

May 30, 2023

Submitted via www.regulations.gov

Alexis Lan
Office of Ground Water and Drinking Water
Environmental Protection Agency
1200 Pennsylvania Avenue, N. W.
Washington, DC 20460

Submitted via www.regulations.gov

**Re: Docket ID No. EPA-HQ-OW-2022-0114, Per- and Polyfluoroalkyl Substances
National Primary Drinking Water Regulation**

The undersigned agricultural organizations appreciate the opportunity to submit these comments to the U.S. Environmental Protection Agency (EPA) in response to its proposed rule to set National Primary Drinking Water Regulations (NPDWR) for six PFAS chemicals¹, including perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). (March. 14, 2023).

Our organizations represent farm and ranch families working together to build a sustainable future of safe and abundant food, fiber and renewable fuel for our nation and the world. We support EPA's underlying goal of addressing widespread contamination of the environment caused by historic use of PFOA and PFOS. Unfortunately, EPA's proposed Maximum Contaminant Level (MCLs) of 4 ppt for PFOA and PFOS and the designation of a hazard index for PFNA, PFHxS, Gen X, and PFBS overlook potential widespread unintended consequences.

At the onset, it is worth emphasizing our shared concerns regarding the health impacts of PFAS exposure, even as research continues to examine claims of causation. This is personal for our membership, rural families that live near to or in the approximately 140,000 small communities in the US with drinking water systems.² There are many factors that must be considered when developing regulatory limits and these comments will outline the challenges that we foresee with setting the drinking water MCL for PFOA and PFOS at the very low level of 4ppt, which is out-of-step with limits recommended by international standard-setting bodies. We fear that the enormous costs, estimated to be at least \$5.2 billion **annually**, and implementation roadblocks outlined below will have a ripple effect throughout our economy, potentially hitting rural communities the hardest.

¹ "Perfluoroalkyl or polyfluoroalkyl substance" (PFAS) means a non-polymeric perfluoroalkyl or polyfluoroalkyl substance that contains at least 2 sequential fully fluorinated carbon atoms, excluding gases and volatile liquids, that is a hazardous substance (as defined in section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601))

² United States Environmental Protection Agency, Small Drinking Water Systems Research and Development, fact sheet, updated February 2020, https://www.epa.gov/sites/default/files/2020-02/documents/scienceinaction_small_systems_research_2020.pdf

EPA Has Underestimated the Challenges in Reaching These Levels

Farmers, ranchers and other agricultural producers support a national drinking water standard for PFOA and PFOS and other PFAS chemicals based on science and an evaluation of risk—to replace the current patchwork of state requirements. However, it is critical that EPA gets this right. The costs that the proposed rule will impose are significant, and likely underestimated. The proposed MCLs must be changed to ensure firm scientific backing and consideration of the potentially enormous financial burdens imposed, as the statute requires.

The U.S. Chamber of Commerce has done an extensive review of the proposed cost-benefit analysis that highlights many of our shared concerns. The costs associated with this rule have not been accurately calculated for a variety of reasons, which the U.S. Chamber of Commerce has expounded upon in more detail in their comments. They have identified the following areas of concern regarding the agency’s development of this rule:

- **Lack of occurrence data at the proposed MCL level.** EPA does not have a robust understanding of occurrence levels at the proposed MCL levels for PFOA and PFOS or the other four PFAS. This lack of occurrence data for a preliminary regulatory determination requires more thoughtful and thorough analysis.
- **The novel hazard index approach.** The hazard index approach for PFNA, PFHxS, Gen X, and PFBS has never been used in setting an MCL, and it presents both technical and legal questions about how it would be implemented.
- **There is limited understanding of risk at these levels.** EPA’s Reference Dose for PFNA, GenX, PFHxS, and PFBS chemicals is based entirely on laboratory animal studies, even though EPA itself advises, “Adequate human data are the most relevant for assessing risks to humans.” There is significant uncertainty regarding the health risks at the proposed MCL levels for all six PFAS. The World Health Organization’s recent study on potential guidelines for water quality, for example, proposed 100 ppt based on the most relevant public health data and seems to be consistent with known risk. EPA’s Science Advisory Board expressed these same sentiments and determined that EPA needs more transparency in how they assess studies, better information on the metrics of including specific studies or not, and they must include more human studies in their assessment.³
- **The Safe Drinking Water Act requires consideration of the costs and benefits.** The estimated annualized costs for a proposed MCL of 4 ppt for PFOA and PFOS are exorbitant. The significant costs and impacts and their connection to other elements of the PFAS Strategic Roadmap, such as the proposed hazardous substance designation under CERCLA, require further analysis and consideration.

3

https://sab.epa.gov/ords/sab/f?p=114:0:6179756424602:APPLICATION_PROCESS=REPORT_DOC:::REPORT_ID:1105

- **Failure to use non-metro median income data.** The cost-benefit analysis that the agency prepared relies solely on national median income which is not representative of the entire country. EPA fails to consider the non-metro median income, where this rule will have a disproportionate impact.
- **Infrastructure Investment and Jobs Act (IIJA) funding will be insufficient to cover the costs of compliance.** The investment needed to reach these low MCL levels moves well beyond the ability of communities to afford and beyond the potential funding available in the IIJA. Simply put, the likelihood of outspending the billions of dollars contained in the IIJA is significant because the compliance costs are so high.

There are a number of other issues associated with the proposed MCLs that deserve in-depth discussion, including the benefits identified by the agency, the health end points, and the possible conflict between other Administration policies. We hope that the EPA will consider all of these factors before finalizing this rule.

Rural Communities Will Be Disproportionately Impacted

Farmers and ranchers often serve as the backbone of rural communities throughout the country. Our members raise their families, support their neighbors, and bring jobs to these less populated and underdeveloped areas. The pristine farmland that is often situated away from bustling urban centers allows our members to produce the safest and highest quality food products in the world. However, rural communities have far fewer resources to address expensive federal regulatory requirements. Drinking water utilities in rural areas will undoubtedly experience more challenges in meeting the 4ppt standard outlined in this proposed rule. They will incur capital costs, annual operating and maintenance costs, life-cycle costs, and annualized costs. Simply put—it will be infeasible for many rural communities to meet the standards outlined in this proposed rule and the exorbitant costs will inevitably be handed down to the water users. Specifically, the costs associated with acquiring and maintaining technology, obtaining appropriate testing, and methods related to disposal and destruction of contaminated environmental media (i.e. water, soil, air) will weigh heavily on rural communities.

Technologies: In order to meet the 4ppt standard for PFOA and PFOS, rural water utilities will have to obtain and install new technologies. As outlined in the American Water Works Association’s (AWWA) recent *WITAF 56 Technical Memorandum: PFAS National Cost Model Report*, treatment strategies for PFAS in drinking water include both proven, commercially available technologies as well as emerging technologies. Commercially available technologies that have been demonstrated at full scale in the field to reduce concentrations of PFAS in drinking water are limited to the following:

- Granular activated carbon (GAC)
- Ion exchange (IX)
- Nanofiltration (NF) and reverse osmosis (RO)

Treatment considerations for the application of each of these technologies are described in the full report. While there are many variables that contribute to the specific costs associated with reaching the 4ppt standard, the report incorporates the most obvious operating costs into their cost models: media replacement, membrane replacement, power, maintenance, water disposal, chemical consumption, and labor. The report contains considerable explanation of their methodology and ultimately finds that the national cost for water systems to install treatment to remove PFOA and PFOS to levels required by this proposal will exceed **\$5.2 billion annually**. These costs alone cannot be ignored and the uncertainty with testing availability and disposal methods only exacerbate our concerns with this rule.

Specific to rural drinking water utilities, we are concerned about the availability of these technologies, especially since drinking water utilities will only have three years to obtain, install and get these systems up and running. We have already heard that supply chain issues are impacting technologies like granular activated carbon, and it will only be further squeezed as the 66,560 water systems in our country all work to meet the implementation deadline. Small, rural facilities will undoubtedly face more challenges in obtaining these technologies, as the priority will be placed on large, metropolitan systems.

Additionally, access to contractors needed to install these technologies has already been identified as a concern by organizations representing the rural water communities. The contracts with large water systems will inevitably be far more lucrative, which will place smaller systems at the bottom of the priority list. Facilities will also need to bring in more employees to oversee the operations, maintenance and treatment of the equipment. This will require specific training, and trainer shortages have already presented challenges. Staff shortages even for the existing work required to safely operate and maintain drinking water systems are widespread: AWWA conducted a survey in 2021 on staffing and supply chain needs and found that 40% of drinking water utilities of all sizes are struggling to fill positions at their facilities, and employee turnover has doubled. Smaller communities will once again lose out because they have less available budget to hire additional staff and fewer available candidates to serve those roles. These systems will still have to meet the three-year implementation deadline but with many more hurdles and fewer resources. The agency must reevaluate the length of the implementation period or move towards a tiered roll out. It would be logical to allow the larger utilities to move ahead first to prevent a bottleneck on technologies and financial resources.

Testing: The availability of testing is a significant concern for all drinking water utilities—both big and small. We are already experiencing a shortage of testing laboratories, and this will only be exacerbated once these national MCLs go into effect. Water utilities already required to comply with state issued drinking water standards are experiencing long delays in getting results back from laboratories. According to the AWWA, there are 66 laboratories that are available nationwide for PFAS testing. Currently, these labs test between 20,000-25,000 samples annually. The initial monitoring requirements of this rule will trigger testing requirements on up to 66,560 systems. It is estimated that over a three-year period, 280,000 (plus) samples will need to be tested to determine initial status, sampling for piloting and performance testing. There is simply no way that the current laboratory network is equipped to deal with this amount of testing.

All drinking water stakeholders agree that testing availability presents a significant hurdle, and EPA must develop a plan to make this rule workable. While there may be an opportunity for large facilities to create an in-house testing method, that is certainly outside the realm of possibility for small operations. Since the proposed MCLs for PFOA and PFOS are incredibly low, we also remain concerned about the risk of contamination during the testing process. Essentially any interference with a testing sample could lead to inaccurate results and costly compliance measures.

Disposal: EPA is obligated by statute to issue periodic (every four years) guidance on the destruction and disposal of PFAS compounds. EPA's initial guidance document submitted to Congress basically reported on the various technologies that have been used or that are under evaluation for use in the management of PFAS and PFAS-contaminated media. The lack of clear guidance and standards for the management, treatment, and destruction of PFAS compounds continues to present a significant challenge to the array of parties managing PFAS compounds and contaminated media. Much of this material is being stored in anticipation of EPA issuing more definitive guidance. In the PFAS Strategic Roadmap, EPA only committed to meeting its statutory deadline of December 2023. This proposed drinking water standard of 4 ppt will require drinking water providers to treat drinking water sources for PFOA and PFOS and thus create more of a need for the management of treatment residues.

In the PFAS Strategic Roadmap, EPA did not identify plans to address PFOA and PFOS under the Resource Conservation and Recovery Act (RCRA), which, among other things, would have required EPA to conduct a rulemaking to establish management, treatment, and disposal standards that would apply to all RCRA-regulated PFOA and PFOS waste anywhere in the United States.

The absence of regulatory requirements or at least clear guidance on management, treatment, disposal, and destruction guidelines hampers the ability of drinking water utilities to develop the management infrastructure needed to address PFOA and PFOS contamination. State regulators look to EPA for guidance on this topic for the purpose of reviewing and approving cleanup plans. Responsible parties lack places to send contaminated materials for appropriate management and disposal.

Appendix A. Modeled Cost Comparison Tables

Table A-1 National Cost Burden by System Size for 4 ppt PFOA, PFOS

4 ppt PFOA, PFOS MCL						
PWS Size Category	Population Range	Average CAPEX/PWS	Average O&M/PWS	Annualized PWS Cost	Estimated Number of Impacted PWSs	Annualized National Cost
1	<100	\$1,920,000	\$72,000	\$253,000	2167	\$548,251,000
2	101-500	\$3,400,000	\$60,000	\$381,000	2469	\$940,689,000
3	501-1,100	\$4,620,000	\$63,000	\$499,000	609	\$303,891,000
4	1,001-3,300	\$5,510,000	\$57,000	\$577,000	858	\$495,066,000
5	3,301-10,000	\$10,560,000	\$176,000	\$1,173,000	781	\$916,113,000
6	10,001-50,000	\$24,490,000	\$372,000	\$2,684,000	255	\$684,420,000
7	50,001-100,000	\$45,510,000	\$512,500	\$4,808,000	64	\$307,712,000
8	100,001-1,000,000	\$110,880,000	\$891,000	\$11,357,000	71	\$806,347,000
9	>1,000,000	\$507,500,000	\$3,045,000	\$50,949,000	4	\$203,796,000
	All Systems				7278	\$5,206,285,000

Given the costs and the challenges associated with obtaining the necessary technologies, availability of testing and the lack of disposal methods that we have already outlined, we recommend that the EPA consider extending the implementation period—particularly for small, rural water utilities. Simply put—these systems need more time and resources to ensure that they are in compliance with these new standards. At a minimum, the EPA should consider a tiered implementation timeline to alleviate the fallout from having every drinking water utility in the nation competing for technologies, testing and disposal.

Costs to rural households: As part of the AWWA analysis, the annual financial impacts to individual households from costs associated with the installation and operation of drinking water treatment facilities for PFAS were determined. The financial impacts to individual households will vary by specific PFAS levels, system size, and other factors. However, the trend that gives us greatest concern is the exorbitant impact this rule will place on small, rural communities. As illustrated in the graph below, meeting the 4ppt standard will be wildly more expensive for public water systems that service less populated areas. These financial burdens will be passed on to the water users—effectively becoming an added tax on drinking water for some of America’s most economically disadvantaged communities. The AWWA report estimates the annual costs of this proposal on communities with populations of less than 100 will be between \$10,000 and \$11,000 per household. Many families throughout the country are already paying higher prices for everything from housing to food—and now higher rates for water. The excessive cost of this rule may force these families to make hard decisions on which essential services they can afford.

Table 7-1 Annual Costs to Household for Removing PFAS from Drinking Water

PWS Size Category	Population Range	Average Service Population	Approximate Range of Costs per Household
1	<100	59	\$10,090 - \$11,150
2	101-500	245	\$4,045 - \$4,245
3	501-1,100	736	\$1,765 - \$1,910
4	1,001-3,300	1,939	\$765 - \$800
5	3,301-10,000	5,696	\$525 - \$545
6	10,001-50,000	20,613	\$335 - \$340
7	50,001-100,000	67,417	\$185 - \$195
8	100,001-1,000,000	204, 194	\$145 - \$160
9	>1,000,000	1,700,000	\$80 - \$105

Federal Funding Is Limited

While the EPA touts the various federal funding streams that are available for drinking water utilities to adapt to this rule, they fail to recognize the difficulties that small, rural communities face in obtaining these monies. At a Small Business Environmental Roundtable on May 11, 2023, EPA staff highlighted the following funding opportunities that were authorized through the IIJA:

- \$11.7 billion to the Drinking Water State Revolving Fund (SRF)
- \$4 billion in SRF for emerging contaminants
- \$5 billion to Water Infrastructure Improvements for the Nation (WIIN) Grants to address emerging contaminants

It is encouraging to see this level of investment in protecting our drinking water and addressing emerging contaminants, like PFAS chemicals. But, as previously mentioned, there is not enough money to go around to cover the costs of this rule for every water utility, and these resources are often devoted to projects that benefit large population areas. We have heard directly from rural water communities who have expressed the challenges of accessing these federal dollars. The agency needs to ensure that these areas are not forgotten but rather prioritized, as they will experience the greatest challenges in meeting this proposed standard.

The Research on PFAS Exposure Is Still Ongoing

As we previously stated, our society cannot dismiss the health concerns related to PFAS exposure and the research in this space must continue. However, even EPA cannot definitively assert that PFAS exposure is leading to these adverse health outcomes. According to EPA's website: Current scientific research suggests that exposure to high levels of certain PFAS **may** lead to adverse health outcomes. However, **research is still ongoing** to determine how different levels of exposure to different PFAS can lead to a variety of health effects. Research is also underway to better understand the health effects associated with low levels of exposure to PFAS over long periods of time, especially in children.

Additionally, the EPA states that the “health effects are **difficult to determine**.” Given the costs that drinking water utilities must expend, which will ultimately land on the backs of American families, we believe EPA needs to improve the transparency of their review of studies and update their assessments based on availability of human studies to ensure the limit they regulate is both in line with the best science on health impacts but also takes into consideration the feasibility of implementation.

It is also worth noting that the World Health Organization (WHO) has recommended a limit of 100 ppt, individually, of either PFOA or PFOS in drinking water and a total cap of 500 ppt for combinations of up to 30 PFAS. When formulating this limit, the WHO looked at the same basic data that EPA evaluated in crafting this proposed rule—but reached very different conclusions. These guidelines represent the position of the United Nations regarding PFAS in drinking water and are likely to be adopted by many countries around the world. Meanwhile, the EPA has rushed to release proposed MCLs that will be extremely challenging to meet.

Conclusion

We strongly encourage the EPA to reevaluate the proposed MCLs for these six PFAS chemicals to ensure that it is an achievable standard and isn't unnecessarily burdensome to families nationwide in the form of higher rates and entirely beyond reach – to implement or afford – for rural communities. The challenges that we have outlined in these comments regarding the feasibility of this rule mirror those of the thousands of small, rural drinking water utilities throughout the country. We hope that you will consider our concerns as you continue to work to make our drinking water safer, yet accessible for all American families.

American Farm Bureau Federation
American Soybean Association
American Horse Council
International Fresh Produce Association
National Association of State Departments of Agriculture
National Association of Wheat Growers
National Council of Farmer Cooperatives
National Milk Producers Federation
National Pork Producers Council

National Turkey Federation
U.S. Poultry & Egg Association
United Egg Producers