

Feuerstein, Heather (DEQ)

From: Wurfel, Brad (DEQ)
Sent: Monday, September 28, 2015 3:31 PM
To: Feuerstein, Heather (DEQ)
Subject: FW: ACLU mini-documentary

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, Llane (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: Shekter Smith, Llane (DEQ)
Sent: Thursday, July 09, 2015 11:51 AM
To: Busch, Stephen (DEQ); Tommasulo, Karen (DEQ); Wurfel, Brad (DEQ); Sygo, Jim (DEQ)
Cc: Benzie, Richard (DEQ)
Subject: ACLU mini-documentary

FYI – the video is lower on the page. It's just under 6 minutes.

http://www.mlive.com/news/flint/index.ssf/2015/06/aclu_video_details_flints_hard.html#incart_story_package

Feuerstein, Heather (DEQ)

From: Wurfel, Brad (DEQ)
Sent: Monday, September 28, 2015 3:10 PM
To: Feuerstein, Heather (DEQ)
Subject: FW: University of Michigan inquiry re: Flint

From: Sygo, Jim (DEQ)
Sent: Thursday, August 06, 2015 12:17 PM
To: Shekter Smith, Liane (DEQ)
Cc: Wurfel, Brad (DEQ); Pallone, Maggie (DEQ); Busch, Stephen (DEQ); Benzie, Richard (DEQ); Cook, Pat (DEQ); Devereaux, Tracy Jo (DEQ); Shaler, Karen (DEQ); Thelen, Mary Beth (DEQ); Feuerstein, Heather (DEQ)
Subject: Re: University of Michigan inquiry re: Flint

Sounds like a good approach.

Sent from my iPhone

On Aug 6, 2015, at 11:52 AM, Shekter Smith, Liane (DEQ) <SHEKTERL@michigan.gov> wrote:

Yesterday, Steve Busch and I participated in a conference call with Professors Lutgarde Raskin and Krista Wigginton (Dept. of Civil and Environmental Engineering) and Prof. Stuart Batterman (School of Public Health) and several of their graduate students.

They wanted to discuss recent events in Flint and are interested in possibly providing sampling, analysis, and education/outreach to address potential lead exposure issues, TTHM issues, possibly microbial activity and/or aesthetic problems. They are aware of the report published on the ACLU website identifying lead as an issue in Flint and were interested in helping to obtain analytical data to determine the potential extent of the problem and to help residents understand what it means for them.

We suggested they begin by having discussions with the City to determine what level of assistance might be helpful to the City.

If this moves forward, we would recommend that DEQ, DHHS staff, LHD staff, and a group of local residents/stakeholders be included in discussions to guide future activities.

Today, Steve provided UM with contacts at the City. UM is interested in quickly arranging a preliminary meeting to flesh out what might happen going forward.

We'll keep you updated if this progresses.

Liane

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

Feuerstein, Heather (DEQ)

From: Wurfel, Brad (DEQ)
Sent: Monday, September 28, 2015 3:30 PM
To: Feuerstein, Heather (DEQ)
Subject: FW: Urgent: Independent Flint Water Study

From: Curt Guyette [<mailto:cguyette@aclumich.org>]
Sent: Monday, August 31, 2015 10:19 AM
To: Wurfel, Brad (DEQ)
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'tile 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

Feuerstein, Heather (DEQ)

From: Wurfel, Brad (DEQ)
Sent: Monday, September 28, 2015 3:39 PM
To: Feuerstein, Heather (DEQ)
Subject: FW: Urgent: Independent Flint Water Study
Attachments: FW: Flint Water Study-VT

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: 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

Sent from my iPhone

On Aug 31, 2015, at 10:25 AM, Wurfel, Brad (DEQ) <WurfelB@michigan.gov> wrote:

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.

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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

Feuerstein, Heather (DEQ)

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

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

Adam,

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

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

Best Regards,
 Marc

From: Marc Edwards [<mailto:edwardsm@vt.edu>]
Sent: Sunday, August 23, 2015 4:57 PM
To: 'ROSENTHALA@michigan.gov'; 'bwright@cityofflint.com'; 'Ptaszinski, 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 PPI 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

Feuerstein, Heather (DEQ)

From: Wurfel, Brad (DEQ)
Sent: Monday, September 28, 2015 3:39 PM
To: Feuerstein, Heather (DEQ)
Subject: FW: Flint Lead
Attachments: Flint PbCu15.doc

From: Prysby, Mike (DEQ)
Sent: Tuesday, September 01, 2015 4:23 PM
To: Wurfel, Brad (DEQ)
Subject: FW: Flint Lead

Brad,

Ron Fonger left me a voicemail concerning questions he has concerning the lead issue in Flint. Specifically, he is aware of the increased discussion of lead in Flint's drinking water and the home tests recently performed at residents request in corroboration with V Tech and concerned groups. Ron discussed this issue w. Mr. Kroft and has the impression that the DEQ has had discussions with the city about the lead issue; however, Mr. Kroft declined to discuss the issue any further. Mr. Fonger wishes to discuss with the DEQ as to what discussions the DEQ has had with the city concerning the lead issue. Can you return Ron's call pertaining to any discussions that the DEQ has had with Mr. Kroft or the city. I am not aware of any verbal discussions. Our written correspondence was the 90th percentile letter that we recently sent to the city acknowledging that they met the lead and copper 90% percentile limits in their most recent round of monitoring (Jan-June 2015). See attached.

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



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE



DAN WYANT
DIRECTOR

August 17, 2015

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

Dear Mr. Wright:

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

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

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

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

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

Mr. Brent Wright

2

August 17, 2015

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

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

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

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

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

Sincerely,

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

cc: Mr. Michael Glasgow, City of Flint

Feuerstein, Heather (DEQ)

From: Wurfel, Brad (DEQ)
Sent: Monday, September 28, 2015 3:40 PM
To: Feuerstein, Heather (DEQ)
Subject: FW: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!
Attachments: Editorial response to Virginia Tech testing Flint homes for lead.doc

From: Shekter Smith, Liane (DEQ)
Sent: Wednesday, September 02, 2015 3:09 PM
To: Wurfel, Brad (DEQ)
Cc: Benzle, Richard (DEQ); Busch, Stephen (DEQ); Prysby, Mike (DEQ)
Subject: FW: DRAFT Flint Journal response -- edit, add and subtract from this as you see fit. Need it asap. Thanks!

Here's a revised version. The track changes make it difficult to read. Can't seem to make it go away though. We suggest you open it and then go to the Review tab and then next to Track Changes, select "Final" from the pick list in the drop down box.

Also, if you haven't opened the note I sent earlier, DHHS has a website with great lead information. <http://www.michigan.gov/lead/0,5417,7-310-65933-308641--,00.html>
 This is their Childhood Lead Poisoning Prevention Program.

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

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

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

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

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

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

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

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

Brad:

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

Today, Sept. 2, researchers at Virginia Tech posted the results on an experiment with Flint water online.

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

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

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

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

Could you let me know who that is?

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

Thanks,

Ron Fonger
MLive Media Group
Reporter

mobile PPI

email rfonger1@mlive.com

address 540 S. Saginaw St. #101, Flint MI 48502

We are aware that Virginia Tech researchers are now testing water at various Flint homes for lead levels in their plumbing. 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 ~~the treatment plant or even the city's transmission lines. The river has no detectable levels of lead in it, and treated water leaving from the plant has not detectable levels of lead in it.~~ The issue is how, whether, and to what extent the drinking water is interacting with lead plumbing in people's homes.

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

The state's compliance monitoring program, which program requires the city to use 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 leadpipes, homeowners should assume there is some varied level of interaction between water and pipes that results in leadmeans exposure.