

The Ongoing Water Crisis in New York

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Hoosick Falls, N.Y., has spent most of this year relying on alternative water sources after elevated levels of a chemical known as PFOA were detected in its water wells. Other municipalities in New York and other states have since found elevated levels of PFOA and similar chemicals. The result is a water crisis expanding across New York and other states.

Use in Products

PFOA and PFOS are the largest and most widespread types of fluorinated organic chemicals known as perfluoroalkyl substances. They are used in the manufacture of non-stick coatings,^[1] and can be found in numerous products, including stain-resistant carpeting, furniture, clothing, firefighting foam, and food packaging. Because of their widespread use, scientists have found these chemicals in the blood of nearly everyone ever tested, and are present in remote areas, including the arctic, and have been found in polar bear livers.^[2] Elevated levels like in Hoosick Falls generally occur where water has been contaminated from a manufacturing plant or a facility where firefighting foam is used, like airports.^[3]

Ingestion of high levels of PFOA and PFOS is linked to pancreatic, liver, and testicular cancers, thyroid issues, and other health problems. PFOA has a half-life in humans of two to nine years and over 92 years in water. The chemicals "bioaccumulate" in organisms, greatly increasing concentration well beyond levels in water. Once released, both substances resist degradation, accumulate in water and soil, and persist for significant periods of time.^[4] Their manufacture and use in the US has been largely phased out beginning in 2002.^[5]

Hoosick Falls

In August 2014, a Hoosick Falls resident began questioning the quality of the village's drinking water.^[6] The following year, tests revealed that the water supply was contaminated with potentially dangerous levels of PFOA. Government officials determined that the contamination was from the Saint-Gobain Performance Plastics factory which manufactures Teflon products.^[7] Residents were not advised against using the water until late 2015, and it took another few months to install temporary water filtration systems.^[8] In March, Governor Andrew Cuomo proclaimed that "the PFOA is out of the water."^[9]

Although Hoosick Falls residents are regaining access to clean water, the consequences of their prolonged exposure may prove significant. Recent blood tests have shown elevated levels of PFOA, with the highest levels in children.^[10]

The U.S. Environmental Protection Agency had advised that PFOA levels in drinking water should not exceed 400 parts per trillion (ppt).^[11] June 2015 tests registered 600 ppt, with 18,000 ppt in groundwater at the Saint-Gobain plant.^[12] In May, EPA adopted a lifetime health advisory for PFOA and PFOS under its Safe Drinking Water Act (SDWA) authority of just 70 ppt (0.07 parts per billion), far below the Hoosick levels.^[13] Although EPA's health advisory is non-regulatory and not enforceable, it reflects EPA's assessment of the best science, and identifies the concentrations in drinking water "at or below which adverse health effects are not anticipated to occur over a lifetime of exposure."^[14]

New York's Response

Much of the criticism regarding the response dealt with the hesitancy of the governor's office and the state Department of Health (DOH) to acknowledge the severity of the situation. Critics claim that as late as November 2015, DOH was still reluctant to inform the public about the contamination, despite the EPA's strong suggestion that they do so.^[15] After significant public pressure, DOH advised citizens to avoid drinking the water. Despite the criticism, the Cuomo administration insists that its response has been "aggressive."^[16]

Other Communities

Since the first reports about the contamination in Hoosick Falls, nearby communities have also discovered elevated levels in their water. The first was in Petersburg, only 11 miles from Hoosick. In February, Petersburg reported that recent tests showed PFOA levels of 93.3 ppt, which was under the EPA recommended level of 400 ppt at that time. Tests were ordered after the local Taconic Plastics facility reported that PFOA had leaked into water sources. Despite the relatively low concentration, town officials immediately began protective measures.^[17]

Tests in April revealed dangerously high levels of PFOS in Petersburg, with three wells with PFOS concentrations greater than 400 ppt, which exceeded EPA's recommended level for PFOS at the time. Unlike the PFOA contamination, the source of the PFOS remains a mystery, as the Taconic Plastics plant insists that it has not used PFOS.^[18] Wells in nearby Bennington, Vt., also showed elevated PFOA, likely from the former Chemfab facility, which manufactured fabric coatings.

Tests in Newburgh, N.Y., also revealed PFOS. The source has yet to be officially determined, but may have come from firefighting foam at Stewart International Airport.^[19] Newburgh officials switched the town's water source from Lake Washington to the Catskill Aqueduct and Brown's Pond and implemented water conservation requirements.^[20] Against the Mayor's wishes, the City Manager declared a state of emergency on May 2, 2016, and shut down the city's water supply. This decision was reversed within 24 hours. Newburgh and the state Department of Environmental Conservation (DEC) continue to investigate the source of the contamination and treatment options.

Emergency Rule

The DEC recently proposed an emergency rule to add perfluorooctanoic acid, ammonium perfluorooctanoate, perfluorooctane sulfonic acid, and perfluorooctane sulfonate to the list of Hazardous Substances, while giving facilities time to use and dispose of firefighting foam. As an emergency action, the rule takes effect immediately, but will only become permanent if formally adopted. The DEC will accept comments through July 8, 2016, and is holding three public hearings regarding the rule on June 27, 28, and 30.^[21] Adding these substances to the statutory list allows the DEC to regulate their storage, require reporting of any releases, and effectuate cleanup in the event of a discharge.

Notwithstanding DEC's emergency listing and EPA's Health Advisory, PFOA and PFOS are not regulated under the SDWA. Every five years, EPA is required to select up to 30 unregulated substances to be monitored by larger public water systems in order to collect data on suspected contaminants for possible future regulation. PFOA and PFOS were required to be monitored under the third unregulated contaminant monitoring regulation (UCMR 3) in 2012, and data was collected between 2013 and 2015.^[22] New York City tested for PFOA and PFOS, but did not detect any in the City's water supply.^[23]

It is important to note that homes with individual drinking water wells are not "public drinking water systems" and are not regulated under the SDWA. The safety of individual wells is generally up to the owners and, depending on the state, the state, county, or municipality. Monitoring for pathogens or chemical contamination is generally less comprehensive in private wells, and would rarely, if ever, include chemicals like PFOA or PFOS.^[24]

Another relevant federal statute is the Toxic Substances Control Act (TSCA). On June 7, 2016, the Senate passed the Frank R. Lautenberg Chemical Safety for the 21st Century Act, which updates the 1976 TSCA.^[25] This bill would increase the EPA's authority to manage toxic

chemicals. For existing chemicals, the EPA would no longer need to show potential risk before testing. Tens of thousands of chemicals previously exempt from scrutiny would now be within EPA authority. Furthermore, the EPA would determine if new chemicals and new uses for chemicals meet safety standards before manufacturers can begin production. When regulating chemicals, EPA would no longer need to impose the “least burdensome requirements,” and could instead elect whatever requirements it believes are necessary. EPA could not consider cost when evaluating a chemical’s risk, but would consider it while setting standards. Finally, the bill would preempt state law in numerous instances, including when the EPA has decided to either restrict or not restrict a chemical.

On the Horizon

Although amending the Hazardous Materials list may help address the expanding crisis upstate, the DEC may need to pursue additional preventative measures. The current regulatory changes will hopefully prevent another significant PFOA/PFOS contamination event, but do not address other contaminants. Given the varied manufacture, use, and disposal of myriad industrial chemicals, it is difficult to determine the nature and source of the next threat.

Lead is one such potential crisis. In April, USA Today reported that elevated lead levels were present throughout the United States, including at schools and day-care centers.^[26] Lead is especially damaging to children, and can lead to severe developmental problems.^[27] Ithaca and Binghamton have instituted corrective measures after finding lead in drinking water.^[28] The Legislature responded by proposing a bill requiring public schools to periodically test water for lead. In the event that schools discover contamination, they would be required to provide an alternative source of water and notify parents in writing.^[29] The Legislature passed the bill on June 17, and it is currently awaiting the governor’s signature.

Such lead contamination is, of course, reminiscent of the crisis in Flint, Mich., which left over 100,000 people without safe water. Dangerous lead levels were first discovered there in 2015, when researchers looked into the rusty appearance of tap water following the city’s decision to begin using the corrosive Flint River as a supply source in order to reduce costs, without treating the water properly.^[30] The corrosive water leached lead from existing plumbing. The situation was exacerbated by widespread denial and avoidance by local and state governments. Flint has since returned to using Lake Huron as a water source, and has begun to replace lead pipes throughout the city.^[31] However, it will be months before the government officially recommends that residents return to drinking tap water, and likely far longer before public trust is restored.

It is doubtful that New York state will face a catastrophe on par with Flint, but even smaller instances of contamination could have serious consequences for New York towns and cities. The water contamination continues to drive away residents from Flint, a city that was struggling to maintain its population long before this crisis. Lead contamination in New York would likely have a similar effect, especially on vulnerable upstate communities.

Conclusion

PFOA and PFOS pollution upstate has raised significant concerns about the overall safety of the state’s water systems and the efficacy of the nation’s industrial chemical regulation in general. The DEC’s recent regulatory amendment is a needed step toward preventing contamination, but is narrow in scope. In order to prevent future water crises, the state will need to institute more significant preventive regulations and respond more quickly to research and local reports of contamination. The way industrial chemicals are studied and regulated also must be reconsidered. Extended periods of delay will only increase the damage caused by contaminants, which could have significant economic and health repercussions for affected communities in years to come.

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Endnotes

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[14] 81 Fed. Reg. at 33250.

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[16] *Id.* See also March Press Release.

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[22] Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR 3) for Public Water Systems, 77 Fed. Reg. 26071 (May 2, 2012),

[23] NEW YORK CITY 2015 DRINKING WATER SUPPLY AND QUALITY REPORT, TABLE 2, available at <http://www.nyc.gov/html/dep/pdf/wsstate15.pdf>.

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