Flint, Michigan residents fight lead poisoning of water supply

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After the city of Flint, Michigan started drawing its water supply from the Flint River last year, LeeAnne Walters' young child became sick and was diagnosed with lead poisoning. She became concerned with the health threat posed to all area children from household tap water.

In March, the city did two separate tests of the water in the Walters home showing lead levels significantly higher than the threshold set by the Environment Protection Agency (EPA). She then contacted the EPA in June. Thirty water samples were taken from her home and sent to scientists at Virginia Tech (VT) for analysis.

The EPA "action level" for lead in water is 15 parts per billion (ppb). Even the city's initial samples showed significantly higher levels—104 ppb and 397 ppb. The samples sent to Virginia Tech, however, showed levels of up to 13,200 ppb—twice the amount that the EPA classifies as "hazardous waste."

Walters told the WSWS, "My son has blood poisoning from exposure to lead. He has anemia. We know he is going to lose IQ points and lost a ton of weight. He's four years old and he is having a number of problems that we are dealing with now."

The health dangers of lead poisoning are now widely known. The World Health Organization reports, "Lead is a cumulative toxicant that affects multiple body systems … Young children are particularly vulnerable to the toxic effects of lead and can suffer profound and permanent adverse health effects, particularly affecting the development of the brain and nervous system."

The head of Virginia Tech's Water Resources Engineering Program is Dr. Marc Edwards, one of the most highly respected experts on water system toxicity in the US. Edwards was instrumental in exposing the catastrophic 2001 lead-in-water problem of Washington, DC. He made the connection with the corrosive chemistry that caused lead to leach into the water from the piping system.

Edwards said that the levels of lead from Walters' sample eclipsed that of the worst DC homes: "When I saw those numbers I was shocked. I have never in my 25-year career seen such outrageously high levels going into another home in the United States. This was literally hazardous-waste levels."

That was the beginning of what the VT team, headed by Edwards, called the Flint Water Study. After finding the catastrophically high amounts of lead in Walters' samples, Professor Edwards oversaw a team of students and professionals to develop a broader sampling effort of Flint's water. To meet the goal of analyzing the tap water from 300 Flint homes, sampling kits with precise instructions were assembled and delivered by the team to Flint, over 500 miles from the VT campus.

Of the 300 kits distributed in late August, 277 were filled and returned for analysis by early September. Just in terms of the number of samples tested for lead, the VT team's test was 12 times as large as that of the city of Flint. Of those samples, the test showed 90 percent above 25 ppb—well above the 15 ppb danger level.

Edwards' team announced that the city of Flint has "A VERY SERIOUS LEAD IN WATER PROBLEM." The scientists warned residents not to trust previous statements by city officials, including one that baldly stated "anyone who is concerned about lead in the drinking water in Flint can relax."

A second trip was made to Flint on September 14-16 by the VT team. During a press conference, Edwards called the results of earlier testing done by city officials "smoke and mirrors," which showed much lower levels of lead in the water than the VT tests. He said that the city never tested in areas known to be subject to high lead levels and never re-tested homes that tested high last year. Nor did they inform residents of the problems they did find.

A town hall meeting was held September 15, at which Professor Edwards discussed the results of the VT sampling of residents' tap water. Some 200 residents attended.

Edwards strongly recommended that residents install certified filters in their homes or use bottled water. At highest risk of lead poisoning are infants using reconstituted formula. Even homes whose lead levels are below the EPA threshold, with 10 ppb, put infant children at risk of absorbing the heavy metal into their systems.

A detailed printout of the VT sampling project was distributed at the meeting. The report illustrated the quantitative superiority of the VT sampling study over the sampling the city did, which was the basis of the false and complacent downplaying of the toxicity of Flint drinking water.

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Because the conclusions of Virginia Tech starkly contrasted those of city officials, Edwards hammered at the superiority of his team's testing.

To that end, it was announced that in response to a proposal for a Rapid Response Research grant from the National Science Foundation based on the results of their testing, VT was awarded $50,000 on September 14. According to the NSF, RAPID grants are "used for proposals having a severe urgency … including quick-response research on natural or anthropogenic disasters and similar unanticipated events."

After the meeting, a WSWS reporter spoke to participants.

Professor Edwards summarized the VT work in Flint: "We believe the tests prove that the water has a high lead content that can lead to serious health problems unless citizens use filters. The overwhelming majority of the samples we tested had 25 ppb and the EPA-allowed level is 15 ppb. This is a serious concern and I think the reaction of the people here shows that. The problem is the city did not do a serious test of the water."

LeeAnne Walters, who had become active in efforts to get information to Flint citizens and get others involved, was asked if she was surprised at the overwhelming response to the VT sampling project. She replied, "No. We already had a list of over 180 people, so we just asked for more volunteers. We were not surprised at the amount of kits we got back. I think 277 is a pretty good number."

Resident Priscilla Weaver said, "I didn't get a filter but I need one. I have been drinking bottled water when I can afford it. When I drink my bottled water, I feel better. When I drink the other water my body gets sore and painful. So I'm trying to stay away from drinking it."

The water crisis began in Flint when the long-term contract with Detroit Water and Sewerage Department (DWSD) was terminated on April 25, 2014. For years, Flint, some 60 miles north of Detroit, had its water delivered through a pipeline built by the DWSD from Lake Huron, the second largest of the Great Lakes, 65 miles to the east. Instead, the Flint River, a meandering 78-mile waterway flowing northward through Bay City and Saginaw into Saginaw Bay, became the new water source for the city.

The water that DWSD piped to the city for decades was treated for corrosivity. When the Flint officials switched sources, no mechanism was put in place to address the known corrosivity of Flint River water. It is this corrosive chemistry of the water that eats away at pipes, causing lead to leach into the water supply.

Residents noticed the degraded water quality immediately after the switch, complaining about the color, smell and taste. Several boil water advisories, resulting from the presence of coliform bacteria in the tap water, were issued starting in the summer months of last year. City officials rejected appeals to reconnect to Detroit water, claiming it would be financially unfeasible. The emergency manager at the time, Darnell Earley—now emergency manager of the Detroit Public Schools—asserted that it would cost the city $4 million to reconnect, plus $1 million a month above water usage costs.

Rich Fahoome, a retired city worker from Detroit who attended the town hall meeting, said, "I think this investigation exposes what people are really going through. It wasn't until Virginia Tech got involved that they took it seriously. People are living with rusty water, their hair is coming out and there was no response. The Virginia Tech investigation showed there was scientific proof that the water was full of lead.

"It exposes the emergency manager who made it out that it was people's opinions. The water is poisoning people and is toxic."

Fahoome expressed anger at government officials who did not "do what they are supposed to do to protect the public." Being a Detroit city retiree, Fahoome is familiar with the attacks made by the emergency manager there against the population of the city. In response to the WSWS reporter's assertion that the issue in Flint as well as Detroit is a class question as opposed to a racial one, he said, "Oh, it is class. We could see this with General Motors. One day after the city connected to the Flint River and their parts began rusting, they switched over to Detroit's water. Water, including shutoffs, is being used as a weapon."

The study of the toxicity of Flint's water by the Virginia Tech team expresses the concern of the scientific community over the degradation of the infrastructure and its effect on a significant portion of the population. The team is composed mainly of students, who have devoted their time and skills—making two visits to Flint, a round-trip of 1,100 miles by car—to ensure that residents get a proper scientific testing of the water coming into their homes.

This initial testing reveals that the actions of city and state officials in exposing hundreds of thousands of residents to toxic water are nothing short of criminal negligence. The reckless decision to disconnect from a system which provided relatively safe drinking water for decades was made by government officials who subordinate everything to the demands of big business.

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