NATIONAL GROUND WATER ASSOCIATION COMMENTS ON:

ENVIRONMENTAL PROTECTION AGENCY Proposed Rule:

PFAS National Primary Drinking Water Regulation Rulemaking

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Summary:

On March 29, 2021, EPA proposed a National Primary Drinking Water Regulation (NPDWR) and health-based Maximum Contaminant Level Goals (MCLG) for regulating specific Per- and Polyfluoroalkyl Substances (PFAS): perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) as contaminants with maximum contaminant levels and perfluorohexane sulfonic acid (PFHxS), hexafluoropropylene oxide dimer acid (HFPO-DA) and its ammonium salt (also known as a GenX chemicals), perfluorononanoic acid (PFNA), and perfluorobutane sulfonic acid (PFBS), and mixtures of these PFAS as contaminants with hazard indicies under Safe Drinking Water Act (SDWA). EPA proposed to set the health-based value, the maximum contaminant level goal (MCLG), for PFOA and PFOS at zero. Considering feasibility, including currently available analytical methods to measure and treat these chemicals in drinking water, EPA proposed individual MCLs of 4.0 nanograms per liter (ng/L) or parts per trillion (ppt) for PFOA and PFOS. EPA proposed to use a Hazard Index (HI) approach to protecting public health from mixtures of PFHxS, HFPO-DA and its ammonium salt, PFNA, and PFBS because of their known and additive toxic effects and occurrence and likely co-occurrence in drinking water. EPA proposed an HI of 1.0 as the MCLGs for these four PFAS and any mixture containing one or more of them because it represents a level at which no known or anticipated adverse effects on the health of persons are expected to occur and which allows for an adequate margin of safety. EPA has determined it is also feasible to set the MCLs for these four PFAS and for a mixture containing one or more of PFHxS, HFPO-DA and its ammonium salt, PFNA, PFBS as an HI of unitless 1.0.

Electronic Link: https://www.federalregister.gov/documents/2023/03/29/2023-05471/pfas-national-primary-drinking-water-regulation-rulemaking

National Ground Water Association Comments

Overarching Comments

Based on Environmental Protection Agency data, small public water systems are most significantly affected by PFAS compared to other system sizes. Additionally, small water systems may be least able to respond technically, financially and managerially to a complex rule requiring expensive treatment technology.[1] This circumstance is also applicable to privately-owned household water systems that may be located near small water systems. NGWA is very concerned that Guelfo and Adamson (2018) [2] examined PFAS results from the EPA's Unregulated Contaminant Monitoring Rule (UCMR) 3 program in detail and found that approximately 50 percent of samples with reportable levels of one or more PFAS detections contained at least two PFAS and 72 percent of detections occurred in groundwater. When detected, median total PFAS concentrations were higher in small public water systems (PWS) serving 10,000 or fewer persons (0.12 µg/L) than in large PWSs (0.053 µg/L). This PFAS level in small water systems is 30 times the proposed MCL of 4 ppt. This concern is highlighted by the fact that 76 percent (37,914) of all community water systems are primarily ground-supplied, and 96 percent of those groundwater-supplied systems are small water systems serving 10,000 or fewer people and have fewer resources to manage their water systems. Ninety-seven (97) percent (99,666) of nontransient and transient noncommunity water systems are groundwater-supplied. [3]

Specific Comments

Health Protective - If achievable, these maximum contaminant levels should be very protective of the public. Groundwater-supplied community water systems, typically serving small communities, are most impacted in incidence and in concentration for PFAS found previously.

[1] U.S. Environmental Protection Agency (USEPA). 2021. 18th Annual EPA Drinking Water Workshop: Small System Challenges and Solutions. Dr. Christopher Frey, EPA Deputy Assistant Administrator for Science Policy, message delivered to Session 1, Plenary, August 30, 2021. https://www.youtube.com/watch?v=ycVa5uG7izg (Accessed April 19, 2023).

[2] Guelfo, J.L. and D.T. Adamson. 2018. Evaluation of a national data set for insights into sources, composition, and concentrations of per- and polyfluoroalkyl substances (PFASs) in U.S. drinking water. Environmental Pollution vol. 236 (May), pp.505-513. Cited in U.S. Environmental Protection Agency, Regulatory Determination 4 Support Document; EPA 815-R-19-006, December 2019, p. 3-38.

[3] U.S. Environmental Protection Agency. 2023. Drinking Water Government Performance Reporting Act Tool. https://obipublic.epa.gov/analytics/saw.dll?PortalPages&PortalPath=/shared/SFDW/_portal/Public

Very small community water systems serving 500 or fewer people are 48% of all community water systems, 63% of all groundwater-supplied water systems, and 89% of all very small community water systems. Nearby private well owners may also be at risk. Small communities typically do not have the expertise and financial resources to manage their water systems sustainably for the delivery of safe drinking water.[4] These small water systems need attention to treatment capabilities designed for their circumstances, including decentralized treatment that is both protective and affordable.

Treatment technology - There are proven technologies to remove PFAS to below these limits, but designing, procuring, and constructing treatment takes time and money. EPA should direct research to support technologies that can be applied to small water systems and individual residences in the cases of applying alternative treatment technology. Are treatment technologies robust enough to maintain the level of performance to the MCL?

Sample Bias – NGWA is concerned that the potential for sample bias and cross contamination is amplified based on the very low (stringent) criteria for sample test results as well as the sensitivity at ng/L levels.

EPA should support an education and outreach effort to assure proper sampling techniques are followed. Consideration of strategic partnerships with approved water-related groups such as NGWA, will help facilitate the timeline and efficacy of the education.

EPA should create a management path of review for samples that fail the MCL but have previously met the standard. Follow up sampling should be considered before designating a water system as out of compliance.

NGWA has prepared "The Practical Guide for PFAS Sampling" to guide field sampling. This guide is published on the NGWA website at: https://my.ngwa.org/NC__Product?id=a18Ht00000ExtFaIAJ.

Compliance - The proposed rule is dynamic and potentially difficult to comply with, as different constituents may drive the risk from sampling event to sampling event. Furthermore, conditions may exist in which a water system is within standards for one sampling event only to be found above standards on the next, the difference being a small change in concentration. Process requirements of the regulation should provide for follow up sampling in such cases

[4] U.S. Environmental Protection Agency (USEPA). 2021. 18th Annual EPA Drinking Water Workshop: Small System Challenges and Solutions. Dr. Christopher Frey, EPA Deputy Assistant Administrator for Science Policy, message delivered to Session 1, Plenary, August 30, 2021. https://www.youtube.com/watch?v=ycVa5uG7izg (Accessed April 19, 2023).

before finding a water system out of compliance, particularly for small systems which may have to invest substantially in treatment technology.

Small System Exemptions to Achieve Compliance – EPA asked for comments on this topic. While small systems exemptions may be useful to limit investment until adequate treatment technology may be available, this approach seems counter to being health protective for the people affected.

1. POE and POU water treatment products, with tested efficacy to a third party NSF/ANSI standard, should be incorporated as approved methodology for small systems to meet compliance.

2. NSF/ANSI 53 as well as NSF/ANSI 58 are current standards that test efficacy to a 70 ng/L endpoint. Currently the ANSI process has incorporated changes to a 20 ng/L endpoint, but will need time to update the standards to meet any new MCL. There should be a grandfathering of such products until the standards are updated.

EPA should provide time in implementation for National Sanitation Foundation (NSF) and American National Standards Institute (ANSI) processes to catch up with regulatory health protection requirements. Third-party certified products protect the consumer.

Hazard Index (HI) · The "Mixture MCL" for PFNA, PFHxS, PFBS, and GenX makes technical sense, but may be confusing and esoteric to the public. Why would EPA not use an MCL consistent with the other contaminants? Use of the MCL is probably more easily understood by the public. Using the MCL for all contaminants clearly communicates whether a concentration is over or under the standard. NGWA recommends use of the MCL for all contaminants and not use of the Hazard Index.

The HI approach ends up eliminating a PFAS in the calculation of the HI if it is non-detect (assuming it is 0). How is analytical dilution accounted for? If the reporting limit (RL) for a sample is above the heath-based water concentration (HBWC) then it would be incorrect to assume that non-detects are not present above the HBWC. Replacing non-detects with 0 is a long-known concern in the public health/environmental field. There are methods to handle these censored data. It is against best practices defined by EPA itself in its Unified Guidance to replace non-detects with 0.[5]

The HI approach is an annual averaging approach. For example, if quarterly samples are collected then the HI for each quarter is calculated and then the 4 HIs are then averaged and if

[5] U.S. Environmental Protection Agency (USEPA). 2009. Statistical Analysis Of Groundwater Monitoring Data At RCRA Facilities; Unified Guidance. EPA 530/R-09-007. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P10055GQ.txt (Accessed April 7, 2023)

that average is below the HI no exceedance is found, even if 1 of the quarterly HIs is above 1.0. For EPA regulatory programs such as RCRA, exceedances of the MCL are determined based on the upper confidence limit (UCL) of the mean not the mean itself. The UCL approach accounts for observed variability.

Communication - Technical and risk communication to water supply customers will be critical. Since PFAS is widely reported in the media, clear, specific information that tells the public how to respond is important, rather than to report that it is found and is a potential problem. Clearly communicating when a problem is more likely is more useful.

In cases of small water systems and private well owners, the best relationships may be between water contractors and their customers rather than regulatory agencies and small and private system consumers. EPA should focus on what information water contractors could usefully communicate to their customers regarding PFAS and meeting health protective requirements. A significant education and outreach program to reach water consumers in meaningful ways should be implemented.

State regulation – The development of the proposed rule needs to consider how the MCLs relate to and affect the patchwork of state drinking water PFAS regulations that have emerged, particularly those that are less stringent.

Laboratory Availability/Capacity - Does adequate lab availability to test to the MCL exist (this may apply to other contaminants as well as PFAS)? Actions that EPA should consider to enable more laboratory capacity are:

1. Provide funding to support an aggressive buildout of nationwide laboratory capacity.

2. Create a forum from the scientific and laboratory communities as well as other impacted stakeholders to review and fast-track/streamline analytical methods and processes while maintaining quality.

3. Provide training for needed additional laboratory staff certification

4. Establish reciprocity of certification across states to utilize all potential capacity available

Small Water Systems and Private Wellowner Consideration – EPA should consider the implication of setting MCLs for these PFAS on the protectiveness of small water system consumers and private well owners which would choose decentralized point-of-entry/point-of-use treatment technologies. EPA should support research in decentralized PFAS treatment systems.

Comprehensive Approach to Controlling PFAS – As NGWA expressed with eight other water associations in our joint letter to the Administrator on June 3, 2020, a comprehensive approach

is needed to address PFAS affecting public health and the environment. The steps identified in that letter include:

- conducting the necessary technical and economic analyses to support proposed SDWA maximum contaminant levels for PFOA and PFOS,
- engaging experts to develop a public health risk assessment for PFAS beyond PFOA and PFOS to guide determining which PFAS or groups of PFAS should be targeted for future action,
- actively engaging water systems and state agencies as well as other key stakeholders in the practical implementation of PFAS risk management,
- accelerating research on water treatment and health effects to support future decision making and contaminant prioritization, and
- leveraging available regulatory tools in other statutes to gather occurrence and health risk assessment data and organize them to support research and decision making, using regulatory tools that include the Toxics Release Inventory, Sections 4 and 8 of the Toxic Substances Control Act, the Unregulated Contaminant Monitoring Rule, the Resource Conservation and Recovery Act, and other existing authorities to protect drinking water supplies.

NGWA appreciates this significant step addressing this approach and the EPA PFAS Strategic Roadmap.

Basis for the Interest of the National Ground Water Association (NGWA) in Setting MCLs for PFAS

NGWA, the largest trade association and professional society of groundwater professionals in the world, represents over 10,000 groundwater professionals within the United States and internationally. NGWA represents four key sectors: scientists and engineers in public and private sectors; water-well contractors who develop and maintain water-well infrastructure; the manufacturers who produce;and the suppliers who deliver the equipment needed to make groundwater development possible. NGWA's mission is to advocate for and support the responsible development, management, and use of groundwater.

Over 34 million people in the United States rely on private wells and over 91 million are served by groundwater from public community water systems.

NGWA views groundwater and the subsurface as natural infrastructure that should be sustainably managed for current and future use. The subsurface environment should be considered from an integrated resource perspective. The natural infrastructure of the

subsurface environment with proper management can provide fresh groundwater for drinking, industrial and manufacturing applications, food production, and ecosystem support.

A concise summary of the position of the National Ground Water Association on groundwater protection related to this proposed rule is:

- Control of potential and active sources of contamination should be a national objective, reducing the need for remediation of groundwater.

- Groundwater quality should be protected for existing or potential beneficial uses.

- NGWA published Groundwater and PFAS: State of Knowledge and Practice, a guidance document on per- and polyfluoroalkyl substances (PFAS) in 2017 (https://my.ngwa.org/NC__Product?id=a183800000kbKF9AAM) as a comprehensive report to identify the known science and knowledge related to PFAS, summarizing the fate, transport, remediation, and treatment of PFAS, as well as current technologies, methods, and field procedures.

- NGWA has additionally updated materials regarding PFAS on its resource webpage "Groundwater and PFAS" at https://www.ngwa.org/what-is-groundwater/groundwater-issues/Groundwater-and-PFAS.

NGWA appreciates the opportunity to comment on the proposed rule.

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