Chronology of MDEQ E-mails, along with select MDEQ Public Statements since the switch to Flint River Water

FlintWaterStudy.org

Use the following suggested citation.

Roy, S., and M. Edwards. Chronological compilation of e-mails from MDEQ Freedom of Information Act (FOIA) request 6526-15 and 6525-15 (2015).

From Metro Times' (Aug 13, 2014):

Flint residents raise concerns over discolored water

…

The city said in a statement to MLive: "The hydrant flushing is in response to localized complaints of discolored water. Residents in the affected areas may see increased water cloudiness for a short time, but the water will be safe to drink. The water throughout the City meets all (state Department of Environmental Quality) required drinking standards."

…

But no official seems to know what happened to Flint's water supply to cause the discoloration.

And it's unclear if the problem has persisted. Flint spokesperson Jason Lorenz, who did not return Metro Times' request for comment, told MLive he wasn't sure what caused the discoloration.

Brad Wurfel, spokesperson for the Michigan Department of Environmental Quality, referred Metro Times requests for comments to DEQ district engineer Michael Prysby, who says by email that "the discoloration appears to have been caused by unauthorized drafting of water from fire hydrants in these areas for street sweeping activities."

"This issue was discussed with the city and the department of public works, and this method of obtaining water for street sweeping will be discontinued," Prysby says.

…

http://www.metrotimes.com/detroit/flint-residents-raise-concerns-over-discolored-water/Content?oid=2231724

From: Deltoral, Miguel
Sent: Friday, February 27, 2015 4:58 AM
To: Crooks, Jennifer; Prysby, Mike (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ); Poy, Thomas; Schock, Michael; Porter, Andrea
Subject: Re: HIGH LEAD: FLINT Water testing Results

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

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

Some quick notes on particulate lead release:

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

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

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

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

Miguel A. Del Toral

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

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

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

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

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

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

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

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

Jennifer

From: Cook, Pat (DEQ)
Sent: Thursday, April 23, 2015 12:48 PM
To: Prysby, Mike (DEQ)
Subject: Flint Corrosion Control?
Hi Mike – I have a quick question for you: what is Flint doing now (post Detroit) for corrosion control treatment?
Pat

From: Prysby, Mike (DEQ)
Sent: Friday, April 24, 2015 10:32 AM
To: Cook, Pat (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: RE: Flint Corrosion Control?
Pat,

As we discussed, Flint is not practicing corrosion control treatment at the WTP. They are conducting lead & copper monitoring at 100 locations. WQ monitoring is also being conducted. The first round of samples after switch-over (July 1, 2014 – Dec 31, 2014) had 90th percentile results as follows: Lead: 6 ppb, Copper 110 ppb The second round of samples (Jan 1, 2015 – June 30, 2015) is underway with approx. 20 of the 100 sample site results in. The highest lead result out of the 20 received thus far is 13 ppb.
Michael Prysby, P.E.
District Engineer
Office of Drinking Water and Municipal Assistance
517 290-8817

From: Busch, Stephen (DEQ)
Sent: Friday, April 24, 2015 10:54 AM
To: Prysby, Mike (DEQ); Cook, Pat (DEQ)
Cc: Rosenthal, Adam (DEQ)
Subject: RE: Flint Corrosion Control?
Based on the matrix of recommended corrosion control study components for Large PWS's for both Lead and Copper, there are no additional requirements for the City of Flint based on the levels of lead and copper in the current source water and the results of the lead and copper distribution monitoring. "The only provision of the Rule which classifies the existing treatment of large PWSs as optimized for corrosion control is when the difference between the 90% Pb-TAP and Pb-POE is less than the lead PQL for each six-month period of the initial monitoring program. By definition, the PQL for lead is 0.005 mg/L; and the lead value for the source water used in this determination is the highest source water lead concentration. If this condition is met, then no study or testing is required. However States may consider the presence of copper in tap samples when determining whether the existing treatment is optimized."
I believe this condition has been met.
Stephen Busch, P.E.
Lansing and Jackson District Supervisor
Office of Drinking Water and Municipal Assistance
MDEQ
517-643-2314

On Apr 24, 2015, at 11:16 AM, Cook, Pat (DEQ) <COOKP@michigan.gov> wrote:

I agree. I'll forward this info to Miguel. However, don't be surprised if you get a call from him disagreeing with our position.
Thank you all for the quick replies.
pat

From: Prysby, Mike (DEQ)
Sent: Friday, April 24, 2015 11:56 AM
To: Cook, Pat (DEQ)
Cc: Busch, Stephen (DEQ); Rosenthal, Adam (DEQ)
Subject: Re: Flint Corrosion Control?

Pat,
You are correct, I received a call from Miguel regarding his concerns with the lead/copper sampling procedure from lead services and how he believes it is skewing down the lead level results from sites with lead services. I briefed Steve on the call and we can discuss in more detail next Tues.

Sent from my iPhone

From: Cook, Pat (DEQ) [mailto:COOKP@michigan.gov]
Sent: Friday, May 01, 2015 11:38 AM
To: Deltoral, Miguel
Cc: Porter, Andrea; Crooks, Jennifer; Poy, Thomas; Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: RE: Flint Corrosion Control?

Hi Miguel - sorry, I should have been more specific in my previous email. The rules you stated below allow large systems to be considered having optimal corrosion control if they have data from two consecutive 6 month monitoring periods that meet specific criteria. DEQ-ODWMA has not made a formal decision as to whether or not the City of Flint meets the exemption criteria or will be required to do a corrosion control study since Flint has only completed one round of 6 month monitoring. The City of Flint's second round of monitoring will be completed by June 30, 2015, and we will make a formal decision at that time. If my memory is correct, this is consistent with the process followed in the early 1990's for large systems when the Pb/Cu rule was first implemented. The Department waits until large systems complete both rounds of full scale, 6 month monitoring before making a decision about optimal corrosion control. If it is determined that Flint has to install corrosion control treatment, the rule allows up to 2 years to complete a study and 2 additional years to install the treatment unless we set a shorter time frame.

As Flint will be switching raw water sources in a just over one year from now, raw water quality will be completely different than what they currently use. Requiring a study at the current time will be of little to no value in the long term control of these chronic contaminants.

Finally, the City of Flint's sampling protocols for lead and copper monitoring comply will all current state and federal requirements. Any required modifications will be implemented at the time when such future regulatory requirements take effect.

Patrick Cook, P.E.

Community Drinking Water Unit

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

WG-15J

June 24, 2015

MEMORANDUM

SUBJECT: High Lead Levels in Flint, Michigan – Interim Report

FROM: Miguel A. Del Toral
Regulations Manager, Ground Water and Drinking Water Branch

TO: Thomas Poy
Chief, Ground Water and Drinking Water Branch

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The U.S. EPA should review whether relevant resident-requested samples are being included by the City of Flint in calculating the 90th percentile compliance value for lead. Recent drinking water tests conducted at homes in Flint for lead that are not part of the compliance sampling pool have revealed high lead levels in the drinking water. The U.S. EPA memorandum signed on December 23, 2004 provides clarification on compliance determinations and states that customer-requested samples are to be included in the 90th percentile lead compliance calculation where the sampling is conducted during the monitoring period from sites and sampling procedures meeting the LCR criteria. Given the prevalence of lead service lines in the City of Flint, should these sample results be from homes with lead service lines, the sample results would be considered compliance samples under the LCR.

From: Shekter Smith, Liane (DEQ)
Sent: Wednesday, July 01, 2015 8:31 AM
To: Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ)
Cc: Shaler, Karen (DEQ); Devereaux, Tracy Jo (DEQ); Monosmith, Carrie (DEQ)
Subject: Fw: Flint

We'll need to discuss after we receive Miguel's report, but before the call later this month.

From: Hyde, Tinka <hyde.tinka@epa.gov>
Sent: Tuesday, June 30, 2015 4:40 PM
To: Shekter Smith, Liane (DEQ)
Cc: Monosmith, Carrie (DEQ); Henry, Timothy; Poy, Thomas; Bair, Rita; Damato, Nicholas
Subject: Flint

Hi Liane – I'm following up on the voicemail I left for you earlier today. I'm also copying Carrie Monosmith as I did get a chance to chat with her. In advance of our call scheduled for 7/21/15, I wanted to provide you with an update related to water quality challenges in Flint. I understand that some discussion occurred on June 10th with Tom Poy and staff during the semi-annual call regarding MDEQ's implementation of the LCR rule and the status of Flint. The Region is concerned about the lead situation in Flint and suggested that additional ORD assistance could be provided to Flint's Advisory Committee. We understand that the city is finishing up its second set of 6-month initial monitoring and I have scheduled a call with you on July 21st so we can discuss the Flint situation in more detail.

As you know, my staff have been out to Flint to collect samples and data which we felt could uniquely inform the NDWAC process and ultimately better inform the LCR rulemaking. Tom Poy asked Miguel Del Toral to prepare a report summarizing the visits and findings. Last week Miguel completed a draft interim report and provided it to management. Once Miguel addresses our comments, we will provide you with a copy of that report. In most cases, an internal EPA memo would not be distributed outside the agency, but given his interaction with the homeowner for one of the sampling locations, Miguel has shared a copy of the draft interim report as a courtesy with this Flint resident. Based on Miguel's initial analysis, elevated lead levels were found at this residence. In addition, it appears that the source of the lead may be from outside the home (Note: plumbing in the home is largely plastic).

Please know that Region 5 management is still being briefed on the lead issues in Flint and we look forward to the opportunity to discuss the situation with you in more detail so we can better characterize what MDEQ is already doing in Flint and how public health protection can best be provided to the citizens of Flint. If you would like to discuss this in advance of our call, please feel free to contact myself, or Tim Henry (312-886-6107). Thanks

Tinka G. Hyde
Water Division Director
USEPA W-15J
77 W. Jackson Blvd
Chicago, IL 60604

Office: 312-886-9296
Cell: 312-735-9428

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From: Crooks, Jennifer
Sent: Wednesday, July 01, 2015 5:31 PM
To: Shekter Smith, Liane (DNRE); Richard Benzie; kris philip; Monosmith, Carrie (DNRE); DeBruyn, Dana (DEQ); Dettweiler, Dan (DEQ); Busch, Stephen (DEQ); 'Prysby, Mike (DEQ)'; 'cookp@michigan.gov'; Holdwick, Kevin (DEQ)
Cc: Thomas Poy; Bair, Rita; Damato, Nicholas; Shoven, Heather; Kuefler, Janet; Murphy, Thomas; Porter, Andrea; Deltoral, Miguel
Subject: Draft Notes from Michigan semi-annual call on 6/10

All—Below are my draft notes from our call last week, June 10, 2015. Thank you all for participating. I apologize for the delay in getting these out in draft to you all for review—I was hoping to get a couple of items ironed out that were fuzzy during our discussions, but hasn't happened yet. Several ACTION items below. So, please review to make sure I documented our discussion/agreements correctly, and feel free to edit as needed. I you could get back to me by July 13, that would be great. Thank you!

Jennifer

Attendees:
MDEQ: Liane Shekter-Smith, Richard Benzie, Carrie Monosmith, Kris Philip, Dan Dettweiler, Marjorie Rodriguez (Student), Kevin Holdwick, Mike Prysby, Dana DeBruyn, Steve Busch
EPA Region 5: Tom Poy, Rita Bair, Nick Damato, Janet Kuefler, Michele Palmer, Tom Murphy, Heather Shoven, Cary McElhinney, Andrea Porter, Miguel Deltoral, Mostafa Noureldin

Summary:

1.Changes in Lead Disinvestments and Commitments for FY 2016 ARDP—for discussion: Due to our extreme focus on lead in drinking water, this is the consensus here.

Consumer notification of tap results at NTNCWSs:

(Suggested wording) The NCWS program commits to full implementation of the lead consumer notification of tap results requirement, to begin in CY 2016. Region 5 will assist in a notification outreach effort in late FY 2015 to remaining 698 NTNCWSs that are not schools/daycares, to begin providing lead consumer notice in CY 2016. NCWS program commits

to include information on providing lead consumer notice in the annual monitoring letter sent to all NTNCWSs for CY 2016.

STATE: The State found this change in the wording acceptable.

b. Collection of Lead samples at NTNCWSs during June – September 2016 timeframe

(Suggested wording) NCWS program commits to including information in the applicable NTNCWS annual monitoring letters of the requirement to collect their annual/triennial lead sample between June and September only, during CY 2016. The MDEQ NCWS program currently does not have the capability to easily track lead sampling compliance within this specific timeframe.

STATE: The State found this change in the wording acceptable.

c. Follow-up Actions for NTNCWSs that sample outside of June-September 2015 timeframe

(From 5/5/15 call notes w/EPA) MDEQ commits to providing Region 5 with all CY 2015 lead (and copper?) sample data for all NTNCWSs by March 2016 so that EPA can analyze how many PWSs monitored outside the June through October timeframe. EPA commits to follow-up with MDEQ to discuss follow-up actions.

STATE: The State agreed to providing EPA R5 the raw lead and copper data for all CY 2015 for all NTNCWSs. The WaterTrack database does have data, but it can't generate violations. MDEQ doesn't commit to enforcing against 2016 violators in FY 2016. The State said, it is planning on disinvesting in enforcing against these violators due to limited capability of WaterTrack; however, if the State's noncommunity data management capabilities improve during FY 2016, implementation of this disinvestment may become a reality. The State has not designated an alternate timeframe, or done system specific documentation as to why the system qualifies for a different timeframe.

d. Submittal of the lead and copper reporting form

(Suggested wording) MDEQ commits to requiring CWSs and NTNCWSs to submit the lead and copper reporting form via the annual monitoring letters to each system, tracking CWSs and NTNCWSs submittal of the lead and copper reporting form, and commits to issuing violations for failure to submit the lead and copper reporting form. The reporting form provides the address of the sample site, designates sampling site selection criteria, and explanation(s) for any changes in sampling sites.

STATE: Dan Dettweiler stated that the NCWS program was not in a position to do this for the NTNCWSs at this time. Tom Murphy asked how does WaterTrack handle/track high lead results? Tom M said there is a truncation issue on the sample location name field. Dan acknowledged that this problem has been identified, and the Department of Technology Management and Budget (DTMB) has been trying to fix this problem, but it is a challenging problem. Dan stated that sample sites for NTNCWSs are actually identified by LHDs during the sanitary survey and are documented in the sanitary survey. The LHDs check the pdf of the laboratory results that clearly states where the sample was taken, and calculates the 90th percentile. However, Dan stated that the requirement to send in the lead and copper reporting form is not currently in the LHD annual monitoring letter sent to each system. The NTNCWSs do not couple this form to the Lead Consumer Notice, as does the CWSs. Kris Philip pointed out that the LHDs select the sample sites, thus when they are calculating the 90th percentile, they are actually double checking the sites with the results.

From our discussion, the Region concluded that at this time, the LHDs are actively reviewing the lead and copper results and the sample locations when they calculate the 90th percentiles to ensure proper LCR monitoring is conducted by ALL NTNCWSs at the proper sample sites. After our call, I asked for verification of this statement, and Dan Dettweiler

responded, "Just as with an exceeding value of an MCL, WaterTrack alerts the LHD when at least one sample for a water system exceeds the AL. A 90th percentile calculation is made only when an exceeding result alerts the LHD. For cases where there are no exceeding results, private lab samples are reviewed at the time LHDs hand-enter them into WaterTrack. State lab samples, which flow electronically via nightly downloads from the state lab database, are reviewed when pdfs of the analysis reports are, routinely, emailed by the state lab to LHDs. Beyond that, MDEQ's annual evaluation of the LHDs provides another opportunity for us to oversee the proper assigning and use of designated sampling locations."

ACTION: The Region will discuss Dan's response internally, and get back to the State with any issues/concerns.

Kris Philip said that the CWS program is requiring that the systems submit the form, but they are not enforcing whether or not the system submits the form. Often, the CWS will submit the Lead Consumer Notice and the Lead and Copper reporting form together. Kris said if 90%+ are already submitting the forms, then the State will agree to follow-up and enforce this requirement. But, if less than that, will probably be too much of a burden. Kris said they may change the way DEQ is tracking in SDWIS during FY 2016. But, the Region said SDWIS-Prime probably won't be available until 2017 at the earliest.

ACTION: Kris Philip will research with the District Offices to determine the current submittal rate of the lead and copper reporting form from CWSs; and report back to the Region.

2. Enforcement Update with Heather

NTNCWSs under Bottled Water agreements due to Arsenic MCL violations:
Per discussions with Region 5 and the February 2014 EPA/OECA memo, MDEQ has closed the old Arsenic open-ended MCL violations; however, no further quarterly monitoring is being conducted at the (+27) systems that are still under bottled water agreements. Thus, no more arsenic MCL violations will be reported for these systems and these systems will not become priority systems (ETT score of 11 or more) since only one arsenic MCL violation will be reported (5 points) even though they have a longstanding issue with arsenic noncompliance. The Region would like to discuss the pros and cons of placing these PWSs with arsenic MCL violations on quarterly monitoring as required under 40 CFR Section 141.23(c)(7); and brainstorm possible solutions.

Heather provided an update on how the State is doing in returning ETT systems to compliance; the State is doing very well in achieving its commitment for FY 2015. Heather said the Region is glad to see the State and LHD prioritization of implementation of the drinking water program and NTNCWS schools and daycares.
Referring to the NTNCWSs under BW agreements that are in violation of the Arsenic MCL, Heather said that since there are no more open-ended MCL violations in SDWIS, that no MCL violations can be reported to SDWIS unless there is monitoring to show the system is in non-compliance. Even though the LHD has indicated that these systems are drinking bottled water for public health protection, the use of bottled water cannot be a permanent solution to the fact that the system's drinking water at the tap continues to exceed the MCL for arsenic. Dan said there are 22 systems, where 8 are schools, that should be conducting quarterly monitoring. Dana said that letters have been sent (OR drafted?) to these 22 systems to require quarterly sampling for arsenic; these 22 systems are in 10 different counties so the message from the State is consistent. A secondary effect of this new requirement for the systems, may be that they transition to another water source or install treatment sooner.

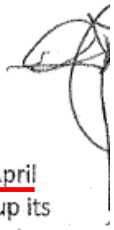
The State voiced a concern that multiple quarterly violations could potentially affect the State's relationship with the LHDs financially. Genesee and Oakland Counties have quite a number of noncommunity water systems. Multiple quarterly violations could affect the Dept of Community Health's determination as to whether the LHDs are meeting their minimum program requirements; thus receive full funding for their work with the noncommunity systems for the drinking water program. The LHDs cannot have more than 20% of their systems with violations. The Region wonders how much funding would be cut from a LHD contract if it exceeds the 20% noncompliance level set in the contract?

3. Status of Flint

a. TTHM levels for May—Due to MDEQ district engineer June 10-RECEIVED; see link to results

https://www.cityofflint.com/2015/06/01/may-water-testing-results-show-all-locations-are-within-acceptable-limits-for-tthm/
All samples below the TTHM MCL; one site still has an LRAA above the MCL but decreased from 105 ppb in Feb to 93.5 ppb in May.

Mike Prysby said he is getting ready to issue the construction permit to the City of Flint to install a GAC filter in July, that will remove more TOC to further reduce the potential of developing TTHMs. Mike said he has already issued a construction permit for a transmission line within the City that will help reduce water age.



b. Lead in Flint

Our discussions with MDEQ indicate that no phosphates/corrosion control has been added to the system since April 2014 when the source of drinking water changed to the Flint River. We understand that the City is just finishing up its second set of 6-month initial monitoring for lead; where the results will probably warrant a Corrosion Control Study to be conducted. Since Flint has lead service lines, we understand some citizen-requested lead sampling is exceeding the Action Level, and the source of drinking water will be changing again in 2016, so to start a Corrosion Control Study now doesn't make sense. The idea to ask Flint to simply add phosphate may be premature; there are many other issues and factors that must be taken into account which would require a comprehensive look at the water quality and the system before any treatment recommendations can/should be made. Miguel is recommending MDEQ and EPA? approach Flint about formally requesting EPA's Office of Research and Development in Cincinnati support on the lead in Flint drinking water issue, and request that Mike Schock, ORD, and possibly Darren Lytle, ORD, to participate in Flint's drinking water advisory committee so that a comprehensive evaluation on how to proceed can be discussed.

Miguel provided a brief summary of the high lead results found at the residence of Ms. Leeanne Walters in Flint. Miguel will follow up with a written summary of the work conducted, sample results, and conclusions.
Miguel believes that lead levels in Flint are being affected by the lack of Corrosion Control being conducted by the City, since the LCR requires 2 6-month initial monitoring for a new source. Steve Busch stated that in the Lead sampling pool, almost all of the lead sample sites are lead service lines, and the State is not seeing large increases in lead levels at the tap. Miguel suggested that EPA experts in Lead, Mike Schock; and in distribution systems, Darren Lytle, be added to the Flint drinking water advisory committee to assist the City/State in determining the best way to proceed to minimize lead in the City's drinking water during the interim use of the Flint River, and subsequent use of Lake Huron water.

Miguel said he will send Mike Schock and Darren Lytle's contact information to Steve and Mike. Steve pointed out that the City is following the LCR requirements, and completing the requirements in a timely manner. Miguel's point is that since the LCR was promulgated 20+ years ago, that research and different situations, like Washington D.C., have educated scientists, experts, and regulators that the existing requirements in the LCR may not be as protective as previously thought. Thus, he can only make recommendations as to how to revise sampling protocols. And Miguel acknowledges that it may be another year before these regulation changes are promulgated in the Long-Term Lead and Copper Rule. In December 2015, the NDWAC recommendation is expected.

The Region asked the State if the Flint River will be a permanent supplemental source of drinking water, once the City of Flint connects with the Karegdodi pipeline from Lake Huron. Mike Prysby said that the City is currently pumping 22MGD, but the City has 40-50 MG of storage. The City is currently working on reducing its unaccounted for water losses, and these water losses are dropping. The State, through the Governor's office, provided disadvantaged system funding, $2M which includes $900K for lead detection, and pipe inspection.

4. Update on WaterTrack to SDWIS-State: The migration of WaterTrack data to SDWIS-State was number 39 on the Dept of Technology Management and Budget's (DTMB) project list last year; this year it is

number 30. It doesn't appear this project has a high priority. Does the State have any new information on the progress of this project?

Dan said that the migration of WaterTrack data to SDWIS-State has moved to a priority of 26 with DTMB so far this year. But Dan said they are going to take this project out of the que, since Ronda Page has returned to the drinking water program from DTMB. Ronda said she re-estimated DTMB's involvement in this project to be far less than originally thought, so there is no need for any program developers or the tech team. This project will only need the Data Team and the web designers only. Ronda said they can set-up on a new server and migrate the data from WaterTrack to SDWIS-State themselves; in-house. Kris Philip remembers migrating the CWS data to SDWIS-State, so she can be a resource for this project. The parts that are needed to be completed by DTMB could be contracted out. Cary McElhinney said that there is a process of withholding PWSS grant funds and re-directing the funds to a HQ contract with SAIC. Richard Benzie said the process worked well last year when MI used PWSS funds to contract with a HQ contractor to conduct NEEDS survey training.

ACTION: Jen will follow up with State and Tribal Programs Branch about the process and timing of holding back funds from the PWSS grant for the purpose of contracting with SAIC.

5. Consequences of cutting the State drinking water program to a "minimal program"

Jennifer had a discussion with Richard Benzie regarding the possibility of the Michigan State Legislature looking to have just a minimal drinking water program, meaning only a program with activities that are required by the Federal SDWA. Jennifer ultimately discussed this internally with Tom Poy. The minimal program suggested would cut out Operator Certification, Capacity Development, Plan Review, Cross Connection Control, Source Water Protection, among other programs that are State required. Operator Certification and Capacity Development, while not required by the Federal regulations, do have financial strings attached. And Plan review/construction permits are required by the SRF program for a loan. Any recent communication with the State Legislature that they might proceed and make this possibility a reality?

Richard and Liane said there is no current threat from the State Legislature to cut the State-funded PWSS program activities. But there is a State-wide impetus to delete old programs and regulations, so this could lead to questioning the purpose of State-funded PWSS program activities. Richard is just being proactive in preparing a justification. Richard remembers a discussion many years ago about what constitutes a "comprehensive drinking water program". Tom Poy and Jennifer commented in a previous communication with Richard that the EPA PWSS primacy program and the State-funded activities in the drinking water program were meant to complement each other. To support this statement, Jennifer sent Richard some PWSS Priority guidance from the 90's, some preamble language from the 1976 SDWA found by our attorney, and language from Section 142 of the SDWA regulations from 1976 that might assist him in his justification.

6. EPA's Resource Message at the LHD Workshop in April

From the 2014 analysis of Shared Goals 2013 data, which is compliance data, for noncommunity systems, there are increasing trends of nitrate M/R violations for both NTNCWSs and TNCWSs. We discussed this on the last semi-annual call. Analysis of the 2015 Shared Goals 2014 data (April 2015) shows an improvement—that of decreasing numbers of bacti/nitrate M/R violations.

However, in light of the upcoming implementation of RTCR in 2016, the question raised here in the Region is:

Does the State have a plan with the LHDs as to what activities must be prioritized, and what will fall off the plate? Not all LHDs will need to disinvest based upon each LHD's resources, but some poorly funded LHDs may have to disinvest in some activities/drop activities that have no risk to public health.

Carrie Monosmith said that she met with the RTCR workgroup, comprised of LHD Directors/sanitarians, last fall to identify activities that the state can disinvest in during the next several years as the LHDs begin implementation of RTCR. They could not identify any activity that could be dropped. The main thing that will help the LHDs save time is to get the electronic DWR (eDWR) going, or the CMD portal, which will drastically reduce the LHDs time in inputting laboratory data into WaterTrack/SDWIS-State. From there, they can develop electronic data forms (CROMEER compliant) that the systems can submit.

Thank you!

Jennifer

shekterl@michigan.gov; 'Richard Benzie' <benzier@michigan.gov>; 'kris philip' <philipk@michigan.gov>; 'Monosmith, Carrie (DNRE)' <MONOSMITHC@michigan.gov>; 'DeBruyn, Dana (DEQ)' <DebruynD@michigan.gov>; Dettweiler, Dan (DEQ) <DETTWEILERD@michigan.gov>; Poy, Thomas <poy.thomas@epa.gov>; Kuefler, Janet <kuefler.janet@epa.gov>; Damato, Nicholas <damato.nicholas@epa.gov>; Shoven, Heather <shoven.heather@epa.gov>; Murphy, Thomas <murphy.thomas@epa.gov>; Bair, Rita <bair.rita@epa.gov>; McElhinney, Cary <mcelhinney.cary@epa.gov>; Pniak, Edward <pniak.edward@epa.gov>; 'cookp@michigan.gov'; 'Prysby, Mike (DEQ)' <PRYSBYM@michigan.gov>; Busch, Stephen (DEQ) <BUSCHS@michigan.gov>

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From: Tommasulo, Karen (DEQ)
Sent: Tuesday, July 07, 2015 10:29 AM
To: Wurfel, Brad (DEQ)
Subject: Call from ACLU reporter about Flint

I got a weird call from a "reporter" with the ACLU asking about Flint drinking water. His name is Curt Guyette, and I'm 98 percent sure it's the same guy who used to work at the Metro Times.

He said he heard from someone at EPA that we use a "flawed methodology" to collect our water samples. We apparently tell people to flush the water from their pipes, let it sit overnight, and then take the sample in the morning. He claims this doesn't measure what's in the main pipes, only in the pipes leading directly to their house. Consequently, he claims, we vastly underestimate lead. Apparently the EPA and Virginia Tech sampled a house using a different methodology and found 13,000 ppb lead.

Additionally, he claimed Flint is not adding corrosion control to their water, and said a city of their size should be doing so by law. But apparently we told Flint they didn't have to.

I didn't offer any comment, just took the message from him. Do you want to talk to him, or does this one need to go to Liane's shop? He's hoping to get ahold of someone today.

586-925-0493

Karen Tommasulo
Public Information Officer
Michigan Department of Environmental Quality
517-284-6716 | 517-599-5733
tommasulok@michigan.gov

From: Tommasulo, Karen (DEQ)
Sent: Wednesday, July 08, 2015 1:47 PM
To: Wurfel, Brad (DEQ)
Subject: FW: Flint water

ACLU guy is back today.

From: Curt Guyette [mailto:cguyette@aclumich.org]
Sent: Wednesday, July 08, 2015 1:20 PM
To: Tommasulo, Karen (DEQ)
Subject: Flint water

Hello,

I'm following up on my phone call and email from yesterday about water testing and corrosion control questions regarding Flint.

I'm in my office this afternoon and really need to get a response this afternoon, if that is at all within your power to make happen.

My office number is 313-578-6834.

Thanks for any help you can provide.

Curt Guyette

From: Tommasulo, Karen (DEQ)
Sent: Thursday, July 09, 2015 3:09 PM
To: Wurfel, Brad (DEQ)
Subject: RE: ACLU mini-documentary

This is what Curt Guyette had been calling about, by the way. Apparently it's going to be a thing now.

From: Wurfel, Brad (DEQ)
Sent: Thursday, July 09, 2015 3:08 PM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Tommasulo, Karen (DEQ); Sygo, Jim (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: RE: ACLU mini-documentary

Steve, I just got a call from Mi Public Radio about an EPA notice to Flint about elevated lead levels in the water. Apparently, you were cc'd on EPA's note. Can you call me asap? Thanks!
b

From: Wurfel, Brad (DEQ)
Sent: Thursday, July 09, 2015 4:54 PM
To: Busch, Stephen (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Cc: Pallone, Maggie (DEQ); Wyant, Dan (DEQ)
Subject: FW: here's the interim report

Steve,
The ACLU has saved us the trouble of waiting on EPA for the report … it's online at the link below. Lindsey Smith at Mi Public Radio picked up the story from Josh. Her inquiry has to do with EPA's Miguel making an assertion that we (DEQ) encourage people to flush their pipes before taking a water sample … which is the opposite of what you described to me as the protocol. Miguel apparently asserts that the DEQ and EPA are at odds on proper protocol. Which seems weird.

Let's discuss. Thanks!
b

From: Lindsey Smith [mailto:lmsmi@umich.edu]
Sent: Thursday, July 09, 2015 4:48 PM
To: Wurfel, Brad (DEQ)
Subject: here's the interim report

http://www.aclumich.org/sites/default/files/file/EPAWaterReport062415.pdf

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Lindsey Smith
West Michigan Reporter
Michigan Radio
Office (616) 551-0717
michiganradio.org

From:	Busch, Stephen (DEQ)
Sent:	Thursday, July 09, 2015 5:21 PM
To:	Wurfel, Brad (DEQ); Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Cc:	Pallone, Maggie (DEQ); Wyant, Dan (DEQ)
Subject:	RE: here's the interim report

Obviously we are not going to comment on an interim draft report.

To address your question from Lindsey, the following text comes from an official memorandum of Benjamin H. Grumbles, Acting Assisant Administrator of EPA at the time, November 23, 2004, to all EPA Regional Administrators Subject: Lead and Copper Rule (LCR) – Clarification of Requirements for Collecting Samples and Calculating Compliance, which in part states:

"The LCR also defines a proper sample as a first draw sample, 1 liter in volume, that is taken after water has been standing in plumbing for at least six hours, and from an interior tap typically used for consumption – cold water kitchen or bathroom sink tap in residences. [40 CFR 141.86(b)(2)] There is no outer limit on standing time."

While it indicates there is no outer limit on standing time, the only requirement is that it be at least those six hours. This was also incorporated into the 2007 LCR minor revisions.
See link below (note the final question at the bottom of the page on long term revisions the response for which includes "broader revisions to monitoring")
http://water.epa.gov/lawsregs/rulesregs/sdwa/lcr/fs_lcr_2007_final.cfm

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

From Michigan Radio (July 13, 2015):

Leaked internal memo shows federal regulator's concerns about lead in Flint's water

…

"Let me start here – anyone who is concerned about lead in the drinking water in Flint can relax," said Brad Wurfel, spokesman for Michigan's Department of Environmental Quality.

He says preliminary tests of at least 170 homes in the past year show the woman's home was an outlier. Wurfel says those reports should be finalized in a few weeks.

"It does not look like there is any broad problem with the water supply freeing up lead as it goes to homes," Wurfel said.

Wurfel says anyone with a home that's more than 30 years old should contact their city and get their water tested, no matter where they live.

Old homes sometimes have lead service connections with city water systems. Lead can get into drinking water that way, or through some old copper connections, which may have lead solder, Wurfel said.

…

http://michiganradio.org/post/leaked-internal-memo-shows-federal-regulator-s-concerns-about-lead-flint-s-water#stream/0

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

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

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

Jennifer

From: Busch, Stephen (DEQ) [mailto:BUSCHS@michigan.gov]
Sent: Wednesday, July 15, 2015 9:39 AM
To: Crooks, Jennifer; Prysby, Mike (DEQ); Cook, Pat (DEQ)
Subject: RE: Flint lead sampling results?

Jennifer,

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

Stephen Busch, P.E.

Lansing and Jackson District Supervisor

Office of Drinking Water and Municipal Assistance

MDEQ

517-643-2314

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From: Hyde, Tinka [mailto:hyde.tinka@epa.gov]
Sent: Tuesday, July 21, 2015 9:07 AM
To: Shekter Smith, Liane (DEQ)
Cc: Poy, Thomas; Bair, Rita; Damato, Nicholas
Subject: AGENDA for Today's Call on Flint

Hi Liane – In preparation for our call today we've prepared an agenda (attached) with some background and discussion points. Please let me know if you have other items you wish to discuss. Thanks

Tinka G. Hyde
Water Division Director
USEPA W-15J
77 W. Jackson Blvd
Chicago, IL 60604

Office: 312-886-9296
Cell: 312-735-9428

From: Shekter Smith, Liane (DEQ)
Sent: Tuesday, July 21, 2015 10:52 AM
To: Hyde, Tinka
Cc: Poy, Thomas; Bair, Rita; Damato, Nicholas; Busch, Stephen (DEQ); Cook, Pat (DEQ); Benzie, Richard (DEQ)
Subject: RE: AGENDA for Today's Call on Flint

Thanks Tinka.

During discussion issue #1, we would like to discuss our (hopefully, mutual) understanding of the timeline for next steps.

Also, while we understand your concerns with the overall implementation of the lead and copper rule(s); we think it is appropriate for EPA to indicate in writing (an e-mail would be sufficient) your concurrence that the city is in compliance with the lead and copper rule as implemented in Michigan. This would help distinguish between our goals to address important public health issues separately from the compliance requirements of the actual rule which we believe have been and continue to be met in the city of Flint.

And finally, we would also like to discuss our concern that the draft report was released by EPA and that we (DEQ) obtained a copy of the report from an outside (ACLU) website.

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

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From: Wurfel, Brad (DEQ)
Sent: Friday, July 24, 2015 12:09 PM
To: Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Pallone, Maggie (DEQ)
Subject: Need upate on lead / copper tests for Flint

Guys, the Flint Ministers met with the Governor's office again last week. They also brought along some folks from the community – a college prof and a GM engineer – who imparted that 80 water tests in Flint have shown high lead levels.

Could use an upate on the January / june testing results, as well as recap of the December testing numbers, and any overview you can offer to edify this conversation.
Call me or email today if possible. Thanks!
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
517-230-8006 cell

From: Busch, Stephen (DEQ)
Sent: Friday, July 24, 2015 3:46 PM
To: Wurfel, Brad (DEQ)
Cc: Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Pallone, Maggie (DEQ); Prysby, Mike (DEQ); Benzie, Richard (DEQ)
Subject: RE: Need upate on lead / copper tests for Flint
Attachments: DWSD-CorrosionControlStudy.pdf; Flint lead history.pdf; DWSD-Flint-1993-Lead-Letter.pdf

Brad,

As we discussed, the City has completed the last round of monitoring (Jan 1 – June 30, 2015). The last samples came in about a week ago. We have made the compliance determination that the 90th percentile level is 11 parts per billion, which is below the Action Level Standard of 15 parts per billion (there is no Lead maximum contaminant level standard). The federal rule requires measuring lead levels in water from household plumbing materials to determine the corrosivity of the City's water in order to limit exposure.

I have provided a summary of Flint's lead compliance monitoring from the last 20+ years since this regulation started in 1991. The City of Flint itself has never had a 90th percentile level exceed the 15 part per billion action level. Sampling requirements look at the worst case plumbing materials. Samples must be collected in accordance with the regulatory requirements and criteria in order to be used for compliance determinations.

requirements and criteria in order to

Because the City of Flint serves a population of over 50,000 they are required to have Fully Optimized Corrosion Control. While it is possible to meet the fully optimized requirement without additional treatment, based on their two rounds of sampling since switching to the Flint River, we have determined they did not meet the eligibility for this per the regulation. They now have to complete a study (within 18 months) and are then allowed a period of additional time (2 additional years) to install the selected treatment for Fully Optimized Corrosion Control in accordance with the regulatory requirements. This is what DWSD was required to do back in 1993 – 1997 (see attached letter and study). We are planning to suggest the City directly submit a treatment process to shorten the timeline to achieve full optimization. This letter is currently being drafted but won't be ready to mail out for another week.

Liane and I had a conference call with EPA region V in Chicago on Tuesday to go over all of this and they are in support of these next steps with the City.

The matter will be potentially further complicated when the City switches over to water from the Karegnondi Water Authority next year to re-evaluate the continuing requirement to fully optimize corrosion control.

The DEQ recognizes that there is has been no level of lead exposure determined to be safe, but again the regulation was developed to optimize water corrosivity to limit exposure and the City is following the regulatory requirements.

Lead is not coming from the Flint River or the City's Water Treatment Plant or the public distribution system. It is from lead service lines into homes and from plumbing materials and fixtures within the private property of the household.

As watermains are replaced within the City lead services associated with that section of watermain would be replaced in order to reconnect to City water. This would also place burden on the homeowner to pay for having the service line re-plumbed. However, since 2000 only 16 miles of the City's 500 miles of watermain have been replaced as they did not have the financial means to do so.

Let us know if there are questions or you need any additional information.

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

Attachments: DWSD-CorrosionControlStudy.pdf; Flint lead history.pdf; DWSD-Flint-1993-Lead-Letter.pdf

City of Flint Lead and Copper Rule Monitoring History						
Monitoring Period	90th Percentile (parts per billion)	Number of Samples above 15 ppb	Samples Required	Samples Collected	Required Frequency	
Jan. - June 2015	11 ppb	6	60	68		*Unofficial
July - Dec. 2014	6 ppb	2	100	100	6 months	
New Source and Treatment - Flint River and Flint WTP						
June - Sept. 2011	0 ppb	0	23	23	3 years	
June - Sept. 2008	0 ppb	0	33	33	3 years	
June - Sept. 2005	1.4 ppb	0	33	33	3 years	
June - Sept. 2002	4 ppb	1	33	33	3 years	
June - Sept. 2001	4.4 ppb	0	33	33	1 year	
June - Sept. 2000	7 ppb	2	33	33	1 year	
Jan. - June 1999	5 ppb	0	33	33	1 year	
July - Dec. 1998	7.4 ppb	1	33	33	6 months	
July - Dec. 1997	5 ppb	1	33	33	6 months	
Jan. - June 1997	4.5 ppb	1	33	33	6 months	
DWSD Study and OCC Treatment						
July -Dec. 1992	14.4 ppb	3	33	33	6 months	
Jan. - June 1992	15 ppb	4	33	33	6 months	

From: Wurfel, Brad (DEQ)
Sent: Friday, July 24, 2015 4:18 PM
To: Saxton, Thomas (Treasury); Muchmore, Dennis (GOV); Wyant, Dan (DEQ)
Subject: FW: Need upate on lead / copper tests for Flint

Guys, here's an update and some clarification on the lead situation in Flint. Please limit this information to internal for now.

By the tenants of the federal statute, the city is in compliance for lead and copper. That aside, they have not optimized their water treatment (for the most part, this means adding phosphates to minimize the degree that the water Ph mobilizes lead and copper in people's home plumbing).

Compliance with the standard started with testing. A June-December run of tests (all in homes with lead in their premise plumbing) concluded in December. Another January – June round of sampling concluded last month. Everything checks out in terms of compliance, but now the next step is optimizing the water supply.

So, In about two weeks, DEQ will be sending a formal communication about the optimizing issue. The federal program has long timelines for action. A community water supplier gets 18 months to study the options, and two years thereafter to implement water system optimization measures.

My point: Conceivably, by the time we're halfway through the first timeline, the city will begin using a new water source with KWA … and conceivably, the whole process starts all over again.

In terms of near-future issues, the bottom line is that residents of Flint do not need to worry about lead in their water supply, and DEQ's recent sampling does not indicate an eminent health threat from lead or copper. That said, anyone with lead pipes in their premise plumbing (this translates to tens of thousands of homes in our older urban centers, btw) should at least be aware that they have them, and to some limited degree that's going to impart minute parts per billion of lead in water no matter what. Its why nobody uses lead water pipes anymore.

The long version of this note is below. Let's connect next week. I'd like some thoughts about what more the state could be doing – most immediately, to convey the results of our testing and tell the story to the residents of Flint in an effort to quell some fears.
Thanks!
b

From: Muchmore, Dennis (GOV)
Sent: Friday, July 24, 2015 6:16 PM
To: Wurfel, Brad (DEQ); Saxton, Thomas (Treasury); Wyant, Dan (DEQ)
Cc: Hollins, Harvey (GOV)
Subject: RE: Need upate on lead / copper tests for Flint

Thanks.

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From: Dykema, Linda D. (DCH)
Sent: Thursday, July 23, 2015 10:08 AM
To: Busch, Stephen (DEQ); Philip, Kris (DEQ); Shekter Smith, Liane (DEQ)
Subject: FW: Director's Office Assignment -- Flint - need update asap

FYI - this is what I sent up to my front office. Thanks for your help Steve.

-----Original Message-----
From: Dykema, Linda D. (DCH)
Sent: Thursday, July 23, 2015 10:07 AM
To: Miller, Corinne (DCH); Peeler, Nancy (DCH); Anderson, Paula (DCH); Travis, Rashmi (DCH); Grijalva, Nancy (DCH); Moran, Susan (DCH)
Cc: Priem, Wesley F. (DCH); Bouters, Janese (DCH); Barr, Jacqui (DCH); Fink, Brenda (DCH); Groetsch, Kory J. (DCH)
Subject: RE: Director's Office Assignment -- Flint - need update asap

I spoke with Steve Busch, Lansing District Office manager, DEQ Office of Drinking Water & Municipal Assistance.

The city of Flint recently conducted drinking water testing throughout the city with special attention to those areas known to have old service lines. The city water supply is in compliance with the lead rule, which means that 90% of the water samples were less than the lead action level of 15 ppb. DEQ will, however, recommend that Flint further "optimize" their corrosion control methods. The DEQ has not seen a change in the city's compliance with the lead rule since switching to the Flint River source.

Some water samples had lead levels above 15 ppb. Homeowners receive their sampling results and those with elevated levels are provided with information regarding how to minimize their exposure, including replacement of water supply lines. The city pays for line replacement from the main to the property boundary. The property owner is responsible for some portion of the cost if the line replaced is on their property. To Steve's knowledge, there is no program in Flint to assist homeowners with limited financial means.

Regarding the home with high drinking water lead levels: some years ago the supply line that serves the neighborhood was replaced, but somehow this house was not connected to the new line, such that the family's drinking water supply was coming from the old corroded lead pipe. None of the neighbors water had elevated lead levels, which was likely why she was temporarily connected by garden hose to a tap supplied by the new line. She has since been permanently connected to the new line.

Regarding the EPA drinking water official quoted in the press articles: the report that he issued was a result of his own research and was not reviewed or approved by EPA management. He has essentially acted outside his authority.

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From: Shekter Smith, Liane (DEQ)
Sent: Monday, August 03, 2015 3:34 PM
To: Cook, Pat (DEQ); Busch, Stephen (DEQ)
Subject: FW: FOR REVIEW: MDEQ - Flint Call Notes
Attachments: MDEQ Call on July 21_call notes v4.docx

Just received the attached. Haven't reviewed it yet.

From: Hyde, Tinka [mailto:hyde.tinka@epa.gov]
Sent: Monday, August 03, 2015 3:31 PM
To: Shekter Smith, Liane (DEQ)
Cc: Poy, Thomas; Bair, Rita
Subject: FOR REVIEW: MDEQ - Flint Call Notes

Hi Liane – Attached are our notes from our call on 7/21 regarding Flint Drinking Water System. Please take a look and let me know if you have any questions or comments. Thanks

Same days as ACLU ✓ POTN

Notes on Call with MDEQ on July 21, 2015

MDEQ Implementation of LCR Rule and Flint Issues

Issue #1: Is there a public health concern regarding lead in Flint or other regulatory requirements?

- The 90th percentile results of the 2nd round of monitoring was 11 ppb.
- The population has dropped to under 100,000 and therefore the 1st round of 6-month monitoring was done for 100 samples, but the 2nd round only needed 60 samples.
- Customer-requested samples were included, but MDEQ did not have specifics on how many there were.
- Tinka asked about the timeline for Flint to switch over to the Lake Huron water source. MDEQ said the pipeline is under construction and scheduled to be complete by July 2016. MDEQ expects some delays and thinks a more realistic timeframe is October 2016.
- MDEQ explained that Flint would have 18 months to complete the corrosion control study and the complicating factor of switching over to Lake Huron. Should the corrosion control study be based on the Lake Huron source? MDEQ also explained that once Flint is using Lake Huron water that they would then need to complete 2 more rounds of 6-month monitoring to assess whether any adjustments to the corrosion control treatment was needed.
- MDEQ will be sending a letter to Flint telling them they need to complete a corrosion control study – based on results they are not optimized. Given the timing of completing a corrosion control study and the anticipated switch to Lake Huron water, MDEQ will have discussions with Flint and request that they start corrosion control treatment as soon as possible.
- MDEQ asked for Region 5's opinion on whether the regulations allow for the study requirement for Flint to be waived if MDEQ has Flint start pH adjustments and adding phosphates. Region 5 will look into this and get back to MDEQ with an answer. All acknowledged that if Flint initiated corrosion control treatment and continued to evaluate the system to ensure optimization that these efforts would essentially equate to a corrosion control study.
- The Region raised its concern about looking at treatment more comprehensively to ensure problems with DBPs didn't occur. MDEQ stated that Flint is on the brink of DBP compliance and that bacteriological issues haven't occurred since last year. Any adjustments for corrosion control treatment would need to make sure the other issues weren't exacerbated.
- Region 5 again offered the assistance of ORD staff, Darren Lytle and Mike Schock which MDEQ said they had shared with Flint already.

Issue #2: Discuss optimal corrosion control requirements

Discussion Items:

- MDEQ explained that they did not treat the switch to Flint River water as a "new system", but as a new source. It is their understanding that 2 rounds of 6-month monitoring is still needed to characterize the water quality. They don't know what is optimized until those 2 rounds of 6-month monitoring are completed.

- Region 5 noted that under 141.81(b)(3)(iii) that any system that has been deemed optimized must notify the State of any long-term change in treatment or the addition of a new source. The State must review and approve the change and may require any such system to conduct additional monitoring or other action to ensure that the system maintains minimal levels of corrosion in the distribution system. The State's requirement for 2 additional rounds of 6-month monitoring would fall under the "additional monitoring" prescribed by the State and not the initial 2 rounds of 6-month monitoring for new systems.
- Region 5 explained that they have talked to HQ about the interpretation of regulations and believes that systems that have been deemed optimized need to "maintain" corrosion control. The Region agreed to provide supporting regulatory citations for the language about maintaining corrosion control. Ed Moriarty in OGWDW is also consulting OGC on this topic and the OGC opinion will also be shared.
- MDEQ mentioned that there are other communities that may leave the Detroit system or connect to the new Lake Huron pipeline, but many of those either don't need to treat for corrosion control or will be building new treatment plants. Requirements for maintaining corrosion control for additional communities connecting to the Lake Huron pipeline will be discussed further after receipt of the HQ/OGC opinion.

Issue #3: Discuss Pre-flushing (as time allows)

- Lead compliance sampling procedures in the state of Michigan comply with Federal SDWA requirements which calls for a minimum of 6 hours during which there is no water used from the tap the sample is taken from.
- MDEQ is not interested in changing its position on pre-flushing until new regulations come out. They also pointed out that the pre-flushing instructions are not requirements, but suggestions.
- The Michigan pre-flushing instructions were developed as a way to ensure that sampled faucets were not stagnant for an excessive period of time beyond the targeted 6 hour (i.e., rarely used faucets or when a homeowner has been gone for an extended period of time).

Next Steps:

- MDEQ will send a letter to Flint regarding the 2 rounds of 6-month monitoring results that exceed 5 ppb and the need for a corrosion control study. They will have discussions with Flint to request that they start corrosion control treatment as soon as possible rather than waiting for the completion of a study that can take 18 months.
- MDEQ and the Region were in agreement that it is important to get phosphate addition going in Flint as soon as possible. MDEQ mentioned tapping Mike Shock for help with this in the interim.
- Region 5 commented that we now have a path forward for Flint despite a difference of opinion on whether the regulations required Flint to "maintain" corrosion control treatment when they started serving treated water from the Flint River.
- MDEQ and Region 5 agreed that after Flint implements corrosion control treatment, when they switch back to Lake Huron water, they will need to continue the corrosion control treatment while conducting monitoring to determine if this treatment is optimized with the new Lake Huron water quality.

- Region 5 will get back to MDEQ once it gets HQ/OGC's opinion on the need to "maintain" corrosion control treatment once a system is deemed optimized.
- MDEQ and Region 5 agreed that other communities currently implementing corrosion control treatment and change sources will need to continue to provide corrosion control treatment and conduct monitoring to determine whether the treatment is optimized with the new source water quality.
- Region 5 will research and get back to MDEQ on the 141.81 (3)(b)(5) citation and the ability to waive a CCT study.

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-----Original Message-----
From: Poy, Thomas [mailto:poy.thomas@epa.gov]
Sent: Monday, August 10, 2015 8:05 AM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Cc: Crooks, Jennifer
Subject: Flint

Liane: Any news on Flint since our call a couple of weeks ago? Has the letter been sent to inform them that they are not optimized for lead based on their monitoring? Have they been approached about starting corrosion control sooner rather than later?

Tom

Tom Poy
Chief, Ground and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

From: Busch, Stephen (DEQ)
Sent: Monday, August 17, 2015 2:36 PM
To: Wurfel, Brad (DEQ)
Cc: Sygo, Jim (DEQ); Benzie, Richard (DEQ); Cook, Pat (DEQ); Prysby, Mike (DEQ); Rosenthal, Adam (DEQ); Pallone, Maggie (DEQ); Shekter Smith, Liane (DEQ)
Subject: Flint Lead Monitoring Letter

Brad,

As there has been much interest regarding lead related to Flint drinking water, I have attached our latest letter which covers the most recent January – June 2015 monitoring period. The City is in compliance with the 15 part per billion action level for lead. Yet based on these results, the treatment cannot be deemed to provide fully optimized corrosion control treatment, and the City will need to recommend additional treatment to achieve this optimization under the Lead and Copper Rule requirements established under the Michigan Safe Drinking Water Act. This is all spelled out in the attached letter.

If you have any questions or would like any additional information you may contact me at the number below.

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

-

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE

DAN WYANT
DIRECTOR

August 17, 2015

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

Dear Mr. Wright:

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

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

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

Ninety percent or more of the sites you tested are within action levels under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399). These results must be reported on your 2015 Consumer Confidence Report (CCR) due to our office, your customers, and the local health department, by July 1, 2016. Also include the following statement in the CCR, regardless of the lead and copper levels:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Flint is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.water.epa.gov/drink/info/lead.

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

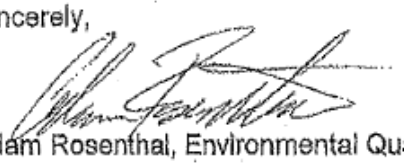
While the City's LCR compliance monitoring has continued to meet action level requirements, the LCR also requires all large systems (those serving over 50,000 people) to optimize corrosion control regardless of their 90th percentile lead concentration. One way to demonstrate fully optimized corrosion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

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

Our office will inform you when monitoring needs to be conducted as part of the optimization of the implemented corrosion control treatment. Customer requested samples for lead shall continue to be collected and analyzed. Please make every attempt to select the same sites used in the previous monitoring period, giving Tier 1 sites first priority. If original sites are unavailable, select replacement sites based on the Tier 1, 2, and 3 criteria.

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

Sincerely,



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

cc: Mr. Michael Glasgow, City of Flint

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From: Busch, Stephen (DEQ)
Sent: Monday, August 24, 2015 10:23 AM
To: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ)
Subject: FW: Flint Water Study-VT
Importance: High

FYI.

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

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

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

Dear Adam, Mike and Rachel,

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

Over the next few months we will be studying Flint water quality issues, in conjunction with all parties who are interested in this subject.
We will be launching our web page to publicly report results of our work.
We visited Flint last week and collected a lot of samples from the distribution system, and we are also doing a lead in water study with residents, to complement that which was recently conducted by the city under the LCR.

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

Mike, I think I met you a few years back at a Michigan AWWA event, and Rachel, you were kind enough to send me the coliform/E.Coli data last week. Adam, I am not sure if I have ever met you or not.
My cell phone is 540 320 8740, my office phone is 540 231-7236, and my e-mail is on this message. Feel free to call me at any time, if any of you should have any questions about our plans, or the Flint water quality issues that we will be studying.

Best Regards,
Marc Edwards

From: Shekter Smith, Liane (DEQ)
Sent: Monday, August 24, 2015 10:31 AM
To: Busch, Stephen (DEQ); Benzie, Richard (DEQ)
Subject: RE: Flint Water Study-VT

Perhaps we should put them in touch with the UM folks.

From: Benzie, Richard (DEQ)
Sent: Monday, August 24, 2015 10:56 AM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: Flint Water Study-VT

Should we have them include Pat Cook as the Treatment Specialist and LCR Manager for the community program?

Do we want to be sure they are aware of the impending change in source water in 2016 and that they should not spend a lot of resources making recommendations about changes to water treatment or water quality without first knowing that fact?

--

From: Shekter Smith, Liane (DEQ)
Sent: Monday, August 24, 2015 10:37 AM
To: Wurfel, Brad (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ)
Subject: RE: LeeAnn Walters Draft

Brad – below is our draft response to Ms. Walters in followup to our meeting at the Governor's Office. Thought you might like to review the draft before we send it out. Also, is there anyone else that should see this before it is sent?

Dear Ms. Walters,

I wanted to update you regarding our Department's findings related to questions raised during our meeting at the Governor's office on August 4. I apologize for the delay in getting back to you.

Lead and Copper Monitoring

Regarding Flint lead and copper compliance monitoring for the January – June 2015 period, the City has confirmed that all lead and copper samples collected throughout the City, whether routine sites or customer requests, were sent to the State of Michigan lab for analysis. Individual sample results are provided to the property owner within 30 days of receiving the lab results in accordance with the Michigan Safe Drinking Water Act (Public Act 399, 1976 Administrative Rule 410(5). Results from the State of Michigan lab are provided directly to our Office.

Staff have confirmed that the lead 90th percentile compliance calculation of 11 parts per billion is based on 69 samples that met the appropriate sampling location site criteria, and met the sample collection site and collection protocol requirements of the Safe Drinking Water Act for this monitoring period. A minimum of 60 samples were required for this monitoring period. As indicated during the meeting, the City's sampling for lead complies with the Action Level standard of 15 parts per billion, but based on the population served by the City and these results, the City will need to make a recommendation to the MDEQ on how they will fully optimize their corrosion control treatment. These next steps continue to follow the requirements of the Lead and Copper Rule.

Samples collected at your residence of 212 Browning Avenue were not included this compliance determination as you utilize a whole home filter. As stated in the Michigan Safe Drinking Water Act (Public Act 399, 1976 Administrative Rule 710a, Lead and Copper in tap water; monitoring requirements) "Sampling sites may not include faucets that have point of use or point of entry treatment devices designed to remove inorganic contaminants." Such treatment alters the water chemistry and water quality such that it is no longer representative of public water from the City's distribution system. Therefore, the City cannot use samples collected at your residence as part of its determination for public water system compliance with the lead or copper action level standard.

Sample Summary (samples taken at your residence)

For your information, we are providing the information that we've gathered regarding samples collected at your home. Our records indicate between February and June of this year there were six samples collected by either you or Mr. Mike Glasgow with the City of Flint, and submitted to the State Laboratory for analysis as follows:

February 11, Bathroom tap, collected at 10:20 AM by Mike Glasgow. This sample was analyzed for aesthetic metals (copper, iron, manganese, and zinc) which does not include lead analysis.

--

February 18, Kitchen tap, collected at 7:15 AM by you. This sample was analyzed for lead (104 parts per billion) and copper (non-detect).

February 25, Kitchen tap, collected at 10:26 AM by Mike Glasgow. This sample was analyzed for metals including lead. All results (including lead) were non-detect except for Barium 0.01 parts per million. The result for Barium was well below its maximum contaminant level of 2 parts per million.

March 3, Kitchen tap, collected at 6:00 AM by you. This sample was analyzed for lead (397 parts per billion) and copper (non-detect).

March 18, Kitchen tap, collected at 11:10 AM by Mike Glasgow. This sample was analyzed for lead (4 parts per billion) and copper (non-detect).

April 2, Pre-point of service, collected at 8:00 AM by you. This sample was analyzed for lead (707 parts per billion) and copper (110 parts per billion).

Lead Education/Outreach

As we discussed during the meeting, we support efforts to educate homeowners about the sources of lead in their private residence, provide guidance measures to reduce the potential for lead exposure, and provide information on resources for lead abatement. Along those lines, our Office has been in contact with the Department of Health and Human Services, Environmental Health Division, Healthy Homes Section and had some preliminary discussions about a public education and assistance campaign regarding household lead issues, guidance and abatement.

Lead monitoring by public water systems serves a dual purpose. The first purpose is to ensure the public water supply is adequately treating its water to address corrosion potential and help limit lead exposure. The second purpose is to inform homeowners about lead levels within their individual residence so that they can make educated choices regarding their own exposure risk.

pH Results

During the meeting concerns were also expressed regarding pH levels within customer plumbing systems. As you may know, pH has no associated contaminant level as it is simply a numeric scale used to specify the acidity or alkalinity of a solution. The City of Flint conducts daily monitoring of pH values on both its raw and finished (treated) water at the City's water treatment plant as part of its operations. The City is also required to conduct water quality parameter monitoring in the distribution system, which includes pH. Samples are analyzed in accordance with Standard Methods using properly calibrated analytical equipment. Results for pH from these samples are summarized below.

Since late April 2014 – June 2015, the following pH conditions were reported:

Water Treatment Plant – Finished Water plant tap pH range = 7.07 minimum to 9.9 maximum, overall average 7.7, measured daily. We believe the 9.9 is a one- time anomaly from softening treatment.

Distribution System – Water Quality Parameters taken from 25 sample sites located throughout and monitored quarterly
July – Sept. 2014: pH 7.71 average, range 7.56 – 7.86
Oct. – Dec. 2014: pH 7.88 average, range 7.62 – 8.10
Jan. – March 2015: pH 7.81 average, range 7.60 – 7.99
April – June 2015: pH 7.63 Average, range 7.48 – 7.80

In addition, the City's treated water contains alkalinity, which is a measurement of the buffering capacity of water to resist a change in pH. As you can see from the water quality parameter monitoring results above there has been very little change in pH within the City's distribution system. The pH levels described within customer site piping or premise plumbing systems are believed to be the result of onsite treatment and not representative of water quality shown to be occuring in the public water supply system.

Consumer Confidence Report

Finally, there was confusion during the meeting regarding the City's annual water quality report, the Consumer Confidence Report which we have since been able to clarify.

The City of Flint issued two separate Consumer Confidence Reports (CCR's) in 2015 covering the water quality data from 2014. One report was for the period of January – April 2014 when the City was obtaining water from Detroit (DWSD). And a second report was for the period April – December 2014 when the City was using the Flint River and its own Water Treatment Plant.

The CCR for DWSD water was mailed to customers in June. The Flint River based CCR was mailed to customers in mid-July, delayed due to issues with the printing contractor. We agree that having two separate reports caused confusion. We are working with the City to ensure both reports are posted to the City's website and both are made available when requested by customers. Should the City choose to create separate CCR's during the year that the City of Flint connects to the Karegnondi Water Authority we will work with the City to provide more clarity and try to have all material included in a single mailing.

The DWSD based CCR is the one community members had at the meeting, while the DEQ brought a copy of the Flint River based CCR. As separate and distinct sampling was done under each source, this explains the discrepancy in the values and monitoring periods being reported in the respective CCR's.

We appreciate your interest in these matters and hope this has addressed many of the questions brought up during our meeting. I would like to provide this information to both Dr. Sullivan and Ms. Mayes, but I do not have their contact information. I'm hoping you can share this with them and any others that may be interested.

Sincerely,

From: Wurfel, Brad (DEQ)
Sent: Monday, August 24, 2015 11:22 AM
To: Shekter Smith, Liane (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ)
Subject: RE: LeeAnn Walters Draft

Comprehensive. Thanks for sharing this, Liane. Lots of important information here.
I'd suggest that Harvey Hollins and Dennis Muchmore need to see it as well.

b

From: Shekter Smith, Liane (DEQ)
Sent: Monday, August 24, 2015 1:10 PM
To: Wurfel, Brad (DEQ)
Cc: Devereaux, Tracy Jo (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Shaler, Karen (DEQ)
Subject: RE: LeeAnn Walters Draft

When you say they should see it as well. Do you mean see the draft or be cc'd on the e-mail?

If the former, do you wish to share it with them?

From: Wurfel, Brad (DEQ)
Sent: Thursday, August 27, 2015 2:00 PM
To: Brown, Eric (GOV) <BrownE15@michigan.gov>
Subject: FW: LeeAnn Walters Draft

Letter to a very vocal resident that went out this week. This may be what Peters' office is wanting to discuss with you. This letter has some really useful info on lead and copper testing.
b

From: Brown, Eric (GOV)
Sent: Thursday, August 27, 2015 2:55 PM
To: Wurfel, Brad (DEQ)
Subject: RE: LeeAnn Walters Draft

So this resident's lead levels are much higher than the 90th percentile mentioned in the previous email. What is the discrepancy?

On Aug 27, 2015, at 3:14 PM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

> Don't know what it is, but I know what it's not. The key to lead and copper in drinking water is that it's not in the source water, or even the transmission lines (most of which are cast iron). It's in the premise plumbing (people's homes). The reason statute requires operators of large systems to test for lead & copper in homes when they switch sources is because large systems inevitably means old neighborhoods, where there's likely a lead connection line to the homes or lead pipes in the premise plumbing (or lead in the solder of copper lines installed before the mid-1990s), and what we're checking for is whether the Ph of the new source water is mobilizing lead in the pipes.
>
> Ironically, the leading fix for it is adding phosphate (ironic because we're fighting to reduce phosphorus in surface water all over the state, but particularly in the Western Lake Erie Basin). The phosphate smooths the water and reduces the interaction.
>
> In accordance with statute, we sent Flint a letter early this month saying they passed muster on the two required rounds of lead and copper tests, but we still want them to 'optimize' their system (phosphates). By law, they now have 18 months to create an optimization plan, and something like two years thereafter to implement that plan. But they're going to switch sources again in June / July of next year, which starts the whole process over again. Such is the wisdom and flexibility of the federal statute …
>
> This person is the one who had EPA lead specialist come to her home and do tests, then released an unvetted draft of his report (that EPA apologized to us profusely for) to the resident, who shared it with the ACLU, who promptly used it to continue raising hell with the locals.
>
> Bottom line is that folks in Flint are upset – because they pay a ton for water and many of them don't trust the water they're getting – and they're confused, in no small part because various groups have worked hard at keeping them confused and upset. We get it. The state is trying like mad get the word out that we're working on every aspect of the health safety of local water that we can manage, and the system needs a lot of work (because the city didn't do any discernable maintenance for nearly 40 years and the transmission lines are falling apart), but it's been rough sledding with a steady parade of community groups keeping everyone hopped-up and misinformed.
>
> Tell me what I can do to help you with the Peters' meeting, or anything else.
> b

From: Brown, Eric (GOV)
Sent: Thursday, August 27, 2015 3:20 PM
To: Wurfel, Brad (DEQ)
Subject: Re: LeeAnn Walters Draft

Very helpful, thanks

Sent from my mobile device

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From: Shekter Smith, Liane (DEQ)
Sent: Tuesday, August 25, 2015 1:56 PM
To: lwalters313@gmail.com
Cc: Busch, Stephen (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: Follow Up from our Aug. 4th meeting

Dear Ms. Walters,

I wanted to update you regarding our Department's findings related to questions raised during our meeting at the Governor's office on August 4. I apologize for the delay in getting back to you.

Lead and Copper Monitoring

Regarding Flint lead and copper compliance monitoring for the January – June 2015 period, the City has confirmed that all lead and copper samples collected throughout the City, whether routine sites or customer requests, were sent to the State of Michigan lab for analysis. Individual sample results are provided to the property owner within 30 days of receiving the lab results in accordance with the Michigan Safe Drinking Water Act (Public Act 399, 1976 Administrative Rule 410(5). Results from the State of Michigan lab are provided directly to our Office.

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Sincerely,

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

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From: Poy, Thomas [mailto:poy.thomas@epa.gov]
Sent: Friday, August 28, 2015 12:35 PM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ)
Cc: Hyde, Tinka; Crooks, Jennifer
Subject: Flint Citizen Sampling

Liane/Richard: FYI...Marc Edwards (Virginia Tech) is working with some of the citizens in Flint and they are finding lead at levels above 5 ppb and some above 15 ppb. There's no indication of whether any of these homes were also sampled and analyzed by Flint and will now part of their compliance calculations. Virginia Tech sent out 300 bottles and have gotten 48 back. We are not involved in this effort by Dr. Edwards.

https://flintwaterstudyupdates.wordpress.com/

Tom

Tom Poy
Chief, Ground Water and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

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From:	Wurfel, Brad (DEQ)
Sent:	Monday, August 31, 2015 10:25 AM
To:	Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Prysby, Mike (DEQ)
Cc:	Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Murray, David (GOV); Wurfel, Sara (GOV); Jessica Brown; Brown, Eric (GOV)
Subject:	Fwd: Urgent: Independent Flint Water Study

Liane / Steve, can you look into this situation as a priority?

Everyone else -- just got this from the ACLU. Call me if you have questions / counsel.

Thanks.
b

Sent from my iPhone

Begin forwarded message:

> **From:** Curt Guyette <cguyette@aclumich.org>
> **Date:** August 31, 2015 at 10:18:34 AM EDT
> **To:** "wurfelb@michigan.gov" <wurfelb@michigan.gov>
> **Subject: Urgent: Independent Flint Water Study**
>
> Mr. Wurfel,
>
> Prof. Marc Edwards of Virginia Tech university has been leading a research project to conduct an independent study of lead in Flint's water. Working with a group of city residents, they have been collecting water samples from homes throughout the city. The study is still under way, but the results so far have been so disturbing that VT has begun posting results on the web in order to alert residents about how serious the problem may be.
>
> This is what VT is reporting:
>
> *Over the weekend we analyzed another 72 lead samples collected by Flint residents and mailed to VT. For the 120 samples analyzed to date,* ***forty two percent were over 5 ppb****, which suggests a serious lead in water problem according to our experience and criteria. Twenty-three (20% of those collected) also exceeded 15 ppb lead, suggesting a serious lead in water problem.* ***That is, the Flint Citizen Science study to date, is finding results worse than the EPA standard which is applied to sampling "worst case" homes.*** *The highest lead sampled in first draw so far was 158 ppb, and the highest sample after 45 second flushing is 1051 ppb. Six of 120 homes sampled (5%), had over 15 ppb lead even after 2 minutes of continuous flushing.* ***The 90%'ile lead level in the Flint Water Study is currently 30 ppb, which is double the EPA standard applied to "worst case" homes, and in a range where water consumption has caused lead poisoning in children and adverse pregnancy outcomes.*** *Needless to say, these data are very worrisome.*
>
> Here is the website containing the information.

I am writing about this for a story that will be posted tomorrow. If the city chooses to respond, I need to hear back from you by the end of the day today, Aug. 31.

Sincerely,

Curt Guyette

From: Busch, Stephen (DEQ)
Sent: Monday, August 31, 2015 10:35 AM
To: Wurfel, Brad (DEQ)
Cc: Shekter Smith, Liane (DEQ); Wyant, Dan (DEQ); Prysby, Mike (DEQ); Muchmore, Dennis (GOV); Hollins, Harvey (GOV); Murray, David (GOV); Wurfel, Sara (GOV); Jessica Brown; Brown, Eric (GOV)
Subject: Re: Urgent: Independent Flint Water Study

Brad,

We are aware of the VT professor. I can bring you up to speed this afternoon or whenever you are available

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

From: Busch, Stephen (DEQ)
Sent: Monday, August 31, 2015 11:25 AM
To: Wurfel, Brad (DEQ)
Subject: RE: Urgent: Independent Flint Water Study

See emails attached.

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

From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Monday, August 31, 2015 2:35 PM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: FW: links to update flint water news

Importance: High

Today's updates on Marc Edwards' site. His staff is phone calling and emailing results to citizens. Talk at 2.

From: Porter, Andrea
Sent: Monday, August 31, 2015 1:19 PM
To: Poy, Thomas
Cc: Deltoral, Miguel; Crooks, Jennifer; Shoven, Heather
Subject: links to update flint water news

Hi All,

Today, activists delivered a petition (with ~27,000 signatures) asking Flint to immediately switch back to Detroit water: http://www.abc12.com/news/headlines/Crowd-gathers-outside-Flint-City-Hall-demands-switch-to-Detroit-water--323442421.html

And, in case you haven't checked the Marc Edwards Flint site today, there are more Pb results posted: https://flintwaterstudyupdates.wordpress.com/

"Analysis of water samples from an additional 72 Flint homes are concerning
August 31, 2015 flintwaterstudy Articles

Over the weekend, we analyzed another 72 lead samples collected by Flint residents and mailed to Virginia Tech. For the 120 samples analyzed to date, forty two percent were over 5 ppb, which suggests a serious lead in water problem according to our experience and criteria.

Twenty-three (20% of the 120 samples collected to date) also exceeded the 15 ppb lead action limit. The highest lead sampled in first draw so far was 158 ppb, and the highest sample after 45 second flushing is 1,051 ppb. Six of 120 homes sampled (5%), had over 15 ppb lead even after 2 minutes of continuous flushing.

The 90%'ile lead level in the Flint Water Study is currently 30 ppb, which is double the EPA standard applied to homes with "worst case" lead plumbing, and in a range where water consumption has caused lead poisoning in children and adverse pregnancy outcomes. Needless to say, these data are very worrisome, especially considering that our survey did not target "worst case" lead plumbing systems as is required for EPA sampling.

Look at our summary page here for more details. We just heard that we are approaching the 250 (out of 300) mark of returned kits and we couldn't be more grateful and proud of Flint's citizen scientists. Please continue collecting samples, as larger number of samples helps to draw stronger conclusions. More samples may also help Flint residents understand what regions of the city and the types of plumbing systems that have the most serious lead problems. We are also contacting homes with high lead levels via phone and email and all sampled residents will receive their results via regular mail."

There's also this part about how residents with high results in the first round were called:

"Informing Flint Residents about lead in their water
All Flint residents who returned their lead kits will receive their results via regular mail. You will also receive this document on how to interpret your lead results. For the first 48 lead kits analyzed so far, we have finished calling residents who had considerably high lead in their water. For those we couldn't get through, we left voicemail messages and sent an email."

Thanks,
Andrea Porter

Environmental Engineer
Ground Water & Drinking Water Branch
U.S. EPA, Region 5 (WG-15J)
77 W. Jackson Blvd.
Chicago, IL 60604
Phone: 312-886-4427
Fax: 312-697-2656

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From: Poy, Thomas [mailto:poy.thomas@epa.gov]
Sent: Wednesday, September 02, 2015 4:23 PM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ)
Subject: Flint Meeting

Liane/Richard:
How did Flint's meeting with their consultant go? Did they decide to implement treatment?

Tom

Tom Poy
Chief, Ground Water and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

From: Benzie, Richard (DEQ)
Sent: Wednesday, September 02, 2015 5:13 PM
To: Prysby, Mike (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: FW: Flint Meeting

Do we know how this meeting concluded?

From: Prysby, Mike (DEQ)
Sent: Thursday, September 03, 2015 9:06 AM
To: Benzie, Richard (DEQ)
Cc: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: RE: Flint Meeting

Richard,

I spoke this morning with Mike Glasgow (Utility Administrator) and Brent Wight (WTP Supt) to see what came out of their meeting with LAN and the city. The meeting's main focus was over the lawsuit and financial issues; however, corrosion control treatment was also discussed. City administration told Mike and Brent that there will be no funding restrictions to install corrosion control. The capital cost to install treatment (P04 feed system) is not expected to be high since the WTP has existing feed lines and equip in place; however, new properly sized pumps will be needed. Mike expects LAN to have a proposal for us to review and approve for issuance of an Act 399 construction permit within the next one to two months.

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

From: Benzie, Richard (DEQ) [mailto:BENZIER@michigan.gov]
Sent: Thursday, September 03, 2015 9:21 AM
To: Poy, Thomas
Cc: shekterj@michigan.gov
Subject: FW: Flint Meeting

FYI

From: Poy, Thomas <poy.thomas@epa.gov>
Sent: Thursday, September 03; 2015 1:02 PM
To: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Cc: Hyde, Tinka; Henry, Timothy; Bair, Rita; Damato, Nicholas; Crooks, Jennifer
Subject: RE: Flint Meeting

Thanks for the email.

I hope that Flint will utilize the expertise of MDEQ field staff and ORD distribution system staff to help them identify water quality and pipe conditions that need to be considered in the effective implementation of phosphate treatment.

Tom Poy
Chief, Ground Water and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

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

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

Today, Sept. 2, researchers at Virginia Tech posted the results on an experiment with Flint water online. The report concludes that Flint River water leaches much more lead from plumbing than does Detroit.
"On average, Detroit water is 12 times (or 12X) less corrosive than the Flint River water currently in use ... This is creating a public health threat in some Flint homes that have lead pipe or lead solder," the report says.
An earlier post by the same researchers says that initial water tests show "a serious lead in water problem" in Flint, partly because Flint River water is so corrosive to pipes.
Given the state's role in oversight of the city's drinking water system through DEQ and its overall oversight by state emergency managers during the past several years, I wanted to make sure I'm reaching out to the right person to respond to this information.
Could you let me know who that is?
I expect to post the first story about the experiment today and expect the issue will be getting more attention as the VT study of 300 water test kits from Flint is completed.
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile 810.347.9963
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Wurfel, Brad (DEQ) [mailto:WurfelB@michigan.gov]
Sent: Wednesday, September 02, 2015 11:37 AM
To: Ronald Fonger
Subject: RE: lead in flint water

Ron, thank you for reaching out. We definitely want to clarify some important points here. Give me a few to read this and pull together some stuff for you.
Again, THANKS!!!
b

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Wednesday, September 02, 2015 11:40 AM
To: Wurfel, Brad (DEQ)
Subject: RE: lead in flint water

Brad:
If needed, here is the link to what's been posted today.
I spoke with Dr. Marc Edwards, who is overseeing the research.
http://flintwaterstudy.org/

Ron Fonger
MLive Media Group
Reporter

mobile 810.347.9963
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

Draft copy of the news release MDEQ put out (next page) regarding Virginia Tech's research (Sep 02, 2015):

We are aware that Virginia Tech researchers are now testing water at various Flint homes for lead levels ~~in their plumbing~~. We appreciate that Virginia Tech's team is working on this issue because it brings the public spotlight on an important fact: if you have lead water pipes or plumbing fixtures containing lead in your home, or a lead service connection to the city system, it is very likely you are ingesting some level of lead. That's just a fact, and in the City of Flint, that fact affects 15,000 or more residences.

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

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

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

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

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

From: Wurfel, Brad (DEQ)
Sent: Wednesday, September 02, 2015 3:28 PM
To: Ronald Fonger
Subject: RE: lead in flint water

Here's a response from the DEQ. Attribute to me. Call me if you have further questions. Thanks, Ron.
b

Brad Wurfel
Communications Director
Michigan Department of Environmental Quality
517-284-6713
517-230-8006 cell

We are aware that Virginia Tech researchers are now testing water at various Flint homes for lead levels. We appreciate that Virginia Tech's team is working on this issue because it brings the public spotlight on an important fact: if you have lead water pipes or plumbing fixtures containing lead in your home, or a lead service connection to the city system, it is very likely you are ingesting some level of lead. That's just a fact. It's true whether you live in Detroit, Dowagiac or Decatur.

And in the City of Flint, that fact affects 15,000 or more residences.

However, we want to be very clear that the lead levels being detected in Flint drinking water are not coming from the treatment plant or the city's transmission lines. Treated water leaving the plant has no detectable levels of lead in it. The issue is how, whether, and to what extent the drinking water is interacting with lead plumbing in people's homes.

It does not appear the Virginia Tech research lab is certified, and we can't speak to the sampling methods being employed to achieve these results. The results reported so far fail to track with any of the lead sampling conducted by the city. In addition, the Virginia Tech results are not reflected by the blood lead level testing regularly conducted by the state department of community health that have not shown any change since Flint switched sources.

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

That said, the state has requested Flint to 'optimize' its water treatment to further limit exposure to lead from plumbing in homes. While statute allows several years for a drinking water system to actually undertake this process – Detroit took five years to complete its water optimization work – we are encouraging Flint water system operators to take these steps immediately and we are encouraged by the conversation so far.

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

--

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Thursday, September 03, 2015 11:03 AM
To: Wurfel, Brad (DEQ)
Subject: steve busch

Brad:
We are planning to follow up on the issue of Flint optimizing its water system to further limit exposure to lead from plumbing in homes.
I left messages we Steve Busch Wednesday and again this morning and am expecting to get some information from the city on what it's doing or considering.
Any help in getting a minute with Steve would be appreciated.
Thanks for this and your help yesterday,

Ron Fonger
MLive Media Group
Reporter

mobile 810.347.9963

From: Wurfel, Brad (DEQ)
Sent: Thursday, September 03, 2015 11:16 AM
To: Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Prysby, Mike (DEQ)
Subject: FW: steve busch

What do we want to do with this today? Seems Steve's outta here.
b

From: Benzie, Richard (DEQ)
Sent: Thursday, September 03, 2015 11:20 AM
To: Wurfel, Brad (DEQ); Busch, Stephen (DEQ); Shekter Smith, Liane (DEQ); Prysby, Mike (DEQ)
Subject: RE: steve busch

If he needs to talk to someone here, Mike Prysby was the one who contacted Flint officials to learn what was decided at the meeting held Tuesday between the city and their consultant to discuss a number of issues including the possibility of optimizing their treatment for corrosion control. Mike provided an update that I forwarded to Region 5 EPA as they were asking about the status.

But this information is best obtained from the city officials that Mike contacted to learn what was discussed.

Richard

--

From: Prysby, Mike (DEQ)
Sent: Thursday, September 03, 2015 1:22 PM
To: Benzie, Richard (DEQ); Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ)
Subject: FW: Flint Water

Below is a note from Howard Croft to our TAC team concerning the return to compliance for TTHMs. Howard also briefly discusses the lead issue and the city's plans to install optimal corrosion control.

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

From: Howard Croft [mailto:hcroft@cityofflint.com]
Sent: Thursday, September 03, 2015 12:28 PM
To: Brent Wright; Dayne Walling; donna. cole; Gerald (Jed) Natzke; Gerald Ambrose; Howard Croft; James Henry; Jason Lorenz; jmikewright; JoAnne Herman; John O'Brien; Kirk Smith; larry.koehler@mcc.edu; Laura Sullivan; Michael Glasgow; Michael Wright; Mike Lane; Prysby, Mike (DEQ); Natasha Henderson; Norb Birchmeier; Pete Levine; Robert Bincsik; rosejo@msu.edu; Russell Hudson; Samir Matta; Warren Green
Subject: Flint Water

Technical Advisory Team,

I am pleased to report that the City of Flint has officially returned to compliance with the Michigan Safe Drinking Water Act and we have received confirming documentation from the DEQ today. The GAC filtering was installed on time and was instrumental in our ability to maintain an average level under the MCL. We anticipate that we will have no further notices going out.

Recent testing has raised questions regarding the amount of lead that is being found in the water and I wanted to report to you our current status.

At the onset of our plant design, optimization for lead was addressed and discussed with the engineering firm and with the DEQ. It was determined that having more data was advisable prior to the commitment of a specific optimization method. Most chemicals used in this process are phosphate based and phosphate can be a "food" for bacteria. We have performed over one hundred and sixty lead tests throughout the city since switching over to the Flint River and remain within the EPA standards.

We are currently designing an optimization plan with the engineering firm that will be presented to the DEQ and upon approval we expect to have it implemented by January 2016. It is worthwhile to note that the DEQ has reported that other cities have taken years to complete an optimization plan and we anticipate having a plan in place over the next four months.

It is also worth noting to this group that there are different lead testing methods used within industry and the city remains consistent with the most recent EPA approved testing method which can produce different results than other methods.

We hope to schedule another TAC team meeting for late September or early October, I will attempt to keep everyone informed and look for the best dates. We are inviting additional EPA experts to become a part of this committee.

Thank you,

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

From Michigan Radio (Sep 6, 2015):

Team testing Flint water for lead sample by sample

…

"The samples don't match the testing that we've been doing in the same kind of neighborhoods all over the city for the past year," says Brad Wurfel, a state Department of Environmental Quality spokesman.

Wurfel says DEQ has conducted two rounds of testing in the past year. He adds that the Department of Community Health conducts its own blood level lead testing in Flint.

"With these kind of numbers," Wurfel says, "we would have expected to be seeing a spike somewhere else in the other lead monitoring that goes on in the community."

…

http://michiganradio.org/post/team-testing-flint-water-lead-sample-sample

Email from Brad Wurfel to Ron Fonger (Sep 9 2015):

Ron,

As we discussed last week, the state DEQ is just as perplexed by Edwards' results as he seems to be by the city's test results, which are done according to state and federal sampling guidelines and analyzed in certified labs.

When I said we were unsure how the Virginia Tech team got its results, that's not the same as being surprised that they got them. There are a conservatively estimated 15,000 old homes with lead plumbing in Flint alone, and this group specializes in looking for high lead problems. They pull that rabbit out of that hat everywhere they go. Nobody should be surprised when the rabbit comes out of the hat, even if they can't figure out how it is done.

It's scientifically probable a research team that specializes in looking for lead in water could have found it in Flint when the city was on its old water supply. We won't know that, because they've only just arrived in town and quickly proven the theory they set out to prove, and while the state appreciates academic participation in this discussion, offering broad, dire public health advice based on some quick testing could be seen as fanning political flames irresponsibly. Residents of Flint concerned about the health of their community don't need more of that.

As I mentioned last week, the issue here isn't Flint's water source or water plants. It's the high number of older homes with lead pipes and lead service connections. Anyone with lead plumbing in their homes should recognize there's some communication of lead from that.

The state and the EPA are working together in Flint – have been from the start, and we are in regular communication with federal counterparts to discuss Flint water. The state's program has been in place, protecting community water supplies for more than 40 years around the state. The reason this conversation began is because we have lead and copper rules; the city met the state and federal standard, and has agreed to further optimize its system to even further reduce lead levels, but let's be clear: lead pipes means some lead in water, at some level. Folks who have concerns should get a water specialist to take a look at their home and see what they need to do to achieve peace of mind, because lead and copper are home plumbing problems that no water source can eliminate entirely.

b

Brad Wurfel

Communications Director

Michigan Department of Environmental Quality

517-284-6713

517-230-8006 cell

From The Flint Journal (Sep 10, 2015):

Feds sending in experts to help Flint keep lead out of water

…

The Michigan Department of Environmental Quality has estimated at least 15,000 homes in Flint have lead plumbing, and Communications Director Brad Wurfel said the only way to eliminate lead in those homes would be to replace hundreds of miles of lead pipes and connections.

Flint residents "who have lead pipes or a lead service connection had lead in their water at some level before this issue was in the newspaper ... before the switch to the Flint River," Wurfel said in an email THursday, Sept. 10. "Optimizing (corrosion control) can minimize impacts, but it won't alleviate the issue."

"The city of Flint has challenges, no question," Wurfel said. "Decades of forestalled maintenance ... coupled with changes in city population size that put new demands on an old system ... compounded by a rate structure which makes Flint's water very expensive, are all serious issues the city must confront."

The "solution won't be cheap and relief for some parts of the city won't come quickly because this problem didn't start last month, last year, or even last governor; it started in the last century," the statement says.

Wurfel said that while the state "appreciates academic participation in this discussion, offering broad, dire public health advice based on some quick testing could be seen as fanning political flames irresponsibly."

…

Wurfel said the state's program for ensuring water quality is built on federal law and "has been effectively protecting drinking water supplies for decades ... a consistent, solid program."

…

Wurfel said large water system operators like Flint must carry out two consecutive rounds of water tests in a 12-month period after changing water sources.

The tests allow the city is to see what changes need to be made to minimize corrosion.

"Those (test) results show the system complies with the federal rule -- 90 percent of the samples are 15 ppb or less," Wurfel said in an email. "If the system is large -- 50,000 or more customers -- they still have to proceed with optimizing the system.

"They get a year to make a plan, based on the results of the tests. We get a year to review the plan. They get two years to implement the plan," the statement says. "We've encouraged Flint to skip the time periods and move immediately to optimizing."

…

http://www.mlive.com/news/flint/index.ssf/2015/09/university_researchers_dont_dr.html

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From: Crooks, Jennifer <crooks.jennifer@epa.gov>
Sent: Thursday, September 10, 2015 5:58 PM
To: Shekter Smith, Liane (DEQ)
Cc: Benzie, Richard (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ); Poy, Thomas; Porter, Andrea; Devereaux, Tracy Jo (DEQ); Kuefler, Janet; Shoven, Heather; Deltoral, Miguel
Subject: Final Notes from call Tuesday 8/31/15 with MI DEQ RE: Flint

Thank you, Liane, for your edits—I incorporated all of your edits, and further clarified who said what.
Jennifer

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

STRATEGIC NEXT STEPS FOR FLINT TO ADDRESS LEAD CORROSION CONCERNS

Tom Poy discussed Marc Edwards' website, "Flint, MI Water Study Updates" (https://flintwaterstudyupdates.wordpress.com/). The discussion focused on the lead sampling and analytical results Marc Edwards' team posted to their website. Tom emphasized that EPA is not involved with Marc Edwards' work in Flint. Tom mentioned that the Edwards team's samples may not have been analyzed by a certified lab (which is only required for compliance samples) nor taken from sites that qualify as Tier 1 for LCR compliance sampling, but the results give further evidence that lead levels in Flint are trending upward. (The conclusion that there is an increasing trend of lead concentrations at consumer taps builds upon earlier compliance sampling taken by Flint in 2014 and 2015 that showed the 90th percentile of the 1st 6-month sampling period at 6ppb, then the 90th percentile of the 2nd 6-month sampling period at 11ppb.) Everyone at the meeting agreed that Flint is in compliance with the Safe Drinking water Act action level for lead. However, because the city's population exceeds 50,000 persons, MDEQ stated that Flint needs to additionally optimize their treatment process to reduce lead levels further, if possible.

The "Flint, MI Water Study Updates" website is putting added pressure on MDEQ and EPA to ensure that Flint addresses their lack of optimized corrosion control treatment in an expedited manner in order to protect the residents from exposure to high lead levels. Richard noted that there are numerous systems across the country that have installed corrosion control treatment, have optimized their corrosion control, but did not necessarily reduce their lead levels. We all acknowledged that this is true. MDEQ acknowledged that implementing installation of corrosion control treatment in Flint is prudent to protect public health since there are approximately 15,000 lead service lines within the city. EPA acknowledged that to delay installation of corrosion control treatment in Flint would likely cause even higher levels of lead over time as Flint's many lead service lines are continuously in contact with corrosive water.

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

1. **Public Education for Flint Residents.** Liane has contacted the Department of Community Health to discuss developing a consumer lead education piece outlining the consumer's options to lower the lead in their drinking water. The Region was glad to hear of a plan to initiate Lead Public Education since this will provide the public immediate actions they can take. The educational material could include steps consumers can take to reduce their exposure to lead in drinking water (flushing their lines after long stagnation periods, using filters certified to remove lead, etc.) as well as longer term fixes to remove lead sources (for example, financing the cost to

remove any part of a lead service line on the owner's property at the same time as Flint is replacing its portion of the lead service line).

2. **Gathering Information on Flint's Future Treatment Plans.** Steve Busch said Flint and their engineering consultants were meeting this week (Sept 1) to discuss conceptually the necessary optimized corrosion control treatment at Flint. Tom Poy shared EPA lead experts' (Mike Schock and Darren Lytle of EPA's Office of Research and Development in Cincinnati) caution against simply adding orthophosphate without first studying the water quality and existing distribution system conditions to ensure that any installed treatment has a good chance of working. EPA lead experts have research and field experience showing the complexity of optimizing corrosion control treatment when water quality is significantly changed, as is the case for Flint.
3. **Offering Flint Free Help from EPA Experts.** Steve Busch has already provided the names of EPA lead experts (Mike Schock and Darren Lytle) to Flint, as has Susan Hedman, R5 Administrator. MDEQ and Region 5 agree that, to successfully control lead corrosion in the distribution system, Flint needs to review this situation holistically, while also addressing the lead issue in an expedited manner.
4. **Laying Groundwork for MDEQ/EPA Collaboration with Flint.** If Flint accepts the offer of technical assistance for optimizing corrosion control, Tom Poy suggested that MDEQ and EPA lead experts (Mike Schock and Darren Lytle) form a partnership to provide such help. EPA experts are able to provide pipe scale analyses, as well as other laboratory support. Although Flint (using their consultant) bears the ultimate responsibility for designing and installing corrosion control, MDEQ and EPA experts are willing and able to provide advice throughout the process.

END

Jennifer

Jennifer Kurtz Crooks
Michigan Program Manager
Ground Water and Drinking Water Branch
U.S. EPA Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604
312.886.0244
crooks.jennifer@epa.gov
312.582.5853 (fax)

From The Flint Journal (Sep 11, 2015):

Kildee, state lawmakers want more info from regulators about Flint water

…DEQ Communications Director Brad Wurfel said in an email to The Flint Journal-MLive that the agency appreciates "that the state representatives have concerns about what they are seeing in various forums on this issue." "Obviously the department looks forward to briefing local legislative leaders and answering all of their questions," the statement says.…

http://www.mlive.com/news/flint/index.ssf/2015/09/kildee_other_elected_officials.html

STATE OF MICHIGAN

September 10, 2015

Michigan Department of Environmental Quality
Executive Division
DEQ Director: Dan Wyant
P.O. Box 30473
Lansing, MI 48909-7973

Director Wyant,

In light of recently released findings by the American Civil Liberties Union, independent researchers and a troubling interim U.S. Environmental Protection Agency memo from June, we are requesting additional answers about the safety and treatment of the City of Flint's water.

Several disturbing points have been raised and we have a number of urgent questions, including:

- **When did the MDEQ become aware of the June 24, 2015, interim EPA memo and whom was it shared with?**
- Which Flint city officials also received this information?
- Why was the memo not immediately shared with the public?
- What response did MDEQ have to the EPA concerns raised in the memo?
- Were any actions taken by the MDEQ as a result of the issues mentioned in the memo?
- What steps, if any, were taken to determine the validity of the Virginia Tech study?

--

From: Jennifer Crooks <jcrooks57@gmail.com>
Sent: Friday, September 11, 2015 10:17 AM
To: Poy, Thomas; Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ)
Subject: Clarification

Just to clarify; on our call, I wanted to remind you that Miguel.s report had DEQ cc.d. So if the Legislature or who ever might say you all were cc.d, you can truthfully respond that it was EPA.s request that the report not be sent to the cc.s. Consequently, you all never received the report from Miguel.
Good to talk with you all.
Jennifer

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

September 17, 2015

VIA E-MAIL

The Honorable Jim Ananich
State Senator
State Capitol
P.O. Box 30036
Lansing, Michigan 48909-7536

The Honorable Sheldon Neeley
State Representative
State Capitol
P.O. Box 30014
Lansing, Michigan 48909-7514

The Honorable Phil Phelps
State Representative
State Capitol
P.O. Box 30014
Lansing, Michigan 48909-7514

Dear Senator Ananich and Representatives Neeley and Phelps:

Thank you for your letter of September 10, 2015, regarding water quality in the city of Flint (City). Your interest in this matter is appreciated. The Michigan Department of Environmental Quality (MDEQ) takes seriously its responsibility to ensure safe drinking water for all Michigan residents. The MDEQ maintains a robust public water supply regulatory program through long-standing partnerships with the United States Environmental Protection Agency (USEPA) and the state's regulated public water systems.

With respect to the draft memo referenced in your letter, the MDEQ does not review or receive draft memos from the USEPA, nor would we expect to while it is a draft.

--

From: Wurfel, Brad (DEQ)
Sent: Friday, September 11, 2015 1:18 PM
To: Shekter Smith, Liane (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ)
Subject: FW: mayor walling's comment

Help?

From: Ronald Fonger [mailto:RFONGER1@mlive.com]
Sent: Friday, September 11, 2015 1:03 PM
To: Wurfel, Brad (DEQ)
Subject: mayor walling's comment

Brad:
On his campaign Web site, Mayor Walling addresses a lot of water issues and states, "The City will be continuing to optimize its water treatment process including planning to use a corrosion inhibitor now that it is being allowed by the MDEQ."
Do you have any information on what the corrosion inhibitor is and whether DEQ has approved its use?
Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile 810.347.9963
email rfonger1@mlive.com
address 540 S. Saginaw St. #101, Flint MI 48502

From: Busch, Stephen (DEQ)
Sent: Friday, September 11, 2015 1:45 PM
To: Wurfel, Brad (DEQ); Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ)
Subject: RE: mayor walling's comment

The City has not sent us their recommendation at this time. Per our 8/17 letter (attached), we recommended they select phosphate treatment which was previously provided by DWSD. They have until the end of the year to make a recommendation, but they are planning to have the treatment in place by January 2016. Their engineering consultant is working on this. Howard Croft noted this in his September 3 email to members of the technical advisory team the City formed.

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

From: Shekter Smith, Liane (DEQ)
Sent: Friday, September 11, 2015 1:47 PM
To: Busch, Stephen (DEQ); Wurfel, Brad (DEQ); Benzie, Richard (DEQ)
Subject: RE: mayor walling's comment

It should be noted that the city does need to obtain a construction permit to install treatment. They have not yet applied for such a permit. So I'm not sure what the mayor means about us finally allowing them to proceed. The ball's in their court.

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

--

From: Poy, Thomas <poy.thomas@epa.gov>
Sent: Friday, September 11, 2015 2:49 PM
To: Shekter Smith, Liane (DEQ); Benzie, Richard (DEQ); Busch, Stephen (DEQ); Crooks, Jennifer
Subject: Draft Response
Attachments: AL-15-001-3725 (Kildee Flint) 9-11-15.docx

Liane: Here is my draft response that I sent up the mgmt chain. As I mentioned on the call, it will likely be edited down as the RA likes one page responses.

Tom

Tom Poy
Chief, Ground Water and Drinking Water Branch
USEPA - Region 5
(312) 886-5991

The Honorable Daniel Kildee
Member, U.S. House of Representatives
Washington, DC 20515-1313

Dear Congressman Kildee:

Thank you for your September 9, 2015 letter regarding drinking water quality in Flint and the June 24, 2015 U. S. Environmental Protection Agency memorandum from Miguel A. Del Toral to Thomas Poy. EPA shares your concern about the quality of the drinking water in Flint. Our focus has been to work with the Michigan Department of Environmental Quality (MDEQ) and the City of Flint so they can provide clean and safe water to its residents.

Mr. Del Toral's June 24, 2015 internal memo summarizing the activities conducted in response to a Flint resident's request for help with high lead levels and expressing his concerns about Flint's drinking water was sent to Mr. Poy. Mr. Del Toral's statements in the memorandum regarding concerns about lead levels in Flint are his professional judgments based on the facts that Flint has not provided corrosion control treatment after switching source waters and that EPA sample results from some homes in Flint found high levels of lead. In addition, the last two rounds of compliance monitoring conducted by Flint, while below the lead action level of 15 micrograms per liter (ug/L), had lead concentrations trending higher.

The lead compliance goal under the Lead and Copper Rule (LCR) is to not exceed the lead action level of 15 ug/L in at least 90% of the samples taken. This is determined by comparing the 90th percentile concentration (e.g., the 90th highest value out of 100 results) to the lead action level. The last two rounds of compliance monitoring that the MDEQ had Flint conduct had the 90th percentile concentrations below the lead action level. The round of samples taken from July 2014 to December 2014 had a 90th percentile value of 6 ug/L. The last round of samples taken from January 2015 to June 2015 had a 90th percentile value of 11 ug/L. Public notice is provided when the action level is exceeded.

Even if public notice is not required, the LCR requires that homeowners whose water was sampled for lead by the water system receive a copy of their individual lead results, including an explanation of health effects and steps the consumer can take to reduce lead exposure from drinking water. EPA and the Centers for Disease Control and Prevention believe there is no safe level of lead exposure. Lead is harmful to health, especially for children. While paint, dust, and soil are the most common sources of lead, drinking water can contribute 20 to 40 percent of an

infant's lead exposure. Lead is typically not found in a utility's source water. It comes from pipes and fixtures, some of which is the owned by the homeowner. Therefore, it is difficult to say with certainty what the lead levels are in each home. The goal is to remove as much lead from drinking water as possible.

EPA promotes a number of options to reduce the amount of lead in the drinking water.

- Have your water tested. The water system will test drinking water for residents upon request.
- Be aware of any work that could disturb your lead service line, such as water main replacement, lead service line repair or replacement of part of the service line.
- Run water before use if it has not been used for several hours. The amount of time to run the water will depend on whether the home has a lead service line or not.
- Use only cold water for drinking, cooking, and preparing baby formula.
- Purchase a water filter that is certified to remove "total lead."
- On a regular basis clean and remove any debris from faucet aerators to clear out any particles of lead that may become trapped in the aerator.
- Purchase lead-free faucets and plumbing components.
- Remove the entire lead service line.

The compliance monitoring conducted by Flint also shows that they do not have optimized corrosion control and they should implement treatment as soon as possible. To help with the implementation of corrosion control treatment, EPA has offered and Flint has accepted technical assistance from EPA's Office of Research and Development experts on lead and water distribution systems to compliment the expertise of MDEQ field staff.

In addition to assisting on needed treatment for Flint's water system, EPA is currently evaluating Flint's compliance with the LCR. We are working with our legal counsel to confirm our interpretation of the LCR regulations regarding maintaining optimum corrosion control treatment. Also, EPA is reviewing the latest round of lead compliance monitoring conducted by Flint to see if all of the relevant samples have been included in the 90th percentile compliance calculation. We will provide you with the results of our evaluation when it is completed.

Again, thank you for your letter. If you have further questions, please contact me, or your staff may contact Denise Fortin, the Region 5 Congressional Liaison, at (312) 886-3000.

Sincerely,

Susan Hedman
Regional Administrator

From The Flint Journal (Sep 15, 2015):

Virginia Tech professor says Flint's tests for lead in water can't be trusted

…

Brad Wurfel, director of communications for the DEQ, said there is lead in all water where lead service lines and plumbing with lead solder exist.

"The problem isn't new," Wurfel said Tuesday. "It's just news (now, and) a knee-jerk reaction would be an irresponsible response."

…

http://www.mlive.com/news/flint/index.ssf/2015/09/virginia_tech_researcher_says.html

From: Shekter Smith, Liane (DEQ)
Sent: Monday, September 21, 2015 11:56 AM
To: Busch, Stephen (DEQ); Benzie, Richard (DEQ); Sygo, Jim (DEQ); Wurfel, Brad (DEQ); Pallone, Maggie (DEQ); Wyant, Dan (DEQ)
Cc: Thelen, Mary Beth (DEQ); Feuerstein, Heather (DEQ); Shaler, Karen (DEQ); Devereaux, Tracy Jo (DEQ)
Subject: FW: Flint MI: LCR Enforcement Issues
Attachments: image003.png; ATT00001.htm; Flint LCR for FOIA 6429-15 (5).pdf; ATT00002.htm; FOIA 15-585 Part 2 55pgs (12).pdf; ATT00003.htm

EPA just shared the attached

From: Fortin, Denise [mailto:Fortin.Denise@epa.gov]
Sent: Monday, September 21, 2015 11:44 AM
To: Shekter Smith, Liane (DEQ)
Subject: Fwd: Flint MI: LCR Enforcement Issues

Sent from my iPhone

Begin forwarded message:

From: "Henry, Timothy" <henry.timothy@epa.gov>
To: "Fortin, Denise" <Fortin.Denise@epa.gov>
Subject: FW: Flint MI: LCR Enforcement Issues

Tim Henry
Deputy Director, Water Division
U.S. EPA (W-15J)
77 W. Jackson Blvd., Chicago, IL 60604-3590
Phone: 312.886.6107 Fax: 312.692.2578

From: Damato, Nicholas
Sent: Monday, September 21, 2015 7:56 AM
To: Henry, Timothy; Hyde, Tinka
Subject: FW: Flint MI: LCR Enforcement Issues
Importance: High

Tim & Tinka,

Miguel forwarded the email below from Marc Edwards. Miguel then called because he wanted Tinka to have a heads up especially on the info in the ACLU video and didn't want her blindsided

with the content – it should be reviewed carefully. Tom, Rita, Heather, Jennifer, Miguel & I will be having a call with ORC & OECA this morning on Marc's email.

Nick

From: Deltoral, Miguel
Sent: Monday, September 21, 2015 6:52 AM
To: Damato, Nicholas
Subject: Fw: Flint MI: LCR Enforcement Issues
Importance: High

Just noticed you weren't copied on this...

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: Marc Edwards <edwardsm@vt.edu>
Sent: Sunday, September 20, 2015 09:29 PM
To: Schock, Michael; Lytle, Darren; kempic.jeffrey@epa.gove; Burneson, Eric; demarco.carol@epa.gov; Murphy, Thomas; Shoven, Heather; Deltoral, Miguel
Subject: Flint MI: LCR Enforcement Issues

Mike, Darren, Jeff, Eric, Carol and Miguel and R5 MI/Enforcement personnel (as listed on the R5 webpage).

In this e-mail, I am making you aware of what we know regarding the Flint lead situation.

1) They do not have an approved lead sampling pool. Only 13 of the lowest lead sampled homes from 2014, were resampled in 2015.
The homes sampling high in 2014, were not asked to be resampled.
At best, their program is sending out sampling bottles at random across the city.

2) This message exemplifies the type of site selection, that they are doing to satisfy their high risk LCR monitoring pool site.
That is, none. They are not even hiding it.
http://www.flintneighborhoodsunited.org/drinking-water-testing/.

3) Furthermore, in a video now on the ACLU website, at the end of the interview, Mike Glasgow (Flint LCR program) notes what is perfectly obvious from looking at the MDEQ FOIA materials.
"we threw out bottles everywhere just to collect as many as we can, just to hit our number, and we just turn in every result we get in."
Moreover, they do not have the records to show the homes have lead pipe. ***"we are still looking for the records"***
See video here. Start at 4 minutes and 13 seconds to see the admission. ***https://vimeo.com/139882021***

4) On top of that, according to my count, MDEQ covered up no fewer than 5 violations in the 2015 sample round. These include:

a) Technical violation in that what they now stamp as the "draft" report (attached) is late (the signed date is 7/28/2015).
It was due 7/10/2015. The final "revised" report is dated 8/20/2015 (also attached), which is 40 days late.

b) Although 87 sites from 2014 were not resampled, no written justification for the site changes was provided in the FOIA materials, and this is required by law.
The statement given today by Flint, that residents were not resampled because they did not want to participate, is contradicted by my conversations with residents.

c) In the original 71 samples Flint submitted late, the lead 90%ile action level was exceeded. MDEQ took the initiative to invalidate 2 samples, dropping Flint below the Action Level.
Flint never requested in writing that any of the samples be invalidated (see the comments written in the box of page 1, FOIA 15-585).
Mike Glasgow says that the 2 high samples were deleted based on the conference call. Only the high samples were scrutinized for meeting the sample pool criteria.
No low samples were investigated. I have the e-mails.

4) The "Draft 7/28/2015" and "revised 8/20/2015" LCR reports, on page 1, check boxes that note Tier 1 sites are not used. MDEQ asks no questions about that. In video Mike admits he has no knowledge of what sites actually have lead pipe or not.

5) Flint did not achieve the minimum number of samples as determined before the sampling round. In his e-mail Mike Glasgow (see below, and see FLINT LCR FOR FOIA...pdf) acknowledges this will be a technical violation. The draft LCR clearly indicates that the minimum was not achieved. MDEQ responds "we are discussing options" to handle this technical violation. In the August 20th revised final report, even this technical violation magically disappears (see comments box on page 1....).

From The Flint Journal (Sep 25, 2015):

Flint River switch has increased risk of lead in water, mayor says

…

While the mayor left the door open to switching water sources -- at an estimated cost of $1.5 million per month, City Administrator Natasha Henderson and Brad Wurfel, a spokesman for the state Department of Environmental Quality, said Flint can't afford such a change.

…

http://www.mlive.com/news/flint/index.ssf/2015/09/mayor_says_flint_river_has_inc.html

From The Detroit Free Press (Sep 25, 2015):

Doctor: Lead seen in more Flint kids since water switch

…

The question is not that whether there is a higher level of lead in water from the Flint River — it's that river water may be more corrosive as it travels through lead pipes on residential properties and in homes, said Brad Wurfel, a spokesman for the Michigan Department of Environmental Quality. About 15,000 of the 40,000 Flint customers have lead pipes connecting to the city system, he said.

But he said testing has shown that lead levels in the Flint water system — both before and after the switch in 2014 — have been under the acceptable limit of 15 parts per billion during every three-year testing cycle since 1992. Additionally, two rounds of supplemented tests since the system switch put lead levels at 6 parts per billion and then at 11 parts per billion — a change that Wurfel said fits in line with previous fluctuations.

Congressman Dan Kildee, a Flint Democrat, called state and local testing "lackluster."

For one thing, Flint residents collect samples, and there are concerns that there are too few samples and that they represent only some parts of the city. And Wurfel confirmed that about 60 bottles of water samples were turned in by citizens in the last round of testing, even though 200 bottles were sent out.

In the best of circumstances — with enough sampling and previous clean tests of water — citizen sampling might be adequate. But, in Flint — where there's a major change in the system that some residents say have led to health problems, "it seems to be a much higher standard would apply," Kildee said.

In addition to water testing, Wurfel a said state public health officials have reexamined results of blood-lead level testing among Flint children. In short, that data doesn't show the same upward trend that Hanna-Attisha's found, he said.

Wurfel said environmental officials aren't taking the matter lightly, and they realize the water system is in "dire" need of an overhaul. They've requested a meeting with U.S. Environmental Protection Agency authorities to "review protocols" to make sure the state's testing is adequate.

"Lead is serious. Lead builds up. Lead effects children. It’s not something we take lightly," he said. "We’re confident with what we’ve done, but we know there are concerns."

…

http://www.freep.com/story/news/local/michigan/2015/09/24/water-lead-in-flint/72747696/

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From Associated Press (Sep 28, 2015):

Doctors Urge Flint To Switch Water Source After Kids' Blood Tests Show Lead Poisoning

…

State regulators quickly responded. Brad Wurfel, spokesman at the **Department of Environmental Quality**, said the water controversy is becoming "near-hysteria."

"I wouldn't call them irresponsible. I would call them unfortunate," Wurfel said of the doctors' comments.

"Flint's drinking water is safe in that it's meeting state and federal standards," he said. "The system has an aging portion that needs to be addressed. They haven't had meaningful maintenance for four decades or more."

…

Associated Press: http://detroit.cbslocal.com/2015/09/24/doctors-urge-flint-to-stop-using-water-from-flint-river-due-to-lead-in-blood/

From NPR (Sep 29, 2015):

High Lead Levels In Michigan Kids After City Switches Water Source

…

But officials with the Michigan Department of Environmental Quality dispute the findings of the draft report. MDEQ spokesman Brad Wurfel says the report was the work of a "rogue employee" and promised the final report — not yet released — would tell a much different story.

"You have to have to do a full year of studying" the water chemistry as it behaves across the system before implementing corrosion control, Wurfel says, adding that's the only way to know how much phosphate to add to the water.

…

http://www.npr.org/2015/09/29/444497051/high-lead-levels-in-michigan-kids-after-city-switches-water-source

From Michigan Radio (Sep 29, 2015):

Flint mayor to state: Approve plan “as fast as humanly possible” to help keep lead out of water

…

You have to have to do a full year of studying” the water chemistry as it behaves across the system before implementing corrosion control, MDEQ spokesman Brad Wurfel said. He says that’s the only way to know what corrosion-control treatment to use.

That period of study was to be completed by June 30.

As the DEQ reads federal regulations, Flint technically has up to two years after the study to install treatment. But Wurfel says an announcement on the state's decision will come by the end of this week, and "the prescription for optimizing the system for corrosion control is going to be done in Flint by the end of this year."

"If I handed you a bag of chocolate chips and a sack of flour and said 'make cookies,' you'd still need a recipe right? They need to get the results from that testing to understand how much of what to put in the (new water source)," Wurfel said.

"We have a plan to expedite this with the city ... and folks can take some comfort in that," Wurfel said.

It's not clear yet how much the treatment will cost, but Wurfel says "this won't break the bank." A state-appointed emergency manager made the interim switch to the Flint River to save the city money.

The city expects to stop using the Flint River when a new regional water system in Genesee County is completed, slated for the end of 2016. According the MDEQ’s Brad Wurfel, that’s because they won’t need to study the nature of the new water source – Lake Huron. Because Detroit’s water system uses water from Lake Huron, Flint will be able to use the same corrosion-control treatment it did when it was hooked up to Detroit’s system.

…

http://michiganradio.org/post/flint-mayor-state-approve-plan-fast-humanly-possible-help-keep-lead-out-water#stream/0

From: Yanna Lambrinidou [mailto:pnalternatives@yahoo.com]
Sent: Thursday, September 10, 2015 11:11 AM
To: Wurfel, Brad (DEQ); Busch, Stephen (DEQ)
Subject: question about optimal WQP ranges for Flint's water

Good morning Mr. Wurfel and Mr. Busch,

As a member of the EPA National Drinking Water Advisory Council (NDWAC) Lead and Copper Rule (LCR) workgroup that just completed its recommendations to EPA about the agency's upcoming revisions to the LCR, I am watching with great interest and concern the developments in Flint in relation to lead. I am looking for information on the optimal water quality parameter (WQP) ranges that MDEQ has set for Flint's water. Are those posted online? If so, could you send me the link? If not, could you let me know what they are?

Thank you kindly,

Yanna Lambrinidou PhD
Parents for Nontoxic Alternatives
PO Box 6283
Washington DC 20015
P 202.997.1834
B www.dcwasawatch.blogspot.com

From: "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov>
To: Yanna Lambrinidou <pnalternatives@yahoo.com>; "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>
Sent: Monday, September 14, 2015 11:05 AM
Subject: RE: question about optimal WQP ranges for Flint's water

Dr. Lambrinidou,

All previous water quality parameter ranges would have been established for the City of Flint's wholesale finished water supplier, the Detroit Water and Sewerage Department, not the City of Flint itself.

As the City of Flint has not yet established optimized corrosion control treatment, the MDEQ is not yet at the point of regulatory requirements where the range of water quality parameters would be set.

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

From: Yanna Lambrinidou [mailto:pnalternatives@yahoo.com]
Sent: Wednesday, September 16, 2015 7:22 PM
To: Busch, Stephen (DEQ); Wurfel, Brad (DEQ)
Subject: Re: question about optimal WQP ranges for Flint's water

Dear Mr. Busch,

Thank you for your quick response. I appreciate the information at, I am sure, a very busy time for you and MDEQ.

Could you please help me understand the following?

When you say that all previous optimal water quality parameter ranges would have been established for the Detroit water utility (not for the City of Flint), do you mean that MDEQ never set optimal water quality parameter ranges *specifically* for Flint before Flint's switch to Flint River water?

It is my impression, please correct me if I'm wrong, that under the LCR, all large systems -- whether they are consecutive or not -- must have optimal water quality parameter ranges designated by states *specifically for them* (at the time when these systems are deemed to have optimized their treatment). Is there language in the LCR I am missing that allows a utility not to have optimal quality parameter ranges established specifically for it?

My second question is this: If the City of Flint had no optimal water quality parameter ranges established specifically for it in the past, how did it achieve LCR compliance? Isn't it the case that utility-specific optimal water quality parameter ranges (and maintenance of these ranges) are required for all large systems to avoid an LCR violation?

I would appreciate your assistance on this matter, as it will shed light on an issue that seems to be very important for EPA's assessment of and upcoming revisions to the LCR.

Kindly,

Yanna Lambrinidou

Yanna Lambrinidou PhD
Parents for Nontoxic Alternatives
PO Box 6283
Washington DC 20015
P 202.997.1834
B www.dcwasawatch.blogspot.com

From: "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov>
To: Yanna Lambrinidou <pnalternatives@yahoo.com>
Cc: "Benzie, Richard (DEQ)" <BENZIER@michigan.gov>; "Cook, Pat (DEQ)" <COOKP@michigan.gov>; "Prysby, Mike (DEQ)" <PRYSBYM@michigan.gov>; "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>; "hyde.tinka@epa.gov" <hyde.tinka@epa.gov>
Sent: Friday, September 25, 2015 8:26 AM
Subject: RE: question about optimal WQP ranges for Flint's water

Dr. Lambrinidou,

I'm sorry for the delay in my response. As some of your questions relate more to statewide program implementation I have requested assistance with the response from staff within our central program office. However, these staff were attending and participating in an offsite (American Water Works Association Conference Michigan Section) conference last week.

Michigan has implemented an EPA approved modified consecutive system approach to lead and copper monitoring where a wholesale water supply sells water to other community water systems. In addition, while water quality parameter (WQP) monitoring occurs at both the water treatment plant and in the combined distribution system, a WQP range is only required to be established at the water treatment plant tap after the system has demonstrated optimized corrosion control treatment (OCCT).

Thus when the City of Flint was a customer of the Detroit Water and Sewerage Department (DWSD), the City of Flint participated in WQP monitoring of its distribution system, but ranges were established only for the OCCT at DWSD treatment plants. The attached letter from our Department established the minimum levels for pH and phosphate dosage in 2000.

As the City of Flint water treatment plant has not yet installed such treatment or been given the designation of OCCT these plant tap values have not been established.

However, the City of Flint WTP has continued to maintain the minimum pH value requirement previously established for DWSD

As noted in your Working Group Report to the NDWAC, "Corrosion Control Treatment (CCT) involves the addition of chemicals (e.g. orthophosphates or silicate) to create a barrier between the pipes and the drinking water, or to modify drinking water chemistry (such as pH and hardness) to inhibit the potential for corrosion."

Should you consider the Flint WTP softening process to be OCCT, then the City already continues to comply with the OCCT requirements as the City of Flint has never had 10% or more of compliance tap samples exceed the 15 ppb action level. Even prior to DWSD's established OCCT the City of Flint lead compliance monitoring has never exceeded the 15 ppb action level.

If you have additional questions we would appreciate having them routed through the NDWAC and your Working Group. Thanks.

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

From: Yanna Lambrinidou [mailto:pnalternatives@yahoo.com]
Sent: Monday, September 28, 2015 12:30 PM
To: Busch, Stephen (DEQ)
Cc: Benzie, Richard (DEQ); Cook, Pat (DEQ); Prysby, Mike (DEQ); Wurfel, Brad (DEQ); hyde.tinka@epa.gov
Subject: Re: question about optimal WQP ranges for Flint's water

Dear Mr. Busch,

I appreciate your response.

Would you be able to send me a copy of the modified consecutive system approach to lead and copper monitoring that EPA approved?

I am sorry I cannot route my question through the NDWAC or my WG. I am not a NDWAC member, and my WG disbanded when our final report was completed back in August. I apologize if I have caused any confusion. The questions I am posing come solely from me because I am in the process of writing a dissenting opinion about the NDWAC LCR WG recommendations that is due to EPA in a couple of weeks. One of the main reasons I am writing this opinion is because of concerns I have about the LCR's CCT requirement. Your experience with and implementation of the LCR in Flint is extremely helpful to me in deepening my understanding about the LCR's CCT requirement and will undoubtedly allow me to write a more informed discussion.

I thank you in advance for your help on this matter and your support of ongoing efforts to assess the LCR carefully and thoroughly.

Kindly,

Yanna Lambrinidou

Yanna Lambrinidou PhD
Parents for Nontoxic Alternatives
PO Box 6283
Washington DC 20015
P 202.997.1834
B www.dcwasawatch.blogspot.com

--

From Associated Press (Oct 2, 2015):

Michigan pledges $1M for filters, steps to help city's water

…

We understand many have lost confidence in the drinking water. We need to build that back. We need to do more," Dan Wyant, director of the Michigan Department of Environmental Quality, said during a news conference in Flint.

State officials are still investigating, but among the differences in how the cities treat their water is that the Detroit system, which taps Lake Huron, adds a corrosion control agent called orthophosphate to prevent lead in pipes getting into the water, said Brad Wurfel, spokesman for the environmental regulatory agency.

Flint had not been doing that, but will start under the guidelines announced Friday. The state said a year of testing showed that the city system exceeded the levels at which corrosion controls must be used. Wurfel said orthophosphate gathers on pipes' interior walls and forms a layer that reduces the water's exposure to lead.

…

http://bigstory.ap.org/article/72fc19a8f47d44109552a11ecaebdcd5/public-health-emergency-declared-due-lead-flint-water

From Al Jazeera America (Oct 8, 2015):

The fight for clean water in Flint, Mich.

…

A spokesman for the MDEQ, Brad Wurfel, said that the sample requirements are based on population, and that the requirement was lowered because new census data showed Flint's population had dropped below 100,000. He also cited difficulty in getting enough people to send in water sample kits for testing. "Participation has historically been a well-documented challenge in Flint," he said.

In response to questions from Al Jazeera, Wurfel said that "the city, the state and the U.S. EPA are taking necessary steps to address lead concerns in Flint. Free lead filters for all Flint residents are a precautionary step to ensure public health while we look more closely at exposure concerns."

…

http://america.aljazeera.com/articles/2015/10/8/the-fight-for-clean-water-in-flint-michigan.html

From Detroit Free Press (Oct 10, 2015):

Flint doctor makes state see light about lead in water

…

Quietly in the back of the room stood Hanna-Attisha, She leaned over to Brad Wurfel, the state spokesman who a week earlier had called her work “unfortunate" in a time of “near hysteria."

You called me irresponsible, Attisha recalled saying to him. Wurfel said he was sorry.

"I had the opportunity to apologize ... I was grateful for the opportunity to do it," Wurfel told the Free Press later. "I will be the first to say, I came on a little strong on this because I believed the numbers we had in the moment."

…

http://www.freep.com/story/news/local/michigan/2015/10/10/hanna-attisha-profile/73600120/

DEQ Chief Wyant: “Wrongdoing of staff” not an issue in Flint water crisis

By MARK BASHORE · OCT 13, 2015

http://wkar.org/post/deq-chief-wyant-wrongdoing-staff-not-issue-flint-water-crisis

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From: Marc Edwards [mailto:edwardsm@vt.edu]
Sent: Thursday, October 15, 2015 10:44 AM
To: WyantD@michigan.gov; lwalters313@gmail.com; Andrew Leavitt (ALeavitt@senate.michigan.gov); Melissa Mays (indigrace@gmail.com); Dickinson, Jordan (Jordan.Dickinson@mail.house.gov)
Subject: Urgent Request for Clarification: Letter to Lee-Anne Walters and justification for invalidating her samples.

Hi Dan,

Thank you for your help (if any) with the MDEQ FOIA. I received the documents last night. I was hoping you could help me with something ASAP.

One of the things creating distrust between Flint residents and MDEQ, is a long list of miscommunications and false statements by your employees. I want you to help us understand one of those miscommunications as soon as possible.

On August 4th your employee's Wurfel, Busch and Shekter Smith met with Melissa and Lee-Anne. According to Melissa and Lee-Anne, in a meeting with the governor's Chief of Staff, your employee's could not explain to them, why Lee-Anne's samples were invalidated (i.e., thrown out of the samples used to calculate the 90%'ile lead).

For your information, on the basis of records from the City, **Lee-Anne's home is the ONLY home in the 2015 sampling pool that is proven to have a lead pipe.** I have compared the sample sites that the city used to the database that Flint has put together, **and of 11 samples in the database that the city claims had a lead pipe, ZERO actually had a lead pipe.** Michigan and Federal law further states that if a sample is taken from a home with a lead pipe**, even if it has a point of use device like a filter or softener,** once that sample is collected it cannot be invalidated (see below). EPA R5 staff explicitly told your employee's in writing, that Lee-Anne's samples had to be counted for compliance purposes. **Your employee's nonetheless, over R5's written instructions and the law, threw out the only Flint LCR samples known to be legitimate in the 2015 sampling round.** They also double counted Melissa's samples for LCR compliance purposes, even though her house does not have a lead pipe, and has no lead plumbing. So I hope you can see the "adding insult to injury" dimension of your employee's actions. The irony-- using samples from the chief critics of MDEQ, to cheat on the LCR monitoring. Specifically, counting a lead free site twice (when it should not be counted at all), and throwing out three samples from the only home known to have lead pipe. We also now have data that shows every single sample we could check in the 2015 round, did not have a lead pipe at all.

Furthermore, according to Melissa and Lee-Anne, the Governors chief of staff ordered your employee's, to as soon as possible, communicate to Lee-Anne why her samples were invalidated. According to Melissa and Lee-Anne, the governor's chief of staff further ordered your employees to "CC" him on that communication. The governor's chief of staff also apparently asked them to get Lee-Anne's address and phone number, so that they could be sure their communication got to her, and they refused, and insisted they had all of Leigh-Anne's information.

In the FOIA production, I was surprised to see that there is an e-mail to Lee-Anne dated August 25th. This is surprising because Lee-Anne never received that e-mail. Moreover, there is an apology to Lee-Anne that the e-mail is late, and furthermore, the chief of staff is not cc'd. Lee-Anne has looked in her spam and other files, and there is no evidence that this late e-mail ever reached her.

I am hoping you can get to the bottom of this, and see first of all 1) why the chief of staff was not cc'd as requested, 2) if this e-mail was actually sent, and produce some evidence that it was, and 3) try to understand why your employee's illegally invalidated Lee-Anne's samples over the objections of EPA and Lee-Anne. And I am hoping you can do this today. My understanding is that you are out and about trying to re-establish public trust in MDEQ, and this would be a good place to start.

Best Regards,

Marc Edwards

From your own web page.

c. Softeners and Other Point of Use (POU) and Point of Entry (POE) Devices:

Sampling sites with faucets that have POU or POE treatment devices, such as softeners, shall not be used as Tier 1, 2, or 3 sites unless insufficient Tiered sites are available. Field staff shall encourage water supplies to sample from a kitchen or bathroom tap that is not normally connected to the softener. **If a sample of softened water is analyzed, then the water supply may consider returning to the same site to collect a sample of unsoftened water. Some residents may be able to bypass the softener at the tap. Both sample results (softened and unsoftened) will be used to calculate the 90th percentile. Sample results shall not be deemed improper on the basis that the water passed through a softener.**

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From: Marc Edwards [mailto:edwardsm@vt.edu]
Sent: Friday, October 16, 2015 3:06 PM
To: WyantD@michigan.gov; lwalters313@gmail.com; Andrew Leavitt (ALeavitt@senate.michigan.gov); Melissa Mays (indigrace@gmail.com); Dickinson, Jordan (Jordan.Dickinson@mail.house.gov)
Subject: RE: Urgent Request for Clarification: Letter to Lee-Anne Walters and justification for invalidating her samples.

Dear Dan,

I spoke with Lee-Anne, and it was Harvey Hollins that ordered MDEQ to respond to Lee-Anne in writing, about the reason for invalidating her samples, not the deputy chief of staff.

http://www.michigan.gov/snyder/0,4668,7-277-57577_57657_59871-260098--,00.html

Also, I asked Lee-Anne what she would have done, **IF she had received that e-mail from MDEQ about her invalidated samples**. She said one of the last things Miguel told her, was to be sure that MDEQ did not invalidate her samples. So if that e-mail had been received, which it was not, she would have screamed from the roof-top. How convenient it was not received.

Your employee's also told Lee-Anne and Melissa, at the August 4th meeting**, that they had no idea why her samples were invalidated. And that the City of Flint invalidated her samples**. This is also a lie. The e-mails have already shown that MDEQ employees led the invalidation of the samples. There is not a word from the City of Flint asking to invalidate Lee-Anne's samples.

My point is that if all of these shenanigans are not "wrong-doing," then what on earth is? If two of Lee-Anne's high lead samples are counted, Flint fails to meet the LCR, even with Flint just "throwing bottles out there," no sampling pool, a 5 minute pre-flush, and sampling in many homes like Melissa without any lead plumbing at all. People would have been protected. Corrosion control would have been required. Nobody would be running around, to this day, claiming in a city of lead poisoned children, that FLINT is meeting all Federal regulations, and that Flint is meeting the LCR. That false statement been a staple of almost every MDEQ press conference in the last few months. Your employee's made that happen.

Marc

From: Marc Edwards [mailto:edwardsm@vt.edu]
Sent: Saturday, October 17, 2015 4:18 PM
To: 'deqfoia@michigan.gov'
Subject: FOIA Request

Please send me all e-mails and documents associated with the drafting of a 3 page letter/ e-mail supposedly sent August 25, 2015 1:56 pm to Lee-Anne Walters by Liane Shekter Smith. The people responsible for drafting the letter are Tracy Devereaux, Steve Busch, Richard Benzie, Jim Sygo, Karen Shaler.

I'd like all e-mails, notes, drafts associated with creation of this document from the time Shekter Smith was ordered to send the letter to Ms. Walters on August 4th. This includes hand written meeting notes or anything associated with creation of this e-mail/letter.
I'd like all emails in which people were forwarded this document in draft or final form, and any communications between MDEQ and Harvey Hollins about the letter.
I would also like to get Steve Busch and Tracy Deveraux's copy of that letter. They are listed as recipients of the letter. Also, any e-mails or documents associated with this e-mail, letter, to the present day.

Marc