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Contaminated Water in the U.S. Requires a National Public Health Mobilization

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Featured image: The Clean Up The Mines! team gathers at Riley Pass, South Dakota. Activist Charmaine White Face is in the foreground. (Photo: Ellen Davidson)

It's hard to miss the water contamination that residents in Flint, Michigan, are experiencing. Television footage shows family members holding bottles of yellow, orange or brown water. They could see and taste the change in their water quality shortly after Gov. Rick Snyder ordered the switch to supply water from the polluted Flint River, rather than Lake Huron, without adding anti-corrosives to prevent leaching from lead pipes in early 2014. Thanks to a few dedicated researchers from Virginia Tech, the elevated lead in Flint's water has been exposed.

Since national attention has turned to Flint, information from other cities is coming to light showing similar problems. Sebring, Ohio, is one city where residents have been warned not to drink the water because of elevated lead levels. And it was recently revealed that there are high levels of lead in water in Jackson, Mississippi, even though the results of the tests were available six months ago.

In Flint, the Environmental Protection Agency (EPA) did not inform the public about the high lead levels in the water when they learned about it, even though the state provided bottled water to public employees. The governor also reconnected General Motors to Lake Huron when they complained, just a few months after the transition in early 2014. The state knew, but continued to allow toxic water – which qualified as "hazardous waste" by EPA standards – for Flint residents without telling them.

Not talked about, perhaps because it is harder to see, is a national water contamination crisis that has been going on for decades. It is invisible and tasteless and the mainstream media won't cover it. This contamination is caused by the United States' secret Fukushima, radioactive and other heavy metals leaking from the more than 15,000 abandoned uranium mines, as well as other sources related to energy extraction throughout the United States.

Measuring radiation levels at an elementary school in Ludlow, South Dakota, April 2014. (Photo: Klee Benally)

We need a national public health mobilization to assess all drinking water sources in a transparent way and a plan to protect the health of residents and the future of our water supply. Water should be tested for radioactivity, as well as for heavy metals such as lead. In addition, the toxic byproducts of our dirty energy system are another of many compelling

reasons why we need to transition rapidly to a cleaner, sustainable green energy economy.

The Biggest Nuclear Accident You've Never Heard About

Most people in the United States know about the accident at the Three Mile Island nuclear power plant in March 1979. Although the official reports stated that an "insignificant" amount of radiation was released (this understatement has since been refuted), it is called "America's worst nuclear accident." Very few people know about the actual worst nuclear accident in the United States, which happened three months later in Church Rock, New Mexico. Perhaps this is because it mostly impacted people of the Navajo (Diné) Nation.

On July 16, 1979, the wall of a tailings pond for a uranium mill broke open and released 93 million gallons of radioactive waste into the Arroyo Pipeline, a tributary to the Puerco River. The waste traveled 80 miles down the Puerco River into Arizona. Not only is it amazing that this spill was not reported in the media, but it is also remarkable that the governor of New Mexico refused to issue a state of emergency. It took days for people who live along the Puerco River to be told about the accident, and though they were warned not to use the water for themselves or their livestock, they were not given access to sufficient clean water.

To this day, people who live downstream from the mill drink water that is polluted by uranium and other radioactive and heavy metals. Tommy Rock, cofounder of Diné No Nukes and a doctoral student at Northern Arizona University, has been testing the water that people around Church Rock, New Mexico, drink. He is finding high levels of uranium in some of the wells – even wells that are regulated and supposed to be tested routinely.

Tommy Rock, of Diné No Nukes, meets with US Department of Agriculture staff in January 2016. (Photo: Klee Benally)

One of the wells that showed levels of uranium at twice the maximum limit serves the Sanders Unified School District in northern Arizona, which has a thousand students. The community did not know about the high uranium content until Rock informed them.

"State and federal regulators knew about the contamination for years, and our community is concerned about the long-term chronic exposure to uranium because we have been consuming this contaminated water without being notified," said Sanders resident Tonya Baloo, a member of the Diné people.Now Rock is working with the Sanders community to find clean water.

There are roughly 1,000 abandoned uranium mines in and around the Navajo Nation, and very few of them have been cleaned up. None of them have been taken care of adequately. Klee Benally, who lives in Arizona and coordinates the Clean Up The Mines! campaign, calls it "toxic landscaping." Benally adds that the Gold King Mine spill, which polluted the 215-mile segment of the San Juan River that flows through the Navajo Nation last August, further compels the urgent need to clean up abandoned mines before they destroy more rivers with toxic waste.

Uranium is the radioactive metal that is used to power nuclear plants and to make nuclear weapons. When it is mined, 85 percent of the radioactivity is left behind in the waste rock. That waste and exposed ore continue to emit radiation for hundreds of thousands of years. As the uranium breaks down to become lead in its final form, it also releases radon gas,

which causes lung cancer. Exposure to uranium and other radioactive metals by drinking contaminated water, breathing contaminated dust or eating food produced in contaminated areas causes cancer, birth defects, kidney disease and autoimmune diseases. Children and the elderly are most affected. These mines are located in the breadbasket of the United States, which provides food to the country and many parts of the world.

When the Clean Up The Mines! campaign was launched nearly two years ago, we toured abandoned uranium mines in South Dakota with Klee Benally and Charmaine White Face of Defenders of the Black Hills. Many of the abandoned mines are open pits. One that we visited was very close to an elementary school in Ludlow, South Dakota. We measured high levels of radiation – over 150 counts per minute in the playground area.

White Face has been working for years to raise awareness of the radioactive contamination in the Great Sioux Nation, which includes North and South Dakota, Wyoming, Montana and parts of Nebraska. She has asked for studies by the Centers for Disease Control and Prevention, but has been denied because she was told there aren't enough people in the area. However, she is certain that people are being impacted. Communities close to the mines suffer high cancer and miscarriage rates.

Like Tommy Rock, White Face has also been testing drinking water and is finding high levels of uranium as well as thorium, a radioactive metal not regulated by the EPA. The composition of the uranium shows that it is coming from the abandoned mines rather than being naturally occurring. Despite the contamination, communities continue to drink the water because they have no choice. This has been going on for decades.

Klee Benally chants in front of the Environmental Protection Agency in January 2016. (Photo: DC Indymedia)

Recently, White Face, Rock and Benally traveled to Washington, DC, with other Indigenous people from the Southwest and Northern Great Plains to sound the alarm about radioactive pollution. They call themselves the "miner's canary" because they are trying to alert the public about the impacts of this national problem. In addition to the 15,000 abandoned uranium mines, there are other sources of radioactive pollution that are not being monitored.

The largest coal mine in the United States, the Black Thunder Mine in Wyoming, provides 40 percent of the nation's coal. Its uranium-laced coal is shipped both to the East and the West, where it is burned in power plants and turned into radioactive coal ash. Fracking is another concern, because the wastewater from fracking wells in the Bakken oil and other shales bring radioactive metals up from deep underground. This wastewater is held in open ponds, is sometimes discharged into waterways and is sprayed on roads during ice and snowstorms.

A National Problem That Needs a National Solution

Charmaine White Face at Red Shirt Village press conference. (Photo: Jill Stein)

The solution to the water contamination crisis requires an urgent public health response.

Water must be tested regularly for contaminants, including radioactivity; the public must be notified immediately when there are concerns; and clean drinking water must be provided when public water is not potable, no matter the size of the affected population. Sources of contamination must be cleaned up.

This may sound like a lot to require, but consider the flip side. Governor Snyder in Michigan changed the water source for Flint in order to save money. However, the result of that decision will be much more expensive than doing the right thing from the start. The state has already authorized $28 million to address the problem. Flint's mayor says it will cost up to $1.5 billion to replace the city's aging pipes. Expensive medical care will be required for the 6,000 to 12,000 children who have been exposed to lead poisoning. Altogether, it is estimated that this crisis will cost $10 billion.

One of the problems exposed by the Flint water crisis is the inadequacy of water testing and notification systems. Some municipalities meet their clean water requirements by conducting tests that violate EPA guidelines. They only test areas that are known to be clean or flush out the pipes prior to testing. According to the Guardian, "A report published [in 2015], commissioned by the American Water Works Association, found that if the water was tested directly from lead pipes, up to 96 million Americans could be found to be drinking water with unsafe levels of lead."

Another problem is that utilities conduct their own testing without adequate oversight by local EPA regulators. It is a scenario that is seen all too often in the United States: close relationships between regulators and the entities they are supposed to regulate that lead to lax oversight.

An EPA task force issued recommendations in 2015 on lead and copper monitoring in water. Those recommendations have not yet been adopted. That needs to be expedited. And there needs to be a task force that will test water for radioactivity and issue rules to protect the public from radioactive pollution in water.

Tommy Rock reports that the standard for radioactive pollution in water is higher than what was originally recommended because utilities didn't want to have more stringent requirements, and they are pushing to raise the maximum allowable levels for radioactive pollutants to be higher. This must be prevented; as Physicians for Social Responsibility reports, "There is no safe level of radionuclide exposure, whether from food, water or other sources. Period."

Steps must also be taken to stop the leaking of uranium and other radioactive metals into water, and that means cleaning up the thousands of abandoned uranium mines. Legislation is being drafted that would require a single high standard of clean up for the mines. You can learn more about that bill and how to support it at CleanUpTheMines.org.

Access to Water Is a Public Good

Warning at Riley Pass mine. (Photo: Jill Stein)

Clean water is a necessity. People cannot survive without access to water. There are many threats to our water system beyond contamination, such as the climate crisis, overuse and privatization. Water is quickly becoming our most precious resource, one that needs to be

managed in a holistic way so that there is enough water to meet everyone's basic needs.

As physicians, we are concerned about the future of our water supply. The Flint water crisis should provoke a public debate at the national level about the best ways to protect clean water, including what type of water infrastructure is required and how water is owned and managed.

With the reality of the climate crisis upon us, corporations view water as a commodity that will increase in value. In 2013, almost 70 percent of water systems in the United States were privately owned. A report by Food & Water Watch shows that private water companies charge higher prices and cut corners, such as using poor construction materials and not hiring sufficient staff. Privatization of water must be prevented and reversed because corporations do not treat water as a public good, but as a profit center for their investors.

The invisible crisis of radioactive metals in our water raises the question of the impacts of fossil fuel and nuclear energy extraction on our water quality and availability. The extractive energy industry is one that consumes tremendous amounts of water and pollutes it with chemicals and radioactive metals. This means that protecting our fragile water future also means transitioning rapidly to a clean and green carbon-free and nuclear-free energy economy.

We need a national plan to manage this precious necessity, clean water. That includes an integrated approach to preserve and protect clean water in a way that involves coordinated but decentralized decision-making, transparency and participation by local communities. We will need to conserve wetlands, manage agricultural use, reduce water demand and reuse water. We can no longer take clean water for granted. These crises are a wake-up call to create a 21st century water policy that treats water as a public good, not a commodity for corporate profit.

This article was first published by Truthout

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