

Water

EPA Set to Propose Drinking Water Standard for PFAS Chemicals

WEFTEC conference included focus on water equity, resilient infrastructure

By Pam McFarland



Photo courtesy of Water Environment Federation

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The U.S. Environmental Protection Agency plans to propose, by the end of the year, a primary drinking water standard for two types of “forever” chemicals that seem to be found in everything, everywhere, including human tissue—agency officials said Oct. 10 at the Water Environment Federation (WEF) annual conference.

The standard would set enforceable limits for PFOA and PFOS, the two most used and studied of the broad category of per- and polyfluoroalkyl substances, collectively known as PFAS. The standard would also require monitoring of public water supplies as part of EPA's overall strategy for addressing the prevalence of PFAS in drinking water sources, wastewater and biosolids.

Yu-Ting Guilaran, deputy director of EPA's office of groundwater and drinking water, said the agency hopes to finalize the standard sometime in 2023.

Additionally, EPA plans to significantly expand monitoring for PFAS in drinking water systems between 2023 and 2025, including for the first time small water utilities that previously were exempt. "We're looking forward to initiating that effort and getting more information on PFAS in drinking water," Guilaran said.

Matt Klasen, manager of EPA's PFAS Council, comprised of senior career officials across the U.S., noted that the agency's Sept. 6 proposal to designate PFOA and PFOS as hazardous substances under the federal Superfund law would be a "significant step in improving information about PFAS releases and getting us the tools for holding those responsible for PFAS contamination accountable."

EPA is currently accepting comment on the proposed rule.

The topic of PFAS was of primary interest and the focus of numerous sessions at the conference, held Oct. 8 to 12 in New Orleans. Many firms and speakers emphasized not just the removal of PFAS from water supplies, wastewater and biosolids, but also identifying scalable methods to destroy it, or increasing sampling to reduce PFAS contamination at the source.

Nick Giannetti, state pretreatment program coordinator for the Vermont Dept. of Environmental Conservation, outlined a program designed to reduce PFAS levels before they reach wastewater treatment plants through sampling techniques at potential sites of pollution and just outside wastewater treatment facilities.

In the program, state officials work with industrial facilities, manufacturers or businesses where PFAS levels were higher.

"Eliminating or preventing pollution at the source, is reducing the amount of pollution to control, treat, and dispose of ... and less pollution posed to the environment and public health," Giannetti said. He added that the model developed in Vermont "is really well suited for those smaller- to medium-size POTWs (publicly owned treatment works)."

Several research studies are underway to evaluate different technologies to destroy PFAS. One project, a partnership between WEF and a multi-disciplinary team led by Brown and Caldwell, will evaluate the effectiveness of using extremely high temperatures in a process called pyrolysis followed by thermal oxidation to destroy PFAS to enable beneficial reuse of biosolids.

Resilience and Social Justice

Conference panels and exhibitors also focused on resilience. A new study by engineering firm GHD found that failing to adequately prepare for storms, droughts and floods through designing and building more resilient infrastructure could result in a total loss of \$3.7 trillion to the U.S. GDP between 2022 and 2050, and upwards of \$5.6 trillion across the globe.

Jonathan Pressdee, GHD's U.S. water market lead, told ENR that being reactive to problems as they arise will be less effective over the long haul than taking a more proactive, strategic approach. "When you take a more holistic view, the failure to have resilient, hardened infrastructure impacts broader swaths of the community and the economy" such as manufacturing, banking, insurance and energy utilities, he said.

Teams at Carollo Engineers have helped about 30 U.S. drinking water utilities develop risk assessment and emergency response plans required under the 2018 American Water Infrastructure Act. These plans evaluate risks associated with everything from hurricanes and other natural hazards to pathogens and cyberterrorism. "There's a growing interest [among municipalities and utilities] in resilience plans and the benefits of considering the sustainability and resilience of your infrastructure," Shawn Corrigan, a Carollo risk and resilience principal, told ENR.

Some panels focused on ensuring that projects are designed with equity in mind. Karyn Riley, Arcadis vice president of water equity and social impact, a newly created position at the firm, said that although some cities, counties, and even a handful of states have incorporated social equity mandates into their engineering and building programs, "consultants have to have a mindset shift."

Social justice initiatives that are a key component of the Infrastructure Investment and Jobs Act, and consequently, equity issues are going to be a significant consideration that needs to be incorporated early on in the design process, Riley said.

"This is a shift, a moment, and I think we're going to see everybody in the sector come together and really collaborate on this because it's so important, not only for our business lines, but for our communities."

KEYWORDS: [PFAS](#) [resiliency](#) [Water Environment Federation](#)

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