

On 2/9/2015 3:58 PM, Henry, James wrote:

Dr. Rose and Dr. Stout

Genesee County Health Department is working with MDCH regarding the Legionella investigation and trying to develop a comprehensive questionnaire for interviewing our Legionella cases. I have attached the questionnaire and questions below that are currently being asked during interviews. Would you please take a look at them and provide any comments or recommendations.

Thanks

Jim

- 1) What kind of water do you drink? (Well vs. City)
  - a. If city water, from what location?
- 2) Have you recently traveled/stayed in any hotels?
- 3) Do you use an air conditioner at home? A humidifier?
- 4) Do you have a pool, sauna or spa you use regularly use at home?
- 5) Has there been any recent remodeling in your house?
- 6) Do you have proper ventilation in your bathroom at home?

Jim Henry

Jim Henry RS, MBA

Environmental Health Supervisor

Genesee County Health Department [www.gchd.us](http://www.gchd.us)

630 S. Saginaw St., Suite 4

Flint, MI 48502-1540

Phone (810) 257-3618 Fax (810) 257-3125

E-mail [jhenry@gchd.us](mailto:jhenry@gchd.us)

<image001

**From:** Hudson, Russell [<mailto:Russell.Hudson@mclaren.org>]

**Sent:** Friday, July 3, 2015 11:45 AM

**To:** [kcarden@specialpathogenslaboratory.com](mailto:kcarden@specialpathogenslaboratory.com)

**Cc:** Henry, James; Wheeler, Brent

**Subject:** McLaren Flint,  
Kim,

My name is Rusty Hudson, I am the Director of Engineering Services at McLaren Flint, Flint Michigan. As you may know from conversations with Jim Henry of the Genesee County Health Department, our community and our hospital has experienced an increase in Legionella cases over the past year. Jim provided me with your name (and that of Dr. Janet Stout) as a "great resource" during their investigation.

I would like to talk with you regarding our efforts and our future plans to mitigate Legionella within the hospital water system and what additional opportunities we may consider.

I leaving shortly for the weekend, but will return on Monday. Feel free to return my email with some times in which we may talk or you can reach me at the number below.

**Rusty Hudson**, Assoc. AIA  
Director, Engineering Services  
McLaren Flint

**From:** Janet Stout <[jstout@specialpathogenslab.com](mailto:jstout@specialpathogenslab.com)>

**Sent:** Monday, August 3, 2015 10:17 PM

**To:** [Nbirchm1@hurleymc.com](mailto:Nbirchm1@hurleymc.com)

**Cc:** Janet Stout

**Subject:** Water

Dear Mr. Birchmeier,

My name is Janet Stout and I was given your name by Rusty Hudson at McClaren Flint. He and I connected because of my long history of working in the field of Legionella prevention and control. Through my contact with Rusty, I have learned of the changes of water sources for some sections of the city - some facilities being on a water system that was served by the lake and some now receiving water from the river.

I am contacting you because of my microbiology research interests and work that I am doing with the University of Pittsburgh School of Civil & Environmental Engineering. We have a student that is studying bacterial communities using molecular methods. I asked Rusty if I could have a liter of the incoming cold water for this analysis. I would really like to also have cold water from other local hospitals that receive water from the lake or the river.

I will be in Flint next week and was wondering if we could have a liter of your source water for study. The identity of the facilities is confidential and would never be named. This is strictly for

scientific study.

I look forward to hearing from you and answering any questions you might have about this request.

Sincerely,

Janet E. Stout, PhD

Director

Special Pathogens Laboratory

**From:** Joan Rose [mailto:rosejo@msu.edu]

**Sent:** Tuesday, September 22, 2015 3:36 PM

**To:** Henry, James

**Subject:** Re: Flint Water

Oh wow. Still very politically charged Is EBL stand for environmental lead? What's the B? I ran into Marc Edwards post doc.

Just been screening the web site. Talk to you soon.

Sent from my iPhone

On Sep 22, 2015, at 11:58 AM, "Henry, James" <jhenry@gchd.us> wrote:

We started out same as last year, cases gradually increasing as weather warmed up. It appeared that we were on track for the same trend as last year and we anticipated an

increase number of cases. McLaren Hospital was sticking out like a sore thumb. Dr. Stout's group began working with McLaren in early August. I think we have had only two cases

since mid-August and none have been associated to McLaren. This is a significant decrease for this same time last year. Thank you for your help.

Regarding CDC, On June 4, 2015, MDHHS wrote a memo claiming the "outbreak is over." I attached it for your reading pleasure, in summary, the memo included, no conclusive

source and the illnesses had discontinued. This was incorrect. There were cases throughout the winter and April, May and June. we anticipated an increase number of cases. We

questioned the memo and MDHHS explained, in writing that any contact with CDC will be made by them. The memo was wrong and politically charged. CDC is not involved.

We are now having potential issues with Lead. Earlier this year the City started treating the water with Ferric Acid, (without phosphate) to reduce the amount of Chlorine, hence

TTHM. It was effective, but now the water is corrosive and appears to be leaching Lead. There is some EBL data that supports this. We are developing education materials and

advisories. Also, working closely with the City, physicians and community.

If you have knowledge or experience in this area, please feel free to share it with us.

Thanks

Jim Henry RS, MBA

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Phone (810) 257-3618 Fax (810) 257-3125

E-mail [jhenry@gchd.us](mailto:jhenry@gchd.us)

<image002.png>

\*NOTICE: This e-mail, including attachments, is intended

**From:** Cupal, Suzanne <scupal@gchd.us>

**Sent:** 9/23/2015 11:47:32 AM

**To:** 'Janet Stout' <jstout@specialpathogenslab.com>

**Subject:** RE: Flint Water

**Attachments:** [image002.png](#), [image003.gif](#)

We have met with Marc Edwards. We thank you for sharing information.

Do you have a contact at Joint Commission that we could share with our hospitals partners regarding questions regarding Legionella?

Thank you.

Suzanne

Suzanne Cupal, M.P.H.

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[scupal@gchd.us](mailto:scupal@gchd.us)

**From:** Henry, James

**Sent:** Tuesday, August 4, 2015 8:33 AM

**To:** Hudson, Russell

**Subject:** RE: Legionella

Rusty,

Could you give a quick update regarding your progress with mitigation and working with Dr. Stout's group? Our Medical Director called a team meeting at 10am this morning. A family member of a McLaren patient contacted him and inquired about Legionella at the hospital.

Thank You

Jim Henry RS, MBA

Environmental Health Supervisor

Genesee County Health Department [www.gchd.us](http://www.gchd.us)

Janet, Frank and Jim,

For your information.

Attached please find the SPECIAL UPDATE from today which has been distributed to the employees of McLaren Flint and posted throughout the hospital.. This highlights the steps being taken starting today.

In addition, we are performing a Hyperchlorination on the hot water system of the Central and South Buildings of the hospital tonight through tomorrow morning. That documentation is attached and was sent out to staff via email and will be posted.

**Rusty Hudson**, Assoc. AIA  
Director, Engineering Services  
McLaren Flint

**From:** Joan Rose [<mailto:rosejo@msu.edu>]

**Sent:** Tuesday, September 22, 2015 10:32 AM

**To:** Henry, James; Janet Stout; Erin Dreelin

**Cc:** Childs, Bonnie; Cupal, Suzanne; Hasan, Shurooq

**Subject:** Re: Flint Water

Hello Everyone

I have been hearing rumors about the *Legionella* cases this summer and that Flint has seen another increase. Can you provide me with any update? Is CDC going to get involved now?

Hope you are all doing ok.

Joan

Joan B. Rose

Homer Nowlin Chair in Water Research

Dept of Fisheries and Wildlife

480 Wilson Road

Natural Resources Building, Room 13

Michigan State University

East Lansing, MI 48824

<http://www.fw.msu.edu/~rosejo/>

<http://camra.msu.edu/>

<http://cws.msu.edu/>

**From:** Mona <[monahannaattisha@gmail.com](mailto:monahannaattisha@gmail.com)>

On Dec 22, 2015 1:49 PM, "Mona" <[monahannaattisha@gmail.com](mailto:monahannaattisha@gmail.com)> wrote:

Do you know below person. I've heard mixed things.

Mona Hanna-Attisha

Begin forwarded message:

**From:** Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)>

**Date:** December 22, 2015 at 1:46:47 PM EST

**To:** Mona Hanna-Attisha <[MHanna1@hurleymc.com](mailto:MHanna1@hurleymc.com)>, "Walter J. Esselman" <[esselman@msu.edu](mailto:esselman@msu.edu)>

**Cc:** Angie Zell <[zell@msu.edu](mailto:zell@msu.edu)>, "Aron.Sousa@hc.msu.edu" <[Aron.Sousa@hc.msu.edu](mailto:Aron.Sousa@hc.msu.edu)>, "Gage, Douglas" <[gage@msu.edu](mailto:gage@msu.edu)>, Lucille Fallon <[fallon@uadv.msu.edu](mailto:fallon@uadv.msu.edu)>, "Buhler, Doug" <[buhler@anr.msu.edu](mailto:buhler@anr.msu.edu)>, "Simon, Lou Anna" <[LAKSimon@pres.msu.edu](mailto:LAKSimon@pres.msu.edu)>

**Subject:** Re: introduction to Joan Rose

**Reply-To:** <[rosejo@msu.edu](mailto:rosejo@msu.edu)>

Hello Mona

Nice to meet you via the email. I will read your paper and thank you for this work. I do microbial water quality and public health work. Enclosed is my brief CV. When I met up with Walt, since there was so much going on in Flint I wanted us all to be informed.

At any rate. I have been on a Technical Advisory Committee for the City and water dept (before Howard got fired) since early 2014. I know Marc Edwards fairly well. So at any rate it is a shame that it had to get so bad before something was done.

There are a number of things happening.

1. an MSU committee examining Water Quality (working with Mott).
2. MSU-Wyane State and UM group working with University Research Corridor to develop a conference on distribution system: risks and solutions. That would be held in 2016. We are thinking that one day has to just be for the community and then another for the scientists. We will definitely keep you in the loop.

I am not taking samples or working in Flint but Dr. Susan Masten is (she is from engineering). We will keep you in the loop. Let me know what else you think you might be doing and what you might need from me.

We will set up a time to meet in January.

happy holidays.

Joan

Joan B. Rose  
Homer Nowlin Chair in Water Research  
Dept of Fisheries and Wildlife  
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[rosejo@msu.edu](mailto:rosejo@msu.edu)  
Phone: [517.432-4412](tel:517.432-4412)

<http://www.fw.msu.edu/~rosejo/>  
<http://camra.msu.edu/>  
<http://cws.msu.edu/>

On Dec 22, 2015, at 1:56 PM, Marc Edwards <[edwardsm@vt.edu](mailto:edwardsm@vt.edu)> wrote:

Joan is awesome! 100

**From:** Mona <[monahannaattisha@gmail.com](mailto:monahannaattisha@gmail.com)>  
**Sent:** Tuesday, December 22, 2015 12:58 PM  
**To:** Marc Edwards <[edwardsm@vt.edu](mailto:edwardsm@vt.edu)>  
**Subject:** Re: introduction to Joan Rose

Shawn does not think she is awesome.

Mona Hanna-Attisha

**From:** Lyon, Nick (DHHS)

**Sent:** Sunday, January 24, 2016 5:06 PM

**To:** Creagh, Keith (DEQ); Baird, Richard (GOV)

**Cc:** Hollins, Harvey (GOV); Lyon, Nick (DHHS)

**Subject:** Re: DRAFT task force response for Governor's Signature - Today's draft 1/24/16

**I edited the letter with some feedback from my staff. It doesn't change the substance of the letter. Keith - I did change one sentence in the sections you put together I changed "please help us" to "we welcome your input" in the sentence about finding other subject matter experts. I just think it sounds better!**

Rich - I did not put anything in regarding Dr. McElmurray's team. I plan on deploying but have few details on his team, except the intent that he was going to look into the spike in legionella and the potential connection to the water source. Harvey was working on the mechanics and hopefully knows more. Harvey - Can you suggest some language for Rich to use in the letter? You could incorporate into this paragraph or add after....

Michigan Department of Environmental Quality Director Keith Creagh and Michigan Department of Health and Human Services Director Nick Lyon stand ready to work closely with the Flint Water Safety Scientific Assessment Team as it is organized. We agree the Flint community is understandably skeptical of government actions and deserves the assurance of independent subject matter experts to help assess drinking water quality and public health concerns. We look forward to the full integration of all relevant expertise from local, state, and federal government as well as outside organizations like institutions of higher learning and public utility associations.

**From:** Henry, James

**Sent:** Tuesday, February 9, 2016 11:43 PM

**To:** Marc Edwards ([edwardsm@vt.edu](mailto:edwardsm@vt.edu)); [rosejo@msu.edu](mailto:rosejo@msu.edu)

**Subject:** FW: Flint Water

Joan/Marc,

Just sharing a Legionella summary, below. I shared this with Janet earlier and she is talking with her contact at CNN. Thank you so much for all you have done to help the Flint community. Every opportunity that I get, I explain your activities and interventions. It is refreshing to know you are out there, ready to step up when needed. This summary is one of many, I'll keep you informed.

Today in the Detroit Free Press <http://www.freep.com/story/news/local/michigan/flint-water-crisis/2016/02/09/flint-e-mails-state-city-appear-unable-share-info/80028820/>

Jim

**From:** Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)>  
**Sent:** Wednesday, February 10, 2016 10:22 AM  
**To:** Henry, James <[jhenry@gchd.us](mailto:jhenry@gchd.us)>; [edwardsm@vt.edu](mailto:edwardsm@vt.edu)  
**Subject:** Re: FW: Flint Water

Thank you Jim, I hope you are all holding up under all of this pressure. You are too kind and I did not do much. I am very glad Janet is involved (and Marc). Some individuals have called about monitoring. Marc has a good protocol and you know Janet's methods are well established. So we are now set up to do some sampling around the state.

Nigel Paneth who does child health research and I are trying to think of what caused all the early complaints of skin rashes, respiratory illnesses. Could be Pontiac Fever I suppose. I did find that study in England that said increase in hardness TDS, Chlorides could cause skin problems as well.

Let me know how else we can help you.

Joan

Joan B. Rose  
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Phone: 517.432-4412

<http://www.fw.msu.edu/~rosejo/>  
<http://camra.msu.edu/>  
<http://cws.msu.edu/>

**From:** Wells, Eden (DHHS) <[WellsE3@michigan.gov](mailto:WellsE3@michigan.gov)>

**Sent:** Tuesday, February 16, 2016 11:01 AM  
**To:** Marc Edwards <[edwardsm@vt.edu](mailto:edwardsm@vt.edu)>  
**Subject:** Touching base

Ni Marc,

Would you have time for a brief chat today?

Eden

Eden V. Wells, MD, MPH, FACPM  
Chief Medical Executive  
Michigan Department of Health and Human Services  
201 Townsend St., 5<sup>th</sup> Floor CVB  
Lansing, MI 48913

On 2/16/2016 12:08 PM, Wells, Eden (DHHS) wrote:

Hi Joan,

I heard through the grapevine that you are conducting Legionella testing, and was wondering if you are doing that in concert with some of the other efforts on the ground? Was hoping to have a quick conversation if possible, at 517-230-5827,  
Eden

**From:** Cupal, Suzanne <[scupal@gchd.us](mailto:scupal@gchd.us)>

**Sent:** 3/1/2016 10:26:36 PM

**To:** [rosejo@msu.edu](mailto:rosejo@msu.edu); Janet Stout <[jstout@specialpathogenslab.com](mailto:jstout@specialpathogenslab.com)>; Berkelman Ruth L <[rberkel@emory.edu](mailto:rberkel@emory.edu)>; Lytle, Darren <[Lytle.Darren@epa.gov](mailto:Lytle.Darren@epa.gov)>; Henry, James <[jhenry@gchd.us](mailto:jhenry@gchd.us)>

**Subject:** RE: FW: FOR IMMEDIATE RELEASE: With warmer months approaching, cases of Legionnaires' disease possible

We want to work with all of you. Our concern is that Shawn and this team do not have Legionella expertise.

I am concerned that the communication issues continue. The health of our community is our greatest concern. There is far too much politics happening.

We want to keep people safe and move the science forward. It will take your third party involvement to help keep the politics out.

We want to work with you. We want you to be comfortable in participating.

We will not be in tomorrow as a snow emergency has been declared. I would like to hear from everyone. Then move forward.

Thank you.

Suzanne

Sent from my Windows Phone

**From:** Joan Rose

**Sent:** 3/1/2016 10:13 PM

**To:** [Cupal, Suzanne](mailto:Cupal,Suzanne); [Janet Stout](mailto:JanetStout); [Berkelman Ruth L](mailto:BerkelmanRuthL); [Lytle, Darren](mailto:Lytle, Darren); [Henry, James](mailto:Henry, James)

**Subject:** Re: FW: FOR IMMEDIATE RELEASE: With warmer months approaching, cases of Legionnaires' disease possible

Hi ALL

So Shawn called me today, and gave me some of what was going on, but not all of it.

I think this is the STATE has decided they needed to do something and was in communication with CDC without

including you all. I don't get it but it is what it is.

So I think we move forward with your plan and we suggest that there be more communication AND that we bring

the two teams together. First you have people who have great experience in sampling (in Janet). I am

going to email Edan and suggest that this happen ASAP.

Look there is a lot of concern at all levels about the lack of State Health to get CDC in sooner, so part

of this may be a reaction to this.

I think our goal is not getting in the news but getting sampling done and coordinating the work.Â

Let me know if you have any concerns.Â Â We will get this worked out.

Joan Â

Joan B. Rose

Homer Nowlin Chair in Water ResearchÂ

Dept of Fisheries and Wildlife

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Â [rosejo@msu.edu](mailto:rosejo@msu.edu)

Phone: 517.432-4412

<http://www.fw.msu.edu/~rosejo/>

<http://camra.msu.edu/>

<http://cws.msu.edu/>

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On 3/1/2016 4:54 PM, Cupal, Suzanne wrote:

Good afternoon.

Â

I wanted to share the media release below and the link to the article information below. I spoke to Cindy Whitney at the CDC yesterday. I shared our concerns and that we were working with you and that we were looking forward to the call tomorrow. She did not share any information regarding this announcement. The meeting has now been rescheduled to Monday, March 7th.

Â

We want to collaborate with you. We will share more information as it becomes available.

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<http://www.detroitnews.com/story/news/michigan/flint-water-crisis/2016/03/01/wayne-state-flint-water-study/81149718/>

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Suzanne Cupal, M.P.H.

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[scupal@gchd.us](mailto:scupal@gchd.us)

**From:** Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)>

**Sent:** 3/2/2016 11:25:28 PM

**To:** Cupal, Suzanne <[scupal@gchd.us](mailto:scupal@gchd.us)>; Berkelman, Ruth L <[rberkel@emory.edu](mailto:rberkel@emory.edu)>

**Cc:** Janet Stout <[jstout@specialpathogenslab.com](mailto:jstout@specialpathogenslab.com)>; Henry, James <[jhenry@gchd.us](mailto:jhenry@gchd.us)>; Lytle, Darren <[Lytle.Darren@epa.gov](mailto:Lytle.Darren@epa.gov)>

**Subject:** Draft v3

**Attachments:** [Genesee County Environmental surveillance of Legionella v3 030116.docx](#)

Hello ALL

Please see the draft. I think that maybe we should take off the budget for now and work it out later so that it is more accurate.

Ruth I did get your email but check on what I wrote.

I think Suzanne that when you talk to Shawn that you state you would like to take a leadership role in

organizing the sampling and for him to work with Janet Stout and the team. If they have funds which are being

used for water testing then these can be used to pay Janet.

Ok

Joan

Joan B. Rose

Homer Nowlin Chair in Water Research

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<http://camra.msu.edu/>  
<http://cws.msu.edu/>  
On 3/2/2016 5:22 PM, Cupal, Suzanne wrote:  
Thank you!  
Sent from my Windows Phone

**From:** Joan Rose  
**Sent:** 3/2/2016 5:18 PM  
**To:** Cupal, Suzanne; Berkelman, Ruth L  
**Cc:** Janet Stout; Henry, James; Lytle, Darren  
**Subject:** Re: Rough draft\_Stout Comments  
I will get you a draft tonight for you to take with you.

Joan  
Joan B. Rose  
Homer Nowlin Chair in Water Research  
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Phone: 517.432-4412  
<http://www.fw.msu.edu/~rosejo/>  
<http://camra.msu.edu/>

**From:** Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)>  
**Sent:** 3/2/2016 9:00:52 AM  
**To:** Suzanne Cupal <[scupal@gchd.us](mailto:scupal@gchd.us)>  
**Subject:** Fwd: Touching base again--Legionella testing SORRY LONG EMAIL

Hi Suzanne  
Your view of our email exchange. So how much is the State involving you? Let's add our bios to the sampling proposal. I will send a new version tonight. At a meeting at EPA. So won't call Eden until tomorrow

Sent from my iPhone  
Begin forwarded message:  
Email exchange  
**From:** "Wells, Eden (DHHS)" <[WellsE3@michigan.gov](mailto:WellsE3@michigan.gov)>  
**Date:** March 2, 2016 at 8:49:05 AM EST  
**To:** Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)>  
**Subject:** Re: Touching base again--Legionella testing SORRY LONG EMAIL

I can talk after 10 this morning until noon. And then likely after 2 o'clock. My cell is 517-230-5827 if there is a time good for you.

Eden V. Wells, MD, MPH, FACPM  
Chief Medical Executive  
Michigan Department of Health and Human Services  
Tel: 517-335-8011

Sent from my iPhone, please excuse typos  
On Mar 2, 2016, at 8:33 AM, Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)> wrote:

So I do not think that GCHD is being included in the decision making. You really need to reach out to them. My potential monitoring is separate and I do not know yet all the details of Otto plans. Finally why don't we set up a email list serve. You know

Ruth

Betkelman right and what she is doing?

Sent from my iPhone

On Mar 2, 2016, at 8:11 AM, Wells, Eden (DHHS) <WellsE3@michigan.gov> wrote:

Hi Joan-

Yes- I was reaching out to you, and I talked to Janet the same day, because I am very

concerned about multiple initiatives going on regarding Legionella surveillance and

sampling. I had heard that you are doing work as well looking at genetic prevalence is

the system-is that what you mean when referring to Otto?

WSU is including GCHD, CDC etc, but I recommend a call with all of the parties involved in these initiatives, and we can make those arrangements.

Eden

Eden V. Wells, MD, MPH, FACPM

Chief Medical Executive

Michigan Department of Health and Human Services

Tel: 517-335-8011

Sent from my iPhone, please excuse typos

On Mar 2, 2016, at 2:25 AM, Joan Rose <rosejo@msu.edu> wrote:

Hello Edan

I know we never did catch up. Oh well. I have been running around in and out of the country and staying connected to the Genesee County group via email and phone conf calls. As you know there is alot of pressure on the local Health Departments and there is so much attention, people coming in and out of Flint, news stories, more sampling being planned etc etc. I feel there is a great potential for miscommunications and greater criticisms directed at how Michigan is handling the microbial water quality issue.

I wanted to get your perspective on how we might get the various groups together on the microbiology and *Legionella* particularly prior to the temperatures warming up and the potential for more blooms, cases and deaths.

I am sure you saw the newspaper article on the Flint Area Community Health and Environment Partnership, Shawn called me today as well and said the You all were funding them. But there is much concern that while the epidemiology, public engagement is well represented with the expertise of the team, there is little experience with monitoring.

Otto will be coming back from Virginia Tech. He is probably going to use our labs. In addition, Suzanne and Jim would like to engage Janet Stout to do the monitoring and not just that but implement an action plan to address the control of *Legionella* in the household (heat and flush, bacterial POU filters which have their own issues as none are certified) as well as in other public buildings (and where susceptible individuals hospitals). In my opinion Janet is what Marc Edwards was for lead, for *Legionella*. I think having that "Outside expertise" will be helpful.

There are also EPA teams, CDC teams playing a role. I was just at CDC and their team as far as I could tell had not developed a consensus on what to do, but meetings are being planned. but it is hard to know who is talking to who.

What methods are being used? What are the QAQC being followed? What is the communication strategy with the community and the various teams (either about the testing plan prior to implementation; about the results and what to do about what might be found)? What is the sampling plan regarding the sampling sites and frequency? who will get their water tested and who won't?

The local Health Department and State needs to be coordinating all these efforts so that the community is not confused and worried about all these people taking samples and what are they doing with the results? Some locations may need to be confidential especially in regard to individuals and their health status, so there are ethical considerations in handling human subjects health information and their exposure to pathogens in their water.

There is a need to respond to the people in Flint and more sampling needs to be considered than one might do in a general water surveillance study . And rapid communication of the results. More importantly an approach to alleviate the potential risk.

At any rate, the water quality sub-committee that DEQ is running at the bequest of the Governor should be kept abreast of all this and other interested stakeholders and community leaders.

I wanted to see if you had some ideas on how to handle all of this. My recommendation is that all sampling plans go through the local and state health department. **I think the State should be funding Janet, ASAP.** thanks Eden, Hope all is going as best as it can in this stressful situation. Talk to you soon.

Joan

Joan B. Rose  
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<http://camra.msu.edu/>  
<http://cws.msu.edu/>

**From:** Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)>  
**Sent:** 3/12/2016 10:54:59 AM  
**To:** Cupal, Suzanne <[scupal@gchd.us](mailto:scupal@gchd.us)>  
**Subject:** Fwd: Flint Jail Lead Level Test  
**Attachments:** [Flint Jail Water Lawsuit](#), [Flint Journal 3.9.16.pdf](#)

Hi Suzanne

I think maybe more monitoring needs to be done at the jail. They have not had any disease cases out there have they?

What about their chlorine residuals? any of these weird skin rashes?

I going to see if Shawn can do the monitoring.

Also I am going to ask Shawn to provide Janet with 30 k to get going on the testing. We will see what happens.

Joan

-----

On 3/12/2016 7:29 PM, Shawn Patrick McElmurry wrote:

> Hey Suzanne and Joan, great to hear from you. I don't think anything formal is required right now, but we should definitely talk soon. I think \$30k is certainly reasonable and something we could request as part of FACHEP as long as it fits within the framework of what everyone is trying to do. Paul and I did reach out to Janet previously and had a nice conversation but we didn't get specific. Ideally I'd like to get a general plan ironed out this week.

>>

Suzanne, I'll follow your lead here.. Let me know when would be good to talk.

>>

Thanks,

> Shawn

>>>>

Shawn P. McElmurry

> Associate Professor

> Wayne State University

**From:** Joan Rose

**Sent:** 3/ 12/ 2016 7:59 PM

**To:** Shawn Patrick McElmurry; Cupal, Suzanne

**Subject:** Re: Legionella testing

thanks Shawn. Do you have a framework document you can share? That would be helpful. All we know is what we read in the newspaper.

Joan

Joan B. Rose  
Homer Nowlin Chair in Water Research  
Dept of Fisheries and Wildlife  
480 Wilson Road  
Natural Resources Building, Room 13  
Michigan State University  
East Lansing, MI 48824  
[rosejo@msu.edu](mailto:rosejo@msu.edu)  
Phone: 517.432-4412

**From:** Berkelman, Ruth L [mailto:rberkel@emory.edu]

**Sent:** Monday, March 21, 2016 9:25 PM

**To:** [rosejo@msu.edu](mailto:rosejo@msu.edu)

**Cc:** Janet Stout <[jstout@specialpathogenslab.com](mailto:jstout@specialpathogenslab.com)>; Cupal, Suzanne <[scupal@gchd.us](mailto:scupal@gchd.us)>

**Subject:** Re: PubMed\_ Investigators and Legionnaires' disease or water

Janet, doesn't your lab have more expertise in legionella culture than theirs? I have not yet heard much about their capabilities in environmental microbiology for legionella. . I agree that they are capable of doing studies. But are they capable of culturing water for legionella, getting accurate quantitative counts and strain identification? Does anyone know. We did not ask on the phone call, did we? Has anyone? Ruth

**From:** [s.mcelmurry@wayne.edu](mailto:s.mcelmurry@wayne.edu)

**Sent:** March 24, 2016 7:53 AM

**To:** [rosejo@msu.edu](mailto:rosejo@msu.edu)

**Cc:** [scupal@gchd.us](mailto:scupal@gchd.us); [jstout@specialpathogenslab.com](mailto:jstout@specialpathogenslab.com)

**Subject:** Congratulations Joan!

Joan, congratulations on this monumental achievement. It must be an amazing honor. Well deserved!

<http://msutoday.msu.edu/news/2016/msu-global-water-scientist-awarded-worlds-top-water-prize/>

I look forward to working with you and the rest of our team in Flint. Please let me know when you get back (I assume you're in Geneva) and we can set up a time to meet face-to-face to hammer out details regarding our upcoming monitoring effort.

Cheers!

Shawn

**From:** Shawn Patrick McElmurry [mailto:[s.mcelmurry@wayne.edu](mailto:s.mcelmurry@wayne.edu)]

**Sent:** Thursday, March 31, 2016 8:35 AM

**To:** Janet Stout <[jstout@specialpathogenslab.com](mailto:jstout@specialpathogenslab.com)>

**Cc:** Paul Evan Kilgore <[paul.kilgore@wayne.edu](mailto:paul.kilgore@wayne.edu)>; Michele Swanson <[mswanson@umich.edu](mailto:mswanson@umich.edu)>

**Subject:** Re: From Paris and Melbourne, to Flint

Hey Janet, I've been meaning to follow up with you for a while now. Any chance you could do a conference call on Wednesday (4/6) at 4pm to discuss legionella sampling, analysis,

etc.? I suggest this time because I already know I will be meeting with Paul and Michele at this time.

Other possible times I'm available would be:

Wednesday (4/6) morning (before 11am)

Thursday (4/7) virtually anytime.

Thanks,

Shawn

Ps. I hear your presentation on Saturday in Flint was well received. Sorry I wasn't able attend.

Shawn P. McElmurry, Ph.D., P.E.

Associate Professor

Wayne State University

Dept. of Civil and Environmental Engineering

2158 Engineering Building

5050 Anthony Wayne Dr.

Detroit, Michigan 48202

Phone: 313-577-3876

Fax: 313-577-3881

Skype: s.mcelmurry  
[www.eng.wayne.edu/mcelmurry](http://www.eng.wayne.edu/mcelmurry)

**From:** Janet Stout <jstout@specialpathogenslab.com>  
**Sent:** 3/31/2016 9:08:05 AM  
**To:** 'Cupal, Suzanne' <scupal@gchd.us>  
**Cc:** Janet Stout <jstout@specialpathogenslab.com>  
**Subject:** RE: Wayne State

Suzanne,  
I have received emails from Shawn and Michele Swanson (molecular pathogenesis microbiologist) asking me to speak with them about Legionella sampling.

My preference is that you set up another call with our group and we invite Shawn and Michele (have Shawn introduce her to our group). They can ask any questions of me about sampling during that call – this way everyone hears their questions and understands their path forward. This would be consistent with the “transparency” that you have often mentioned.

What are your thoughts?

Janet  
Janet E. Stout, Ph.’

**From:** Janet Stout <jstout@specialpathogenslab.com>  
**Sent:** 3/31/2016 9:37:07 AM  
**To:** 'Shawn Patrick McElmurry' <s.mcelmurry@wayne.edu>  
**Cc:** Cupal, Suzanne <scupal@gchd.us>; Janet Stout <jstout@specialpathogenslab.com>; rosejo@msu.ed  
**Subject:** RE: Call About Legionella Sampling/ Introduce Michele Swanson

Hi Shawn,

I have received your email and an email from Michele Swanson asking for a call to discuss Legionella sampling/analysis. I'd like to suggest that we set up a call that would include our other project members (Suzanne, Joan, Ruth, Darren, Michael). You could introduce Michele to the group and we can discuss Legionella sampling/analysis.

Suzanne is copied on the email and your suggested times/dates are in your email below. Suzanne will query our group on availability and we'll get the call on our schedules ASAP!

I've also copied Joan – now that she is even more famous, getting this on her schedule is the first priority! ☺

Thanks!

Janet  
Janet E. Stout, Ph.D.  
President & Director  
Special Pathogens Laboratory  
1401 Forbes Ave. Suite 209  
Pittsburgh, PA 15219  
P: 412-281-5335  
F: 412-281-7445

**From:** s.mcelmurry@wayne.edu  
**Sent:** March 31, 2016 9:52 AM  
**To:** jstout@specialpathogenslab.com  
**Subject:** RE: Call About Legionella Sampling/ Introduce Michele Swanson

Ok for entire group but there are specifics I would like to discuss with you ASAP. Just figured it would be easier to get a smaller group together. I'll wait to hear back from Suzanne.

Shawn P. McElmurry  
Associate Professor  
Wayne State

**From:** Michele Swanson <mswanson@umich.edu>  
**Sent:** Wednesday, March 30, 2016 2:37 PM  
**To:** Janet Stout  
**Cc:** Paul Evan Kilgore; Shawn Patrick McElmurry  
**Subject:** From Paris and Melbourne, to Flint

Hi Janet-

A quick note to say that it looks like we have another opportunity to work together. Shawn, Paul, and I are in the midst of developing strategies for Flint as the warm weather returns.

We look forward to benefiting from your deep experience in environmental surveillance.

My lab remains interested in how Legionella adapts to life in nutrient-poor environments and whether use of strong oxidants in water treatment protocols selects for more resilient and virulent strains of this pathogen.

Cheers-

Michele

Professor, Department of Microbiology & Immunology  
Director, Office of Postdoctoral Studies  
University of Michigan Medical School  
6734 Medical Science Building II  
1150 West Medical Center Drive  
Ann Arbor, MI 48109-5620  
734-647-7295  
[mswanson@umich.edu](mailto:mswanson@umich.edu)

**From:** Cupal, Suzanne [<mailto:scupal@gchd.us>]

**Sent:** Thursday, March 31, 2016 9:49 PM

**To:** Janet Stout <[jstout@specialpathogenslab.com](mailto:jstout@specialpathogenslab.com)>; Berkelman, Ruth L <[rberkel@emory.edu](mailto:rberkel@emory.edu)>; [rosejo@msu.edu](mailto:rosejo@msu.edu); Lytle, Darren <[Lytle.Darren@epa.gov](mailto:Lytle.Darren@epa.gov)>; Rodgers, Mark <[Rodgers.Mark@epa.gov](mailto:Rodgers.Mark@epa.gov)>; Schock, Michael <[Schock.Michael@epa.gov](mailto:Schock.Michael@epa.gov)>; Shawn Patrick McElmurry <[s.mcelmurry@wayne.edu](mailto:s.mcelmurry@wayne.edu)>; Paul Evan Kilgore <[paul.kilgore@wayne.edu](mailto:paul.kilgore@wayne.edu)>

**Subject:** Conference Call

**Importance:** High

Shawn would like a meeting next week to discuss sampling. He is available on Wednesday at 4pm, Wednesday before 11am and is open on Thursday. Would any of those dates work for you?

Thank you.

Suzanne

Suzanne Cupal, M.P.H.  
Public Health Supervisor  
Genesee County Health Department  
630 S. Saginaw Street  
Suite 4  
Flint, MI 48502  
(810) 768-7970  
[scupal@gchd.us](mailto:scupal@gchd.us)

**From:** Janet Stout

**Sent:** 3/ 31/ 2016 6:18 PM

**To:** Shawn Patrick McElmurry

**Cc:** Janet Stout; Suzanne Cupal

**Subject:** Re: Call About Legionella Sampling/ Introduce Michele Swanson

Hi Shawn,

I'm sure Suzanne can get the group on a call on one of the dates you suggested.

Send me your questions in advance and I'll be able to prepare responses in advance.

Thanks,

Janet

Janet E. Stout, PhD

President and Director

Special Pathogens Laboratory

412-281-5335

[www.specialpathogenslab.com](http://www.specialpathogenslab.com)

Sent from my BlackBerry - the most secure mobile device - via the T-Mobile Network

From: Shawn Patrick McElmurry

Sent: 4/ 1/ 2016 3:04 AM

To: Berkelman Ruth L; [rosejo](mailto:rosejo); Paul Evan Kilgore; Nancy Love; Michele Swanson; Suzanne Cupal;

Suleyman, Geehan

Cc: Schock, Michael; Lytle Darren; Janet Stout; Mark Rodgers

Subject: Re: Conference Call

Thanks Suzanne for coordinating. I believe 1pm will work but I would also like to have some of our other collaborators looped in. I've copied them here. It may turn out to be too difficult to get

everyone on the same call but we can try.  
Nancy, Michele, Geehan, Paul - could you make a conference call Thursday (4/7) sometime between 1 and 3pm?

Shawn P. McElmurry, Ph.D., P.E.  
Associate Professor  
Wayne State University  
Dept. of Civil and Environmental Engineering  
2158 Engineering Building  
5050 Anthony Wayne Dr.  
Detroit, Michigan 48202  
Phone: 313-

**From:** Shawn Patrick McElmurry [mailto:s.mcelmurry@wayne.edu]

**Sent:** Thursday, April 07, 2016 12:50 PM

**To:** Cupal, Suzanne <scupal@gchd.us>; Berkelman Ruth L <rberkel@emory.edu>; rosejo <rosejo@msu.edu>; Paul Evan Kilgore <paul.kilgore@wayne.edu>; Nancy Love <nglove@umich.edu>; Michele Swanson <mswanson@umich.edu>; Suleyman, Geehan <GSULEYM2@hfhs.org>

**Cc:** Schock, Michael <Schock.Michael@epa.gov>; Lytle Darren <Lytle.Darren@epa.gov>; Janet Stout <jstout@specialpathogenslab.com>; Mark Rodgers <Rodgers.Mark@epa.gov>; Susan J. Masten <masten@egr.msu.edu>; Laura Sullivan <dr.laura2@gmail.com>

**Subject:** Reminder: Conference Call at 1pm

I look forward to our conference call at 1pm today.

**Dial-in Number: (641) 715-3580**

**Access Code: 299749**

To help guide the discussion, I have drafted a quick agenda. Also attached is a working draft of the anticipated sample processing of legionella samples.

Agenda:

1. Introductions
2. Define key questions guiding environmental assessment
3. Sample collection & testing
4. Partnerships and communication

**Draft key questions:**

Question 1. What is the prevalence of legionella within Flint's municipal water distribution system?

Question 2. Is the prevalence of legionella within Flint's municipal water distribution system greater than other comparable cities?

Question 3. Is the seasonal variation in the cases of legionellosis attributable to seasonal variation in the prevalence of legionella found in the municipal water distribution system?

Shawn P. McElmurry, Ph.D., P.E.

Associate Professor

Wayne State University

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Fax: 313-577-3881

Skype: s.mcelmurry

[www.eng.wayne.edu/mcelmurry](http://www.eng.wayne.edu/mcelmurry)

On 4/8/2016 6:19 PM, Janet Stout wrote:

Hello Suzanne, Ruth and Joan,

Suzanne often and properly reminds us of the importance of "transparency" as well as the importance of "advancing the science." I want to share my thoughts with you on these

topics after thinking about our call yesterday and some of the things I heard during the call.

All of us were on the call with the exception of Ruth -who could not be on the call due to travel.

The following other researchers were on the call: Shawn Patrick McElmurry, Paul Evan Kilgore, Nancy Love, Michele Swanson, Geehan Suleyman, Darren Lytle, Mark Rodgers,

Susan J. Masten, Laura Sullivan (Michael Schock was absent),

During the call I heard/learned some things that I found quite disturbing and warrant some discussion.

1. We discussed the topic of how to sample homes for *Legionella*. Shawn asked if testing only one location (the shower) in a home would be acceptable - he stated that

sampling locations other than the shower did not make sense to him because the mode of transmission of Legionnaires' disease was

aerosolization.

a. I recommended that multiple sites be tested (kitchen sink faucet, bathroom sink faucet, shower and hot water tank). Studies have shown (including my own) that *Legionella* may not be isolated/recovered from all sites equally, thus necessitating the testing of multiple sites. Testing multiple locations is a common practice when testing water systems for *Legionella*. Shawn also questioned the epidemiological relevance of testing a location that does not generate an aerosol, like the sinks and hot water tanks in these homes.

b. It is common knowledge and in published papers that aerosolization is not the only mode of transmission. Aspiration is another mode of transmission for this disease. Shawn acknowledged that aspiration could be a mode of transmission. He was aware of instances of the disease being transmitted this way in the hospital setting, but then asked if there were publications demonstrating that the disease had been acquired this way during home exposure. The implication was that transmission could not/would not occur via aspiration outside of a hospital, as if location dictated the mode of transmission. The two examples above demonstrate the concern that I have raised previously – that the scientists being tasked with investigating the presence of *Legionella* in the water of Flint lack the necessary expertise to perform such a study – a study that can withstand the scrutiny that will come from being a state-funded study.

2. Towards the end of the call I asked about our proposal (attached). Specifically, I commented on the fact that the discussion on the call (and what I had heard previously from Suzanne) was that testing of patient homes was only going to be done in the future -- if/when a new case is identified. The position of CDC and the State Health Department was that they did not want to test the homes of the patients that were part of the outbreak in 2014 and 2015. During the call yesterday, Suzanne shared that she had been told that part of the concern around doing retrospective testing of outbreak-related patient homes stemmed from concerns over the many lawsuits that have been filed against the state.

a. The only conclusion I can draw is that *Legionella* testing of the homes of the people that acquired Legionnaires' disease during the summer of 2014 and 2015 will not be done – so this part of our proposal should be considered dead upon arrival. When testing is performed, it appears that the plan is for the testing to be done by people with very little experience in performing *Legionella* environmental testing, particularly in homes.

b. When Shawn first called me, he told me that he would be free to conduct the study independently and without influence from any state or local agencies, even though the funding was coming from the State of Michigan. We had this discussion because I could see the danger of undue influence by the funders. I know he believed this then and may still now, I don't know. It is my conclusion, however, that Shawn will not be permitted to look into the possible exposure of these patients from the water within their homes /from their drinking water. The objective evidence that something other than advancing the science is at play is that free *Legionella* testing was offered in our proposal for up to 87 of the homes of the outbreak-affected Flint residents (348 samples). This amount of in-kind support is \$38,280.

3. Shawn then raised a concern around conflict of interest. He said that among this group there were people that may have been retained as expert witnesses related to these lawsuits. I asked if he was speaking from some specific knowledge and it was this knowledge that prompted his concern. I offered that I had not been retained. Michele shared that she had been approached by the Michigan State Attorney General's Office of Special Counsel presumably to serve as an expert that could eventually be called to testify.

a. Shawn's concern implied that someone has suggested that such a conflict or perception of a conflict would be seen as problematic and would call into question the findings of the group and would be the basis for excluding investigators from the study. I have never before heard of this argument being presented as a rationale for inclusion/exclusion of scientific investigators.

b. I offered an alternative view – as the "devil's advocate" I said that the group could be equally criticized for not performing a well-conceived and scientifically sound study performed by experts.

4. Lastly, I raised the question of roles and responsibilities. I was trying to get at the fact that there has been no mention of our specific roles or that our proposal will be part of what is submitted to the state for funding. I asked the question because I think this should be an "out in the open" and



"transparent" discussion. Shawn replied that he wanted to have individual discussions and that he would be doing this soon. These issues are of grave concern to me, as they may be for you. We must remember that what got Flint into trouble in the first place was state and local officials manipulating data and ignoring well validated and accepted policies, procedures, practices and science. This desire to control information led to the crisis in Flint.

In my opinion, the only way to save this effort is for Joan to be appointed Principal Investigator. A more senior and well-respected investigator could stand against any pressure to influence the study design.

Sincerely,

Janet

Janet E. Stout, Ph.D.  
President & Director  
Special Pathogens Laboratory  
1401 Forbes Ave. Suite 209  
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P: 412-281-5335  
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Legionella Resources:  
[Sign up for SPL's newsletter](#)  
Laboratory and Consulting Services [www.specialpathogenslab.com](http://www.specialpathogenslab.com)  
General Information [www.legionella.org](http://www.legionella.org)\_\_\_

**From:** Janet Stout <jstout@specialpathogenslab.com>  
**Sent:** 4/9/2016 12:06:27 PM  
**To:** Suzanne Cupal <scupal@gchd.us>; rosejo <rosejo@msu.edu>; Berkelman Ruth L <rberkel@emory.edu>  
**Cc:** Janet Stout <jstout@specialpathogenslab.com>  
**Subject:** Re: Thoughts About Yesterday's Call

Dear Joan, Suzanne and Ruth,

The process that Joan has suggested solves many of challenges facing our group.

I support the proposition. Please let me know what you might need from me.

Sincerely,

Janet

Janet E. Stout, PhD  
President and Director  
Special Pathogens Laboratory  
412-281-5335  
[www.specialpathogenslab.com](http://www.specialpathogenslab.com)

Sent from my BlackBerry - the most secure mobile device - via the T-Mobile Network

**From:** scupal@gchd.us  
**Sent:** April 9, 2016 10:53 AM  
**To:** rosejo@msu.edu; jstout@specialpathogenslab.com; rberkel@emory.edu  
**Subject:** RE: Thoughts About Yesterday's Call

Thank you. I wanted to wait to see how you would respond.

I am very concerned that Shawn has not provided a written plan. It has been requested repeatedly. I am also concerned that the state has not provided Wayne States roles and responsibilities in writing.

I support the activities you have outlined. I think C.S. Mott Foundation would be a great place to start. I am not sure of additional potential funders. I can speak with Mark Valacak on Monday

about the role GCHD can play related to the finances. I am concerned about the time frame. We would need to work fast.

I requested and received the letter of support from EPA so we could work with them and the sites they are working with.

If you are ok with Joan's proposal, I will speak to Mark on Monday.

Suzanne

Sent from my Windows Phone

**From:** Joan Rose  
**Sent:** 4/9/2016 10:38 AM  
**To:** Janet Stout; Cupal, Suzanne; Berkelman Ruth L  
**Subject:** Re: Thoughts About Yesterday's Call  
Dear Janet Suzanne and Ruth

So first thank you Janet for your great faith in me. I was thinking alot about what is going on after the last call as well. It is a sensitive situation, and Shawn is attempting to figure out his overall research plan, but thus far we have seen nothing on paper. I think a written plan, individuals roles will need to be sorted out. So part of me feels we should just not worry about what Shawn's research plan and what his team will do or not do. I think we stay engaged with them BUT move forward to help the citizens with the situation in Flint.

This is what I was thinking.

1. modify the proposal and let's get started with sampling homes, identify some sites (not homes with previous cases).
2. Janet has agreed to do some samples for free so let's move that forward. I am not asking for funds and can assist with sampling and shipping etc.
3. Obtain funds directly for the county and Janet (Sources ? DEQ?, Sloan, Mott, EPA, MSU) Let's try to piece together 50K.
4. work with EPA on a written plan for collecting samples at their sites.
5. I will email Otto and find out about his results and what other sampling he might do.

Finally of course Suzanne your group has to be comfortable with this. We would need to communicate

exactly what we are doing and what will be done with the results.

I feel like maybe Emory could handle the funds that would pay Janet, as we might have some flexibility with

a University and there would be no perception of "MSU" trying to get \$\$\$.

Otherwise Suzanne how difficult would it be for you to receive the funds, set up accounts and get the

payment to Janet?

ok what do you all think?

Joan

Joan B. Rose

Homer Nowlin Chair in Water Research

Dept of Fisheries and Wildlife

480 Wilson Road

Natural Resources Building, Room 13

Michigan State University

East Lansing, MI 48824

[rosejo@msu.edu](mailto:rosejo@msu.edu)

Phone: 517.432-4412

<http://www.fw.msu.edu/~rosejo/>

<http://camra.msu.edu/>

<http://cws.msu.edu/>

**From:** Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)>

**Sent:** 4/9/2016 11:04:06 AM

**To:** Shawn Patrick McElmurry <[s.mcelmurry@wayne.edu](mailto:s.mcelmurry@wayne.edu)>; Cupal, Suzanne

<[scupal@gchd.us](mailto:scupal@gchd.us)>; Berkelman Ruth L

<[rberkel@emory.edu](mailto:rberkel@emory.edu)>; Paul Evan Kilgore <[paul.kilgore@wayne.edu](mailto:paul.kilgore@wayne.edu)>; Nancy Love

<[nglove@umich.edu](mailto:nglove@umich.edu)>; Michele Swanson

<[mswanson@umich.edu](mailto:mswanson@umich.edu)>; Suleyman, Geehan <[GSULEYM2@hfhs.org](mailto:GSULEYM2@hfhs.org)>

**Cc:** Schock, Michael <[Schock.Michael@epa.gov](mailto:Schock.Michael@epa.gov)>; Lytle Darren <[Lytles.Darren@epa.gov](mailto:Lytles.Darren@epa.gov)>; Janet Stout

<[jstout@specialpathogenslab.com](mailto:jstout@specialpathogenslab.com)>; Mark Rodgers <[Rodgers.Mark@epa.gov](mailto:Rodgers.Mark@epa.gov)>; Susan J. Masten

<[masten@egr.msu.edu](mailto:masten@egr.msu.edu)>; Laura Sullivan <[dr.laura2@gmail.com](mailto:dr.laura2@gmail.com)>

**Subject:** Re: Reminder: Conference Call at 1pm

Hi Shawn

Thanks for setting up the call. I think that having minutes is a very good idea as keeping track of

progress being made toward the helping the citizens of Flint is imperative. I also agree that it would

be good to have something written down ( a draft proposal) that describes the partners and scientists

involved and their roles would be very beneficial. I think I understand that you are in charge of the

program (as PI or lead coordinator) but the decision process and timeline are very unclear. That would

helpful to all involved.

The Research questions you are attempting to address I think will improve our scientific understanding of

microbiology of distributions systems, but I do worry about the community feeling like they are being

"researched" but not helped.

I also think there is some confusion between what might be an environmental assessment versus

epidemiological investigation. That could be clarified once you have begun to write your plan down.

While this is a sensitive situation, the best pathway forward is to have something written down so there is

no confusion. Transparency and clear communications will certainly be in the best interest of public

health and the science.

I know you have been very busy, just let me know when you want to set up a time to talk. I think you had

sent me an email a few weeks ago about setting up a phone call, so just let me know when.

Sincerely

Joan

Joan B. Rose

Homer Nowlin Chair in Water Research

Dept of Fisheries and Wildlife

480 Wilson Road

Natural Resources Building, Room 13

Michigan State University

East Lansing, MI 48824

[rosejo@msu.edu](mailto:rosejo@msu.edu)

Phone: 517.432-4412

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<http://camra.msu.edu/>

<http://cws.msu.edu/>

**From:** Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)>

**Sent:** 4/9/2016 11:00:13 AM

**To:** Cupal, Suzanne <[scupal@gchd.us](mailto:scupal@gchd.us)>

**Subject:** Re: Thoughts About Yesterday's Call

Hi Suzanne

great. once we hear from Janet and Ruth, let's go for it.

Joan

Joan B. Rose

Homer Nowlin Chair in Water Research

Dept of Fisheries and Wildlife

480 Wilson Road

Natural Resources Building, Room 13

Michigan State University

East Lansing, MI 48824

[rosejo@msu.edu](mailto:rosejo@msu.edu)

Phone: 517.432-4412

<http://www.fw.msu.edu/~rosejo/>

<http://camra.msu.edu/>  
<http://cws.msu.edu/>

**From:** Joan Rose <rosejo@msu.edu>  
**Sent:** 4/10/2016 10:36:23 AM  
**To:** Shawn Patrick McElmurry <s.mcelmurry@wayne.edu>; Cupal, Suzanne <scupal@gchd.us>; Berkelman Ruth L <rberkel@emory.edu>; Paul Evan Kilgore <paul.kilgore@wayne.edu>; Nancy Love <nglove@umich.edu>; Michele Swanson <mswanson@umich.edu>; Suleyman, Geehan <GSULEYM2@hfhs.org>  
**Cc:** Schock, Michael <Schock.Michael@epa.gov>; Lytle Darren <Lytle.Darren@epa.gov>; Janet Stout <jstout@specialpathogenslab.com>; Mark Rodgers <Rodgers.Mark@epa.gov>; Susan J. Masten <masten@egr.msu.edu>; Laura Sullivan <dr.laura2@gmail.com>  
**Subject:** Re: Reminder: Conference Call at 1pm

Thanks Shawn

Joan

Joan B. Rose  
Homer Nowlin Chair in Water Research  
Dept of Fisheries and Wildlife  
480 Wilson Road  
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On 4/9/2016 9:37 PM, Shawn Patrick McElmurry wrote:

Thanks Joan. Thank for the follow up.

All: As promised, here are my ROUGH notes from our call. Any additional comments/edits are welcome. In the future I will have a student join to take notes – too hard for me to do while talking/listening.

I'll talk to all of you soon.

Shawn

### GCHD/FACHEP-Legionella Conference Call April 7, 2016

Suzanne, Joan, Darrin, Nancy, Michele Swanson, Susan Masten, Janet, Geehan, Mark Rodgers, Paul, Shawn

Goal of FACHEP: Through collaboration with community partners to assess and mitigate the potential risk of legionella to Flint residents.

Agenda:

1. Introductions
2. Define key questions guiding environmental assessment
3. Sample collection & testing
4. Partnerships and communication

Draft questions guiding environmental sampling:

Question 1. What is the prevalence of legionella within Flint's municipal water distribution system?

Question 2. Is the prevalence of legionella within Flint's municipal water distribution system greater than other comparable cities?

Question 3. Is the seasonal variation in the cases of legionellosis attributable to seasonal

variation in the prevalence of legionella found in the municipal water distribution system?

Notes:

- Joan suggested remediating water distribution system, measuring before and after. Possibly add fourth question:
  - Question 4. Can we demonstrate a change in legionella before and after remediation?
- Only sampling showers has 2 problems:
  1. One location sets you up for failure – the likelihood of detection legionella is low if not sampling from multiple points
  2. Bias in selecting shower – because this assumes only inhalation risk. Janet suggested that aspiration is another potential exposure pathway that needs to be considered. Aspiration documented in medical setting is likely in residential setting. Janet will send articles.
- Joan suggested collecting composite sampling (5 L) to reduce sampling cost, similar to what has been done with beach monitoring
- Janet's previous studies have also measured temperature coming out of tank after draw, temperature at faucet
- Investigate other methodologies
- Need to determine plumbing material (galvanized, etc.)
- Amount of chlorine in systems required to inhibit growth would have to be as high as 2-4ppm.
- The low chlorine levels and the 80-90% cast iron pipes present an opportunity.
- Incoming cold water should also be sampled
- Darin asked about other parameters going to be measured when sampling (iron, chlorine, etc.) – will be measuring chlorine, aoc, etc.
- Nursing homes, going to be important.
- No comments regarding sampling protocol, more context/info needed
- Potential conflicts of interest. Michele planning to meet with lawyers (Gov. defense?). Talking science is ok. Once retainer is signed, officially working FOR legal team.
- Uncertainty regarding roles - Shawn will reach out to Janet and Joan to discuss prior to next meeting
- Need to have notes taken during call.

**From:** Joan Rose <rosejo@msu.edu>

**Sent:** 4/10/2016 12:52:14 PM

**To:** Berkelman, Ruth L <rberkel@emory.edu>

**Cc:** Janet Stout <jstout@specialpathogenslab.com>; Cupal, Suzanne <scupal@gchd.us>

**Subject:** Re: Thoughts About Yesterday's Call

Thanks Ruth

Suzanne and I will start working on this ASAP next week and keep you informed.

Joan

Joan B. Rose

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On 4/9/2016 10:01 PM, Berkelman, Ruth L wrote:

Thank you all for your thoughtful comments on the call that I missed. I agree with Janet and

wholeheartedly support Joan being PI , and, in turn believe the funds should flow through MSU. There should not be a problem with MSU receiving funds and it may even be beneficial in raising the resources.

A specific comment about Shawn's saplan to limit the number of sites; there seems to be a prevailing opinion among some key gov't public health experts to minimize the number of environmental samples even during outbreak situations. I agree with Janet that Shawn's questioning the need for more than one sample site (he also questioned this on the first call) has little scientific support. Sinks also cause aerosols as do hoses with nozzles ...how much disease aerosols from such sources cause is unknown but probably not zero.

**From:** Henry, James <jhenry@gchd.us>  
**Sent:** 4/27/2016 5:39:58 PM  
**To:** Janet Stout (jstout@specialpathogenslab.com); rosejo@msu.edu; Marc Edwards (edwardsm@vt.edu)  
**Subject:** FW: Detroit News  
**Attachments:** [image001.jpg](#)

Hi guys,

Just sharing. You are mentioned in the first link below. I don't know why this February interview is being aired now, but it's good timing. There has been a lot of behind the scenes retaliation from the state agencies towards my office. It so absurd that these people think they can influence me by cutting funding! The saga continues and this will be made public, very soon! The Attorney General seems interested about Eden Wells having her filthy hands in everything, leading around her pack of goons.

Thanks Jim

<http://www.detroitnews.com/media/cinematic/video/83581050/jim-henry-credits-water-quality-experts-stout-and-edwards/>  
<http://www.detroitnews.com/media/cinematic/video/83580890/jim-henry-asks-why-flint-water-was-not-treated-with-corrosion-controls/>  
<http://www.detroitnews.com/media/cinematic/video/83580508/jim-henry-questions-the-politics-involved-in-handling-of-flint-water-crisis/>  
<http://www.detroitnews.com/media/cinematic/video/83580344/health-supervisor-jim-henry-on-the-plight-of-flint-residents/>

Jim Henry RS, MBA

Environmental Health Director

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E-mail [jhenry@gchd.us](mailto:jhenry@gchd.us)

**From:** Janet Stout <jstout@specialpathogenslab.com>  
**Sent:** 5/17/2016 11:22:05 AM  
**To:** James Henry <jhenry@gchd.us>  
**Cc:** Janet Stout <jstout@specialpathogenslab.com>  
**Subject:** Re: Meeting  
**Attachments:** [image001.jpg](#)

Thanks, that does help.

I'm in a meeting most of the day, but I do get a break between 1 and 2pm. I'll try then.

Janet

Sent from my BlackBerry - the most secure mobile device

**From:** jhenry@gchd.us  
**Sent:** May 17, 2016 11:14 AM  
**To:** jstout@specialpathogenslab.com  
**Subject:** RE: Meeting

Hi Janet, Sure, please feel free to call anytime.

The Genesee County Prosecutor investigation team told me that they are primarily interested in understanding Legionella bacteria. I forwarded your webinar presentation to them. I guess they are looking for more, not really sure. I told them that when MDEQ would not talk with us about our Legionella investigation, you helped and explained some of the things to consider and challenges with the bacteria. I told them that you do not have firsthand knowledge of our issues with the state agencies. They might be looking for your perspective with McLaren. The investigators reviewed my emails with Rusty, requesting he contact you. They

also reviewed the McLaren Legionella Executive Summary, which mentions Special Pathogens Laboratory. Hope this helps a little with the lay of the land.

Thanks Jim

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**From:** Joan Rose <[rosejo@msu.edu](mailto:rosejo@msu.edu)>  
**Sent:** 6/21/2016 4:10:01 PM  
**To:** Cupal, Suzanne <[scupal@gchd.us](mailto:scupal@gchd.us)>; Oscar Alleyne <[oalleyne@naccho.org](mailto:oalleyne@naccho.org)>  
**Subject:** Re: FW: Contract Template/Printer information  
**Attachments:** [Vendor Information Form NACCHO jRose MSU.docx](#), [NACCHO W9 jrose.pdf](#)

Hello Suzanne and Oscar

Enclosed are the forms. I did hear the Marc Edwards is being funded directly by DEQ to do Legionella testing this week in Flint.

We are ready though to help you get your own survey going as part of a health surveillance for the public.

Next steps is a PO with number of samples and \$ per sample and as soon as we get that we can meet with you

Suzanne and collect the samples.

We will set up the professional contract with Janet.

Let me know if you have any questions.

Joan

Joan

Joan B. Rose

Homer Nowlin Chair in Water Research  
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**From:** Cupal, Suzanne <[scupal@gchd.us](mailto:scupal@gchd.us)>  
**Sent:** Thursday, June 30, 2016 8:47:05 AM  
**To:** [rosejo@msu.edu](mailto:rosejo@msu.edu); Janet Stout; Berkelman, Ruth L  
**Cc:** Oscar Alleyne  
**Subject:** Update

I emailed Oscar Alleyne for an update. I have not heard anything yet.

Marc Edwards and his team have been sampling homes for legionella. They have not found anything yet. They did sample the river and did find low levels of legionella.

The city has installed a flushing system to address concerns about chlorine residual. I confirmed yesterday that the EPA has assigned staff to Flint for another year. This is GREAT news. We did have another boil water advisory related to a pipe leak and maintenance.

We have had very challenging differences of opinion regarding the filter messaging. The feds have said that filtered water is good for everyone include vulnerable populations. We know

not everyone is using a filter or using it correctly and not everyone is using a replacement cartridge. We want everyone to be cautious and make sure they are using the filters correctly

first. We got them to agree to call in Barbara Reynolds, CDC's risk communicator. This has kept me very busy.

No 2016 Legionnaires' disease cases. Just a reminder, our physician guidance requires testing of every pneumonia case for Legionnaires' disease. There was a newspaper article

about this earlier in the week. For all urine antigen negative tests, the patient respiratory samples go to the state lab for culture. Let me know if you have any questions.

ASHRAE 188 outreach is going well. NSF is offering a training next week. Both Marc Edwards' team and the Wayne State team have offered technical assistance and testing for the building facilities managers.

It has been really busy. I will be taking a break next week. I am off until July 11th. I am available via email and my cell phone number is 810-624-4742 if you need me. Joan, I will contact you as soon as I hear from Oscar.

Suzanne

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