

WHAT EPA'S INTERIM PFAS STANDARDS MEAN FOR WATER SUPPLIERS

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On June 15, the U.S. Environmental Protection Agency announced its decision to establish significantly lower interim health advisory levels, or HALs, for four per- and polyfluoroalkyl substances — a family of chemicals referred to generically as PFAS.

This is only the latest development in the EPA's implementation of its PFAS strategic road map, which aims to comprehensively address the presence of PFAS compounds in the environment, starting with drinking water supplies.

In addition to the lower interim HALs suggested for four PFAS compounds, the EPA is inviting states and territories to apply for a share of \$1 billion in funding — the first of \$5 billion in Bipartisan Infrastructure Law grant funding — to address PFAS in drinking water, specifically in small or disadvantaged communities.

The EPA also reaffirmed its commitment to elevate some PFAS compounds, most likely the same four, to the status of "hazardous substances" under the Comprehensive Environmental Response, Compensation and Liability Act, also known as the Superfund law.

All three of these announcements have significance to municipal water and wastewater treatment plant operators.

HISTORY OF FEDERAL PFAS REGULATION

PFAS emerged onto the national stage in May 2012, with the EPA's publication of its Safe Drinking Water Act Unregulated Contaminant Monitoring Rule No. 3, which compelled public water suppliers to begin sampling their public water supplies for a subset of PFAS compounds — including perfluorooctanoic acid, or PFOA, and perfluorooctane sulfonic acid, or PFOS — for the first time.

For Mark Ruffalo fans, this may not be news, but for the rest of America, it is a dramatic development for this emerging group of contaminants referred to colloquially as "forever chemicals."

Ruffalo was co-producer and lead actor in the 2019 movie "Dark Waters,"

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which dramatically chronicled the efforts of one small community and its counsel to bring to light the health and environmental effects associated with their exposure to this family of chemicals — which in that case were released in association with the manufacture of Teflon and related products at a facility in West Virginia.

PFAS compounds are a family of more than 100 chemicals that have been widely used in this country for over 40 years, with PFOA and PFOS being the two most studied. As described on the EPA's website and the notice posted in the Federal Register, many PFAS chemicals break down very slowly, and can build up in people, animals and the environment over time after exposure through water, soil, air, food and other materials in homes or workplaces.

Under the Safe Drinking Water Act, the EPA may publish health advisories for contaminants that are not subject to any national primary drinking water regulation, although whether it can publish interim standards is subject to debate.

In its June 15 pronouncement, the EPA reaffirmed that it is working diligently to establish by this fall formal drinking water standards — known as maximum contaminant levels, or MCLs — for certain PFAS compounds.

At the same time, and due to its concern with emerging data, the EPA announced that in the interim, it was dramatically lowering certain HALs, and establishing new HALs for four PFAS compounds. In this action, the interim HALs for PFOA and PFOS — originally set at 70 parts per trillion combined — were lowered to 0.004 and 0.02 ppt, respectively.

These interim HALs will be in place until the EPA publishes its PFAS National Drinking Water Regulations, expected this fall. Surprisingly, the EPA set a number of these HALs below the levels at which they can be detected by most commercial laboratories using the EPA's approved analytical methodology — another source of concern within the regulated community.

Additionally, the EPA proposed interim HALs for the first time for hexafluoropropylene oxide dimer acid and its ammonium salt — together, referred to as GenX chemicals — and PFOS and its related compound potassium perfluorobutane sulfonate — together, referred to as PFBS.

Some GenX chemicals and PFBS are considered replacements for PFOA and PFOS, which were voluntarily phased out of production in the U.S. over the past decade, and banned by the European Union in 2019. The interim HALs for GenX chemicals and PFBS are proposed at 10 ppt and 2,000 ppt, respectively.

HOW STATES ARE REGULATING PFAS

Until the EPA issues final national drinking water regulations, there are

currently no federally enforceable PFAS standards for drinking water. In the absence of an enforceable federal standard, many states have forged ahead on their own with standards for PFAS compounds in drinking water.

As of this writing, 20 states have enacted PFAS drinking water regulations at various levels. One of the lowest allowable concentrations is 5.1 ppt for PFOA in California. Six states are in the process of establishing regulations for PFAS.

These proposals underscore that state-driven PFAS drinking water regulations are developing quickly throughout the country — and the new interim HALs just released by the EPA may influence state rulemakings.

SIGNIFICANCE TO PUBLIC WATER AND SEWER AUTHORITIES

HALs are not legally binding standards, but rather, advisories. Interim HALs are one step removed from that, and reflect a tentative recommendation, pending further scientific review.

There is some question whether the EPA has the legal authority to propose HALs on an interim basis, given that the interim HALs are released prior to complete scientific testing, and suit has been filed challenging the interim rule and the science behind it.

In practice, many public water suppliers look to the HALs as treatment goals, not as binding standards, and it appears that many state regulators view them in the same manner.

Public water suppliers faced with PFAS detections above an established state benchmark have been setting treatment goals as "non-detect" for PFOA and PFOS, which, given the technological capabilities of most commercial laboratories using the EPA's approved analytical method, is around 4 ppt.

The EPA's interim HALs for PFOA and PFOS are set well below the current state of laboratory technology, which means that even a non-detect under current EPA-approved methods cannot demonstrate that an interim HAL has been achieved.

The June 15 announcement does not establish standards for PFAS concentrations in food products, clothing, textiles, or other commercial or consumer products where they are being found. But by lowering the standard, the EPA is sending a clear message to the regulated community that PFAS compounds are a pernicious contaminant requiring closer regulation — and that has important implications.

One important element of the EPA announcement is the availability of millions of dollars in funding for water suppliers who need to control PFAS threats. These funds could be used to address, among other things, PFAS contamination detectable in wastewater treatment plant solids — often dried, pressed and

sold or disposed as "biosolids."

Increasingly, PFAS impacts are being found on farms and game lands where biosolids have been land-applied — in some cases, over many decades. Problems have been documented from Maine to Illinois, and into the upper Midwest.

While the last thing the wastewater treatment plant industry needs are more hurdles to the cost-effective management of biosolids, the discovery of these forever chemicals in treatment plant solids represents a significant threat.

And, as if the discovery of PFAS in biosolids were not enough, the EPA has promised to elevate some PFAS compounds to the status of hazardous substances under the federal Superfund statute.

When that happens, public and private wastewater treatment plant operators will face new cost recovery threats for land application and disposal sites — particularly if the land application of biosolids on rural farms has resulted in contaminated groundwater and surface streams.

If land application options are lost, municipal authorities could find themselves with few options for the management of a never-ending supply of biosolids. Landfilling or incinerating biosolids is expensive, and landfill capacity is becoming more limited for biosolids.

In a number of states, landfill operators have imposed daily caps on their acceptance of biosolids, and prices in some regions are topping \$40/ton. The bottom line is that the discovery of PFAS in biosolids is a significant threat to the industry, calling for insight, planning and funding.

Treatment plant operators should be undertaking root cause analyses to identify sources of PFAS in their systems, and working to develop programs for their control or removal. Immediate efforts also should be made to pursue available federal and state funding to implement PFAS management programs for public water supply and wastewater treatment system management.