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THE REGISTER CITIZEN

Opinion: Emerging contaminants in water: What may be ahead

James J. Roberts

April 4, 2022

In this June 7, 2018 photo, PFAS foam gathers at the the Van Etten Creek dam in Oscoda Township, Mich., near Wurtsmith Air Force Base.

Associated Press

It is only a matter of time before water utilities in Connecticut are required to upgrade systems to remove what are being termed emerging contaminants. Now is the time for more utilities to prepare — and take advantage of federal funding.

Emerging contaminants, as a general matter, have dominated the landscape of drinking water regulatory compliance for the last several years. Per- and polyfluoroalkyl substances, or PFAS, have become a heavy focus of water systems large and small.

These contaminants have major implications for the health of communities across the country/state and should be top of mind for all water suppliers, especially considering the new federal infrastructure funding which includes significant amounts for the treatment of these contaminants.

Complicating the issue, individual states have begun enacting varying regulatory limits, which typically have been far more stringent than federal guidelines, for some or all the same compounds.

In Connecticut, potential policies are being considered in conjunction with Gov. Ned Lamont's PFAS taskforce, but no state limits have thus far been set. To be prepared for new regulations and the funding now available to address them, water suppliers and purveyors should be informed of the challenges others have faced — and ways to mitigate them.

Per- and polyfluoroalkyl substances are a group of manmade chemicals that are linked to adverse health effects. Widespread detection in drinking water has caused the United States Environmental Protection Agency to examine whether more stringent regulations should be enacted. Monitoring these developments throughout many states in the Northeast has shown me that the solution is not "one size fits all," although there are lessons to be learned in each case.

Some Connecticut municipalities, such as the town of Manchester, have taken proactive steps in assessing their vulnerability to the potential impact of PFAS. New York and New Jersey are among several states that have enacted local regulations regarding PFAS. When New Jersey set PFAS maximum contaminant limits in the first quarter of 2021, water suppliers were tasked with bringing their water supply into compliance. Atlantic City Municipal Utility Authority, like many other suppliers, was challenged by these new regulations. Atlantic City has two sources for its water supply: surface and groundwater. The wells established in this municipality are along a lake bordering the Atlantic City International Airport. Testing of several wells revealed levels which required emergency action to achieve compliance.

Striving to meet the established compliance schedule, an H2M team leveraged previous experience in treating chemicals in this family as well as prior relationships with manufacturer partners. Success required contractors and equipment to come together at the right time, ensuring all pieces were in place for the rapid deployment.

PFAS, of course, are only one example of contaminants that pose a threat to drinking water. Another threat is 1,4-dioxane. This is one of the more challenging contaminants to remove from water, as conventional filtration is generally ineffective. It has been successfully addressed on Long Island, which had the most concentrated levels in its groundwater supply wells in the United States. With accelerated pilot testing, followed by rapid deployment, drinking water suppliers on Long Island were able to comply with new regulations and protect the public's health, much like what was done in Atlantic City with PFAS.

The successful development and implementation of rapid deployment for emerging contaminants for numerous water suppliers in New York and New Jersey evolved from extensive water quality experience coupled with carefully applied, integrated modular design schemes. This allows the project approach to be adjusted to fit specific project needs and can be applied to any unique water quality in geographies across the nation.

With this approach, knowledge of challenges that may arise, and a significant amount of federal funding, there is no reason to hesitate in addressing these contaminants; regulations will come. Proactive planning is the only way to be ready when they do.

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