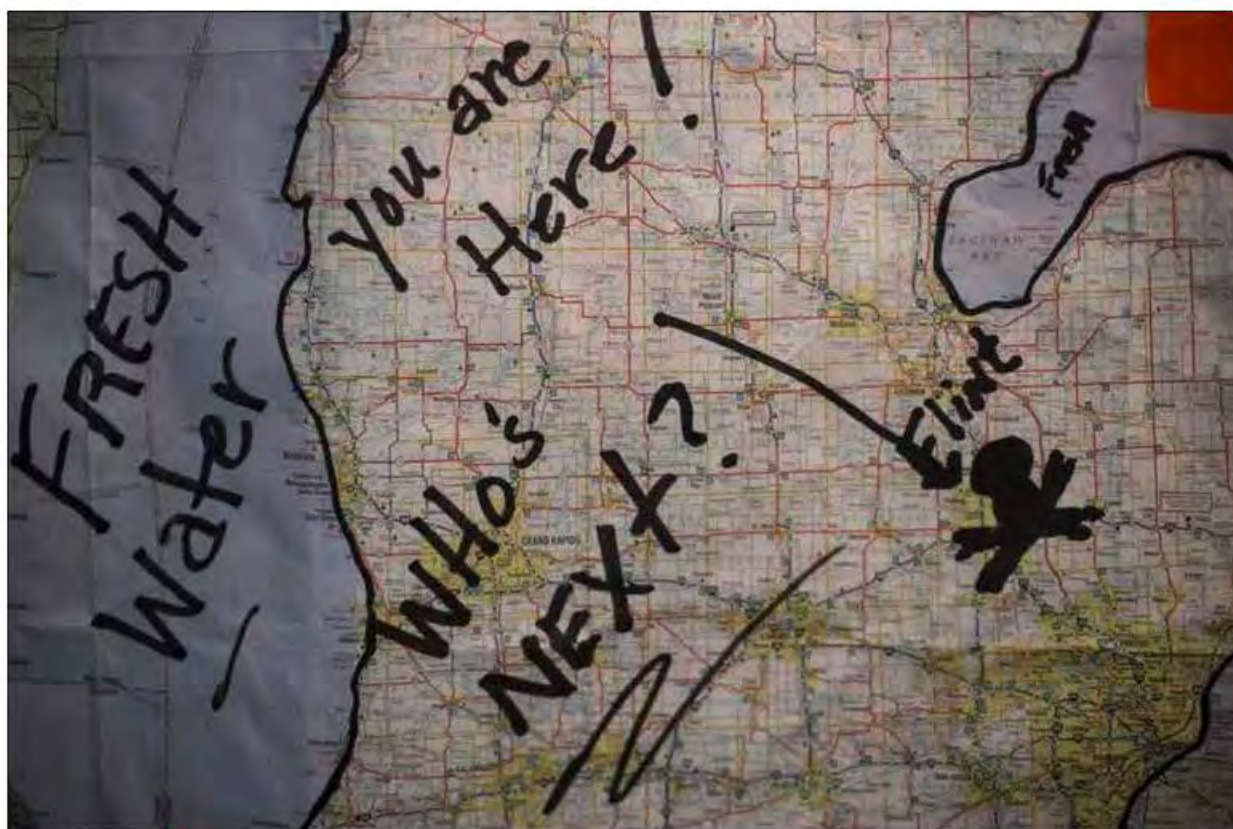






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Groups collect 26,000 signatures to end use of Flint River for water

A map previously used during protests against Flint's water quality hangs in the home of area resident Tony Palladeno Jr., 53, on Monday, May 18, 2015 in Flint. Palladeno has been regularly active at protests as well as City Council meetings. Brittany Greeson | MLive.com

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FLINT, MI -- Flint drinking water is "very corrosive" and "causing lead contamination in homes," researchers from Virginia Tech University reported online Wednesday, Sept. 2. "On a scientific basis, Flint River water leaches more lead from plumbing than does Detroit water," the report concludes. "This is creating a public health threat in some Flint homes that have lead pipe or lead solder."

The Virginia Tech report comes as students there, overseen by Professor Marc Edwards, are in the final days of testing water collected from 300 sample kits distributed to Flint residents.

On Monday, Aug. 31, the researchers reported 42 percent of 120 initial samples from Flint had lead levels that were more than 5 parts per billion, "which suggests a serious lead-in-water problem, according to our experience and criteria."

Virginia Tech was initially contacted by a Flint resident who had concerns about lead in [Flint water](#). It has been working with citizen groups in Flint such as Water You Fighting For.

Twenty percent of the first samples also exceeded the U.S. Environmental Protection Agency lead action limit of 15 ppb, the report said.

The EPA requires water systems like Flint's to collect tap samples from sites that are more likely to have

plumbing materials containing lead.

If more than 10 percent of samples exceed 15 ppb, then water systems are required to take action, including steps to optimize corrosion control treatment.

Lead is a toxic metal that was used for many years in products found in and around homes, according to EPA.

"Even at low levels, lead may cause a range of health effects, including behavioral problems and learning disabilities," EPA's website says. "Children 6 years old and under are most at risk because this is when the brain is developing."

The Virginia Tech report on Flint River water comes two days after representatives of three organizations delivered more than 26,000 online [petition signatures to Mayor Dayne Walling](#), demanding the city end its use of the Flint River and [reconnect the city to the Detroit water system](#).

The petition language says high lead levels are one reason the city should no longer use the river as a drinking water source.

Walling and Department of Public Works Director Howard Croft issued statements in response to questions about lead in Flint water Wednesday after Croft declined to discuss the issue in a news conference Tuesday. Flint spokesman Jason Lorenz said the two would not comment further Wednesday.

"The city of Flint is currently in compliance with the safety mandates of the Michigan Department of Environmental Quality and continues to work with them to stay in compliance with all safety and quality standards," Croft's statement said. "We have also been in constant contact with Virginia Tech, sharing information as it becomes available."

Walling, who has supported Flint's continued use of the Flint River as a drinking water source, said, "Lead can be a concern in communities with older public and private infrastructure.

"The city of Flint has offered free and independent testing to residents since spring, and I encourage people to use this service if they have questions," Walling's statement said.

Edwards, a professor of civil and environmental engineering, said the elevated lead levels he has seen in Flint tap water are tied to a corrosive water source that contains about eight times more chloride than Detroit water does.

"Chloride is generally considered to be very corrosive to iron. For instance, chloride present in road salts applied in the winter causes iron in cars and bridges to rust," the Virginia Tech team's website says.

"This could be a huge public health problem. ... The Flint water just ate the pipe up," Edwards said of the testing he has overseen so far.

In the testing, researchers took copper pipe pieces joined with lead solder inside them, according to the report, which says lead solder is probably present in plumbing systems of many Flint homes built before 1986.

Lead solder-copper pipe test pieces were placed in containers filled with water from Detroit and Flint in the experiment, according to the report.

"If it were me, I would not be using (Flint River water) for cooking or drinking unless I had it tested for lead," said Edwards, who previously mounted a six-year campaign that succeeded in forcing the U.S. Centers for Disease Control and Prevention to admit it had misled the public about the risk of lead in the Washington, D.C., area's drinking water, according to The Washington Post.

"Bottled or filtered water (is what I would use for) children under 6 years old or if I was pregnant," he said. Brad Wurfel, communications director for the state Department of Environmental Quality, said the preliminary water testing results from Virginia Tech don't jibe with two separate rounds of testing during the past year by the city.

That testing indicated "Flint drinking water meets state and federal safe drinking water standards," Wurfel said.

Wurfel said lead levels detected in testing are not the result of water containing lead when it leaves Flint's

treatment plant. But he said the state "has requested Flint optimize its water treatment to further limit exposure to lead from plumbing in homes."

The concerns about lead are the latest challenge for the Flint water system since the city started using the Flint River to replace Lake Huron water sold by the city of Detroit in April 2014.

Since the switch, the city has been plagued by issues such as water main breaks and boil water advisories because of bacteria and has been in violation of the Safe Drinking Water Act because of high levels of total trihalomethanes (TTHM), a byproduct of chlorinating river water.

The Rev. Allen Overton, who hand-delivered petitions to Walling on Monday, asking that city officials reconnect the Flint water system to Detroit, said Wednesday that the Virginia Tech experiment is more evidence Flint is not using the best quality of water available.

"We have a major health issue here, (and) they are not being honest with the citizens of Flint," Overton said. City Council President Josh Freeman said the city has been willing to provide customers with free water testing and has taken action — such as installing a new \$1.6 million filtration system — to address problems such as TTHM.

Councilman Eric Mays said, as more water testing is done, it becomes clearer that Flint should be negotiating with Detroit for a new, short-term water contract as work continues on the Karegnondi Water Authority pipeline.

The pipeline, a partnership between the city and Genesee County, is expected to bring untreated Lake Huron water to Flint at some point in 2016.

"They are trying to make the water safe by trial and error," said Mays, who called Flint's water situation "a disgrace."