of regulatory drivers and compliance in multiple state, and he has been involved with the development of site-specific operating strategies that help treatment plants achieve water quality goals and regulatory standards.

Work History:

- **2013-Present: Water Process Manager – Engineering and Optimization Group – Municipal and Commercial Technical Support Group – Veolia Environnement North America**
 - Works as part of an in-house specialty team that provides technical and management support for new and ongoing projects with municipal and commercial clients. This involves supporting projects under the water treatment and supply, wastewater collection and treatment, and energy utility operations and management business lines.
 - Served as Subject Matter Expert in the area of water operations for a contract with the Detroit Water and Sewerage Authority (DWSD) and the City of Detroit to evaluate their water and wastewater operations and proposed solutions. This includes an intensive due diligence examination of the facilities and operations and development of two reports, a Peer Review Report, which looked at the current operations with a focus on identifying immediate and long term needs for the DWSD, and a Transition Plan: Retail Services Report for the City. These reports outlined the issues facing the DWSD and the City as the water and wastewater operations changed under a new regionalization approach.
- **2010-2013: Municipal Water Technical Manager – Technical Direction Group - Veolia Water North America Operating Services, LLC**
 - Worked as part of the Veolia Water PPS team in New York City (operations evaluation and identification of improvements for the City's water supply systems), as well as the team involved in implementing a PPS project with DC Water and Sewer Authority (DC Water), Washington, DC. The DC Water project involved conducting an independent comprehensive review of the operations and management of the Washington Aqueduct (WAD). The focus of this work was on examining WAD's operations, considering: overall operational efficiency; reliability and security of supply; and total water quality management. The project with New York City involved operations efficiency studies that identified utility-approved opportunities expected to save the City \$108–\$130 million per year; Veolia Water is currently engaged in the implementation phase (Phase 2), which will cover the next five years.
 - Responsible for providing technical and operational expertise to current and ongoing Veolia Water projects. Participated in the development of new projects throughout North America.
 - Provided technical consultation and process troubleshooting for water treatment plant operations throughout the U.S., including a variety of conventional and advanced water treatment processes and the specialized equipment they employ.
- **2009-2010: Water Resources Manager - Brown and Caldwell**
- **2005-2009: Water Resources Manager/Operations Manager - URS Corporation**
- **1996-2005: Operations Specialist/Senior Design Engineer - Arcadis**
- **1989-1996: Operations Specialist - Jones & Henry Engineers**
- **1986-1989: Superintendent of Water - City of Defiance, Ohio**
- **1979-1986: Superintendent of Water - City of Berea, Ohio**
- **1977-1979: Water and Wastewater Operator - Village of LaGrange, Ohio**

Other Key Experience:

- Involved with the testing design and optimization of treatment processes including: source water characterization and oxidative organics fractioning; carbon adsorption; enhanced coagulation techniques; effective mixing applications; high-rate clarification processes; solids contact clarification; high pressure and low pressure membrane technologies including ultrafiltration (UF) and nanofiltration (NF); TOC removal and DBP control; enhanced softening techniques; anion exchange processes; chlorine and chlorine dioxide disinfection; chloramination; precipitative
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softening and recarbonation; tube and plate settlers; sludge management (pumping and processing, gravity thickening, lagoon storage and dewatering, land application, filter press dewatering and centrifuge dewatering); and laboratory analyses and operations.

- Significant experience in distribution system operations, including pumping operations, booster disinfection techniques, water quality monitoring, taste and odor investigations, iron and manganese related issues, unidirectional flushing programs, cross connection control, and repair and maintenance of piping systems.
- Served as Project Manager for a number of water treatment plant design projects related to implementation of chemical and treatment process improvements aimed at achieving compliance with drinking water standards, and improving plant operations and water quality. Provided construction oversight for the projects once construction of the improvements began.
- Provided chemical and process optimization services for a number of water treatment plants across the U.S. defining needed upgrades in operating practices and/or process equipment to enhance water quality and reduce operating costs.
- Conducted a number of bench-scale, pilot-scale, and full-scale process investigations related to identification of operating strategies and advanced treatment technologies to meet more stringent drinking water standards and developed recommendations for process treatments and equipment necessary to achieve regulatory compliance.
- Designed and equipped municipal drinking water laboratories for process monitoring, bacteriological analyses, algae identification and speciation, and advanced instrumentation and analyses.
- Prepared site-specific water and wastewater treatment plant operations and maintenance manuals for more than 120 systems across the U.S. outlining operating strategies, equipment descriptions, process control techniques, instrumentation and control systems, troubleshooting, and maintenance activities.
- Developed operating standards and training manuals related to jar testing and coagulation operations, mixing applications, solids contact clarification, water and wastewater disinfection, lime-soda softening and recarbonation techniques, filter inspection techniques, formation and control of DBPs, and an overview of the Stage 2 D/DBP and LT2 ESWT Rules. Also served as principle instructor for these courses since their development.
- Instructor for basic and advanced water treatment courses for the Operator Training Committee of Ohio; and instructor for basic math, basic chemistry, and basic hydraulics for the Michigan Department of Environmental Quality.

Education:

BS, Environmental Engineering,
East China University of Chemical Technology, 1985

MS, Environmental Engineering,
University of North Carolina at Chapel Hill, 1991

Registration:

Registered Professional Engineer,
Michigan

Additional Training and Certification:

Construction Documentation Technologist

Memberships/Affiliations:

American Water Works Association
(Past National committee members on Source Water Protection, Taste & Odor, and Organic Contaminant Control)

Water Environment Federation

International Ozone Association

(Current PAG board of directors, and past conference planning committee),

International UV Association

Background:

Mr. Chen is a Process and Operations Optimization Manager with the Engineering and Optimization group of Veolia Environnement North America (Veolia)'s Municipal and Commercial Technical Support Group. In this role he provides support for Veolia's design/build, design/build/operate (DBO) and operations, maintenance and management (O&M) projects in the U.S. and Canada. This includes providing technical and capital project support to municipal, commercial and other projects in the water and energy business lines.

Mr. Chen has almost 30 years of water system engineering, operations and research experience. He joined Veolia in 2014 and has been engaged in supporting the delivery of projects under O&M and Peer Performance Solutions (PPS) project approaches. The PPS approach involves working with large water and wastewater utilities in to conduct detailed operations evaluations that lead to operations efficiencies and cost saving for their operations. In this work, Mr. Chen has provided support for some of the largest water and wastewater utility operations in the U.S., including that for New York City, New York, and Washington, DC. Most recently he was part of the Veolia team that worked with the Detroit Water & Sewerage Authority in conducting an operations assessment, which yielded a comprehensive due diligence report and a second future planning/operations report for a regional approach for the water and wastewater operations.

Mr. Chen's experience includes working as a Senior Technical Specialist, Senior Project Manager, Technical Manager, as well as Research and Development (R&D) Specialist. He has extensive experience in water, wastewater treatment and water quality, and has worked on numerous study, planning, design, and services during construction projects. This work has included master planning, water and wastewater treatment, taste and odor control, asset management, biosolids management, residual management, and water quality.

Work History:

- **2014-Present: Process and Operations Optimization Manager – Engineering and Optimization Group – Municipal and Commercial Technical Support Group – Veolia Environnement North America**
 - Works as part of an in-house specialty team that provides technical and management support for new and ongoing projects with municipal and commercial clients. This involves supporting projects under the water treatment and supply, wastewater collection and treatment, and energy utility operations and management.
 - Served as a Technical Support Manager for PPS and O&M project sites, including:
 - DC Water and Sewer Authority (DC Water), Washington, DC. - Project involved conducting an independent comprehensive review of the operations and management of the Washington Aqueduct (WAD). The focus of this work was on examining WAD's operations, considering: overall operational efficiency; reliability and security of supply; and total water quality management.

Under the DC Water PPS project task, a key work task included: conducting a workshop evaluating the induction mixer to improve rapid mixing, review of water quality and chemical dosages, alternatives for controlling algae in the two water treatment plants) for the Washington Aqueduct McMillan Water Treatment Plant.

- Pittsburgh Water & Sewer Authority (PWSA), Pennsylvania – This PPS project has involved evaluating the operations of this agency's water and wastewater operations. This utility serves more than 300,000 people in the greater Pittsburgh area. A main area of focus for the work was on the development of Key Performance Indicators (KPIs) that were used to drive system improvements for the PWSA. Work tasks engaged in under this contract involved evaluating the algaecide alternative, and CAL-FLO replacing lime.
- Detroit Water & Sewerage Department, Michigan – Served as part of a team that worked with the DWSD along with Counties in the greater Detroit area in shaping comprehensive water and wastewater solutions considering the needs of the City and those of customers in the surrounding County areas. The work involved developing a comprehensive Peer Review Report, along with a second report (Retail Report) that discussed issues surrounding the formation of the Great Lakes Water Authority and the impact of that on operations of the DWSD and the City of Detroit. These reports involved performing extensive due diligence of the City's water and wastewater assets, preparing reports documents and supporting materials, and then presentations to multiple parties, including state level and judicial, City and County managers. Work tasks under that contract included conducting a process review for the DWSD's five water treatment plants.
- City of Buffalo, New York – This is an O&M contract that began in 2010 for operations and management of a water system serving a population of 280,000, with facilities and operations that include: a 160-MGD surface water treatment plant; 814 miles of water distribution system, customer service management (meter reading, billing and collections); capital program management; and underground asset management (UGAM) and above-ground asset management programs. Involved in supporting this operation in soliciting bids for an induction mixer and streaming current monitor, and alternative evaluations for these systems.
- City of Brockton, Massachusetts – This is an O&M contract that began in 1988 and includes: water operations for a 1.3-MGD and a 24-MGD surface water treatment plant, two raw water pump stations (40-MGD capacity), and two ground storage tanks (11.4 million gallons capacity); and wastewater operations for a 20.49-MGD tertiary wastewater treatment plant, three pump stations, and an 18 dry ton per day multiple-hearth sludge incinerator. Served as the Lead Technical Support Specialist for the conduct of a comprehensive water quality and water treatment plant review. This included evaluating alternatives for algae control, TOC and manganese removal, and evaluating manganese removal and short filter runtime, as well as backwash pump cavitation issues.
- Owned and Managed Energy Operations – Conducted a comprehensive system operation and optimization review for two Veolia energy makeup water treatment plants, including: Kendall Station Cogeneration in Cambridge, Massachusetts and the Grays Ferry Cogeneration Plant in Philadelphia, Pennsylvania. This included performing a review of river source water pretreatment alternatives, and identifying optimization opportunities of the ultrapure water treatment processes.
- **2013-2014: Independent Water Consultant – Solon, Ohio**
- **2012-2013: Project Principal - ARCADIS US Water – Cleveland, Ohio**
 - Served as Task Lead for softening water treatment plant upgrade and expansion evaluation for:
 - Dayton and Montgomery County Water Efficiency Master Plan, Ohio- Worked as the senior consultant and lead author of the three tasks reports, including: Task 5 - Water Treatment Plant Capacity Evaluation and Assessment for two 96-MGD softening water treatment plants; Task 6

- Regulatory Review and Compliance Assessment; and Task 9 – Evaluation of Groundwater Wells Reclassification’s Impact on Water Treatment.
 - Delaware County Water System Master Plan, Ohio – Served as the Task Lead for water treatment. The work involved evaluating the historical water productions and forecasted the future water production profile. Evaluated the treatment plant expansion and upgrade needs for four surface water and groundwater softening plants to best utilize the available source of supply to meet the future water supply needs. Provided recommended scope of work, process schematic and opinion of cost for upgrading and expanding the water treatment plants.
 - Northeast Ohio Regional Sewer District (NEORS) - Cleveland, Ohio – Worked as a Technical Consultant/ O&M Manual Task Process Engineer for the NEORS’s Southerly Wastewater Treatment Plan’s biosolids handling facility. Responsible for preparing an O&M manual for the centrifuge dewatering system.
 - Eureka Resources, Pennsylvania - Served as Process Mechanical Design Task Leader for a new frac wastewater treatment plant. The process included: oil/water separators; primary clarifiers; pH adjustment units; membrane biological reactors; crystallizer; sludge thickening and dewatering units; and various raw wastewater and treated wastewater storage tanks. Lead the design documentation preparations and coordinated and reviewed the P&ID drawing development.
 - New York City, Department of Environmental Protection, New York - Performed a quality assurance and quality control (QA/QC) role for the NYDEP’s Groundwater Treatment BOD report. Reviewed basis of design report for treatment of three well sites which uses treatment processes such as air stripping with and without vapor GAC adsorption, liquid GAC adsorption, and chemical oxidation followed by filtration for iron and manganese removal.
 - City of Monroe, Michigan – Served as the Technical Lead for the City’s Water Treatment Plant Ozone System Improvement Study. Assessed the current conditions of the existing system, evaluated different generator and ozone contactor improvement alternatives, and made recommendations and provided opinion of cost for each alternative.
 - Other Work - Supported winning proposals for Akron Water Quality Modeling, Alliance Joint Dewatering System, and Minneapolis Water Pool of Consultants. Served as: Technical Knowledge and Innovation and Technical Community of Practice member; Client Account Manager for Aqua Ohio and Pennsylvania American Water; and manager and support specialist for business development efforts, including pursuits with DWSD, NEORS, the Louisville Water Company, the City of St. Louis, the MSD, the City of Toronto’s wastewater treatment plant, the City of Ann Arbor’s water treatment plant, the City of Toledo’s water treatment, and the Warren County water treatment plant.
 - **2012: Technical Director and Technical Practice Network Leader, Water and Urban Development - AECOM Asia - Hong Kong/Shanghai China**
 - Served as the Technical Practice Network Leader and the Team Leader for: Asian Development Bank/JiangXi Government Boyang Lake Water Resource Management project; Project Manager of Shanghai Wastewater Treatment Plant Sludge Management Strategy Optimization Study; and Process Lead for the 50-MGD first membrane filtration plant feasibility study, and first 37-MGD sea water desalination plant feasibility study proposal in Hong Kong.
 - **2010-2012: Regional Director, Water and Urban Development - AECOM China – Shanghai**
 - Served as the Regional Director for Water and Urban Development in China with responsibility for: operation, strategic plan development, client management, business development and project delivery and staffing management of PRC WUD business line; leading the team winning record numbers of ADB and WB funded PPTA, ADTA and loan implementation projects (over \$10M USD) in 12 months; conducting high profile national strategy and policy projects in China on Boyang Lake
-

Water Resource Management (largest fresh water lake in PRC), National Stormwater Management and Water Logging Prevention Policy Study, and National Wastewater Treatment Plant Sludge and Wastewater Reuse Technology and Policy Study for PRC; consulting on wastewater treatment plant sludge management technical route studies for Beijing and Shanghai, two largest municipalities in PRC, including two of world's largest wastewater treatment plants: the Beijing GaoBeiDian plant and the Shanghai BeiLongGang plant; and serving as Process Manager for the Hong Kong Shatin Water Treatment Plant reprovisioning (expansion from 90-MGD to 145-MGD) with ozone and two-stage filtration (one biological) treatment processes.

- **2010: Senior Project Manager/Senior Technical Specialist - AECOM - San Francisco, California**
 - Worked as Senior Project Manager supporting AECOM Water operations and projects in North America. This included:
 - Project Manager and Lead Process Engineer on the Groundwater Reuse project for NASA Ames Research Center in Moffat Field, California. Upgraded the collection system from three pump-and-treat groundwater treatment systems, conducted hydraulic analysis and designed the pump and control upgrades. Designed the modifications of converting the existing 240,000 gallon tank into a RO permeate storage tank. Lead the alternative evaluation, and design services for treating the three different sources of pump-and-treated groundwater. Prepared the D/B contract for construction of a new 850,000 gallon tank. Designed the upgrade to the RO pretreatment system including the installation of dual media filter, UV reactor, and chemical feed system. Designed the refurbishment of the RO system including the new pumps, sensors, and RO membrane elements. Designed the new CIP system, and CIP waste neutralization and disposal system and piping, RO concentrate disposal system and piping. Designed and upgraded the control system for the RO permeate distribution system, provided the constant pressure in the system that allows the auto-source switching in the event the distribution system loss of pressure.
 - Engineering Manager for a multi-year, as-needed, system-wide zebra mussel study and control project with the California Department of Water Resource.
 - Senior Technical Consultant on the City of Portland, Oregon's, 225-MGD Bull Run Water Treatment Plant Chlorination Alternative Study. Evaluated bulk hypochlorite storage and feed, low strength (0.8% wt.) onsite generation of hypochlorite, high strength (12% wt.) onsite generation of hypochlorite, and onsite gas chlorine generation technologies. Conducted the conceptual design, including sizing, layout, list of equipment, construction and O&M cost estimate. Conducted the market research on installations, operation experience and cost.
- **2006-2009: Global Drinking Water Oxidation & Disinfection Technical Practice Workgroup Leader, Project Manager and Senior Technical Specialist – Metcalf & Eddy, Inc. (later acquired by AECOM) – Cleveland, Ohio**
 - Served in multiple roles for an engineering and operations company, including serving as: Global Drinking Water Oxidation and Disinfection Technical Workgroup Leader; International Ozone Association Champion; Ohio American Water Company (OAWC) Client Coordinator; Senior Technical Specialist; and Project Manager.
 - Key project work and accomplishments included: developing the company's first project for from both Ohio American Water and Pennsylvania American Water, and then managing the treatment plant projects with these two clients; developed the \$25 million Ashtabula Water Treatment Plant design/build project with the OAWC; organized the workshop for IO3A and IUVA/IO3A conferences; served as Project Manager and Lead Process Engineer for the OAWC Marion Water Treatment Plant chemical and filter systems improvements project; served as Project Manager for the OAWC Marion Water Treatment Plant needs assessment study, and on-call engineering services for both water and wastewater systems; served as Project Manager for the Elyria Water Treatment Plant intake study and preliminary design project; served as the Lead Technical

Engineer on the Shreveport ozone system improvement study and preliminary design project; served as the Lead Technical Engineer on Miami-Dade County Water and Sewer Department's Hialeah Water Treatment Plant filter backwash improvement alternative evaluations; served as the Project Manager and Lead Process Engineer for the Pennsylvania New Castle water treatment plant filter-to-waste addition project; and Project Engineer for the Northeast Ohio Regional Sewer District's ECT-4 Baffled Drop CSO Shaft Physical Model Study.

- **2001-2006: Multiple Technical and Management Roles - CH2M HILL – Detroit, Michigan**

- Worked in multiple roles, including: Northeast Regional Water Process Practice Leader; Northeast Regional Water Treatment Technology Leader; member of the Detroit Client Service Management Team; Member of the Northeast Regional Water Service Team; Technical Director of China Water Business Group; and Project Manager.
- Responsibilities in these roles included: contributing to developing strategic business plan for local, and region-wide markets; maintaining client contact and involvement in business development efforts for strategic water projects; and contributing to business development for water projects in Ann Arbor, Louisville, Cincinnati and other communities in the Mid-West.
- Worked on multiple projects with the DWSD, including:
 - Task Manager for DWSD's 50-year Comprehensive Water Master Plan. This work involved: evaluation of capacity development; analysis and projection of significant industrial flows and loadings; and projected flows from significant industrial users (SIU) and quality in the next 50 years by decade, industrial category, and geographic areas, within DWSD's service area.
 - Task Project Manager for the summary and evaluation of Detroit wastewater treatment plant capacity and performance, as part of the development of a comprehensive wastewater master plan for the DWSD. The plant has a rated secondary treatment capacity of 890-MGD, and primary treatment capacity of 1,700-MGD. Summarized the design criteria; assessed the existing and near-term capacity under the comprehensive treatment plant renovation project for both liquid and solids processing streams; conducted water quality and compliance status analysis; and discussed the suitability of the plant to meet future expansion and treatment needs including the proposed additional dewatering from CSO basins.
 - Project Manager and Lead Process Engineer for improvements to two wastewater treatment plant pump stations, including pickle liquor buildings, the polymer utilization building, and main plant influent building rehabilitation for DWSD. The wastewater treatment plant has a secondary treatment capacity of 890-MGD. Replaced all polymer delivery pumps, pickle liquor feed and transfer pumps, and influent sampling pumps. Managed the selection and sizing of various chemical and wastewater transfer pumps, with specific consideration of handling chemicals and high solids applications, and designed the new piping layout and control system. Assisted in preparing the specifications for various pumps and pipes and oversaw the design and specification of the basket strainers. Prepared construction documents and provided services during construction.
 - Managed an evaluation of long-term solids disposal alternatives as part of the development of a comprehensive wastewater master plan for DWSD. The plant has a rated secondary treatment capacity of 890-MGD. Conducted a thorough review of the current solids production and handling practices at the plant; reviewed the applicable treatment technologies and current and future regulations; and developed various alternatives and implementation plans as well as a scoring system to rank and select the recommended alternatives. Also developed capital and operations cost estimates for each alternative.
 - Project Manager and Lead Engineer for field sampling activities review and pre-audit service for the DWSD. Reviewed program documents and QA/QC procedures as well as the standard operating procedures. Audited the field sampling safety issues, reviewed EPA auditing reports

- and pertinent federal regulations and EPA guidelines, and recommended areas that needed improvement.
- Manage and Lead Engineer for the preparation of a low-interest loan application for the Drinking Water State Revolving Fund for the DWSD. Prepared an overview project plan for the 2004-2008 loan programs, successfully securing \$30M per year in low-interest loans from the Michigan DWSRF.
 - Task Manager for a source water protection project for DWSD. Summarized the pertinent federal and state regulations and international charters and agreements related to the Great Lakes and reviewed the associated watershed initiatives, trends, and programs, as well as the current and future monitoring technologies. Investigated the existing spill notification system and procedures and conducted a national survey on the early-warning monitoring and source water protection programs. Developed the framework for establishing a source water protection program. Made recommendations for short-, intermediate-, and long-term improvement and proposed the scope and estimated cost of the near-term capital improvement project needs of this first source water protection plan for a surface water utility in Michigan.
 - Task Manager for the development of a water quality management and treatment plant capital improvement plan for DWSD, covering their five water treatment plants (with a combined capacity of over 1.7 billion gallons per day. Reviewed the past and ongoing projects, reviewed the short-term and long-term water quality regulations. Developed short- and long-term water quality goals. Conducted a thorough assessment and evaluation of the current treatment process for capacity, technology and performance. Selected future treatment technologies and prepared the conceptual preliminary design and cost estimate for each plant, including ozone and UV installations. Coordinated ongoing plant improvement projects and developed a capital improvement plan for plants that would meet both system growth and water quality needs while maintaining a limited increase (6-7 percent) of water rate to DWSD customers in the future.
 - Task Manager for the development of DWSD's Wastewater Master Plan, which addressed: Significant Industrial Flows, Capacity and Performance Evaluation of the Detroit Wastewater Treatment Plant, Wholesale User Survey, and Long Term Solids Disposal Plan tasks.
 - Managed the development of a customer survey and service plan for the DWSD. Designed the survey form and managed the design and distribution of the survey questionnaires.
 - Project Engineer for the update of DWSD's industrial pretreatment program local limits database, including modification of the program and local limits calculation.
 - Project Engineer for Phase I and project manager for Phase II of an atmospheric deposition study for the DWSD, addressing the air deposition addition of mercury, cadmium, and PCBs loads to the headworks of a wastewater treatment system. Developed a quality assurance project performance plan and field sampling standard operating procedures, and coordinated the lab SOPs. Managed the water-phase sampling and led data analysis. Interfaced with subcontractors and labs; conducted detailed chronicle and statistical data analysis of pollutant concentrations, fluxes, or loadings for dry deposition, wet deposition, runoff, ambient, and treatment plant influent and effluent. Developed several approaches in estimating the quantitative relationships between the air deposition and runoff, air deposition and the plant headworks loadings of PCBs, mercury, and cadmium. Prepared responses to the steering committee's review comments. Conducted all data treatment and prepared the final study report, providing the crucial information for the state to establish the regulatory policies toward these chemicals.
 - Served as Senior Technical Consultant and Lead Engineer for a brackish groundwater treatment pilot study and preliminary design of the reverse osmosis water treatment plant at Moron Air Force Base in Spain. Led the technical evaluation and process design for providing portable water
-

to the base by evaluating, piloting, and designing a 1-mgd groundwater treatment facility. Conducted the desktop evaluation for alternative technologies to remove hardness, nitrate, TCE, and salinity from the groundwater sources. Developed the test plan and conducted the pilot tests on GAC, ion-exchange demineralizer, and reverse osmosis processes. Provided air-stripping unit troubleshooting, scale control evaluation, and preliminary design. Evaluated concentrate disposal alternatives and developed the construction cost estimate.

- Served as the Project Manager and Lead Process Engineer for the evaluation and design of an ozone system to remove geosmin-caused drinking water tastes and odors from the Lucerne Water Treatment Plant for the California-American Water Company. Evaluated the bench treatability data, designed the ozone and ozone/H₂O₂ application dose, and established the remaining ozone system design criteria, including a construction cost estimate. Prepared preliminary design of the system and evaluated different types of ozone generators, ozone dissolution methods, and ozone contactors. Determined final design, which included a LOX-feed ozone generator with side-stream injection skid and a pipeline contactor with the options of using an ozone contactor for disinfection (ozone alone) and taste and odor removal (ozone/H₂O₂) or T&O removal only.
 - Served as the Lead Process Engineer for construction and start-up of the 17-MGD Windsor Water Treatment Plant's new ozone system. The scope includes the construction management, start-up of the ozone system, optimization of the ozone residual analyzer layout and design and upgrade of the ozone-quenching agent with calcium thiosulfate to increase quenching capacity and safety. Participated in the resizing of the tanks and redesign of the layout and spill containment area. Participated in process and start-up troubleshooting, including how to achieve the desired log inactivation of *Cryptosporidium* and residual quenching during winter season.
 - Served as a Senior Consultant for ozonation design for the 167-MGD Tacoma, Washington, water treatment plant. Developed design criteria and evaluated bench testing results on geosmin and MIB removals. Employed the experimental design approach. Conducted statistical analysis of the experimental data, summarized the findings and conclusions of the tests, and prepared the study report.
 - Served as Senior Consultant for an algal toxin removal project for the American Water Works Research Foundation (AWWARF). Prepared the testing plan using statistical experimental design methodology for ozone oxidation, UV/H₂O₂ oxidation, and PAC adsorption of the microcystin-LR. Conducted a statistical analysis on the testing results and prepared the study reports.
 - Managed and served as Lead Technologist for a filter backwash and recycle stream evaluation and improvement study for the 27-MGD water treatment plant in the City of Ann Arbor, Michigan. Investigated the filter backwash and other recycle stream practices, as well as the average and peak instantaneous flow of each stream, and evaluated the potential hydraulic and water quality impact to the treatment process. Facilitated a plant staff workshop to develop operational and process improvements. Prepared report to submit to the Michigan Department of Environmental Quality.
 - Served as Process Engineer for the development of a master water plan for the City of Ann Arbor, Michigan. Led a water treatment plant process criteria evaluation and evaluations of the treatment of 1,4-dioxane from the groundwater.
 - **1992-2001: Multiple Technical and Management Roles - TETRA TECH MPS - Detroit and Ann Arbor, Michigan**
 - Worked as Project Manager, Senior Project Engineer, Project Engineer; and Water/Wastewater Technology Council Member.
 - Served as Process and Project Engineer for the Baby Creek combined sewer overflow control study for DWSD. Conducted a literature review, provided dry and wet weather multi-stage sampling of the CSO events, and performed bench-scale evaluations of various disinfection options, including UV, ozone, sodium hypochlorite, peracetic acids, and sodium bromide with sodium hypochlorite.
-

Proposed recommendations and disinfection design criteria. Prepared the disinfection study report and reviewed the final design study report.

- Served as Lead Engineer for a drinking water taste-and-odor study for DWSD, which received the 1998 Research and Technical Practices Award from the Michigan Section of the AWWA and required the development of monitoring and experimental plans and analytical standard operating procedures. Trained senior chemists to become flavor panelists, coordinated the monitoring efforts and flavor profile analysis, interfaced with clients, and conducted comprehensive powdered activated carbon and ozonation treatability studies to remove the taste-and odor-causing compounds from the water. Investigated a broad range of operational parameters and identified their impact to the odorant removals. Developed mathematical models for quantitative assessment of operational parameters and performance prediction.
 - Served as Project Manager and Lead Engineer in the development of ozonation design criteria for taste and odor control and Cryptosporidium inactivation for DWSD. Conducted an ozone demand and decay study, and developed the design criteria for meeting the requirement of disinfecting Giardia and Cryptosporidium. Assessed the impact of the proposed treatment technologies on the current operation. Prepared the progress and final study reports and made presentations to the client.
 - Served as Lead Engineer examining powdered activated carbon and chlorine interaction impact on T&O compound removal and contact time value for DWSD. Performed CT calculations under various conditions for four water treatment plants and made design and operational recommendations.
 - Served as Process Engineer for an implementation assessment of PAC storage, dosing, and delivery facilities at four water treatment plants for DWSD. Developed the design criteria for upgrading the powdered activated carbon dosing systems and reviewed the conceptual design and cost estimate of the PAC feeding system. Also provided an engineering feasibility valuation of building centralized PAC storage and dosing facilities. Reviewed the contact time calculations under various PAC addition points for the four plants and developed design criteria for alternative PAC dosing systems.
 - Served as Process Engineer for a backwash and residual management improvement project for DWSD. Developed the treatment process basis of design criteria and conceptual design for handling the backwash water and plant treatment residual for four water treatment plants with a combined capacity over 1,600-MGD. Conducted the historical data analysis and scenario analysis for determining the optimum equalization volume and treatment process design capacities.
 - Served as a Co-principal Investigator which involved conducting an investigation for a taste-and-odor materials evaluation workshop for the American Water Works Research Foundation. Convened an international expert panel to develop a new AWWA drinking water standard for testing materials from taste and odor perspectives. Organized a workshop, managed literature review, and prepared the final standard and project report.
 - Served as Resident Project Engineer for a seven-month pilot study to treat the low-strength, organics-containing cooling water for the Upjohn Company in Kalamazoo, Michigan. Participated in the planning, initiation, and operation of a 30-gpm carbon fluidized bed biological reactor. Coordinated with the client, vendor, and project manager and prepared weekly and final project reports.
 - Served as Field Project Engineer for a three-month feasibility study for the Kellogg Company of Battle Creek, Michigan, for the treatment of high-strength BOD/COD cereal-production wastewater using a pilot upflow anaerobic sludge blanket bioreactor. Obtained optimum operation and design conditions and addressed typical operation interference such as shock loads of BOD and TSS.
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- Served as Project Engineer for Michigan's Rouge River CSO control study for a national wet weather demonstration project. Trained the sampling crew, developed the field sampling SOPs, and coordinated with the weather service. Conducted detailed data analyses, such as concentration and load profiles for different pollutants, removal efficiencies, and overflow discharge quality. Drafted final report and provided recommendations for sampling and design of the future CSO basins.
- Served as Project Engineer for Michigan's Rouge River settling column study, as part of a CSO control study for a national wet weather demonstration project. Developed the experimental and sampling plans, trained technicians, performed data analysis, and drafted the report.
- Assisted in the evaluation of CSO control technologies and performance of retention basins in the Rouge River watershed. Assisted in evaluating the retention basin's effectiveness in disinfecting and removing numerous pollutants. Reviewed existing column testing protocol and proposed new protocol using modified columns and Imhoff cones. Developed a protocol for evaluating disinfection and the standard data analysis procedures to be used at all basins within the Rouge watersheds. Reviewed the mathematical models (steady-state settling model, statistical models, and dynamic models) available for predicting the basin long-term performance and individual event performance and assessed their advantages and limitations. Worked with modeling experts to develop new dynamic models for the project and developed the protocol for disinfection evaluation.
- 1991-1992: Process and Environmental Engineer (Biotech scale-up and Groundwater remediation projects) - ARCTECH, Inc. - Alexandria, Virginia
- 1988-1991: Research Assistant and Graduate Student (Thesis: Enzymatic Oxidation of Phenolic Pollutants) – University of North Carolina at Chapel Hill, Department of Environmental Engineering – Chapel Hill, North Carolina
- 1985-1988: Research & Design Engineer (industrial wastewater treatment) and Teaching Assistant – East China University of Chemical Technology, Department of Environmental Engineering and Institute of Chemical Environmental Engineering

Publications:

- Completed numerous technical articles, reports and other publications on topics related to water and wastewater treatment, water quality and research and development related topics.
-

Education:

BA, Marketing/
Communications,
Southern Methodist
University (1984)

**Memberships/
Affiliations:**

Indianapolis Urban
League

Indianapolis Sports
Corporation
President's Council

Indiana Business
Diversity Council

Purdue University
Science Bound

St. Mary's Child
Development Center

Big Ten Basketball
Tournament
Committee

American Water
Works Association
(AWWA)

Awards:

Indiana Basketball
Hall of Fame

2005 Achievement in
Business Award,
Center for Leadership
and Development

2006 Sam Jones
Award, Indianapolis
Black Chamber of
Commerce

Background:

Mr. Gadis is Vice President and Manager for Sales with the Municipal and Commercial Group of Veolia in North America. In this role he leads a team that is responsible for new project development and the support of ongoing projects and client relationships. This work has included supporting alternative project delivery approaches to municipal clients in the North American market. His recent work has focused on working with Veolia's team at the City of Detroit, Michigan, to support the identification of utility needs and solutions/approaches to address the City's water and wastewater utility.

Mr. Gadis was also a part of the Veolia team that working with the New York City Water Board and New York City Department of Environmental Protection (DEP) under the Operational Excellence (OpX) program. This team is charged with examining water and wastewater operations in the City with the goal of developing recommendations to streamline workflows, boost productivity, identify opportunities for efficiency gains, and keep future water rate increases as low as possible.

Prior to his current role, Mr. Gadis was the President of Veolia Water Indianapolis, LLC, the company that was charged with managing the water system providing service to almost a million in Central Indiana. The scope of this contract involved operating, maintaining and managing a water treatment, storage and supply system, a customer service organization responsible for meter reading for some 310,000 connections for the City of Indianapolis and an additional 15,000 connections through contracts with surrounding communities, as well as billing and revenue collection for 600,000 accounts. The contract also included a capital project component, and Veolia Water managed and implemented in excess of \$200 million in capital work to improve the City's aging water infrastructure.

Prior to that, Mr. Gadis managed the procurement and operations of the Indianapolis Water operations, with responsibility for administering the Veolia Water Indianapolis minority-owned (MBE), woman-owned (WBE) and other locally-owned business involvement efforts. The success of this was demonstrated in the company's unmatched success in achieving local involvement in all aspects of the project work at levels that well exceeded all of the City's goals and expectations-- keeping 92% of the dollars spent in the local economy and maintaining a 35% M/WBE participation level. He also provided leadership for Veolia Water's local involvement program in Indianapolis, with involvement in numerous community service organizations in the community. Additionally, Mr. Gadis has played a key role in shaping Veolia Water's national program for MBE/WBE recruitment and involvement in governmental and industrial projects at sites across North America.

Mr. Gadis has over 23 years of overall business experience, with more than 14 years of management experience, and his involvement with the Indianapolis water facilities began back in 1998, working as the Director of Procurement for Indianapolis Water Company. He joined Veolia Water Indianapolis in 2002 on the transition of the water facilities.

Key Experience:

- **2013-President: Vice President and Manager – Sales – Municipal & Commercial Group - Veolia North America – Indianapolis, Indiana**
 - Provides leadership for a Sale team and new project development for Veolia's water and energy utility services line in North America.
 - Work has included the development and support for projects under Veolia's Peer Performance Solutions (PPS) approach, including a new project with the DeKalb County, Georgia, Department of Watershed Management (DWM). This work is focused on helping the County identify cost savings and help improve customer service by conducting a comprehensive and independent review of their water and wastewater operations. DWM provides services to 700,000 residents in the Atlanta metropolitan region through its system of water treatment and distribution, customer service, and wastewater collection and treatment.
 - **2010-2013: Vice President – Municipal Sales Group – Veolia Water North America Operating Services, LLC – Indianapolis, Indiana**
 - Provided leadership for the company's sales and development program that has focused on identifying and developing innovative utility operations solutions for major cities in the U.S.
 - Worked as a part of the Veolia Water team for the Operational Excellence (OpX) program with New York City. The work is divided into two phases, with the Veolia Water Team first conducting an initial evaluation and recommendation phase that will result in a final report in 2012 of recommendations on how DEP can improve productivity and reduce costs. Based on that report, DEP has the ability to accept or reject any of the proposed operational changes and cost-saving measures. Improvements that DEP chooses will be implemented over a four-year period.
 - **2008-2010: President – Veolia Water Indianapolis, LLC - Indianapolis, Indiana**
 - Served as the Executive officer for Veolia Water's operations of the City's water systems, under a project that was completed in 2011.
 - Served as a part of the transition management team responsible for managing the transfer of the water operations (owned by the City) to a new owner and operator. The sale of the City's water treatment and supply assets, which serve almost 1 million people in the region, was completed in 2010, and the transition of services was completed in August 2011. The key challenges of that process involved maintaining the levels of service and quality for the customers that rely on the water system, and providing ongoing operations, maintenance and management services as the new owner is allowed to implement its own operations and management approach.
 - **2003-2008: Vice President and Chief Operating Officer – Veolia Water Indianapolis, LLC - Indianapolis, Indiana**
 - Responsible for day-to-day operations of the company, including field services, production, engineering, construction, procurement, risk management, asset management, laboratory services, health and safety, security, IOS9001 and 14001, as well as the company's MBE/WBE program.
 - **2002-2003: Vice President of Shared Services – Veolia Water Indianapolis, LLC - Indianapolis, Indiana**
 - Responsible for procurement, fleet, risk management, warehousing, health and safety, security, and M/WBE development.
 - **2000-2002: Vice President – Water Materials Unlimited (Indianapolis Water Company subsidiary) – Indianapolis, Indiana**
 - **1998-2000: Director of Procurement - Indianapolis Water Company - Indianapolis, Indiana**
-

- Acted as Director of Supply Chain Management, with responsibility for a \$15 million budget, \$8 million in sales, non-regulated business development, and \$7.5 million minority vendor program.
- Responsible for liability and property insurance claims, developing and administering the company's risk goals and objectives, and overseeing the procurement of goods and services.
- **1995-1998: Vice President – Monroe Guaranty Insurance – Indianapolis, Indiana**
 - Responsible for claims management, including \$125 million of claims expenses.
- **1989-1995: Midwest Regional Manager – USF&G Insurance Company – Indianapolis, Indiana**
 - Managed 16 branch office operations, 120 employees and \$200 million in written premiums. Responsible for re-engineering efforts in the company.
- **1984-1988: Senior Claims Adjuster – USF&G Insurance Company – Indianapolis, Indiana**
 - Responsible for handling general liability, auto and property claims, and special investigations.

Attachment 2

Summary Table –
Water Treatment Plant O&M Experience



Attachment 2. Veolia - Water Treatment Plant O&M Experience Summary

Client/Location	Flow	Scope	Major Process(es)	Dates
Ashburnham-Winchendon Joint Water Authority, MA	2 MGD	O&M of Surface Water Treatment Plant	Trident Filtration, Microfloc Microfiltration	2001-Ongoing
Blackwell, OK	1.55 MGD	O&M of Groundwater Treatment Plant	Conventional Treatment with Filtration	2001-Ongoing
Brockton, MA	24 MGD	O&M of Surface Water Treatment Plants	Conventional and GAC Filtration	1988-Ongoing
	1.3 MGD		Upflow Clarification, Direct Filtration, Microfloc Microfiltration	
Gloucester, MA	10 MGD	O&M of (two 5-MGD) Surface Water Treatment Plants	Conventional Treatment, Rapid Mix, Rapid Sand Filtration	2009-Ongoing
Heavener, OK	3 MGD	O&M of Surface Water Treatment Plant	Clarification, Filtration and Disinfection	1996-Ongoing
Latimer County, OK	0.23 MGD	O&M of Surface Water Treatment Plant	Surface Water Treatment Plant	2007-2017
Lynn, MA	15 MGD	O&M of Surface Water Treatment Plant	Rapid Mix Direct Filtration	1987-Ongoing
Leominster, MA	4 MGD	Design/Build and O&M for Multiple Surface Water Treatment Plants	Multi-Media Direct Filtration	1988-Ongoing
	2 MGD		GAC Filtration	
	1.2 MGD		Conventional (Rapid Mix, Upflow Pulsating Clarification, GAC Filtration)	
Sturbridge, MA	1.6 MGD	O&M of Groundwater Treatment Plant	Iron Removal Plant with Pressure, Greensand, Mixed-Media Filtration	1989-Ongoing
Westborough, MA	3.5 MGD	O&M of Surface and Groundwater Treatment Plants	Conventional Treatment, Multi-Media Filtration	1996-Ongoing
	2 MGD		Greensand Iron/Manganese Removal	
City of Atlanta/Fulton County, GA	90 MGD	O&M of Surface Water Treatment Plant	Conventional Treatment, Declining-Rate Filters	1991-Ongoing
Boonville, IN	2.9 MGD	O&M of Groundwater Treatment Plants	Iron/Manganese Oxidation, Dual-Media Greensand Pressure Filtration	1995-Ongoing
	1.9 MGD			
Buffalo, NY	160 MGD	O&M of Surface Water Treatment Plant	Conventional Treatment, Rapid Sand Filtration	2010-Ongoing
Canby Utility, OR	8 MGD	O&M of Surface Water Treatment Plant	Flocculation, Upflow Clarification, Filtration, UV Disinfection	2006-2016
Chattahoochee Valley Water Supply District, Lanett, AL	8 MGD	O&M of Surface Water Treatment Plant	Conventional Treatment, High-Rate, Multi-Media Filtration	1994-Ongoing

Attachment 2. Veolia - Water Treatment Plant O&M Experience Summary

Client/Location	Flow	Scope	Major Process(es)	Dates
Discovery Bay, CA	8.21 MGD	O&M of Groundwater Treatment Plants	Iron Removal with Sand Filtration	2009-Ongoing
Edwardsville, IL	7.78 MGD	O&M of Groundwater Treatment Plants	Greensand Filtration and Zeolite Softening	1987-Ongoing
Hardinsburg, KY	2 MGD	O&M of Groundwater Treatment Plant and Surface Water Treatment Plant	Reverse Osmosis Filtration of Groundwater	1995-Ongoing
	1.2 MGD		Conventional Treatment, Surface Water Dual-Media Filtration with ClariCone Clarification	
Junction City, KS	10 MGD	O&M of Groundwater Treatment Plant	Aeration, Lime Softening	1989-Ongoing
Matewan, WV	0.05 MGD	O&M of Surface Water Treatment Plant	Conventional Filtration	2001-Ongoing
New London, CT	9 MGD	O&M of Surface Water Treatment Plant	Conventional Filtration	2008-Ongoing
National Park Service, Elwha River WTP, Port Angeles, WA	53 MGD	O&M of Surface Water Treatment Plant	Coagulation, Sedimentation	2009-Ongoing
Smugglers Notch, VT	0.15 MGD	O&M of Groundwater Treatment Plant	Pressure Vessel Filtration	1985-Ongoing
Springboro, OH	7 MGD	O&M of Groundwater Treatment Plant	Anthracite Multi-Media Filtration	1990-Ongoing
Tampa Bay Water, FL	120 MGD	DBO for Surface Water Treatment Plant (new plant and expansion)	ACTIFLO Flocculation, Ozonation, Carbon Filtration	2000-Ongoing
	30 MGD	O&M of Groundwater Treatment Plant	Hydrogen Sulfide Stripping via Aeration Towers and Scrubbers	
Tupelo, MS	12 MGD	O&M of Surface Water Treatment Plant	Infilco Filtration Systems	1991-Ongoing
Williamson, WV	4.2 MGD	O&M of Surface Water Treatment Plant	Direct Filtration & Conventional Filtration (GAC and Multi-Media)	1999-Ongoing
Wilsonville, OR	15 MGD	O&M of Surface Water Treatment Plant	ACTIFLO Flocculation, GAC Filtration Ozonation	2001-Ongoing
Yukon, OK	3 MGD	O&M of Groundwater Treatment Plant	Groundwater Treatment Plant	1991-Ongoing

Attachment 3

**Affidavit for Corporate
Veolia Water North America Operating Services, LLC**



CITY OF FLINT, MICHIGAN

AFFIDAVIT

AFFIDAVIT FOR INDIVIDUAL

STATE OF

s.s.

COUNTY OF

.....being duly sworn, deposes and says that he is the person making the above bid; and that said bid is genuine and not sham or collusive, and is not made in the interest of or on behalf of any person not therein named, and that he has not directly or indirectly induced or solicited any bidder to put in a sham bid; that he has not directly or indirectly induced or solicited any other person or corporation to refrain from bidding, and that he has not in any manner sought by collusion to secure to himself any advantage over other bidders.

Subscribed and sworn to before me at, in said County and State,
this day of, A. D. 20

*Notary Public,County,.....

My Commission expires, 20

FOR CORPORATION * (Limited Liability Company, LLC)

STATE OF Indiana

s.s.

COUNTY OF Marion

David M. Gadis

..... being duly sworn, deposes and says
that he is Senior Vice President of Veolia Water North America Operating Services, LLC
(Official Title) (Name of Corporation) *

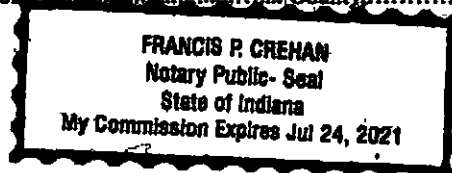
a corporation* duly organized and doing business under the laws of the State of Delaware (LLC).....
the corporation* making the within and foregoing bid; that he executed said bid in behalf of said corporation* by authority of its Board of Directors; that said bid is genuine and not sham or collusive and is not made in the interests of or on behalf of any person not herein named, and that he has not and said bidder has not directly or indirectly induced or solicited any bidder to put in a sham bid; that he has not and said bidder has not directly or indirectly induced or solicited any other person or corporation to refrain from bidding; that he has not and said bidder has not in any manner sought by collusion to secure to himself or to said corporation an advantage over other bidders;

(Signature)

Subscribed and sworn to before me at Indianapolis, in said County and State,
this 27th day of January, A. D. 20 15

*Notary Public State of Indiana County of Marion

My Commission expires July 24, 2021



Pleyte, Beth (Treasury)

From: Muchmore, Dennis (GOV)
Sent: Wednesday, February 04, 2015 6:02 PM
To: Saxton, Thomas (Treasury)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Flint Meeting

If we just could compare the old rates vs. the new Flint River rates it would help immensely. I think we can do something here that the ministers would like.

From: Saxton, Thomas (Treasury)
Sent: Wednesday, February 04, 2015 5:26 PM
To: Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Flint Meeting

My plan is to talk to Jerry A. et al. I don't have that old cost & rate info for Flint in my head. At the time it was more of Andy's gig but we will get it.
I will check too as to what they (the City) think of the rfp response for that water consultant i.e., if it is actually going to add value. And don't forget about that loan restructuring; that is about another \$2mm+ that could be used to replace bad lines.

From: Muchmore, Dennis (GOV)
Sent: Wednesday, February 04, 2015 4:53 PM
To: Saxton, Thomas (Treasury)
Subject: Flint Meeting

So, just so I understand, the rates went up from the Detroit rates when they went to the Flint River? If that is true I'd be pissed also. We probably need an accounting of this water issue. Costs to date, old rate v. today's rate, any new hook charges, etc.

In a discussion about this with Rich, he recited a conversation with Daddow in which Daddow said that the \$847,000 a month is a reduction from their previous rate. Daddow had no objection to a shorter term fix as it would mitigate some of the costs that were to be added to the water charges at GLWA for present customers for a year and a half which Bob seemed to think made sense.

I asked him to review with Daddow this whole thing and see if they could be rehooked for 15 months or so.

Dennis C. Muchmore
Chief of Staff
Governor Rick Snyder, Michigan
517-241-5601



STAY CONNECTED:



Koryzno, Edward (Treasury)

From: Workman, Wayne (TREASURY)
Sent: Wednesday, February 04, 2015 8:23 PM
To: Koryzno, Edward (Treasury); Byrne, Randall (Treasury); Cline, Richard (Treasury); Widigan, Robert (TREASURY)
Subject: Flint water Rates

We will need to collect some water rate info from our files including the E&Y study. Questions will go to Jerry Ambrose. Maybe we can talk just before 9:00 or sometime in the am about what we need to do. Thanks, Wayne

Sent from my iPad

Widigan, Robert (TREASURY)

From: Workman, Wayne (TREASURY)
Sent: Thursday, February 05, 2015 2:54 PM
To: Byrne, Randall (Treasury); Cline, Richard (Treasury); Widigan, Robert (TREASURY)
Cc: Koryzno, Edward (Treasury)
Subject: Fwd: pastor harris

Better check these numbers with Jerry

Sent from my iPhone

Begin forwarded message:

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: February 5, 2015 at 2:21:33 PM EST
To: "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>, "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>
Subject: Fwd: pastor harris

I have talked with Rich, Daddow and the Mayor and all seem to believe that the \$847K was a fair discount from the previous rates and they indicate a willingness to reconnect for 15-18 months. How does that calculate with our previous bills and payments?

From: "Fonger, Ronald" <RFONGER1@mlive.com>
Date: February 5, 2015 at 1:06:36 PM EST
To: "wurfelb@michigan.gov" <wurfelb@michigan.gov>
Subject: pastor harris

Brad:

I just spoke with Pastor Harris, the president of the Concerned Pastors for Social Action.

He said the group asked that Flint be immediately re-connected to Lake Huron water during yesterday's meeting and is expecting a response of some kind by the beginning of next week.

Would you or Dave Murray want to comment on whether that's under consideration?

I just wanted you guys to know what he's saying – without equivocation – in the story.

Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile 810 [REDACTED]
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

Stanton, Terry A. (Treasury)

From: Workman, Wayne (TREASURY)
Sent: Thursday, February 05, 2015 3:32 PM
To: Stanton, Terry A. (Treasury)
Cc: Saxton, Thomas (Treasury)
Subject: Re: pastor harris

They are trying to make a complicated subject very simple needs a longer conversation

Sent from my iPhone

On Feb 5, 2015, at 3:17 PM, Stanton, Terry A. (Treasury) <StantonT@michigan.gov> wrote:

Since you two weren't on this...thought I'd since DM is being pretty direct. That said, I'm fairly certain the \$2m grant funds can only be used for what the application described...but I will leave sharing that nugget to one of you guys...above my pay grade ;)

From: Muchmore, Dennis (GOV)
Sent: Thursday, February 05, 2015 3:11 PM
To: Stanton, Terry A. (Treasury); Wurfel, Brad (DEQ); Murray, David (GOV); Wurfel, Sara (GOV)
Subject: RE: pastor harris

Only problem with that is that the citizens of Flint say they are paying more now than they did when they were connected with DWSD. The city, after all, is not giving the water away free right now, so there is some kind of equalization that comes into play here. Additionally, we just gave them \$2M so if we need to use it for a reconnect that's probably a good use of the money as opposed to people refusing to use city water. Since we're in charge, we can hardly ignore the people of Flint. After all, if GM refuses to use the water in their plant and our own agencies are warning people not to drink it, another expressing continuing concern over quality, and the differential between what we now collect and what we would pay DWSD is not significant, we look pretty stupid hiding behind some financial statement.

From: Stanton, Terry A. (Treasury)
Sent: Thursday, February 05, 2015 2:19 PM
To: Wurfel, Brad (DEQ); Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Subject: RE: pastor harris

Would add that the city (Earley, Ambrose, etc.) have been unequivocal that doing so would cost at least \$1m per month...per the DWSD "offer" ...and the city simply cannot afford that.

I have also heard that the city no longer owns a section of pipeline that would have to be used in making any re-connection...making that more difficult and expensive.

From: Wurfel, Brad (DEQ)
Sent: Thursday, February 05, 2015 2:15 PM
To: Muchmore, Dennis (GOV); Murray, David (GOV); Wurfel, Sara (GOV)
Cc: Stanton, Terry A. (Treasury)
Subject: Fwd: pastor harris

Thoughts on this? Who responds? How?

Sent from my iPhone

Begin forwarded message:

From: "Fonger, Ronald" <RFONGER1@mlive.com>
Date: February 5, 2015 at 1:06:36 PM EST
To: "wurfelb@michigan.gov" <wurfelb@michigan.gov>
Subject: pastor harris

Brad:

I just spoke with Pastor Harris, the president of the Concerned Pastors for Social Action. He said the group asked that Flint be immediately re-connected to Lake Huron water during yesterday's meeting and is expecting a response of some kind by the beginning of next week.

Would you or Dave Murray want to comment on whether that's under consideration?

I just wanted you guys to know what he's saying – without equivocation – in the story.

Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile 810-
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502



STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

R. KEVIN CLINTON
STATE TREASURER

DATE: February 6, 2015
TO: Kevin Clinton, State Treasurer
FROM: Wayne Workman, Deputy State Treasurer
SUBJECT: City of Flint Water Rates

On April 17, 2013 Detroit Water and Sewerage Department (DWSD) sent a letter to the City of Flint terminating the existing water service contract between the City of Flint and Detroit. The termination of services was set to take effect one year later on April 17, 2014. This left a gap between the end of DWSD services and the start of the Karegnondi Water Authority (KWA). In order to fill a one year gap between the end of DWSD services and the start of KWA services the City estimated a financial benefit by switching to the river as a primary water source.

A memo from City of Flint to the residents, dated January 13, 2015 states that the final year that the City of Flint purchased water from DWSD, the cost was \$12.4M. In 2014 the cost was projected to rise to \$14.4M, and by 2015 the cost was projected to rise to \$16M. The financial benefit for switching to the river was the opportunity to divert that revenue towards capitalizing the upgrade expenditures needed to run the plant and the development of a capital improvement program for the aged infrastructure without a significant increase to the water bill.

Cost Comparison of Using River Water vs. DWSD

River Water		DWSD	
Plant Upgrades	12,500,000	Plant Upgrades	12,500,000
Cost of Water	<u>XX</u>	‡ Cost of Water	<u>16,000,000</u> †
	<u>12,500,000</u>		<u>28,500,000</u>

† - \$16M is the City's estimate of costs based current water usage and DWSD's rate structure

‡ - \$XXM is the City's costs for production of water netted of system improvement costs necessitated to bring the City to operational capacity with KWA when the system comes online

Widigan, Robert (TREASURY)

From: Gerald Ambrose <gambrose@cityofflint.com>
Sent: Friday, February 06, 2015 11:40 AM
To: Widigan, Robert (TREASURY)
Subject: Water info - per request
Attachments: DWSD Cancellation notice.docx; KWA Memo & Attachments.pdf; Flint Rate Study Report Final Draft v6.docx; SUMMARY OF WATER AND WASTEWATER RATES - RFC STUDY RECOMMENDATIONS.pdf; Treasurer Analysis City of DWSD Proposal 01-14 (3).xls

Robert,

Attached is the March 2013 DWSD cancellation notice, as well as an analysis of the business case for going to KWA. Also included is an analysis of the additional costs of obtaining water from DWSD even on a short term basis. Also fyi please find the rate study by RFC which confirms the City's decision to go to KWA.

Jerry

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
OFFICE OF THE DIRECTOR

735 RANDOLPH STREET
DETROIT, MICHIGAN 48226
WWW.DETROITMI.GOV

April 17, 2013

RECEIVED
CITY OF FLINT
CITY CLERK'S OFFICE
2013 APR 18 AM 11:33

Via Certified Mail and Electronic Delivery

Ms. Incz M. Brown
City Clerk
City of Flint
2nd Floor, City Hall
1101 S. Saginaw Street
Flint, Michigan 48502

Dear Ms. Brown:

**Regarding: Termination of Contract for the Provision of Water Services
by the City of Detroit, Water and Sewerage Department**

On December 20, 1965, the City of Detroit, through its Board of Water Commissioners, (DWSD) and the City of Flint, Michigan (Flint) entered into a contract for the provision of DWSD treated water to Flint and the distribution by Flint of that water to other Genesee County communities. Section 18 of that Agreement¹ provides:

18. The Board [DWSD] shall supply and sell water to the City [Flint] from the water system of the City of Detroit, and the City shall receive and purchase such water in accordance with the terms of this Agreement for an indefinite period of time but at least for a period of thirty-five (35) years from the date hereof. This Agreement may be terminated by either party after expiration of said 35-year period, upon one year's written notice served upon the other party by delivering the same to the Secretary of the Board or to the Clerk of the City as the case may be, or at any time upon mutual consent of both parties.

Please take notice that pursuant to this section, 18, of the above-referenced Agreement, DWSD is terminating this Agreement one year from today's date (April 17, 2014).

Sincerely yours,

Sue F. McCormick
Sue F. McCormick
Director

¹ Although the Agreement between DWSD has been subsequently amended, Section 18 remains unchanged and in full effect.



Dayne Walling
Mayor

CITY OF FLINT, MICHIGAN **Department of Finance**

City Hall, Room #203
1101 South Saginaw Street
Flint, MI 48502
(810) 766-7268 / (810) 766-8675 (fax)

Edward J. Kurtz
Emergency Financial
Manager

Michael K. Brown
City Administrator

Gerald Ambrose
Finance Director

October 31, 2012

Edward J Kurtz
Emergency Financial Manager
City Of Flint Municipal Center
1101 S. Saginaw Street
Flint, MI 48502

RE: Cost Comparison, KWA v DWSD

Mr. Kurtz:

The City of Flint is considering whether joining the Karegnondi Water Authority (KWA) is a better alternative for the residents and businesses of Flint than continuing to purchase water from the Detroit Water and Sewer District (DWSD).

An important part of this consideration is the relative cost of the alternatives. We have compared the current projected costs of continuing to purchase water from DWSD to the projected costs of purchasing water from KWA.

The projected costs of purchasing water from DWSD come from our current and past experience, as well as statements from DWSD about their future costs. The costs of purchasing water from KWA are based on the KWA Lake Huron Water Supply Study, as updated by its October 2012 Preliminary Engineering Report Update, Appendix 20, dated October 4, 2012.

Based on the current contract with DWSD, the FY13 cost of purchasing water for the City of Flint only (excluding the sale of water to Genesee County) is budgeted at \$14.4 million. Past experience indicates that it is reasonable to assume a 10% increase annually in the capacity charge from DWSD and a 5% increase in the commodity cost. It is also reasonable to assume a 5% increase in operational costs for the Flint Water Treatment Plant. Consequently, it appears that the costs for continuing to purchase water from DWSD will increase to \$22.7 million by FY20.

Edward J. Kurtz
RE: Cost Comparison, KWA v DWSD
October 30, 2012
Page 2

Conversely, joining KWA and participating in the construction of infrastructure to receive water will require an up-front cost to the City of \$2.3 million, to be paid over the first three years of joining. This would be paid by the City during the construction period while the City continues to purchase its water from DWSD. However, once the construction is complete and water delivery commences, the City's capacity charge will be fixed, based on the debt service necessary to finance construction. Operational costs for KWA water delivery and the Flint WTP are projected to increase by 5% annually.

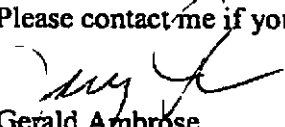
Based on the assumptions in this comparison, the annual projected cost of purchasing water for the City of Flint is 15% or \$2.6 million LESS using the KWA option in the first year of operation, increasing to 27% or \$6.1 million LESS in the fifth year of operation. The only caveat is that in order to achieve this, the City will need to upfront KWA \$3.25 million over 3 years prior to KWA beginning water delivery.

Concerns have been raised about the potential of cost overruns and delays in construction. These are reasonable concerns. An additional analysis, assuming a 15% cost overrun, and a one-year delay in construction, indicates that the gain to be achieved from participating in KWA is lessened (from \$2.6 million in the first year to \$2.3 million) and the City's upfront contribution is increased to \$10.4 million if the City is required to make its first year's debt service payment before operations begin. The City's gain from participating in KWA is delayed, but once operations begin, the City's annual costs are less than continuing with DWSD, becoming net positive in FY20. However, given the City's precarious financial position, it is likely that the City would need to find some source of capital if such an up-front payment were necessary.

Finally, we have also analyzed what constraints DWSD would need to impose on its contract with the City of Flint in order to be a positive financial option. It would appear that if the capacity costs to Flint were to be fixed at the FY13 level and if annual operating cost increases were capped at 2.25%, then the cost to the City of Flint could be less than KWA.

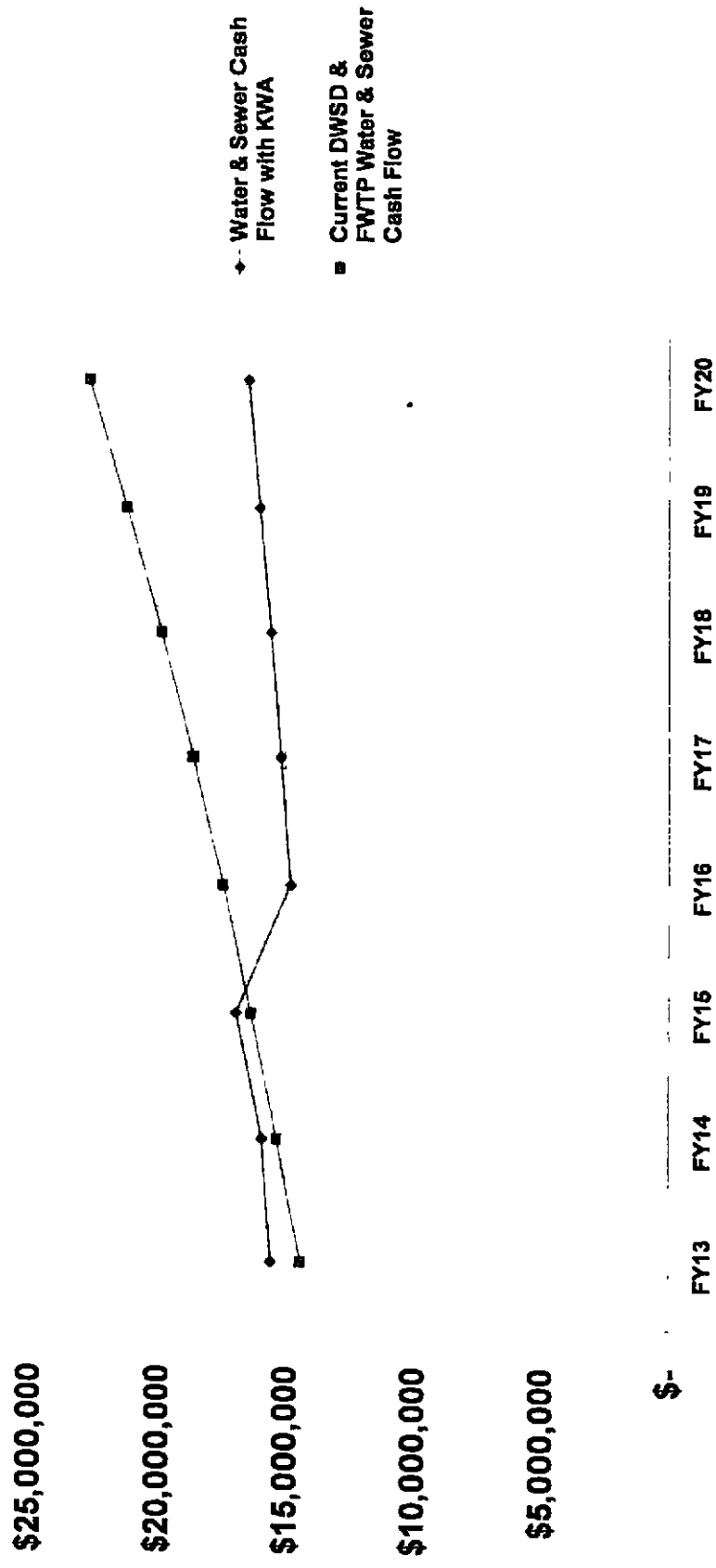
Attached are the three projections summarized above. First is the "Original Projection" utilizing the KWA Study. Second is the "Worse Case Projection" with cost increases and construction delays. Third is the reduced DWSD costs associated with fixed capacity costs and capped increases in operational costs.

Please contact me if you have any questions.


Gerald Ambrose
Director of Finance

GA:js
Attachments

Original Projection - Summary Comparison: KWA vs DWSD



ORIGINAL PROJECTION
SUMMARY COMPARISON: KWA v DWSD

Water and Sewer Cash Flow with KWA

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	\$ 14,413,858	\$ 15,355,135	\$ 18,385,534	\$ -	\$ -	\$ -	\$ -	\$ -
KWA Entry Fee	\$ 1,182,800	\$ 581,400	\$ 581,400	\$ -	\$ -	\$ -	\$ -	\$ -
KWA Debt Service	\$ -	\$ -	\$ -	\$ 6,583,155	\$ 6,583,155	\$ 6,583,155	\$ 6,583,155	\$ 6,583,155
FWTP Debt Service	\$ -	\$ -	\$ -	\$ 572,781	\$ 572,781	\$ 572,781	\$ 572,781	\$ 572,781
KWA operations	\$ -	\$ -	\$ -	\$ 878,868	\$ 922,812	\$ 908,863	\$ 1,017,401	\$ 1,068,271
FWTP operations w KWA	\$ -	\$ -	\$ -	\$ 8,843,344	\$ 7,185,511	\$ 7,544,787	\$ 7,922,026	\$ 8,318,128
Total Costs	\$ 15,576,658	\$ 15,936,535	\$ 18,966,934	\$ 14,886,149	\$ 18,274,280	\$ 15,879,878	\$ 18,108,383	\$ 18,582,334

Water and Sewer Cash Flow with DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	\$ 14,413,858	\$ 15,355,135	\$ 16,385,534	\$ 17,466,717	\$ 18,616,861	\$ 19,870,860	\$ 21,219,435	\$ 22,671,185

Cash Flow Difference: KWA and DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Annual Cost: DWSD - KWA	\$ (1,182,800)	\$ (581,400)	\$ (581,400)	\$ 2,582,588	\$ 3,342,581	\$ 4,180,874	\$ 5,114,072	\$ 6,118,851
Cumulative Gain with KWA	\$ (1,182,800)	\$ (1,744,200)	\$ (2,325,600)	\$ 236,988	\$ 3,878,589	\$ 7,770,533	\$ 12,884,605	\$ 19,003,456

(1) This projection assumes that KWA begins delivery of water to Flint starting in July, 2016. Any interest on the bonds will be capitalized until that period. The City will be obligated to begin paying its \$2,325,600 entry fee in FY13 - 2 payments of \$681,400 in FY13, 1 payment in FY14 and 1 payment in FY15.

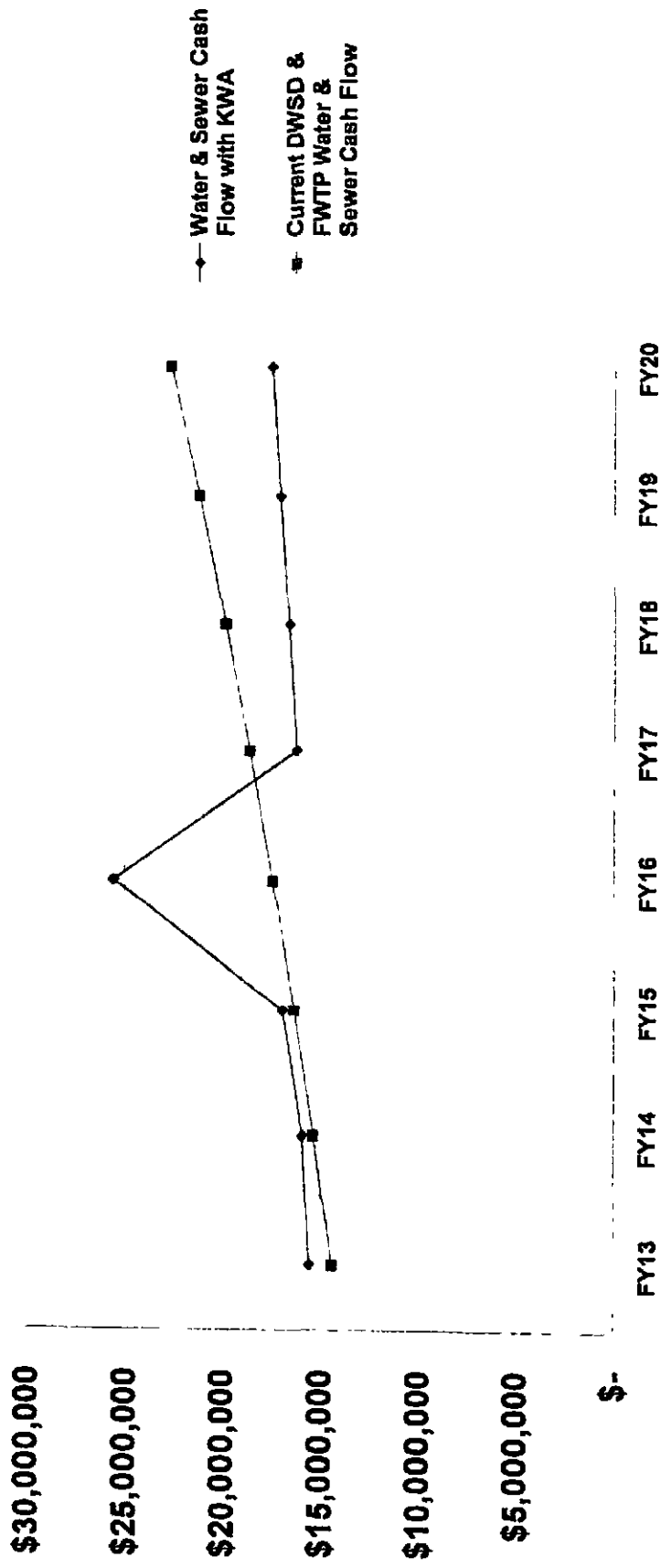
(2) The cost of the KWA option is projected to be \$2,582,588 or 16% LESS than DWSD in the first year of operation (Year 4). This gain offsets the upfront costs of \$2,325,600 by \$236,988.

(3) The cost of the KWA option is projected to be \$6.1 million or 27% LESS than DWSD in the 5th year of operation (Year 5).

(4) The cumulative savings by the 8th year from the beginning of the project are projected to be \$19 million.

KWA Entry Costs (1)		\$ 1,162,800	\$ 581,400	\$ 581,400	\$	\$	\$	\$	\$	\$
Fixed KWA Construction Cost (2)	Escalator				\$ 8,593,155	\$ 6,593,155	\$ 6,593,155	\$ 6,593,155	\$ 6,593,155	\$ 6,593,155
Fixed Flint WTP Construction Cost (3)	Escalator				\$ 572,781	\$ 572,781	\$ 572,781	\$ 572,781	\$ 572,781	\$ 572,781
Flint WTP Operating Cost (4)	Escalator	\$ 5,911,538	\$ 6,207,115	\$ 6,517,471	\$ 8,843,344	\$ 7,185,511	\$ 7,544,787	\$ 7,922,028	\$ 8,318,128	\$ 8,318,128
KWA Commodity Charge (5)	Escalator	\$ 759,200	\$ 787,180	\$ 837,018	\$ 878,988	\$ 922,812	\$ 988,953	\$ 1,017,401	\$ 1,088,271	\$ 1,088,271
TOTAL					\$ 14,888,149	\$ 18,274,280	\$ 18,878,678	\$ 19,105,353	\$ 19,582,334	\$ 19,582,334
(1) The City will, upon joining, be required to pay an initial fee of \$32,300 per MGD plus the same amount for each year until bonding for the project is obtained. At 18MGD, the City's cost is \$581,400 annually. Since it is projected that fee will be assessed for 3 years, the City's upfront cost is projected at \$2,325,800. (2) Per KWA proposal, project cost is \$272 million. City's fixed cost would be 30% of debt service, based on capacity design of 60mgd, of which 18MGD is for Flint. Debt service is based on 5% interest rate @ 25 years; 5% added to principal for capitalized interest for FY13, FY14, and FY15. (\$272,421,898 plus \$13,821,078 for 3 years = \$313,284,782) (3) Per KWA proposal, the cost of upgrading the Flint is \$7.1 million. City's fixed cost would be 100% of debt service based on 5% interest rate @ 25 years, with 5% added to cover capitalized interest for FY13, FY14, and FY16 (total principal = \$9,185 million) (4) Per FY13 Budget annual cost of WTP is \$4,111,538. \$1.6 million for electricity and chemicals & 2 FTE's are added. 100% City cost. 100% (5) Per KWA proposal, initial commodity charge would be based on \$1.30/mil or 7,900 gallons. Charge is based on 12MGD.										

Worst Case Scenario - Summary Comparison KWA vs DWSD (15% Cost Overrun; One year delay in Water Supply delivery)



WORSE CASE PROJECTION
SUMMARY COMPARISON: KWA v DWSD
(15% Cost Overrun: One year delay in Water Supply delivery)

Water and Sewer Cash Flow with KWA

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	\$ 14,413,855	\$ 16,355,135	\$ 16,355,534	\$ 17,450,717	\$ -	\$ -	\$ -	\$ -
KWA Entry Fee	\$ 1,182,800	\$ 551,400	\$ 551,400	\$ -	\$ -	\$ -	\$ -	\$ -
KWA Debt Service	\$ -	\$ -	\$ -	\$ 7,582,128	\$ 7,582,128	\$ 7,582,128	\$ 7,582,128	\$ 7,582,128
FWTP Debt Service	\$ -	\$ -	\$ -	\$ 658,888	\$ 658,888	\$ 658,888	\$ 658,888	\$ 658,888
KWA operations	\$ -	\$ -	\$ -	\$ -	\$ 922,812	\$ 922,812	\$ 1,017,401	\$ 1,068,271
FWTP operations w KWA	\$ -	\$ -	\$ -	\$ -	\$ 7,185,511	\$ 7,844,767	\$ 7,922,028	\$ 8,318,128
Total Costs	\$ 16,576,885	\$ 16,936,535	\$ 16,946,934	\$ 25,031,544	\$ 16,348,150	\$ 16,764,868	\$ 17,180,253	\$ 17,627,225

Water and Sewer Cash Flow with DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	\$ 14,413,855	\$ 16,355,135	\$ 16,355,534	\$ 17,450,717	\$ 18,916,851	\$ 19,870,550	\$ 21,219,435	\$ 22,871,185

Cash Flow Difference: KWA and DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Annual KWA - DWSD	\$ (1,182,800)	\$ (551,400)	\$ (551,400)	\$ (8,240,828)	\$ 2,287,700	\$ 3,116,034	\$ 4,038,182	\$ 5,043,960
Cumulative	\$ (1,182,800)	\$ (1,744,200)	\$ (2,325,600)	\$ (10,566,428)	\$ (8,288,726)	\$ (5,182,692)	\$ (1,143,460)	\$ 3,900,500

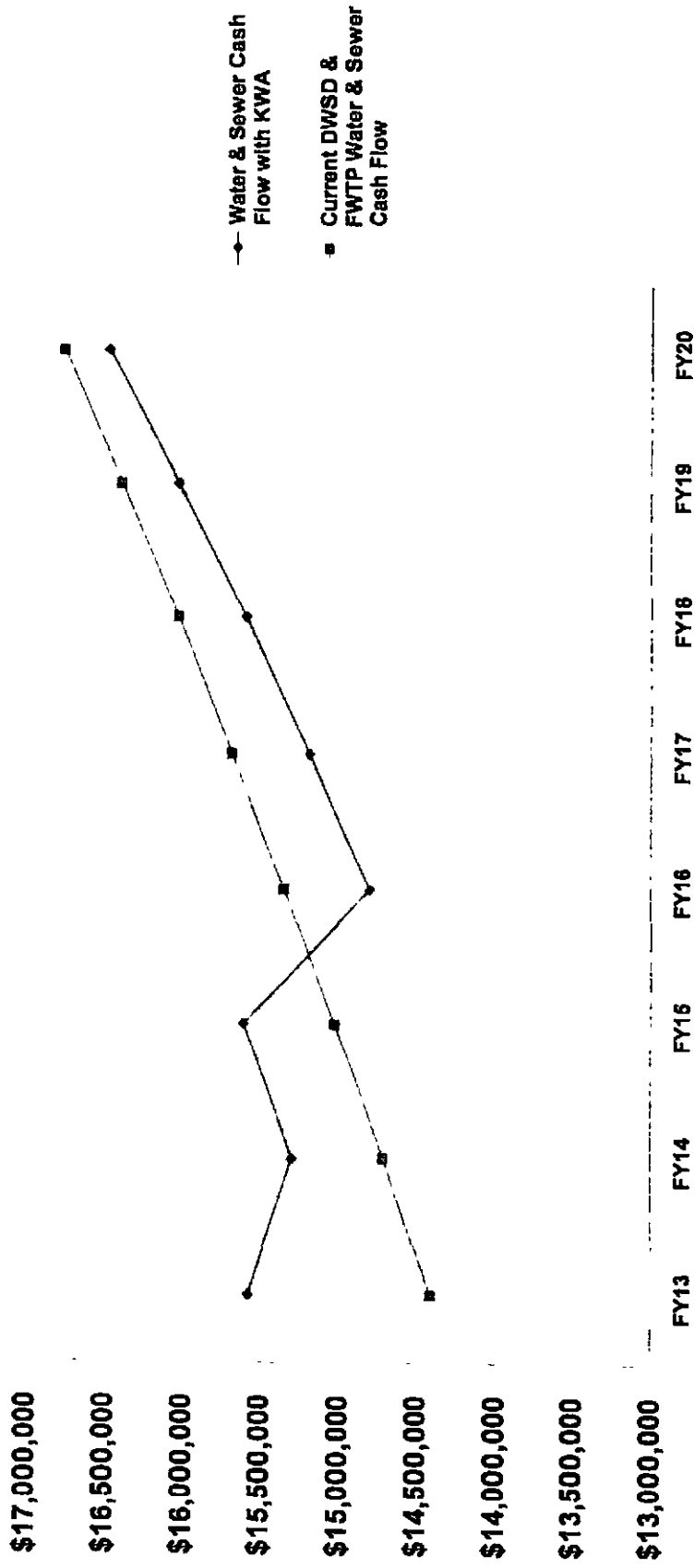
"Worse Case" scenario differs from Original in these respects:

Delivery of water to Flint from KWA is delayed by one year and construction costs are 15% above the original projection. Consequently, the City is required to begin paying for debt service one year before KWA begins delivery of water. This is in addition to its obligation to pay its initial entry fee of \$551,400 plus \$551,400 annually for the first 3 years.

(2) Once KWA begins delivering water in year 5, the annual operating costs are less than DWSD by 12%. Considering \$10.6 million in upfront costs in the first 4 years prior to KWA operation, the cumulative cost of KWA exceeds the cost of DWSD until year 8.

(3) Cumulative savings by Year 8 are projected to be \$3.9 million, compared to \$18 million in the original projection.

**ALTERNATE PROJECTION - SUMMARY COMPARISON: KWA V DWSD
WITH DWSD COSTS REDUCED (Fixed Costs held constant; Commodity
Costs Increased by 2.25% Annually)**



ALTERNATE PROJECTION
SUMMARY COMPARISON: KWA V DWSD WITH DWSD COSTS REDUCED
(FIXED COSTS HELD CONSTANT; COMMODITY COSTS INCREASED BY 2.25% ANNUALLY)

Water and Sewer Cash Flow with KWA

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	\$ 14,413,858	\$ 14,713,859	\$ 15,024,358	\$ -	\$ -	\$ -	\$ -	\$ -
KWA Entry Fee	\$ 1,162,800	\$ 581,400	\$ 581,400	\$ -	\$ -	\$ -	\$ -	\$ -
KWA Debt	\$ -	\$ -	\$ -	\$ 6,593,155	\$ 6,593,155	\$ 6,593,155	\$ 6,593,155	\$ 6,593,155
FWTP Debt	\$ -	\$ -	\$ -	\$ 572,781	\$ 572,781	\$ 572,781	\$ 572,781	\$ 572,781
KWA operations	\$ -	\$ -	\$ -	\$ 878,899	\$ 922,812	\$ 968,953	\$ 1,017,401	\$ 1,068,271
FWTP operations w KWA	\$ -	\$ -	\$ -	\$ 6,843,344	\$ 7,185,511	\$ 7,544,787	\$ 7,922,026	\$ 8,318,128
Total Costs	\$ 15,576,658	\$ 16,295,259	\$ 15,605,758	\$ 14,886,149	\$ 15,274,280	\$ 15,878,676	\$ 16,105,363	\$ 16,552,334

Water and Sewer Cash Flow with DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Current DWSD & FWTP Costs	\$ 14,413,858	\$ 14,713,859	\$ 15,024,358	\$ 15,345,778	\$ 15,678,582	\$ 16,023,172	\$ 16,380,081	\$ 16,749,823

Cash Flow Difference: KWA and DWSD

	Year 1 FY13	Year 2 FY14	Year 3 FY15	Year 4 FY16	Year 5 FY17	Year 6 FY18	Year 7 FY19	Year 8 FY20
Annual Cost: DWSD - KWA	\$ (1,162,800)	\$ (581,400)	\$ (581,400)	\$ 457,828	\$ 404,302	\$ 343,486	\$ 274,728	\$ 187,489
Cumulative Gain with KWA	\$ (1,162,800)	\$ (1,744,200)	\$ (2,325,600)	\$ (1,867,971)	\$ (1,463,669)	\$ (1,120,173)	\$ (845,445)	\$ (647,956)

(1) This projection assumes that DWSD fixed costs remain at 2013 levels and that operating costs increase by 2.25% annually

(2) KWA costs are as in the Original Projection.

(3) In this comparison, KWA costs are still less once operations begin (by 2.9%), and cumulative gain does not occur until after year 6. Over time, DWSD costs could be less with these limitations on cost increases.

**Cost Comparisons: Water Supply to City of Flint from DWSD and proposed KWA project
(FIXED COSTS HELD CONSTANT; COMMODITY COSTS INCREASED BY 2.25% ANNUALLY)**

Cost of water to City (excluding Genesee) using continued service from DWSD with modified escalator

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Fixed Cost (1)	\$ 4,411,680	\$ 4,411,680	\$ 4,411,680	\$ 4,411,680	\$ 4,411,680	\$ 4,411,680	\$ 4,411,680	\$ 4,411,680
Commodity Cost (2)	\$ 7,276,640	\$ 7,440,364	\$ 7,607,773	\$ 7,778,947	\$ 7,953,874	\$ 8,132,936	\$ 8,315,929	\$ 8,503,038
Flint WTP Operating Cost (3)	\$ 2,725,538	\$ 2,861,815	\$ 3,004,906	\$ 3,155,151	\$ 3,312,908	\$ 3,478,554	\$ 3,652,482	\$ 3,835,106
TOTAL	\$ 14,413,858	\$ 14,713,859	\$ 15,024,358	\$ 15,345,778	\$ 15,678,562	\$ 16,023,172	\$ 16,380,091	\$ 16,749,823

Cost of water to City of Flint using proposed KWA project for water supply to Flint WTP

	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
KWA Entry Costs (1)	\$ 1,162,800	\$ 581,400	\$ 581,400	\$ 581,400	\$ 581,400	\$ 581,400	\$ 581,400	\$ 581,400
Fixed KWA Construction Cost (2)				\$ 6,593,155	\$ 6,593,155	\$ 6,593,155	\$ 6,593,155	\$ 6,593,155
Fixed Flint WTP Construction Cost (3)				\$ 572,781	\$ 572,781	\$ 572,781	\$ 572,781	\$ 572,781
Flint WTP Operating Cost (4)	\$ 5,911,538	\$ 6,207,115	\$ 6,517,471	\$ 6,843,344	\$ 7,185,511	\$ 7,544,787	\$ 7,922,026	\$ 8,318,128
KWA Commodity Charge (5)	\$ 759,200	\$ 797,160	\$ 837,018	\$ 878,869	\$ 922,812	\$ 968,953	\$ 1,017,401	\$ 1,068,271
TOTAL	\$ 14,888,149	\$ 15,274,260	\$ 15,679,676	\$ 16,105,363	\$ 16,552,334	\$ 16,999,305	\$ 17,496,276	\$ 17,993,257

ES-6: SUMMARY OF WATER AND WASTEWATER VOLUMETRIC RATES

Water Volumetric Rates							
CUSTOMER CLASS	CONSUMPTION BLOCK	UNITS	FY 2014 Existing Block Rates	Test-Year FY 2015 Proposed Block Rates	Forecast FY 2016 Proposed Block Rates	Forecast FY 2017 Proposed Block Rates	Forecast FY 2018 Proposed Block Rates
Annual % Increase in Rate Revenues			0.00%	5.00%	5.00%	5.00%	5.00%
Total Inside City All Classes							
Inside City Block 1	0-35 CCF	(\$/CCF)	\$ 7.52	\$ 7.82	\$ 8.32	\$ 8.73	\$ 9.17
Inside City Block 2	36-2000 CCF	(\$/CCF)	\$ 7.31	\$ 7.62	\$ 8.00	\$ 8.40	\$ 8.82
Inside City Block 3	above 2000 CCF	(\$/CCF)	\$ 5.78	\$ 6.09	\$ 6.40	\$ 6.72	\$ 7.05
Total Outside City All Classes							
Outside City Block 1	0-35 CCF	(\$/CCF)	\$ 11.28	\$ 11.88	\$ 12.48	\$ 13.10	\$ 13.75
Outside City Block 2	36-2000 CCF	(\$/CCF)	\$ 10.77	\$ 11.42	\$ 12.00	\$ 12.60	\$ 13.23
Outside City Block 3	above 2000 CCF	(\$/CCF)	\$ 8.68	\$ 9.14	\$ 9.60	\$ 10.08	\$ 10.58

Wastewater Volumetric Rates							
CUSTOMER CLASS			FY 2014 Existing Rates	Test-Year FY 2015 Proposed Rates	Forecast FY 2016 Proposed Rates	Forecast FY 2017 Proposed Rates	Forecast FY 2018 Proposed Rates
Annual % Increase in Rate Revenues			0.00%	7.50%	7.00%	7.00%	4.50%
Total Inside City All Classes	(\$/CCF)		\$ 4.80	\$ 5.17	\$ 5.53	\$ 5.92	\$ 6.18
Total Outside City All Classes	(\$/CCF)		\$ 6.29	\$ 6.68	\$ 6.08	\$ 6.51	\$ 6.80

ES-7: SUMMARY OF WATER AND WASTEWATER FIXED CHARGES

CUSTOMER CLASS	WATER FIXED CHARGES					WASTEWATER FIXED CHARGES									
	FY 2014 Existing Charge	Task-Year FY 2015 Proposed Charge	Forecast FY 2016 Proposed Charge	Forecast FY 2017 Proposed Charge	Forecast FY 2018 Proposed Charge	FY 2014 Existing Charge	Task-Year FY 2015 Proposed Charge	Forecast FY 2016 Proposed Charge	Forecast FY 2017 Proposed Charge	Forecast FY 2018 Proposed Charge	Forecast FY 2019 Proposed Charge	Forecast FY 2016 Proposed Charge	Forecast FY 2017 Proposed Charge	Forecast FY 2018 Proposed Charge	Forecast FY 2019 Proposed Charge
Inside City Residential	5/8"	\$ 21.78	\$ 22.90	\$ 24.05	\$ 25.25	\$ 26.51	\$ 27.31	\$ 28.51	\$ 29.31	\$ 30.51	\$ 31.31	\$ 32.51	\$ 33.31	\$ 34.51	\$ 35.31
	3/4"	\$ 41.88	\$ 44.03	\$ 46.23	\$ 48.54	\$ 50.87	\$ 52.50	\$ 54.11	\$ 55.83	\$ 57.44	\$ 59.05	\$ 60.66	\$ 62.27	\$ 63.88	\$ 65.49
	1"	\$ 55.28	\$ 58.15	\$ 61.05	\$ 64.11	\$ 67.31	\$ 69.33	\$ 71.35	\$ 73.37	\$ 75.39	\$ 77.41	\$ 79.43	\$ 81.45	\$ 83.47	\$ 85.49
	1-1/2"	\$ 55.28	\$ 58.15	\$ 61.05	\$ 64.11	\$ 67.31	\$ 69.33	\$ 71.35	\$ 73.37	\$ 75.39	\$ 77.41	\$ 79.43	\$ 81.45	\$ 83.47	\$ 85.49
	2"	\$ 55.28	\$ 58.15	\$ 61.05	\$ 64.11	\$ 67.31	\$ 69.33	\$ 71.35	\$ 73.37	\$ 75.39	\$ 77.41	\$ 79.43	\$ 81.45	\$ 83.47	\$ 85.49
	5/8"	\$ 63.39	\$ 66.79	\$ 70.22	\$ 73.68	\$ 77.11	\$ 80.52	\$ 83.92	\$ 87.31	\$ 90.69	\$ 94.05	\$ 97.41	\$ 100.76	\$ 104.11	\$ 107.46
	3/4"	\$ 76.10	\$ 79.48	\$ 82.81	\$ 86.15	\$ 89.53	\$ 92.88	\$ 96.23	\$ 99.57	\$ 102.91	\$ 106.25	\$ 109.59	\$ 112.93	\$ 116.27	\$ 119.61
	1-1/2"	\$ 107.76	\$ 112.60	\$ 117.45	\$ 122.30	\$ 127.15	\$ 132.00	\$ 136.85	\$ 141.70	\$ 146.55	\$ 151.40	\$ 156.25	\$ 161.10	\$ 165.95	\$ 170.80
	2"	\$ 150.62	\$ 157.40	\$ 164.18	\$ 170.96	\$ 177.74	\$ 184.52	\$ 191.30	\$ 198.08	\$ 204.86	\$ 211.64	\$ 218.42	\$ 225.20	\$ 231.98	\$ 238.76
	2"	\$ 267.45	\$ 281.03	\$ 294.61	\$ 308.19	\$ 321.77	\$ 335.35	\$ 348.93	\$ 362.51	\$ 376.09	\$ 389.67	\$ 403.25	\$ 416.83	\$ 430.41	\$ 443.99
Inside City Commercial	5/8"	\$ 523.50	\$ 547.05	\$ 570.60	\$ 594.15	\$ 617.70	\$ 641.25	\$ 664.80	\$ 688.35	\$ 711.90	\$ 735.45	\$ 759.00	\$ 782.55	\$ 806.10	\$ 829.65
	3/4"	\$ 1,028.43	\$ 1,078.75	\$ 1,129.07	\$ 1,179.39	\$ 1,229.71	\$ 1,280.03	\$ 1,330.35	\$ 1,380.67	\$ 1,430.99	\$ 1,481.31	\$ 1,531.63	\$ 1,581.95	\$ 1,632.27	\$ 1,682.59
	1"	\$ 1,492.68	\$ 1,560.05	\$ 1,627.42	\$ 1,694.79	\$ 1,762.16	\$ 1,829.53	\$ 1,896.90	\$ 1,964.27	\$ 2,031.64	\$ 2,099.01	\$ 2,166.38	\$ 2,233.75	\$ 2,301.12	\$ 2,368.49
	1-1/2"	\$ 2,060.76	\$ 2,153.48	\$ 2,246.20	\$ 2,338.92	\$ 2,431.64	\$ 2,524.36	\$ 2,617.08	\$ 2,709.80	\$ 2,802.52	\$ 2,895.24	\$ 2,987.96	\$ 3,080.68	\$ 3,173.40	\$ 3,266.12
	2"	\$ 2,483.12	\$ 2,595.31	\$ 2,707.50	\$ 2,819.69	\$ 2,931.88	\$ 3,044.07	\$ 3,156.26	\$ 3,268.45	\$ 3,380.64	\$ 3,492.83	\$ 3,605.02	\$ 3,717.21	\$ 3,829.40	\$ 3,941.59
	2"	\$ 3,102.64	\$ 3,242.26	\$ 3,404.36	\$ 3,574.56	\$ 3,753.31	\$ 3,941.56	\$ 4,139.81	\$ 4,338.06	\$ 4,536.31	\$ 4,734.56	\$ 4,932.81	\$ 5,131.06	\$ 5,329.31	\$ 5,527.56
	2"	\$ 3,351.18	\$ 3,501.88	\$ 3,677.08	\$ 3,860.93	\$ 4,053.38	\$ 4,255.83	\$ 4,458.28	\$ 4,660.73	\$ 4,863.18	\$ 5,065.63	\$ 5,268.08	\$ 5,470.53	\$ 5,672.98	\$ 5,875.43
	5/8"	\$ 32.48	\$ 34.17	\$ 35.87	\$ 37.57	\$ 39.27	\$ 40.97	\$ 42.67	\$ 44.37	\$ 46.07	\$ 47.77	\$ 49.47	\$ 51.17	\$ 52.87	\$ 54.57
	3/4"	\$ 62.71	\$ 65.95	\$ 69.20	\$ 72.45	\$ 75.70	\$ 78.95	\$ 82.20	\$ 85.45	\$ 88.70	\$ 91.95	\$ 95.20	\$ 98.45	\$ 101.70	\$ 104.95
	1-1/2"	\$ 82.76	\$ 87.08	\$ 91.40	\$ 95.72	\$ 100.04	\$ 104.36	\$ 108.68	\$ 112.99	\$ 117.31	\$ 121.63	\$ 125.95	\$ 130.27	\$ 134.59	\$ 138.91
Outside City Residential	5/8"	\$ 80.13	\$ 83.74	\$ 87.35	\$ 90.96	\$ 94.57	\$ 98.18	\$ 101.79	\$ 105.40	\$ 109.01	\$ 112.62	\$ 116.23	\$ 119.84	\$ 123.45	\$ 127.06
	3/4"	\$ 112.67	\$ 117.74	\$ 122.81	\$ 127.88	\$ 132.95	\$ 138.02	\$ 143.09	\$ 148.16	\$ 153.23	\$ 158.30	\$ 163.37	\$ 168.44	\$ 173.51	\$ 178.58
	1"	\$ 181.76	\$ 189.06	\$ 196.36	\$ 203.66	\$ 210.96	\$ 218.26	\$ 225.56	\$ 232.86	\$ 240.16	\$ 247.46	\$ 254.76	\$ 262.06	\$ 269.36	\$ 276.66
	1-1/2"	\$ 226.09	\$ 236.26	\$ 246.43	\$ 256.60	\$ 266.77	\$ 276.94	\$ 287.11	\$ 297.28	\$ 307.45	\$ 317.62	\$ 327.79	\$ 337.96	\$ 348.13	\$ 358.30
	2"	\$ 448.47	\$ 468.66	\$ 488.85	\$ 509.04	\$ 529.23	\$ 549.42	\$ 569.61	\$ 589.80	\$ 609.99	\$ 630.18	\$ 650.37	\$ 670.56	\$ 690.75	\$ 710.94
	2"	\$ 765.37	\$ 820.71	\$ 876.05	\$ 931.39	\$ 986.73	\$ 1,042.07	\$ 1,097.41	\$ 1,152.75	\$ 1,208.09	\$ 1,263.43	\$ 1,318.77	\$ 1,374.11	\$ 1,429.45	\$ 1,484.79
	5/8"	\$ 1,543.87	\$ 1,613.34	\$ 1,682.81	\$ 1,752.28	\$ 1,821.75	\$ 1,891.22	\$ 1,960.69	\$ 2,030.16	\$ 2,100.63	\$ 2,170.10	\$ 2,240.57	\$ 2,310.04	\$ 2,380.51	\$ 2,450.98
	3/4"	\$ 2,239.47	\$ 2,340.24	\$ 2,441.01	\$ 2,541.78	\$ 2,642.55	\$ 2,743.32	\$ 2,844.09	\$ 2,944.86	\$ 3,045.63	\$ 3,146.40	\$ 3,247.17	\$ 3,347.94	\$ 3,448.71	\$ 3,549.48
	1"	\$ 3,107.48	\$ 3,247.30	\$ 3,408.67	\$ 3,570.04	\$ 3,731.41	\$ 3,892.78	\$ 4,054.15	\$ 4,215.52	\$ 4,376.89	\$ 4,538.26	\$ 4,699.63	\$ 4,860.99	\$ 5,022.36	\$ 5,183.73
	1-1/2"	\$ 3,738.51	\$ 3,907.77	\$ 4,103.16	\$ 4,308.55	\$ 4,513.94	\$ 4,719.33	\$ 4,924.72	\$ 5,130.11	\$ 5,335.50	\$ 5,540.89	\$ 5,746.28	\$ 5,951.67	\$ 6,157.06	\$ 6,362.45
Outside City Commercial	5/8"	\$ 4,653.87	\$ 4,853.28	\$ 5,052.69	\$ 5,252.10	\$ 5,451.51	\$ 5,650.92	\$ 5,850.33	\$ 6,049.74	\$ 6,249.15	\$ 6,448.56	\$ 6,647.97	\$ 6,847.38	\$ 7,046.79	\$ 7,246.20
	3/4"	\$ 5,483.82	\$ 5,705.67	\$ 5,927.52	\$ 6,149.37	\$ 6,371.22	\$ 6,593.07	\$ 6,814.92	\$ 7,036.77	\$ 7,258.62	\$ 7,480.47	\$ 7,702.32	\$ 7,924.17	\$ 8,146.02	\$ 8,367.87
	1"	\$ 80.13	\$ 83.74	\$ 87.35	\$ 90.96	\$ 94.57	\$ 98.18	\$ 101.79	\$ 105.40	\$ 109.01	\$ 112.62	\$ 116.23	\$ 119.84	\$ 123.45	\$ 127.06
	1-1/2"	\$ 112.67	\$ 117.74	\$ 122.81	\$ 127.88	\$ 132.95	\$ 138.02	\$ 143.09	\$ 148.16	\$ 153.23	\$ 158.30	\$ 163.37	\$ 168.44	\$ 173.51	\$ 178.58
	2"	\$ 181.76	\$ 189.06	\$ 196.36	\$ 203.66	\$ 210.96	\$ 218.26	\$ 225.56	\$ 232.86	\$ 240.16	\$ 247.46	\$ 254.76	\$ 262.06	\$ 269.36	\$ 276.66
	2"	\$ 226.09	\$ 236.26	\$ 246.43	\$ 256.60	\$ 266.77	\$ 276.94	\$ 287.11	\$ 297.28	\$ 307.45	\$ 317.62	\$ 327.79	\$ 337.96	\$ 348.13	\$ 358.30
	5/8"	\$ 448.47	\$ 468.66	\$ 488.85	\$ 509.04	\$ 529.23	\$ 549.42	\$ 569.61	\$ 589.80	\$ 609.99	\$ 630.18	\$ 650.37	\$ 670.56	\$ 690.75	\$ 710.94
	3/4"	\$ 765.37	\$ 820.71	\$ 876.05	\$ 931.39	\$ 986.73	\$ 1,042.07	\$ 1,097.41	\$ 1,152.75	\$ 1,208.09	\$ 1,263.43	\$ 1,318.77	\$ 1,374.11	\$ 1,429.45	\$ 1,484.79
	1"	\$ 1,543.87	\$ 1,613.34	\$ 1,682.81	\$ 1,752.28	\$ 1,821.75	\$ 1,891.22	\$ 1,960.69	\$ 2,030.16	\$ 2,100.63	\$ 2,170.10	\$ 2,240.57	\$ 2,310.04	\$ 2,380.51	\$ 2,450.98
	1-1/2"	\$ 2,239.47	\$ 2,340.24	\$ 2,441.01	\$ 2,541.78	\$ 2,642.55	\$ 2,743.32	\$ 2,844.09	\$ 2,944.86	\$ 3,045.63	\$ 3,146.40	\$ 3,247.17	\$ 3,347.94	\$ 3,448.71	\$ 3,549.48

**City of Detroit Water and Sewer Proposal
Cost Comparison**

Period	City of Flint Usage	Detroit Fixed Cost	Detroit Option Variable Cost	Detroit Option Total Cost	Price Per MCF	Comment
Jan '14	109,173	\$ 738,006	\$ 1,508,841	\$ 2,246,847	\$ 13.01	Detroit W & S monthly Purchase M.C.F
Feb '14	117,397	\$ 738,006	\$ 1,471,538	\$ 2,209,544	\$ 13.01	Detroit W & S monthly Purchase M.C.F
March '14	128,686	\$ 738,006	\$ 1,376,243	\$ 2,114,249	\$ 13.01	Detroit W & S monthly Purchase M.C.F
April '14	101,587	\$ 738,006	\$ 1,297,598	\$ 2,035,604	\$ 13.93	Detroit W & S monthly Purchase M.C.F
May '14	77,187	\$ 738,006	\$ 1,075,217	\$ 1,813,223	\$ 13.93	Data translated production to "purchase equivalents" for comparison
June '14	86,077	\$ 738,006	\$ 1,199,051	\$ 1,937,057	\$ 13.93	Data translated production to "purchase equivalents" for comparison
July '14	77,535	\$ 846,700	\$ 1,156,818	\$ 2,003,518	\$ 14.92	Data translated production to "purchase equivalents" for comparison
Aug '14	70,450	\$ 846,700	\$ 1,051,109	\$ 1,897,809	\$ 14.92	Data translated production to "purchase equivalents" for comparison
Sept '14	73,671	\$ 846,700	\$ 1,099,177	\$ 1,945,877	\$ 14.92	Data translated production to "purchase equivalents" for comparison
Oct. '14	64,153	\$ 846,700	\$ 957,167	\$ 1,803,867	\$ 14.92	Data translated production to "purchase equivalents" for comparison
Nov. '14	59,461	\$ 846,700	\$ 887,160	\$ 1,733,860	\$ 14.92	Data translated production to "purchase equivalents" for comparison
Dec '14*	64,218	\$ 846,700	\$ 958,133	\$ 1,804,833	\$ 14.92	Data translated production to "purchase equivalents" for comparison
		\$ 9,508,236	\$ 14,038,052	\$ 23,546,288		

* - Used 2013 data showing 8% increase over Nov data

1 Cubic Foot = 7 48051948 Gallons [Fluid, US]

NOTE: This does not include the reduction in expenses that would occur if we were to go back to DWSD on an interim period. Those expenses would be in utilities, chemicals, and perhaps in personnel. Those reductions would not exceed \$5 million. Based on this, our statement that the cost of returning to DWSD would increase costs by \$1 million per month is a conservative estimate.

Detroit Water Purchase Vs Sales FY14

Detroit Water Bill

Usage Period	Invoice Date	Total Purchase		Total Purchase In UNITS	Total Amt	Fixed Cost	Variable Cost	Total Billed In Units	Total Sales *	Percentage Billed
		M.C.F								
06/30/13-07/31/13	\$ 13.01	115,975		1,159,750	\$2,246,947.28	\$738,008	\$1,508,941.28	1,006,683	\$3,188,454.00	88.80%
07/31/13-8/31/13	\$ 13.02	113,012		1,130,120	\$2,209,543.88	\$738,008	\$1,471,537.88	859,484	\$3,121,199.00	78.05%
08/31/13-09/30/13	\$ 13.01	105,783		1,057,830	\$2,114,249.34	\$738,008	\$1,376,243.34	808,172	\$2,682,443.00	78.40%
09/30/13-10/31/13	\$ 13.01	99,738		997,380	\$2,035,603.89	\$738,008	\$1,297,597.89	779,584	\$2,427,343.00	78.18%
10/31/13-11/30/13	\$ 13.01	90,127	7.083	901,278	\$1,910,588.88	\$738,008	\$1,172,582.88	650,846	\$2,328,414.00	72.19%
11/30/13-12/31/13	\$ 13.01	97,190		971,906	\$2,002,455.71	\$738,008	\$1,264,449.71	750,543	\$2,403,623.00	77.22%
12/31/13-1/31/14	\$ 13.01	109,173		1,091,739	\$2,168,358.44	\$738,008	\$1,420,352.44	692,393	\$2,411,703.00	83.42%
01/31/14-2/28/14	\$ 13.01	117,397		1,173,970	\$2,265,347.27	\$738,008	\$1,527,341.27	878,457	\$2,308,039.00	57.82%
02/28/14-03/31/14	\$ 13.01	128,686		1,286,860	\$2,412,222.58	\$738,008	\$1,674,218.58	867,494	\$2,236,499.00	51.87%
03/31/14-4/30/14	\$ 13.93	101,587		1,015,870	\$2,162,848.80	\$738,008	\$1,414,842.80	725,511	\$2,281,328.00	71.42%
04/30/14-05/31/14 **	\$ 13.93	77,187	577.4	771,243	\$1,813,223.04	\$738,008	\$1,075,217.04	242,758	\$1,778,271.19	31.48%
05/31/14-06/30/14 **	\$ 13.93	86,077	643.9	863,877	\$1,937,057.35	\$738,008	\$1,199,051.35	261,841	\$1,917,772.00	30.68%
		1,241,932.1		12,411,823.0	25,258,325.8	\$5,856,072	16,402,283.8	8,121,544.0	29,084,088.2	68.43%

City of Flint Water Production Vs Sales FY15

Usage Period	Invoice Date	Total Purchase		Total Purchase In UNITS	Total Amt	Fixed Cost	Variable Cost	Total Billed In Units	Total Sales *	Percentage Billed
		M.C.F								
06/30/14-07/31/14	\$ 14.92	77,535	580.0	727,783	\$2,093,518.06	\$846,700	\$1,156,818.06	280,975	\$2,147,262.00	38.61%
07/31/14-8/31/14	\$ 14.92	70,450	527.0	656,334	\$1,887,808.82	\$846,700	\$1,081,108.82	244,695	\$1,876,080.00	37.28%
08/31/14-09/30/14	\$ 14.92	73,671	551.1	688,814	\$1,845,876.80	\$846,700	\$1,098,176.80	232,147	\$1,783,148.00	33.70%
09/30/14-10/31/14	\$ 14.92	64,153	479.8	592,957	\$1,803,867.22	\$846,700	\$957,167.22	258,913	\$1,789,597.00	43.87%
10/31/14-11/30/14	\$ 14.92	59,481	444.8	545,553	\$1,733,859.78	\$846,700	\$887,159.78	216,300	\$1,680,223.00	39.85%
11/30/14-12/31/14										
12/31/14-1/31/15										
01/31/15-2/28/15										
02/28/15-03/31/15										
03/31/15-4/30/15										
04/30/15-05/31/15										
05/31/15-06/30/15										
		345,270.1		3,211,320.8	9,394,930.5	4,233,500.0	5,161,430.5	1,233,030.0	9,258,310.0	38.40%

* Total Sales do not include Service Charge Revenue

06/30/14-07/31/14	Ratio of Units to gallons
07/31/14-8/31/14	0.01254763
08/31/14-09/30/14	0.01245416
09/30/14-10/31/14	0.01249889
10/31/14-11/30/14	0.01236376
Average	0.01226512

02/09/2015

UTILITY WIDE WATER FUND PROFESSIONAL SERVICES
PERIOD ENDING 02/28/2015

ACCOUNT DESCRIPTION	2014-15 AMENDED BUDGET	ACTIVITY FOR MONTH 02/28/2015	YTD BALANCE 02/28/2015	ENCUMBERED YEAR-TO-DATE	% BDGT USED
Dept 536.100-Utilities - Water Administration					
Fund 591 - Water Fund					
801.000 Professional Service	2,320,000.00	50,418.75	537,844.65	348,549.88	38.21
ROWE City Engineering			contract \$	79,000.00	
Dump Site Analysis			contract \$	42,892.00	
LAN Water Implementation			contract \$	244,900.00	
JFA /U.S. Dept Interior				\$ 27,295.00	
Raffelis Financial Update				\$ 23,810.00	
Bray Road				\$ 500,000.00	
TTHM Violation Letters/Mailings				\$ 25,000.00	
MDEQ Permit Fees				\$ 100,000.00	
Energy Costs/Performance Contracts				\$ 250,000.00	
Veolia Water Consultant				\$ 40,000.00	
City Works/Assesst Management				\$ 350,000.00	
Operational Contingency				\$ 117,500.00	
Total Dept 536.100-Utilities - Water Administration			\$ 366,792.00	\$ 1,433,605.00	
Dept 540.100-Water Service Center Management					
Fund 591 - Water Fund					
801.000 Professional Service	374,400.00	0.00	74,877.03	250,869.51	87.00
Sewerlines Cty Engineering			contract \$	190,000.00	
Internal Investigations			contract \$	95,645.22	
Landfill Services				\$ 12,500.00	
Janitorial Services				\$ 4,260.00	
After Hours Water & Staking				\$ 2,500.00	
Line Stopping				\$ 25,000.00	
				285,645.22	44,260.00

Dept 540.202-Wsc-Water Distribution Mains

Fund 591 - Water Fund

801.000	Professional Service	60,000.00	0.00	0.00	500.00	59,500.00	0.83
	Fire Extinguisher Services				contract 500.00		
					500.00		
	Balance is being used for budget adjustment to cover overruns for garage charges						
	Current garage overruns is \$100,000.00					59,500.00	

Dept 540.300-Capital Improvement

Fund 591 - Water Fund

801.000	Professional Service	2,660,000.00	0.00	0.00	60,000.00	2,600,000.00	2.26
	Water Meters				contract 60,000.00		
	Water Main Replacement Iroquois					\$ 2,500,000.00	
	Valve Exercising					\$ 100,000.00	
	Total Dept 540.300-Capital Improvement				\$ 60,000.00	\$ 2,600,000.00	

Dept 545.200-Water Plant - Operations

Fund 591 - Water Fund

801.000	Professional Service	80,000.00	0.00	8,866.98	10,323.02	60,810.00	23.99
	Lab Testing				contract 10,323.02		
	Dam inspections					\$ 11,500.00	
	Comprehensive Regulatory Compliance					\$ 40,000.00	
	Lab Proficiency Testing					\$ 6,000.00	
	All Max Data Support					\$ 2,500.00	
	Total Dept 545.200-Water Plant - Operations				\$ 10,323.02	\$ 60,000.00	

Dept 545.201-Water Plant Maintenance

Fund 591 - Water Fund

801.000	Professional Service	26,000.00	0.00	3,700.00	12,955.00	9,345.00	64.06
	Vibration Analysis				contract \$ 5,500.00		
	Elevator Inspections & Services				contract \$ 2,455.00		
	Diving for Dams Inspection				contract \$ 5,000.00		
	RPZ Inspection & Repair					\$ 4,000.00	
	Generator Inspection & Services					\$ 5,000.00	
	Total Dept 545.201-Water Plant Maintenance				\$ 3,700.00	\$ 12,955.00	\$ 9,000.00
		26,000.00	0.00				64.06

Dept 545.300-Water Plant -Capital Improvements

Fund 591 - Water Fund

801.000	Professional Service	2,900,000.00	0.00	927,098.07	1,296,474.81	676,427.12	76.67
	Installation of Storage Tanks			contract \$	716,272.00		
	Motor Control Upgrade			contract \$	440,157.00		
	Easement- Electrical Grounding			contract \$	4,054.00		
	Lime Residual			contract \$	135,991.81		
	Cedar Street Pump Station					\$	500,000.00
	Pump Station Feeder					\$	125,000.00
	THM Operational Evaluation					\$	50,000.00

Total Dept 545.300-Water Plant - Capital Improvements 2,900,000.00 0.00 \$ 1,296,474.81 \$ 675,000.00 76.67

Total	Budgeted	YTD Balance	Encumbered	Unencumbered
	\$8,420,400.00	\$1,552,386.73	\$2,032,690.05	\$4,821,865.00

2015-15

GL NUMBER	DESCRIPTION	2013-14 ACTIVITY	2014-15 AMENDED BUDGET	2015-16 APPROVED BUDGET	2015-16 BUDGET CHANGES FOR DWSD	2015-16 BUDGET CHANGES FOR DWSD	STATUS QUO REVISED 2015-16 BUDGET	BUDGET CHANGES WITH DWSD & ALL CAPITAL FUNDING ELIMINATED
Expenses - Water Fund								
Dept 546.100-Utilities - Water Administration								
	Wages and Fringes	\$76,155	\$528,777	\$445,851			\$445,851	
	Repairs and Improvements	\$2,497,397	\$2,320,000	\$2,320,000	\$0		\$2,320,000	(\$2,320,000)
	Other Expenses	\$2,295,410	\$2,245,750	\$2,248,750			\$2,248,750	
Dept 540.100-Water Service Center Maintenance								
	Wages and Fringes	\$189,883	\$728,451	\$256,548			\$256,548	
	Repairs and Improvements	\$140,599	\$374,400	\$350,000	\$0		\$350,000	(\$350,000)
	Other Expenses	\$106,780	\$477,292	\$477,649	\$0		\$477,649	
Dept 540.200-Water Meter Reading - Water								
	Wages and Fringes	\$439,351	\$488,365	\$481,916	\$0		\$481,916	
	Other Expenses	\$151,894	\$64,000	\$64,000	\$0		\$64,000	
Dept 540.202-Water Distribution Meters								
	Wages and Fringes	\$2,383,598	\$3,006,530	\$3,024,627	\$0		\$3,024,627	
	Repairs and Improvements	\$381	\$60,000	\$65,000	\$0		\$65,000	(\$65,000)
	Other	\$1,210,118	\$920,457	\$849,500	\$0		\$849,500	
Dept 543.100-Water Plant - Operations								
	Wages and Fringes	\$988,523	\$1,827,003	\$1,761,027		(\$376,093)	\$1,384,929	
	Repairs and Improvements	\$48,728	\$80,000	\$80,000			\$80,000	
	Supplier, Utilities and Other	\$22,779,869	\$3,445,856	\$3,318,636			\$23,860,446	(\$50,000)
Dept 543.202-Water Plant - Dam Operations								
		\$119,216	\$0	\$0			\$0	
Dept 543.203-Water Plant - Dam Maintenance								
		\$126,623	\$0	\$0			\$0	
Dept 545.300-Water Plant - Capital Improvements								
	Repairs and Improvements	\$968,815	\$2,900,000	\$1,200,000			\$1,200,000	(\$1,200,000)
	Other	\$880,161	\$3,700,000	\$2,400,000			\$2,400,000	
Dept 900.100-Cost Allocation and Retires Healthcare								
		\$3,111,462	\$3,600,242	\$6,077,577			\$6,077,577	
Dept 966.101-Pilot Payment								
		\$1,130,000	\$1,130,000	\$1,130,000			\$1,130,000	
Dept 966.623-Debt Service								
		\$2,638,071	\$2,638,071	\$2,638,071			\$2,638,071	
Dept 940.300-Capital Improvements								
	Repairs and Improvements	\$0	\$2,660,000	\$2,660,000			\$2,660,000	(\$2,660,000)
	Other	\$0	\$530,000	\$530,000			\$530,000	
Dept 233.100-Purchasing								
	Wages and Fringes	\$63,363	\$0	\$29,313			\$29,313	
Dept 233.202-Said Debt Expenses								
		\$161,939	\$0	\$0			\$0	

\$108,182

Wages and Fringes	\$1,069,567	\$1,147,846	\$1,127,386	\$1,127,386
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Reserva

\$58,151,692

\$48,576,942

WATERFUND REVENUES						2015-16	2015-16
LINE NUMBER	DESCRIPTION	2015-16 AMENDED BUDGET	2015-16 APPROVED BUDGET	STATUS QUO REVIEWED BUDGET	2015-16 WITH DOWNSIDE BUDGET	2015-16 ELIMINATED BUDGET	
	Revenue Water Fund						
	Mater Water Sales	\$7,000,000	\$7,000,000		\$5,725,692	\$17	
	Other Revenues	\$886,000	\$886,000		\$886,000	\$886,000	
	Asset Sale	\$0	\$0		\$0	\$0	
	C&T Over	\$3,263,505	\$3,263,505		\$0	\$0	
	Total Revenues	\$41,149,505	\$41,149,505		\$5,725,692	\$48,576,942	

Stanton, Terry A. (Treasury)

From: Wurfel, Brad (DEQ)
Sent: Monday, February 09, 2015 9:21 AM
To: Wheaton, Bob (DHS); Lasher, GERALYN (DCH)
Cc: Muchmore, Dennis (GOV); Murray, David (GOV); Minicuci, Angela (DCH); Stanton, Terry A. (Treasury)
Subject: FLINT WATER NOTES

Hey, friends. Anticipating more coverage this week on Flint, want to make sure we are all looped in and on the same page. Treasury takes calls on funding and money and the EM. DEQ takes calls on water quality. Here's what I can share about the water quality part.

Total Trihalomethanes (TTHM) are a byproduct of too much chlorine to kill organic material in a water supply. They are among the 80 toxins water suppliers monitor. They are considered a long-term health hazard. As such, they're sampled from water systems every quarter. Systems are required to remain below 80 parts per billion on a yearly average (four quarters). Flint exceeded the average in the course of three quarters last year.

Water system operators around the state periodically get a high result for TTHMs. When consecutive quarters of testing remain at high levels, it's usually a sign that operators are using too much chlorine to address high levels of organic matter in their water source. This most frequently affects systems that use surface water as a source. And several municipal water systems around the state do use surface water (rivers) as a source.

When a water system exceeds this standard, the operator gets a very formally worded violation notice from DEQ that says, effectively, "hey, your numbers are high. Alert your customers and figure out how you're going to bring your numbers back down." This is not as serious as a boil water advisory situation. But, the (think decades) long-term risk of drinking water with high TTHMs is an increased risk of exposure to cancer causing agents, so it's not a situation that the state can accept as status quo.

Because TTHM is measured on an annual (quarterly) basis, it will take a couple quarters of clear results before the city's average falls below the guidelines. This means Flint will probably be issuing another public notice about TTHM in March, despite that the high samples were late last summer.

Flint's numbers have dropped dramatically since the November testing and they're presently in compliance with state drinking water standards.

The water as it leaves the plant is clean, sanitary and safe. However, the water supply system is old, poorly maintained and many residents' connections are also old and poorly maintained. Thus, some residents are experiencing water that smells off or is discolored. This is from the transmission system, not the production system. The three top issues appear to be

- a. Hard water interacting with cast iron pipes, causing water that looks rusty (and likely tastes a bit irony)
- b. Water sitting too long in the pipes because of valves not working properly or limited users in some sections of the system; or,
- c. Residents with old homes that have cast iron connections contributing to the hard water issue.

So, how do we message this issue in light of the many variables at play?

1. Right now, water produced at the Flint plant is meeting state safe drinking water standards.
2. DEQ is aware that many residents have concerns about smell, color and other aesthetic qualities of their water. There are several potential causes for aesthetic water conditions. Residents with these concerns are encouraged to contact the City first to report problems. They also can contact the Michigan DEQ, but the City operates the system and needs to be alerted to concerns with their system to help document problem areas and prioritize improvements.
3. Total Trihalomethane (TTHM) is odorless and colorless. It is regarded as a long-term health concern. TTHM was included in the list of toxins screened under the Safe Drinking Water Act because of its potential for long-term potential health concerns. This is why it is only sampled quarterly. The water operator is required by law to notify residents when the annually averaged

standard has been exceeded, and the system operator is required to take active steps to get back into compliance with the standard for TTHM.

4. Residents received notice because the law requires transparency and works to help ensure residents can make informed decisions. The notice residents received early this month is a totally separate issue from the water discoloration issues some residents are reporting.
5. The DEQ continues working with Flint Water system operators to ensure that residents receive water that complies with state drinking water standards. This system is tested regularly and rigorously, and the results are reported to customers as outlined in the Safe Drinking Water Act.

From: Wheaton, Bob (DHS)
Sent: Wednesday, February 04, 2015 3:57 PM
To: Wurfel, Brad (DEQ)
Subject: RE: IMPORTANT MEDIA ISSUE Please call

Here's what our Bureau of Children and Adult Licensing emailed on Friday:

City of Flint Warns of Potential Health Risks Caused by the City's Drinking Water

The city says there's been too much disinfection byproduct in Flint's water system recently, something that – over many years could cause liver, kidney or central nervous system problems and an increased risk of cancer.

The notice from the city says Flint water is safe to drink but warns that those with a severely compromised immune system, who have an infant or who are elderly may be at increased risk and should seek advice about drinking water from their health care provider.

For others, there is no need to boil water or take other actions, the notice says.

It is recommended that licensed child care providers and licensed adult foster care and homes for the aged providers seek medical advice or use bottle water when serving individuals at increased risk as outlined above.

For more information, go to to the city's website at <http://cityofflint.com>.

From: Wheaton, Bob (DHS)
Sent: Wednesday, February 04, 2015 3:41 PM
To: Wurfel, Brad (DEQ); Tommasulo, Karen (DEQ)
Cc: Feuerstein, Heather (DEQ)
Subject: IMPORTANT MEDIA ISSUE Please call
Importance: High

Hi Brad, Karen,

Could one of you call me ASAP regarding a media crisis having to do with Flint water?

Thanks!

Bob Wheaton
Manager of Communications/Public Information Officer
Michigan Department of Human Services
235 S. Grand Ave. Suite 1510
P.O. Box 30037
Lansing, MI 48909
Phone: 517-373-4287
Cell: 517-
WheatonB@michigan.gov
www.michigan.gov/dhs

Stanton, Terry A. (Treasury)

From: Gerald Ambrose <gambrose@cityofflint.com>
Sent: Monday, February 09, 2015 1:32 PM
To: Stanton, Terry A. (Treasury)
Subject: Re: FW: Flint Water Update

She continues to assist us and has been retained by Veolia to assist in communications on this project. Part of our contract w Veolia is for them to assist in communications. She is handling our announcement of Veolia to the community.

J

On Mon, Feb 9, 2015 at 1:18 PM, Stanton, Terry A. (Treasury) <StantonT@michigan.gov> wrote:

Jerry...

I received this from my counterpart at DEQ. Is Kelly formally working for the city? Last I was aware, she was assisting DE, pro bono...

Thanks, Terry

From: Kelly Rossman-McKinney [<mailto:krossman@truscottrossman.com>]
Sent: Monday, February 09, 2015 12:01 PM
To: Wurfel, Brad (DEQ)
Subject: Flint Water Update

Hi, Brad – Wanted to let you know that Flint will be announcing its water consultant tomorrow at a 2 PM media roundtable. Holler if you have questions or need info. Thanks!

Kelly



Kelly Rossman-McKinney, APR

CEO
Truscott Rossman • truscottrossman.com

Boji Tower • 124 W. Allegan St., Ste. 800 • Lansing,
MI 48933

200 Renaissance Center, Suite 3160 • Detroit, MI
48243

125 Ottawa Ave NW, Suite 235 Grand Rapids, MI
49503

Office: 517-487-9320
Fax: 517-487-5080
Cell: 517-██████████

Koryzno, Edward (Treasury)

From: Google Calendar <calendar-notification@google.com> on behalf of Elizabeth Murphy <emurphy@cityofflint.com>
Sent: Monday, February 09, 2015 1:23 PM
To: Koryzno, Edward (Treasury)
Subject: Accepted: Weekly Flint Meetings @ Thu Feb 19, 2015 8:30am - 9:30am (Elizabeth Murphy)
Attachments: invite.ics

Elizabeth Murphy has accepted this invitation.

Weekly Flint Meetings

Ed Koryzno to Host

Call in – 1- [REDACTED]

Access Code – [REDACTED]

When Thu Feb 19, 2015 8:30am – 9:30am Eastern Time

Where Conference Call - Info Below ([map](#))

Calendar Elizabeth Murphy

Who

- Koryzno, Edward (Treasury) - organizer
- Elizabeth Murphy - creator
- Larkin, Brian (GOV)
- Baird, Richard (GOV)
- Maxine Murray (mmurray@cityofflint.com)
- Minix, Connie (DTMB)
- 'James Tolbert'
- Roberts, John (DTMB)
- Etue, Kriste (MSP)
- West, Samantha (GOV)
- Clement, Elizabeth (GOV)
- Hollins, Harvey (GOV)
- Lee, Nichole (MSP)
- Muchmore, Dennis (GOV)
- Smith, Paul (GOV)
- Klotz, Josephine (MSP)
- Pekrul, Daniel (MSP)
- Workman, Wayne (TREASURY)
- O'Neill, Stephen (MSP)
- Carpenter, Brian (TREASURY)
- Sipes, Stephen (MSP)
- Sands, Thomas (MSP)
- Kapp, Gene (MSP)

- 'gambrose@cityofflint.com'
- Deasy, Thomas (MSP)
- Darnell Early (dearly@cityofflint.com)
- Byrne, Randall (Treasury)
- Saxton, Thomas (Treasury)
- Sims, Robbin (MSP) - optional
- Widigan, Robert (TREASURY) - optional
- McGowan, Emmitt (MSP) - optional
- Cousineau, Sara (Treasury) - optional
- Carter, Jerry (MSP) - optional
- Pleyte, Beth (Treasury) - optional
- 'Darnell Earley' - optional

Invitation from Google Calendar

You are receiving this courtesy email at the account koryznoe@michigan.gov because you are an attendee of this event

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at <https://www.google.com/calendar/> and control your notification settings for your entire calendar

Stanton, Terry A. (Treasury)

From: Wurfel, Brad (DEQ)
Sent: Monday, February 09, 2015 2:13 PM
To: Stanton, Terry A. (Treasury); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: RE: Flint Water Update

Thanks, Terry.

Heads up to all that Flint is required to do its quarterly TTHM sampling again in February. We expect their numbers to be in compliance. But we also expect that they were so far out of compliance in three quarters of 2014 that their annual average will still be out of compliance, which will require them to send another letter to the community in accordance with the safe drinking water act. So the show will, unfortunately, go on.

From: Stanton, Terry A. (Treasury)
Sent: Monday, February 09, 2015 2:08 PM
To: Wurfel, Sara (GOV); Wurfel, Brad (DEQ); Murray, David (GOV)
Subject: RE: Flint Water Update

As I mentioned a couple weeks back, Kelly initially provided some comms assistance/guidance to Darnell Earley, pro bono.

At this point, per Jerry Ambrose, she has been retained by Veolia, Flint's new water consultant, to assist w communications on the project...

From: Wurfel, Sara (GOV)
Sent: Monday, February 09, 2015 12:33 PM
To: Wurfel, Brad (DEQ); Stanton, Terry A. (Treasury); Murray, David (GOV)
Subject: RE: Flint Water Update

Not really – still wondering if TR is working with/through the Emergency Manager OR mayor, or both?

Regardless, is a bit fishy.

From: Wurfel, Brad (DEQ)
Sent: Monday, February 09, 2015 12:17 PM
To: Stanton, Terry A. (Treasury); Wurfel, Sara (GOV); Murray, David (GOV)
Subject: FW: Flint Water Update

Answers the question about whether the Mayor is getting counsel from TR ...
b

From: Kelly Rossman-McKinney [<mailto:krossman@truscottrossman.com>]
Sent: Monday, February 09, 2015 12:01 PM
To: Wurfel, Brad (DEQ)
Subject: Flint Water Update

Hi, Brad – Wanted to let you know that Flint will be announcing its water consultant tomorrow at a 2 PM media roundtable. Holler if you have questions or need info. Thanks!

Kelly



Kelly Rossman-McKinney, APR

CEO

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200 Renaissance Center, Suite 3160 • Detroit, MI 48243

125 Ottawa Ave NW, Suite 235 Grand Rapids, MI 49503

Office 517-487-9320

Fax 517-487-5080

Cell 517- [REDACTED]

Byrne, Randall (Treasury)

From: Widigan, Robert (TREASURY)
Sent: Monday, February 09, 2015 5:28 PM
To: Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
Subject: City Analysis of DWSD Proposal
Attachments: Treasurer Analysis City of DWSD Proposal 01-14 (3).xls

Ed/Randy,

Liz sent me this – may be useful.

Robert Widigan | Office of Fiscal Responsibility
State of Michigan | Department of Treasury
430 W. Allegan Street | Lansing, MI 48922
Cell (517) [REDACTED] WidiganR@michigan.gov

Koryzno, Edward (Treasury)

From: Widigan, Robert (TREASURY)
Sent: Tuesday, February 10, 2015 12:09 PM
To: Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
Cc: Dempkowski, Angela (Treasury)
Subject: FW: Draft Water History Table
Attachments: Flint Water Rate History.pdf

Importance: High

Jerry is saying they do not agree with the \$28M in fund equity for 2014. The numbers I used came directly from their audit.

Rob

From: Gerald Ambrose [mailto:gambrose@cityofflint.com]
Sent: Tuesday, February 10, 2015 12:03 PM
To: Widigan, Robert (TREASURY)
Cc: Maxine Murray; Elizabeth Murphy; Albert Mooney
Subject: Re: Draft Water History Table

We are looking at it. Unfortunately I am in meetings for a while addressing water issues. But I can tell you this from a quick look - the average residential cost is in the \$150-\$160 range. And the equity in the water fund is mostly the value of the assets. I don't know what your point is, but DO NOT conclude that we have \$28 million in available cash. Most of it is the value of the capital assets in the system. And the impact of the disconnect from DWSD is not reflected in the FY14 statements since we did not disconnect until May 2014. The increase in value in FY14 is the sale of the pipeline. were it not for that, net equity would have declined.

Jerry

On Tue, Feb 10, 2015 at 10:29 AM, Widigan, Robert (TREASURY) <WidiganR@michigan.gov> wrote:

Jerry,

Attached you will find a table showing the water rate increases since 2005 along with water fund information.

Can you please review the table and let me know if you see anything that should be changed.

Again, the Gov's office has requested this and the earlier requested information no later than COB today, once I receive the information from you I will have to put it into memo format.

If you have any questions or changes please call or email me.

Regards,

Robert Widigan|Office of Fiscal Responsibility

State of Michigan|Department of Treasury

430 W. Allegan Street|Lansing, MI 48922

Office (517) 335-2130|Cell (517) 243-8645|WidiganR@michigan.gov

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Byrne, Randall (Treasury)

From: Saxton, Thomas (Treasury)
Sent: Tuesday, February 10, 2015 8:48 PM
To: Gerald Ambrose
Cc: amoooney@cityofflint.com; Workman, Wayne (TREASURY); Koryzno, Edward (Treasury); Byrne, Randall (Treasury); Dempkowski, Angela (Treasury); Widigan, Robert (TREASURY); Pleyte, Beth (Treasury)
Subject: Re: Water Rate History

Jerry - I just talked to Wayne... he would prefer 9:00 as well. Let's use my call in... 1-800-██████; ██████#

If there is a probably from your end with 9:00 give us a call in the morning. Thanks

From: Saxton, Thomas (Treasury)
Sent: Tuesday, February 10, 2015 8:26 PM
To: Gerald Ambrose; Widigan, Robert (TREASURY)
Cc: amoooney@cityofflint.com; Workman, Wayne (TREASURY); Koryzno, Edward (Treasury); Byrne, Randall (Treasury); Dempkowski, Angela (Treasury)
Subject: Re: Water Rate History

Wayne / Jerry - I am good with either time... I probably prefer 9:00 but I thought you had a regular Flint call @ 9:00. I can send around a call in, Just let me know the time.

From: Gerald Ambrose <gambrose@cityofflint.com>
Sent: Tuesday, February 10, 2015 8:12 PM
To: Widigan, Robert (TREASURY)
Cc: amoooney@cityofflint.com; Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Koryzno, Edward (Treasury); Byrne, Randall (Treasury); Dempkowski, Angela (Treasury)
Subject: Re: Water Rate History

I see that Al completed the rate history sheet - thanks, Al!

I reviewed the draft memo and added some comments you might want to consider.

If we need to talk tomorrow, I suggest 7:30 or 9:00 as I am in another meeting off site. Please call my cell. 517.230.9793

Jerry

On Tue, Feb 10, 2015 at 6:10 PM, Widigan, Robert (TREASURY) <WidiganR@michigan.gov> wrote:

Jerry/Al,

Good afternoon.

Please see the attached and address the yellow highlighted areas. In particular, we need to have an apples-to-apples comparison of average monthly water sewer rates and percentage increases.

Also, please review both documents thoroughly to confirm that everything is correct.

If possible, let's talk at 8:00 am tomorrow morning.

Thanks you,

Robert Widigan|Office of Fiscal Responsibility

State of Michigan|Department of Treasury

430 W. Allegan Street|Lansing, MI 48922

Office (517) 335-2130|Cell (517) [REDACTED] WidiganR@michigan.gov

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Koryzno, Edward (Treasury)

From: Widigan, Robert (TREASURY)
Sent: Tuesday, February 10, 2015 7:43 AM
To: Koryzno, Edward (Treasury)
Subject: RE: A couple of things

I will get ahold of Jerry or Liz first thing.

Thank you,

Rob

From: Koryzno, Edward (Treasury)
Sent: Tuesday, February 10, 2015 7:17 AM
To: Widigan, Robert (TREASURY)
Cc: Byrne, Randall (Treasury); Dempkowski, Angela (Treasury)
Subject: Fwd: A couple of things

Robert below is an email from Dennis Muchmore which contains questions that we need to get the answers from Jerry this morning.

Let me know if you have any questions.

Sent from my iPad

Begin forwarded message:

From: "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
Date: February 10, 2015 at 6:26:22 AM EST
To: "Koryzno, Edward (Treasury)" <KoryznoE@michigan.gov>
Cc: "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>
Subject: Fw: A couple of things

Ed - this is the Dennis email I mentioned a bit ago re Flint water

From: Muchmore, Dennis (GOV)
Sent: Monday, February 9, 2015 11:35 AM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: A couple of things

1. I need Darnell Earley's new email and phone;
2. Do we have the numbers on the Flint project: Pre cost of DWSD cut off/Present cost for users? Cost of reconnect on Flint end?
3. Discussion with KWA contractors to get a fix on timeline for construction.

Pleyte, Beth (Treasury)

From: Saxton, Thomas (Treasury)
Sent: Tuesday, February 10, 2015 9:17 AM
To: Wisniewski, Wendy (GOV)
Subject: Re: A couple of things

thanks... my recollection is Dennis was pushing for Tues but I am happy pushing it back to later in the week. If you will just check with him.

On Feb 10, 2015, at 8:17 AM, "Wisniewski, Wendy (GOV)" <wisniewski@michigan.gov> wrote:

Dennis isn't in the office on Tuesday

From: Saxton, Thomas (Treasury)
Sent: Tuesday, February 10, 2015 6:25 AM
To: Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY); Wisniewski, Wendy (GOV)
Subject: Re: A couple of things

Darnell's contact information:

Darnell.earley@detroitk12.org

313- [REDACTED] - direct
313- [REDACTED] - office assistant Valerie
517- [REDACTED] cell

Re Flint water... we should hopefully have something late today or tomorrow. Wayne's guys have a table with the historical rate info you wanted. They are putting together the reconnect \$info. I want to make sure though that Jerry A. is comfortable with the numbers, etc.

Also, my Beth is working with Wendy to figure out a time for the follow up Wayne Co mtgs. I am just confirming... we were going to do an internal meeting this week and get back to the County next Tues the 17th.

From: Muchmore, Dennis (GOV)
Sent: Monday, February 9, 2015 11:35 AM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: A couple of things

1. I need Darnell Earley's new email and phone;
2. Do we have the numbers on the Flint project: Pre cost of DWSD cut off/Present cost for users? Cost of reconnect on Flint end?

3. Discussion with KWA contractors to get a fix on timeline for construction.

Koryzno, Edward (Treasury)

From: Workman, Wayne (TREASURY)
Sent: Tuesday, February 10, 2015 4:30 PM
To: Widigan, Robert (TREASURY); Koryzno, Edward (Treasury); Dempkowski, Angela (Treasury)
Subject: RE: Answers for Treasury

Finish what you have right now

From: Widigan, Robert (TREASURY)
Sent: Tuesday, February 10, 2015 4:28 PM
To: Workman, Wayne (TREASURY); Koryzno, Edward (Treasury); Dempkowski, Angela (Treasury)
Subject: FW: Answers for Treasury
Importance: High

All,

I just received the below from Liz.

Rob

From: Elizabeth Murphy [<mailto:emurphy@cityofflint.com>]
Sent: Tuesday, February 10, 2015 4:26 PM
To: Widigan, Robert (TREASURY)
Subject: Fwd: Answers for Treasury

Follow up on your questions from this am.

LIZ

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

From: Albert Mooney <amooney@cityofflint.com>
Date: Tue, Feb 10, 2015 at 4:17 PM
Subject: Answers for Treasury
To: Elizabeth Murphy <emurphy@cityofflint.com>
Cc: Gerald Ambrose <GAmbrose@cityofflint.com>, Howard Croft <hcroft@cityofflint.com>, Amanda Trujillo <atrujillo@cityofflint.com>

Hi Liz,

In regard to the answers to the questions, I have listed the responses for which I have information compiled below.

1. The "Units" from the Treasurer Analysis is million cubic feet. The amounts are derived from two separate sources of data to allow for an evaluation of an entire 12 month period. For the period from January through April (which is before the Flint River was utilized as the source of the water), the amounts represent the actual billings from the Detroit Water & Sewer invoices. For the period from May through December, the amounts are from the production totals that are reported to our Office from Brent Wright in Water Operations. I understand that there has been a decrease in units as the usage previously attributable to General Motors operations on the Flint water system has been diverted to the Genesee County system.

5. The total of the invoices the City of Flint paid for the DWSD water for the 12 months prior to May 1st was \$25,503,911. The invoices were for 1,285,982.1 million cubic feet. The analysis total of \$23,546,288 is based on the actual usage amounts (which included the aforementioned period from January through April when DWSD provided water) and will reflect lower usage as General Motors left the system, customer changes in usage, and variations in watering.

6. The estimated financial impact needs to be roughly defined due to assumptions pertaining to the incremental expenses incurred from treating the water from the river. Without a full year of history, developing trends for certain expenses is difficult and some billing cycles for certain additional material expenses like electric power lag by one month the actual period for which the expense was incurred. Also, because of certain positions being eliminated in the budget and with wage and benefit changes from contract concessions distorting the data, obtaining a "trued up" year over year comparison of expenses poses a challenge. Looking at the six months of actual data, the incremental additional expenses to treat the water from the river have been \$1,469,962. This is compared with the budgeted incremental additional expenses that approximate \$2,875,048.

These amounts need to be evaluated in conjunction with the \$25,503,911 the City of Flint paid for the DWSD water for the 12 months prior to May 1st and the previously provided Treasurer Analysis total of \$23,546,288.

If you have any questions or need more information, please let me know (I attached two workbooks which provides background information). Thank you.

Al Mooney, Interim City Treasurer

(810) 766-7470 ext. [REDACTED]

--

Liz Murphy
Assistant to the Emergency Manager
City of Flint
810 237 2025

Byrne, Randall (Treasury)

From: Saxton, Thomas (Treasury)
Sent: Wednesday, February 11, 2015 6:44 AM
To: Albert Mooney
Cc: Widigan, Robert (TREASURY); Jerry Ambrose; Workman, Wayne (TREASURY); Koryzno, Edward (Treasury); Byrne, Randall (Treasury); Dempkowski, Angela (Treasury); Amanda Trujillo
Subject: Re: Water Rate History

thanks Al - on the spread/sheet table for 2010 is the ave. monthly water/sewer bill rate available ?

On Feb 10, 2015, at 7:15 PM, "Albert Mooney" <amooney@cityofflint.com> wrote:

Hi Rob,

I found some more data and have updated the spreadsheet (my workbook reflecting the rates is also attached).

On Tue, Feb 10, 2015 at 6:10 PM, Widigan, Robert (TREASURY) <WidiganR@michigan.gov> wrote:

Jerry/Al,

Good afternoon.

Please see the attached and address the yellow highlighted areas. In particular, we need to have an apples-to-apples comparison of average monthly water sewer rates and percentage increases.

Also, please review both documents thoroughly to confirm that everything is correct.

If possible, let's talk at 8:00 am tomorrow morning.

Thanks you,

Robert Widigan|Office of Fiscal Responsibility

State of Michigan|Department of Treasury

430 W. Allegan Street|Lansing, MI 48922

Office (517) 335-2130|Cell (517) [REDACTED] WidiganR@michigan.gov

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--

Thanks.

Al Mooney, Interim City Treasurer

(810) 766-7470 ext. 2108

<Flint Water Rate History DRAFT 02-10-15(V).xlsx>

<Flint Water Rate History DRAFT 02-10-15(V).xlsx>

Byrne, Randall (Treasury)

From: Albert Mooney <amooney@cityofflint.com>
Sent: Wednesday, February 11, 2015 8:31 AM
To: Widigan, Robert (TREASURY)
Cc: Jerry Ambrose; Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); Koryzno, Edward (Treasury); Byrne, Randall (Treasury); Dempkowski, Angela (Treasury); Amanda Trujillo
Subject: Re: Water Rate History
Attachments: Flint Water Rate History DRAFT 02-11-15(V).xlsx; Final - 02-15 WATER SEWER RATES with Service Charges.xls

FYI, here is the data that includes the earlier periods we did not have available last night.

On Tue, Feb 10, 2015 at 7:14 PM, Albert Mooney <amooney@cityofflint.com> wrote:
Hi Rob,

I found some more data and have updated the spreadsheet (my workbook reflecting the rates is also attached).

On Tue, Feb 10, 2015 at 6:10 PM, Widigan, Robert (TREASURY) <WidiganR@michigan.gov> wrote:

Jerry/Al,

Good afternoon.

Please see the attached and address the yellow highlighted areas. In particular, we need to have an apples-to-apples comparison of average monthly water sewer rates and percentage increases.

Also, please review both documents thoroughly to confirm that everything is correct.

If possible, let's talk at 8:00 am tomorrow morning.

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Robert Widigan|Office of Fiscal Responsibility

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Office (517) 335-2130|Cell (517) [REDACTED] WidiganR@michigan.gov

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--

Thanks

Al Mooney, Interim City Treasurer

(810) 766-7470 ext [REDACTED]

--

Thanks.

Al Mooney, Interim City Treasurer

(810) 766-7470 ext. [REDACTED]

WATER/SEWER RATES Residential

FISCAL YEAR:	WATER	Service Charge* 5/8" remote	SEWER	Service Charge	Units for Ave. Bill	WATER	Service Charge* 5/8" remote	Service Charge	Service Charge	Service Charge Total
93 7-1-93 to 6-30-94	\$ 1.47		\$ 1.39		7.00	\$10.29		\$9.73		
94 7-1-94 to 6-30-95	\$ 1.51		\$ 1.50		7.00	\$10.57		\$10.50		
95 7-1-95 to 6-30-96	\$ 1.57		\$ 1.58		7.00	\$10.99		\$11.06		
96 7-1-96 to 6-30-97	\$ 1.63		\$ 1.54		7.00	\$11.41		\$10.78		
97 7-1-97 to 6-30-98	\$ 1.68		\$ 1.66		7.00	\$11.76		\$11.62		
98 7-1-98 to 6-30-99	\$ 1.73		\$ 1.71		7.00	\$12.11		\$11.97		
99 7-1-99 to 6-30-00	\$ 1.78		\$ 1.82		7.00	\$12.46		\$12.74		
00 7-1-00 to 6-30-01	\$ 1.78		\$ 1.82		7.00	\$12.46		\$12.74		
01 7-1-01 to 7-21-02	\$ 1.87		\$ 1.97		7.00	\$13.09		\$13.79		
02 7-22-02 to 8-21-02	\$ 2.06	\$ 8.67	\$ 2.17	\$ 13.40	7.00	\$14.42		\$15.19		\$0.00
03 8-22-02 to 9-30-03	\$ 2.23	\$ 8.67	\$ 2.17	\$ 13.40	7.00	\$15.61	\$8.67	\$15.19	\$13.40	\$52.87
04 10-1-03 to 12-31-04	\$ 2.99	\$ 8.67	\$ 2.01	\$ 13.40	7.00	\$20.93	\$8.67	\$14.07	\$13.40	\$57.07
05 01-01-05-5-7-09	\$ 3.44	\$ 8.67	\$ 1.56	\$ 13.40	7.00	\$24.08	\$8.67	\$10.92	\$13.40	\$57.07
09 June due date bills 2009	\$ 3.96	\$ 8.67	\$ 2.01	\$ 13.40	7.00	\$27.72	\$8.67	\$14.07	\$13.40	\$63.86
11 bills due after 1-15-11	\$ 4.95	\$ 14.34	\$ 2.45	\$ 16.35	7.00	\$34.65	\$14.34	\$17.15	\$16.35	\$82.49
12 bills due after 9-16-11	\$ 6.68	\$ 19.36	\$ 3.31	\$ 22.07	7.00	\$46.76	\$19.36	\$23.17	\$22.07	\$111.36
13 bills effective 7-1-12	\$ 7.52	\$ 21.78	\$ 4.80	\$ 32.00	7.00	\$52.64	\$21.78	\$33.60	\$32.00	\$140.02
15 bills due 8-7-14	\$ 7.92	\$ 22.90	\$ 5.17	\$ 34.48	7.00	\$55.44	\$22.90	\$36.19	\$34.48	\$149.01
Total Increase over 12.5 years										116%
Total Increase over 5.5 years										108%

* - Service Charge for 3/4" meter is \$44.03

Stanton, Terry A. (Treasury)

From: Muchmore, Dennis (GOV)
Sent: Wednesday, February 11, 2015 9:12 AM
To: Saxton, Thomas (Treasury), Hollins, Harvey (GOV)
Cc: Workman, Wayne (TREASURY); Stanton, Terry A. (Treasury); Clement, Elizabeth (GOV)
Subject: RE: PRESS RELEASE: Water Consultant Announcement

I need something more substantive that we can get to the community about the rates and costs today.

From: Saxton, Thomas (Treasury)
Sent: Wednesday, February 11, 2015 6:09 AM
To: Muchmore, Dennis (GOV); Hollins, Harvey (GOV)
Cc: Workman, Wayne (TREASURY); Stanton, Terry A. (Treasury); Clement, Elizabeth (GOV)
Subject: Fwd: PRESS RELEASE: Water Consultant Announcement

see the press release below re the water consultant. In the conversation Wayne & I had with Jerry late yesterday they are apparently planning a public forum mtg of some type next week to share preliminary results of the consultant's work. Veolia has already been doing some work on this.

Begin forwarded message:

From: Gerald Ambrose <gambrose@cityofflint.com>
Date: February 10, 2015 at 9:13:45 PM EST
To: "Thomas Saxton (Treasury)" <SaxtonT@michigan.gov>, "Wayne Workman (TREASURY)" <workmanw@michigan.gov>
Subject: Fwd: **PRESS RELEASE: Water Consultant Announcement**

Just in case you did not see this. Had a roundtable with media and Veolia.

----- Forwarded message -----
From: "Jason Lorenz" <jlorenz@cityofflint.com>
Date: Feb 10, 2015 2:56 PM
Subject: PRESS RELEASE: Water Consultant Announcement
To:
Cc:

For Immediate Release

Flint Hires International Urban Water Experts of Veolia North America to Assess City's Water Issues

Flint, Michigan – February 10, 2015 – The City of Flint has retained a team of urban water experts from Veolia North America to conduct an analysis of the city's water system. Veolia, which is the world's largest water services and technology company, will assess how Flint's water is tested and distributed, including reviewing water treatment processes and operations, laboratory testing and analysis, and engineering reports that detail the city's treatment and distribution systems.

"We understand the frustration and urgency in Flint," said David Gadis, vice president of Veolia North America's Municipal & Commercial Business. "We are honored to support your community with our technical expertise so that together we can ensure water quality for the people of the city of Flint."

Veolia anticipates its analysis to take less than two weeks, at which time they will present findings to City officials, including the Mayor, City Council and the Emergency Manager. Once the findings are presented, city officials will determine how to move forward.

"Addressing the City's water challenges are the top priority right now and it is important to bring in an independent, highly qualified team to work with us to address the safety and quality issues," said Mayor Dayne Walling.

"Until we have completed our analysis, we cannot say for certain how long it will take to provide solutions to Flint's current water situation," said Gadis. "We have extensive experience handling challenging river water sources, reducing leaks and contaminants and in managing discolored water."

"Veolia worked diligently to respond to our Request For Proposal in a thorough, professional way and demonstrated the ability to immediately support us as we ensure safe, clean water for our residents," said Emergency Manager Jerry Ambrose.

The Veolia team hit the ground running Tuesday morning, meeting with water officials to provide an overview of the work to be conducted. "We look forward to helping Flint's team find ways to address and improve the city's drinking water operation," Gadis said.

The company designs and provides water, waste and energy management solutions to communities and industries across the country, including providing water and wastewater

services to 530 communities in North America. More information is available at www.veolianorthamerica.com.

—END—

-Jason Lorenz
Public Information Officer
City of Flint
(810) 237-2039
jlorenz@cityofflint.com

Pleyte, Beth (Treasury)

From: Baird, Richard (GOV)
Sent: Wednesday, February 11, 2015 2:44 PM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Subject: Fwd: Re: Flint - Random Thought DWSD

Sent from my Verizon Wireless 4G LTE DROID

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

From: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Date: Feb 10, 2015 9:15 AM
Subject: Re: Flint - Random Thought DWSD
To: "Baird, Richard (GOV)" <bairdr@michigan.gov>
Cc:

What is she talking about? I'm getting so I understand Bob, but Sue talks in circles...

On Feb 5, 2015, at 9:29 AM, Baird, Richard (GOV) <bairdr@michigan.gov> wrote:

Sent from my Verizon Wireless 4G LTE DROID

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

From: "Daddow, Robert" <daddowr@oakgov.com>
Date: Feb 5, 2015 8:14 AM
Subject: RE: Flint - Random Thought DWSD
To: "Baird, Richard (GOV)" <bairdr@michigan.gov>
Cc:

A resend in response to the separate email you sent out last night on the DWSD response. Given that they have already reduced the annual cost from the \$12.5M range to \$10.5M range – even as the DWSD Board of Water Commissioners is about to raise the rates substantially for the coming fiscal year – the offer to Flint was reduced. Frankly, this alone would excite the locals. So far I have been requested to speak at no less than five local units' boards / councils and / or have working group sessions / meetings with City officials on DWSD. It is right now a very sensitive subject even as it has not gotten the media attention it will in the coming weeks. With the exception of a presentation I accepted no less than 4 months ago, I have turned them down or made arrangements to have DWSD – the folks actually in charge right now – to present. In the coming weeks, this is going to become the issue du jour.

And, even as there were two courses of action on the use of a base (FY-2015 operating budget know to have flaws or the tender offer projections representing a forecast revised for matters not addressed formally by the BOWC through budget amendments) remains an open issue. A recently discovered timing issue in the contracts (namely, that the 'detailed rates' had to be provided to the locals at least 30 days advance of approval – and why they didn't know this in a contract they have been working on for eons is beyond me) may have resulted in the DWSD management determining the base outside even a public discussion of the BOWC or the Authority Board. The base issue is the cause of the range of the water rates being either 9% or 14% - and has a significant impact on the feasibility as described in the MOU. The more and more I learn, the less and less I want to know.

From: Sue McCormick [<mailto:mccormick@dwsd.org>]
Sent: Friday, January 30, 2015 6:25 PM
To: Robert Daddow
Cc: poissonq@oakgov.com; Richard 'Baird (GOV)'; Nicolette Bateson
Subject: Re: Flint - Random Thought DWSD

The rate we offered Flint is a bit different than what we calculate for our contract customers. We adjusted the rate of return to reflect the short term, terminated contract status. In other words, the outstanding investment, that we made to serve Flint somewhat recently, will not be recovered without a long term contract. This differential rate of return is now being utilized by Genesee County who was served through the Flint contract, so add to the the additional complications. If we want to get to a lower rate for emergency 'short term' service, we can evaluate our options - but we would have to differentiate it somehow from Genesee or have additional revenue loss or legal exposure there and without a questions there will be huge political issues with our other customers.

Sue F. McCormick, Director
Detroit Water and Sewerage Department
735 Randolph, Room 506
Detroit, Michigan 48226
Office (313)224-4701
Fax (313)224-6067
McCormic@dwsd.org

From: "Robert Daddow" <daddowr@oakgov.com>
To: "Sue McCormick" <mccormick@dwsd.org>, "Nicolette Bateson" <bateson@dwsd.org>
Cc: poissonq@oakgov.com, "Richard 'Baird (GOV)'" <bairdr@michigan.gov>
Sent: Friday, January 30, 2015 5:40:16 PM
Subject: Flint - Random Thought

Sue / Nikki – today I chatted with Rich Baird on the Flint matter given that they continue to have on-going water quality problems. Numerous articles are being written on this matter and I suspect it is getting a bit tense in Flint over this critical issue. They are balking at the cost of the DWSD water – which I understand may be a bit more expensive for them simply because of the distance and elevation – completely understandable. The attached letters indicate \$847K per month at a standard commodity rate (which I now am beginning to realize is one of the volume flow issues giving rise to the situation we are in with all communities; but we'll leave that alone for the moment).

The attached letter suggest that they can re-connect to the DWSD using the same rates offered to other communities through June 30, 2015. This seems fair and would not exacerbate the already sensitive issue of the sizable rate increases the suburban and retail customers are now facing. Notwithstanding that matter, Mr. Baird inquired of some means of lowering the rate to encourage Flint to return to the DWSD fold on a marginal costing approach that covers some portion of the fixed costs but may be slightly lower than the amount offered in the letter.

The optics of this matter to the suburban customers now facing a 9% to 14% rate increases are troublesome (sans any provision for the balance sheet issues and with little or no provision for the Detroit retail customers likely collection issues arising from these rate increases – which is going to make this summer even more troublesome when the shut offs start circa March / April). How can a reduction occur in the Flint rate covering fixed costs such that additional volumes actually would serve to reduce what would otherwise be the present proposals on the table? Theoretically, it can be justified but it is steeped in cost accounting but if we can't seem to differentiate 'rates' versus 'revenue

requirement' how the heck can we justify something even more complicated to the residents or suburban customers? Perhaps I have answered my own question – it might be able to be done and prove to be beneficial, but politically its DOA. The political barrier seems to be too high a hurdle – and the approach already taken of offering to reconnect at the rates and flow previously charged is the only rational approach possible without sending what is already a very sensitive public off the deep end.

Just musing on a Friday afternoon, but I think I answered the question that Rich and I chatted about in the last part of the paragraph above.

*_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*

DWSD - Email Filter

EMT Rule: Message Allowe *_*_*_*_*_*_*_*_*_*_*_*_*_*_*_*



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

R. KEVIN CLINTON
STATE TREASURER

DATE: February 11, 2015
TO: Tom Saxton, Chief Deputy Treasurer
FROM: Wayne Workman, Deputy State Treasurer
SUBJECT: City of Flint Water Rates

Attached and below is information regarding the increase in water and sewer rates for the City of Flint since 2010.

- The data shows the significant deficit position of the water fund which was not rectified until 2013 when water rates were increased by 26%. The data also shows the lack of capital investment for a system as old as Flint.
- This condition is acknowledged in the City's recently adopted Capital Improvements Plan which identified approximately \$50M in needed capital improvements over the next several years. This deficiency was also noted in the rate study commissioned by the City of Flint in 2014.
- According to the City, if Flint reconnected to DWSD for the next 18 months, the estimated monthly cost would be more than \$1M per month totaling approximately \$18M. This includes a fixed monthly charge of \$846,700 plus the cost of actual water usage, minus the cost of operational expenditures at the Water Treatment Plant. Even with the elimination of future capital improvements, most of the additional cost would need to be funded with an additional increase to existing rates. Such an increase could approach 30%.
- The option of purchasing DWSD water from the County would be on parity with purchasing water directly from DWSD.
- The KWA previously advised the City that the connection to KWA may take place in mid-2016, but has now stated that weather conditions permitting, the connection could be made as early as December 2015.
- The \$8M capital costs to upgrade the Water Treatment Plant was made to be able to treat both river water and KWA water. This upgrade has been funded with the cost reduction in operating costs achieved by not buying water from DWSD during the interim period.
- As you are aware, the City has retained Veolia as an outside water consultant to assist in maintaining the safety and improving the quality of water produced by its water system, and their initial analysis is due to be completed within the next two weeks. In addition, the City's current budget includes \$2M for replacement of a 2-mile pipeline segment that is anticipated to significantly address some of the current water issues.

Average monthly bill in 2015 - note that water and sewer are not billed separately; the charges are included within the same bill regardless of water usage.

Water service charge	\$22.90
Sewer service charge	<u>\$34.48</u>
Total service charge	\$57.38

Per unit rate:

Water	\$ 7.92
Sewer	<u>\$ 5.17</u>
Total per unit	\$13.09

Average family of four uses 7 units per month.

Their bill for usage would be: $7 \times 13.09 = 91.63$ + 57.38 service charge = \$149.

If additional information is desired, please let me know.

City of Flint Water Rate History

Year (Date Effective)	Average Monthly Water/Sewer Bill*	Percentage Change in Water/Sewer Rates	Water Fund** Total Operating Revenue	Water Fund** Unrestricted Net Position	Water Fund** Capital Improvements
2010	\$64	12%	\$31,956,754	-\$5,795,973	\$2,091,160
1/15/2011	\$82	29%	\$36,762,663	-\$12,443,265	\$1,403,916
9/16/2011	\$111	35%			
7/1/2012	\$111	26%	\$44,854,439	-\$8,758,091	\$755,681
2013	\$140	0%	\$49,903,868	\$834,447	\$147,462
07/01/13 to 06/30/14	\$140	0%	\$43,552,152	\$760,745	\$3,301,700
07/01/14 to 06/30/15	\$149***	6%	N/A	N/A	N/A

Note* Water rate information is based on average usage of 7 units per month with a 5/8" residential remote meter.

Note** Water fund information was compiled from the City of Flint's CAFR filed with the Michigan Department of Treasury.

Note*** Billing breakdown contained in attached memo.

Pleyte, Beth (Treasury)

From: Hollins, Harvey (GOV)
Sent: Thursday, February 12, 2015 3:59 PM
To: Workman, Wayne (TREASURY); Saxton, Thomas (Treasury); Baird, Richard (GOV); Muchmore, Dennis (GOV)
Subject: RE: Flint water

Thanks Wayne.

From: Workman, Wayne (TREASURY)
Sent: Wednesday, February 11, 2015 3:02 PM
To: Saxton, Thomas (Treasury); Hollins, Harvey (GOV); Baird, Richard (GOV); Muchmore, Dennis (GOV)
Subject: Fwd: Flint water

See below from Jerry

Sent from my iPhone

Begin forwarded message:

From: "Gerald Ambrose" <gambrose@cityofflint.com>
To: "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>
Cc: "Widigan, Robert (TREASURY)" <WidiganR@michigan.gov>, "amooney@cityofflint.com" <amooney@cityofflint.com>, "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
Subject: Re: FW: Flint water

We followed the recommendations of the RFC rate study. Their recommendations encompassed the knowledge of leaving DWSD, as well as the impending increase in costs associated with KWA once connected (City share of debt service), and the need for significant reinvestment in the utility system infrastructure, and a desire to level out future rate increases.

Copy of the RFC study attached.

Jerry

On Wed, Feb 11, 2015 at 12:31 PM, Workman, Wayne (TREASURY) <WorkmanW@michigan.gov<<mailto:WorkmanW@michigan.gov>>> wrote:
Please see Harvey's question as to rationale for 2014 rate increase

From: Hollins, Harvey (GOV)
Sent: Wednesday, February 11, 2015 12:27 PM
To: Saxton, Thomas (Treasury)
Cc: Muchmore, Dennis (GOV); Wisniewski, Wendy (GOV); Workman, Wayne (TREASURY)
Subject: Re: Flint water

Why did the rates go up after the connection to the Flint river?

Best,

Harvey

On Feb 11, 2015, at 12:21 PM, Saxton, Thomas (Treasury)

<SaxtonT@michigan.gov<<mailto:SaxtonT@michigan.gov>>> wrote:

Dennis – the attached pdf is the memo & table that hopefully addresses some of the info needs stemming from the meeting with the pastors last week. Jerry A. has looked at this document as well. In terms of key items at this point (that are mentioned in the memo)....

KWA may be hooked up by the end of this calendar year; weather permitting, etc. Even allowing for some slippage that is positive news

Whether you hooked to DWSD thru the county or directly; it is a \$1mm add'l impact to the budget... an add'l 30% increase in rates over existing

They have \$2mm already baked in the budget to fix that two mile 'bad' section of pipeline that might address a good portion of the current issues

They now have an outside consultant on the ground who is suppose to provide some preliminary indications next week to help improve the situation

Don't forget about the \$2mm SRF loan restructuring (which we have not officially put on the table). Those \$s would be available for more system improvements.

Again, sorry this took as long as it did. Let us know if this is what you had in mind or if you need anything else. Wayne – chime in if I missed anything.

See you @ 1:30

<FlintWater.pdf>

Pleyte, Beth (Treasury)

From: Saxton, Thomas (Treasury)
Sent: Friday, February 13, 2015 7:41 AM
To: Workman, Wayne (TREASURY)
Subject: Re: Flint

we need from your guys or Jerry a brief simple table that shows the numbers how reconnecting to DWSD will raise rates 30%

On Feb 13, 2015, at 7:31 AM, "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov> wrote:

Yes, not sure what he is saying

From: Saxton, Thomas (Treasury)
Sent: Friday, February 13, 2015 7:27 AM
To: Workman, Wayne (TREASURY)
Subject: Re: Flint

lets talk before we respond

On Feb 12, 2015, at 11:34 PM, "Baird, Richard (GOV)" <bairdr@michigan.gov> wrote:

Sent from my Verizon Wireless 4G LTE DROID

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

From: Robert Daddow <daddowr@oakgov.com>
Date: Feb 12, 2015 11:32 PM
Subject: Re: Flint
To: "Baird, Richard (GOV)" <bairdr@michigan.gov>
Cc:

Should not have thought politically but financially in the first place. This is very doable. We need to chat. Rjd

On Feb 12, 2015, at 10:32 PM, Bart Foster <bfoster@fostergroupllc.com> wrote:

Actually, my quick take is about 8%.

Some background:

When Flint left, the annual revenue profile for the Water System was initially reduced by \$12.5 million, However, we immediately recalculated the rate for Genesee County (recognizing their higher demands), to effectively "claw back" about \$2 million of the reduction, so the net Flint impact is ~ \$10.5 million, or just under 2.5% of the (reduced) Water System rate revenue. Assuming that same amount could be replaced, and all else being equal, the

“system rate increase” could be reduced by about 3 percent, with a bit more of the reduction occurring in the suburban wholesale rate structure. Safe to say that (again, absent any other changes) the average suburban water rate increase would be closer to 8 percent compared to the current 11.1%.

Hope this helps . . .

--

Bart Foster

President

THE FOSTER GROUP

(913) 345-1410

(913) 345-1640 fax

(913) [REDACTED] cell

bfoster@fostergroupllc.com <<mailto:bfoster@fostergroupllc.com>>

Please note that the information in this message along with any attachments are intended for the exclusive use of the addressee and may contain confidential or privileged information. If you are not the intended recipient, please do not forward, copy or print the message or its attachments: notify me at the above address and delete this message and any attachments.

Thank you.

On Feb 12, 2015, at 7:02 PM, Bart Foster

<bfoster@fostergroupllc.com> wrote:

Bob - in transit but will review and reply this evening.

Sent from my iPhone

On Feb 12, 2015, at 3:44 PM, Daddow, Robert

<daddowr@oakgov.com> wrote:

Nikki / Bart – don’t need a hard and fast number on this. However, it would seem to me that in a fixed cost system such as water, if Flint were to be hooked up again at the \$847K / month cited in Ms. McCormick’s January 12th memorandum and after the release of the rates yesterday, bringing Flint back would – on a marginal cost basis – serve to mitigate the wholesale (suburban) customer rate increase of 11.1% cited in yesterday’s presentation. Without going into a whole lot of detailed calculations (unless necessary), what would the impact of the inclusion of Flint starting say on July 1, 2015 (hypothetical date) be on the rate increase presently now in the public? A revised increase of

what – 10.6% - looking for a high level
sensitivity analysis here. Can you
help? RJD

Byrne, Randall (Treasury)

From: Elizabeth Murphy <emurphy@cityofflint.com>
Sent: Friday, February 13, 2015 1:56 PM
To: Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
Subject: Re: DWSD - Flint Cost Comparison
Attachments: Re-Establishing Water Service 2015.pdf

I forgot to attach letter from Sue McCormick which details proposed DWSD terms/rates.
LIZ

On Fri, Feb 13, 2015 at 1:31 PM, Elizabeth Murphy <emurphy@cityofflint.com> wrote:
Ed and Randy,
Please review the attached chart and let me know if this meets your expectations. Jerry has reviewed this.

--
Liz Murphy
Assistant to the Emergency Manager
City of Flint
810 237 2025

--
Liz Murphy
Assistant to the Emergency Manager
City of Flint
810 237 2025

January 12, 2015

Mr. Darnell Earley, Emergency Manager
Mr. Dayne Walling, Mayor
City of Flint
1101 S. Saginaw Street
Flint, Michigan 48502

Dear Messrs. Earley and Walling:

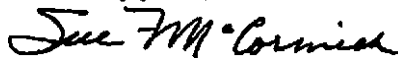
Regarding: Re-establishing Detroit Water and Sewerage Department Water Service

I was recently referred to a report in MLive in which there was reference to the City of Flint (City) potentially re-visiting its decision to utilize Flint River water as a water source prior to the completion of the KWA pipeline. Within that report, there appeared to be some incorrect assumptions about the cost of water service from the Detroit Water and Sewerage Department (DWSD). I write to you today to express the willingness of DWSD to resume delivery of drinking water to the City and its residents. We have monitored the water quality issues that have troubled the City since May, 2014, and understand that many of the difficulties stem from the limited access to source water. Please know that DWSD is ready, willing and able to resume service to the City if you so desire.

If the City is interested in a long term arrangement with DWSD, with this goal in mind, we offer that the City can immediately reconnect to the DWSD system at no additional charge to the City and at the same "expired contract" rate that the City was paying in April, 2014, modified to reflect the 4% increase experienced by all other wholesale customers in July, 2014. The resulting rate structure is a fixed monthly rate of \$846,700 and a commodity rate of \$14.92/Mcf. In order to facilitate contract negotiations, DWSD is willing to extend this rate to the City (and to Genesee County as the City's partner and former customer) until June 30, 2015.

We at DWSD take very seriously the matter of drinking water quality, and we are as concerned as you must be by the continued quality issues faced by the City. We are confident that DWSD can provide you with a solution for reliable, safe, high quality water on an expeditious timeline. Please contact me directly at (313) 224-4701 if you wish to discuss this offer further.

Sincerely yours,



Sue F. McCormick
Director

cc: Governor Rick Snyder – (via U.S. Mail)
Flint City Council, (via U.S. Mail and Electronic Mail)
Eric Mays; Jacqueline Poplar (c/o Jennie Johnson); Kerry Nelson (c/o Jennie Johnson); Joshua Freeman;
Wantwaz Davis; Herbert Winfrey (c/o Jennie Johnson); Monica Galloway, Vicki VanBuren; Scott
Kincaid (c/o Jennie Johnson)
Jeff Wright, GCDC – (via Electronic Mail)
Mayor Mike Duggan (via Electronic Mail)
James Fausone, BOWC (via Electronic Mail)
Robert Daddow, GLWA (via Electronic Mail)

Flint Water vs DWSD Water

	Monthly	Annual
Water Usage MCF	71594	859128
DWSD Price Per MCF	\$14.92	
DWSD Fixed Charge/Month	\$846,700	\$10,160,400
Cost of Water/Month Avg.	\$1,914,882	\$22,978,590
Flint Incremental Cost of Treatment Plant Operation (to continue as a back-up only) Note 2	\$239,587	\$2,875,048
Net Cost Increase with DWSD - Note 3	\$1,675,295	\$20,103,542
Flint Budgeted Water Revenue (FY15)		\$37,000,000
New Fee Collection Level to Handle DWSD - Note 4		\$48,403,542
Percentage Fee Change to Handle DWSD		30.82%

Note 1 - DWSD prices from 1/ /15 S. McCormick letter

Note 2 - Treatment Plant costs HC email 2/6/15

Note 3 - Unknown: additional cost to GCDC for pipe lease/mo.

Note 4 - In order to keep fee increases to the lowest level Flint would need to eliminate the \$3 million set aside annually for future costs and completely eliminate the \$8.4 million professional services expenses.

Prepared by: E.S. Murphy 2/13/15

Koryzno, Edward (Treasury)

From: Koryzno, Edward (Treasury)
Sent: Friday, February 13, 2015 3:52 PM
To: Saxton, Thomas (Treasury)
Subject: RE: Water Cost Analysis - 2

Jerry approved the table.



Edward B. Koryzno, Jr. | Director - Bureau of Local Government Services
State of Michigan | 430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
(517) 373-4415 | (517) 373-0633 (fax)
KoryznoE@michigan.gov



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Thank you

From: Saxton, Thomas (Treasury)
Sent: Friday, February 13, 2015 3:51 PM
To: Koryzno, Edward (Treasury)
Cc: Dempkowski, Angela (Treasury); Workman, Wayne (TREASURY)
Subject: RE: Water Cost Analysis - 2

Did Jerry A or Al sign off on that table ?

From: Koryzno, Edward (Treasury)
Sent: Friday, February 13, 2015 3:39 PM
To: Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)
Cc: Dempkowski, Angela (Treasury)
Subject: FW: Water Cost Analysis - 2

Attached is the table you requested.

Also attached is a letter from DWSD verifying their rates.



Edward B. Koryzno, Jr. | Director - Bureau of Local Government Services
State of Michigan | 430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
(517) 373-4415 | (517) 373-0633 (fax)
KoryznoE@michigan.gov

Koryzno, Edward (Treasury)

From: Workman, Wayne (TREASURY)
Sent: Friday, February 13, 2015 5:26 PM
To: Koryzno, Edward (Treasury)
Cc: Saxton, Thomas (Treasury); Dempkowski, Angela (Treasury)
Subject: Re: Water Cost Analysis - 2

This sure looks like it is accurate. Will ask Jerry

Sent from my iPad

On Feb 13, 2015, at 3:38 PM, "Koryzno, Edward (Treasury)" <KoryznoE@michigan.gov> wrote:

Attached is the table you requested.

Also attached is a letter from DWSD verifying their rates.

 Edward B. Koryzno, Jr. | Director - Bureau of Local Government Services
State of Michigan | 430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
(517) 373-4415 | (517) 373-0633 (fax)
KoryznoE@michigan.gov



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Thank you

From: Elizabeth Murphy [<mailto:emurphy@cityofflint.com>]
Sent: Friday, February 13, 2015 3:30 PM
To: Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
Cc: Gerald Ambrose
Subject: Water Cost Analysis - 2

Ed,
Does this make it more clear? Items in red are subtracted.

--

Liz Murphy
Assistant to the Emergency Manager
City of Flint
810 237 2025

Koryzno, Edward (Treasury)

From: Workman, Wayne (TREASURY)
Sent: Friday, February 13, 2015 5:27 PM
To: Gerald Ambrose
Cc: Koryzno, Edward (Treasury)
Subject: Fwd: Water Cost Analysis - 2
Attachments: image001.jpg; ATT00001.htm; Annual Comparison Flint with DWSD 021315.xlsx; ATT00002.htm; Re-Establishing Water Service 2015.pdf; ATT00003.htm

Do these numbers match what you think?

Sent from my iPad

Begin forwarded message:

From: "Koryzno, Edward (Treasury)" <KoryznoE@michigan.gov>
Date: February 13, 2015 at 3:38:44 PM EST
To: "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>, "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>
Cc: "Dempkowski, Angela (Treasury)" <DempkowskiA@michigan.gov>
Subject: FW: Water Cost Analysis - 2

Attached is the table you requested.

Also attached is a letter from DWSD verifying their rates.

Pleyte, Beth (Treasury)

From: Hollins, Harvey (GOV)
Sent: Sunday, February 15, 2015 10:46 PM
To: Saxton, Thomas (Treasury); Baird, Richard (GOV); Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Re: Flint

Tom,

Thanks. I'd like to get such a table out to the Flint stakeholders; however, before doing so, the table probably needs to be modified to better reflect the comparison between Flint River and DWSD.

--HH

From: Saxton, Thomas (Treasury)
Sent: Friday, February 13, 2015 8:10 PM
To: Baird, Richard (GOV); Muchmore, Dennis (GOV); Hollins, Harvey (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: Re: Re: Flint

You may have already seen this (below) blurb from MLive. Also, I had a call from Jerry A. He indicated Veolia is coming to the same conclusion that it may involve tweaking of the process vs some major undertaking. We will know more next week.

I have also attached a table Wayne's & Jerry's staff put together. My sense is there is still this thought that hooking back up to DWSD is cost neutral or nearly so. Hopefully this table shows that is not the case. The info is consistent with we sent you the other day i.e., there is an estimated 30% rate impact.

FLINT, MI — A water quality expert who has spent years working with environmentalist Erin Brockovich is expected to speak at two events in Flint Saturday, Feb. 14.

Robert W. Bowcock, founder of Integrated Resource Management, met with Mayor Dayne Walling, Councilman Wantwaz Davis and others Friday, Feb. 13.

Bowcock said earlier this week that he believes small treatment and distribution adjustments could help fix some of Flint's water quality problems. He toured the city's water treatment plant Friday.

Walling declined to comment on his conversation with Bowcock, but city Councilman Eric Mays said he is anxious to hear his assessment and recommendations.

Davis said Bowcock was straightforward in giving his opinion that the city can cut back on some of the chemicals being used to treat water.

City spokesman Jason Lorenz issued a statement, saying, "The city of Flint honored a request for a tour of its water treatment plant submitted by Mr. Bowcock, as it has done with individuals and groups in the past.

"(Director of Public Works) Director Howard Croft and F-1 Licensed Treatment Operator Mike Glasgow guided the tour and answered all of Mr. Bowcock's questions. Tours of the Water Treatment Plant can be arranged by appointment for interested groups by calling 810-787-6537."

Bowcock is scheduled to join in a march for water quality through downtown Flint, which is planned to begin at 1 p.m. Saturday at Flint City Hall, 1101 S. Saginaw St., and end at The Durant.

Bowcock is also scheduled to speak at a forum at the Saints of God Church, 2200 Forest Hill Ave., Flint, from 3-4:15 p.m.

Brockovich, portrayed by Julia Roberts in a 2000 movie about her fight over the pollution of a California town, has been speaking out on Facebook about Flint's water issues for several weeks.

Today, she posted a photo of Bowcock, Davis and march organizer Melissa Mays inside the Flint water plant, saying she was "so honored this community would seek my help ... and I am glad I could send Bob to get it done."

In addition to customer complaints about the price and quality of the water, there were several boil water advisories in Flint in 2014 and the city was found in violation of the Safe Drinking Water Act for excess total trihalomethanes in the water supply last year.

The city began using the Flint River as its source of drinking water in April after 50 years of handling only the distribution of already-treated Lake Huron water purchased from the Detroit Water and Sewerage Department.

Since that time, some citizens and members of the City Council have advocated abandoning the use of the river and purchasing lake water from the Detroit until the Karegnondi Water Authority pipeline is complete.

The city and Genesee County are partners in the KWA.



From: Baird, Richard (GOV)

Sent: Thursday, February 12, 2015 11:34 PM

To: Muchmore, Dennis (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)

Subject: Fwd: Re: Flint

Sent from my Verizon Wireless 4G LTE DROID

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

From: Robert Daddow <daddowr@oakgov.com>
Date: Feb 12, 2015 11:32 PM
Subject: Re: Flint
To: "Baird, Richard (GOV)" <bairdr@michigan.gov>
Cc:

Should not have thought politically but financially in the first place. This is very doable. We need to chat. Rjd

On Feb 12, 2015, at 10:32 PM, Bart Foster <bfoster@fostergroupllc.com> wrote:

Actually, my quick take is about 8%.

Some background:

When Flint left, the annual revenue profile for the Water System was initially reduced by \$12.5 million. However, we immediately recalculated the rate for Genesee County (recognizing their higher demands), to effectively "claw back" about \$2 million of the reduction, so the net Flint impact is ~ \$10.5 million, or just under 2.5% of the (reduced) Water System rate revenue. Assuming that same amount could be replaced, and all else being equal, the "system rate increase" could be reduced by about 3 percent, with a bit more of the reduction occurring in the suburban wholesale rate structure. Safe to say that (again, absent any other changes) the average suburban water rate increase would be closer to 8 percent compared to the current 11.1%.

Hope this helps . . .

--

Bart Foster
President
THE FOSTER GROUP
(913) 345-1410
(913) 345-1640 fax
(913) 530-6240 cell

bfoster@fostergroupllc.com <<mailto:bfoster@fostergroupllc.com>>

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Thank you.

On Feb 12, 2015, at 7:02 PM, Bart Foster <bfoster@fostergroupllc.com> wrote:

Bob - in transit but will review and reply this evening.

Sent from my iPhone

On Feb 12, 2015, at 3:44 PM, Daddow, Robert <daddowr@oakgov.com> wrote:

Nikki / Bart – don't need a hard and fast number on this. However, it would seem to me that in a fixed cost system such as water, if Flint were to be hooked up again at the

\$847K / month cited in Ms. McCormick's January 12th memorandum and after the release of the rates yesterday, bringing Flint back would – on a marginal cost basis – serve to mitigate the wholesale (suburban) customer rate increase of 11.1% cited in yesterday's presentation. Without going into a whole lot of detailed calculations (unless necessary), what would the impact of the inclusion of Flint starting say on July 1, 2015 (hypothetical date) be on the rate increase presently now in the public? A revised increase of what – 10.6% - looking for a high level sensitivity analysis here. Can you help? RJD

Koryzno, Edward (Treasury)

From: Workman, Wayne (TREASURY)
Sent: Monday, February 16, 2015 8:41 AM
To: Koryzno, Edward (Treasury); Byrne, Randall (Treasury); Cline, Richard (Treasury); Dempkowski, Angela (Treasury)
Subject: Fwd: Flint

Maybe we can discuss this table idea Tuesday am while I am driving. It may be a good way to simplify things

Sent from my iPad

Begin forwarded message:

From: "Hollins, Harvey (GOV)" <hollinsh@michigan.gov>
Date: February 15, 2015 at 10:46:19 PM EST
To: "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>, "Baird, Richard (GOV)" <bairdr@michigan.gov>, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov>
Cc: "Workman, Wayne (TREASURY)" <WorkmanW@michigan.gov>
Subject: RE: Re: Flint

Tom,

Thanks. I'd like to get such a table out to the Flint stakeholders; however, before doing so, the table probably needs to be modified to better reflect the comparison between Flint River and DWSD.

--HH

From: Saxton, Thomas (Treasury)
Sent: Friday, February 13, 2015 8:10 PM
To: Baird, Richard (GOV); Muchmore, Dennis (GOV); Hollins, Harvey (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: Re: Re: Flint

You may have already seen this (below) blurb from MLive. Also, I had a call from Jerry A. He indicated Veolia is coming to the same conclusion that it may involve tweaking of the process vs some major undertaking. We will know more next week.

I have also attached a table Wayne's & Jerry's staff put together. My sense is there is still this thought that hooking back up to DWSD is cost neutral or nearly so. Hopefully this table shows that is not the case. The info is consistent with we sent you the other day i.e., there is an estimated 30% rate impact.

Gerald Ambrose
Emergency Manager



Dayne Walling
Mayor

Jason Lorenz
Public Information Officer
(810) 237-2039
jlorenz@cityofflint.com

For Immediate Release

City of Flint to Form Water Advisory Committee from Members of the Community to Share Updates and Concerns

Flint, Michigan – February 16, 2015 – In response to the recent concerns regarding water quality in the City of Flint, a water advisory committee of 40 citizens consisting of business owners, elected officials and members of various community organizations is being formed. The committee's formation comes after the City hired the firm Veolia to provide an analysis of Flint's water system as well as recommendations on actions to improve water quality. The purpose of the committee will be to provide the community with ongoing information on the City's work to maintain a safe water supply and to improve quality.

In addition to gathering information from the City to share during their interactions with the community, committee members will also be expected to share the concerns they receive from the community in order for those concerns to be addressed. Mayor Dayne Walling pointed out that the level of connection between the City and the community provided by the committee is an important step toward ensuring that the public is engaged in this ongoing issue.

"Members of our community have concerns about the quality of their water, the costs associated with delivering it and the problems facing the infrastructure that brings it to them," said Mayor Walling. "As we worked to address each of these areas in turn, keeping our residents, businesses and visitors informed on the progress being made and keeping a dialogue open to hear any new concerns is crucial."

–CONTINUE–

Gerald Ambrose
Emergency Manager



Dayne Walling
Mayor

All meetings by the Water Advisory Committee will be open to the public and will be held at easily accessible locations throughout the city. Meetings will be held on a regular basis as work continues at least until the City is receiving its water from the Karegnondi Water Authority, which is anticipated to be in 2016.

The first meeting is anticipated to be during the first week of March, 2015. Letters have been sent to prospective members and confirmation is expected to be received by Friday, February 20, 2015. Any group who has not received an invitation and who would like to have a member participate can send a request to mayor@cityofflint.com.

A second, smaller group of experts in various areas surrounding water is also being formed. The Technical Advisory Committee will consist of members from the areas of health, government, industry, education and scientific research. That group will be announced later this week.

Groups and designated individuals asked to join the Water Advisory Committee:

Flint City Council President	Flint Community Schools
Chair Public Works Cmte.	Genesee County Commissioner
Concerned Pastors for Social Action	Genesee County Medical Society
Flint & Genesee Chamber of Commerce	Kettering University
Hurley Medical Center	Mott Community College
McLaren Flint	U of M Flint
Genesys Health System	Consumers Energy
The United Way	Flint River Watershed Coalition
Big Brothers Big Sisters	Hamilton Community Health Network

—CONTINUE—

Gerald Ambrose
Emergency Manager



Dayne Walling
Mayer

Tenacity Brewing (owner/city resident)

COGIC Alliance

Master Plan Infrastructure team

Flint Downtown Small Business Assoc.

Genesee County Drain Commissioner

Genesee Landlords' Assoc.

The Torch (owner/city resident)

Brennan Senior Center

Flint Area Congregations Together

Hasselbring Senior Center

Flint Neighborhoods United

Valley Area Agency on Aging

State Rep. Phil Phelps

The Salvation Army

State Rep. Sheldon Neeley

Catholic Charities of Shiawassee and
Genesee Counties

State Senator Jim Ananich

Genesee County Health Dept.

Governor's Office

U.S. Rep. Dan Kildee

—END—

7-18-15
Flint

Current Operations		
	Monthly	Annual
Water Usage MCF	71,594	859,128
Price Per MCF		
Cost of Water Usage per MCF		
Fixed Charge/Month		
Flint Incremental Cost of Treatment Plant Operation (to continue as a back-up only)	\$ 239,587.00	\$ 2,875,044.00
Flint Set aside	\$ 250,000.00	\$ 3,000,000.00
Flint Professional Services	\$ 700,000.00	\$ 8,400,000.00
Cost of Water/Month Avg.		
Rate Increase if the New Fee Collection Level to Handle DWSD		
Additional Cost was \$48,403,542		

DWSD Reconnect		Impact on Switch to DWSD on the FY 15 Flint Budgeted Water Revenue Set at \$37,000,000	% Rate Increase needed to adjust to DWSD Switch
Monthly	Annual		
71,594	859,128		
\$ 14.92	\$14.92		
\$ 1,068,182.48	\$ 12,818,189.76	\$ 12,818,189.76	34.64%
\$ 846,700.00	\$ 10,160,400.00	\$ 22,978,589.76	62.10%
\$ (239,587.00)	\$ (2,875,044.00)	\$ 20,103,545.76	54.33%
\$ (250,000.00)	\$ (3,000,000.00)	\$ 17,103,545.76	46.23%
\$ (700,000.00)	\$ (8,400,000.00)	\$ 8,703,545.76	23.52%
\$ 725,295.48	\$ 8,703,545.76	\$ 8,703,545.76	23.52%
		\$ 11,403,542.00	30.82%

Byrne, Randall (Treasury)

From: Byrne, Randall (Treasury)
Sent: Wednesday, February 18, 2015 4:47 PM
To: Widigan, Robert (TREASURY); Cline, Richard (Treasury)
Subject: FW: Bi-Weekly Conference Call Agenda
Attachments: Agenda for Conference Call with Treasury 021815.pdf

FYI,

Randy,

From: Maxine Murray [mailto:mmurray@cityofflint.com]
Sent: Wednesday, February 18, 2015 4:40 PM
To: Kapp, Gene (MSP); Muchmore, Dennis (GOV); Roberts, John (DTMB); Dempkowski, Angela (Treasury); Baird, Richard (GOV); Carter, Jerry (MSP); Deasy, Thomas (MSP); Koryzno, Edward (Treasury); Clement, Elizabeth (GOV); Elizabeth Murphy; Etue, Kriste (MSP); Hollins, Harvey (GOV); Hill, Darryl (MSP); James Tolbert; Jerry Ambrose; Klotz, Josephine (MSP); Lee, Nichole (MSP); McGowan, Emmitt (MSP); Smith, Paul (GOV); Byrne, Randall (Treasury); Sands, Thomas (MSP); Sipes, Stephen (MSP); O'Neill, Stephen (MSP); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY); West, Samantha (GOV)
Subject: Bi-Weekly Conference Call Agenda

Good afternoon,

Please find attached the agenda for the conference call scheduled for **Thursday, February 19th, at 8:30 am.**

Thank you.

--

Maxine Murray
Executive Assistant to
Mayor Dayne Walling
Gerald Ambrose, Emergency Manager
1101 S. Saginaw Street
Flint, MI 48502
810.237.2035 Telephone
810.766.7218 Fax

February 19, 2015

City of Flint Thursday 9:00am Phone Conference Agenda

1- Access code: Last Report

1) Public Safety Update –
FPD, MSP, (FFD, if needed)

	Status Report	Status
a) FPD		Update
b) FFD	* SAFER Grant - Recommendation is to not apply in 2015, do apply in 2016 in light of anticipated FY17 shortfall.	Update

c) Other update from
Chief Tolbert and MSP

2) Governor's Office
Update – R. Baird, H. Hollins,
B. Clement

a) District Court Consolidation	County Commissioners voted on 12/10/14 to approve "pursuant to the terms and conditions set forth in a MOU to be approved between City of Flint and Gen. City."	Meeting with County Rep. Feb 18. Waiting for proposed MOU from County.
b) Local Income Tax Initiative	Additional source of funds still needed for City. H. Hollins working to find a new sponsor. Projected financial challenges associated with projection of FY17 budget may emphasize the rational.	No Change

3) Finance and
Administrative Update

a) Financial Ordinances	Complete	Update
b) Management Vacancies	MML has been selected to recruit candidates for Treasurer, HR Director and Finance Director. Search for Fire Chief to be added - effective date 7/1/15	Update

	Last Report	Status
c) Budget	Dr. Scorsone to assist with updating financial projections by Feb. 18. Budget planning session held with Council on 2/16/17. Projected gap between revenues and status quo expenses is between \$4.5million and \$5.0million. Progress under DEP/RAP being revised. Revised purchasing ordinance being enacted.	New No change New
d) DEP/RAP		
e) Purchasing		
4) City Council Update		
a) EM Order	An Order also being developed defining organizational reporting relationships to new City Administrator.	No Change
b) Council/Mayor Compensation	Revision to Council and Mayor compensation is being developed.	Update
5) Water Issues		
a) MDEQ Violation Notice	The next TTHM sampling was conducted 2/17/15, testing will be done by the MDEQ. Our most recent internal tests show water to be within federal/state guidelines. Expect to receive a violation notice from MDEQ, due to the running average calculation, in 7-10 days. The notice to customers will go out by mid-March.	Update
b) Distressed Cities Grants	Announcements made for grant awards to Flint for Leak Detection and Sewage sludge Load Out Facility.	No Change
c) Drinking Water Revolving Fund	Discussing possible restructuring of loans.	No Change
d) Water Quality Consultant	Veolia will provide preliminary recommendations at the 2/18/15 Public Works Committee meeting - Including process improvements, distributions system actions, communications improvements, and personnel support by way of new policies and procedures, training and new testing models. Priority budget, and timeline to follow within 1-2 weeks; much improvement has occurred as demonstrated by the most recent testing.	Update
e) WAC/TAC	A Water Advisory Committee and a Technical Advisory Committee have been formed as part of the process of improving communication and receiving additional feedback.	New

	Last Report		Status
6) 9-1-1 Reconsolidation Plan	a) Tower Transfer to Consortium	Preparing Tower Transfer Justification package for EM and Council. Sending grant amendment request to E. Cole for use of current C-GAP grant to pay for consolidation expenses.	Update
	a) Transition Management	New Council Committee structure has been implemented and Council is now meeting twice per month. Council has been engaged in the planning and budget process for FY16-20, adopting updated Vision, Mission and Goals, and participating in a budget workshop led by Dr. Eric Scorsone. Next step will be for Council to receive 5 Year Revenue/Expense projections and adopt budget priorities. Beginning in March, more business items will be sent to Council for consideration. Date specific transition calendar will need to be developed.	Update
8) Other Items	MDNR and Purchase of CSX rail area	Requesting DNR authorize full amount of appraised property value to be paid by DNR grant. Note from Planning and Development Director: In brief, the City hired an appraiser for the Grand Traverse Greenway trail to complete acquisition of the CSX properties. We forwarded the appraisal of \$170,000 to the DNR for approval to proceed with negotiations with CSX. During our negotiations, CSX disputed the appraisal and submitted their own appraisal for the property of \$330,000. After reviewing the CSX appraisal, DNR told the City that they would be willing to increase the grant up to \$215,000 for acquisition, but the City would have to make up the difference. After doing additional research on similar properties including acquisition of the Genesee Valley Trail in the City of Flint, we realize that CSX offer is not unreasonable. We asked DNR to reconsider and allow us to have our appraisal amended so that we can fully use the DNR grant for the \$330,000 asking price. (Our DNR grant allocation is \$700,000 more than enough to cover the \$330,000 asking price. Thus far, DNR has been unwilling to provide the additional funding and suggested we talk to MDOT about making up the difference. I think the MDNR is concerned about setting precedent for future trail acquisition, but I don't think it matters if MDOT is routinely paying more	Awaiting update from Treasury.

Pleyte, Beth (Treasury)

From: Gerald Ambrose <gambrose@cityofflint.com>
Sent: Wednesday, February 18, 2015 5:01 PM
To: Hollins, Harvey (GOV); Workman, Wayne (TREASURY); Byrne, Randall (Treasury); Koryzno, Edward (Treasury); Widigan, Robert (TREASURY); Saxton, Thomas (Treasury)
Subject: Fwd: Copy of Presentation
Attachments: Flint Public Works Committee Interim Report V6 - Final.pptx

Veolia presentation...interim report

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

From: "Nicholas, Robert" <robert.nicholas@veolia.com>
Date: Feb 18, 2015 4:03 PM
Subject: Copy of Presentation
To: <jllorenz@cityofflint.com>, "Elizabeth Murphy" <emurphy@cityofflint.com>, "Howard Croft" <hcroft@cityofflint.com>, "gambrose@cityofflint.com" <gambrose@cityofflint.com>
Cc:

Good Afternoon

You will find attached a copy of the presentation for this afternoon.

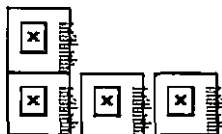
--

Rob Nicholas
Vice President, Development
Municipal & Commercial Business
VEOLIA NORTH AMERICA

tel

+1 859 582 0104

5071 Endview Pass / Brooksville, FL 34601
Robert.Nicholas@veolia.com
www.veolianorthamerica.com



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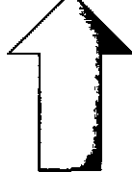


City of Flint, MI
City Council Public Works Committee
Interim Water Quality Report

Veolia Scope of Work

Week 1

- Provide a review of current actions
- Engage staff, visit facilities and analyze data
- Make interim report



Week 2

- Carry out more detailed study of initial findings
- Make recommendations for Improving water quality
- Provide a plan, cost and schedule for change

Items of Note

- **Not in scope** – studying why the change from DWSD or the history of the utility
- **What we found** – A very frustrated community and a staff trying to solve the problem, having some success but frustrated with the pace of change

Everybody Is Checking the Safety of Water



- City, state, news media, universities and other groups
- Safe = compliance with state and federal standards and required testing
 - *Latest tests show water is in compliance with drinking water standards*
 - *Monthly report available on web page*
- More than 20,000 tests required annually for city
- Strict testing requirements in place (what and how to test)

Why TTHM Notices?

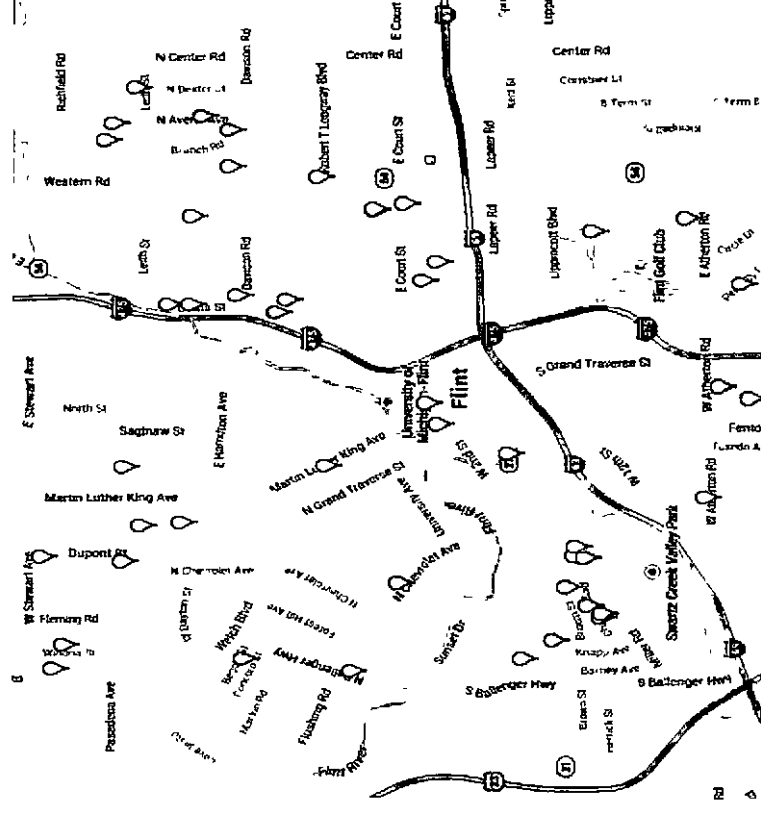
- TTHM is formed as a result of the reaction between chlorine and organic material in the water
- City is required to test quarterly at 8 sites
 - *Last summer, several sites had more TTHM than allowed*
- City has reduced levels of TTHM and now all sites are in compliance
 - *Customer notification letters are required until tests are in compliance an average of four quarters*
- **It will take at least 2 more quarters to lower average**
 - *Even a change to DWSD water doesn't solve problem*
- **Flint is not alone – hundreds of communities are facing TTHM issues**

Why Discolored Water?

- Old cast iron pipes
- Always has been some discolored water problems — mostly after water breaks
- Efforts to reducing TTHM didn't help discoloration
 - *Doesn't mean the water is unsafe but it is not appealing and raises questions*
- City will test the water at your home — call 787-6537 or email flintwater@cityofflint.com
- Tracking customer complaints is important

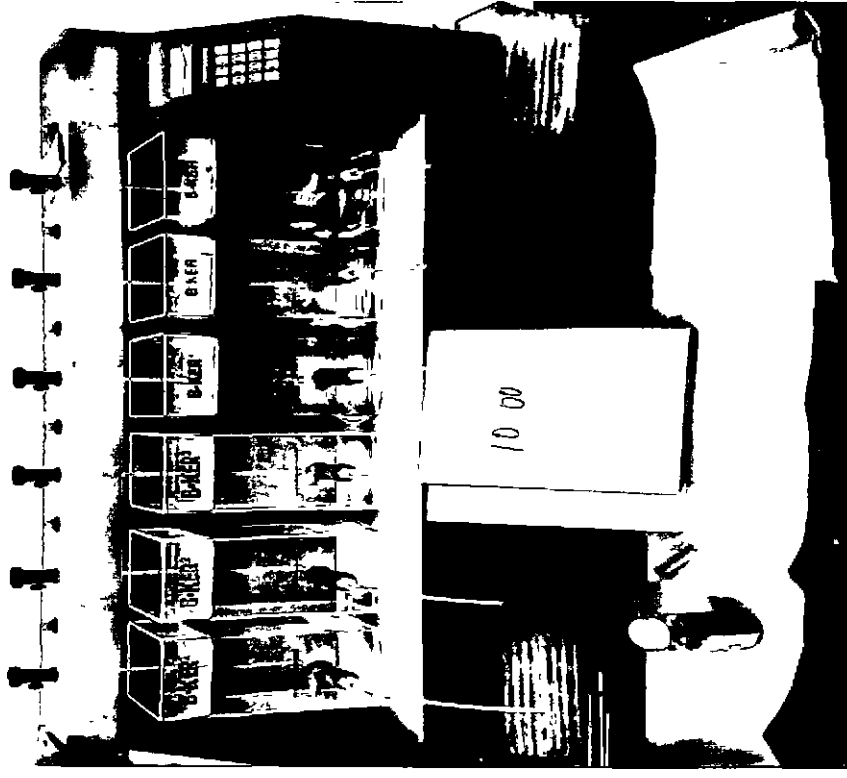
Location of water quality complaints

The last 12 months — fewer than you think



Water Quality Can Be Improved

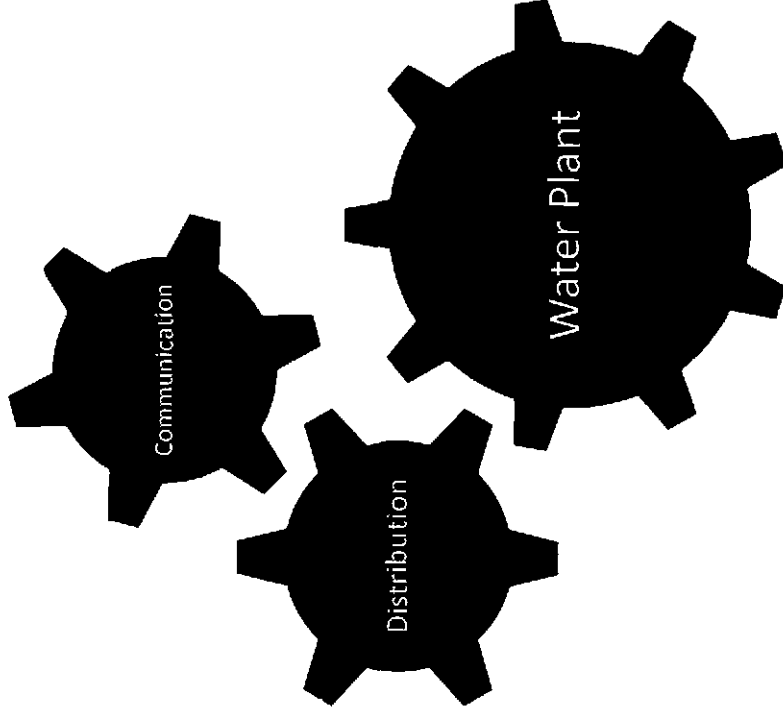
- Adjust the chemicals being fed – stop some, increase some and change some
- Provide better monitoring of water quality to help make adjustments
- Continue repair or replacement of broken parts
- Reduce the over capacity of the distribution system
- Do a better job explaining what is happening
- Do a better job of asking for help





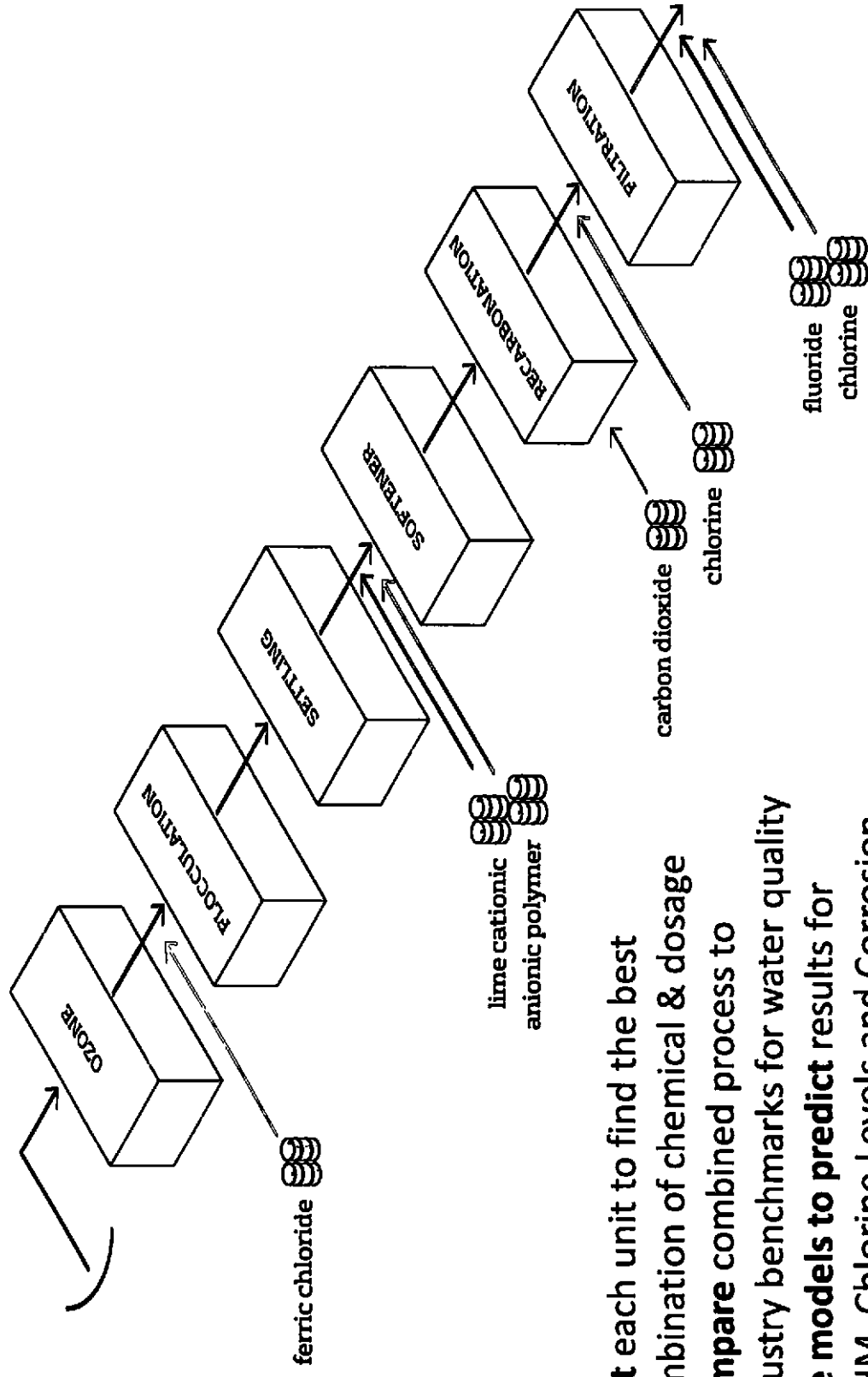
Further Explanation of Solutions

Solution Involves Coordination of 3 Activities



- **Water plant improvements**
 - *Optimize chemical dosages*
 - *Consider different chemicals*
 - *Change dosing points*
 - *Install granulated activated carbon*
 - *Complete plant upgrades*
 - *Implement best mgt practices*
- **Distribution system improvements**
 - *Fix broken valves*
 - *Ask for customer feedback*
 - *Reduce tank storage*
 - *Target line flushing*
 - *Run a hydraulic model*
- **Better communication with customers**
 - *Engage advisory committees*
 - *More accessible utility*
 - *Make it easy to access information*
 - *Better customer communication*

Optimize Plant Processes



- **Test** each unit to find the best combination of chemical & dosage
- **Compare** combined process to industry benchmarks for water quality
- **Use models to predict** results for TTHM, Chlorine Levels and Corrosion

Complete Plant Construction & Re Prioritize Capital

Cost effective plan in budget

- Complete water plant renovation
 - *Target SCADA and instrumentation in plant*
- Speed up valve turning contract & provide money for replacements
- Speed up hydraulic model update to reduce tank volume
- Evaluate installing of granulated activated carbon on filters

Weather can impact timing

Digging up a water valve for repair
Need good weather to start



Implement Best Management Practices

Activities to Help Operators Maintain Good Water Quality

- Process Control Management Plan
- Lab QA/QC Program
- Computerized Maintenance Management System
- Asset Management System
- Training and Certification Program
- Vulnerability Plan



Distribution System Improvements

- Speed up flow of water from plant to homes – 2 weeks plant to house
 - *Find closed valves & open them*
 - *Replace broken valves*
 - *Update hydraulic model*
 - *Reduce system storage*
- Track customer complaints
 - *Test customer water*
 - *Spot flush hydrants to clean areas of stagnant water in the system*

Flushing out discolored water





Improving Customer Service

Make It Easy to Access Information and People

Develop a proactive customer communication plan

- Create advisory committees to help direct efforts and improve flow of information
- Establish a single point of contact to manage all water quality complaints
- Provide additional customer service training to staff
- Expand neighborhood and community outreach
- Change monthly billing statements from card to envelope with information

Example - Communicate in the field

NOTICE: ANNUAL FLUSHING PROGRAM

We are conducting our annual flushing program to enhance your water quality and clean the distribution system.

DC Water crews will be flushing hydrants in your area

10:00 p.m. to 6:30 a.m. on the following dates:

9/24 through 9/30

IMPORTANT INFORMATION

- Your water supply will not be shut off during hydrant flushing.
- You may notice slight water discoloration or low water pressure.
- During this time, customers can continue normal water usage, including drinking, bathing and laundry (unless water is discolored).

If you experience discolored water during this period:

- Run your cold water taps for 15 minutes. If it does not clear up, please contact our Drinking Water Division.
- Do not run your hot water. If you experience discolored water from your hot water tap for several hours, then it is recommended to drain and flush your water heater tank.

Provide field crews with additional communications tools to use to address questions or concerns from the public

Create door hangers, flyers, or yard signs to notify neighborhoods about main breaks, hydrant flushing, or system maintenance that may affect the public

Create a business card or other contact card with the name and phone number of the single point of contact with the Department of Public Works who is managing information flow

*sample door hanger provided by DC Water & Sewer Authority



What Is Next

Next Steps

Week 1

- Provide a review of current actions
- Engage staff, visit facilities and analyze data
- Make interim report



Week 2

- Carry out more detailed study of initial findings
- Make recommendations for Improving water quality
- Provide a plan, cost and schedule for change

Questions Being Heard

REMEMBER

We just started. Might not have an answer yet to your question

- **When will water improve** - The water has improved with current actions. More changes will occur over weeks and months because of safety reviews
- **Date of next update and final report** – An update will be provided next week and a report the following week.
- **Time frame for implementing recommendations** – The City is already started. Others a few days and some weeks or months due to State approval being required or weather.
- **Cost of changes** – Don't know yet but we are aware of the financial concerns

More Questions Being Heard

- **How are TTHM formed** – It's the reaction of chlorine to organics (leaves, dirt) in the water.
- **How to reduce TTHM** – Reduce organics before introducing chlorine and shorten time chlorine has to react with the organics
- **What causes discoloration** – Older lines, the iron parts of the system will leach iron into the water causing the discoloration. Other times it's just air built up.
- **Why no discoloration with DWSD** – There was. Flint had a bad time with breaks of old line and is doing lots of construction. This stirred up the water and caused discoloration.

More Questions Being Heard

- **Can you test my water** – The city will test your water for free. But, only 2 of 20 people have taken the city up on the offer since it began offering the service.
- **Medical problems** – Some people may be sensitive to any water. Talk to your doctor. The City is communicating with the medical community.
- **Confidence that future problems will be avoided** – Recommendations will include putting programs in place to better respond to water changes and assure quality



Questions?

Pleyte, Beth (Treasury)

From: Saxton, Thomas (Treasury)
Sent: Thursday, February 19, 2015 5:08 AM
To: Robert Daddow
Subject: Re: water

no problem... I am off to Detroit this morning for meeting. I will try to reach you when I am on the road.

On Feb 18, 2015, at 8:39 PM, "Robert Daddow" <daddowr@oakgov.com> wrote:

Regrets. Didn't get out of my meeting until 615 and the Board caucus ran from 6 to 7 - I hopped in the car and drove like a beast to try to get back for a DWSD presentation but couldn't make it before the Board meeting started at 7 pm. Am in tomorrow in the am at 248 / [REDACTED]

On Feb 18, 2015, at 3:28 PM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov> wrote:

Sorry I missed your call. I assume you are in your DWSD mtg at this point. Give me a call when you are free. You can try my cell as well. 517/[REDACTED]
Although I have mtgs @ 4:00 & 5:00.

From: Robert Daddow [mailto:daddowr@oakgov.com]
Sent: Wednesday, February 18, 2015 2:27 PM
To: Saxton, Thomas (Treasury)
Subject: Re: water

Just left message

On Feb 18, 2015, at 1:15 PM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov> wrote:

Bob - I just left a message at your office to call (so I am double covering). I am trying to close the loop re Flint. 517/[REDACTED] is my direct.

Cousineau, Sara (Treasury)

Subject: Weekly Flint Meetings
Location: Conference Call - Info Below

Start: Thu 2/19/2015 8:30 AM
End: Thu 2/19/2015 9:30 AM

Recurrence: Weekly
Recurrence Pattern: every 2 weeks on Wednesday from 9:00 AM to 10:00 AM

Meeting Status: Accepted

Organizer: Koryzno, Edward (Treasury)

Required Attendees: 'gambrose@cityofflint.com'; Byrne, Randall (Treasury); Sands, Thomas (MSP); Clement, Elizabeth (GOV); Saxton, Thomas (Treasury); Etue, Kriste (MSP); Maxine Murray (mmurray@cityofflint.com); Roberts, John (DTMB); Larkin, Brian (GOV); Klotz, Josephine (MSP); Kapp, Gene (MSP); Deasy, Thomas (MSP); Workman, Wayne (TREASURY); Sipes, Stephen (MSP); Pekrul, Daniel (MSP); O'Neill, Stephen (MSP); Lee, Nichole (MSP); 'Elizabeth Murphy'; Hollins, Harvey (GOV); Baird, Richard (GOV); Muchmore, Dennis (GOV); West, Samantha (GOV); 'James Tolbert'; Darnell Early (dearly@cityofflint.com); Carpenter, Brian (UIA); Smith, Paul (GOV); Minix, Connie (DTMB)

Optional Attendees: 'Darnell Earley'; Pleyte, Beth (Treasury); Cousineau, Sara (Treasury); McGowan, Emmitt (MSP); Sims, Robbin (MSP); Widigan, Robert (TREASURY); Carter, Jerry (MSP)

Ed Koryzno to Host

Call in – 1- [REDACTED]

Access Code – [REDACTED]

M, BT, SAM, RTAB Analyst
 .z, MSP, PD,

City of Flint Thursday 9:00am Phone Conference Agenda			
February 19, 2015	1-8- Access code	Last Report	Status
1) Public Safety Update – FPD, MSP, (FFD, if needed)			
a) FPD	Status Report – Murder ↑ ; Case ↓ 20% ; Rehearing ↑ Arson, Assault, Burg. Larc ↓ ; Auto Theft ↑		Update
b) FFD	* SAFER Grant - Recommendation is to not apply in 2015, <u>do</u> apply in 2016 in light of anticipated FY17 shortfall.		Update
c) Other update from Chief Tolbert and MSP			
2) Governor's Office Update – R. Baird, H. Hollins, B. Clement			
Issue of Retirement + Packing for Judges			
a) District Court Consolidation	County Commissioners voted on 12/10/14 to approve "pursuant to the terms and conditions set forth in a MOU to be approved between City of Flint and Gen. Cty."		Meeting with County Rep. Feb 18. Waiting for proposed MOU from County.
b) Local Income Tax Initiative	Additional source of funds still needed for City. H. Hollins working to find a new sponsor. Projected financial challenges associated with projection of FY17 budget may emphasize the rational.		No Change
3) Finance and Administrative Update			
a) Financial Ordinances	Complete		Update
b) Management Vacancies	MML has been selected to recruit candidates for Treasurer, HR Director and Finance Director. Search for Fire Chief to be added - effective date 7/1/15		Update

	Last Report	Status
c) Budget	Dr. Scorsone to assist with updating financial projections by Feb. 18. Budget planning session held with Council on 2/16/17. * Projected gap between revenues and status quo expenses is between \$4.5million and \$5.0million. Progress under DEP/RAP being revised. Revised purchasing ordinance being enacted.	New No change New
<i>Fiscal Stabilization Ordinance</i>		
4) City Council Update		
a) EM Order	An Order also being developed defining organizational reporting relationships to new City Administrator.	No Change
b) Council/Mayor Compensation	Revision to Council and Mayor compensation is being developed.	Update
5) Water Issues		
a) MDEQ Violation Notice	The next THM sampling was conducted 2/17/15, testing will be done by the MDEQ. Our most recent internal tests show water to be within federal/state guidelines. Expect to receive a violation notice from MDEQ, due to the running average calculation, in 7-10 days. The notice to customers will go out by mid-March.	Update
b) Distressed Cities Grants	Announcements made for grant awards to Flint for Leak Detection and Sewage sludge Load Out Facility.	No Change
c) Drinking Water Revolving Fund	Discussing possible restructuring of loans.	No Change
d) Water Quality Consultant	Veolia will provide preliminary recommendations at the 2/18/15 Public Works Committee meeting - including process improvements, distributions system actions, communications improvements, and personnel support by way of new policies and procedures, training and new testing models. Priority budget, and timeline to follow within 1-2 weeks; much improvement has occurred as demonstrated by the most recent testing.	Update
e) WAC/TAC	A Water Advisory Committee and a Technical Advisory Committee have been formed as part of the process of improving communication and receiving additional feedback.	New
4) Organizations		

	Last Report	Status
6) 9-1-1 Reconsolidation Plan	a) Tower Transfer to Consortium Preparing Tower Transfer Justification package for EM and Council. Sending grant amendment request to E. Cole for use of current C-GAP grant to pay for consolidation expenses.	Update
7) Transition Activities	a) Transition Management New Council Committee structure has been implemented and Council is now meeting twice per month. Council has been engaged in the planning and budget process for FY16-20, adopting updated Vision, Mission and Goals, and participating in a budget workshop led by Dr. Eric Scorsone. Next step will be for Council to receive 5 Year Revenue/Expense projections and adopt budget priorities. Beginning in March, more business items will be sent to Council for consideration. Date specific transition calendar will need to be developed.	Update
8) Other Items	MDNR and Purchase of CSX rail area Requesting DNR authorize full amount of appraised property value to be paid by DNR grant. Note from Planning and Development Director: In brief, the City hired an appraiser for the Grand Traverse Greenway trail to complete acquisition of the CSX properties. We forwarded the appraisal of \$170,000 to the DNR for approval to proceed with negotiations with CSX. During our negotiations, CSX disputed the appraisal and submitted their own appraisal for the property of \$330,000. After reviewing the CSX appraisal, DNR told the City that they would be willing to increase the grant up to \$215,000 for acquisition, but the City would have to make up the difference. After doing additional research on similar properties including acquisition of the Genesee Valley Trail in the City of Flint, we realize that CSX offer is not unreasonable. We asked DNR to reconsider and allow us to have our appraisal amended so that we can fully use the DNR grant for the \$330,000 asking price. (Our DNR grant allocation is \$700,000 more than enough to cover the \$330,000 asking price. Thus far, DNR has been unwilling to provide the additional funding and suggested we talk to MDOT about making up the difference. I think the MDNR is concerned about setting precedent for future trail acquisition, but I don't think it matters if MDOT is routinely paying more	Awaiting update from Treasury.

Pleyte, Beth (Treasury)

From: Muchmore, Dennis (GOV)
Sent: Saturday, February 21, 2015 7:14 PM
To: Saxton, Thomas (Treasury)
Cc: Baird, Richard (GOV); Workman, Wayne (TREASURY); Hollins, Harvey (GOV)
Subject: Re: Flint

Let's hope that you're right since people are paying the same or more than with Detroit water and getting pretty shaky quality. We're just diverting money that went to DWSD originally into the Flint repayment and debt scheme. I assume the advantage will disappear when KWA is up and running to pay the debt and costs of intake. Let's hope the community can see the value of this somehow.

Sent from my iPhone

> On Feb 19, 2015, at 5:31 AM, Saxton, Thomas (Treasury) <SaxtonT@michigan.gov> wrote:

>

> I traded calls yesterday with Bob D. And talked to Jerry A. My intent was to get the 3 of us on the phone to resolve any confusion, etc on ongoing questions relating to Flint hooking back up with DWSD. I will try again today.

> But again, unless I am missing something (which has been known to happen); going back to DWSD represents (lets say in round \$\$) \$10mm in net add'l costs to the Flint system. There is no money to pay that other than raising rates to customers. The calculations show that would be an approx 30% increase in rates.

> Momentarily, I will forward a preliminary analysis/presentation from the City's newly hired consultant. I just blasted thru the document but it seems to say that reconnecting with DWSD will not necessarily cure the issues that they are currently dealing with e.g., discoloration, TTHM.

>

>> On Feb 18, 2015, at 10:03 AM, "Muchmore, Dennis (GOV)" <muchmored@michigan.gov> wrote:

>>

>> This train is leaving and we'll be holding the bag if we don't work out a deal on DWSD for Flint.

>>

>>

>> Begin forwarded message:

>>

>> From: "Baird, Richard (GOV)" <bairdr@michigan.gov<mailto:bairdr@michigan.gov>>

>> To: "Muchmore, Dennis (GOV)" <muchmored@michigan.gov<mailto:muchmored@michigan.gov>>

>> Subject: Fwd: FW: Flint

>>

>> Need to bring this to ground today if we can.

>>

>> Sent from my Verizon Wireless 4G LTE DROID

>> ----- Forwarded message -----

>> From: "Daddow, Robert" <daddowr@oakgov.com<mailto:daddowr@oakgov.com>>

>> Date: Feb 17, 2015 9:05 AM

>> Subject: FW: Flint

>> To: "Baird, Richard (GOV)" <bairdr@michigan.gov<mailto:bairdr@michigan.gov>>

>> Cc:

>>

>> Rich - it takes two to negotiate and Flint representatives are not at the table. In fact, they are actively trying to avoid even considering this as an alternative course of action. Me - what I'd be doing is a dual track; if the local solution fails, I'd have the second option to fall back on. But, heh, that is just me. They are over 21, have been elected to represent

their residents / commercial entities and therefore are responsible for their actions - to the same people who put them there.

>>

>> While I'd like to pick up a few percentage point reduction in the water rate increases for the retention of Flint, it would be short-term anyway. If we don't have a willing partner on that side, then it can only lead to further distractions from a DWSD management already stressed in dealing with the transition, normal business, and the new Financial Review Board / two policy boards that they are reporting to.

>>

>> -----Original Message-----

>> From: Robert Daddow [mailto:daddowr@oakgov.com]

>> Sent: Tuesday, February 17, 2015 9:01 AM

>> To: 'Nicolette Bateson'

>> Cc: 'Brian Baker'; 'Bart Foster'; 'jfausone@fb-firm.com<mailto:jfausone@fb-firm.com>'; 'Sue McCormick'; 'William Wolfson'

>> Subject: RE: Flint

>>

>> Yesterday, I received a voice mail from R. Baird (still have not connected) that indicated that the City is actively working to resolve the water matter so as to avoid connecting to the DWSD. Veolia is assisting in this matter and will be issuing a report shortly. Nikki shared the above article that provides additional guidance as well.

>>

>> The voice mail from Mr. Baird indicated that the City is saving a fair amount of dollars in treating the water locally - albeit notwithstanding the known quality issues. The difference between DWSD and Flint treated water is helping to remediate other fiscal issues (potentially capital and operating) as the rates charged to the residents / commercial entities have not been changed, including perhaps other City fiscal issues. Given the active involvement of Flint in securing a resolution of this matter locally and not actively engaging DWSD in the discussions as an alternative course of action, I see no reason to pursue this matter any further. The ball is squarely in the court of the EM and Flint elected officials to resolve. RJD

>>

>> -----Original Message-----

>> From: Nicolette Bateson [mailto:bateson@dwsd.org]

>> Sent: Friday, February 13, 2015 6:45 PM

>> To: Robert Daddow

>> Cc: Brian Baker; Bart Foster; jfausone@fb-firm.com<mailto:jfausone@fb-firm.com>; Sue McCormick; William Wolfson

>> Subject: Re: Flint

>>

>> Hi Bob: I just saw your message. Interesting development!

>>

>> All: May I suggest a conference call to evaluate the options? I am available at any time and can send out the call-in number.

>>

>> Regards,

>>

>> Nickie

>>

>> Nicolette N. Bateson, CPA

>> Chief Financial Officer

>> Detroit Water & Sewerage Department

>> 735 Randolph, Room 1608

>> Detroit, Michigan 48226

>> Office: (313)964-9225

>> Cell: (313) [REDACTED]

>> Fax: (313) 964-9219
>> bateson@dwsd.org<mailto:bateson@dwsd.org>
>> City of Detroit
>> Mike Duggan, Mayor
>>

>> ----- Original Message -----

>> From: "Robert Daddow" <daddowr@oakgov.com<mailto:daddowr@oakgov.com>>
>> To: "Bart Foster" <bfooster@fostergrouppllc.com<mailto:bfooster@fostergrouppllc.com>>, "Nicolette Bateson"
>> <bateson@dwsd.org<mailto:bateson@dwsd.org>>, jfausone@fb-firm.com<mailto:jfausone@fb-firm.com>, "Sue
>> McCormick" <mccormick@dwsd.org<mailto:mccormick@dwsd.org>>
>> Cc: "Brian Baker" <bbaker@sterling-heights.net<mailto:bbaker@sterling-heights.net>>
>> Sent: Friday, February 13, 2015 1:53:06 PM
>> Subject: RE: Flint
>>

>> Guys – I think we can craft a win here. In talking with Rich Baird, who has been working with Flint on this matter along with Dennis Muchmore from the Governor's staff, apparently Flint is consider this but is choking a bit on the amount to be billed. While I recognize that this amount is based on the prior contract, we are in a unique position over the next two weeks or so and before the BOWC takes action on the rates, budget, CIP and other related efforts on March 11 th (formally March 4 th). The win would be solving the water problem in Flint (generally agreed that this is there issue and comes from a poor decision to remove themselves from the DWSD's quality water product), serving to reduce the

>> FY-2016 suburban water rates already now in the public by perhaps 2% to 3%, and help to tamp down the media frenzy on this matter. It also demonstrates that flow is part of the problem – DWSD adds flow, rates go down.

>>

>>

>>

>> Right now, no one wins with Flint off the system – the rates for water remain at 11% for suburban wholesale, Flint has bad water and the press for both of us continues on this matter, along with the rate media issues.

>>

>>

>>

>> Here is what I propose. Drop the monthly rate for a defined period of time – they need a 15 month period. So let's drop the rate by say \$50K monthly and make it a rate of \$800K / month, fixed. In doing so, I suspect that the 11% rate can be dropped to roughly 8.5% to 9% (subject the Foster Group's more detailed analysis) – which show the public good >> faith. Then, if they go past the 15 month time frame, we can add costs

>> on the rate at a semi-punitive approach - \$850K \$875K or more.

>>

>>

>>

>> I believe that there is a win / win here. If the proposal is not acceptable, then I'd like to hear an alternative if at all possible – particularly since th3e 11% isn't selling well in the media, given the misinformation out there in the public.

RJD

>>

>>

>>

>>

>>

>> From: Bart Foster [mailto:bfooster@fostergrouppllc.com]

>> Sent: Thursday, February 12, 2015 10:33 PM

>> To: Robert Daddow

>> Cc: Nicolette Bateson

>> Subject: Re: Flint

>>
>>
>>
>>
>> Actually, my quick take is about 8%.
>>
>>
>>
>>
>>
>> Some background:
>>
>> When Flint left, the annual revenue profile for the Water System was initially reduced by \$12.5 million, However, we immediately recalculated the rate for Genesee County (recognizing their higher demands), to effectively "claw back" about \$2 million of the reduction, so the net Flint impact is ~ \$10.5 million, or just under 2.5% of the
>> (reduced) Water System rate revenue. Assuming that same amount could be replaced, and all else being equal, the "system rate increase" could be reduced by about 3 percent, with a bit more of the reduction occurring in the suburban wholesale rate structure. Safe to say that (again, absent any other changes) the average suburban water rate increase would be closer to 8 percent compared to the current 11.1%.
>>
>>
>>
>>
>>
>> Hope this helps . . .
>>
>>
>>
>> -- Bart Foster
>> President
>> THE FOSTER GROUP
>> (913) 345-1410
>> (913) 345-1640 fax
>> (913) [REDACTED]
>> bfooster@fostergroupllc.com<mailto:bfooster@fostergroupllc.com> <mailto:bfooster@fostergroupllc.com >
>>
>>
>> Please note that the information in this message along with any attachments are intended for the exclusive use of the addressee and may contain confidential or privileged information. If you are not the intended recipient, please do not forward, copy or print the message or its attachments: notify me at the above address and delete this message and any attachments.
>> Thank you.
>>
>>
>>
>>
>>
>> On Feb 12, 2015, at 7:02 PM, Bart Foster < bfooster@fostergroupllc.com<mailto:bfooster@fostergroupllc.com> >
>> wrote:
>>
>>
>>



PDF

New Flint water consultant says city's problems can be fixed

Ron Fonger | rfonger1@mlive.com By **Ron Fonger | rfonger1@mlive.com**

on February 10, 2015 at 5:52 PM, updated February 10, 2015 at 5:53 PM

FLINT, MI -- The city's new water consultant says Flint doesn't have "problems that are not fixable" and pledged Tuesday, Feb. 10, to make recommendations for improving the quality of city water very quickly -- in about two weeks.

"Nothing you (are dealing with) hasn't been solved before," said Rob Nicholas, vice president for Veolia North America, the consultant who city officials introduced during a news conference Tuesday.

Emergency manager Jerry Ambrose said Veolia, the sole company to respond to a request for proposals issued by the city for a water consultant, will be paid \$40,000 to deliver its recommendations for Flint's water system and potentially earn more if it's asked to do additional follow-up work.

Ambrose called Veolia's job here a "limited engagement" specifically to provide an outside, expert assessment of how to avoid future boil water advisories, violations of the Safe Drinking Water Act and to lessen customer complaints about the safety, appearance, smell and taste of city water.

Veolia is the world's largest water services and technology company. Its team started work in Flint Tuesday, assessing how city water is tested and distributed, including water treatment processes and operations, laboratory testing and analysis, as well as engineering reports that detail the city's treatment and distribution systems.

Ambrose hired the company after former emergency manager Darnell Earley started work on the request for proposals last month.

Earley said in January that the city had shown "some issues managing the supply" of public water since it started to use the Flint River as city's drinking water source in April.

Until April, Flint water had been in the water transmission business, delivering water from Lake Huron, treated by the Detroit Water and Sewerage Department, to business and residential customers.

At that time, the city began treating Flint River Water for daily use for the first time in 50 years, and customers have complained about the differences in quality of the water.

David L. Gadis, also a vice president for Veolia, said his company has enough experience working with

problems, including total trihalomethanes (TTHM) in other communities, that it can bring a new perspective to problems.

Gadis said his company sees Flint as an opportunity and said the city's issues are not unlike other communities that also rely on river water, which changes with the season and weather, making it far more variable than lake water.

"When we take a look at something, we bring a worldwide knowledge to the table," Gadis said. "What Flint will get is our capability."

Both Veolia officials said Flint should have a citizen water advisory board and respond immediately to customer concerns about water that doesn't look, smell or taste right.

Although treatment of Flint River water is the first concern, Veolia officials said they won't hesitate to make suggestions about the city's planned use of raw water from Lake Huron next year or potential money-saving measures even though those are not immediate concerns.

"The immediate (objective) is to deal with Flint River water," Nicholas said. "We will look at the long-term (use of the river as a back-up water source in the future) as well as the short-term."

Flint Mayor Dayne Walling said Veolia has the capacity to help the city restore confidence in the drinking water supply.

Nicholas called TTHM "an unfortunate problem."

"You want to get it fixed as soon as you can," he said.

Flint has made progress in removing excess TTHM from water, according to water sampling results from its most recent quarterly tests but tested beyond federal limits for the disinfection byproduct at each of eight test sites in August.

TTHM levels were high enough in 2014 that the city is certain to remain in violation of the Safe Drinking Water for several more months.

Walling said the city is working "extremely hard to address its water challenges, taking steps every day to improve the quality of the water."

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Koryzno, Edward (Treasury)

From: Workman, Wayne (TREASURY)
Sent: Wednesday, February 18, 2015 10:26 AM
To: Saxton, Thomas (Treasury)
Cc: Koryzno, Edward (Treasury)
Subject: FW: Re: Flint

The City needs to answer these questions, Jerry and Al Mooney. Are you responding to Harvey?

From: Hollins, Harvey (GOV)
Sent: Wednesday, February 18, 2015 10:22 AM
To: Saxton, Thomas (Treasury); Baird, Richard (GOV); Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Re: Flint

Tom,
What are the total revenues collected from water and sewer rates for the following months: 9/14, 10/14, 11/14, 12/14?

To get a handle on the last table you sent Friday that was attached to your communication below, I attached an excel spreadsheet to help me understand this better. The yellow highlighted cell is where I need data filled in. I broke up the potential reduction (\$3m and \$8.4m) and spread them into the monthly and annual even though it sounds like the \$8.4 million for professional services is a one-time or short-term expense. The pink highlight is the % increase in rates based on the table you sent last Friday which is different from the 24% rate increase I calculated...so where did I error?

Assuming there are fixed costs in the current rates via the Flint river, what are they?

Thanks,
Harvey

From: Hollins, Harvey (GOV)
Sent: Sunday, February 15, 2015 10:46 PM
To: Saxton, Thomas (Treasury); Baird, Richard (GOV); Muchmore, Dennis (GOV)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Re: Flint

Tom,
Thanks. I'd like to get such a table out to the Flint stakeholders; however, before doing so, the table probably needs to be modified to better reflect the comparison between Flint River and DWSD.

--HH

From: Saxton, Thomas (Treasury)
Sent: Friday, February 13, 2015 8:10 PM
To: Baird, Richard (GOV); Muchmore, Dennis (GOV); Hollins, Harvey (GOV)

Cc: Workman, Wayne (TREASURY)

Subject: Re: Re: Flint

You may have already seen this (below) blurb from MLive. Also, I had a call from Jerry A. He indicated Veolia is coming to the same conclusion that it may involve tweaking of the process vs some major undertaking. We will know more next week.

I have also attached a table Wayne's & Jerry's staff put together. My sense is there is still this thought that hooking back up to DWSD is cost neutral or nearly so. Hopefully this table shows that is not the case. The info is consistent with we sent you the other day i.e., there is an estimated 30% rate impact.

FLINT, MI -- A water quality expert who has spent years working with environmentalist Erin Brockovich is expected to speak at two events in Flint Saturday, Feb. 14.

Robert W. Bowcock, founder of Integrated Resource Management, met with Mayor Dayne Walling, Councilman Wantwaz Davis and others Friday, Feb. 13.

Bowcock said earlier this week that he believes small treatment and distribution adjustments could help fix some of Flint's water quality problems. He toured the city's water treatment plant Friday. Walling declined to comment on his conversation with Bowcock, but city Councilman Eric Mays said he is anxious to hear his assessment and recommendations.

Davis said Bowcock was straightforward in giving his opinion that the city can cut back on some of the chemicals being used to treat water.

City spokesman Jason Lorenz issued a statement, saying, "The city of Flint honored a request for a tour of its water treatment plant submitted by Mr. Bowcock, as it has done with individuals and groups in the past.

"(Director of Public Works) Director Howard Croft and F-1 Licensed Treatment Operator Mike Glasgow guided the tour and answered all of Mr. Bowcock's questions. Tours of the Water Treatment Plant can be arranged by appointment for interested groups by calling 810-787-6537."

Bowcock is scheduled to join in a march for water quality through downtown Flint, which is planned to begin at 1 p.m. Saturday at Flint City Hall, 1101 S. Saginaw St., and end at The Durant.

Bowcock is also scheduled to speak at a forum at the Saints of God Church, 2200 Forest Hill Ave., Flint, from 3-4:15 p.m.

Brockovich, portrayed by Julia Roberts in a 2000 movie about her fight over the pollution of a California town, has been speaking out on Facebook about Flint's water issues for several weeks.

Today, she posted a photo of Bowcock, Davis and march organizer Melissa Mays inside the Flint water plant, saying she was "so honored this community would seek my help ... and I am glad I could send Bob to get it done."

In addition to customer complaints about the price and quality of the water, there were several boil water advisories in Flint in 2014 and the city was found in violation of the Safe Drinking Water Act for excess total trihalomethanes in the water supply last year.

The city began using the Flint River as its source of drinking water in April after 50 years of handling only the distribution of already-treated Lake Huron water purchased from the Detroit Water and Sewerage Department.

Since that time, some citizens and members of the City Council have advocated abandoning the use of the river and purchasing lake water from the Detroit until the Karegnondi Water Authority pipeline is complete.

The city and Genesee County are partners in the KWA.



From: Baird, Richard (GOV)

Sent: Thursday, February 12, 2015 11:34 PM

To: Muchmore, Dennis (GOV); Saxton, Thomas (Treasury); Workman, Wayne (TREASURY)

Subject: Fwd: Re: Flint

Sent from my Verizon Wireless 4G LTE DROID

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

From: Robert Daddow <daddowr@oakgov.com>

Date: Feb 12, 2015 11:32 PM

Subject: Re: Flint

To: "Baird, Richard (GOV)" <bairdr@michigan.gov>

Cc:

Should not have thought politically but financially in the first place. This is very doable. We need to chat. Rjd

On Feb 12, 2015, at 10:32 PM, Bart Foster <bfoster@fostergroupllc.com> wrote:

Actually, my quick take is about 8%.

Some background:

When Flint left, the annual revenue profile for the Water System was initially reduced by \$12.5 million. However, we immediately recalculated the rate for Genesee County (recognizing their higher demands), to effectively "claw back" about \$2 million of the reduction, so the net Flint

impact is ~ \$10.5 million, or just under 2.5% of the (reduced) Water System rate revenue. Assuming that same amount could be replaced, and all else being equal, the “system rate increase” could be reduced by about 3 percent, with a bit more of the reduction occurring in the suburban wholesale rate structure. Safe to say that (again, absent any other changes) the average suburban water rate increase would be closer to 8 percent compared to the current 11.1%.

Hope this helps . . .

--

Bart Foster

President

THE FOSTER GROUP

(913) 345-1410

(913) 345-1640 fax

(913) 530-6240 cell

bfoster@fostergroupllc.com <<mailto:bfoster@fostergroupllc.com>>

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Thank you.

On Feb 12, 2015, at 7:02 PM, Bart Foster <bfoster@fostergroupllc.com> wrote:

Bob - in transit but will review and reply this evening.

Sent from my iPhone

On Feb 12, 2015, at 3:44 PM, Daddow, Robert <daddowr@oakgov.com> wrote:

Nikki / Bart – don’t need a hard and fast number on this. However, it would seem to me that in a fixed cost system such as water, if Flint were to be hooked up again at the \$847K / month cited in Ms. McCormick’s January 12th memorandum and after the release of the rates yesterday, bringing Flint back would – on a marginal cost basis – serve to mitigate the wholesale (suburban) customer rate increase of 11.1% cited in yesterday’s presentation. Without going into a whole lot of detailed calculations (unless necessary), what would the impact of the inclusion of Flint starting say on July 1, 2015 (hypothetical date) be on the rate increase presently now in the public? A revised increase of what – 10.6% - looking for a high level sensitivity analysis here. Can you help? RJD

	Current Operations	
	Monthly	Annual
Water Usage MCF	71,594	859,128
Price Per MCF		
Cost of Water Usage per MCF		
Fixed Charge/Month		
Flint Incremental Cost of Treatment Plant Operation (to continue as a back-up only)	\$ 239,587.00	\$ 2,875,044.00
Flint Set aside	\$ 250,000.00	\$ 3,000,000.00
Flint Professional Services	\$ 700,000.00	\$ 8,400,000.00
Cost of Water/Month Avg.		
Rate Increase if the New Fee Collection Level to Handle DWSD Additional Cost was \$48,403,542		

DWSD Reconnect		Impact on Switch to DWSD on the FY 15 Flint Budgeted Water Revenue Set at \$37,000,000	% Rate Increase needed to adjust to DWSD Switch
Monthly	Annual		
71,594	859,128		
\$ 14.92	\$14.92		
\$ 1,068,182.48	\$ 12,818,189.76	\$ 12,818,189.76	34.64%
\$ 846,700.00	\$ 10,160,400.00	\$ 22,978,589.76	62.10%
\$ (239,587.00)	\$ (2,875,044.00)	\$ 20,103,545.76	54.33%
\$ (250,000.00)	\$ (3,000,000.00)	\$ 17,103,545.76	46.23%
\$ (700,000.00)	\$ (8,400,000.00)	\$ 8,703,545.76	23.52%
\$ 725,295.48	\$ 8,703,545.76	\$ 8,703,545.76	23.52%
		\$ 11,403,542.00	30.82%

Pleyte, Beth (Treasury)

From: Saxton, Thomas (Treasury)
Sent: Saturday, February 21, 2015 6:46 AM
To: Gerald Ambrose
Subject: Fwd: Response to City of Flint Council Member Freeman
Attachments: Flint.Councilmember Joshua M Freeman.Feb 19 2015.pdf; ATT00001.htm

fyi in case you had not already rec'd this

Begin forwarded message:

From: "Daddow, Robert" <daddowr@oakgov.com>
To: "Baird, Richard (GOV)" <bairdr@michigan.gov>, "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
Subject: FW: Response to City of Flint Council Member Freeman

FYI – just received the attached letter on Flint. RJD

From: Rechanda Willis [<mailto:willis@dwsd.org>]
Sent: Friday, February 20, 2015 3:23 PM
To: James Fausone; Robert Daddow
Subject: Response to City of Flint Council Member Freeman

Attached is copy of the response to City of Flint Council Member Joshua Freeman's February 3, 2015 letter.

Thank you

Rechanda L. Willis
Assistant to the Deputy Director/Chief Customer Service Officer
Detroit Water and Sewerage Department
735 Randolph Street - Room 506
Detroit, Michigan 48226
(313) 224-4785 (office)
(313) 224-6067 (fax)
willis@dwsd.org<<mailto:willis@dwsd.org>>

February 19, 2015

The Honorable Joshua M. Freeman, Councilmember
City of Flint, Michigan
1101 S. Saginaw Street
Flint, Michigan 48502

Dear Councilman Freeman:

Regarding: Your letter of February 3, 2015

Thank you for your letter of February 3, 2015 in which you seek additional information related to the Detroit Water and Sewerage Department's ("DWSD") offer to resume supplying drinking water to the City of Flint. Specifically, you have asked several follow-up questions related to the nature of the long-term arrangement I referenced within my letter, as well as some technical questions regarding rates and the method for reconnection in light of changes Flint has made to its system in the interim timeframe.

I will attempt to provide as much clarity as possible through this response. For starters, the rate quoted in my January 12, 2015 letter is related to the current rate year ending June 30, 2015. As new rates are adopted each year, the relative methodology as is applied to current DWSD wholesale customers would also be applied to Flint (and Genesee County) and will impact your rates, accordingly. In other words, rates will change in accordance with DWSD revenue requirements each year that Flint (and Genesee County) receives water from DWSD. That is why my prior letter only quoted a specific rate through June 30, 2015. Our Board of Water Commissioners has not yet adopted rates for the 2015-2016 rate year.

Secondly, you have asked if the rates described in the January 12, 2015 letter are exclusive to Flint or if they also would cover the Genesee County Drain Commissioner ("GCDC"). I certainly envision that the rates associated with Flint would also be available to the GCDC, as the two entities have utilized service pursuant to a single contractual arrangement in the past. To that end, DWSD is open to the possibility for a contract to be entered into by either Flint or GCDC on behalf of both customers, depending on the intricacies of the connections that you referenced with respect to Flint's recent sale of pipeline to GCDC. As noted previously, entering into a contract is not required to reinstitute service to Flint during the current emergency situation, in anticipation of further discussions toward a future service relationship.

Additionally, you have asked about short-term as compared to a long-term contractual relationship in light of Flint and GCDC's combined intent to utilize KWA for long-term service as early as 2016. DWSD operates pursuant to long-term contracts with its customers. As you may be aware, our model contracts are for a period of thirty years.



Councilmember Joshua M. Freeman
City of Flint
February 19, 2015
Page 2

However, in light of the work already done by Flint and GCDC in preparation to receive raw water from KWA, DWSD is open to exploring a long-term contractual arrangement in which DWSD provides full service to Flint (and GCDC) until such time as KWA is operational, and then a back-up service arrangement, thereafter. The specific terms of that back-up service arrangement would require some further negotiation, but I would assume that such an arrangement would be mutually beneficial in light of the concerns with utilization of the Flint River as a primary or secondary water source.

You have also asked a technical question about the steps necessary in order for Flint to convert back to DWSD for receipt of water service. While I agree that it is not as simple as flipping a switch, I do not believe that this conversion would be a significant obstacle for Flint and GCDC to overcome. In fact, there should not be any actions required of DWSD in order to resume service, since we are currently providing full service to GCDC through the GN-01 meter (formerly the FL-01 meter).

Finally, you have asked if the anticipated assumption of DWSD's wholesale operations by the Great Lakes Water Authority ("GLWA") will impact the proposal that has been made. In short, the answer to your question is that it would not, depending on the timing of the signing of a new contract between the parties. Under the terms of the GLWA Memorandum of Understanding and Articles of Incorporation, it is envisioned that the GLWA would assume all wholesale contracts of DWSD. Therefore, the GLWA would be bound by the contractual terms that are agreed upon between DWSD and the City of Flint and/or GCDC. Nevertheless, as the GLWA Board has now been seated and has a regular schedule of meetings, I would certainly anticipate advising the GLWA Board of the terms of any proposed contract between the parties, and to seek their input or listen to any concerns or suggestions that they might have. In any event, resumption of service in the short term to address Flint's current needs, remains available immediately under existing published rates, and requires no action by either Board.

I look forward to the continued discussions, and hope that there is a viable solution that can be reached for the benefit of all parties.

Sincerely yours,

Sue F. McCormick
Director, Detroit Water and Sewerage Department
Interim CEO, Great Lakes Water Authority

Cc: The Honorable Dayne Walling, Mayor, City of Flint
Gerald Ambrose, Emergency Manager, City of Flint
Flint City Council
The Honorable Michael E. Duggan, Mayor, City of Detroit
Mr. Jim Fausone, Chairman, Board of Water Commissioners
Mr. Robert Daddow, Chairman, Great Lakes Water Authority

Pleyte, Beth (Treasury)

From: Gerald Ambrose <gambrose@cityofflint.com>
Sent: Saturday, February 21, 2015 8:31 AM
To: Saxton, Thomas (Treasury)
Subject: Re: Fwd: Response to City of Flint Council Member Freeman

Thanks, Tom, I did receive a copy. What I see is confirmation that we could rejoin on a short term basis on the financial terms outlined in the original letter while we (or presumably KWA) attempts to negotiate a long term back up agreement. And the quoted rates are only good til July 1, at which time (from the media I read) they will increase. Am I missing something?

Rejoining on a short term basis would increase Flint's costs by at least \$1 million a month....not possible without a significant rate increase (more than 25%) or a monthly gift of that amount from somewhere.

Does someone really want Flint rate payers to send \$1 million per month to DWSD or GLWA when our water supply is (by our internal testing today) within EPA/MDEQ guidelines and we are taking steps every day to improve water quality?

J

On Feb 21, 2015 6:47 AM, "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov> wrote:
fyi in case you had not already rec'd this

Begin forwarded message:

From: "Daddow, Robert" <daddowr@oakgov.com>
To: "Baird, Richard (GOV)" <bairdr@michigan.gov>, "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov>
Subject: FW: Response to City of Flint Council Member Freeman

FYI – just received the attached letter on Flint. RJD

From: Rechanda Willis [<mailto:willis@dwsd.org>]
Sent: Friday, February 20, 2015 3:23 PM
To: James Fausone; Robert Daddow
Subject: Response to City of Flint Council Member Freeman

Attached is copy of the response to City of Flint Council Member Joshua Freeman's February 3, 2015 letter.

Thank you

Rechanda L. Willis
Assistant to the Deputy Director/Chief Customer Service Officer
Detroit Water and Sewerage Department
735 Randolph Street - Room 506
Detroit, Michigan 48226

Pleyte, Beth (Treasury)

From: Gerald Ambrose <gambrose@cityofflint.com>
Sent: Sunday, February 22, 2015 9:23 AM
To: Saxton, Thomas (Treasury)
Cc: Workman, Wayne (TREASURY)
Subject: Re: Response to City of Flint Council Member Freeman

Will do.

On Feb 22, 2015 8:14 AM, "Saxton, Thomas (Treasury)" <SaxtonT@michigan.gov> wrote:
hopefully this will settle down a bit at some point. Anything you can do to share any metrics on this periodically would be helpful... e.g., call volume re any complaints, number of contacts where you go to the residences for those complaints, # of quality tests/ results, specific dates as to when you will be replacing that 2 mile section, updates on progress of KWA, etc etc.

On Feb 21, 2015, at 8:31 AM, "Gerald Ambrose" <gambrose@cityofflint.com> wrote:

Thanks, Tom, I did receive a copy. What I see is confirmation that we could rejoin on a short term basis on the financial terms outlined in the original letter while we (or presumably KWA) attempts to negotiate a long term back up agreement. And the quoted rates are only good til July 1, at which time (from the media I read) they will increase. Am I missing something?

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Subject: FW: Response to City of Flint Council Member Freeman

FYI – just received the attached letter on Flint. RJD

From: Rechanda Willis [<mailto:willis@dwsd.org>]

Koryzno, Edward (Treasury)

From: Hollins, Harvey (GOV)
Sent: Thursday, February 26, 2015 11:29 AM
To: Workman, Wayne (TREASURY); Muchmore, Dennis (GOV); Baird, Richard (GOV)
Cc: Koryzno, Edward (Treasury); Saxton, Thomas (Treasury)
Subject: RE: Flint Water

Thank you.

From: Workman, Wayne (TREASURY)
Sent: Thursday, February 26, 2015 8:31 AM
To: Hollins, Harvey (GOV); Muchmore, Dennis (GOV); Baird, Richard (GOV)
Cc: Koryzno, Edward (Treasury); Saxton, Thomas (Treasury)
Subject: Flint Water

Harvey, Wanted to let you know I did get in touch with Jerry Ambrose last night and the City will be working on a side by side comparison of KWA vs DWSD and a simple explanation of the current finances of the water system. Hope the attachments Ed Koryzno sent again are helpful. One was the list of members in the new Water Advisory Committee and the second was the interim report from Veiola. Wayne

Koryzno, Edward (Treasury)

From: Koryzno, Edward (Treasury)
Sent: Friday, February 27, 2015 3:50 PM
To: Widigan, Robert (TREASURY); Byrne, Randall (Treasury)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Flint Water committee

Thanks!



Edward B. Koryzno, Jr. | Director - Bureau of Local Government Services
State of Michigan | 430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
(517) 373-4415 | (517) 373-0633 (fax)
KoryznoE@michigan.gov



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Thank you

From: Widigan, Robert (TREASURY)
Sent: Friday, February 27, 2015 3:48 PM
To: Koryzno, Edward (Treasury); Byrne, Randall (Treasury)
Cc: Workman, Wayne (TREASURY)
Subject: RE: Flint Water committee

All,

I was able to reach Liz Murphy; she said the water advisory committee will meet Thursday, March 5 from 2-4 PM in the Mass Transportation Authority auditorium, 1407 South Dort Highway. Flint, MI.

I will discuss the details with Randy.

Regards,

Robert Widigan | Office of Fiscal Responsibility
State of Michigan | Department of Treasury
430 W. Allegan Street | Lansing, MI 48922
Office (517) 335-2130 | Cell (517) 243-8645 | WidiganR@michigan.gov

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From: Koryzno, Edward (Treasury)
Sent: Friday, February 27, 2015 3:43 PM

To: Byrne, Randall (Treasury); Widigan, Robert (TREASURY)
Cc: Workman, Wayne (TREASURY)
Subject: Flint Water committee

Please contact Jerry Ambrose to obtain the details of this meeting which is scheduled to take place next week.

Wayne wants a someone from OFR to attend and "take notes".

You two can decide which one of you will attend.



Edward B. Koryzno, Jr. | Director - Bureau of Local Government Services
State of Michigan | 430 W. Allegan Street, 3rd Floor | Lansing, MI 48922
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KoryznoE@michigan.gov



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Thank you

February 27, 2015

To: Wayne Workman,

From: Jerry Ambrose, Emergency Manager, City of Flint

As the Emergency Manager for the City of Flint, I am charged with restoring the City government to financial solvency, and working to assure that the City moves forward on a financially sustainable basis. The steps taken over the past three years have been difficult. Taxes and fees have been raised, services and workforce reduced, and ongoing costs, including legacy costs, have been constrained.

The current controversy surrounding the provision of water, and the path for resolution, has a potentially significant impact on the progress that is being made. I am satisfied that the water provided to Flint users today is within all MDEQ and EPA guidelines, as evidenced by the most recent water quality results conducted for MDEQ. We have a continuing commitment to maintaining water safety and to improve water quality, and have dedicated resources to assure this commitment will be made.

The oft-repeated suggestion that the City should return to DWSD, even for a short period of time, would, in my judgment, have extremely negative financial consequences to the water system, and consequently to the rate payers. By the most conservative estimates, such a move would increase costs by at least \$12 million annually, with that amount achieved only by eliminating virtually all budgeted improvements in the system. For a system with Unrestricted Assets of only \$740,745, according to the June 30, 2014 audited financial statements, the only recourse within the City's control would be to raise rates. And in my judgment, such a rate increase would minimally be in the 30% range.

This direction of discussion also deviates from what, in my judgment, should be the focus: How can we not only operate and maintain a system to assure the delivery of safe and quality water dependably, but significantly reduce the cost of water and sewer to the users? At an average of \$149 per month for a residential user, the cost for this service is extremely high in comparison to surrounding areas, as well as most areas across the state, and creates a significant financial burden for many users. In my judgment, we should all be concentrating on how to reduce rates by 50% or more! Unfortunately, there are no easy or evident answers, and continuation of the status will be an impediment to the sustainable recovery of the City of Flint. It is a conversation that we will have with the recently created Water Quality Advisory Committee.

My reasoning for this conclusion is as follows:

One of the decisions made in the context of beginning to eliminate deficits and to restore financial stability to the City of Flint was to increase water and sewer rates significantly – the only choice available to financially stabilize a system that as of June 30, 2012, had a deficit of \$8,758,091. Another was to leave DWDS for the KWA because it offered the opportunity to lower future rate increases. A third decision was to utilize the Flint River on an interim basis when DWSD unilaterally terminated the City's contract for water purchase. That decision was made because it also offered an immediate cost savings opportunity which translated into the ability to upgrade the Water Treatment Plant without having to seek financing. It was a reasonable decision because of our experience in using the river in a back-up capacity, including test runs on a quarterly basis for several decades.

Unfortunately, the switch to the river as a primary source was more challenging than anticipated, and the harsh winter of 2013-2014 resulted in much more damage to the aging water infrastructure than in previous years. The result was the issuance of required notices that water exceeded established guidelines for safety as it could affect certain vulnerable populations, and some users of the system experienced unpleasant odors and discoloration. Some users appeared to have had some negative reactions to the new source of water. However, as soon as the test results were known, City staff took immediate actions to address the concerns. These actions are evidenced today by the fact that MDEQ has certified that our most recent testing shows water from all testing sites to be within acceptable guidelines. Additionally, the City is continuing to taking the necessary actions to assure that the water supply remains safe and that water quality continues to improve.

As the City has moved to address the situation, the suggestion has been made that the City should re-engage with DWSD and purchase water at least until the KWA pipeline is supplying water. As evidenced by the most recent letter from DWSD, such a decision would immediately increase the City's cost by \$846,700 per month, or \$10,160,400 per year, just for the fixed cost portion of the price. The actual purchase of water would be in addition, and dependent upon the quantity purchased. We estimate the actual water purchase cost to average more than \$1 million per month, for a grand total of approximately \$22 million. Finally, the DWSD offer is conditioned upon the City (or presumable its partners in KWA) agreeing to negotiate a long term contract (30 years) for back-up.

The \$22 million annual estimate of increased costs to purchase water from DWSD would be minimally offset by an approximate \$3 million in reduced operating costs, and could be further offset by an additional \$9 million, but only if all funding for capital improvements to the system are eliminated. To eliminate all funding dedicated to repairing, stabilizing, and improving the system would be totally irresponsible and would have long term negative consequences to the City and to future rate payers.

As you are aware we have recently brought in outside expert assistance to evaluate the steps we have taken to assure that the water is safe and to continue to improve water quality. We are expecting specific recommendations within the next few weeks, and are committed to implementing those recommendations in a timely manner. Many steps have already been taken. I am confident that implementing their recommendations will assure a continuing supply of safe water as well as improved quality, and at far less cost than re-engaging DWSD.

We have also created a 40 member Water Advisory Committee and a 15 member Technical Advisory Committee to assure two-way communication with the public and users of the system. Those committees will begin to meet within the next week, and we look forward to answering their questions and receiving their input.

It is unfortunate that problems and concerns with quality have arisen, and we are working every day to address the issues created them. Maintaining safe water and improving quality is a top priority as we work to make the City of Flint an attractive place to live, work, study, and play.

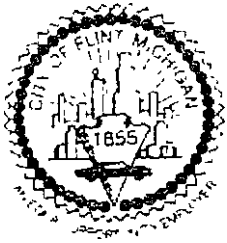
Byrne, Randall (Treasury)

From: Widigan, Robert (TREASURY)
Sent: Friday, February 27, 2015 4:56 PM
To: Byrne, Randall (Treasury); Cline, Richard (Treasury); Dube, Mathieu (Treasury); Vandegrift, Drew (TREASURY)
Subject: Mayor Walling's Letter to White House
Attachments: Mayor Walling letter to White House.pdf

FYI, attached is the Mayor's letter to the White House requesting support from the White House to address the ongoing water issues in Flint.

Robert Widigan | Office of Fiscal Responsibility
State of Michigan | Department of Treasury
430 W. Allegan Street | Lansing, MI 48922
Office (517) 335-2130 | Cell (517) 243-8645 | WidiganR@michigan.gov

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CITY OF FLINT

Dayne Walling
Mayor

Mr. Jerry Abramson
White House, Executive Office of the President
Director of Intergovernmental Affairs
1600 Pennsylvania Ave. NW
Washington, DC 20500

February 23, 2015

Dear Mr. Abramson

I am writing to request the support of the White House for improving the City of Flint's water quality and infrastructure. The President, Vice-President and White House have been highly engaged in seeking solutions for Flint challenges around public safety, neighborhood stabilization and economic development. We are very thankful for President Obama's leadership and dedicated support being provided through the Sustainable Communities, Choice Neighborhoods, Justice Innovation, and Strong Cities Strong Communities Initiatives.

Now residents are most concerned about the safety and quality of the drinking water that is being treated from the Flint River. This is my top priority and work is being done every day to secure drinking water that is 100% safe according to the standards. As with other challenges, it is essential that we have a coordinated effort among Local, State and Federal agencies. To this end, I am requesting participation from the White House and Environmental Protection Agency on a City of Flint Technical Advisory Water Committee. The committee is expected to meet regularly through the transition to the new Karegnondi Water Pipeline and will include governmental, hospital, university and business sectors.

I welcome any technical assistance you are able to coordinate including expertise on water quality and public health, best practices with water treatment, and improving distribution system infrastructure. Thank you again for the valuable partnership. I look forward to working with you and Federal partners as we transform Flint into a sustainable 21st Century city with new jobs, safe neighborhoods, strong infrastructure and great schools.

Sincerely,



Dayne Walling
Mayor, City of Flint

CC: Mark Linton, Director, Strong Cities Strong Communities, White House Domestic Policy Council
Dr. Susan Hedman, Great Lakes Regional Administrator, U.S. Environmental Protection Agency
Mark Rupp, Deputy Associate Administrator for Intergovernmental Relations, U.S. EPA
U.S. Congressman Daniel T. Kildee
Paul Joice, Strong Cities Strong Communities, U.S. Department of Housing and Development

Stanton, Terry A. (Treasury)

From: Workman, Wayne (TREASURY)
Sent: Friday, February 27, 2015 6:04 PM
To: Muchmore, Dennis (GOV)
Cc: Clement, Elizabeth (GOV); Hollins, Harvey (GOV); Saxton, Thomas (Treasury); Stanton, Terry A. (Treasury); Storberg, Ann Marie (TREASURY)
Subject: Re: PRESS RELEASE: Recent Tests Show Flint Water within EPA Guidelines

Dont know but i would drink it

Sent from my iPhone

On Feb 27, 2015, at 6:02 PM, Muchmore, Dennis (GOV) <muchmored@michigan.gov> wrote:

Does it still smell?

From: Workman, Wayne (TREASURY)
Sent: Friday, February 27, 2015 5:15 PM
To: Muchmore, Dennis (GOV); Clement, Elizabeth (GOV); Hollins, Harvey (GOV); Saxton, Thomas (Treasury); Stanton, Terry A. (Treasury); Storberg, Ann Marie (TREASURY)
Subject: Fwd: PRESS RELEASE: Recent Tests Show Flint Water within EPA Guidelines

In case you did not see this. Will be reviewing Water System info over the weekend. Maybe something Monday, Tuesday latest. I need to edit also. Wayne

Sent from my iPhone

Begin forwarded message:

From: Jason Lorenz <jlorenz@cityofflint.com>
Date: February 27, 2015 at 4:29:04 PM EST
To: Jason Lorenz <jlorenz@cityofflint.com>
Subject: Re: PRESS RELEASE: Recent Tests Show Flint Water within EPA Guidelines

Attached is the release with the proper date.

For Immediate Release

Recent Tests Show Flint Water within EPA Guidelines

Flint, Michigan – February 27, 2015 – The Michigan Department of Environmental Quality (MDEQ) Testing lab has provided results to the City of Flint showing that

Gerald Ambrose
Emergency Manager



Dayne Walling
Mayor

Jason Lorenz
Public Information Officer
(810) 237-2039
jlorenz@cityofflint.com

For Immediate Release

Recent Tests Show Flint Water within EPA Guidelines

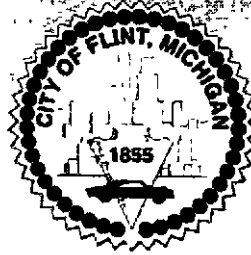
Flint, Michigan – February 27, 2015 – The Michigan Department of Environmental Quality (MDEQ) Testing lab has provided results to the City of Flint showing that test results for TTHM levels for the month of February are well within EPA guidelines for safe water. All eight testing sites showed levels of TTHM ranging between 14.9 and 28.5 micrograms per liter (µg/L), well below the Maximum Contamination Level of 80 (see chart below).

The testing results confirm the progress made by the City to address concerns regarding the safety of its water supply and corroborates findings by the City and independent tests by other organizations that the water today is safe. "Flint's water supply is meeting all safety guidelines set forth by the EPA," said DPW Director Howard Croft. "Today's findings by the MDEQ reinforce the progress we have made, and should help rebuild confidence in the safety of Flint's drinking water. We still have work to do to improve water quality and are committed to being vigilant to assure that water safety is maintained."

These results also show that the four month average for test results is now within EPA guidelines for five of the eight testing areas in the City. However, because EPA regulations require that the four month average for all testing sites be within guidelines, the City of Flint will still be considered to be out of compliance by MDEQ. The City expects to receive notice within the next few weeks indicating non-compliance, and system users can expect to receive official notice of non-compliance in the month of March.

–CONTINUE–

Gerald Ambrose
Emergency Manager



Dayne Walling
Mayor

Meanwhile, the City continues to work on maintaining water safety and improving water quality. While steps are being taken daily to improve quality, the City is expecting a formal set of recommendations from its water quality experts within the next few weeks.

The detail of the study results, a report of the progress being made and preliminary recommendations from Veolia will be shared with the newly formed Water Advisory Committee and Water Technical Committee, whose first meetings are scheduled for next week.

Areas in blue (under February) indicate current levels:

DISINFECTION BY-PRODUCTS - DEQ Required Testing
MCL for TTHM = 80 ug/L MCL for HAA5 = 60 ug/L

	May-14		Aug-14		Nov-14		Feb-15		1RAA		MAX	MIN
	TTHM	HAA5	TTHM	HAA5	TTHM	HAA5	TTHM	HAA5	TTHM	HAA5	TTHM	TTHM
Water Plant Tap	56	36	86	36	33	36		36	58.3	36.0	86.0	33.0
	*Once Yearly (June 2014)		*Once Yearly (June 2014)		*Once Yearly (June 2014)		*Once Yearly (June 2014)		*Once Yearly (June 2014)			
Site # 1	162.4	64.0	145.3	49.0	58.6	16.0	16.2	9.0	95.6	39.0	162.4	16.2
Site # 2	111.6	52.0	112.0	40.0	96.2	21.0	19.9	9.0	69.9	30.5	112.0	19.9
Site # 3	96.5	48.0	127.2	31.0	33.3	15.0	16.8	9.0	68.5	25.8	127.2	16.8
Site # 4	106.4	55.0	181.3	24.0	33.9	15.0	18.1	9.0	84.9	25.8	181.3	18.1
Site # 5	75.1	38.0	196.2	11.0	93.6	24.0	24.5	9.0	97.4	20.5	196.2	24.5
Site # 6	82.2	41.0	112.4	25.0	50.1	5.0	28.5	2.0	68.3	18.3	112.4	28.5
Site # 7	88.2	49.0	144.4	30.0	53.6	17.0	19.2	9.0	76.4	26.3	144.4	19.2
Site # 8	79.2	50.0	118.3	37.0	41.1	18.0	14.9	9.0	63.4	28.5	118.3	14.9

*Sampled at end of Oct.

—END—

DISINFECTION BY-PRODUCTS - DEQ Required Testing

MCL for TTHM = 80 ug/L MCL for HAA5 = 60 ug/L

Water Plant Tap

	May-14		Aug-14		Nov-14		Feb-15	
	TTHM	HAA5	TTHM	HAA5	TTHM	HAA5	TTHM	HAA5
Site # 1	56	36	86	36	33	36		36
Site # 2	*Once Yearly (June 2014)		*Once Yearly (June 2014)		*Once Yearly (June 2014)		*Once Yearly (June 2014)	
Site # 3	162.4	64.0	145.3	43.0	58.6	16.0	16.2	9.0
Site # 4	111.6	52.0	112.0	40.0	36.2	21.0	19.9	9.0
Site # 5	96.5	48.0	127.2	31.0	33.3	15.0	16.8	9.0
Site # 6	106.4	55.0	181.3	24.0	33.9	15.0	18.1	9.0
Site # 7	75.1	38.0	196.2	11.0	93.6	24.0	24.5	9.0
Site # 8	82.2	41.0	112.4	25.0	50.1	5.0	28.5	2.0
	88.2	49.0	144.4	30.0	53.6	17.0	19.2	9.0
	79.2	50.0	118.3	37.0	41.1	18.0	14.9	9.0

*Sampled at end of Oct.

LRAA	
TTHM	HAA5
58.3	36.0
*Once Yearly (June 2014)	
95.6	33.0
69.9	30.5
68.5	25.8
84.9	25.8
97.4	20.5
68.3	18.3
76.4	26.3
63.4	28.5

MAX TTHM	MIN TTHM
86.0	33.0
162.4	16.2
112.0	19.9
127.2	16.8
181.3	18.1
196.2	24.5
112.4	28.5
144.4	19.2
118.3	14.9

Total Organic Carbon (mg)

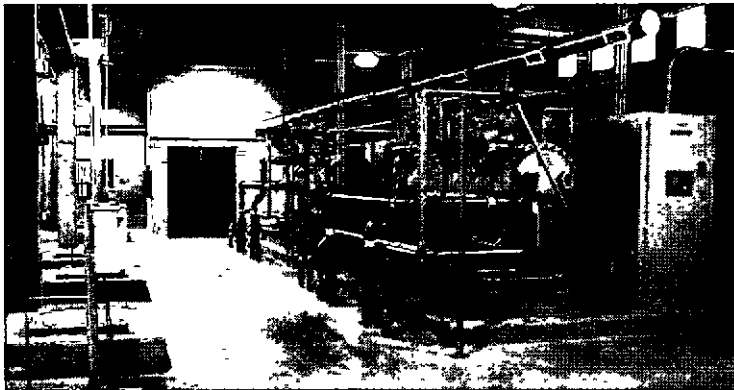
	Raw	Final
May	10.30	4.57
June	9.00	3.63
July	8.44	2.67
August	8.48	4.06
Sept	7.36	3.30
Oct	7.38	2.99
Nov	7.27	3.86
Dec	6.49	2.59
Jan	7.62	3.21
Feb	5.95	2.07

Operational Evaluation Report City of Flint



Trihalomethane Formation Concern

February 27, 2015



Lockwood, Andrews
& Newnam, Inc.
A LEO A DALY COMPANY



EXECUTIVE SUMMARY

Environmental Protection Agency (EPA) and Michigan Department of Environmental Quality (MDEQ) regulations require that public water suppliers test drinking water quarterly throughout the distribution system for disinfectant by-products (DBP's). Two categories of DBP's, tri-halomethanes (THM) and halo-acetic acids (HAA5), are regulated and must be tested for. The City of Flint began operation of their water treatment plant (WTP) full time with the Flint River as the source on April 25, 2014. Since that time, four quarters of samples taken have resulted in an annual average violation for total THM. Prior to the first violation (Nov. 2014), the City hired Lockwood, Andrews & Newnam, Inc. (LAN) to complete this Operational Evaluation Report (OER) in conformance with EPA guidelines with the goal to determine the cause(s) of high levels of THM and evaluate possible solutions.

The EPA promulgated the Stage 2 Disinfectants and Disinfection By-Products Rule (DBPR) in January 2006 which set maximum contaminant levels (MCLs) for total trihalomethanes (TTHM) and HAA5 based on an annual running average, tested quarterly, for a given sampling location. The City of Flint reports levels from 8 sampling test locations. Of the four quarterly sampling cycles since Flint began operating the WTP full time, HAA5 levels have been acceptable but TTHM levels were high at 4 sampling sites following the third sampling cycle. Average THM levels exceeded the MCL at 3 sites following the fourth sampling cycle.

A number of issues have been identified as possibly contributing to the high THM levels measured.

1. Inefficient ozone system functionality which has resulted in increased chlorine feed.
2. Upstream source influences in terms of increased chlorine demand.
3. Bypass stream around softening contributed to chlorine demand and increased total organic carbon (TOC) levels in the effluent.
4. Unlined cast iron pipes in the distribution system contributing to chlorine demand.
5. High water age in the distribution system due to:
 - a. Broken valves causing less than ideal flow patterns.
 - b. Inefficient pump station pressure zones
 - c. *Water storage volumes in excess of that needed for today's demands*
 - d. Oversized water mains
 - e. Low water demands
6. High chlorine demand in filters.
7. High THM formation potential (THMFP) in source water.
8. Less than optimal removal of THM precursors

A graphical representation of how the factors above relate to the timing of THM compliance sampling is shown as Table 1. Compliance sampling dates are hatched. Each row in Table 1 describes a factor that can lead to increased THM levels and the table defines when each of those factors applied. Note the convergence of nearly all factors around the second sampling period on August 21, 2014 to create what appears to be a worst case scenario. The table also shows that the factors listed as those that the City can control have been addressed prior to the February sampling period. Monthly operating report data up to February 1, 2015 is depicted on the Table.



TABLE 1 - SUMMARY OF NEGATIVE INFLUENCES ON THM COMPLIANCE SAMPLING

FACTOR	2014								2015		
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	
Softening bypass stream over 20% of plant flow											
Ozone system not feeding optimally											
Using full water storage capacity of WSR & CSR											
Chlorine feed at WTP 7.0 mg/l or more											
Ferric chloride feed rate less than 10 mg/l Fe3+											
Raw water temp 23 degrees C or more											
Raw water TOC levels above 8.0 mg/l											
Raw water coliform over 5000 counts/day											
Positive bacteria test in dist. system (boil water notice)											
Water demand less than 15 mgd											

Dates of occurrence

Dates of occurrence and expected to repeat in future years

Compliance sampling date

Factors under Flint staff control

Flint River characteristics

System factors



ACTION PLAN

The City of Flint has signed an agreement with the Karegnondi Water Authority (KWA) to purchase raw water drawn from Lake Huron. The KWA system is currently under construction and expected to be operational by late 2016. The water supply from Lake Huron will have entirely different water quality characteristics from the Flint River and those characteristics are expected to yield drastically reduced DPB formation. With that, non-structural options to help reduce THM levels are much preferred over solutions requiring new construction. Therefore, two categories of actions have been devised: Stage 1 being actions that can be completed relatively quickly without major construction and Stage 2 consisting of either long term actions or solutions requiring major construction. The City is actively working to complete Stage 1 actions as soon as possible. Stage 2 actions are to be implemented only if Stage 1 actions are ineffective in adequately reducing TTHM levels and therefore Stage 2 is contingent upon the outcome of Stage 1. As of the date of this report, status updates for action items are shown in red.

Stage 1 – Immediate Actions

- Hire third party water quality expert to complete independent 'water audit'
 - The City hired Veolia Water to review all water quality related operations, procedures, actions taken and planned responses. Recommendations from Veolia are expected by the first week in March 2015.
- Obtain an in house THM analyzer to allow regular operational monitoring of THM levels
 - THM analyzer was installed 2/17/15.
- Hire ozone system manufacturer to troubleshoot ozone system
 - Manufacturer and controls programmers performed on site evaluations in January 2015.
- Bench scale jar testing
 - Match existing process and assess possible areas of improvement
 - Existing process was simulated and an evaluation of existing chemical feed dosages has been completed by LAN.
 - Existing process TOC profile was developed by Veolia.
 - Simulate potential modifications to treatment process
 - Soda ash softening evaluation completed and PAC feed testing completed by LAN.
 - Evaluate coagulation and flocculation polymer aid feeds to assist with TOC removal
 - Evaluations of polymer aids completed by LAN and PVS Technologies.
- WTP operational changes
 - Discontinue softening bypass stream to reduce chlorine demand
 - Operational directive has been set to soften no less than 80% of flow.
 - Disinfection of filter beds to reduce chlorine demand
 - Utility Service Group contracted by City and condition assessment completed. Controls improvements have been completed.
 - Begin coagulation and flocculation polymer aid feeds to assist with TOC removal if bench scale test results are positive
 - Jar testing completed to date has not indicated a useful benefit to feeding coagulation/flocculation polymer aids. Increased ferric doses have been implemented at the WTP based on positive jar test results.



- Increase water main flushing efforts to minimize stagnant water
 - Flushing efforts are ongoing as weather permits.
- Water system modeling to identify areas with high water age and potential solutions
 - The water model has been improved and preliminary results, including system wide water age, have been produced. Water demand updates and reconciliation with operator's data are scheduled for March 2015 to complete water modeling analysis.
 - Cedar Street Pump Station potential recirculation
 - Water model analysis to be completed in March 2015.
 - West Side Pump Station potential recirculation
 - Water model analysis to be completed in March 2015.
 - Storage tank volume use
 - Operating levels of West Side and Cedar Street reservoirs have been lowered to reduce water age
 - Possible broken closed valve locations
 - Model has been updated with known broken valve locations. Model results are being evaluated for indications of other possible broken valves. City has also initiated valve assessment program.
 - Locations in need of flushing
 - High water age areas have been identified in the water model. Further evaluation forthcoming to determine most effective flushing points.

Stage 2 – Contingent Actions

- Fix ozone system
 - Repairs have been made to gauges and programming and the system is producing proper ozone and functioning under manual operation. Further minor repairs are planned for the 1st quarter 2015 to allow automatic operation.
- Start feeding coagulation and flocculation polymer aids to lower TOC, if not completed in Stage 1
 - Polymers evaluated by LAN did not demonstrate notable benefit.
 - PVS Technologies evaluated a proprietary polymer that showed little benefit.
- Convert to lime and soda ash softening
 - Cost effective analysis to be developed, if necessary, based on routine operation THM level monitoring.
- Change disinfectant to chloramine or chlorine dioxide until KWA
 - Cost effective analysis to be developed, if necessary, based on routine operation THM level monitoring.
- Install pre-oxidant feed at intake to optimize ozone disinfection
 - Permanganate feed at intake was evaluated by Veolia the week of 2/16/15 and recommendations are expected by the first week in March 2015.
- Replace filter media with granular activated carbon (GAC) media
 - Cost effective analysis to be developed, if necessary, based on routine operation THM level monitoring.
- Implement advanced treatment for THM precursor removal
 - Cost effective analysis to be developed, if necessary, based on routine operation THM level monitoring.
- Increased main flushing based on water modeling results
 - Water model analysis to be completed in March 2015.



- Continue valve replacements with water model assistance
 - Water model analysis to be completed in March 2015.
- Emphasize cast iron pipes on water main replacement priority list
 - Flint has bid replacement of over 2 miles of 24" cast iron pipe along Dupont and Bishop Streets to be completed this coming construction season. The water main section is considered a critical transmission main, and is expected to contribute to decreases in water age when complete

THM samples have been taken and tested 5 times since the City began using the Flint River for supply. Four sets of samples were taken for official regulatory compliance and one set of samples was taken by the City for operational monitoring. Samples were taken in May 2014, August 2014, November 2014, January 2015, and February 2015. THM levels at all sample sites have declined from August 2014 to February 2015. The average of all sample sites in August was 142.1 ug/l and the most recent average of samples taken in February 2015 was 19.8 ug/l. The MCL defined by the EPA is 80 ug/l.



I. BACKGROUND

The City of Detroit Water and Sewer Department (DWSD) has historically provided drinking water for the City of Flint and Genesee County. In the late 1990's growing concern regarding the reliability of the DWSD supply prompted the City of Flint to upgrade their existing water treatment plant (WTP). Those improvements, defined as Phase I, were completed in 2005 and were intended to allow the Flint WTP to operate, using the Flint River as the source, for an extended period of time in the event that supply from the DWSD was temporarily interrupted. Additionally, the Phase I improvements set the stage for Flint to break free from dependence on the DWSD supply and water charges over which they had no control.

A. WATER SUPPLY TRANSITION

1. Detroit Water and Sewer Department (DWSD)

Until recently the Genesee County and Flint region had been provided drinking water by the DWSD. However, due to excessive cost increases and reliability issues with the DWSD system other options had to be explored.

2. Karegnondi Water Authority (KWA)

In 2010 the Karegnondi Water Authority (KWA) was formed for the purpose of developing a new water supply from Lake Huron to serve the region in lieu of the DWSD supply and the City of Flint elected to join. The KWA expects the new system which is currently being constructed to become operational by the fall of 2016.

3. Flint River – Interim Period

With a renewing water supply agreement between Flint and the DWSD being terminated by the DWSD (effective April 30, 2014) and the KWA system not expected to be operational until late 2016, the City of Flint decided to initiate operation of the existing WTP full time utilizing the Flint River as the interim water source. A variety of WTP improvements were necessary for the Flint plant to become a full time plant. For purposes of this report, Phase II improvements to the Flint WTP are improvements intended to allow the plant to operate full time with either the Flint River as the source or the KWA supply as the source.

B. TTHM VIOLATIONS

The EPA and MDEQ method of determining if TTHM sample results exceed the MCL uses a locational running annual average (LRAA). Flint's first TTHM violation was cited by the MDEQ following the third cycle of sampling completed in November 2014. Of the 8 sampling sites, 4 were in violation. At that time the MDEQ used the following calculation for determining if the MCL had been violated:

$$(2 \times \text{current quarter value} + \text{previous 2 quarter values}) / 4 = \text{Operational Evaluation Value}$$

Flint has now completed tests for 4 quarters and a straight annual running average applies. Based on samples taken on February 17, 2015 the number of sites in violation of the THM MCL limit has decreased to three. The City also conducted a round of sampling on January 27, 2015 in order to internally monitor the progress of actions taken to address the THM issue. It is worth noting that each round of sampling since August of 2014 has indicated a significant drop (improvement) in THM levels. Test results are tabulated in Table 2. HAA5 sample results are shown in Table 3, of which Flint has had no violations.



TABLE 2 – TTHM TEST RESULTS (ug/L)

Sample Location	1st Qrt 5/21/14	2nd Qrt 8/21/14	3rd Qrt 11/21/14	Inter. 1/27/15	4th Qrt 2/17/15	LRAA
WTP Tap	56	86	33	16	-	na
1) 3719 Davison McDonalds	162.4	145.3	58.6	35	16.2	95.6
2) 822 S. Dort Hwy BP Gas Sta.	111.6	112.0	36.2	23	19.9	69.9
3) 3302 S. Dort Hwy Liquor Palace	96.5	127.2	33.3	23	16.8	68.5
4) 3606 Corunna Taco Bell	106.4	181.3	33.9	24	18.1	84.9
5) 2501 Flushing Univ. Market	75.1	196.2	93.6	35	24.5	97.4
6) 3216 MLK Salem Housing	82.2	112.4	50.1	33	28.5	68.3
7) 5018 Clio Rite Aid	88.2	144.4	53.6	29	19.2	76.4
8) 6204 N. Saginaw N. Flint Auto	79.2	118.3	41.1	21	14.9	63.4

TTHM MCL = 80 ug/l

TABLE 3 – HAA5 TEST RESULTS (ug/L)

Sample Location	1st Qrt 5/21/14	2nd Qrt 8/21/14	3rd Qrt 11/21/14	Inter. 1/27/15	4th Qrt 2/17/15	LRAA
WTP Tap	36 (taken June 14, 2014)					na
1) 3719 Davison McDonalds	64	43	16	Na	9.0	33.0
2) 822 S. Dort Hwy BP Gas Sta.	52	40	21	Na	9.0	30.5
3) 3302 S. Dort Hwy Liquor Palace	48	31	15	Na	9.0	25.8
4) 3606 Corunna Taco Bell	55	24	15	Na	9.0	25.8
5) 2501 Flushing Univ. Market	38	17	24	Na	9.0	22.0
6) 3216 MLK Salem Housing	41	25	5	Na	2.0	18.3
7) 5018 Clio Rite Aid	49	30	17	Na	9.0	26.3
8) 6204 N. Saginaw N. Flint Auto	50	37	18	Na	9.0	28.5

HAA5 MCL = 60 ug/l

C. WATER TREATMENT PLANT RECENT IMPROVEMENTS & STATUS

1. Phase I WTP Improvements

Since 1965, the Flint WTP has remained a secondary or backup supply system to the DWSD primary supply. Typically the secondary supply for a public water system is expected to be needed only during emergency situations and normally is designed for short term operation such as providing the average daily demand for a few days. Conversely, Phase I improvements were designed with the intent to upgrade the Flint WTP in order to allow for an extended short term period (6 weeks) because of the perceived high risk that the DWSD supply would fail and remain out of service for an



extended duration. Regardless, the Flint WTP was still intended to serve as a standby plant and as such the Phase I improvements lacked redundancies that would be required for a primary supply WTP.

2. Past Pilot Study & Testing

During design of the Phase I improvements a treatability study was completed by Alvord, Burdick & Howson, LLC (AB&H) in 2002. The Treatability Study evaluated the current treatment processes that are in place at the Flint WTP today with the Flint River as the source. The report recommended the following:

TABLE 4 – 2002 WTP TREATMENT RECOMMENDATIONS

Treatment	Purpose	Point of Application	Dosage (mg/l)
Sodium permanganate	Zebra mussel control	Intake	0.3
Ozone	Taste & odor removal, disinfection	Diffuser basin	1.5
Ferric chloride	Coagulation	Rapid mix	40
Coag aid polymer	Turbidity & TOC removal	Rapid mix	2.0
Floc aid polymer	Turbidity & TOC removal	Floc basin	0.05
Lime	Softening	Softening basin	175
Soda ash	Softening	Softening basin	52
Carbon dioxide	pH adjustment	Recarb basin	37
Media filters	Filtration	N/A	Na
Chlorine	Disinfection	Filter effluent	1.0

Of the recommended items, zebra mussel control, coagulant and flocculation polymer aids, and soda ash feed have not been incorporated into the treatment process.

3. Phase II WTP Improvements for Full Time Operation

Phase II WTP improvements are those needed to convert the Flint WTP from a back-up supply to a primary supply plant. A number of improvements have already been constructed as they were necessary to operate full time when treating water from the Flint River. The improvements under the title of Phase II that have been completed or are nearly complete include installation of the future raw water feed connection point and valving for the KWA supply, upgrades to the lime sludge lagoon, the lime sludge lagoon decant and disposal system, decant pump station and force main, installation of mid-point chlorination before filtration, and upgrade of the electric feed sub-station.

Additional improvements to the Flint WTP that are to be completed to become part of the normal treatment process using water supplied by the KWA are:

- New oxygen and nitrogen storage facilities for the ozone system (under construction)
- New coagulant feed system
- Electrical
 - Pump Station #4 upgrades (under construction)
 - SCADA and controls upgrades
 - Filter transfer pump station feeders
- Pump replacements and VFD installation in the low and high service pump station (under construction)
- Filter transfer pump station to Dort Reservoir
- Facility security improvements



II. SOURCE WATER EVALUATION

A. DATA ANALYSIS

Based on past data collected and the 2002 Treatability Study by AB&H, the Flint River water quality varies seasonally with higher hardness and alkalinity experienced in the winter. Higher magnesium concentrations are also experienced in the winter, adding difficulty to the settling process due to neutrally buoyant floc. General water quality average characteristics recorded for the 2002 Treatability Study as compared with average characteristics recorded in 2014 are shown in Table 5 below.

TABLE 5 – FLINT RIVER WATER QUALITY CHARACTERISTICS							
Period	Turbidity NTU	TOC Mg/l	Alk. Mg/l	Hardness Mg/l as CaCO ₃	pH	Total Col. Count/day	THMFP Mg/l
2001 Apr–Oct	7.9	9.4	215	272	8.1	870-1230 (7300 max)	410
2014 May–Oct	8.3	10.3 5/22/14	207	252	8.2	1900-9000 (48,300 max)	187

The Flint River characteristics do not appear to have changed significantly over the past 10+ years. Note that further investigation by City staff revealed a sewer leak upstream of the plant that may have contributed to the total Coliform count. The leak was subsequently repaired.

B. CONCLUSIONS

Considering the minor changes in Flint River water quality, much of the information contained in the 2002 Treatability Study by AB&H remains relevant today. Data from that report assumed to be consistent today include the following:

- Flint River is influenced by groundwater from a dolomitic aquifer
- Hardness varies seasonally with higher hardness and alkalinity in the winter
- Hardness, alkalinity, magnesium concentrations tend to be reduced by run-off

In development of the 2002 Treatability Study, processes were simulated which resulted in low THM levels. Therefore, information contained in that report will be used to assist with establishing a baseline jar testing procedure as discussed further in Section III.



III. TREATMENT PROCESS EVALUATION

A. EXISTING PROCESS DESCRIPTION

The existing WTP consists of an intake with screening from the Flint River, low lift pumping, ozonation, rapid mix, flocculation, settling, softening, recarbonation, filtration, storage and high service pumping. A process diagram is shown as Figure 1.

1. Intake

A 72" diameter pipe draws water from the Flint River through 2 traveling screens to the low lift pump structure. No chemicals are currently fed for Zebra mussel control or pre-oxidation as recommended by the 2002 Treatability Study. Manual removal of zebra mussels is more economical than installation of chemical feed equipment considering the short term need.

2. Ozone

There are 2 ozone generators designed to provide adequate ozone for a WTP flow of up to 36 mgd. There are 3 ozone contact basins. The ozone generators were designed to produce 900 lbs/day at 10% concentration and up to 1300 lbs/day at 6% concentration each. Prior to recent repairs, readings indicated a production rate of approximately 700 lbs/day at 4% concentration. It is possible that before the recent improvements the ozone feed might not have been optimized. In fact, it is known that less than optimal ozonation previously led to increased chlorine feed which would have contributed to THM formation.

3. Rapid Mix

East and West rapid mix chambers allow chemical feed prior to the flocculation basins. Each rapid mix chamber is equipped with a 5 hp mixer.

4. Coagulation / Flocculation

The WTP contains two equally sized flocculation basins, east and west, and each basin provides tapered or gradually slowed mixing from inlet to outlet. There are fifteen 2 hp mixers for each basin with VFDs to control mixing speed. The 2002 Treatability Study recommended feeding both coagulation and flocculation polymer aids. Neither polymer aid is being used today because turbidity and TOC removals have been sufficient to meet regulatory requirements.

5. Settling

Primary clarification takes place within 3 basins containing plate settlers. The settlers are operating as designed.

6. Softening

Again, there are two basins for softening: east and west. Each basin is 120' in diameter and contains a solids contact softening unit. Each softening basin/unit has a design capacity of 18 mgd. The east clarifier has an effluent weir imbalance that the City intends to fix when low demands allow for construction. Low lift pumping limitations, flow control to the basins, control restrictions on residuals removal, and fluctuating demands have made it difficult for WTP staff to stabilize the softening process. Softening is accomplished by feeding lime. The decision was made by the City not to feed soda ash in order to remove non-carbonate hardness because acceptable hardness levels could be achieved with lime feed only and softening is short term until Lake Huron water becomes available. Lime and soda ash softening is a possible consideration to assist with TOC removal and thus reduce THM formation.



7. Recarbonation

Recarbonation for pH adjustment is accomplished in east and west recarbonation basins between and to the north of the softening basins. Carbon dioxide storage and feed equipment is located west of the recarbonation basins.

8. Filtration

Filtration is accomplished with 12 dual media filters, equally sized and designed to filter 3.0 mgd each. Media consists of 12" of sand and 18" of anthracite. The filters have been operated intermittently over the years due to the standby nature of the WTP and until recently, chlorine injection took place downstream of the filters. It is possible some microbial growth had developed in the filters leading to increased chlorine demand. The City recently hired a contractor to upgrade the electrical controls for the filters and that work has been completed.

9. Disinfection

Disinfection is provided by ozonation and by feeding chlorine. Ozonation occurs at the front end of the WTP. Chlorine is fed prior to filtration and prior to finish water storage / high service pumping. The intermediate chlorine injection location was recently constructed under the Phase II, Segment 1 contract.

10. Clear Well & Pumping

The pump building sits adjacent to a 3 MG clear well and contains both low and high service pumps.

B. JAR TESTS / EXPERIMENTS

1. Approach

There are several well practiced methods by which DBPs can be reduced. First, the disinfectant can be changed to an alternate that has a lower tendency to form DBPs. Second, additional treatment systems such as activated carbon or air stripping (depending on the nature of the precursors) can be added to remove DBP precursors. Lastly, the existing treatment processes can be optimized to remove as much DBP precursor as possible. Of these options, optimizing existing treatment processes is the only strategy that does not require the construction of new and expensive facilities. It is anticipated that Flint will be receiving Lake Huron water in approximately two years and this water will have a completely different chemistry from the Flint River. Major process changes instituted to address THM levels using Flint River water are likely to be unnecessary for Lake Huron water and may even be inappropriate. Therefore, those options which require addition of new treatment processes are undesirable at this time. In recognition of this upcoming change in water source, efforts for this study have concentrated on improving the existing processes, rather than adding new ones. New treatment processes will only be recommended if operational changes to the existing treatment train prove ineffective.

Recent sample test results suggest that most of the DBPs are formed in the distribution system rather than within the treatment plant. Therefore, the most logical approach is to reduce the DBP formation potential (DBPFP) rather than simply lowering the levels of DBPs leaving the plant. During bench scale testing, formation potential (FP) levels were the primary indicator of success or failure of proposed process modifications.

2. Protocol

Bench scale pilot testing is intended to reflect actual plant operating and hydraulic conditions so the bench scale treatment units were sized based on various dimensionless factors to ensure the pilot treatment matched the actual system. Bench



scale ozonation was not practical due to time and cost limitations. Therefore, water samples were withdrawn from the plant ozone basin effluent. These samples were transported to the laboratory and dispensed into square testing jars. The jars were used to simulate rapid mix, three-stage flocculation, and settling. Rapid mix and flocculation conditions were matched to the plant based on "Gt" values. The "G" value is a measure of the mixing intensity and is a function of mix time, viscosity of the liquid, and mixing power applied to the water. "Gt" then, is a size scaling factor where time has been accounted for. Settling time was scaled to match the shorter settling depth of the testing jars. After settling, samples were decanted from the test jars. The decanted samples were then lime softened; softening conditions were similarly matched on the basis of "Gt". Carbon dioxide was sparged into the samples to reduce the pH. The water was then vacuum filtered through filter paper, sized to simulate the plant's dual media filters. The samples were dosed with excess chlorine and allowed to react for seven days at 25° C before testing for DBPs to determine the formation potential.

The following conditions were applied during testing to properly match small scale testing to actual plant processes.

TABLE 6 – BENCH SCALE TEST MIXING INTENSITIES

Process	G	Duration	Mix RPM
Ozonation	Plant	-	-
Rapid Mix	200	44 sec	160
Flocculation, Stage 1	50	9 min	55
Flocculation, Stage 1	25	9 min	30
Flocculation, Stage 1	12	9 min	19
Settling	N/A	10 min	-
Softening	TBD	10 min	-
Recarbonation	N/A	N/A	-

The primary variables during testing were chemical additions and chemical dosages. Specific chemicals and dosages used for initial testing conditions were selected to reflect current plant usage and the recommendations of the 2002 Treatability Study:

TABLE 7 – BENCH SCALE TEST CHEMICAL FEED RATES

Chemical	Current Usage	2002 Study	Test Values
Ozonation	4.66 mg/l	1.5 mg/l	
Ferric Chloride	7.7 mg/l Fe3+	40 mg/l Fe3+	7.7 – 80 mg/l Fe3+
Coagulant Aid Polymer	Not used	2.0 mg/l	1 – 2 mg/l
Flocculation Aid Polymer	Not used	0.05 mg/l	0 – 0.05 mg/l
Powdered Activated Carbon	Not used	N/A	20 – 100 mg/l
Lime	120 mg/l	175 mg/l	120 – 175 mg/l
Soda Ash	Not used	52 mg/l	0 – 52 mg/l
Cationic Softening Polymer	3.13 mg/l	Not used	3.13 mg/l
Anionic Softening Polymer	0.88 mg/l	Not used	0.88 mg/l
Fluoride	0.45 mg/l	1 mg/l	Not used
Carbon Dioxide	32 mg/l	37 mg/l	Fed to reach pH of 7.5 +/- 0.3
Chlorine	6.3 mg/l	1 mg/l	10 mg/l



3. Considerations

The 2002 Treatability Study did not note significant formation of DBPs. This may be a function of different Flint River water chemistry at that time. However, recognizing the considerable differences in chemical usage and dosages between that study and current operations, those differences in chemical use and dosage are an obvious starting point for optimizing treatment to prevent DBP limit exceedance.

Although it is believed that optimization of current treatment can correct the DBP issue, should optimization of present treatment prove insufficient, alternate residual disinfectants (chloramines and chlorine dioxide) will be investigated as additional treatment measures.

4. LAN Test Results

Two rounds of jar testing were completed by LAN during the weeks of December 15, 2014 and January 26, 2015. Detailed test data is included in Appendix A. Testing results can be summarized as follows:

- Increased dosages of ferric chloride resulted in higher reduction of THMFP.
- The currently utilized feed rate of lime at 120 mg/l is appropriate
- Softening with soda ash in addition to lime resulted in minor additional THMFP reduction – in the range of 0% - 10%.
- The benefits of using a cationic polymer during softening at a dosage range of 0.31 - 3.13 mg/l to help reduce THM's are unclear
- The benefits of using an anionic polymer during softening at a dosage range of 0.09 – 0.88 mg/l to help reduce THM's are unclear
- Feeding PAC was ineffective in reducing THMFP within the dosage range of 20 – 100 mg/l.

5. Testing by Others

In addition to jar testing completed by LAN, the chemical supplier who provides ferric chloride for the City, PVS Technologies, ran tests using their recommended flocculant polymer aid. Plus, Veolia Water completed jars testing of their own the week of February 16th to analyze other process details and current WTP parameters. Experiments completed by PVS Technologies showed very little TOC removal beyond that obtained with straight ferric chloride feed.

6. Conclusions

Increasing the dose rate of ferric chloride is an operational change that can easily be implemented without the need for any additional equipment. Test results show that over 40% THMFP removal can be obtained with a dosage of 60 mg/l Fe³⁺ or higher. Increased dosing of ferric chloride would be most ideal coupled with regular raw water TOC monitoring so that TOC levels would dictate the appropriate ferric chloride feed rate.

Softening with soda ash in addition to lime is another option the City should consider if increased ferric chloride doses are not adequate to maintain THM levels under the MCL, particularly during warmer months. Again, monitoring of TOC in the raw water could provide useful information of when lime/soda ash softening is necessary.



IV. DISTRIBUTION SYSTEM EVALUATION

EPA guidance for the distribution evaluation portion of an OER is focused on identification and isolation of a specific portion of the distribution system that led to the exceedance. The circumstances of Flint's apparent pending TTHM exceedances are unusual in that a new supply has been implemented which clearly corresponds to the high TTHM sample results. Although the new source is one element in increased TTHM levels, value remains in evaluating the distribution system since water age is also a critical factor. Additionally, there may be distribution improvements that can be made to help alleviate the problem.

A. INFRASTRUCTURE

1. Piping

According to the most recent MDEQ Sanitary Survey, the distribution system is estimated to contain 70% cast iron, 20% ductile iron, 2% concrete and 8% steel water mains. Unlined cast iron pipe can become pitted, allowing colonization sites for microorganisms leading to chlorine demand. Additionally, much of the piping in the system is aged and in poor condition. Increased chlorine demand could be resulting from biofilm in older pipes and from main breaks/repairs. The extent of contribution is not known but any water main replacement project will decrease chlorine demand somewhat if constructed properly. Unfortunately, water main breaks may also assist with decreasing water age by providing unintentional flushing. All things considered, it is impossible to quantify the impact existing piping has on THM formation.

The City utilizes City Point software and GPS equipment to document main breaks and prioritize replacements. However, main break information is more pertinent to rusty water complaints and has little relevance to THM levels. Areas that have been targeted for main replacements include the transmission main from the WTP west to Dupont and south to the West Side reservoir, Fenton Road, Atherton Road, Dort Highway, Averil Street, and Boulevard Drive.

2. Storage

There are 4 finish water storage tanks and 1 raw water tank as tabulated below:

TABLE 8 – STORAGE TANKS							
Name	Type	Water	Volume (MG)	Operating		Absolute	
				LWL	HWL	Bottom	OF
Dort Reservoir	Ground	Raw	20	-	-	730	750
WTP Tank	Elevated	Finished	2	883.0	896.0	863.0	898.0
WTP Clear Well – PS #4	Ground	Finished	3	11'	15'	708.5	726.0
Cedar Street Reservoir	Ground	Finished	20	-	11'	737.2	757.2
Westside Reservoir	Ground	Finished	12	-	12'	761.8	779.0

The MDEQ typically recommends providing a minimum finish water storage volume of 1/3 the maximum daily demand (MDD). According to the 2013 MDEQ Sanitary Survey, the 5 and 10 year MDDs are 21.57 mgd and 30.05 mgd respectively. A common rule of thumb for clear well storage volume at a WTP is 10% of the design flow rate. Another general guideline for reliability is to provide total storage to allow for 2 X the average daily demand plus fire flow demand. For this analysis, fire flow is assumed to be 2,500 gpm for either one industrial fire (2,500 gpm) or a combination of one residential (1,000 gpm) and one commercial (1,500 gpm) fire at a 4 hour duration which results in a total volume of 600,000 gallons. These go-by



approximations are summarized below with the applicable flow rates and are compared to the existing storage volumes currently being utilized.

<u>Common Practice</u>	<u>Flow Rate</u>	<u>Recommended Volume by ROT</u>	<u>Volume In Use</u>
Clear well 10% of Design Flow	18 MGD	1.8 MG	3.0 MG
Finish Storage = 1/3 MDD	30.05 MGD	10.0 MG	37 MG
Total Storage = 2 * ADD + FFD	13.87 MGD	28.3 MG	57 MG

Based on the values above, it appears the storage volume used in the Flint system could be decreased without negatively affecting reliability. The appropriate volumes of individual tanks will be further evaluated using the water system model and discussed in Section V (C).

All reservoirs have baffling to minimize stagnant water. Also, all tanks have been maintained and are in reasonable condition. The Westside reservoir has an exposed roof that is in need of rehabilitation, but its current condition has no influence on THM formation.

3. Pump Stations

All pump stations are in good condition but pumps are generally oversized. As an independent consideration, oversized pumps are not a contributing factor to high THM levels. Control of pumps and pressure zones are discussed in detail below.

B. OPERATIONS AND MAINTENANCE

1. Pump Station & Storage Operations

Pump stations and storage tank levels are controlled as shown in Table 9.

TABLE 9 – PUMP STATION CONTROLS			
PS Name	Control Point	On Point	Off Point
PS No. 4 Raw	Operator	-	-
PS No. 4 Finish	Match plant flow	-	-
Westside	System pressure (elevated tank)	22.5'	33'
Cedar Street	System pressure (elevated tank)	22.5'	33'
Torrey Road	Distr. – Brown/Bradley	< 45 psi	> 45 psi

Cedar Street and Westside pump stations are operated as needed and they are alternated. Typically, Cedar Street is run in the morning and Westside is run in the evening and reservoirs for each are filled during low demand periods at night.

Westside, Cedar Street and Torrey Road pump stations are used to boost system pressure when high demands warrant it, but there are not well defined pressure zones within the system. Therefore, the possibility exists that water is being recirculated allowing for increased water age.

2. Booster Disinfection Practices

Booster disinfection is provided at the Cedar Street and Westside pump stations. When sustained residuals are not provided by chlorine feed at the WTP, sodium hypochlorite is applied at the reservoirs while being filled.



3. Changes in System Demands

Water demands in the City have been declining since the 1960's as the population has dropped. As a result, many of the water system components are oversized including storage tanks and water mains which both increase the time for water to reach the user.

From a short term perspective, Flint demands tend to increase in summer as is ordinarily expected but also in the winter due to water main breaks. The MDD for Flint often occurs in winter. Regarding THM formation, with lower temperatures and higher flows in the winter, THM levels taken at the distribution sample points are expected to be lower than at other times of the year.

C. WATER SYSTEM HYDRAULIC MODELING

As part of this report, the City provided a hydraulic water model, originally developed by Potter Consulting, for LAN to update. Thus far, LAN has modified the model to be capable of extended period simulations, modified controls to reflect current operations, revised the piping to include known broken valve locations, and developed preliminary water age results throughout the entire system. Water age shown in the updated model corresponds well to TTHM levels at 6 of the 8 sampling sites. However, LAN has also identified several deficiencies within the model that require further adjustments to allow for usable and reliable results. Those model deficiencies include outdated demands, improperly located appurtenances, and incorrect flow patterns. Preliminary water age results are presented in Table 10. Revised results will be provided when the hydraulic model has been fully updated.

TABLE 10 – PRELIMINARY WATER AGE FROM WATER MODEL

Sample Point	Location	Address	Water Age (Hrs)	Aug 2014 THM (ug/l)
1	McDonalds	3719 Davison	23	145
2	BP Gas Station	822 S. Dort Hwy	18	112
3	Liquor Palace	3302 S. Dort Hwy	15	127
4	Taco Bell	3606 Corunna	128	181
5	Univ. Market	2501 Flushing	178	196
6	Salem Housing	3216 MLK	50	112
7	Rite Aid	5018 Clio	78	144
8	N. Flint Auto	6204 N. Saginaw	71	118

It is anticipated that topics shown below in italicized font will be detailed after the model is updated in March 2015.

1. *Simulation of Existing System*

Match existing conditions. Chlorine and THM data may be used to verify model results. We have chlorine feed data at plant and residuals at 10 locations in each MOR, May 2014 – January 2015.

2. *Identification of Water System Deficiencies*

Specific issues to look at:

- Worst case at minimum daily demands*
- Water age in entire system*
- Recirculating water through pump stations*
- Use of storage tanks – volumes in particular*
- Indications of broken valves*
- Effectiveness of booster disinfection*



V. RECOMMENDATIONS TO MINIMIZE FUTURE OEL EXCEEDANCES

A. SOURCE

The City of Flint has already committed to the change from the Flint River as the water source to Lake Huron under the KWA system, planned for late 2016. The risk of future TTHM limit violations will decline substantially with the use of water from Lake Huron due to much lower DBP precursors. It is important to recognize that the Flint River will become strictly an emergency supply when the KWA supply becomes available and any investments toward the Flint River should be contemplated accordingly. Recommendations discussed below in this section apply to the Flint River as the source.

Reverting to supply from the DWSD until the KWA supply is available as an option. However, based on information provided by the City of Flint, the annual cost to receive water from the DWSD would be at least \$16,000,000/year or \$1,333,000/month. Therefore, utilizing the DWSD for interim supply is cost prohibitive under the terms defined by the DWSD.

1. Watershed Management

A volunteer group entitled the Watershed Coalition performs various tasks related to managing the Flint River watershed such as spring cleanups and annual benthic studies to evaluate the river 'health'. No additional action is recommended at this time.

2. Monitoring

The City documents daily raw water flow, pH, alkalinity, carbonate and non-carbonate hardness, chloride, temperature, turbidity and coliform count as part of standard preparation of Monthly Operating Reports (MOR). It is recommended to add raw water TOC and plant tap THM values to daily documented measurements which would provide staff the data needed to establish correlations to predict distribution system THM formation.

3. Intake Operations

The 2002 Treatability Study recommended pre-oxidation in the form of sodium permanganate as a feed at the intake. It is possible the addition of a pre-oxidant such as hydrogen peroxide or some type of permanganate could enhance the ozone process. Veolia evaluated permanganate demand during jar testing the week of February 16th, 2014 and further recommendations will be incorporated when results become available.

4. Seasonal Strategies

Past data indicates the Flint River is influenced by groundwater and in particular, dolomitic spring water. The result is hard water with high concentrations of magnesium and sulfate. Also, hardness and alkalinity are higher during the winter. Upon initiation of supply from the Flint River, the City made the decision to soften with just time to focus on removal of carbonate hardness. One potential modification that could assist with TOC removal and thus decrease THMFP would be lime and soda ash softening. A temporary caustic soda feed system is recommended to be put in place in case the need for optimized softening arises.

5. Upstream Contamination Issues

Upstream contamination issues are extremely difficult to prevent and even if detected are difficult to locate. Evaluation of raw water data collected for MORs is the easiest



manner in which to detect upstream contamination issues because the data is already collected for treatment purposes. In fact, high total Coliform readings signaled a potential issue recently that the City identified and removed.

An upstream monitoring and warning system could be established to attempt to detect water quality issues or spill event type contamination early enough to adjust treatment procedures or cease intake prior to the contamination reaching the WTP. However, given the imminent conversion to the KWA supply, the period of full time use would likely be far too short to achieve payback on the capital expenditures.

B. TREATMENT PROCESS

1. Operational Recommendations

- Increase ferric chloride dosage: Previous testing in the 2002 Treatability Study, jar testing completed by LAN, and a review of 2014 ferric chloride dosages compared to THM levels leaving the WTP support that increasing the ferric chloride dosage would help reduce THM formation.
- Increased monitoring: Currently, the MDEQ does not require daily reporting of raw water TOC or finished water TTHM levels. However, daily tracking of such levels would allow the City to develop a correlation between the two, thus providing a predictive tool to help manage TTHM levels.
- Coagulation and flocculation polymer aids: The 2002 Treatability Study suggested the use of coagulation and flocculation polymer aids. These polymer aids were shown in the 2002 Treatability Study to increase TOC removal and thereby reduce THMFP. Further evaluation will be completed during jar testing.
- Discontinue softening bypass: The City was previously bypassing a portion of flow around the softening basins because hardness levels did not warrant softening of the full stream. However, this practice was discontinued because it was believed the bypass stream was contributing to chlorine demand and preliminary data has supported that belief. Chlorine demand dropped 0.5 – 1.0 mg/l following elimination of the bypass stream in early November 2014.
- Soften with lime and soda ash: Research has shown that enhanced softening with both lime and soda ash may provide additional TOC removal. The efficacy of this option will be evaluated during jar testing.
- Disinfection of filter beds: In case there has been microbial growth it is recommended the filters be 'shock' treated with chlorine and rinsed. A chlorine injection point was added upstream of the filters during the first segment of Phase II so future growth in the filters should not be an issue.
- Optimization of all existing treatment processes: Depending on bench scale testing conditions and results, slight modifications to all treatment processes might in order to replicate lower DPBFP.
- Discontinue or adjust softening anionic polymer feed: Some anionic polymers have been found to increase TOC. Veolia evaluated the anionic polymer currently being fed during their jar testing and depending on the results, when available, the softening anionic polymer feed should be adjusted accordingly.



2. Infrastructure Change Recommendations

- Fix and/or replace faulty ozone equipment: Since the ozone equipment was installed it has not been used extensively so the hope is that major components remain in good condition and the system can be easily modified to restore proper functionality. The City has scheduled the equipment manufacturer to field inspect the system on December 15, 2014.
- Replace filter media with GAC media: GAC media could help reduce THM levels by reducing both TOC and chlorine demand. For this consideration, the recommended approach would be to first complete small scale testing to verify efficacy. Upon positive results, the next step would be replacement of media in a fraction of the filters following by sampling to measure water quality. Those results would determine the need to replace media in additional filters.
- Change disinfectant to chloramine or chlorine dioxide: If other options prove to be ineffective, conversion to another disinfectant should be fully evaluated. Various characteristics of chloramination indicate an advantage over chlorine dioxide, but a full analysis would provide clarity as to which would be preferred.
- Install pre-oxidant chemical feed: Hydrogen peroxide or a form of permanganate as a pre-oxidant can enhance the activity of the ozone. Chemical feed could be installed at the intake structure or low service pump station, depending on the reaction time required. Use of a pre-oxidant at the intake might also provide the additional benefit of disinfection credit for ozonation with the MDEQ if an ozone residual can be obtained at the ozone process effluent as a result.
- Repair upstream sewer leak: a sewer leak upstream of the WTP intake was discovered and has already been repaired by the City.

C. DISTRIBUTION SYSTEM

Potential distribution issues related to water quality issues discussed in Section IV included old cast iron pipe, oversized infrastructure, and remote storage/pump station locations and operations that might be less than ideal. Recommendations to address those issues are offered in this section.

1. Manage Water Age

a) Storage Tanks

Considering the excess storage capacity discussed in Section IV, in the short term it is recommended that operational changes be implemented immediately to reduce the overall volume of water stored to decrease water age. Immediate operational recommendations include lowering high water levels of reservoirs other than the elevated tank, to reduce the total system wide usable storage volume to 30-36 MG.

In the long term, LAN recommends development of the most ideal options for water model evaluation. Excess storage volume and tank locations within the water system afford Flint numerous options to reduce the amount of storage volume utilized. As a starting point, two recommendations are presented below.



Option 1

- Take West Side reservoir and pump station out of service
- Cut storage volume used in half at Cedar Street reservoir
- Reduce the utilized storage volume of the WTP clearwell from 3 MG to 2 MG
- Adjusted system wide storage volume would be 34 MG

Option 2

- Take Cedar Street reservoir and pump station out of service
- Reduce the utilized storage volume of the WTP clearwell from 3 MG to 2 MG
- Adjusted system wide storage volume would be 36 MG

b) Residence Time in Pipes

Completely redesigning and replacing the water system to match today's demands is not feasible financially and would be a waste of infrastructure with remaining useful life. Going forward, it is recommended that any future main replacement projects be evaluated for possible downsizing. When the water model is fully updated, it will provide a valuable tool in determining which mains can be downsized and to what extent. Replacement of broken valves and valve exercising are also recommended, which are programs that have already been implemented into Flint's regular operations.

Operationally, hydrant flushing is recommended as needed to minimize water age in low flow areas. Again, the updated water model should be used to locate high water age areas and optimal flushing points.

2. Reduce Disinfectant Demand

Recommendations to reduce disinfectant demand are similar to those described above to reduce water age. Replacement of old cast iron pipes would lead to a reduction of disinfectant demand on the distribution side, but realistically can only be accomplished over a prolonged period of time. In the meantime, hydrant flushing is the most viable means of reducing disinfectant demand in piping. From a storage standpoint, all reservoirs and tanks should be regularly inspected and maintained to prevent entrance of any outside contamination that would contribute to disinfectant demand.

3. Water Modeling of Recommendations [yet to be completed]

Determine best flushing locations to reduce water age

Evaluate changes in storage tank operations to reduce water age

Valves to close/add to improve pressure zones, reduce recirculation

Optimization of pump station use – smaller pumps? Shut down?

Evaluate booster disinfection

D. BOOSTER DISINFECTION

Decreasing chlorine feed at the WTP and adding booster disinfection in the distribution system is an alternative intended to reduce the reaction time at higher concentrations of chlorine to reduce DPB formation. Extensive looping and branching within the existing system complicate how to best implement and utilize booster disinfection. Water system modeling is recommended to gauge the effectiveness of existing feed point locations and dosages. Further discussion and details will be provided when the distribution evaluation results are available.

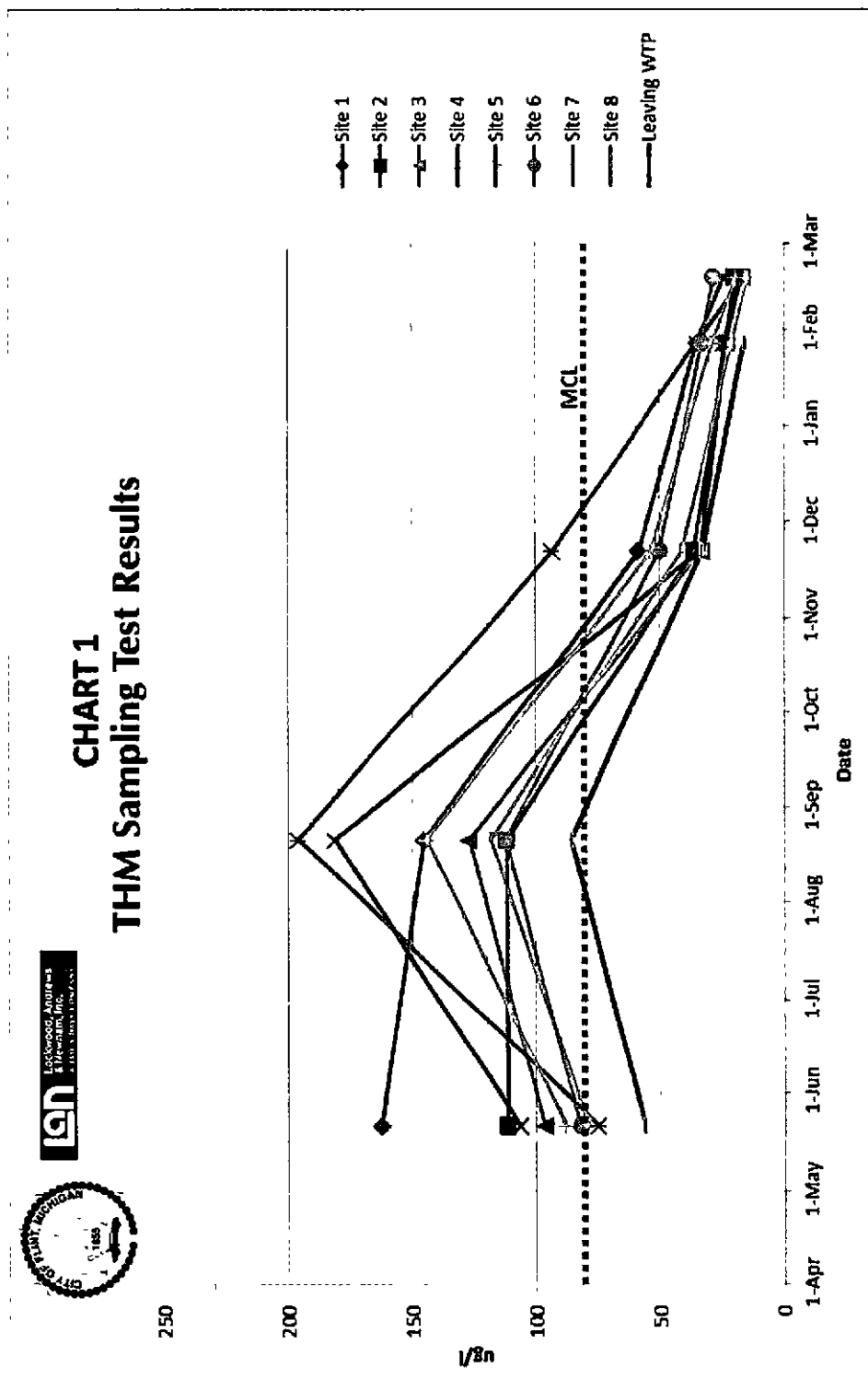


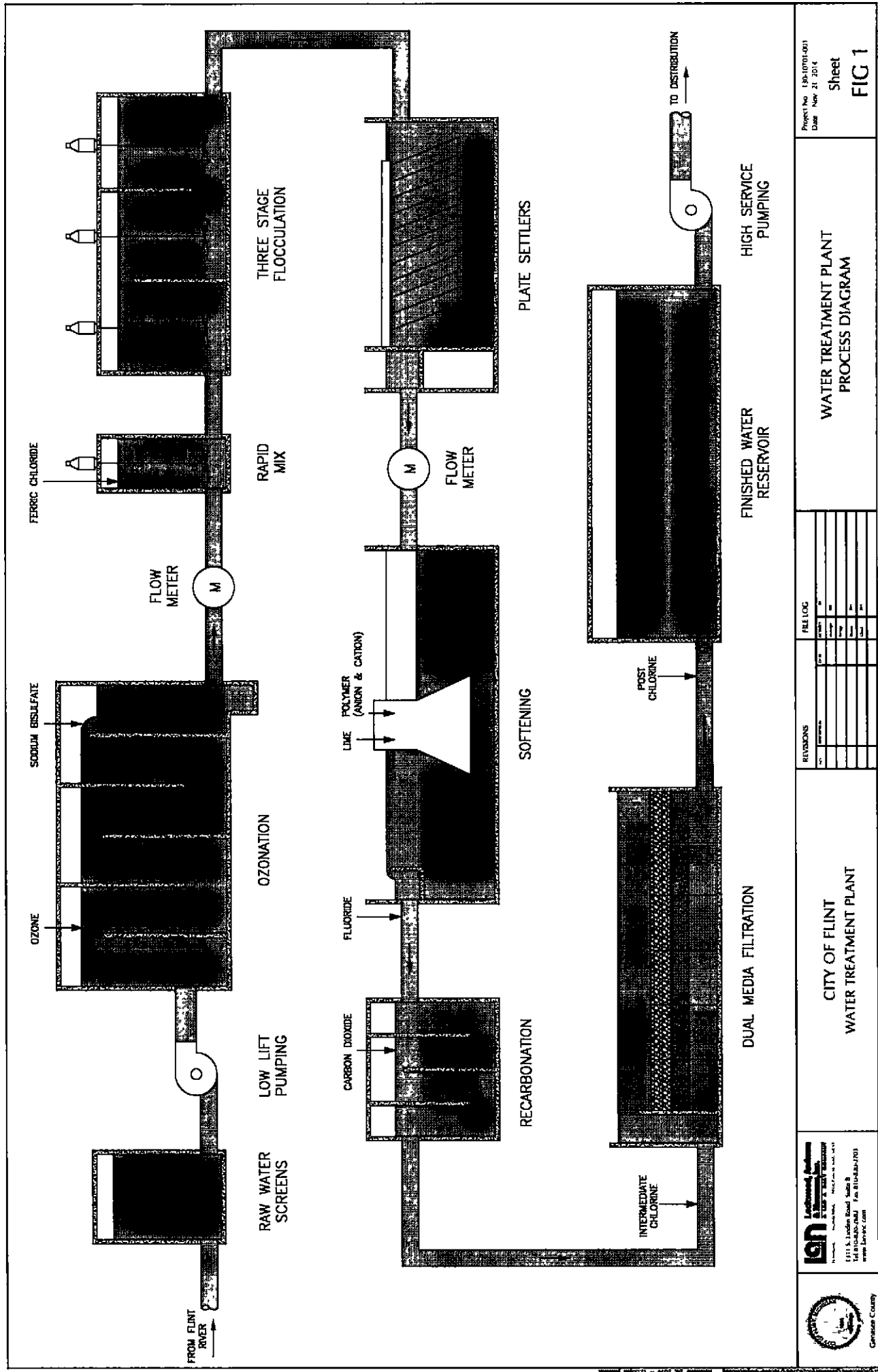
E. CATEGORIZATION OF ACTIONS

Considering that the Flint River is being used as the water source only until the KWA supply is available (expected late 2016), options to address high THM formation that require new construction or extensive time to implement are not preferred. On the other hand, the City understands THM sample results to date dictate that some action is necessary. Two categories have been developed to assist the City in prioritizing actions to take. Stage 1 consists of actions that can be completed relatively quickly without major construction and Stage 2 actions are either long term actions or solutions requiring major construction. Stage 1 actions are to be completed first followed by evaluation of the results prior to consideration of Stage 2 actions. Grouping of actions are shown in the table below.

TABLE 11 – ACTION PLAN		
	Action	Purpose
Stage 1	Hire water consultant to complete 'water audit'	Third party review of actions and operations to make sure no options are being missed
	Increased water quality monitoring – obtain THM and TOC analyzers	Provide information needed to adjust WTP operations to match changing raw water quality
	Troubleshoot ozone feed system	Reduce chlorine feed and increase TOC removal
	Bench scale jar testing	Optimize treatment process and evaluate possible modifications
	Discontinue softening bypass	Reduce chlorine demand
	Disinfect filters	Reduce chlorine demand
	Increased water main flushing	Reduce water age / stagnant water
	Water system modeling evaluation	Determine areas with high water age and reasons
	Implement coag. & floc. polymer aids, if appropriate	Increase TOC removal
	Modify booster disinfection feeds, if appropriate	Decrease water age
Stage 2	Repair ozone system	Reduce chlorine feed and increase TOC removal
	Continue increased water main flushing	Reduce water age / stagnant water
	Convert to lime and soda ash softening	Increase TOC removal
	Continue valve replacements based on water model	Reduce water age / stagnant water
	Replace filter media with GAC	Reduce TOC and chlorine demand
	Change disinfectant to chlorine dioxide	Reduce THMFP
	Install pre-oxidant feed at intake	Optimize ozone disinfection, reduce chlorine
	Place priority on replacing cast iron water mains	Reduce chlorine demand

Samples were taken the week of February 16th for the 4th round of quarterly testing. The City has implemented many of the Stage 1 actions and THM test results have significantly improved (decreased) each time samples have been taken since August 2014. In addition to the regular compliance monitoring, the City performed a round of sampling on January 27, 2015. All sampling results are shown on Chart 1.







CITY OF FLINT
WATER TREATMENT PLANT

REVISIONS

NO.	DESCRIPTION	DATE	BY	CHKD.

FILE LOG

NO.	DESCRIPTION	DATE	BY	CHKD.

WATER TREATMENT PLANT
PROCESS DIAGRAM

Legend

 1511 & Linden Road, Suite B
 Flint, MI 48903
 Tel: 810-486-7444 Fax: 810-486-7703
 www.legend.com

Project No. 140-0701-0011
 Date: Nov 21, 2014

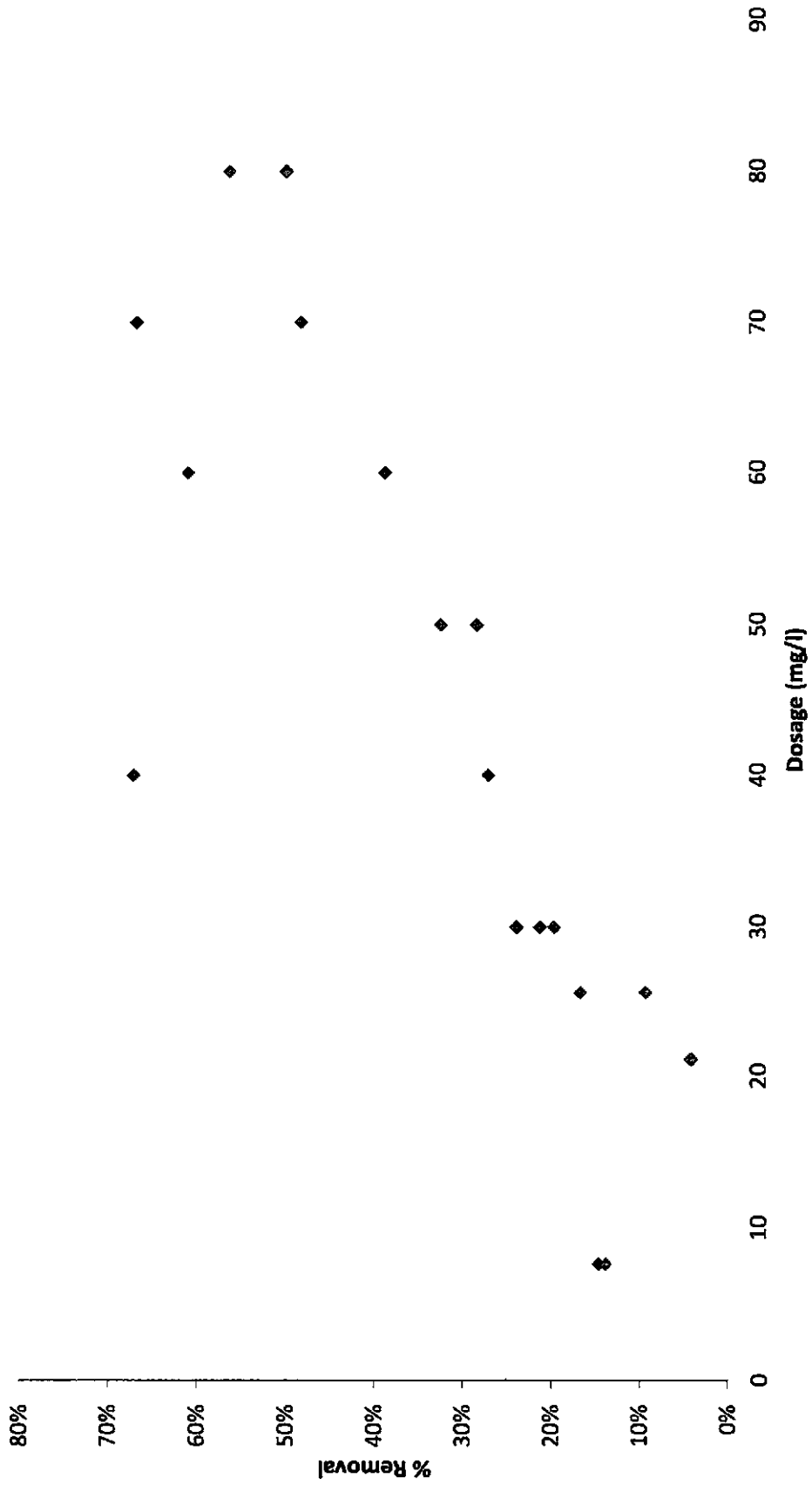
Sheet
FIG 1



APPENDIX A JAR TEST DATA



Ferric Chloride Feed THM Removal



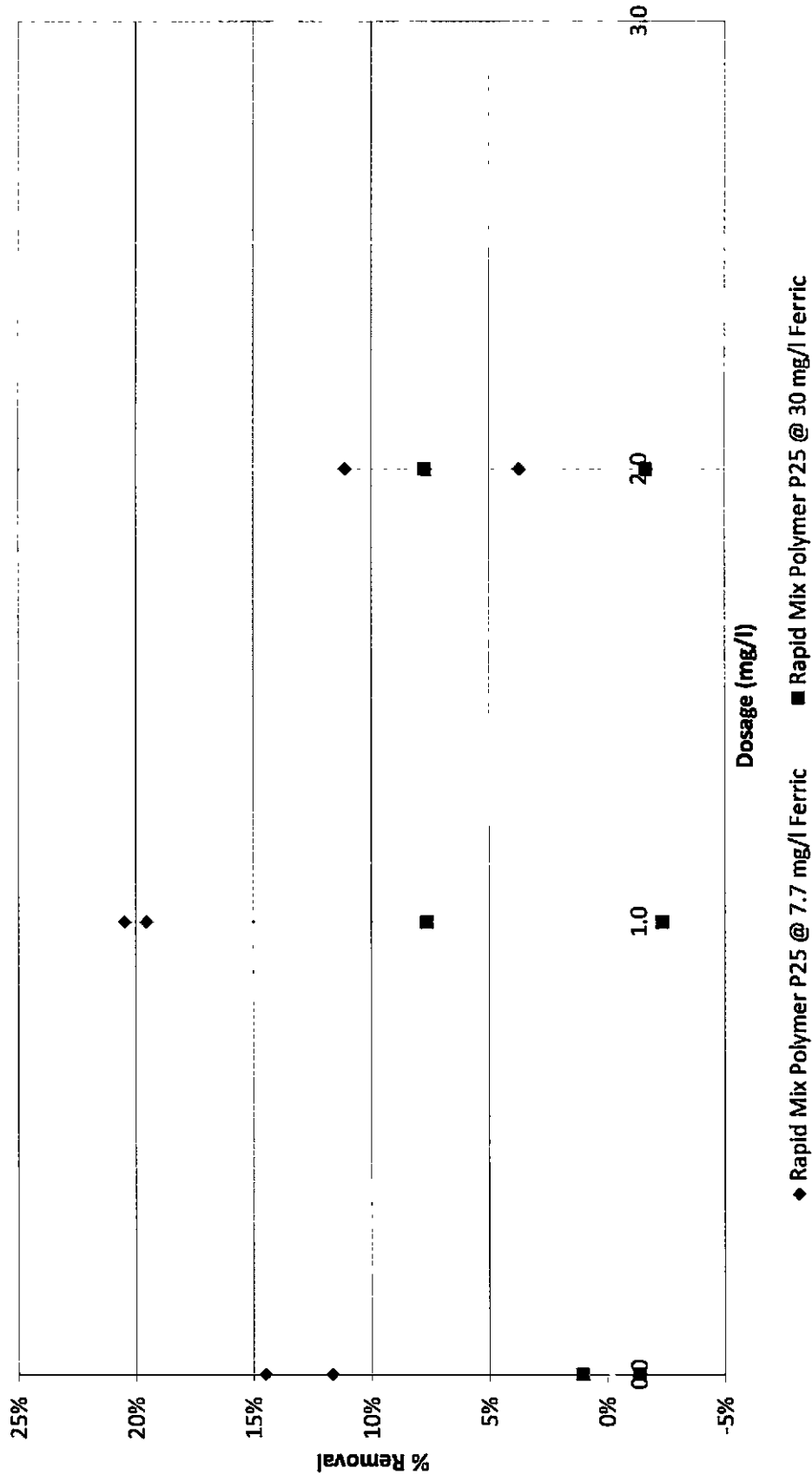


Lockwood, Greene & Neenan, Inc.
A LGS GROUP COMPANY



Charles F. Lawrence P.E.

Coag/Floc Polymer Aid THM Removal



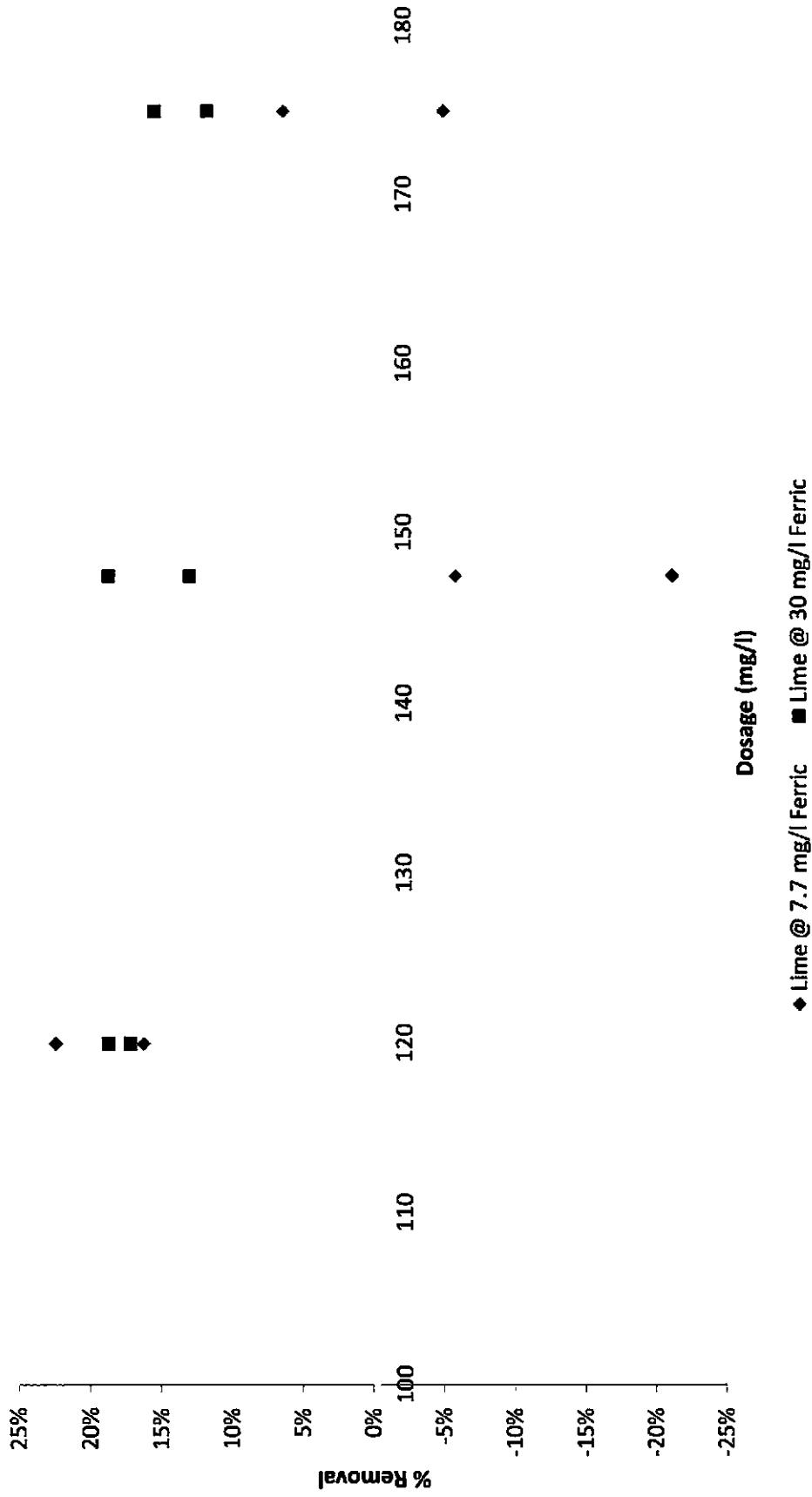


Lockwood, Andrews
& Newnam, Inc.
A L.L.O. HOLDING COMPANY



Charles F. Lawrence, P.E.

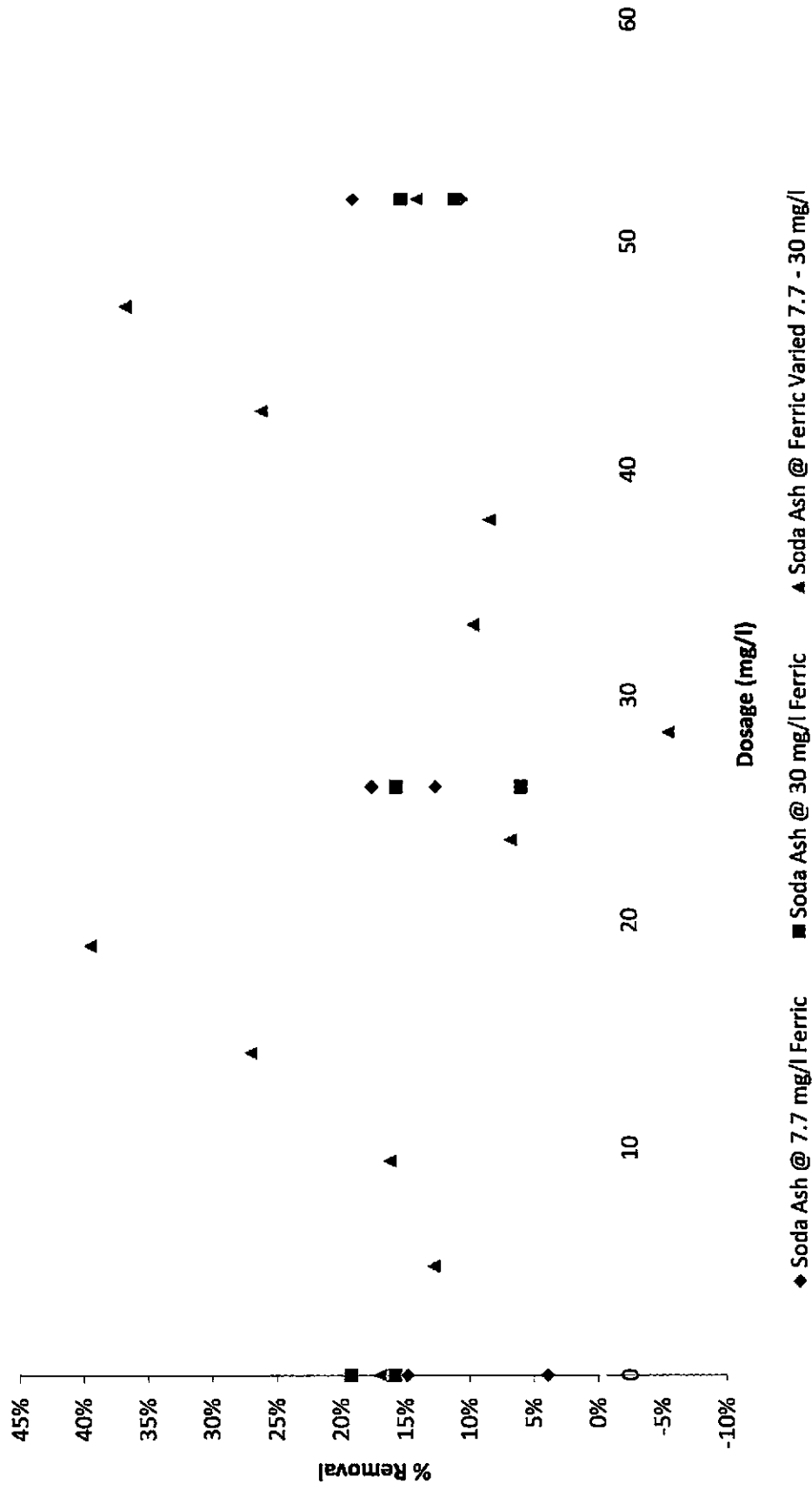
Lime Feed THM Removal

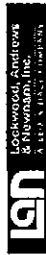




Charles P. Lawrence, P.E.

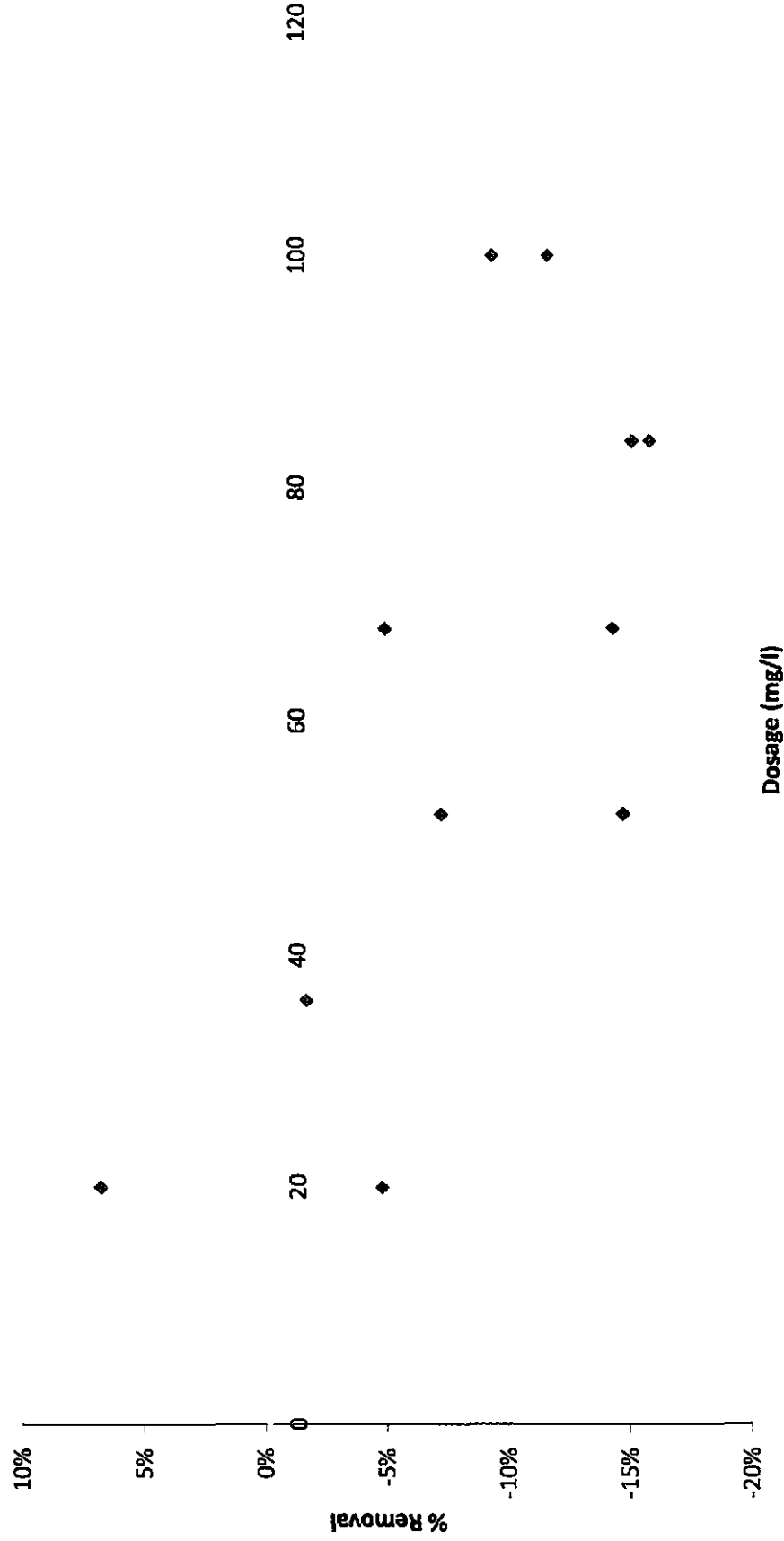
Soda Ash Feed THM Removal





Charles F. Lawrence, P.E.

PAC Feed THM Removal





APPENDIX B WTP DATA

TABLE 1 - SUMMARY OF NEGATIVE INFLUENCES ON THM COMPLIANCE SAMPLING

FACTOR	2014												2015	
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb				
Softening bypass stream over 20% of plant flow														
Ozone system not feeding optimally														
Using full water storage capacity of WSR & CSR														
Chlorine feed at WTP 7.0 mg/l or more														
Ferric chloride feed rate less than 10 mg/l Fe3+														
Raw water temp 23 degrees C or more														
Raw water TOC levels above 8.0 mg/l														
Raw water coliform over 5000 counts/day														
Positive bacteria test in dist. system (boil water notice)														
Water demand less than 15 mgd														

 Dates of occurrence

 Dates of occurrence and expected to repeat in future years

 Compliance sampling date

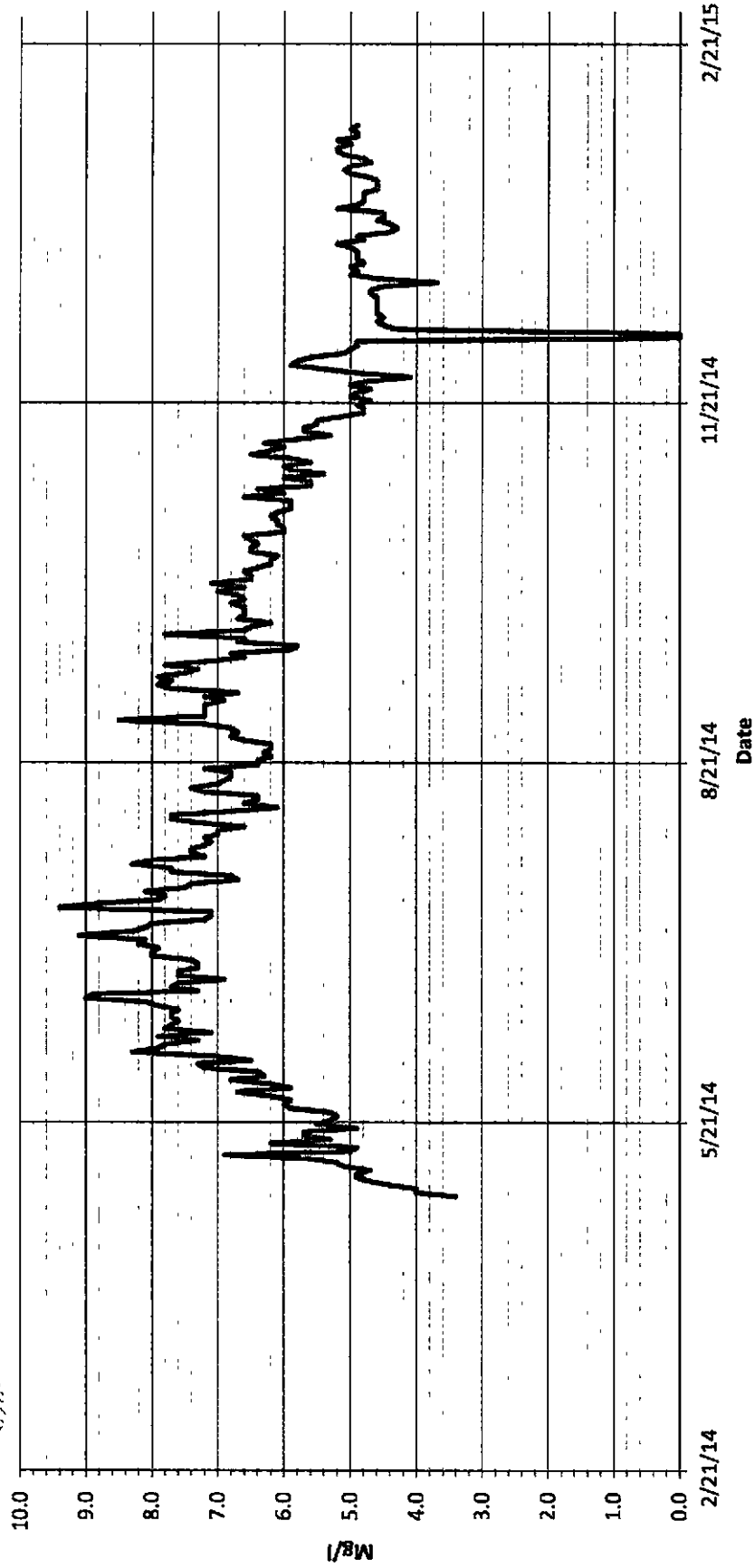
Factors under Flint staff control

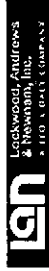
Flint River characteristics

System factors

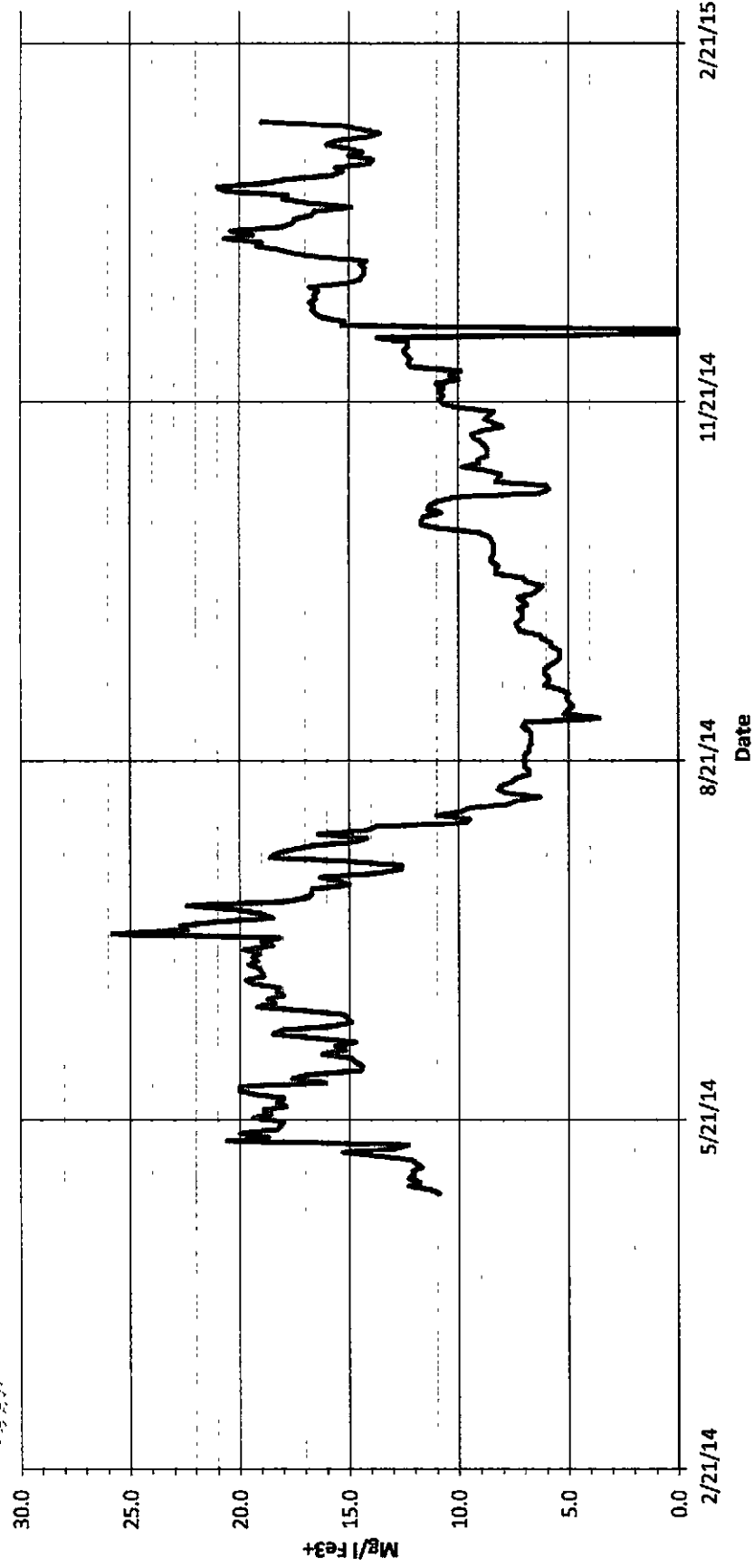


2014 Chlorine Feed





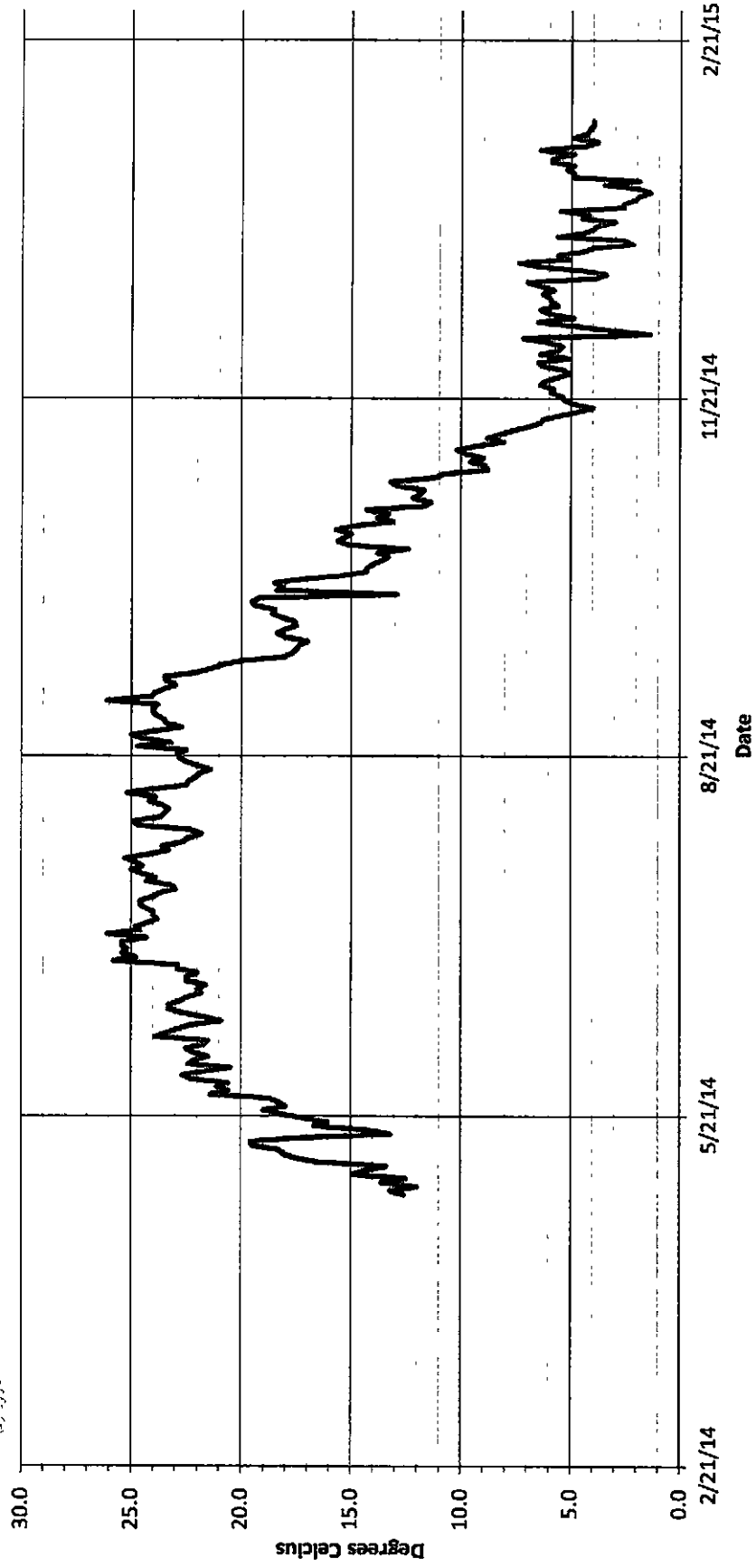
2014 Ferric Chloride Dosage





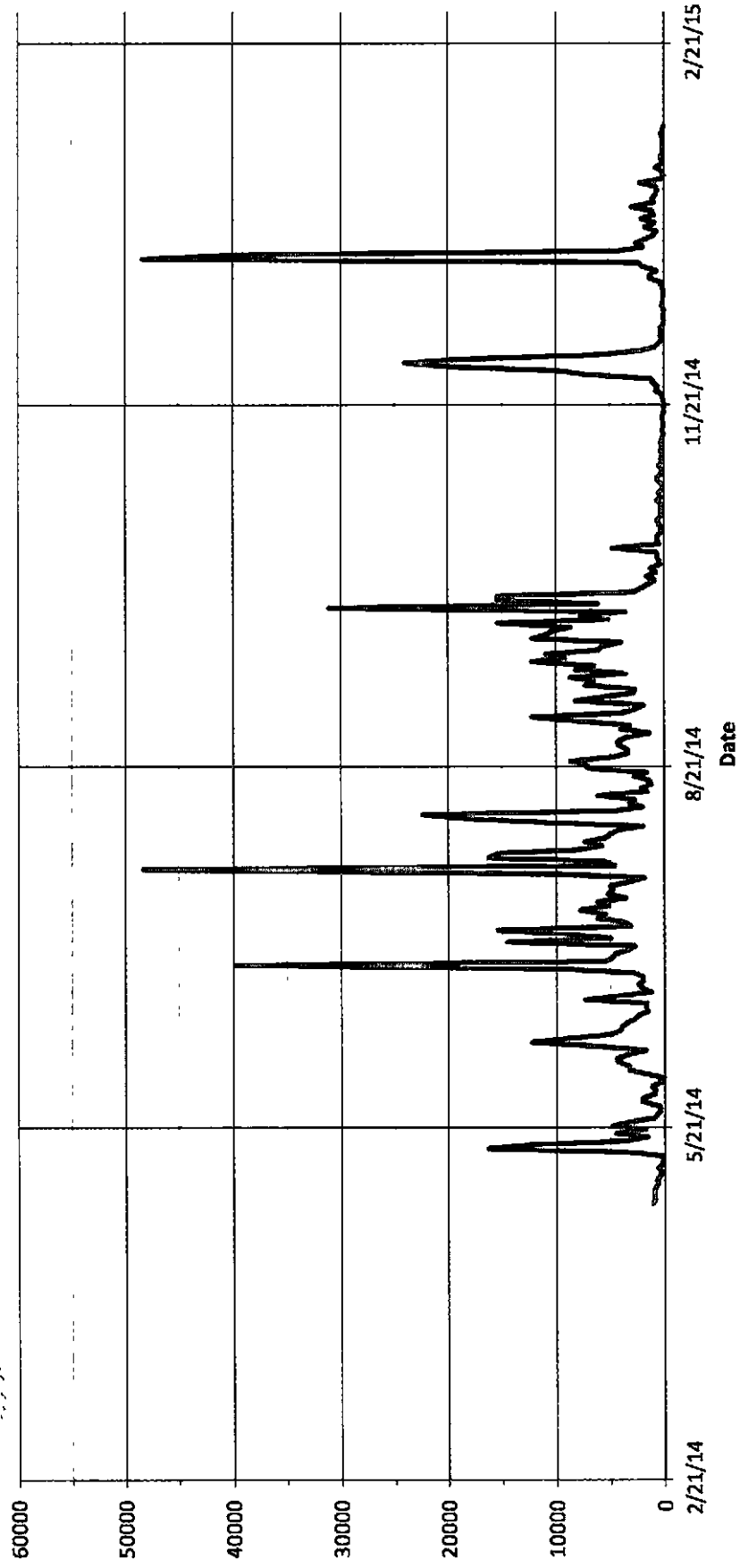
IGN Logwood, Andrews
& Reynolds, Inc.
Aerial & Field Surveys

2014 Raw Water Temperature





2014 Raw Water Coliform Count





2014 Daily Water Treated

