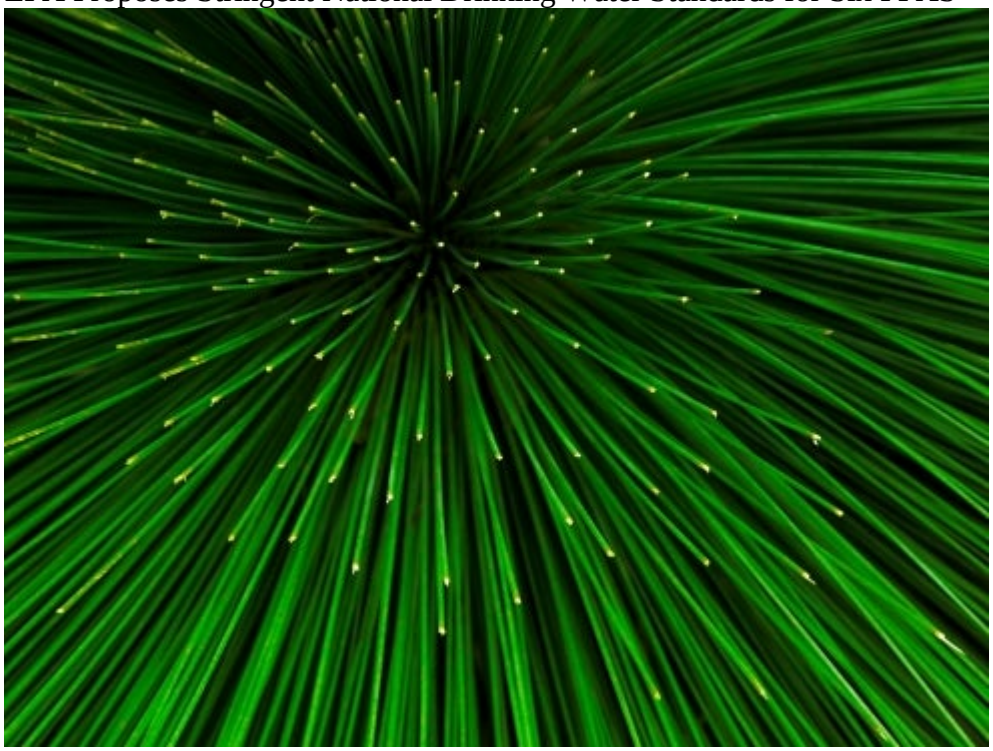
Updates
March 16, 2023
EPA Proposes Stringent National Drinking Water Standards for Six PFAS



For the first time and after much anticipation, the U.S. Environmental Protection Agency (EPA) proposed National Primary Drinking Water Regulations for key "forever chemicals." The proposed rule would establish near-zero limits for six per- and polyfluoroalkyl substances (PFAS) in a move the EPA characterizes as "a major step to protect public health" by "leveraging the latest science."[1] Several legal, policy, and scientific factors will determine the fate of the EPA's proposed standards and shape their impact on key stakeholders.

This Update summarizes the proposed PFAS drinking water standards, briefly discusses potential implications, and outlines key next steps in the EPA's process to adopt a final rule.

Overview of First-Ever National Drinking Water Standards for PFAS

The proposed rule marks the first national legally enforceable drinking water standards proposed for PFAS. Specifically, it would establish legally enforceable Maximum Contaminant Levels (MCLs) and health-based, nonenforceable Maximum Contaminant Level Goals (MCLGs) for six PFAS in drinking water.[2]

The proposed rule would regulate two common PFAS—perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS)—as individual contaminants subject to numeric MCLs and MCLGs. The EPA based the proposed MCLG of zero upon its determination that "there is no dose below which either chemical is considered safe," and its proposed MCL reflects its conclusion that four parts per trillion (4 ppt) represents the lowest feasible and technically achievable standard available.[3]

For the remaining four PFAS subject to the rule, the EPA has proposed a "hazard index" formula to limit any mixture of the covered PFAS that would result in an unreasonable health risk. According to the proposed rule, the EPA elected to use this approach instead of individual numeric MCLs because these PFAS compounds are commonly found together, and exposure is assumed to act in a cumulative manner.[4]

The proposed MCLs and MCLGs are set forth in the following table:

Compound	Proposed MCLG	Proposed MCL (enforceable levels)
PFOA	Zero	4.0 ppt
PFOS	Zero	4.0 ppt
PFNA		
PFHxS	1.0 (unitless)	1.0 (unitless)
PFBS		
HFPO-DA (commonly referred to as GenX Chemicals)	Hazard Index	Hazard Index

The proposed rule also requires public water systems to monitor for PFAS concentrations and take steps to address any exceedances of the proposed standards. First, public water systems must monitor for the six covered PFAS at varying frequencies depending on previous results. Second, public water systems must notify consumers if monitoring detects exceedances of MCLs "as soon as practicable but not more than 30 days after the system learns of the violation."[5] Third, public water systems with PFAS exceedances must "take action" to provide acceptable drinking water within three years after promulgation. This can be accomplished through the installation of water treatment or "other options such as source remediation or connecting to an uncontaminated water system."[6]

Ongoing Implementation of EPA's PFAS Strategic Roadmap

The proposed rule adopting enforceable drinking water standards for PFAS represents the latest and most consequential step towards the Biden administration's implementation of policymaking around PFAS in the environment. We briefly review some of the previously implemented policies and rules below:

- **PFAS Strategic Roadmap** (October 2021). The EPA established overall federal policy reflecting an integrated approach to addressing PFAS pollution. The overall policy stresses the need for additional research, pollution prevention, and remediation. Five core principles underpin the roadmap, including (1) accounting for lifecycle effects of PFAS, (2) addressing upstream sources of PFAS, (3) holding polluters accountable, (4) ensuring science-based decision-making, and (5) prioritizing protection of disadvantaged communities.
- **Fifth Unregulated Contaminant Monitoring Rule** (December 2021). The EPA finalized a rule to expand PFAS testing nationwide by requiring monitoring for 29 PFAS in drinking water. Monitoring will occur from 2023 through 2025 at thousands of drinking water systems nationwide and will generate new data critical to assessing the prevalence and distribution of PFAS in U.S. public water systems.

- **Interim Updated Drinking Water Health Advisories** (June 2022). The EPA adopted nonenforceable health advisory levels (HALs) for PFOA, PFOS, PFBS, and GenX. Significantly, the EPA reduced the interim HALs for PFOA and PFOS, which it originally set in 2016 at 70 ppt combined, down to 0.004 and 0.02 ppt, The June 2022 interim HALs were notable because they reflected levels at which PFOA and PFOS cannot be detected by most laboratories using the EPA's standard methodology.[7]
- **Designation of PFOA and PFOS as Hazardous Substances** (September 2022). The EPA proposed to designate PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which would increase PFAS release reporting and enable EPA-led cleanup without an "imminent and substantial endangerment" finding. The EPA received public comments and is currently developing its final rule.

Legal, Policy, and Scientific Considerations for the Proposed Rule

Adoption of national primary drinking water standards for these six PFAS would have far-reaching effects. Regulated stakeholders will closely scrutinize the environmental, economic, and scientific bases of the rule. Some key legal, policy, and scientific factors that are likely to be weighed during and after adoption of final MCLs include the following:

- **Cost/Benefit Analysis.** The Safe Drinking Water Act (SDWA) requires the EPA to set primary drinking water standards as close to the MCLG as "feasible," taking account of best available treatment technologies and cost considerations.[8] The sufficiency of the EPA's consideration of the costs and benefits of its proposed rule could be subject to challenge.
- **Scientific Consensus.** Drinking water standards also must be based on best available peer-reviewed science.[9] The EPA's ability to set scientifically sound standards depends on the availability of health effects and occurrence data. While the EPA has studied PFAS meaningfully over the past several years, the sufficiency of the scientific basis for the proposed rule may still be subject to challenge.
- **Uniformity.** Many states have previously proposed or issued their own binding drinking water standards or guidance for the covered PFAS. A national primary drinking water standard would promote uniformity and regulatory certainty, although states that have previously adopted more lenient standards would need to conform to new federal minimum standards.
- **Cleanup Standards.** The EPA and state environmental regulators sometimes use MCLs as de facto cleanup standards at contaminated sites.[10] Parties responsible for cleanup at sites impacted by PFAS, including sites where regulatory closure previously has been granted subject to "reopener" clauses, could face increased costs as a result.
- **Discharge Standards.** Similarly, the EPA and states may use MCLs to inform discharge standards for industrial wastewater, stormwater discharges, and/or discharges of treatment residuals pursuant to permits issued under the Clean Water Act (CWA) and state water quality laws.
- **Disadvantaged Communities.** The degree to which the proposed rule would achieve federal policy to prioritize disadvantaged communities is also a significant factor. Disadvantaged communities may bear disproportionate health risks from PFAS pollution in drinking water supplies,[11] although smaller and rural water systems and their ratepayers could also bear an outsized cost burden to comply with the proposed rule.

Opportunities for Public Participation

Before promulgating a final rule, the EPA provides opportunities for affected stakeholders to participate in the rulemaking process, including through the following:

- The EPA will accept written public comments for 60 days after publication of the proposed rule in the *Federal Register* (Docket ID: EPA-HQ-OW-2022-0114), which is forthcoming. Comments on the information collection provisions submitted to the Office of Management and Budget (OMB) must be submitted within 30 days after *Federal Register*
- The EPA will be holding informational webinars on March 16, 2023 (General Overview) and March 29, 2023 (Technical Overview).
- The EPA will also be accepting oral comments during a public hearing on May 4, 2023, which has a registration deadline of April 28, 2023.
- The EPA anticipates finalizing this regulation by the end of 2023.

Endnotes

[1] U.S. Envt'l Prot. Agency, Biden-Harris Administration Proposes First-Ever National Standard to Protect Communities from PFAS in Drinking Water (Mar. 14, 2023).

[2] The proposed rule covers PFOA, PFOS, GenX, perfluorohexane sulfonic acid (PFHxS), perfluorononanoic acid (PFNA), and perfluorobutane sulfonic acid (PFBS). PFAS include thousands of human-made chemicals such as perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), and hexafluoropropylene oxide dimer acid and its ammonium salt (GenX). PFAS have non-stick and grease-, oil-, and water-resistant properties. Today, PFAS are virtually ubiquitous: PFAS have been detected in up to 99% of human blood samples taken during biomonitoring studies of the U.S. population. PFAS are also bioaccumulative and persistent, meaning they build up and remain in the food chain and the environment for decades or longer. *See* Proposed Rule, *infra*, at 20-21.

[3] U.S. Envt'l Prot. Agency, Pre-Publication Version of Proposed PFAS National Primary Drinking Water Regulation Rulemaking, 1, 6 (Mar. 14, 2023) (the "Proposed Rule").

[4] Proposed Rule at 6.

[5] Proposed Rule at 164.

[6] Proposed Rule at 164.

[7] *See* Proposed Rule at 106 ("EPA determined that 4.0 ppt is the lowest concentration that PFOA and PFOS can be reliably quantified within specific limits of precision and accuracy during routine laboratory operating conditions. EPA has historically called this level the 'practical quantitation level,' also known as a PQL.").

[8] SDWA §1412(b)(4)(B); 42 U.S.C. §300g-1(b)(4)(B); Congressional Research Service, Regulating Contaminants under the Safe Drinking Water Act (SDWA), 2, 13 (Jan. 5, 2022) ("CRS Report").

[9] SDWA §1412(b)(3); 42 U.S.C. §300g-1(b)(3); CRS Report at 11-12.

[10] *See, e.g.*, National Contingency Plan, 40 CFR 300.430(e)(2)(i)(B)-(C) (requiring attainment of MCLs where MCLGs have been set at zero and contaminated groundwater or surface water is designated as a current or potential source of drinking water).

[11] *See* Proposed Rule at 10.

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