

Water filters could increase bacteria in Flint water, researchers say 12-14-16



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Water filters could increase bacteria in Flint water, researchers say

Updated Dec 15, 2016; Posted Dec 14, 2016

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By **Oona Goodin-Smith**
ogoodins@mlive.com

FLINT, MI - While the point-of-use water filters provided by the state clear lead from Flint drinking water, they actually have the potential to increase bacteria levels in the water, researchers say.

<Dr.> Love said that to better the quality of the water, it's important to let water run through the filter for at least one minute to let the bacteria that has built up in the activated carbon filter disperse. Other tactics for clearing the bacteria from the water include boiling water or using a UV disinfection lamp.

Dr. Shawn McElmurry, a Wayne State University professor also on the FACHEP team, noted that in

cases of concern, bottled water is always a safe alternative. Because filters are designed to capture and absorb organic matter, he said, they naturally hold onto the organic organisms that are bacteria.

"It was nice to hear that things aren't all better, because that's what we're used to hearing --- that things are better, that things are all fine," said Flint resident and water crisis activist Melissa Mays. "There's certainly been a concern about the filters and we've definitely heard that they can grow bacteria. I can only imagine what would happen if I were to try to drink this through the tap filters. It's telling me I'm making the right decision by drinking bottled water."

Joyce Sanders of Flint, also attended the open house with her husband and two daughters. "It was a confirmation of something I had suspected," Sanders said, referring to increased bacteria levels in the water...**But now I know that it's related to the filter and the cleansing process that the water goes through."**

McElmurry said it's important that Flint residents know **"that there are people out there working to understand the concerns that residents have."**

Ben Pauli

December 14, 2016 ·

Preliminary results of Wayne State & Co. water study. See p. 3 for takeaway points. **The team is not ready to make a blanket statement about the water being safe.** Certain findings around bacteria and chlorine are sources of concern and call for further study. It's also important to note that sampling during the warmer months of 2017 will be essential before firm scientific conclusions can be reached. Any questions, let me know!

Water Study Update and Open House

5:30-7:30pm
Wednesday, December 14th, 2016
Flint Public Library

Reported Legionellosis Disease Trends

Every day, the Michigan Department of Health and Human Services received Legionellosis case reports. These reports are compiled in the electronic surveillance system known as the Michigan Disease Surveillance System (MDSS). As part of the FACHEP project, we have been tracking and analyzing Legionellosis case reports in 2016 as well as conducting analysis of Legionellosis cases from previous years. Our period of analysis currently covers 2011 through 2016.

The number and incidence rate for Legionellosis in Genesee County has declined from peaks seen in 2014 and 2015. Numbers and rates of Legionellosis remain above the yearly number and incidence rates seen in the pre-2014 time period (2011 through 2013).

Resident Survey

Of the 187 household members that were interviewed, 29% requested specific assistance with accessing resources.

Requests for assistance included basic needs, utility bills and transportation; almost one-quarter of requests related to home conditions and needed home repair; 13% requested assistance with addressing stress, anxiety, depression, anger and grief, and 12% identified financial challenges.

Over half of those who requested assistance were either able to access additional resources or are in the process of getting assistance.

Household Environmental Water Testing

More than 180 homes sampled September 6 - October 29 with ~25% of the homes sampled outside of Flint's water system (in Genesee County).

Samples were collected from the following locations in each home:

1. Hot water heater
2. Hot shower water
3. Shower arm swab
4. Cold water from primary sink (5min flush)
5. Point-of-use filters

Chlorine levels were found to be less than 0.2 mg/L in ~10% of homes on Flint water.

Our sample period was after the typical or expected peak of Legionellosis.

In the period, *Legionella* detected slightly more than ~12% of randomly selected homes from September 6 to October 29,

No significant difference in the number of homes having *legionella* inside (133) and outside (46) of Flint.

Suspected *Legionella* species detected (cultured, not confirmed): 23% hot water heaters, 30% shower water, 47% kitchen faucets

Legionella serogroup confirmed (cultured, confirmed): 22% hot water heaters, 35% shower water, 50% kitchen faucet.

In household water samples tested during the 2016 household survey, *Legionella pneumophila* serogroup 4 was the predominant strain detected (83% of strains confirmed).

In clinical illness, the most common strain causing disease in people is *Legionella* serogroup 1.

Using standard clinical diagnostic tests now available, detection of non-serogroup 1 *Legionella* may be limited as rapid diagnostic tests for *Legionella* are designed to detect only serogroup 1.

Point-of-Use Filters

Point-of-Use filters are effective in removing metals (lead and copper) and trihalomethanes (THMs) to non-detectable levels.

The filters are designed to breakdown chlorine. Not surprisingly, our studies have shown that 90% of the filtered water samples had a residual free chlorine level less than 0.1 mg/L.

Because high concentrations of lead in water is sporadic, unpredictable. We encourage people to continue to use their filters and change the filter cartridges according to the manufacturer's recommendations.

Filters are necessary to provide barrier to lead and other metals at point of use, along with disinfection byproducts. The filters are also designed to capture (adsorb) organic matter, the source of which are the natural products of degradation found in the surface water. Filters are known to be ineffective at removing bacteria and actually increase bacterial counts because (i) the organic matter serves as food for the bacteria in the filter and (ii) the disinfectant is low or gone so does not prevent their growth. This is well established over decades. If a resident wants to keep bacterial counts low, a second treatment barrier is needed. That barrier can be a form of disinfection (boiling, UV disinfection lamp) or physical barrier (membrane).

We sampled 18 homes across 32 sampling events. The number of bacteria present in water increases across filter in 70% of sampled events. Flushing for five minutes reduces bacterial count; we are doing additional studies with Detroit water to determine how long one should flush for. However, flushing decreases the life of the filter.

We initiated multiple DNA-based experiments to determine which bacteria are present. We always run at least two independent methods to confirm our microbiological results. This is a slow and multi-step process that is still underway, plus we have to be strategic about which bacteria we try to characterize because we have a limited amount of DNA to work with. To date, we have focused the work on quantifying bacteria that are associated with illness patterns in Flint.

Water from 13 of 18 sampled homes and filter fabrics from the 7 homes monitored in July were tested for evidence of *Shigella* (total of 87 samples) using an established DNA-based method; all samples were negative.

We also saw that Enterobacteriaceae, a family of bacteria that contain both known enterics (in human or mammalian gut), pathogens, as well as non-gut microbes and non-pathogens, were present in Flint.

water. *Shigella* is a member of the Enterobacteriaceae. Because of the number of interruptions in the Flint distribution system (line breaks, LSL replacements), we felt this was important to pursue. We saw needed to compare to other cities that use chlorine disinfection in the same way as Flint. We have studied down some data sets and are currently re-evaluating our Flint data to make the comparison to address the question: is the level of Enterobacteriaceae in Flint's water unusually high?

Separately, we compared how numbers of Enterobacteriaceae change across point-of-use filters. We found that Enterobacteriaceae concentrations increased substantially after filtration in 1 of 4 homes. However, we have not looked for pathogens in those samples yet. We are in the process of screening a subset of samples, including those with increasing Enterobacteriaceae across the filter, for a range of common waterborne pathogens.

So, to date, we have not detected specific pathogens in the drinking water or coming out of the filters, but we have only analyzed specifically for one pathogen (*Shigella*) and are in the process of looking for a range of other common waterborne pathogens with the samples we have.

Because high concentrations of lead in water is sporadic and still unpredictable, we encourage residents to continue to use their filters and change the filter cartridges according to the manufacturer's recommendations. If you are concerned about bacterial levels coming from the filter, you can flush water for at least a minute before using it, and bypass the first flush of water around the filter after long (overnight) stagnation periods. If you want to add a second treatment barrier, a reasonable option is to disinfect the water by boiling, or to just use bottled water.

Regular water use or flushing the premise plumbing each day helps with multiple problems. It helps to reduce bacterial counts by raising residual chlorine levels and will likely assist in further passivating pipes. This will not, however, increase the chlorine residual in the water from the faucet filters. Flushing water through the faucet filters decreases bacterial counts but will also reduce the life of the filter.

Summary:

- Chlorine levels are not what they should be in some of the homes that have been sampled so far.
- Point-of-use filters increase bacterial counts in most homes, and change which bacteria are most abundant. We see increases in some bacteria across filters in homes and we are evaluating whether the types and levels of these bacteria are cause for concern.
- During home visits, many Flint residents report skin and lung illnesses. While we do not have data to validate these reports, this is consistent with what others have reported.
- The predominant strain of *Legionella* bacteria found in Flint homes is a strain that may not be detected by the standard rapid urine antigen detection diagnostic tests run by your doctor yet are known to cause disease in susceptible humans.
- Since the chemical and bacterial loads change with temperature, additional seasons of data are required to determine if the systems is improving (water monitoring needs to continue).

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William Hammond What I find most disturbing is the statement that "the use of point of distribution filters (faucet) increases the presence of bacteria"!!

Water samples reveal problem for Flint residents Dec 14, 2016WNEM

FLINT, MI (WNEM) -

Researchers from Wayne State University revealed their latest findings on improvements in Flint's water and ongoing problems that need to be addressed at a public meeting on Wednesday.

"There's issues with the point of use filters. They're very good at reducing lead levels, but bacteria levels actually increase. The filters are important and have been effective for that, but for bacteria there's an issue," Zervos said.

Quincy Murphy, flint activist, helped collect the samples. **He said the preliminary test results confirm many residents' fears...**



DEC 16, 2016

[Laura Sullivan](#)

[December 16, 2016](#) ·

I am so proud to be on this team of physicians and scientists, from more than just a single University. Dr. [Shawn McElmurry](#) assembled experts from Wayne State University, UM Ann Arbor, Michigan State, Henry Ford Hospital, and Kettering University.

My biggest thanks this week goes to Dr. Zervos from Henry Ford Hospital. He specializes in the spread of infectious diseases, and has studied Flint water for Legionella. He is also paying attention to skin and lung infections. Thank you, Dr Zervos, for speaking out.



[Water samples reveal problem for Flint residents](#)

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wnem.com

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Comments



[Karen Dean](#) Keep posting this stuff Laura. Those of us who don't live in Flint are lead to believe that the water crisis is just about over and the only issues are whiners who want every house tested and the state to continue house delivery of bottled water. Thanks for keeping us informed about what is actually happening.

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· [December 16, 2016 at 1:49am](#)

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[Laura Sullivan](#) Thank you, Karen. That's exactly why I post this stuff. Plus, I like to try and focus on the tiny glimmers of trust, rather than on the deluge of darkness that makes us afraid.

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· [December 16, 2016 at 8:17am](#)

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[Shawn McElmurry](#) Thank you [Laura](#) for working with and trusting us. It's never easy and a crap load of work but we're getting it done. We do have a great team!

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[Laura Sullivan](#) Stay true, Shawn, in the midst of the storm of voices that say that Flint residents aren't able to handle the truth about their water. The good people Flint will rise together when we are empowered with truth about our water and tools to participate equally in the solution. Thank you for putting yourself and your beautiful family in our shoes - it's from that perspective that you serve us best.

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Position Group



Side

Water Study Update and Open House

5:30-7:30pm
Wednesday, December 14th, 2016
Flint Public Library

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14 December 2016 at 20:41

Preliminary results of Wayne State & Co. water study. See p. 3 for takeaway points. The team is not ready to make a blanket statement about the water being safe. Certain findings around bacteria and chlorine are sources of concern and call for further study. It's also important to note that sampling during the warmer months of 2017 will be essential before firm scientific conclusions can be reached. Any questions, let me know!

From: Shawn McElmurry [<mailto:s.mcelmurry@wayne.edu>]
Sent: Thursday, December 15, 2016 12:07 AM
To: Nancy Love
Cc: Benjamin Pauli; Laura Sullivan; Paul Kilgore; Zervos, Marcus
Subject: RE: Flint event

Oh NO! I'm so sorry to hear this Nancy. The driving was truly atrocious. I don't think I got above 40mph on the way there and maybe hit 60mph on the way home a few times. Ugly. I hope everyone in your car is ok and your car is easily repaired.

As for the presentations...please do not sweat it. You by far had the toughest job and I thought you did great. Sure, we could of all done much better with time (both for prep and for the presentation itself) but it went about as good as could be expected.

Enjoy the news article below, courtesy of our own Dr. Zervos!
<http://www.wnem.com/story/34056227/water-samples-reveal-problem-for-flint-residents>

Going home to get a shower and then some sleep!

Shawn

From: Nancy Love [<mailto:nglove@umich.edu>]
Sent: ~~Wednesday~~, December 14, 2016 10:42 PM
To: Shawn McElmurry <s.mcelmurry@wayne.edu>; Benjamin Pauli <bpauli@kettering.edu>; Laura Sullivan <dr.laura2@gmail.com>; Paul Kilgore <paul.kilgore@wayne.edu>; Marcus Zervos <MZERVOS1@hfhs.org>
Subject: Flint event

All: I hope everyone made it home ok. I ended up being rear-ended as someone just ahead of me started doing 360's going down 23 as we approached a four car pile-up; I was able to stop but cars behind me didn't - damage

seems very minor; it could have been a lot worse. We saw 8 accidents during the trip! Really bad conditions so I hope everyone made it home safely.

I want to thank all of you (so much!) for all your work around this event and around our projects. It is, as always, an honor and joy to work with all of you.

I don't feel like I answered questions well, and didn't say some of the things that were important to say (truly, Shawn, I was not avoiding the "boil" statement: was more focused on trying to explain why we are pursuing Enterobacteriaceae and justifying ongoing work. I did a lot of analysis yesterday and need to show it to you so it may become clearer. Then as you said it I realized I had not said it and you had to, so I'm really sorry; by the way, your statement about our position around water safety was the best moment, I think). In the future, I will benefit from having a practice run on the presentation. I don't get nervous, but I get laser focused on a few things at the expense of everything else. There are times when my laser focus is beneficial, but this was not one of them. Truly, I've been known to forget my name because I was so laser focused. Spending 2.5 hours with a red knuckle grip on the steering wheel coming up just primed my "laser focus" pump.

Shawn, doing some grading myself. What is the topic of your exam? If it is general water/ww treatment, I'm happy to share some of my past exams if it helps make creation of the exam that much easier. I'll be up for an hour or so.

Regards,

Nancy

Nancy G. Love, Ph.D., P.E., BCEE

Borchardt and Glysson Collegiate Professor

Department of Civil and Environmental Engineering, University of Michigan

Adjunct Professor, Addis Ababa University Institute of Biotechnology, Ethiopia

Fellow: Water Environment Federation; International Water Association; Association of Environmental Engineering and Science Professors

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Attend the AEESP2017 Conference on Advancing Healthy Communities

June 20-22, 2017, Ann Arbor Michigan

Abstracts due: January 9, 2017

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From: Paul Kilgore
Sent: Thursday, December 15, 2016 10:02 AM
To: Shawn McElmurry
Subject: Re: URGENT - Re: Wayne State Community Meeting in Flint

we need to talk

Paul E. Kilgore, MPH, MD
Associate Professor, Department of Pharmacy Practice
Director of Research, Department of Pharmacy Practice
Eugene Applebaum College of Pharmacy and Health Sciences
Adjunct Professor, Department of Family Medicine and Public Health Sciences, School of Medicine
Wayne State University

Address:
259 Mack Ave., Room 2156
Detroit, Michigan 48201
Phone: (313) 577-1215
Cell: (248) 403-0275
Fax: (313) 577-5369
Skype: drpaulwsu

From: Shawn McElmurry
Sent: Thursday, December 15, 2016 9:52:20 AM
To: Benjamin Pauli; Matthew Seeger
Cc: Paul Kilgore; Laura Sullivan (dr.laura2@gmail.com); Nancy Love; Zervos, Marcus
Subject: RE: URGENT - Re: Wayne State Community Meeting in Flint

I can't make the 3pm. I think Paul can. It would be extremely helpful if you and Paul could go.

I was planning to reach out to Jamie-Lee at 11am.

Matt, did you know about this 9am meeting?

From: Benjamin Pauli [mailto:bpauli@kettering.edu]
Sent: Thursday, December 15, 2016 9:49 AM
To: Zervos, Marcus <MZERVOS1@hfhs.org>
Cc: Shawn McElmurry <s.mcelmurry@wayne.edu>; Paul Kilgore <paul.kilgore@wayne.edu>; Laura Sullivan (dr.laura2@gmail.com) <dr.laura2@gmail.com>; Nancy Love <nglove@umich.edu>; Matthew Seeger <matthew.seeger@wayne.edu>
Subject: Re: URGENT - Re: Wayne State Community Meeting in Flint

The communication workgroup meeting? It started at 9 so it's probably almost over. I'm just now seeing this.
Are we going to have a presence at the community partners meeting at 3? I would go, but I certainly wouldn't want to be the only one there.

On Thu, Dec 15, 2016 at 9:11 AM, Marcus <MZERVOS1@hfhs.org> wrote:

I cant do if today

From: Shawn McElmurry [mailto:s.mcelmurry@wayne.edu]
Sent: Thursday, December 15, 2016 9:03 AM
To: Paul Kilgore <paul.kilgore@wayne.edu>; Benjamin Pauli (bpauli@kettering.edu) <bpauli@kettering.edu>; Laura Sullivan (dr.laura2@gmail.com) <dr.laura2@gmail.com>; Nancy Love <nglove@umich.edu>; Zervos, Marcus <MZERVOS1@hfhs.org>; Matthew Seeger <matthew.seeger@wayne.edu>
Subject: RE: URGENT - Re: Wayne State Community Meeting in Flint

Can anyone go to community meeting hosted by Jamie-Lee? Unfortunately, I cannot. I think this could be a real problem if we don't have someone there from our team.

From: Shawn McElmurry
Sent: Thursday, December 15, 2016 8:55 AM
To: Paul Kilgore <paul.kilgore@wayne.edu>; Benjamin Pauli (bpauli@kettering.edu) <bpauli@kettering.edu>; Laura Sullivan (dr.laura2@gmail.com) <dr.laura2@gmail.com>; Nancy Love <nglove@umich.edu>; Marcus Zervos <MZERVOS1@hfhs.org>; Matthew Seeger <matthew.seeger@wayne.edu>
Subject: FW: URGENT - Re: Wayne State Community Meeting in Flint
Importance: High

All, just had a conversation with Eden. Quick recap:

- Jovon had one resident contact him and ask if they were going to die because they were drinking out of the filters
- Nothing has come back to Angela Minicuci so she didn't know if this was even going to be a big deal...basically they are reacting to Jamie-Lee's email below.
- This had the gotcha quality because we didn't inform Jamie-Lee Venable.
- Main concern was comments regarding bacteria coming out of filters.
- She noted we did provide context but that our context was written at too high a level.
- She was annoyed that media was there.
- She did say she thought talking points were good and doesn't disagree with them. However, she did request that we bring them down to a lower level to communicate more effectively. Requested I work with Matt to do this.

So, I think if there is something we should do it is to bring down the talking points to a lower reading level, particularly the PoU stuff. Nancy, you had been working on a white paper - is that at a stage we can try to get that out? I can try to review today. Of course, I am tied up with Final Exams, etc.

Thanks all.

Shawn

From: Wells, Eden (DHHS) [<mailto:WellsE3@michigan.gov>]
Sent: Thursday, December 15, 2016 6:40 AM
To: Shawn McElmurry <s.mcelmurry@wayne.edu>; MZERVOS1@hfhs.org; Matthew Seeger <matthew.seeger@wayne.edu>; Paul Kilgore <paul.kilgore@wayne.edu>
Cc: LyonCallo, Sarah (DHHS) <lyoncallos@michigan.gov>; Hanley, Farah (DHHS) <hanleyf@michigan.gov>
Subject: Fwd: URGENT - Re: Wayne State Community Meeting in Flint

Shawn,

I was advised that there was not gonna be any media and that you were not gonna be presenting any new information. We've got a serious risk communication situation blowing up at 5 AM this morning. I will be calling you early.

Eden V. Wells, MD, MPH, FACPM

Chief Medical Executive

Michigan Department of Health and Human Services

Tel: 517-284-4020

Sent from my iPhone, please excuse typos

Begin forwarded message:

From: "Adler, Ari (GOV)" <AdlerA@michigan.gov>
Date: December 15, 2016 at 6:24:50 AM EST
To: "Hiipakka, Scott (GOV)" <HiipakkaS@michigan.gov>
Cc: "Wells, Eden (DHHS)" <WellsE3@michigan.gov>, "Heaton, Anna (GOV)" <HeatonA@michigan.gov>, "Baird, Richard (GOV)" <bairdr@michigan.gov>, "Lyon, Nick (DHHS)" <LyonN2@michigan.gov>, "Krisztian, George (DEQ)" <krisztiang@michigan.gov>, "Creagh, Keith (DNR)" <creaghk@michigan.gov>, "Weise, Kevin (GOV)" <WeiseK@michigan.gov>, "Papadopoulos, Matthew (GOV)" <PapadopoulosM@michigan.gov>, "Minicuci, Angela (DHHS)" <MinicuciA@michigan.gov>, "Eisner, Jennifer (DHHS)" <EisnerJ@michigan.gov>, "Agen, Jarrod (GOV)" <AgenJ@michigan.gov>, "Emmitt, Beth (GOV)" <emmittb@michigan.gov>, "Zimmer, Mike (GOV)" <ZimmerM1@michigan.gov>
Subject: URGENT - Re: Wayne State Community Meeting in Flint

Added folks for situational awareness.

DHHS needs a quick, effective response to this ASAP for media this morning. In addition to DHHS medical experts, are there folks from outside -- independent or CDC -- who could address this, as well?

Ari

--

Ari B. Adler

Director of Communications

Executive Office of Gov. Rick Snyder

adlera@michigan.gov

[517-599-5445](tel:517-599-5445)

On Dec 15, 2016, at 05:52, Hiipakka, Scott (GOV) <HiipakkaS@michigan.gov> wrote:

Greetings,

Not sure if you've seen this yet but it appears that the Wayne State research team conducted a community meeting last night and one of the speakers (Dr. Mark Zervos, Infectious Disease Physician) made the following statement:

"There's issues with the point of use filters. They're very good at reducing lead levels, but bacteria levels actually increase. The filters are important and have been effective for that, but for bacteria there's an issue," Zervos said.

The link to the story is below.

Scott Hiipakka

Cell: 248.303.4618

Begin forwarded message:

From: Jamie-Lee Venable <jvenable@unitedwaygenesees.org>
Date: December 14, 2016 at 23:14:03 EST
To: Jamie Gaskin <jgaskin@unitedwaygenesees.org>
Cc: Scott Hiipakka <HiipakkaS@michigan.gov>
Subject: Wayne State

Did anyone know Sean and team were hosting a meeting to talk about the Wayne State results???

"There's issues with the point of use filters. They're very good at reducing lead levels, but bacteria levels actually increase. The filters are important and have been effective for that, but for bacteria there's an issue," Zervos said.

<http://www.wnem.com/story/34056227/water-samples-reveal-problem-for-flint-residents>

Sent from my iPhone

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Benjamin J. Pauli, Ph.D.
Assistant Professor of Social Science
Department of Liberal Studies
Kettering University
1700 University Ave
Flint, MI 48504

Shawn McElmurry

From: Shawn McElmurry
Sent: Thursday, December 15, 2016 10:49 AM
To: Nancy Love
Subject: RE: FW: URGENT - Re: Wayne State Community Meeting in Flint

Could we talk at 11:15am?

Shawn P. McElmurry, PhD, PE
Associate Professor
Wayne State University

----- Original message -----

From: Nancy Love <nglove@umich.edu>
Date: 12/15/16 10:43 AM (GMT-05:00)
To: Shawn McElmurry <s.mcelmurry@wayne.edu>
Cc: Paul Kilgore <paul.kilgore@wayne.edu>, "Benjamin Pauli (bpauli@kettering.edu)" <bpauli@kettering.edu>, "Laura Sullivan (dr.laura2@gmail.com)" <dr.laura2@gmail.com>, Marcus Zervos <MZERVOS1@hfhs.org>, Matthew Seeger <matthew.seeger@wayne.edu>
Subject: Re: FW: URGENT - Re: Wayne State Community Meeting in Flint

To be clear from my point of view:

1. No new information was presented. Indeed, I held off on new information because we had not discussed it with Eden, Pam, etc. Shawn, you seemed to imply there was new information in one email, but I don't think there was anything Eden didn't hear about from me and I was very careful to contain my message with that in mind. Eden knows we had bacterial increases across filters (her reaction to that motivated my first slide). Eden knows we looked for, but did not detect [REDACTED] Eden knows we saw high levels of [REDACTED] and are trying to understand the implication (I mentioned at the GCMS meeting and she was briefed by CDC on our call with them). So, what is new?
2. I remain perplexed how the information about the increase in bacteria across the filters is a surprise. Not only have we discussed this with them before, especially during the "you are going to release shigella data" kerfuffle, but did they not read ANY literature about filters before they decided to deploy 24,000 of them in Flint? Literature, papers, NSF Standards? Anything? This should not be a surprise and was the public health community's responsibility when they decided to deploy an intervention that they do not understand.
3. I think I was balanced and measured and clear. Counts go up (not unusual for these filters) and we are looking at who those bacteria are. Again, this is absolutely not new. The only thing that is new is that the general public, not just those who we sampled, are now aware of what the state should have told citizen's was a risk from the beginning.

Nancy G. Love, Ph.D., P.E., BCEE

Borchardt and Glysson Collegiate Professor
Department of Civil and Environmental Engineering, University of Michigan
Adjunct Professor, Addis Ababa University Institute of Biotechnology, Ethiopia
Fellow: Water Environment Federation; International Water Association; Association of Environmental Engineering and Science Professors

NEXT:

NEXT:

From: "Wells, Eden (DHHS)" <WellsE3@michigan.gov>

Date: December 15, 2016 at 11:49:19 AM EST

To: Shawn McElmurry <s.mcelmurry@wayne.edu>

Cc: "LyonCallo, Sarah (DHHS)" <lyoncallos@michigan.gov>, "Hanley, Farah (DHHS)" <hanleyf@michigan.gov>, "MZERVOS1@hfhs.org" <MZERVOS1@hfhs.org>, Matthew Seeger <matthew.seeger@wayne.edu>, Paul Kilgore <paul.kilgore@wayne.edu>

Subject: Re: URGENT - Re: Wayne State Community Meeting in Flint

I'm sitting here at a senior citizen meeting and it is very clear that there are people who did not receive it well. You do need to be prepared for the fact that Information will be construed in certain fashion if it is not delivered with risk communication concepts in mind.

Eden V. Wells, MD, MPH, FACPM

Chief Medical Executive

Michigan Department of Health and Human Services

Tel: 517-284-4020

Sent from my iPhone, please excuse typos

On Dec 15, 2016, at 11:44 AM, Shawn McElmurry <s.mcelmurry@wayne.edu> wrote:

Hey Eden, I know we discussed but I just want to make sure it was clear that our meeting last night was not intended to be a media event. We did not advertise it as such nor invite the media to attend. Our target audience for last night was the people that participated in the sampling. Additionally, I want to stress that no new information was presented and our message was not significantly different than the message we stressed during the meeting arranged by Mark Durno. Overall, I think those that attended received the message and took it well. Obviously, we can't control what others do with the information.

Please feel free to share with others.

Thanks,
Shawn