

EXHIBIT 40

3/18/2016

Flint reconnects to Detroit water, may take 3 weeks to clear all pipes | MLive.com

Michigar

Flint reconnects to Detroit water, may take 3 weeks to clear all pipes

By **Amanda Emery** | aemery@mlive.com[Follow on Twitter](#)

on October 16, 2015 at 6:08 PM, updated October 17, 2015 at 7:48 AM

FLINT, MI -- Water from Detroit is flowing into Flint again.

But it'll be about three weeks before **all** of the city's pipes are clear of **water from the Flint River**, city officials said Friday.

Mayor Dayne Walling announced Friday afternoon the city was reconnecting to Detroit Department of Water and Sewerage **as a water source at 5 p.m.**

The city held a press conference on Friday, Oct. 16, at Freeman Elementary to announce the switch would take place that evening. The school is **one of three in the Flint School District that tested above 15 parts per billion for lead**, the safety standard set by the federal government.

"When we learned that Flint's drinking water was contributing to high lead levels in Flint, it made me furious and this community was rightly outraged," Walling said. "My immediate reaction to learning from our doctors about high lead levels was to not take no for an answer from the Snyder administration and to insist that they approve and help fund the switch to a safe drinking water source from Detroit."

Detroit water was to be introduced into the Flint system throughout the evening. It is expected that the thorough replacement from Flint River water to Detroit water will happen after approximately three weeks, according to a news release from the city. Residents in Flint may see discoloration as well as noticing some taste and odor issues during the transition.

Water provided by DWSD will contain corrosion control agents to hinder the leaching of lead from old pipes into the water. However, the city will also be adding additional corrosion control agents to further minimize the risk presented by lead pipes, according to the release.

Walling said extraordinary efforts **all** around made the quick switch possible.

"The city council approved the \$2 million pledge that was necessary from the city of Flint, because we had to take action -- that was approved by the transition advisory board. The Legislature moved quickly. The governor has signed the appropriation. The C.S. Mott Foundation has come forward," Walling said.

FLINT WATER

[Genesee County wants state to repay \\$1M for water crisis response](#)

[Death toll grows to 10 for Legionnaires' cases in Flint area](#)

[Flint water crisis, MLive audit show need for Michigan FOIA reform](#)

[7 key moments from Flint water crisis Congressional hearings](#)

['No magic pill' for Flint lead poisoning, whistleblowing doctor says](#)

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"But I have to tell you that it's the men and women in the water department who have worked tirelessly to get us to this point so quickly. All the work that had to get done with the transmission lines, with the testing, and with the cleaning so that today at 5 p.m. clean water from Detroit will begin flowing back into Flint's system," Walling said.

House Democratic leader Tim Greimel (D-Auburn Hills) applauded an emergency measure that directed about \$9.4 million in state funds to restore clean drinking water to Flint and take steps to help children affected by high lead levels.

"The actions of the governor's office and the governor-appointed emergency manager for Flint are the direct cause of the Flint water disaster," Greimel said in a statement. "Beyond that, we must hold the Department of Environmental Quality responsible as well. There were so many opportunities to stop this before it started, so many people this had to pass through, before the switch could be made, and not a single person looking at this saw families at risk. They saw dollar signs. Therefore, it's not just appropriate, but morally incumbent, on the state to restore clean water to families in Flint. These families are paying for the bad decisions made by the governor and his appointed administrators. It would be wrong to expect these families to pay extra to fix those mistakes."

According to a news release from Greimel's office, Under House Bill 4102, a supplement budget bill, the state will appropriate:

- \$6 million to connect Flint to the Detroit Water and Sewerage Department.
- \$1 million to test Flint water samples.
- \$1 million to purchase and install water filters.
- \$850,000 to the childhood lead program.
- \$500,000 to support programs.
- Add three positions within the Michigan Department of Environmental Quality and Licensing and Regulatory Affairs to help oversee Flint's water system.

Walling echoed Greimel's sentiment, saying while he appreciated the quick action, the situation should never have happened.

"I appreciated the Legislature and the state's quick action on the issues when it was brought before them, but this was a crisis that should have never happened in the first place," Walling said. "Gov. Snyder and the emergency managers caused this problem, plain and simple, and we're making sure that they fix it."

Walling said the money from the state to reconnect to Detroit is just a start. He said he is going to demand tens of millions in additional investments in Flint's infrastructure and for the replacement of lead service lines.

The precautionary measures, such as water filters, currently being taken by residents should remain in place in the coming months, Walling said.

"I've also been heartened by the incredible outpouring of support from the entire community. I again want to say thank you," Walling said. "We came together, we provided for the needs of our most vulnerable kids and families, and those precautionary measures need to stay in place in the coming weeks and months. It's going to take time for the Detroit water to move through the system, for our pipes to be healed, for our families and our children who have been affected to be healed."

The reconnection comes after months of controversy after the city disconnected from Detroit in April 2014 and began drawing its water from the Flint River to save money.

Residents with questions or concerns about the hydrant flushing in their area can call the Water Service Center at 810-766-7202. Continuing information on water will be provided via the City of Flint's website, cityofflint.com.

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EXHIBIT 41

3/18/2016

Flint Drinking Water Response | US EPA



Flint Drinking Water Response

Advice to Flint Residents

Until further notice, people should only consume filtered or bottled water. Filtered water is a safe option only if your filter is certified to remove lead and you follow all the instructions on how to use it/when to replace it.

- **For babies under 1 year old:** use only bottled water for water, food and formula

- **For pregnant or breastfeeding women and children under 6 years of age:** bottled water is the safest choice

DO NOT drink unfiltered water. It's not safe!

DO NOT cook or brush teeth with unfiltered water

DO NOT allow babies and children to drink bathwater

DO USE an NSF-certified water filter rated to remove lead

DO RUN cold water throughout the house up to 5 minutes every morning to flush pipes

EVERYONE CAN wash hands, bathe, or shower with unfiltered water

En español

Information for Residents

Advice to Flint Residents

Frequently Asked Questions

Fact Sheets for Flint Residents

EPA Response

Flint Drinking Water Task Force

Flint Water Sampling

Flint Documents

On January 16, 2016, President Obama signed an emergency declaration ordering federal assistance to support state and local response efforts in Flint, Michigan.

3/18/2016

Flint Drinking Water Response | US EPA

The U.S. Department of Health and Human Services (HHS) has been designated the lead federal agency responsible for coordinating federal government response and recovery efforts.

In collaboration with the Federal Emergency Management Agency (FEMA), HHS will identify and mobilize the capabilities of the rest of the federal partners – including the Small Business Administration (SBA), the Environmental Protection Agency (EPA), and the Departments of Housing and Urban Development (HUD), Agriculture (USDA) and Education -- that are already working to help residents in Flint.

The goal of the federal response is to help state and local leaders identify the size and scope of the problem, and work with them to make and execute a plan for mitigation of the short- and long-term health effects of lead exposure.

On October 16, 2015, EPA established the Flint Safe Drinking Water Task Force to provide the Agency's technical expertise through regular dialogue with designated officials from Michigan Department of Environmental Quality and the City of Flint.

Contacts

Questions about Flint drinking water:

flintwater@epa.gov
810-434-5122

Media Inquiries:

flintpio@epa.gov
312-802-3646

Flint Water Sampling

- EPA Filter Evaluation Map
- EPA Lead Assessment Data Map
- EPA Chlorine Residual Screening Map

[More Information](#)

EXHIBIT 42

Office of Mayor Karen W. Weaver, Ph.D.
City of Flint, Michigan, County of Genesee

Declaration of State of Emergency

Authority Emergency Management Act: Michigan Emergency Management Act 390 of 1976

BY THE MAYOR:

Whereas; in accordance with the Michigan Emergency Management Act, I am declaring a State of Emergency for the incorporated boundaries of the City of Flint, Michigan; and

Whereas; the City of Flint has experienced a Manmade disaster by switching to the use of the Flint River before connecting to KWA; and

Whereas; the City of Flint children have experienced increased blood lead levels since the switch to the Flint River; and

Whereas; this damage to children is irreversible and can cause effects to a child's IQ, which will result in learning disabilities and the need for special education and mental health services and an increase in the juvenile justice system; and

Whereas; this will increase the need for foster and adoptive parents as a result of social services needed due to the detrimental effects of the high blood lead levels; and

Whereas; I am requesting that all things be done necessary to address this State of Emergency Declaration, effective immediately; and

Whereas; this action is being taken to protect the health, safety, and welfare of the citizens of Flint; and

Whereas; I request that the Genesee County Board of Commissioners call a Special Meeting no later than the end of December 2015 to take action supporting this State of Emergency; and

Now, Therefore, I, Mayor Karen W. Weaver declare a State of Emergency in the City of Flint, effective, December 14, 2015;

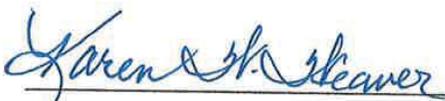

Dr. Karen W. Weaver, Mayor

EXHIBIT 43



STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

PROCLAMATION

DECLARATION OF EMERGENCY

WHEREAS, Section 1 of Article V of the Michigan Constitution of 1963 vests the executive power of the state of Michigan in the Governor; and

WHEREAS, under the Emergency Management Act, Act No. 390 of the Public Acts of 1976, as amended, MCL 30.401 to 30.421, the Governor is responsible for coping with dangers to this state or the people of this state presented by a disaster or emergency or threat thereof, and may issue executive orders and proclamations, having the force and effect of law to implement the Act; and

WHEREAS, under Section 3 of the Emergency Management Act, 1976 Public Act 390, MCL 30.403, the Governor shall, by executive order or proclamation, declare a state of emergency if the Governor finds that an emergency has occurred or that the threat of an emergency exists; and

WHEREAS, on April 25, 2014 the City of Flint, Michigan switched from the Detroit water system to the Flint River as a water source, the harmful effects of untreated water struck the city's water infrastructure, causing leaching of lead into the water which caused damage to the water system and potential negative health impacts to the citizens; and

WHEREAS, the area affected includes parts of the City of Flint, within the County of Genesee; and

WHEREAS, the damaged water infrastructure and leaching of lead into the city's water caused damage to public and private water infrastructure, and has either caused or threatened to cause elevated blood lead levels, especially in the population of children and pregnant women, and causing a potential immediate threat to public health and safety and disrupting vital community services; and

WHEREAS, from October 1, 2015 to this date, the County of Genesee and the City of Flint have taken a number of actions to cope with the situation, including but not limited to, switching back to the Detroit water system on October 16th, declaring local states of emergency, activating the emergency response and recovery aspects of their emergency operations plan, marshaling

and distributing required resources on a city-wide level, and issuing emergency public information and bulletins; and

WHEREAS, local resources have been insufficient to address the situation, and additional assistance from voluntary organizations and the state is required to protect public health, safety, and property, and to lessen or avert the threat of more severe and long lasting impacts to the community;

NOW, THEREFORE, I, RICHARD D. SNYDER, Governor of the state of Michigan, pursuant to the Constitution of the state of Michigan and provisions of Act No. 390 of the Public Acts of 1976, as amended, do hereby proclaim that a state of emergency exists in the aforementioned county and municipality; and

FURTHER, the Emergency Management and Homeland Security Division of the Department of State Police shall coordinate and maximize all state efforts, and may call upon all state departments to utilize resources at their avail to assist in the emergency area pursuant to the Michigan Emergency Management Plan; and

FURTHER, termination of this emergency will occur at such time as the threats to public health, safety, and property caused by the emergency no longer exist and appropriate programs have been implemented to recover from the effects of this emergency, but in no case longer than February 1, 2016, unless extended as provided by Act No. 390.

Given under my hand and the Great Seal of the State of Michigan this 5th day of January in the Year of Our Lord, Two Thousand and Sixteen.



Richard D. Snyder

RICHARD D. SNYDER
GOVERNOR

BY THE GOVERNOR:

Spencer Johnson

SECRETARY OF STATE

FILED WITH SECRETARY OF STATE

ON 1/5/16 AT 4:00pm

EXHIBIT 44



STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

**EXECUTIVE ORDER
No. 2016 – 02**

**ACTIVATION OF THE NATIONAL GUARD
TO ASSIST IN RESPONDING TO THE EMERGENCY RELATING TO
THE CITY OF FLINT'S WATER SYSTEM**

WHEREAS, Section 1 of Article V of the Michigan Constitution of 1963 vests the executive power of the State of Michigan in the Governor; and

WHEREAS, Under Section 12 of Article V of the Michigan Constitution of 1963 the Governor is the Commander-in-Chief of the state armed forces and may call them out to execute the laws; and

WHEREAS, Section 151 of the Michigan Military Act, MCL 32.551, authorizes the Governor to order any members of the organized militia to active state service in the aid of the civil authority in times of public danger, disaster, crisis, catastrophe, or other public emergency within the State; and

WHEREAS, municipal water in the City of Flint showed elevated lead levels after the City of Flint changed its water source from the Detroit water system to its own treatment plant drawing from the Flint River; and

WHEREAS, by Executive Proclamation issued on January 5, 2016, the Governor declared a State of Emergency in the City of Flint and Genesee County; and

WHEREAS, lead can be introduced to humans through water, and elevated lead levels can result in significant health impacts, particularly for children, pregnant women, and the elderly; and

WHEREAS, the State's first priority in addressing this emergency is to limit potential exposure to lead in drinking and cooking water by limiting potential exposure to lead in the City's water system; and

WHEREAS, other priorities include: (1) directly informing as many Flint residents as possible that filters, bottled water, information on lead, water testing kits, and other resources are available; and (2) directly providing resources to Flint residents and following up with those residents to ensure that they have access to safe water, are fully informed, and have their water supply tested. These tasks will require that personnel go door-to-door in large areas of the City of Flint; and

WHEREAS, due to the significant level of human and other resources required for these tasks, additional assistance is needed to supplement existing personnel and equipment; and

WHEREAS, by the Executive Proclamation of Emergency issued on January 5, 2016, the Governor directed that the Emergency Management and Homeland Security Division of the Department of State Police, coordinate and maximize all state efforts, and call upon all state departments and agencies to utilize available resources to assist the City of Flint and Genesee County pursuant to the Michigan Emergency Management Plan;

NOW, THEREFORE, in consequence of the above, I, Richard D. Snyder, Governor of the State of Michigan, pursuant to the Michigan Constitution of 1963, the Michigan Military Act, 1967 PA 150, MCL 32.501 et seq., and the Emergency Management Act, 1976 PA 390, MCL 30.401 et seq., order the following:

1. The Adjutant General of the Michigan National Guard is directed to order to active state service units and individuals of the Michigan National Guard that, in his discretion, he deems appropriate to meet general mission assignments as determined by the Director of the Department of State Police, or her designee.
2. The Director of the Department of State Police, or her designee, shall coordinate and maximize all state efforts, including such units and individuals of the Michigan National Guard that may be activated to state service to assist the City of Flint and Genesee County in accordance with the Michigan Emergency Management Plan.
3. The Michigan National Guard is activated until such time as determined by the Adjutant General, after consultation with the Director of Department of State Police, or her designee.

The Executive Order shall become effective upon filing.

Given under my hand and the Great Seal of the state of Michigan this 12th day of January, in the year of our Lord, Two Thousand Sixteen



Richard D. Snyder
RICHARD D. SNYDER
GOVERNOR

BY THE GOVERNOR:

Guthrie Johnson
SECRETARY OF STATE

FILED WITH SECRETARY OF STATE
ON 1/12/16 AT 9:19 p.m.

EXHIBIT 45

[Home \(/snyder\)](#) [Meet the Governor \(/snyder/0,4668,7-277--264124--,00.html\)](#)
(/snyder/)



Governor Rick Snyder
REINVENTING MICHIGAN
Getting It Right. Getting It Done.

SNYDER (/SNYDER/)

Governor Snyder Requests Support from the Federal Emergency Management Agency

Tuesday, Jan. 12, 2016

National Guard Activated to Assist with Flint's Water Emergency

LANSING, MI - Gov. Rick Snyder today requested support from the Federal Emergency Management Agency (FEMA) to coordinate an interagency recovery plan with other federal agencies to provide resources to Flint.

This request will identify federal agencies that have programs, authorities and/or technical expertise that could be utilized in the ongoing response and recovery efforts in Flint to be made available. Such federal agencies may include the Department of Health and Human Services, Environmental Protection Agency, Department of Housing and Urban Development, and Army Corps of Engineers.

In addition, Snyder today issued an Executive Order activating the Michigan National Guard to assist with distributing supplies at the five water resource sites established in Flint.

"As we work to ensure that all Flint residents have access to clean and safe drinking water, we are providing them with the direct assistance they need in order to stretch our resources further," Snyder said. "The Michigan National Guard is trained and ready to assist the citizens of Flint."

Members of the National Guard are expected to start arriving in Flint as early as Wednesday to assist with response efforts and plan to increase to over 30 personnel by Friday. The support of the National Guard will enable American Red Cross volunteers, who have been staffing the water resource sites since Jan. 9, to join the efforts of the water resource teams going door to door in Flint neighborhoods to distribute bottled water, water filters, replacement cartridges and testing kits.

This is the second time Snyder has activated the National Guard. The first was for the massive Duck Lake Fire in the Upper Peninsula in May 2012.

Under Executive Order 2016-02, the active state service units and individuals in the Michigan National Guard are authorized to assist in maximizing all state efforts to assist the City of Flint and Genesee County in accordance with the Michigan Emergency Management Plan.

Flint residents can continue to pick up free bottled water, water filters, replacement cartridges and home water testing kits at the water resource sites.

On Jan. 5, Governor Snyder declared a state of emergency in the City of Flint at the request of Flint and Genesee County officials.

In accordance with the Michigan Emergency Management Plan, the director of the Michigan State Police, or her designee, is responsible for coordinating all state efforts, including the Michigan National Guard to assist the City of Flint and Genesee County.

Additional information about available resources can be found at www.michigan.gov/flintwater (<http://www.michigan.gov/flintwater>) and by calling 2-1-1.

Related Documents

EO 2016-2 (/documents/snyder/EO_2016-2_510635_7.pdf) 

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Governor's Press Releases
(/snyder/0,4668,7-277-57577_57657---,00.html)
Videos
(http://www.youtube.com/user/290249snyder/feature=watch)
Half-staff Flag Alerts
(/flaghonors)

Help & Contacts

Share Your Opinion
(https://sombgovweb.state.mi.us/GovRelations/ShareOpinion.aspx)
Scheduling Requests
(https://sombgovweb.state.mi.us/GovRelations/SchedulingRequest.aspx)
Internships
(/snyder/0,4668,7-277-58104---,00.html)
Request Recognition
(/snyder/0,4668,7-277-57959_63437-290249snyder.html)
Request Assistance
(https://sombgovweb.state.mi.us/GovRelations/CitizenAssistanceRequest.aspx)
Contact the Governor
(/snyder/0,4668,7-277-57827-267869--,00.html)

Services

Order a Flag
(https://sombgovweb.state.mi.us/GovRelations/FlagOrderForm.aspx)
State of MI Mobile Apps
(/GovRelations/SchedulingEventRequest.aspx)
Talent Connect
(http://www.mitalent.org/)
State Job Openings
(http://agency.governmentjobs.com/michigan/default.cfm)
A to Z Online Services
(/som/0,1607,7-192-29929_31966---,00.html)

Michigan Locator

Search any location for services, state parks and recreation or educational entities.

Weather

Radar | Lansing

(http://www.accuweather.com/radar?play=1)

Michigan.gov Home (/) ADA (/adaform) Michigan News (/minewswire)
Policies (/snyder/0,4668,7-277--281460--,00.html)

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EXHIBIT 46

3/18/2016

President Obama Signs Michigan Emergency Declaration | whitehouse.gov

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The White House

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For Immediate Release

January 16, 2016

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President Obama Signs Michigan Emergency Declaration



3/18/2016

President Obama Signs Michigan Emergency Declaration | whitehouse.gov

The President today, in response to a request from the Governor submitted on January 14, 2016, declared that an emergency exists in the State of Michigan and ordered federal aid to supplement state and local response efforts due to the emergency conditions in the area affected by contaminated water.

The President's action authorizes the Department of Homeland Security, Federal Emergency Management Agency (FEMA), to coordinate all disaster relief efforts which have the purpose of alleviating the hardship and suffering caused by the emergency on the local population, and to provide appropriate assistance for required emergency measures, authorized under Title V of the Stafford Act, to save lives and to protect property and public health and safety, and to lessen or avert the threat of a catastrophe in Genesee County.

Specifically, FEMA is authorized to identify, mobilize, and provide at its discretion, equipment and resources necessary to alleviate the impacts of the emergency. Emergency protective measures, limited to direct federal assistance, will be provided at 75 percent federal funding. This emergency assistance is to provide water, water filters, water filter cartridges, water test kits, and other necessary related items for a period of no more than 90 days.

Additionally, the President offered assistance in identifying other Federal agency capabilities that could support the recovery effort but do not require an emergency declaration under the Stafford Act.

W. Craig Fugate, Administrator, Federal Emergency Management Agency (FEMA), Department of Homeland Security, named David G. Samaniego as the Federal Coordinating Officer for federal recovery operations in the affected area.

FOR FURTHER INFORMATION MEDIA SHOULD CONTACT: FEMA NEWS DESK AT (202) 646-3272 OR FEMA-NEWS-DESK@DHS.GOV

###

3/18/2016

President Obama Signs Michigan Emergency Declaration | whitehouse.gov



HOME **BRIEFING ROOM** **ISSUES** **THE ADMINISTRATION** **PARTICIPATE**

1600 PENN

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EXHIBIT 47

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE
WASHINGTON, D.C.

IN THE MATTER OF: : Proceedings Pursuant To
: Section 1431 of the Safe Drinking
City of Flint, Michigan; Michigan : Water Act, 42 U.S.C. § 300i
Department of Environmental :
Quality; and the State of Michigan, : EMERGENCY
: ADMINISTRATIVE ORDER
Respondents. :

I. INTRODUCTION

1. The Safe Drinking Water Act (“SDWA” or “Act”) provides the U.S. Environmental Protection Agency (“EPA” or “Agency”) with the authority to order actions when an imminent and substantial endangerment exists and the actions taken by the state and/or local authorities are inadequate to protect public health. EPA has determined that the City of Flint’s and the State of Michigan’s responses to the drinking water crisis in Flint have been inadequate to protect public health and that these failures continue. As a result, EPA is issuing this SDWA Emergency Order (“Order”) to make sure that the necessary actions to protect public health happen immediately. The Order requires that necessary information be provided promptly to the public in a clear and transparent way to assure that accurate, reliable, and trustworthy information is available to inform the public and decisions about next steps. In addition to the issuance of this Order, EPA will promptly begin sampling and analysis of lead levels in tap water in the City of Flint’s public water system (“PWS”). EPA will publish these sampling results on its website to provide the public with transparency into the process to abate the public health emergency in the City of

Flint. In the coming weeks, EPA may take additional actions under the SDWA to address the situation in the City of Flint.

II. STATUTORY AUTHORITY

2. This Order is issued under the authority vested in the Administrator of the EPA by Section 1431 of the SDWA, 42. U.S.C. § 300i. This Order is issued for the purpose of protecting the health of persons who are supplied drinking water by a PWS with conditions that may present an imminent and substantial endangerment to human health.

III. FINDINGS OF FACT

3. The City of Flint, Michigan (“City”) owns and operates a PWS that provides piped drinking water for human consumption to its nearly 100,000 citizens.
4. From December 2011 through April 2015, an emergency manager was appointed by the State of Michigan (“State”) under Public Act 436 to oversee the management of the City during its financial crisis. During that time, the City became a partner with the Karegnondi Water Authority (“KWA”) and decided to no longer purchase treated drinking water from the Detroit Water and Sewerage Department (“Detroit”).
5. The Michigan Department of Environmental Quality (“MDEQ”) has primary responsibility for the implementation and enforcement of the public water system program in Michigan.
6. Before April 2014, the City purchased finished drinking water from Detroit.
7. On or around April 25, 2014, the City ceased purchasing treated drinking water from Detroit and began drawing water from the Flint River as its source water.

8. Between July and December 2014, the City conducted the first of two rounds of six month lead sampling under the Lead and Copper Rule (“LCR”), 40 C.F.R. § 141.80 *et seq.*
9. The City conducted the second of two rounds of six month lead sampling under the LCR between January and June 2015. These rounds of sampling showed that the levels of lead in the City water supply were rapidly rising.
10. On or about April 24, 2015, MDEQ notified EPA that the City did not have corrosion control treatment in place at the Flint Water Treatment Plant.
11. During May and June, 2015, EPA Region 5 staff at all levels expressed concern to MDEQ and the City about increasing concentrations of lead in Flint drinking water and conveyed its concern about lack of corrosion control and recommended that the expertise of EPA’s Office of Research and Development should be used to avoid further water quality problems moving forward.
12. On July 21, 2015, EPA Region 5 discussed with MDEQ the City’s lead in drinking water issues and implementation of the LCR and MDEQ agreed to require corrosion control as soon as possible.
13. On August 17, 2015, MDEQ sent a letter to the City recommending the City implement corrosion control treatment as soon as possible, but no later than January 1, 2016, and to fully optimize its treatment within six months.
14. On August 31, 2015, EPA Region 5 had a call with MDEQ to discuss outreach to citizens to reduce exposures to high lead levels in Flint drinking water and reiterate EPA’s offer of technical assistance in implementing corrosion control treatment.

15. On September 3, 2015, Flint Mayor Dayne Walling announced that the City will implement corrosion control treatment and invited EPA corrosion control experts to join the Flint Technical Advisory Committee (“Flint TAC”).
16. On September 27, 2015, EPA Region 5 Administrator Susan Hedman called MDEQ Director Dan Wyant to discuss the need for expedited implementation of corrosion control treatment, the importance of following appropriate testing protocols, urged MDEQ to enlist Michigan Department of Health and Human Services’ involvement and discussed options to provide bottled water/premixed formula/filters until corrosion control is optimized.
17. On October 7, 2015, the Flint TAC met about the City’s corrosion control and treatment. The Flint TAC recommended returning to Detroit water as the best course of action for the City.
18. On October 16, 2015, EPA established the Flint Safe Drinking Water Task Force (“EPA Flint Task Force”) to provide the Agency’s technical expertise through regular dialogue with designated officials from MDEQ and the City.
19. On or around October 16, 2015, the City switched back to purchasing finished water from Detroit, now called the Great Lakes Water Authority.
20. On November 25, 2015, the EPA Flint Task Force requested information that would allow EPA to determine the progress being made on corrosion control in the City; this information has not been received by EPA. This information includes water quality parameter measurements (pH, total alkalinity, orthophosphate, chloride, turbidity, iron, calcium, temperature, conductivity) in the distribution system. The EPA Flint Task Force has also made subsequent requests and recommendations.

<http://www.epa.gov/mi/flint-drinking-water-documents> The City is required by its MDEQ permit to monitor for these parameters at 25 sites quarterly and at 10 of these sites weekly. Because the City has not provided the information requested by the EPA Flint Task Force EPA does not have the information that would provide any assurance that contamination in the City's water system has been controlled.

21. On or around December 9, 2015, the City began feeding additional orthophosphate at the Flint Water Treatment Plant to begin optimizing corrosion control treatment. Notwithstanding the orthophosphate addition, high levels of lead and other contaminants are presumed to persist in the City's water system until LCR optimization process, utilizing sampling and monitoring requirements, have confirmed lead levels have been reduced.
22. On December 14, 2015 the City declared an emergency.
23. On January 14, 2016, the Governor of the State requested a declaration of major disaster and emergency and requested federal aid.
24. On January 16, 2016, the President of the United States declared a federal emergency in the City.
25. The presence of lead in the City water supply is principally due to the lack of corrosion control treatment after the City's switch to the Flint River as a source in April 2014. The river's water was corrosive and removed protective coatings in the system. This allowed lead to leach into the drinking water, which can continue until the system's treatment is optimized.
26. Lead occurs in drinking water from two sources: lead in raw water supplies and corrosion of plumbing materials in the water distribution system (i.e., corrosion

byproducts). Most lead contamination is from corrosion byproducts. The amount of lead in drinking water attributable to corrosion byproducts depends on a number of factors, including the amount and age of lead bearing materials susceptible to corrosion, how long the water is in contact with the lead containing surfaces, and how corrosive the water in the system is toward these materials. *Final Rule: Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper*, 56 *Fed. Reg.* 26460, 26463 (June 7, 1991).

27. EPA has set the Maximum Contaminant Level Goal (“MCLG”) at zero for lead because (1) there is no clear threshold for some non-carcinogenic lead health effects, (2) a substantial portion of the sensitive population already exceeds acceptable blood lead levels, and (3) lead is a probable carcinogen. 56 *Fed. Reg.* at 26467. Pregnant women, unborn children, and children under the age of six are particularly sensitive to lead exposure.
28. The concentration of lead in whole blood has been the most widely used index of total lead exposure. Lead exposure across a broad range of blood lead levels has been associated with a spectrum of patho-physiological effects, including interference with heme synthesis necessary in the formation of red blood cells, anemia, kidney damage, impaired reproductive function, interference with vitamin D metabolism, impaired cognitive performance (as measured by IQ tests, performance in school, and other means), delayed neurological physical development, and elevation in blood pressure. 56 *Fed. Reg.* 26467-68.
29. EPA finds that consumption of lead in water contributes to increase in blood lead levels. The Centers for Disease Control and Prevention uses a reference level of 5

micrograms per deciliter to identify children with elevated blood lead levels. This new level is based on the U.S. population of children ages 1 – 5 years who are in the highest 2.5% of children when tested for lead in their blood.

http://www.cdc.gov/nceh/lead/acclpp/blood_lead_levels.htm

30. Under the LCR, the “action level” for lead is the concentration of lead at which corrective action is required. 40 C.F.R. § 141.2.
31. EPA’s LCR includes requirements for corrosion control treatment, source water treatment, lead service line replacement, and public education. These requirements are triggered, in some cases, by lead and copper action levels measured in samples collected at consumers’ taps. The action level for lead is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during the monitoring period conducted in accordance with 40 C.F.R. § 141.86 is greater than 0.015mg/L (i.e., if the “90th percentile” is greater than 0.015mg/L). 40 C.F.R. § 141.80(c). When a large system exceeds this action level, the LCR requires the system to: 1) implement public education requirements; 2) implement all applicable source water treatment requirements specified by the primacy agency under 40 C.F.R. § 141.83; and (3) if the system is exceeding the action level after implementation of all applicable corrosion control and source water treatment requirements, then the system must replace lead service lines in accordance with 40 C.F.R. § 141.84.
32. All large systems (over 50,000 persons) are required to either complete corrosion control treatment steps in 40 C.F.R. § 141.91(d) or be deemed to have optimized corrosion control treatment under 40 C.F.R. § 141.81(b)(2) or (b)(3).

33. Based on the foregoing, EPA finds that water provided by the City to residents poses an imminent and substantial endangerment to the health of those persons. Those persons' health is substantially endangered by their ingestion of lead in waters that persons legitimately assume are safe for human consumption. This imminent and substantial endangerment will continue unless preventive actions are taken.
34. The City, MDEQ and the State have failed to take adequate measures to protect public health. Although some progress has been made in addressing the drinking water crisis in the City, there continue to be delays in responding to critical EPA recommendations and in implementing the actions necessary to reduce and minimize the presence of lead and other contaminants in the water supply both now and in the near future. The Respondents have failed and continue to fail to provide the information necessary for EPA, the EPA Flint Task Force and the City's PWS customers to fully understand and respond promptly and adequately to the current deficiencies. EPA remains concerned that the City lacks the professional expertise and resources needed to carry out the recommended actions and to safely manage the City's PWS.
35. In accordance with SDWA Section 1431(a), 42 U.S.C. § 300i(a), to the extent practicable EPA has consulted with state and local authorities regarding the information on which this EPA action is based.
36. This Order and the requirements set forth herein are necessary to ensure adequate protection of public health in the City.

37. As a result of the emergency, EPA will promptly begin sampling and analysis of lead levels and other contaminants in the City to assure that all regulatory authorities and the public have accurate and reliable information.
38. EPA will make its LCR sampling results available to the public on the Agency's website.

IV. CONCLUSIONS OF LAW

39. Section 1431 (a), 42 U.S.C. § 300i(a), specifies that the EPA Administrator, upon receipt of information that a contaminant which is present in or likely to enter a public water system that may present an imminent and substantial endangerment to the health of persons, and that State and local authorities have not acted to protect the health of such persons, may take such actions as she may deem necessary in order to protect the health of such persons.
40. The City owns and operates a "public water system" within the meaning of SDWA Section 1401.
41. MDEQ is an instrumentality of the State.
42. The City, State and MDEQ are "persons" as defined in SDWA Section 1401(c)(12).
43. Respondents' cessation of purchased water from Detroit and switch to the Flint River as its source water triggered a cascade of events that directly resulted in the contribution of lead and other "contaminants" that are within the meaning of SDWA Sections 1401(c)(6) and 1431 of the Act.
44. The contaminants introduced by Respondents are present in or likely to enter a PWS.
45. Based upon the information and evidence, EPA determines that Respondents' actions that resulted in the introduction of contaminants, which entered a public water system

and have been consumed and may continue to be consumed by those served by the public water system, present an imminent and substantial endangerment to the health of persons.

46. The lead and other contaminants will remain present in the PWS and will continue to present an imminent and substantial endangerment to the health of persons until the underlying problems with the corrosion control treatment and fundamental deficiencies in the operation of the PWS are corrected and sampling results confirm the lead and other contaminants are adequately treated.

47. Respondents have failed to take adequate measures to protect public health.

48. The EPA has consulted with the State and local authorities, to the extent practicable, to confirm the correctness of the information upon which this ORDER is based and to ascertain the actions which such authorities are or will be taking. All requisite conditions have been satisfied for the EPA action under SDWA Section 1431(a)(1), 42 U.S.C. § 300i(a)(1).

49. The EPA finds that there is an imminent and substantial endangerment to the people drinking water from the public water system of the City of Flint and that the actions taken by the State and/or the City are inadequate to protect public health. The actions required by this ORDER are necessary to protect the health of persons who are currently consuming or who may consume or use water from the City's PWS.

V. ORDER

Based on the foregoing Findings and Conclusions, and pursuant to Section 1431 of the Act, 42 U.S.C. 300i,

IT IS ORDERED:

Intent to Comply

50. Within one day of the effective date of this Order, Respondents shall notify EPA in writing of their intention to comply with the terms of this Order. For the purposes of this Order, “day” shall mean calendar day.

Reporting Requirements

51. Within five days of the effective date of this Order, the State shall create, and thereafter maintain, a publicly available website. Respondents must post on this website all reports, sampling results, plans, weekly status reports on the progress of all requirements and all other documentation required under this Order. The Respondents shall not publish to this website any personally identifiable information.

Response to EPA Flint Task Force Recommendations, Requests for Information and Sampling Activities

52. The Respondents shall within 10 days of the effective date of this Order respond in writing, in accordance with Paragraph 51, to all of the EPA Flint Task Force’s requests and recommendations made on November 25, 2015 and subsequent dates. The response shall include all actions Respondents have taken and intend to take in response to those requests and recommendations. The EPA Flint Task Force’s requests and recommendations are publicly available at <http://www.epa.gov/mi/flint-drinking-water-documents>.
53. Within 10 days of the effective date of the Order the Respondents shall provide the following information in accordance with Paragraph 51:
- a. Water quality parameter measurements (pH, total alkalinity, orthophosphate, chloride, turbidity, iron, calcium, temperature, conductivity) in the distribution

- system. The City is required by the MDEQ permit to monitor for these parameters at 25 sites quarterly and at 10 of these sites weekly;
- b. All lead in water testing results for the City since January 2013, including those not used for LCR compliance; and
 - c. Identification of areas (e.g., zip codes, neighborhoods) in the City with elevated blood lead levels.
54. Within 10 days of the effective date of the Order, the Respondents shall provide, without publicly disclosing any personally identifiable information, the following directly to the EPA in accordance with Paragraph 66:
- a. Existing inventory of homes with lead service lines in Excel or a similar format;
 - b. Addresses of homes that have had water service interruptions or street disturbances (e.g., water main breaks, road/sidewalk construction, etc.) within the last year; and
 - c. Addresses of currently unoccupied homes.
55. Respondents shall cooperate with EPA as the Agency conducts LCR sampling and other diagnostic activities in the City.

Treatment and Source Water

56. To ensure that treated water meets finished water quality goals and is consistently maintained throughout the distribution system, that existing and potential plant operational and mechanical start-up issues are identified and addressed, and that water plant operations staff are proficient in treating the existing and new source water, Respondents shall comply with Paragraphs 57, 58 and 59.

57. Respondents shall maintain chlorine residual in the distribution system in accordance with SDWA and the National Primary Drinking Water Regulations (“NPDWRs”).
58. The City shall continue to add corrosion inhibitors (e.g., orthophosphate booster) at levels sufficient to re-optimize corrosion control in the distribution system.
59. To address optimization of corrosion control for the system as operated with its current water source, within 14 days of the effective date of this Order the Respondents shall submit to MDEQ and post in accordance with Paragraph 51:
- a. Submit a plan and schedule to the MDEQ to review and revise as needed designated optimal corrosion control and water quality parameters as well as monitoring plans for LCR compliance and all other monitoring plans developed to ensure that the treatment plant is consistently and reliably meeting plant performance criteria and all other NPDWRs;
 - b. Submit a sampling plan for daily monitoring of water quality parameters in the distribution system with results compiled in a weekly report in an approved format; and
 - c. Submit an operations plan for the corrosion control equipment (storage day tanks, feed/injection systems), with results compiled in a weekly format, that includes monitoring, calibration, verification (pump catch, etc.) as well as daily monitoring of finished water corrosion control parameters. Results shall be submitted and posted weekly.
60. Respondents shall not effectuate a transition to a new water source for the City’s PWS (e.g., from KWA) until such time as they have submitted a written plan, developed through consultation with appropriate experts and after providing adequate

advanced notice and an opportunity for public comment, to MDEQ and in accordance with Paragraph 51, demonstrating that the City has the technical, managerial and financial capacity to operate its PWS in compliance with SDWA and the NPDWRs and that necessary infrastructure upgrades, analysis, and testing have been completed to ensure a safe transition. Such plans shall include, but not be limited to, provisions addressing:

- a. The impacts on corrosion control for any new source water and an operations plan for periodic use of existing sources of water;
- b. Completion of corrosion control study for any new sources;
- c. Implementation of a "performance period" that allows for the demonstration of the adequacy of treatment of the new water source to meet all NPDWRs before it can be distributed to residents; and
- d. The City's technical, managerial and financial capacity to meet SDWA's applicable requirements, including the NPDWRs, during and after the transition to any new water source.

Treatment and Distribution System Management

61. Within 15 days of the effective date of this Order, the City must demonstrate, and the MDEQ and State must ensure, the City has the necessary, capable and qualified personnel required to perform the duties and obligations required to ensure the PWS complies with the SDWA and the NPDWRs.
62. To ensure the City's PWS is adequately operated to meet SDWA and all NPDWRs, within 30 days of the effective date of this Order, the Respondents shall submit the steps they will take to develop and implement a distribution system water quality

optimization plan to MDEQ and in accordance with Paragraph 51, to evaluate and improve its programs that affect distribution system water quality, including: evaluating conditions within the distribution system; creating better documentation; and enhancing communication between the various utility functions that impact distribution system water quality. The MDEQ must ensure that this plan is adequate to ensure SDWA compliance and the State must ensure it is executed.

Independent Advisory Panel (“IAP”)

63. Within seven days of the effective date of this Order, the MDEQ and State, with the City’s input and concurrence, shall engage a panel of independent, nationally-recognized experts on drinking water treatment, sampling, distribution system operation, and members of the affected community to advise and make public recommendations to the City on steps needed to mitigate the imminent and substantial endangerment to the health of persons and general operation of the City’s PWS to ensure compliance with SDWA and the NPDWRs.
64. The charge to the IAP will include the following:
 - a. Make recommendations to the Respondents, and for consideration by the EPA, to ensure the safe operation of the City’s PWS.
 - b. Make other recommendations to the Respondents, and for consideration by the EPA, to better serve the community served by the City’s PWS.

VI. PARTIES BOUND

65. The provisions of this Order shall apply to and bind Respondents and their officers, employees, agents, successors and assigns.

VII. GENERAL PROVISIONS

66. All submittals and inquiries pursuant to this Order shall be addressed to:

Mark Pollins, Director
Water Enforcement Division
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
William Jefferson Clinton South Building
1200 Pennsylvania Avenue NW
Room 3104
Washington, DC 20460
pollins.mark@epa.gov

67. All plans, reports, notices or other documents submitted by Respondents under this Order shall be accompanied by the following statement signed by a responsible official.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

68. Record preservation. Respondents shall retain, during the pendency of this Order, and for a minimum of six years after its termination, all data, records and documents in its possession or control, or which comes into its possession or the possession of its divisions, officers, directors, employees, agents, contractors, successors, and assigns, which relate in any way to this Order. After the above mentioned six year period, Respondents shall provide written notification to EPA 60 calendar days before the destruction of any data, records, or documents that relate in any way to this Order or its implementation. At the EPA's request, Respondents shall then make records available to the EPA for inspection and/or retention, or shall provide copies of any such records to EPA before discarding.

69. Within 10 days of the effective date of this Order, or at the time of retaining any agent, consultant, or contractor for the purpose of carrying out terms of this Order, Respondents shall enter into an agreement with any such agents, consultants, or contractors whereby such agents, consultants, or contractors will be required to provide Respondents a copy of all documents produced under this Order.
70. EPA retains all of its information gathering and inspections authorities and rights, including the right to bring enforcement actions related thereto, under SDWA and any other applicable statutes or regulations.
71. Pursuant to SDWA Section 1431(b), 42 U.S.C. § 300i, in the event Respondents violate, fail or refuse to comply with any of the terms or provisions of this Order, EPA may commence a civil action in U.S. District Court to require compliance with this Order and to assess a civil penalty of up to \$21,500 per day of violation under SDWA, as adjusted by the Federal Civil Penalties Inflation Adjustment Act of 1990, amended by the Debt Collection Improvement Act of 1996, and the subsequent Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19.
72. Compliance with the terms and conditions of this Order shall not in any way be construed to relieve Respondents of their obligations to comply with all applicable provisions of federal, state, or local law, nor shall it be construed to be a determination of any issue related to any federal, state, or local permit. Compliance with this Order shall not be a defense to any actions subsequently commenced for any violation of federal laws and regulations administered by EPA, and it is the responsibility of Respondents to comply with such laws and regulations.

73. EPA may modify this Order to ensure protection of human health and the environment. Such modification shall be in writing and shall be incorporated into this Order.

74. This Order shall constitute final agency action by EPA.

VIII. EFFECTIVE DATE

75. Under SDWA Section 1431, 42 U.S.C. § 300i, this Order shall be effective immediately upon Respondents' receipt of this Order. If modifications are made by the EPA to this Order, such modifications will be effective on the date received by Respondents. This Order shall remain in effect until the provisions identified in the Order have been met in accordance with written EPA approval.

IX. TERMINATION

76. The provisions of this Order shall be deemed satisfied upon Respondents' receipt of written notice from the EPA that Respondents have demonstrated, to the satisfaction of the EPA, that the terms of this Order, including any additional tasks determined by EPA to be required under this Order or any continuing obligation or promises, have been satisfactorily completed.

1/21/16

Date



CYNTHIA GILES
Assistant Administrator
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
William Jefferson Clinton South Building
1200 Pennsylvania Avenue N.W.
Washington, DC 20460

EXHIBIT 48

**BEFORE THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

Petition for Emergency Action under the Safe Drinking Water Act, 42 U.S.C. § 300i, to Abate the Imminent and Substantial Endangerment to Flint, Michigan Residents from Lead Contamination in Drinking Water

Submitted on Behalf of Petitioners Coalition for Clean Water, Concerned Pastors for Social Action, Water You Fighting For, Democracy Defense League Water Task Force, Flint Water Study Team, Michigan Nurses Association, NAACP – Michigan State Conference, Michigan Chapter of the National Conference of Black Lawyers, American Civil Liberties Union of Michigan, and the Natural Resources Defense Council

October 1, 2015

Notice of Petition

Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Mail Code: 1101A
Washington, DC 20460

Susan Hedman
Regional Administrator
U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard
Mail Code: R-19J
Chicago, IL 60604-3507

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2. Letter from Darnell Earley, Emergency Manager, to Sue McCormick, Detroit Water & Sewer Department (Mar. 7, 2014)
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The residents of Flint, Michigan have been and continue to be exposed to dangerous levels of lead in their drinking water. Monitoring results confirm that, in many instances, these levels are well above the threshold set by the U.S. Environmental Protection Agency (EPA) that triggers mandatory corrective action by public water systems. The City of Flint and the Michigan Department of Environmental Quality (MDEQ) have failed to address this public health crisis, despite their awareness of these monitoring results and data showing increasing blood lead levels in children residing in Flint.

The Coalition for Clean Water, Concerned Pastors for Social Action, Water You Fighting For, Democracy Defense League Water Task Force, Flint Water Study Team, Michigan Nurses Association, NAACP – Michigan State Conference, Michigan Chapter of the National Conference of Black Lawyers, American Civil Liberties Union of Michigan, and Natural Resources Defense Council (collectively, Petitioners) petition EPA to use its emergency powers under the Safe Drinking Water Act (SDWA or the Act), 42 U.S.C. § 300i, to take action to abate the imminent and substantial endangerment to human health caused by lead contamination in Flint’s drinking water. As Petitioners demonstrate below, this contamination meets the SDWA requirements for immediate action by EPA and requires a comprehensive federal response.

I. Background

Water-quality problems have plagued Flint’s water system since at least April 2014, when the City began using the Flint River as its water source after deciding not to continue purchasing water from Lake Huron through the Detroit Water and Sewerage Department, as it had done for nearly fifty years.¹ In the eighteen months since the switch to Flint River water, the City’s drinking water has been at times discolored, foul smelling, and “laden with sediments.”² Residents report that they have experienced hair loss, skin rashes, and vomiting after drinking the water.³ In the summer of 2014, the City was forced to issue several boil-water notices after tap water tested positive for total coliform bacteria, which

¹ See Dominic Adams, *Closing the valve on history: Flint cuts water flow from Detroit after nearly 50 years*, Michigan Live, Apr. 25, 2014, http://www.mlive.com/news/flint/index.ssf/2014/04/closing_the_valve_on_history_f.html (attached as Ex. 1); Letter from Darnell Earley, Emergency Manager, to Sue McCormick, Detroit Water & Sewer Dep’t (Mar. 7, 2014) (explaining that the City “has actively pursued using the Flint River as a temporary water source” instead of accepting Detroit’s offer to “provide[] Flint with the option of continuing to purchase water from DWSD”) (attached as Ex. 2).

² See Curt Guyette, *In Flint, Michigan, Overpriced Water is Causing People’s Skin to Erupt in Rashes and Hair to Fall Out*, The Nation, July 16, 2015, <http://www.thenation.com/article/in-flint-michigan-overpriced-water-is-causing-peoples-skin-to-erupt-and-hair-to-fall-out/> (attached as Ex. 3); Wenonah Hauter, *Flint’s Brown Water Blues*, Huffington Post, July 10, 2015, http://www.huffingtonpost.com/wenonah-hauter/flints-brown-water-blues_b_7765132.html (attached as Ex. 4).

³ Laura Gottesdiener, *Flint, Mich., Residents find state water control hard to swallow*, Al Jazeera America, Apr. 3, 2015, <http://america.aljazeera.com/articles/2015/4/3/flint-residents-find-state-water-control-hard-to-swallow.html> (attached as Ex. 5).

suggested a possible “pathway for pathogens and fecal contamination” to enter the water system.⁴

The City’s subsequent treatment of the water to kill disease-carrying pathogens resulted in elevated levels of total trihalomethanes (TTHM), a byproduct of disinfection.⁵ Drinking water with TTHM levels that exceed the federal limit can cause “liver, kidney, or central nervous system problems and increased risk of cancer.”⁶ In response to the City’s water problems, local hospitals, schools, and museums began using bottled water instead of tap water.⁷ Some grocery stores reduced the price of bottled water and “sponsored community giveaways of bottled water to low income residents.”⁸

Flint River water is also highly corrosive, causing dangerous amounts of lead to leach out of pipes and into the City’s water system.⁹ Recent sampling has shown that lead is present in Flint’s water system at levels well above 15 parts per billion (ppb), the “action level” for lead under the SDWA.¹⁰ These high lead levels put residents at risk of increased lead exposure, which can cause a broad array of serious, irreversible health effects, including cognitive impairment, decreased red blood cell survival, kidney damage, coronary heart disease, and impaired reproductive function.¹¹

⁴ Ron Fonger, *Flint issues boil water advisory for section of the city after positive test result for total coliform bacteria*, Michigan Live, Sept. 5, 2014, http://www.mlive.com/news/flint/index.ssf/2014/09/flint_issues_boil_water_adviso.html (attached as Ex. 6).

⁵ Robin Erb, *Who wants to drink Flint’s water?*, Detroit Free Press, Jan. 23, 2015, <http://www.freep.com/story/news/local/michigan/2015/01/22/water-woes-latest-hit-flint/22193291/> (attached as Ex. 7); Mich. Dep’t of Env’tl. Quality, Violation Notice—Maximum Contaminant Level for Total Trihalomethanes (Dec. 16, 2014) (attached as Ex. 8).

⁶ U.S. EPA, Basic Information about Disinfection Byproducts in Drinking Water, <http://water.epa.gov/drink/contaminants/basicinformation/disinfectionbyproducts.cfm> (last updated Dec. 13, 2013) (attached as Ex. 9); see 40 C.F.R. § 141.64(b).

⁷ Order Den. Mot. for Prelim. Inj. 1, *Coalition for Clean Water v. City of Flint*, No. 15-cv-12084 (E.D. Mich. June 23, 2015), ECF No. 6 (attached as Ex. 10).

⁸ *Id.*

⁹ Marc Edwards, *Flint River water 19X more corrosive than Detroit water for Lead Solder; Now What?*, Flint Water Study (Sept. 11, 2015), <http://flintwaterstudy.org/2015/09/test-update-flint-river-water-19x-more-corrosive-than-detroit-water-for-lead-solder-now-what/> (attached as Ex. 11); Marc Edwards, *Flint River water is very corrosive to lead, and causing lead contamination in homes*, Flint Water Study (Sept. 2, 2015), <http://flintwaterstudy.org/2015/09/flint-rivers-water-is-very-corrosive-to-lead-and-causing-lead-contamination-in-homes/> (attached as Ex. 12). The river water is so corrosive that in October 2014, a local GM engine plant decided to switch back to Lake Huron water to avoid damage to equipment at the plant from corrosion. Brianna Owczarzak, *GM says no to Flint water*, WNEM, Oct. 14, 2014, <http://www.wnem.com/story/26785625/gm-says-no-to-flint-water> (attached as Ex. 13).

¹⁰ 40 C.F.R. § 141.80(c)(1).

¹¹ See, e.g., U.S. EPA, Integrated Science Assessment for Lead tbl.ES-1 (June 2013) (attached as Ex. 14) (summarizing health effects of lead exposure); U.S. EPA, Basic

The City of Flint and the Michigan Department of Environmental Quality (MDEQ) have been aware of independent monitoring results showing exceedingly high lead levels in the City's drinking water for months.¹² Despite increasing public concern about the safety of the City's drinking water, neither the City nor MDEQ has taken the actions necessary to meaningfully address the problem. The City has not implemented *any* measures to treat the highly corrosive Flint River water to reduce the amount of lead leaching from service pipes.¹³ And MDEQ refuses to use its enforcement authority under the SDWA or state law to require Flint to employ corrosion control measures or provide alternative safe water supplies.¹⁴

When state and local authorities fail to adequately address a public health crisis, the SDWA empowers EPA to act. Section 1431 of the Act vests EPA with broad emergency authority to address endangerments to public health from contaminated drinking water. The EPA Administrator may use these emergency powers "upon receipt of information that a contaminant which is present in or is likely to enter a public water system . . . may present an imminent and substantial endangerment to the health of persons, and that appropriate State and local authorities have not acted to protect the health of such persons."¹⁵ Once the Administrator receives this information, she may "take such actions as [s]he may deem necessary in order to protect [public] health."¹⁶ These actions "may include (but shall not be limited to) . . . issuing such orders as may be necessary to protect the health of persons who are or may be users of such system (including travelers), including

Information About Lead in Drinking Water, <http://water.epa.gov/drink/contaminants/basicinformation/lead.cfm> (last updated June 26, 2015) (explaining that "[i]nfants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development," and that "[a]dults who drink this water over many years could develop kidney problems or high blood pressure") (attached as Ex. 15); *see also* National Ambient Air Quality Standards for Lead, 80 Fed. Reg. 278, 290 (Jan. 5, 2015).

¹² *See, e.g.*, Email from Jennifer Crooks, U.S. EPA, to Stephen Busch, MDEQ, and Mike Prysby, MDEQ (Feb. 26, 2015) (describing "[b]ig worries" for high lead test results at a Flint resident's home) (attached as Ex. 16).

¹³ The City's plan to implement corrosion control measures within thirty to sixty days is inadequate to address the ongoing endangerment. *See* City of Flint, City of Flint Issues Lead Advisory (Sept. 25, 2015), <https://www.cityofflint.com/2015/09/25/city-of-flint-issues-lead-advisory/> (attached as Ex. 17).

¹⁴ *See* Mich. Comp. Laws Ann. §§ 325.1015(1) ("When considered necessary for protection of the public health, the department shall notify a supplier of water of the need to make changes in operations, to provide treatment, [or] to make structural changes in existing systems . . . as necessary to produce and distribute an adequate quantity of water meeting the state drinking water standards."), (3) ("If a public water supply poses an imminent hazard to the public health, the department may issue an emergency order immediately, . . . requiring such action as the department determines is necessary to protect the public health.").

¹⁵ 42 U.S.C. § 300i(a).

¹⁶ *Id.*

orders requiring the provision of alternative water supplies by persons who caused or contributed to the endangerment.”¹⁷ EPA has, in the past, used its emergency powers to issue orders to provide alternative safe water sources to community members, require public notice of the drinking water hazard, require contributors to the hazard to treat or otherwise mitigate the hazardous conditions, and require additional monitoring and data-collection activities.¹⁸

As Petitioners demonstrate below, the lead contamination in Flint’s drinking water meets the prerequisites that authorize EPA to take emergency action under the SDWA.

II. Interests of Petitioners

Petitioners are community groups and advocacy organizations seeking safe and clean water for all residents in Flint. For instance, the Coalition for Clean Water (Coalition), which includes Concerned Pastors for Social Action, Water You Fighting For, and Democracy Defense League Water Task Force, among other community members, has urged city and state officials for months to address Flint’s water-quality problems. The Coalition filed a lawsuit in June 2015 in the Circuit Court for the County of Genesee seeking declaratory, injunctive, and other relief relating to Flint’s water-quality problems.¹⁹ In August 2015, Food and Water Watch, Water You Fighting For, and the Coalition for Clean Water collected more than 26,000 signatures on a petition to Mayor Dayne Walling asking the City to end its use of the Flint River as a drinking water source.²⁰ Community members have also organized marches²¹ and met with City Council²² to raise concerns about the quality of Flint’s drinking water. These advocacy activities fueled awareness and concern

¹⁷ *Id.*

¹⁸ See H.R. Rep. No. 93-1185, 1974 U.S.C.C.A.N. 6454, 6487 (1974); *In re Yakima Valley Dairies*, Admin. Order on Consent (U.S. EPA Region 10, Mar. 5, 2013), http://www.epa.gov/region10/pdf/sites/yakimagw/consent_order_yakima_valley_dairies_march2013.pdf (attached as Ex. 18).

¹⁹ Compl., *Coalition for Clean Water v. City of Flint*, No. 104900-cz (Mich. Cir. Ct. June 5, 2015) (attached as Ex. 19).

²⁰ Ron Fonger, *Groups collect 26,000 signatures to end use of Flint River for Water*, Michigan Live, Aug. 31, 2015, http://www.mlive.com/news/flint/index.ssf/2015/08/groups_delivering_26000_signat.html#incart_river (attached as Ex. 20); Ron Fonger, *Flint mayor accepts petitions but not call to end use of Flint River*, Michigan Live, Aug. 31, 2015, http://www.mlive.com/news/flint/index.ssf/2015/08/flint_mayor_accepts_petitions.html (attached as Ex. 21).

²¹ William E. Ketchum III, *People take to streets to protest Flint water quality*, Michigan Live, Feb. 14, 2015, http://www.mlive.com/news/flint/index.ssf/2015/02/flint_residents_protest_citys.html (attached as Ex. 22).

²² AP, *Flint city councilman: ‘We got bad water,’* Detroit Free Press, Jan. 14, 2015, <http://www.freep.com/story/news/local/michigan/2015/01/14/flint-water-resident-complaints/21743465/> (attached as Ex. 23).

among residents and some elected officials in Flint,²³ but have not resulted in any comprehensive action by the City or the State.

III. Lead present in and likely to continue to enter Flint's water system presents an imminent and substantial endangerment to human health

A. Lead is present in and likely to continue to enter Flint's water system

Flint's residents face ongoing endangerment from lead in their drinking water. Recent sampling data show that dangerously high levels of lead are present in and will likely continue to enter Flint's water system.²⁴ In August and September 2015, Dr. Marc Edwards, a water resources engineering professor at Virginia Tech, tested 252 drinking water samples collected from Flint residences. Edwards found that *ten percent* of these samples had lead levels of 25 ppb or more, substantially in excess of the federal action level of 15 ppb.²⁵ Several samples exceeded 100 ppb, and one sample exceeded 1000 ppb.²⁶ Edwards' sampling data show that lead—a contaminant under the SDWA²⁷—is present in Flint's water system.

The results of Edwards' testing are even more concerning because the sampling did not target high-risk residences, as the City is required to do under the Lead and Copper Rule.²⁸ Because lead levels in a water system are not evenly distributed, EPA requires monitoring for lead under the SDWA to target high-risk residences, "to better ensure that high levels of lead are detected and that the system institutes treatment that provides

²³ See Letter from Jim Ananich, Mich. Sen. Minority Leader and Sheldon Neeley, Phil Phelps, Mich. State Representatives, to Dan Wyant, MDEQ (Sept. 10, 2015) (attached as Ex. 24); Letter from U.S. Representative Dan Kildee, U.S. Representative, to Adm'r Gina McCarthy, U.S. EPA, and Director Dan Wyant, MDEQ (Sept. 9, 2015) (attached as Ex. 25).

²⁴ Flint's water system is a "public water system" for purposes of the SDWA because it provides water for human consumption to more than twenty-five individuals. 42 U.S.C. § 300f(4).

²⁵ *Flint Town Hall Meeting Presentation and Distribution of lead results across Flint by ward and zip codes*, Flint Water Study (Sept. 16, 2015), <http://flintwaterstudy.org/2015/09/distribution-of-lead-results-across-flint-by-ward-and-zip-codes/> (attached as Ex. 26); Siddhartha Roy, *Flint Water Study Updates for the Citizens of Flint* (Sept. 15, 2015) (attached as Ex. 27); Ron Fonger, *Virginia Tech professor says Flint's tests for lead in water can't be trusted*, Michigan Live, Sept. 15, 2015, http://www.mlive.com/news/flint/index.ssf/2015/09/virginia_tech_researcher_says.html (attached as Ex. 28).

²⁶ *Lead testing results for water sampled by residents*, Flint Water Study, <http://flintwaterstudy.org/information-for-flint-residents/results-for-citizen-testing-for-lead-300-kits/> (attached as Ex. 29).

²⁷ See 42 U.S.C. § 300f(6).

²⁸ 40 C.F.R. § 141.86(a)(3)-(5); 56 Fed. Reg. 26,460, 26,514 (June 7, 1991) (adopting approach that "require[s] water systems to collect samples from high-risk residences that are most likely to have lead problems").

uniform and adequate levels of public health protection.”²⁹ Because targeting high-risk residences “means that the detected levels will likely be higher than if sampling were randomly distributed,”³⁰ Edwards’ data showing a 90th percentile lead level of 25 ppb is particularly alarming given that his sampling protocol would be expected to produce *lower* results than the targeted sampling protocol mandated by the Lead and Copper Rule.

The City’s monitoring data confirm that some Flint residents’ water contains lead at concentrations above the federal action level. Several samples collected by the City showed lead levels as high as 397 ppb, 25 times the action level.³¹ Although the City claims that its data show that the 90th percentile lead concentration is lower than the 90th percentile in Edwards’ sampling pool, these differences may be attributable to the sampling methods employed by the City. For instance, the City instructed residents to pre-flush their water for “at least 5 minutes” before collecting the sample.³² Pre-flushing has the effect of reducing the amount of lead in the sample, which is why one of the key steps residents can take to reduce their lead exposure following discovery of a lead problem is to flush their taps prior to consuming tap water.³³ Pre-flushing in sampling results in “significant underestimation of lead levels in drinking water.”³⁴ Pre-flushing is not included in the collection procedures EPA recommends,³⁵ and is contrary to the Lead and Copper Rule’s intent to use worst-case lead and copper sampling data.³⁶ Evidence also shows that in the January to June 2015 monitoring period, the City did not use a pre-developed sampling pool that targeted high-

²⁹ 56 Fed. Reg. at 26,514.

³⁰ *Id.*

³¹ See Email from Jennifer Crooks, U.S. EPA, to Stephen Busch, MDEQ (Mar. 18, 2015) (referring to sample with lead level at 397 ppb) (attached as Ex. 30); Email from Jennifer Crooks, U.S. EPA, to Stephen Busch, MDEQ, et al. (June 4, 2015) (referring to samples showing lead levels 22 ppb and 40 ppb) (attached as Ex. 31); Consumer Notice of Lead & Copper Results in Drinking Water (Feb. 18, 2015) (lead level at 104 ppb) (attached as Ex. 32); see also Mich. Dep’t of Env’tl. Quality, Lead and Copper Report and Consumer Notice of Lead Result Certificate for Community Water Supply (Aug. 20, 2015) (showing six samples with lead levels over the action level (attached as Ex. 33).

³² Drinking Water Lead & Copper Sampling Instructions, *available at* http://www.michigan.gov/documents/deq/Lead_Copper_Sampling_Instructions_329915_7.pdf (attached as Ex. 34).

³³ Memorandum from Miguel A. Del Toral, Regulations Mgr., Ground Water and Drinking Water Branch, U.S. EPA Region 5, to Thomas Poy, Chief, Ground Water and Drinking Water Branch, U.S. EPA Region 5, re High Levels in Flint, Michigan—Interim Report 2 (June 24, 2015) (attached as Ex. 35).

³⁴ *Id.*

³⁵ U.S. EPA, Lead and Copper Rules Monitoring and Reporting Guidance for Public Water Systems 28 (Mar. 2010) (attached as Ex. 36).

³⁶ See Letter from Cynthia C. Dougherty, U.S. EPA, to Ralph Scott, Alliance for Healthy Homes (Sept. 12, 2008) (“[W]e believe that [pre-flushing] goes against the intent of the monitoring protocol, since it changes the normal water use of the homeowners in the sample.”) (attached as Ex. 37).

risk residences and did not sample sites consistently across monitoring periods.³⁷ This likewise may have caused the City's sampling results to underrepresent the 90th percentile lead level in the water system.³⁸

The lead contamination in Flint's water is likely to continue. As EPA has explained, "[t]he amount of lead in drinking water depends heavily on the corrosivity of the water,"³⁹ and testing has shown that Flint River water is highly corrosive. Moreover, the City has no treatment program in place to control the corrosive effects of the water on the City's thousands of lead service lines.⁴⁰

B. Lead in drinking water presents an imminent and substantial endangerment to Flint residents

The endangerment to Flint residents from lead in drinking water is both "imminent" and "substantial."⁴¹ The endangerment to community members' health is imminent because the threat "is present *now*."⁴² Highly corrosive water in the Flint River has been flowing through lead service lines in Flint's water system for more than a year without any corrosion control treatment, and sampling has already shown the existence of dangerously high levels of lead in residents' tap water.

The seriousness of the potential harms from lead exposure renders the endangerment "substantial" for purposes of the SDWA.⁴³ The poisonous effects of lead on "virtually every system in the body," and particularly on the developing brains of young children, are well documented.⁴⁴ "Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement," effects that are irreversible.⁴⁵

³⁷ See *infra* p. 11 & nn. 70-74; 40 C.F.R. § 141.86(a), (b)(4).

³⁸ See *infra* p. 11-12.

³⁹ 56 Fed. Reg. 26,460, 26,466 (June 7, 1991).

⁴⁰ MDEQ, Frequently Asked Questions: Water Lead Levels in the City of Flint (Sept. 2015), https://www.michigan.gov/documents/deq/deq-spotlight-Flint_water_FAQs_500946_7.pdf (stating that Flint has more than 15,000 lead service lines) (attached as Ex. 38).

⁴¹ *Id.* § 300i.

⁴² *Meghrig v. KFC Western, Inc.*, 516 U.S. 479, 486 (1996) (interpreting substantial-and-imminent-endangerment provision in RCRA).

⁴³ *E.g., Me. People's Alliance v. Mallinckrodt, Inc.*, 471 F.3d 277, 288 (1st Cir. 2006).

⁴⁴ Centers for Disease Control and Prevention, Preventing Lead Poisoning in Your Children: Chapter 2 (Oct. 1991), <http://www.cdc.gov/nceh/lead/publications/books/plpyc/chapter2.htm> (attached as Ex. 39); see also 80 Fed. Reg. 278, 290 (Jan. 5, 2015) ("Lead has been demonstrated to exert a broad array of deleterious effects on multiple organ systems."); 56 Fed. Reg. 26,460, 26,467-68 (June 7, 1991).

⁴⁵ Centers for Disease Control and Prevention, *What Do Parents Need to Know to Protect Their Children?* (last updated June 19, 2014), http://www.cdc.gov/nceh/lead/ACCLPP/blood_lead_levels.htm (attached as Ex. 40).

The scientific community has not identified *any* threshold of lead in blood below which there are no adverse health impacts.⁴⁶

Increased lead exposure from drinking water is dangerous because “drinking water can make up 20 percent or more of a person’s total exposure to lead.”⁴⁷ For infants whose diet consists of baby formula made with drinking water, lead in drinking water can make up between forty and sixty percent of total lead exposure.⁴⁸ Lead levels in drinking water above the federal action level have been associated with an increase in the rate of individuals with elevated blood lead levels.⁴⁹ Exposure to lead-contaminated drinking water has also been associated with fetal death and reduced birth rates.⁵⁰ As EPA has recognized, “[i]nfants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development.”⁵¹ In short, there is no safe level of lead in drinking water.⁵²

⁴⁶ Centers for Disease Control and Prevention, National Biomonitoring Program, Factsheet: Lead (last updated Jul. 12, 2013), http://www.cdc.gov/biomonitoring/Lead_Fact_Sheet.html (“No safe blood lead level has been identified.”) (attached as Ex. 41).

⁴⁷ U.S. EPA, Lead and Copper Rule: A Quick Reference Guide for Schools and Child Care Facilities that are Regulated Under the Safe Drinking Water Act (Oct. 2005), http://www.epa.gov/safewater/schools/pdfs/lead/qrg_lcr_schools.pdf (attached as Ex. 42).

⁴⁸ Lead in Drinking Water, Wisc. Dep’t of Nat. Res. 2008), http://dnr.wi.gov/topic/drink_ingwater/documents/forms/lead.pdf (attached as Ex. 43). Several cases have also been reported in which infant formula constituted from lead-contaminated tap water was determined to be the sole cause of childhood lead poisoning. *See, e.g.*, Michael Shannon & John W. Graef, *Lead Intoxication: From Lead-contaminated Water Used to Reconstitute Infant Formula*, 28 *Clinical Pediatrics* (8) 380, 381 (1989) (attached as Ex. 44).

⁴⁹ Ronnie Levin, et al., *Lead Exposures in U.S. Children, 2008: Implications for Prevention*, 116 *Environ. Health Perspect.* (1) 1285-93 (2008), available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2569084/> (attached as Ex. 45); CDC, *Blood Lead Levels in Residents of Homes with Elevated Lead in Tap Water—District of Columbia, 2004*, 53 *MMWR Weekly* (No. 12) 268-70 (Apr. 2, 2004), available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5312a6.htm> (attached as Ex. 46).

⁵⁰ Marc Edwards, *Fetal Death and Reduced Birth Rates Associated with Exposure to Lead-Contaminated Drinking Water*, 48 *Envtl. Sci. & Tech.* 739-40 (2013), available at <http://pubs.acs.org/doi/pdf/10.1021/es4034952> (attached as Ex. 47).

⁵¹ U.S. EPA, Basic Information about Lead in Drinking Water, *supra* note 11.

⁵² *See* Email from Jennifer Crooks, U.S. EPA, to Mike Prysby, MDEQ (Feb. 26, 2015) (“[T]here are no safe levels of lead in drinking water.”) (attached as Ex. 48); City of Flint Issues Lead Advisory, *supra* note 13 (recognizing that “no level of lead is considered safe”). Because no safe level of lead in blood has been identified, EPA promulgated a Maximum Contaminant Level Goal for lead in drinking water of *zero*, reflecting EPA’s determination that a threshold of zero lead in drinking water is the level at which “no known or anticipated adverse effects” on human health will occur, allowing for a margin of safety. *See* 40 C.F.R. §§ 141.2, 141.51(b).

Petitioners have reason to be concerned about the health impacts of increased exposure to lead in drinking water. A recent study conducted by researchers at Flint's Hurley Medical Center found that the rate of Flint children with elevated blood lead levels is rising. An analysis of 1746 Flint children under five years old showed that the proportion of children with elevated blood lead levels has *doubled* in the time since the City changed its drinking water source.⁵³ The study found that the rate of elevated blood lead levels in children under fifteen months is 2.5 times greater after the switch to Flint River water than the rate before the switch.⁵⁴ The study found no corresponding statistically significant increase in the rate of elevated blood lead levels of children living in Genesee County outside of Flint.⁵⁵ Data released by the State confirm that the percentage of Flint children under sixteen with elevated blood levels has risen (from 2.37% to 3.21%) since the switch to Flint River water.⁵⁶

This increased rate of children with elevated blood lead levels is even more alarming because the Flint community may be more at risk for elevated blood lead levels and lead poisoning than communities elsewhere in the country. Michigan ranks fifth worst in the country for harmful exposures to lead.⁵⁷ Low income is a risk factor for lead poisoning, and the proportion of families living below the poverty level in Flint is more than three times the national proportion (35.5% in Flint vs. 11.3% nationally in 2013 estimates).⁵⁸ Living in housing built before 1978 (when the federal ban on high-lead paint went into effect) is also a risk factor, because dust from lead paint continues to be a major source of lead exposure in children.⁵⁹ Nearly 90% of housing in Flint was built before

⁵³ Pediatric Lead Exposure in Flint, MI: Concerns from the Medical Community (PowerPoint Presentation), *available at* <http://flintwaterstudy.org/2015/09/pediatric-lead-exposure-presentation-from-hurley-medical-center-doctors-concerning-flint-mi/> (attached as Ex. 49).

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ Kristi Tanner & Nancy Kaffer, *State data confirms higher blood-lead levels in Flint kids*, Detroit Free Press, Sept. 29, 2015, <http://www.freep.com/story/opinion/columnists/nancy-kaffer/2015/09/26/state-data-flint-lead/72820798/> (attached as Ex. 50).

⁵⁷ Centers for Disease Control and Prevention, *Public Health in Action: Lead Poisoning Prevention in Michigan* (last updated Feb. 4, 2013), http://www.cdc.gov/nceh/information/healthy_homes_lead.htm (attached as Ex. 51).

⁵⁸ 2009-2013 American Community Survey 5-year Estimates, 2013, *available at* <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml> (enter "Flint, MI" in the box under "Community Facts," click on "Income" on left-side bar, then click "Selected Economic Characteristics" under "2013 American Community Survey") (table attached as Ex. 52 compares data from Flint, MI to Michigan and the United States).

⁵⁹ *See, e.g.,* Am. Cancer Soc'y, *Lead, Lead in the Environment*, <http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/lead> (last updated May 27, 2014) (characterizing lead paint as a "major" source of exposure) (attached as Ex. 53).

1978.⁶⁰ These factors show that the risks to Flint residents from lead exposure may be particularly acute.

The monitoring data showing high lead levels in Flint drinking water, combined with the well-known serious adverse health impacts of lead exposure, demonstrate “a substantial likelihood that contaminants capable of causing adverse health effects will be ingested by consumers if preventive action is not taken.”⁶¹ These circumstances constitute an imminent and substantial endangerment warranting emergency federal action.⁶²

IV. Neither the City nor MDEQ has acted to protect Flint residents from continuing health risks of exposure to high lead levels in drinking water

Federal emergency action is necessary because neither the City nor MDEQ has adequately addressed the danger to Flint residents from lead in their drinking water. To date, the local and state response to lead concerns has been, at best, nominal and ineffective.⁶³

The state-appointed emergency manager and MDEQ allowed the City to begin using the Flint River as its water source without adequately ensuring that the system would continue to “operate and maintain optimal corrosion control treatment,” as required by the SDWA.⁶⁴ The Lead and Copper Rule requires states to “review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system.”⁶⁵ But as of March 28, 2014, three weeks before the City planned to start using Flint River water, the City had not even submitted an application to the State for approval to make the change.⁶⁶ A month later, MDEQ had approved the change without requiring the City to implement corrosion control measures, as required by the Lead and

⁶⁰ 2012 Annual Data Report on Blood Lead Levels of Children in Michigan 26 (Apr. 2013), https://www.michigan.gov/documents/mdch/2012AnnualDataReportOnBloodLeadLevels_419508_7.pdf (attached as Ex. 54); see CPSC, *CPSC Announces Final Ban on Lead-Containing Paint* (Sept. 2, 1977), <http://www.cpsc.gov/en/Recalls/1977/CPSC-Announces-Final-Ban-On-Lead-Containing-Paint/> (attached as Ex. 55); Maj. Thomas F. Zimmerman, *The Regulation of Lead-Based Paint in Air Force Housing*, 44 Air Force L. Rev. 169, 175 (1998).

⁶¹ H.R. Rep. No. 93-1185, 1974 U.S.C.A.A.N. 6454, 6488 (July 10, Aug. 15, 1974) (defining when an endangerment may be considered substantial).

⁶² See *Trinity Am. Corp. v. U.S. E.P.A.*, 150 F.3d 389, 399 (4th Cir. 1998) (imminent and substantial endangerment found when “dangerous levels of [a] contaminant[] exist in [the] water supply,” and that the contaminant “pose[s] a great risk to human health”).

⁶³ See *id.* at 397 (explaining that “minor” and “ineffective” action by state and local authorities does not “strip EPA of its statutory emergency powers”).

⁶⁴ 40 C.F.R. § 141.81(b).

⁶⁵ 40 C.F.R. § 141.81(b)(3)(iii).

⁶⁶ Dominic Adams, *State says Flint hasn’t applied for permit to use river as drinking water source*, Michigan Live, Mar. 28, 2014, http://www.mlive.com/news/flint/index.ssf/2014/03/state_says_flint_hasnt_applied_1.html (attached as Ex. 56).

Copper Rule.⁶⁷ When EPA inquired about what the City was doing to control corrosion, MDEQ falsely stated that the City was already operating an “Optimized Corrosion Control Program.”⁶⁸ The opposite was true: as the State later admitted, the City had not implemented any corrosion control treatment measures (and still has not done so).⁶⁹

Further, evidence indicates that the City and MDEQ are either unwilling or unable to conduct tap water monitoring for lead in compliance with federal regulations. As discussed above, statements by a Flint Utilities Administrator suggest that the City did not identify a sampling pool prior to conducting monitoring, as federal law expressly requires. Instead, the Department of Public Works “just thr[ew] out bottles everywhere just to collect as many [samples] as we c[ould].”⁷⁰ The City even asked its own employees and their “family/friends who live in the city” to participate in the sampling group.⁷¹

The City also may not have complied with requirements for targeting high-risk homes, including the requirement that 50% of sampled sites contain lead pipes or copper pipes with lead solder.⁷² The City’s Utilities Administrator conceded that the City was “not really” able to determine that every residence sampled had lead pipes, even though this was what the City affirmatively reported to MDEQ in a monitoring compliance report.⁷³ Further, the City’s monitoring compliance report shows that the City did not meet the deadline to submit its monitoring results and did not comply with the requirement to sample the same sites across monitoring periods.⁷⁴ During the January to June 2015 monitoring period, the City initially sought to obtain 100 samples.⁷⁵ After the City failed to collect that number, MDEQ decided that only sixty samples were required.⁷⁶

⁶⁷ See 40 C.F.R. § 141.81(a)-(b).

⁶⁸ See Email from Stephen Busch, MDEQ, to Jennifer Crooks and Miguel Del Toral, U.S. EPA (Feb. 27, 2015) (“The City of Flint . . . [h]as an Optimized Corrosion Control Program[.]”) (attached as Ex. 57).

⁶⁹ Email from Pat Cook, MDEQ, to Miguel Del Toral, U.S. EPA (Apr. 24, 2015) (“Flint is not currently practicing corrosion control treatment at the [Water Treatment Plant].”) (attached as Ex. 58).

⁷⁰ See 40 C.F.R. § 141.86(a)(1); *Thirst for Truth: Who’s to Blame for Flint Water Crisis?* (ACLU of Michigan, Jul. 28, 2015), available at <https://www.youtube.com/watch?t=9&v=LT09irD2f0Y> (statement of Michael Glasgow, Utilities Administrator).

⁷¹ Email from Michael Glasgow (June 1, 2015) (attached as Ex. 59).

⁷² 40 C.F.R. § 141.86(a)(8).

⁷³ *Thirst for Truth*, supra note 70 (statement of Michael Glasgow, Utilities Administrator, at 5:30-5:45).

⁷⁴ City of Flint Water Plant, Lead and Copper Report and Consumer Notice of Lead Result Certificate for Community Water Supply (Jul. 28, 2015) (checking “no” box in response to question asking whether City used the same sampling sites as the previous monitoring period) (attached as Ex. 60); see 40 C.F.R. §§ 141.86(b)(4); 141.90(a)(1).

⁷⁵ See Email from Adam Rosenthal, MDEQ, to Michael Glasgow, Brent Wright, City of Flint (June 25, 2015) (attached as Ex. 61).

⁷⁶ *Compare id.* (“We hope you have 61 more lead/copper samples collected and sent to the lab by 6/30/15, and that they will be below the AL for lead. As of now with 39 results,

Compliance with the SDWA's monitoring requirements is critical to accurately assessing the levels of lead in Flint's water, and to ensuring implementation of the drinking water standards set forth in the Lead and Copper Rule. Although the serious apparent flaws in the City's testing procedures call into question whether the City is complying with the SDWA, both the City and MDEQ continue to maintain that Flint's water "is meeting state and federal drinking water standards."⁷⁷

Neither the City nor MDEQ has taken measures to broadly provide an alternative, free source of safe drinking water to residents. Instead, state and local authorities have dismissed citizen concerns about lead in drinking water as "near-hysteri[cal]" and "irresponsible."⁷⁸ City officials have encouraged residents to install in-home water filters, flush their taps before using the water, and send their children to school with bottled water, all at the residents' own expense, which is alarming given that there are roughly 14,000 households in Flint with children under 18, and nearly three-quarters of the children in those households receive Supplemental Security Income (SSI), cash public assistance income, or Food Stamp/SNAP benefits.⁷⁹ These remedies are inadequate: filters are expensive, may clog quickly, are of varying effectiveness at removing lead, and require

Flint's 90th percentile is over the AL for lead."), *with* City of Flint, Lead and Copper Report and Consumer Notice of Lead Result Certificate for Community Water Supply, *supra* note 31, at 1 ("Revised report after conference call with DEQ staff . . . [D]ue to population the number of samples required was reduced to 60.").

⁷⁷ Letter from MDEQ to MI State Senators 2 (Sept. 17, 2015) (attached as Ex. 62); City of Flint, *City of Flint Issues Lead Advisory*, *supra* note 13 ("[T]he City is in full compliance with the Federal Safe Drinking Water Act.").

⁷⁸ *Did this Michigan Town Poison its Children?*, U.S. News & World Report, Sept. 24, 2015, <http://www.usnews.com/news/articles/2015/09/25/flint-michigan-children-show-high-levels-of-lead-in-blood> (attached as Ex. 63); Ron Fonger, *Feds sending in experts to help Flint keep lead out of water*, Michigan Live, Sept. 10, 2015, http://www.mlive.com/news/flint/index.ssf/2015/09/university_researchers_dont_dr.html (attached as Ex. 64). The City's statement that it will "work with [MDEQ] on implementing water optimization measures to reduce the corrosive effects of water on older pipes" by 2016 is a hollow promise given the present and continuing exposure to lead and lead's irreversible effects on human health. Ron Fonger, *Flint will have lead-reduction plan for water system by 2016, officials say*, Michigan Live, Sept. 3, 2015, <http://www.mlive.com/news/flint/index.ssf/2015/09/mayor.html> (attached as Ex. 65).

⁷⁹ City of Flint, *City of Flint Issues Lead Advisory*, *supra* note 13; Amanda Emery, *Flint public school students told to bring own water to school*, Michigan Live, Sept. 25, 2015, http://www.mlive.com/news/flint/index.ssf/2015/09/flint_community_schools_asks_s.html (attached as Ex. 66); *see* factfinder.census.gov (2010 data) (enter "Flint, MI" in box under "Community Facts," then click "General Population and Housing Characteristics" under "2010 Census") (attached as Ex. 67); 2009-2013 American Community Survey 5-Year Estimates, Children's Characteristics (2013 estimate), factfinder.census.gov (enter "Flint, MI" in box under "Community Facts," then click "Poverty" on left-side bar, then click "Children Characteristics") (attached as Ex. 68).

ongoing maintenance. Pre-flushing is also imperfect, does not always eliminate lead, and may be prohibitively expensive for many families given Flint's high water rates.⁸⁰

The City's and State's apparent lapses in regulatory compliance, and their failure to take responsibility for responding to the City's lead problems, demand federal intervention.

V. EPA should act immediately to adequately address the public health emergency created by lead in Flint drinking water

Petitioners urge EPA to take all actions necessary to abate the endangerment presented by lead in Flint's drinking water, and to inform Flint residents about the potential hazards of drinking the City's tap water. At minimum, Petitioners request that EPA:

- Immediately order the City and MDEQ to reconnect Flint's water system with water from the Detroit Water and Sewerage Department. EPA should work with the City of Flint, MDEQ, and the Detroit Water and Sewerage Department to facilitate this renewed connection as soon as possible.
- Immediately provide Flint residents with an alternative, free source of safe drinking water that meets EPA standards. This may include providing customers with free bottled water or providing (and routinely maintaining) free in-home and replacement filters that are certified to remove lead by NSF International.⁸¹
- Immediately order the City to advise all Flint water customers to avoid consuming unfiltered water from the City's water system. The notice should warn customers not to use unfiltered Flint water to make baby formula or for children. The notice should inform customers that if they have no alternative water source, they should flush Flint water for *a minimum* of five minutes before

⁸⁰ Dominic Adams, *Flint monthly water and sewer bills highest in Genesee County by \$35*, Michigan Live, June 1, 2014, http://www.mlive.com/news/flint/index.ssf/2014/06/post_386.html (citing Flint bills at \$140/month) (attached as Ex. 69). A state-court judge recently ruled that the Emergency Manager's decision to significantly raise water rates was unlawful. Ron Fonger, *Judge orders Flint to cut water rates 30% in sweeping injunction*, Michigan Live, Aug. 7, 2015, http://www.mlive.com/news/flint/index.ssf/2015/08/flint_ordered_to_cut_water_rat.html (attached as Ex. 70).

⁸¹ See U.S. EPA, Planning for an Emergency Drinking Water Supply (June 2011) (provision of bottled water is a "common federal response" in emergencies) (attached as Ex. 71); *cf.* 40 C.F.R. § 141.101 (allowing public water systems to use bottled water on a temporary basis "to avoid unreasonable risk to health"); U.S. EPA, Memorandum re: Update on Providing Alternative Water Supply as Part of Superfund Response Actions (Sept. 24, 2010), <http://www.epa.gov/superfund/health/conmedia/gwdocs/pdfs/610732.pdf> (allowing delivery of bottled water on a temporary basis in certain circumstances in CERCLA removal or remediation actions) (attached as Ex. 72).

use. EPA should prohibit the City from charging water customers for this flushing time.

- Use its authority under 40 C.F.R. §§ 142.19 and 141.82(i) to review MDEQ's determinations concerning corrosion control requirements for the Flint water system, and issue a federal order establishing the optimal corrosion control treatment requirements for the Flint water system and requiring Flint to immediately comply with these requirements.
- Order the City to conduct continued monitoring for lead and copper in six-month periods in accordance with the procedures set forth in 40 C.F.R. § 141.86. EPA should directly oversee the City's monitoring by ordering the City to submit a Quality Assurance Project Plan (QAPP) to ensure that all information, sample collection, analytical data and resulting decisions are technically sound, scientifically valid, and properly administered. EPA must approve the City's QAPP before the City conducts any additional monitoring. EPA should prohibit the City from conducting reduced monitoring under 40 C.F.R. § 141.86(d)(4) for at least five years.
- Order the City to comply with the public education and supplemental monitoring requirements in 40 C.F.R. § 141.85, including but not limited to immediately notifying consumers of the results of tests completed at their homes or places of business, and providing the public education, monitoring, and notification established in those rules.
- Order any other additional relief that EPA determines is "necessary to protect the health" of Flint residents from lead contamination in drinking water.

VI. Conclusion

For the foregoing reasons, Petitioners respectfully request that EPA take the actions necessary to abate the imminent and substantial endangerment to Flint residents' health from lead contamination in their drinking water.

Dated: October 1, 2015

Respectfully Submitted,

/s/ Pastor Allen Overton
Pastor Allen Overton
COALITION FOR CLEAN WATER

/s/ Pastor Alfred Harris
Pastor Alfred Harris
CONCERNED PASTORS FOR SOCIAL ACTION
2200 Forrest Hill
Flint, Michigan 48504
(810) 394-6787

/s/ Melissa Mays
Melissa Mays
LeeAnne Walters
WATER YOU FIGHTING FOR

/s/ Claire McClinton
Claire McClinton
DEMOCRACY DEFENSE LEAGUE WATER TASK FORCE

/s/ Marc Edwards
Marc Edwards, CEE
Siddhartha Roy
FLINT WATER STUDY TEAM

/s/ Dawn Kettinger
Dawn Kettinger
MICHIGAN NURSES ASSOCIATION

/s/ Yvonne M. White
Yvonne M. White
NAACP – Michigan State Conference

/s/ Jeffrey L. Edison
Jeffrey L. Edison
**MICHIGAN CHAPTER OF THE NATIONAL
CONFERENCE OF BLACK LAWYERS**

/s/ Brooke Tucker

Brooke Tucker
Michael Steinberg
AMERICAN CIVIL LIBERTIES UNION OF MICHIGAN
2966 Woodward Ave.
Detroit, MI 48201
(313) 578-6800

/s/ Dimple Chaudhary

Dimple Chaudhary
Anjali Waikar
Sarah C. Tallman
Evan Feinauer
NATURAL RESOURCES DEFENSE COUNCIL
20 N. Wacker Drive, Suite 1600
Chicago, IL 60606
(312) 663-9900

EXHIBIT 49

3/18/2016

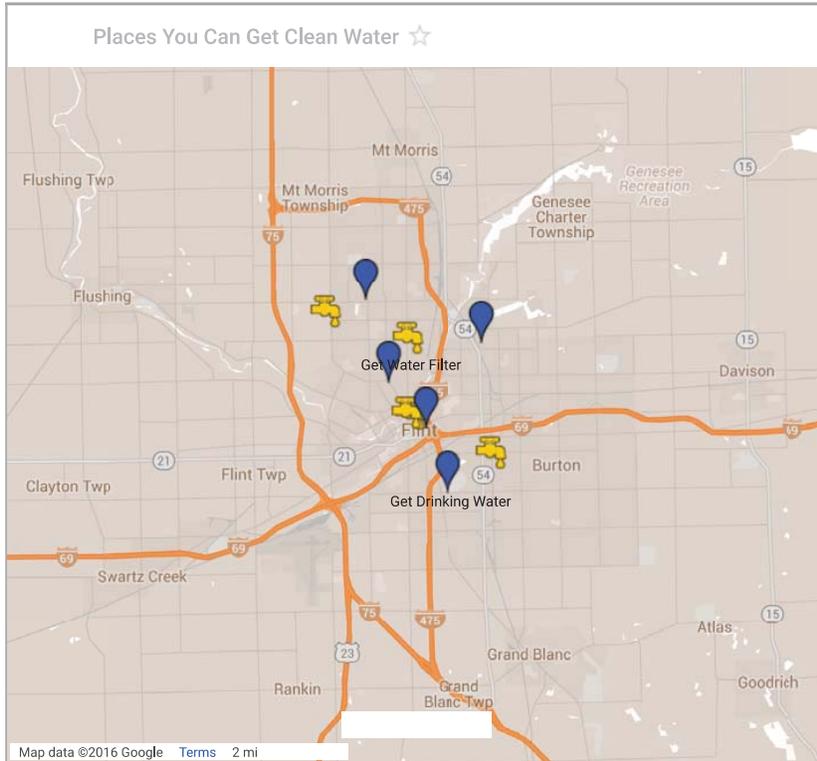
Flint Water - Get Clean Water

Resource Sites (/flintwater/0,6092,7-345-75251_75271---,00.html) Media Center (/flintwater/0,6092,7-345-75251_75414---,00.html)



FLINT WATER (/FLINTWATER/)

MI.gov (/som)



Get Clean Water Locations

Water Resource Sites
Hours of Operation 9 a.m. - 9 p.m.
Free bottles of water, water filters, replacement cartridges, and home water testing kits are available at these locations.

- Fire Station #1
310 East 5th St.
Flint, MI 48502
- Fire Station #3
1525 Martin Luther King Ave.
Flint, MI 48503
- Fire Station #5
3402 Western Rd.
Flint, MI 48506
- Fire Station #6
716 West Pierson Rd.
Flint, MI 48505
- Fire Station #8
202 East Atherton Rd.
Flint, MI 48507

Get Water Filters Locations

Water Filter Pickup Locations
Hours of Operation 9 a.m. - 4 p.m.
See Map (/flintwater/0,6092,7-345-75251_75271---,00.html)

- Michigan Department of Health and Human Services
125 E. Union St.
Flint, MI 48502
- Michigan Department of Health and Human Services
4809 Clio Road
Flint, MI 48504
- Genesee County Community Action Resource Department
2727 Lippincott
Flint, MI 48507
- Genesee County Community Action Resource Department
601 N. Saginaw
Flint, MI 48502
- Flint City Hall
101 Saginaw St #310
Flint, MI 48502

****If you are homebound, don't have transportation to a water resource site, or need other assistance, dial 211.**

3/18/2016

Flint Water - Get Clean Water

Clean Water Resources

Flint Water Sampling Form Instructions 
(/documents/flintwater/Flint_Water_Sampling_Fo
Water Resource Site Flyer 
(/documents/deq/flyerBW_510337_7.pdf)

Free Filters are National Sanitation
Foundation-Approved to Remove Lead
([http://www.nsf.org/newsroom/statement-
regarding-flint-water-system-lead-issue-
and-to-certification-nsf](http://www.nsf.org/newsroom/statement-regarding-flint-water-system-lead-issue-and-to-certification-nsf))

Water Filter Information
(/flintwater/0,6092,7-345-
75251_75315---,00.html)

Donation Guidelines 
(/documents/flintwater/Guidelines_for_Water_Dor

[Michigan.gov Home \(/\)](#) |

[Policies \(/flintwater/0,6092,7-345-75251_75271-281460---,00.html\)](#) | [Michigan News \(/minewswire\)](#) | [ADA \(/adaform\)](#)

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EXHIBIT 50

From: Busch, Stephen (DEQ) <BUSCHS@michigan.gov>
Sent: Friday, February 27, 2015 12:48 PM
To: Crooks, Jennifer; Deltoral, Miguel
Cc: Rosenthal, Adam (DEQ); Poy, Thomas; Porter, Andrea; Prysby, Mike (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: RE: HIGH LEAD: FLINT Water testing Results

Miguel and Jennifer,

Thank you for this information, we will take it under consideration.

The City of Flint:

- Has a 90th percentile lead level of 6.0 ppb based on 100 samples collected in its most recent monitoring period of 7/1/2014 – 12/31/2014, with 2 samples (23 & 37 ppb) over the AL.
- Has a 90th percentile copper level of 110 ppb based on 100 samples collected in its most recent monitoring period of 7/1/2014 – 12/31/2014, with no samples over the Cu AL.
- Has an Optimized Corrosion Control Program
- Conducts quarterly Water Quality Parameter monitoring at 25 sites and has not had any unusual results.
- Has never had a 90th percentile lead AL exceedance
- Continues to meet all applicable plant tap standards and treatment technique requirements at its WTP
- Has developed and implemented an Operational Evaluation of its treatment and distribution systems, and continues to adjust and update this OE based on updated quarterly results

My understanding from Ben Grumbles and the LCR Short Term Revisions is that “EPA regulations require water systems to develop a targeted sampling pool, focused on those sites with the greatest risk of lead leaching. All compliance samples used to determine the 90th percentile must come from that sampling pool.” [40 CFR 141.80(c)(1)], 56 Fed Reg. 26518 (June, 7, 1991), [40CFR 141.90(a)(1)(v), and 40 CFR 141.90(h)(2)]. Our office continues to work with our community water systems to follow these and all other requirements of the current lead and copper regulations.

212 Browning, the site in question, is not part of the City’s established sample site pool. The residence consists of PVC plumbing materials, and has an iron pre-filter at the service connection.

Regarding TTHM, the most recent quarter monitoring from February 2015 was issued today by the lab. While 2 of the 8 DBP compliance sites continue to have an LRAA that exceeds the standard, quarterly results at all 8 DBP compliance sites were below less than half the standard level of 80 ppb, the highest being 28.5 ppb. Only one site now has an OEL over 80 ppb, at 85 ppb.

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

From: Crooks, Jennifer [mailto:crooks.jennifer@epa.gov]
Sent: Friday, February 27, 2015 11:05 AM
To: Deltoral, Miguel; Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Poy, Thomas; Porter, Andrea
Subject: Re: HIGH LEAD: FLINT Water testing Results

Hi, Steve and Mike. I talked with Miguel, and he said if you all would be interested in getting input from our expert, Mike Schock at EPA Cincinnati Research, on the Flint distribution system issues and dealing with lead and DBP's together, you should contact Mike directly--here is his information.

schock.michael@epa.gov

(513) 569-7412

Jennifer

From: Deltoral, Miguel

Sent: Friday, February 27, 2015 4:58 AM

To: Crooks, Jennifer; Prysby, Mike (DEQ)

Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Poy, Thomas; Schock, Michael; Porter, Andrea

Subject: Re: HIGH LEAD: FLINT Water testing Results

Jen/all - I think things got garbled in translation...

What I was saying is that where you find Pb values that high, it is usually due to particulate lead. Not always, but generally. Particulate lead is released sporadically from lead service lines, leaded solder and leaded brass in a number of ways and folks tend to discount these values as anomalies, but particulate lead release is a normal part of the corrosion process and it is universal (common) in all systems. It's just that it is not captured as often by the infrequent LCR sampling. If systems are pre-flushing the tap the night before collecting LCR compliance samples (MDEQ still provides these instructions to public water systems) this clears particulate lead out of the plumbing and biases the results low by eliminating the highest lead values. If systems are pre-flushing and still finding particulate lead, the amount of particulate lead in the system can be higher than what is being detected using these 'pre-flushed' first-draw samples. My point on that was that people are exposed to the particulate lead on a daily basis, but the particulate lead is being flushed away before collecting compliance samples which provides false assurance to residents about the true lead levels in the water.

Some quick notes on particulate lead release:

- Fe/Mn can transport lead from the lead service lines into the home. The lead sorbs onto the Fe/Mn particles. In GW systems, Fe/Mn can come from the source water and more Fe from the water mains. In SW systems, the Fe typically is released from the water mains.
- Lead released from lead service lines can also 'seed' galvanized iron pipes inside the homes. Again, the lead sorbs onto the iron on the pipes and be released sporadically. Generally, the higher the flow, the more Fe and Fe+Pb particulate you will likely get.
- If there is a partial lead service line (lead connected to copper) you can get additional lead release due to galvanic corrosion.
- Leaded brasses and solder can also release particulate lead under certain circumstances.
- The particulate can contain very high concentrations of lead (hundreds to thousands of ppb Pb) which is a much higher concentration than lead paint, so even small particles can result in high lead values.
- If the lead service line was disturbed (water main repair/replacement, meter installation repair/replacement, service line leak repairs, etc.) you can have VERY high lead levels in the scale and sediment that is dislodged from the inside of lead service lines. Here in Chicago, during a partial lead service line replacement, we collected the scale and sediment that came into the home and we found 300,000+ ug/L lead in the scale; 125,000 ug/L Pb in the sediment. Very dangerous.
- Higher levels of PO4 (3-4 mg/L Ortho) seem to reduce the amount of particulate Pb that is released in the absence of physical disturbances to the lead lines. Doesn't stop it entirely, but should generally

reduce the occurrence. Caveat – Other water quality issues can change the chemical complexes that form on the pipe, so cleaner sources with more consistent WQ form more predictable scale complexes.

If I remember correctly, Detroit is feeding PO₄ for the LCR, but since Flint is no longer part of that interconnection, I was wondering what their OCCT was. They are required to have OCCT in place which is why I was asking what they were using.

Mike Schock is our resident expert and may be able to help out with the simultaneous compliance (Pb & DBPs) so I would suggest that folks give him a call.

Miguel A. Del Toral
Regulations Manager
U.S. EPA R5 GWDWB
77 West Jackson Blvd, (WG-15J)
Chicago, IL 60604
Phone: (312) 886-5253

From: Crooks, Jennifer
Sent: Thursday, February 26, 2015 04:15 PM
To: Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Deltoral, Miguel; Poy, Thomas
Subject: HIGH LEAD: FLINT Water testing Results

Thank you, Mike. These results are dated 2/18/15, so they're probably different results than the results Adam had, but they still have to be included in with compliance calculation of the 90th percentile. What dates are the earlier compliance samples?

Yes, the stagnation of the water would increase the lead levels, and I'm glad you're following up with the City to get the lead levels reduced for Mrs. Walters' home—which will hopefully be effective for her neighbors because they are also most likely being exposed to these high lead levels. Miguel reminded me this morning, there are no safe levels of lead in drinking water.

I talked with Miguel Del Toral about his knowledge on research on lead. He said that high levels of iron, usually bring high levels of lead. The large amount of black sediment at Mrs. Walters' home, is most likely particulate lead, Miguel said, where the lead actually bonds to the iron sediment. While the particulates of lead/iron are small, they're very highly concentrated with lead—up to 95% lead.

Miguel was wondering if Flint is feeding Phosphates. Flint must have Optimal Corrosion Control Treatment—is it Phosphates? Or is it pH/Alkalinity Adjustment? The reason he asks, is because systems using the pH/Alkalinity adjustment have problems with lead levels in the 100's or higher—and they have problems with random lead particulate matter in the distribution system. Miguel said that we all know that flushing regularly helps reduce the lead concentrations, but not immediately. The City can't just flush in advance of taking the compliance samples, they have to flush the lines on a regular schedule.

The problem with high lead issues, is that the water has so many different variables, that it's hard to pinpoint what is causing what problem where. From a public health perspective, can we assume that the high lead levels in Mrs. Walters' neighborhood are isolated to just her area? Or are they more widespread?

Please feel free to contact Miguel directly—312-886-5253; Deltoral.miguel@epa.gov.

Jennifer

From: Prysby, Mike (DEQ) [<mailto:PRYSBYM@michigan.gov>]
Sent: Thursday, February 26, 2015 10:25 AM
To: Crooks, Jennifer
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: HIGH LEAD: FLINT Water testing Results

Jennifer,

I recall Adam showing me a high lead/copper sample result (perhaps it was this one)...as part of the city's routine lead-copper monitoring. If so, it was a stagnated sample as part of the sampling protocol. Adam mentioned that all other samples were below the AL...and the city will not exceed the lead AL. I will confirm this. The city; however, needs to take further action to help address Ms. Walter's concern. The type of plumbing needs to be identified and sample tap location within the premise plumbing. They should offer to re-sample for PB after flushing the tap to demonstrate that flushing the tap will reduce the lead concentration. The city also needs to provide other lead-reduction strategies to Mrs. Walters.

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

From: Crooks, Jennifer [<mailto:crooks.jennifer@epa.gov>]
Sent: Thursday, February 26, 2015 10:53 AM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Poy, Thomas; Deltoral, Miguel
Subject: HIGH LEAD: FLINT Water testing Results

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

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

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

We also talked about Dr. Joan Rose from Michigan State being on the Flint Tech Advisory Committee—you also mentioned that someone from the Dept of Community Health was on the Committee. I'm thinking that Dr. Rose would want to dive further into this, since there's actual evidence that the water is leaching contaminants from the biofilms; or

Dept of Community Health would want to get involved and look at this from an epidemiological perspective. (She and her family are also exhibiting the rashes when exposed to the water, and her daughter's hair is falling out in clumps.)

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

The citizen's name is:

LeeAnn Walters
212 Browning Ave
Flint, MI 48507
616-212-6233
Lwalters313@gmail.com

Jennifer

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

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

From: "Michael Glasgow" <mglasgow@cityofflint.com>
Date: Feb 26, 2015 7:55 AM
Subject: Re: Water testing Results
To: "Lea Moste" <lwalters313@gmail.com>
Cc:
Lee,

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

Mike

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

Lee,

I will bring a copy of last years annual report when I stop by tomorrow. The annual report from 2014 must be delivered to residents by July 1st of this year. I imagine we may have it complete by June.

Mike

On Fri, Feb 20, 2015 at 1:00 AM, Lea Moste <lwalters313@gmail.com> wrote:

Mike,

Thank you for the water reports and we already planned to see you on the 25th at 10:00am. I was wondering if you know who I need to talk to in the water plant to obtain the Annual Drinking Water Report from last year. According to the EPA website there is link to access but when you click on it, it cannot be accessed.

Was also curious if there is an expected time frame for this years report due to the switch. If you can be of any assistance I would appreciate it.

Thank You
LeeAnne Walters

On Thu, Feb 19, 2015 at 12:47 PM, Michael Glasgow <mglasgow@cityofflint.com> wrote:

Lee & Dennis,

Here is a list of test results from water sampled at your home over the last 2 weeks. I have sent in your lead and copper sample, and also a sample from the toilet tank for manganese. I should hopefully have results from this testing early next week. I'll plan on stopping over on Wednesday (the 25th) around 10 am again to give you these results & sample again.

Mike

EXHIBIT 51

STATE OF MICHIGAN



JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

REPLY TO:

DRINKING WATER & RADIOLOGICAL
PROTECTION DIVISION
SOUTHEAST MICHIGAN DISTRICT OFFICE
38980 SEVEN MILE ROAD
LIVONIA, MICHIGAN 48152-1006

September 27, 1999

Mr. Robert Malloch, Water Production Manager
City of Detroit
Water and Sewerage Department
735 Randolph Street
Detroit, Michigan 48826-2830

WSSN: 1880

Dear Mr. Malloch:

SUBJECT: Water Supply - Detroit Water and Sewerage Department (DWSD)
Lead and Copper Water Quality Parameter Limits

Results of the January through June 1999, follow-up monitoring required by the Lead and Copper Rule have been mailed separately to Ms. Pamela Turner of DWSD. The 90th percentile action levels for lead and copper are 0.015 mg/l and 1.3 mg/l, respectively. Based on the 104 samples collected, the 90th percentile results for the city of Detroit were 6 mg/l for lead and 47 mg/l for copper. Therefore, the city has met both action levels and public education is not required. In addition, we have received satisfactory results of the water quality parameter monitoring from the distribution tap samples and from the point of entry samples collected at the five (DWSD) owned water treatment plants.

DWSD has demonstrated optimum corrosion control using phosphoric acid. The state must determine water quality parameters that must be maintained to ensure that optimum corrosion control will continue. Based on our review of monthly operation reports and numerous discussions, we have agreed on limits for pH, phosphoric acid dosage and residual, measured at the water treatment plant taps.

A minimum pH of 7 must be maintained at the treatment plant tap with no more than 9 days per six-month period (Jan. through June, July through Dec.) in non-compliance with this established minimum. If more than one pH sample is collected in a day, the results will be a weighted average for the day.

In addition to pH, a lower limit must be maintained for the phosphoric acid dosage and measured residual at the treatment plant taps. Again, based on our review of monthly operation reports and discussions with you, we have agreed on a minimum dosage and residual for phosphoric acid.

A minimum total phosphate dosage of 0.9 mg/l must be maintained at each of the five water treatment plant taps on a daily basis. In addition, a total phosphate residual of 0.8 mg/l must be maintained at each of the water treatment plant taps. If more than one phosphate sample is collected in a day, the results will be a weighted average for the day. Again, no more than 9 days in a six-month period can be in non-compliance with these established limits.

Water Supply - Detroit Water and Sewerage Department (DWSD)
Lead and Copper Water Quality Parameter Limits
Page Two

In addition to water treatment plant tap sampling, water quality parameters from the distribution system will continue to be required every six month period (Jan. – June, July – Dec.). Two samples per six-month period are required from each site and the parameters to be analyzed include pH, total phosphate and alkalinity. The numbers of sites to be sampled are reduced from previous monitoring periods.

Water Quality Parameter Monitoring

<u>Service Area</u>	<u>Previous # WQP Sites</u>	<u>New # WQP Sites</u>
Detroit	25	10
Detroit Suburbs	140	70
SOCWA	25	10
Flint	8	8
Genesee County	6	6

Should you require additional details or further explanation of any of this information, please feel free to contact me.

Sincerely,



Robert A. Green, P.E., Supervisor
Field Operations Section
Drinking Water and Radiological
Protection Division
Southeast Michigan District Office
734-953-1439

RAG/MLG

cc: Ms. Pamela Turner, DWSD
Mr. John Schandeval, SOCWA
Mr. John O'Brien, Director, City of Flint
Mr. Robert Carlyon, Water Plant Supervisor, City of Flint
Mr. Mike, Prysby, DWRPD, MDEQ
Tucker, Young, Jackson and Tull, Inc.
Wayne County Health Department

EXHIBIT 52



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

August 26, 2011

TO: Water Supply Superintendent or Operator In Charge
SUBJECT: 2011 Drinking Water System Monitoring – Reminder

This is just a friendly reminder that drinking water monitoring is due by September 30, 2011. This is not a notice of violation. Contacting water systems provides the Department of Environmental Quality (DEQ) a chance to remind supplies of upcoming deadlines, and allows supplies the chance to verify that their records for submitted sample results match what the DEQ has received.

According to our records, not all drinking water monitoring has been performed as outlined in the 2011 Monitoring Schedule sent to you earlier this year. Please refer to the enclosed monitoring schedule to view the sampling for which we have not yet received laboratory results. If you have results for monitoring listed in the schedule, please provide a copy to this office.

If monitoring has not yet been completed, please collect the required sample(s) no later than **September 30, 2011**, unless otherwise noted, to avoid monitoring violations, public notice requirements, and administrative fines of at least \$200.00. If you use a private laboratory to analyze your samples, you must provide this office with copies of the results by October 10, 2011.

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

Reminder if Lead and Copper Monitoring Due This Year: Recent changes to the Lead and Copper Rule requires you to provide individual lead tap results, within 30 days of learning of results, to people who receive water from sites that were sampled, even if lead was not detected. You must also send us a certification that you met all the delivery requirements along with a sample copy of your customer notice within 3 months after the end of the monitoring period. To download the *Lead and Copper Report and Consumer Notice of Lead Result Certificate* in Microsoft Word or PDF format, visit <http://michigan.gov/DEQ>. Under Environmental Services, click on Water, Drinking Water, Community Water Supply, and Reporting Forms.

If you have any questions or believe that the enclosed monitoring schedule is not accurate, please contact Adam Rosenthal at 517-335-6131 or rosenthala@michigan.gov, or you may contact your district engineer:

Michael Prysby at 517-335-6122 or prysbym@michigan.gov – Genesee & Lapeer Co.
Bethel Skinker at 517-335-6127 or skinkerb@michigan.gov – Eaton, Ingham & Shiawassee Co.
Mark Joseph at 517-335-6349 or josephm@michigan.gov – Clinton, Gratiot & Livingston Co.

2310

2011 Monitoring Schedule

FLINT, CITY OF

WSSN: 02310

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

Location: Distribution System

Sample Type	Collect Samples According to the ...	# Samples/ Frequency	Collect	Site Code	Fee	Unit Number	Test Code
Bacteriological – coliforms	TCR Sampling Site Plan	100/Monthly	Monthly	DIST	\$16.00	30	BPTC
Chlorine Residual	DBP Monitoring Plan	Measure the residual disinfectant level at the same point and at the same time as the bacteriological sample and report the average to the DNRE.					
Lead and Copper for corrosion control	Lead and Copper Sampling Pool	23/36 months	Between 06/01 and 09/30/2011	DIST	\$26.00	36CC	CCUB
Water Quality Parameters	Representative Sites	10/3 months	Quarterly	DIST	Various	Various	Various
Total Trihalomethanes	DBP Monitoring Plan (paired samples at same time and place)	4/3 months	Quarterly	DIST	\$65.00	36VO	CXTM
Haloacetic Acids		4/3 months	Quarterly	DIST	\$130.00	36HA	CXHA

EXHIBIT 53

2310



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

February 22, 2013

Mr. Robert Bisnick
Water Service Center
3310 East Court Street
Flint, MI 48506

WSSN: 02310
City Of Flint

Dear Mr. Bisnick:

SUBJECT: Drinking Water Monitoring Schedule – 2013
Annual Reports

Enclosed is your Drinking Water Monitoring Schedule for calendar year 2013 outlining the minimum requirements for your public water supply. Collect samples early in the monitoring period of the year indicated on the schedule. If you use a private laboratory you are required to report the results to us within the first ten days of the month following the month that you received the results. To receive credit for monitoring, the "WSSN" (water supply serial number), the "Site Code," and "County" must appear on the sample result. Bottles will NOT be mailed automatically. To order bottles, call the DEQ Laboratory at 517-335-8184. Be certain of the EPA sampling and analysis method requirements for hold times.

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

Also enclosed is the document "2013 Monitoring and Reporting Requirements." This provides additional details about monitoring and reporting requirements. If you have any questions, please contact us at the numbers below.

Sincerely,

Michael F. Prysby, P.E., District Engineer
Field Operation Section
Office of Drinking Water and
Municipal Assistance
517-335-6122

Adam Rosenthal, EQA
Field Operation Section
Office of Drinking Water and
Municipal Assistance
517-335-6131

MFP:AR:JR

Enclosure
cc/encl: Mr. Brent Wright, W T P Supervisor

2013 Monitoring Schedule

FLINT, CITY OF

WSSN: 02310

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

Location: Distribution System

Sample Type	Collect Samples According to the ...	# Samples/ Frequency	Collect	Site Code	Fee	Unit Number	Test Code
Bacteriological – coliforms	TCR Sampling Site Plan	100/Monthly	Monthly	DIST	\$16.00	30	BPTC
Chlorine Residual	DBP Monitoring Plan	Measure the residual disinfectant level at the same point and at the same time as the bacteriological sample and report the average to the DEQ.					
Lead Copper for corrosion control	Lead and Copper Sampling Pool	23/36 months	Between 06/01 and 09/30/2014	DIST	\$26.00	36CC	CCUB
Water Quality Parameters	Representative Sites	10/3 months	Quarterly	DIST	Various	Various	Various
Total Trihalomethanes	DBP Monitoring Plan	2/3 months	Quarterly	DIST	\$65.00	36VO	CXTM
Haloacetic Acids		2/3 months	Quarterly	DIST	\$130.00	36HA	CXHA

*Need to revise
DBPR2 Monitoring
Plan
Reduced sites*

EXHIBIT 54

Flint Safe Drinking Water Task Force Recommendations on MDEQ's Draft Sentinel Site Selection

This response is intended to identify how the comments received from the Flint Safe Drinking Water Task Force have been addressed.

On February 1, 2016, the Michigan Department of Environmental Quality (MDEQ) reviewed their proposed sentinel system that was being developed. The purpose of the sampling sites has several goals. First, it is a mechanism to ensure that the city of Flint has an adequate number of Tier 1 sites for their next Lead and Copper Rule compliance monitoring. The city of Flint lacks a good inventory of lead service lines, and the MDEQ expects that at least 150 sites will be identified with lead service lines. The MDEQ also wants to utilize these sites to determine the effectiveness of the corrosion control additive, orthophosphate, on reducing the leaching of lead from the lead service lines. Samples will be taken over a period of time to determine the trends in lead levels that are generated at Tier 1 sites.

The MDEQ will leave aerators in place and will make sure that all samples taken from Tier 1 sites are incorporated in the lead and copper compliance monitoring program for the city of Flint. As additional lead service line sites are identified through other sampling efforts, these sites will be added to the sentinel sites. In particular, we are waiting for the addresses of sites being evaluated by the U.S. Environmental Protection Agency to include as sentinel sites, but as of this writing, the addresses have not been provided.

EXHIBIT 55

3/22/2016

Flint water sampling for state analysis to be done at about 400 homes | MLive.com

Michigar

Flint water sampling for state analysis to be done at about 400 homes

By **Molly Young** | myoung7@mlive.com

on February 12, 2016 at 4:00 PM, updated February 12, 2016 at 4:03 PM

FLINT, MI -- Sentinel site teams have identified around 400 Flint homes that will serve as regular water testing sites for the next two months.

Ten teams comprised of three people each, including a community member, an employee from the MDEQ and a licensed plumber, started knocking on doors Wednesday, Feb. 10, to teach about 400 residents the scientifically sound method to collect the samples.

The goal is to monitor all types of homes for changes in water quality and contaminants over an eight-week period to help determine when the drinking water is safe and where changes made to the water are taking affect.

"So we'll be able to trend how our corrosion control is working over time," said Bryce Feighner, chief of Michigan Department of Environmental Quality, office of waste management and radiological protection.

The residents will collect a sample of water after the lines have been stagnant for at least six hours, and the sentinel site teams will collect samples every two weeks over the course of an eight-week period, Feighner said.

"But it's not necessarily going to end there. We're going to let the data determine when this process ends." Feighner said.

There were about 1,950 residents interested in being part of the sentinel testing, Feighner said, but that number was narrowed down and the team pinpointed certain homes they wanted to participate after looking at several layers of data.

First, the team took the locations of the 1,950 residents who volunteered to be part of the ongoing testing, and crossed it with what information the city does have about the locations of lead service lines. About 156 of the 400 homes were chosen this way.

Then, they picked homes from the three areas identified by Dr. Mona Hanna-Attisha where people are most likely to have high levels of lead in their blood.

Finally, they used three layers of data from the Environmental Protection Agency, including minority populations, income levels and homes built prior to 1960, which the EPA says is an indicator of lead paint, another way lead can get into the body.

"So we looked at all those layers, we added additional sites, and when we were all done, we made sure we had representation throughout all nine wards of the city, and the end result was these 402 sentinel sites," Feighner said.

FLINT WATER

[10 ways Gov. Snyder wants to fix Flint water crisis](#)

[Snyder's Flint water task force co-chair teases upcoming report](#)

[Gov. Snyder 75-point plan for Flint water crisis draws mixed reviews](#)

[Flint water crisis could mean two dozen layoffs if state fails to pay \\$1.1M](#)

[State unveils big plans for Flint recovery after water crisis](#)

All Stories

Flint water sampling for state analysis to be done at about 400 homes | MLive.com

Teams started going to the homes Wednesday morning to meet with resident and teach them a scientifically sound method for collecting water samples. Before they set out Friday morning, they had knocked on 250 doors and made contact with and trained 110 residents. They hoped to reach all 400 homes by Sunday and have water samples ready to be picked up on Monday.

Results take a few days to get back, but they will be posted online at Michigan.gov/flintwater.

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EXHIBIT 56

2310



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE



DAN WYANT
DIRECTOR

April 16, 2014

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

WSSN: 02310

Dear Mr. Wright:

SUBJECT: Revised Drinking Water Monitoring Schedule – 2014
Monthly Operation Reports
Siting Plans and Record Keeping

Monitoring Schedule:

Enclosed is your revised Drinking Water Monitoring Schedule for calendar year 2014 outlining the minimum requirements for your public water supply. Your schedule has been revised based on the City's intent to change the source of its drinking water from the Detroit Water and Sewerage Department to treatment of the Flint River utilizing the City's Water Treatment Plant. Collect samples early in the monitoring period of the year indicated on the schedule. If you use a private laboratory you are required to report the results to us within the first ten days of the month following the month that you received the results. To receive credit for monitoring, the "**WSSN**" (water supply serial number), the "**Site Code**," and "**County**" must appear on the sample result. Bottles will NOT be mailed automatically. If you use the Department of Environmental Quality Laboratory, you can order bottles by calling 517-335-8184. Be certain of the United States Environmental Protection Agency sampling and analysis method requirements for hold times.

Please note that both distribution and entry point to the distribution system monitoring will increase upon plant startup.

Monthly Operation Report (MOR) Requirements:

The City shall submit MORs as required under Administrative Rule 1502 (R325.11502). In addition to plant operational data collected and as noted in the attached schedule, the City of Flint will be required to collect Total Organic Compounds (TOC) samples from the source and finish water on a monthly basis. You will also be required to collect Water Quality Parameters (WQPs) at your entry point every 2 weeks. The City must also demonstrate adequate contact time (CT) for disinfection in accordance with Administrative Rule 1505a (R325.11505a).

Mr. Brent Wright

2

April 16, 2014

Disinfection By-Product Sample Siting Plans:

The City of Flint must return to routine standard monitoring of disinfection by-products, and a revised Disinfection & Disinfectants By-Product (DDBP) plan must be submitted, which identifies 4 additional sites, 8 sites in total, for routine quarterly monitoring. These sites must be selected in accordance with the Stage 2 DDBP Rule and supporting documentation must be submitted with the plan for review and approval by this office prior to monitoring.

Lead and Copper Monitoring Requirements and Site Sample Pool

This change in source also increases your distribution system monitoring for WQPs to 25 samples per 6 months and 100 sample locations for Lead & Copper for 2 consecutive 6 month rounds of monitoring. The City will need to expand its current sample site pool in accordance with the requirements of Administrative Rule 710a (R325.10710a). A list of the proposed sample site pool locations, including each site's Tier, sample category, service material, and building plumbing material, shall be submitted to this office for review and approval.

Record Keeping:

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

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

Also enclosed is the document "2014 Monitoring and Reporting Requirements." This provides additional details about monitoring and reporting requirements. If you have any questions, please contact us by telephone or e-mail using the information below.



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



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

Enclosure

cc/encl: Mr. Robert Bisnick, City Of Flint
Genesee Co. Health Dept.

2014 Monitoring and Reporting Requirements

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

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

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

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

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

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

UCMR3 Monitoring: You may have monitoring requirements in 2014 under the third Unregulated Contaminant Monitoring Rule (UCMR3). The U.S. EPA will contact you directly if your water supply is required to monitor in 2014. A list of laboratories certified to analyze the samples collected for UCMR3 is available at <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/upload/lablist.pdf>. Contact the U.S. EPA with questions.

Reminder if Lead and Copper Monitoring Due This Year: You must provide individual lead tap results to people who receive water from sites that were sampled, even if lead

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

Annual Reports: Act 399 requires certain reports to be submitted to this office each year.

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

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

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

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

- The **Consumer Confidence Report**, due by July 1 to your customers, to your local health department and to this office.

Electronic delivery methods may be used to distribute the CCR to bill-paying customers, provided they are direct. For more information on e-delivery, visit www.michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, Consumer Confidence Report Rule (under Laws and Rules).

2014 Monitoring Schedule

FLINT, CITY OF

WSSN: 02310

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

Location: Plant Tap

Collect these samples at the entry point to the distribution system (after treatment, if applicable.)

Sample Type	# Samples/ Frequency	Collect Before	Site Code	Fee	Unit Number	Test Code
Automated Partial Chemistry	This DEQ lab scan includes nitrate, nitrite, fluoride, and sodium whose monitoring frequency requirements differ from one another. Before requesting analyses from a laboratory other than the DEQ laboratory, check with your DEQ district staff for the specific monitoring requirements.					
	1/3 months	Quarterly	TP001	\$18.00	32	R
Volatile Organic Compounds	1/3 months	Quarterly	TP001	\$100.00	36VO	CXVO
Complete Metals	1/36 months	09/30/2014	TP001	\$102.00	36ME	CMET2
Arsenic	1/3 months	Quarterly	TP001	\$18.00	36ME	CAS
Cyanide	1/3 months	Quarterly	TP001	\$25.00	36CNa	CCN
SOC – Pesticides	1/3 months	Quarterly	TP001	\$125.00	36PT	CXPT
SOC – Herbicides	1/3 months	Quarterly	TP001	\$120.00	36HB	CXHB
SOC – Carbamates	1/3 months	Quarterly	TP001	\$120.00	36LP	CXLP
Gross Alpha (Radiological)	1/3 months	Quarterly	TP001	Not performed at the DEQ Laboratory. A list of certified labs is at www.michigan.gov/DEQ . Select Water, Drinking Water, Community Water Supply, then Certified Labs under Programs and Activities.		
Radium 226 & Radium 228	1/3 months	Quarterly	TP001			
Water Quality Parameters	Bi-weekly	Every 2 Weeks	TP001	Various	Various	Various
	Pair/Monthly	Monthly	TP001	\$35.00	36TO	CTOC
Total Organic Carbon (TOC)	Monitor for TOC in the source water before any treatment at the same time as monitoring for TOC in the treated water. These samples (source water and treated water) are referred to as "paired samples." Collect the treated water sample not later than the point of combined filter effluent turbidity monitoring and representative of treated water.					
Expanded SOCs						
Dalapon & Haloacetic Acids	1/12 months	Between 04/01 and 09/30/2014	TP001	\$130.00	36HA	CXHA
Diquate	1/12 months	Between 04/01 and 09/30/2014	TP001	\$150.00	36DQ	CXDQ
Endothall	1/12 months	Between 04/01 and 09/30/2014	TP001	\$150.00	36EN	CXEN
EDB & DBCP	1/12 months	Between 04/01 and 09/30/2014	TP001	\$70.00	36VO	CXEV

2014 Monitoring Schedule

FLINT, CITY OF

WSSN: 02310

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

Location: **Distribution System**

Sample Type	Collect Samples According to the ...	# Samples/ Frequency	Collect	Site Code	Fee	Unit Number	Test Code
Bacteriological – coliforms	TCR Sampling Site Plan	100/Monthly	Monthly	DIST	\$16.00	30	BPTC
Chlorine Residual	DBP Monitoring Plan	Measure the residual disinfectant level at the same point and at the same time as the bacteriological sample and report the average to the DEQ.					
Lead Copper for Corrosion Control	Lead and Copper Sampling Pool	100/6 months	Between 07/01 and 12/31/2014	DIST	\$26.00	36CC	CCUB
Water Quality Parameters	Representative Sites	25/Quarterly	Quarterly	DIST	Various	Various	Various
Total Trihalomethanes	DBP Monitoring Plan	8/3 months	During February, May, August and November 2014	See DBP Monitoring Plan	\$65.00	36VO	CXTM
Haloacetic Acids		8/3 months	During February, May, August and November 2014	See DBP Monitoring Plan	\$130.00	36HA	CXHA

EXHIBIT 57



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

August 24, 2015

Mr. Brent Wright, Operation Supervisor
City of Flint - D P W
Flint Water Plant
4500 North Dort Highway
Flint, Michigan 48505

WSSN: 02310
Genesee County

Dear Mr. Wright:

SUBJECT: Drinking Water System Monitoring – Reminder

This is just a friendly reminder that drinking water monitoring is due by September 30. This is not a notice of violation. This gives you a chance to verify that your submitted sample results match what we have received.

According to our records, not all drinking water monitoring has been performed as outlined in the Monitoring Schedule sent to you earlier this year. Please refer to the enclosed monitoring schedule to see which laboratory results we have not yet received. If you have results for monitoring listed in the schedule, please send us a copy.

If monitoring has not yet been completed, please collect the required sample(s) no later than **September 30**, unless otherwise noted, to avoid monitoring violations, public notice requirements, and possibly administrative fines of at least \$200. If you use a private laboratory, please send us copies of the results by October 10.

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

If you have any questions or believe that the enclosed monitoring schedule is not accurate, please contact me at the number below; rosenthala@michigan.gov; or DEQ, 525 West Allegan, 1st floor Southwest – Constitution Hall, PO Box 30242, Lansing, MI 48909.

Sincerely,

Adam Rosenthal
Environmental Quality Analyst
Field Operations Section
517-284-6644

Enclosure

cc: Mr. Mike Glasgow, City of Flint

CONSTITUTION HALL • 525 WEST ALLEGAN STREET • P.O. BOX 30473 • LANSING, MICHIGAN 48909-7973
www.michigan.gov/deq • (800) 662-9278

2015 Monitoring Schedule

FLINT, CITY OF

WSSN: 02310

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

Location: Plant Tap

Collect these samples at the entry point to the distribution system (after treatment, if applicable.)

Sample Type	# Samples/ Frequency	Collect Before	Site Code	Fee	Unit Number	Test Code
Automated Partial Chemistry	This DEQ lab scan includes nitrate, nitrite, fluoride, and sodium whose monitoring frequency requirements differ from one another. Before requesting analyses from a laboratory other than the DEQ laboratory, check with your DEQ district staff for the specific monitoring requirements.					
	1/3 months	Quarterly	TP001	\$18.00	32	R
Volatile Organic Compounds	1/3 months	Quarterly	TP001	\$100.00	36VO	CXVO
Complete Metals	1/36 months	09/30/2017	TP001	\$102.00	36ME	CMET2
Arsenic	1/3 months	Quarterly	TP001	\$18.00	36ME	CAS
Cyanide	1/3 months	Quarterly	TP001	\$25.00	36CNa	CCN
SOC – Pesticides	1/3 months	Quarterly	TP001	\$125.00	36PT	CXPT
SOC – Herbicides	1/3 months	Quarterly	TP001	\$120.00	36HB	CXHB
SOC – Carbamates	1/3 months	Quarterly	TP001	\$120.00	36LP	CXLP
Bromate	1/1 months	Monthly	TP001	Not performed at the DEQ Laboratory. A list of certified labs is at www.michigan.gov/DEQ . Select Water, Drinking Water, Community Water Supply, then Certified Labs under Programs and Activities.		
Gross Alpha (Radiological)	1/3 months	Quarterly	TP001			
Radium 226 & Radium 228	1/3 months	Quarterly	TP001			
Water Quality Parameters	25/3 months	Quarterly	TP001	Various	Various	Various
Total Organic Carbon (TOC)	Pair/Monthly	Monthly	TP001	\$35.00	36TO	CTOC
	Monitor for TOC in the source water before any treatment at the same time as monitoring for TOC in the treated water. These samples (source water and treated water) are referred to as "paired samples." Collect the treated water sample not later than the point of combined filter effluent turbidity monitoring and representative of treated water.					
Expanded SOCs						
Dalapon & Haloacetic Acids	1/12 months	Between 04/01 and 09/30/2015	TP001	\$130.00	36HA	CXHA
Diquate	1/12 months	Between 04/01 and 09/30/2015	TP001	\$150.00	36DQ	CXDQ
Endothall	1/12 months	Between 04/01 and 09/30/2015	TP001	\$150.00	36EN	CXEN
EDB & DBCP	1/12 months	Between 04/01 and 09/30/2015	TP001	\$70.00	36VO	CXEV

2015 Monitoring Schedule

FLINT, CITY OF

WSSN: 02310

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

Location: Distribution System

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

EXHIBIT 58

EXHIBIT 59

<https://twitter.com/mayorwalling>

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@MayorWalling

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More jobs coming to #Flint industrial corridor, sale of former GM warehouse to bring 200 jobs s.mlive.com/QKdfS71 @mlive @RACER_Trust

View summary



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Dayne Walling @MayorWalling · 5 Jun 2015
Mark your calendars, #Flint will have a primary election on Tuesday August 8th cityofflint.com/city-clerk/cit...



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Dayne Walling @MayorWalling · 4 Jun 2015
economic development in #Flint includes entrepreneurs, universities, and students, new projects announced

MSU REI @MSU_REI

REI is excited to announce a new co-implementation initiative with Co-Learning Plan authors and the #Flint community. ow.ly/NSHo0



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Dayne Walling @MayorWalling · 4 Jun 2015
preparing for annual lead and copper tests in water, need residents to volunteer, you will receive the results, call water plant 8107876537



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PA 00362

EXHIBIT 60

See CD.

(question at 5:38; response follows)