
From: Krisztian, George (DEQ)
Sent: Tuesday, October 13, 2015 2:49 PM
To: Sygo, Jim (DEQ)
Subject: FW: Documents provided to Legislature
Attachments: Freep 101115 Flint.pdf; Flint Water FY 2016 Supplemental Budget Request.docx; Flint Drinking Water Events Timeline.docx; Flint Backgrounder.docx; FlintWater_ActionPlan_100115.pdf

FYI

George L. Krisztian
Flint Action Plan Coordinator
Laboratory Director
Michigan Department of Environmental Quality
Desk ph (517) 284-6719
Cell ph PPI

From: Feuerstein, Heather (DEQ)
Sent: Tuesday, October 13, 2015 2:40 PM
To: Thelen, Mary Beth (DEQ); Shaler, Karen (DEQ); Krisztian, George (DEQ)
Subject: Documents provided to Legislature

Here are the documents Dan provided to the Legislature today.

Heather Feuerstein
Management Assistant to
Maggie Pallone, Deputy Director and
Brad Wurfel, Communications Director
Department of Environmental Quality
517.284.6715

Chemical testing could have predicted Flint's water crisis

By John Wisely and By Robin Erb, Detroit Free Press 7:14 a.m. EDT October 11, 2015



(Photo: Ryan Garza, Detroit Free Press)

Chemical tests could have predicted the corrosion in the pipes that is now being blamed for endangering the health of thousands of vulnerable Flint residents by elevating lead levels in their water supply, experts say.

As the city scrambles to reconnect to the Detroit water system, the absence of such testing on the Flint River water is one of many missed opportunities that might have lessened or avoided the crisis, they say.

"Any competent person should have seen this water will eat up iron and eat up lead," Marc Edwards, a Virginia Tech professor and national expert on pipe corrosion, told the Free Press. Edwards said his own research shows that Flint River water, without additional controls, corrodes the lead inside pipes at 19 times the rate of water piped from Detroit.



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[Why are lead levels in children higher in 2 Flint ZIP codes?](#)

<http://www.freep.com/story/news/local/michigan/2015/10/10/lead-danger-basics/73683934/>

Among red flags that popped up over the last 18 months:

- General Motors announced in October 2014 that it was pulling its engine plant off Flint water after workers there began noticing rust spots on newly machined parts. The city approved letting GM switch to water from Flint Township, but didn't change its own water treatment procedures.
- The University of Michigan-Flint alerted city officials that it found elevated lead levels in its water in January, prompting the school to shut off some drinking fountains and add water filters to others.
- Testing in the fall of 2014 found E. coli in the city's water system, prompting "boil water" notices. The city's procedures for killing the E. coli produced chemical by-products known as trihalomethanes, which can cause cancer with long-term exposure. The city had to adopt additional measures to reduce them.

"Common sense tells you that the Flint River is not your first choice of drinking water," said Shawn McElmurry, who teaches civil and environmental engineering at Wayne State University and has followed Flint closely.



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[Q & A on Flint's water troubles](#)

<http://www.freep.com/story/news/local/michigan/2015/10/10/flint-water-qa/73693500/>

Experts say the testing could have been done before the switch from the Detroit system. But officials from the Michigan Department of Environmental Quality note that that kind of testing isn't required under federal drinking-water rules and has never been done in Michigan. What's more, they said, the Flint River water, treated in the city's plant, was already approved as a backup supply in case of interrupted service from Detroit.

Other experts said the testing is more nuanced, part art and part science. Still, they acknowledge that by examining things such as the acidity of water and other factors, engineers could have estimated how much corrosion to expect once water from the Flint River was pumped into homes and businesses across the city.

"Not every engineer in our field could do it, it's a pretty specialized area," said David Cornwell, a Virginia-based engineering consultant and a technical adviser to the National Drinking Water Advisory Council, a group of experts that works with the Environmental Protection Agency on drinking water issues.

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[Flint doctor makes state see light about lead in water](#)