
From: Wurfel, Brad (DEQ)
Sent: Wednesday, January 28, 2015 3:12 PM
To: Prysby, Mike (DEQ)
Subject: RE: Flint issue DEQ points. Please check me for message accuracy?

Thanks. You rock.
b

From: Prysby, Mike (DEQ)
Sent: Wednesday, January 28, 2015 3:09 PM
To: Wurfel, Brad (DEQ)
Subject: Re: Flint issue DEQ points. Please check me for message accuracy?

Brad
Printed it out....will read and let u know ASAP

Sent from my iPhone

On Jan 28, 2015, at 3:06 PM, "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov> wrote:

Terry, all good and thanks for working these up. Been rebriefed by our staff, so let me throw in some things that are pertinent from that point.

Following the formal approval of Flint into the KWA, DWSD sent Flint a letter saying their contract was thereby terminated (at some certain date). According to our folks, Genesee County has been using DWSD water without a contract for years. But Flint took the letter to imply a water cutoff, and promptly turned to DEQ with a proposal to use the Flint River (their historic backup system).

This proposed shift put the city in the business of water production, where they historically had been in the business of water transmission. DEQ approved the use of the river as a source, believing that with the proper conditions it could be managed. Several municipalities around the state use surface water supplies (rivers): Blissfield near Monroe, Manistique, and Alma to name a few.

The city constructed the facility and DEQ approved it April / May 2014.

There were some initial hiccups. Last summer, there were a couple of 'boil water' notices issued. One for a water test that showed e. coli, one for a break in the water main.

The challenge to using the Flint River as a source is that the condition of the water is variable and changes with season and weather. It has substantially more organic matter than deep lake sources like Lake Huron. This organic matter is mobilized by high water events, and warm weather also can account for more organic material in the water.

The treatment of the organic matter is done with chlorine. One might conclude that the perennial answer is just to use more chlorine to achieve water safety. However, at some point on the continuum, the chlorine and organic matter create TTHM – total trihalomethanes – as a byproduct. When the standard for those is exceeded over several consecutive quarters of testing, the operator of the system is required by law to issue public notice and submit an approved plan for addressing the situation.

You'll note that this regulatory approach means TTHM testing is done quarterly. That means people who use the system are exposed to TTHM for several months before the public notice is required. It's because TTHM is a chronic health threat. Over the long term (measured in decades), continued exposure can contribute to some known health problems. Put in context, the EPA (who established the standard and the rule) estimates this rule prevents an estimated 280 bladder cancer cases each year ... out of more than 330 million people who use public water supplies around the country.

It's not nothing. State and federal law requires quarterly testing for TTHM and that the public be informed of it when three quarters' worth of consecutive testing shows elevated TTHM levels, and they must develop a plan to address it. But it's not like an eminent threat to public health like e. Coli or even coliform bacteria, which require immediate public notification and response and are part of daily / hourly testing of public water supplies.

It's clear the nature of the threat was communicated poorly. It's also clear that folks in Flint are concerned about other aspects of their water – taste, smell and color being among the top complaints.

The Safe Drinking Water Act requires public water supplies be tested for more than 90 toxins and pathogens. The act, and the program here in Michigan, work to ensure that water is safe to drink. The act does not cover aesthetic values of water. Here are some factors affecting the aesthetics of water in Flint.

1. It's the Flint River. The water supplied by DWSD historically came from Lake Huron. It's softer. With hard water, you get a different flavor and feel. It's why General Motors suspended use of Flint Water

— it was rusting their parts. Also, there's the 'organics' factor (discussed previously).

2. The system is old. Flint has more than 500 miles of water pipes. More than half of those pipe miles are more than 75 years old. Much of it is cast iron. Hard water hits cast iron and exacerbates the rusty factor, which creates that brown water that angry residents were holding up in jugs for the media cameras last week. Valve failure has also been a key challenge. The system has an estimated 7,500+ valves. When they stick open or stick shut, it affects the hydrology of the system. Water can stagnate in pipes. The city has a backlog of valves that need to be addressed. They've done half a dozen or so since November.
3. Flint is old. Many of the homes served by the system are old. Residents who are getting brown water may have aged, cast iron pipes in their service connection to the city lines. The DEQ has been encouraging people with water coloration concerns to contact the city and see whether it is the service line or the City's line causing the issue. Again, discoloration is not an indicator of water quality or water safety, but we recognize that nobody likes it.

In summary, the City of Flint has tremendous need to address its water delivery system. We are not aware that they have any Capital Improvement account in place to set aside maintenance funds, much less line replacement project monies that will require hundreds of millions. The City was approved for a Revolving Fund loan in 2008 or 2009. As a Distressed Community, they qualified for flexible terms and 2 percent increase. After they were notified they were approved for the loan, they declined it. Previous SRF loans from the state to Flint bear an outstanding balance of \$20.7 million today.

The DEQ continues working with the city to address the TTHM issue. They can take interim steps — from scrubbing the insides of transmission lines to carefully monitoring the hydrological challenges in their system — to address customers' aesthetic concerns. Their TTHM numbers already are showing dramatic improvement; the November testing showed only one of seven sample points exceeding the standard. The key now is that the standard is an average of three quarters' worth of results. It will be some time before they are officially "not in violation." However, depending on weather in 2015, it's not unforeseeable that we will be having this conversation again by next Christmas.

The key to the conversation is that TTHM is not a top health concern. That's key because residents need to understand TTHM in context, and it is key because it appears the mayor has seized on the public panic (sparked, frankly, by their poor communication of the violation notice) to ask the state for loan forgiveness and more money for their infrastructure improvement.

Another key thing to remember is that once the city connects to the new KWA system in 2016, this issue will fade in the rearview.

Until then, our top messages:

1. The DEQ Drinking Water program works with communities around the state to ensure that municipalities provide customers with clean, safe drinking water.
2. Municipal water supplies are tested rigorously and regularly for more than 90 toxins and pathogens.
3. Flint's exceedance of the TTHM standard should reassure residents that the testing program is effective.
4. TTHM is not an immediate health threat. It is a chronic concern, one that can be problematic over the course of many years. The public was notified because the law requires the city to make public notification, so that everyone can make informed decisions. This is particularly true for people with infants or those with compromised immune systems.
5. The DEQ is working with the City to address the situation. Recent tests show the TTHM numbers dropping rapidly. The department will continue working with the city in the months ahead, and residents should feel confident that their water is safe to drink unless the DEQ or City notifies them otherwise.
6. The discoloration and odor issues some Flint residents are experiencing are separate issues from the TTHM issue. TTHM is odorless, colorless and measured in parts per billion.
7. Flint water customers who have questions or concerns about their water should first contact the city to get answers and help. They also can contact the Michigan DEQ at ***** (web or phone address?)

From: Stanton, Terry A. (Treasury)
Sent: Tuesday, January 27, 2015 5:52 PM
To: Wurfel, Brad (DEQ); Wurfel, Sara (GOV); Murray, David (GOV)
Cc: Brown, Jessica (GOV); Stanton, Terry A. (Treasury); Sampson, Jeremy (TREASURY)
Subject: Flint issue
Importance: High

All,

Please see the attached TPs. I have also attached a couple pdfs noted in the TPs. They include the Treasurer's conditional approval of the eventual move to KWA and the EM's response to DWSD's "last, best offer."

Additionally, during my most recent interaction with Jerry Ambrose, he indicated that the water issue is critically important and that he and staff are working on it every day. They have posted a host of information for residents on the City's website (<http://cityofflint.com/?p=6251>). They have extended the deadline for the Water Quality Consultant RFP to this Thursday, to ensure interested and qualified firms can submit comprehensive proposals and assist the city.

I have also attached the earlier talking points I had shared with Dave.

Let me know if you need anything else in the meantime...or before we speak again...

Terry