THE CITY OF
COLUMBUS
ANDREW J. GINTHER, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES

KRISTEN ATHA
Director

May 30, 2023

FILED VIA FEDERAL eRULEMAKING PORTAL
Assistant Administrator Radhika Fox
Office of Water
Office of Ground Water and Drinking Water
Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: Proposed Rule, PFAS National Primary Drinking Water Regulation
EPA-HQ-OW-2022-0114; 88 FR 18638 (March 29, 2023)

Dear Assistant Administrator Fox:

The City of Columbus, Department of Public Utilities ("CDPU") appreciates the opportunity to comment on EPA's proposed National Primary Drinking Water Regulation for PFOA, PFOS, and four other PFAS. CDPU operates drinking water and wastewater treatment plants serving over 220 square miles in the greater Columbus area. Our interest in PFAS stretches from the source water that feeds our drinking water plants to the effluent released from our wastewater plants, and everywhere in between. We are committed to improving water quality and protecting the environment, and we share EPA's concerns about the risks that PFAS chemicals pose to the public.

CDPU provides critical services to our community. The three drinking water plants operated by CDPU delivered over 50 billion gallons of clean, safe drinking water last year, averaging 145 million gallons daily, to over 1.3 million residents of the Greater Columbus area. The City of Columbus has many residents living in environmental justice communities including Linden, Franklinton, Hilltop, and Near South. CDPU uses a complex multi-barrier approach utilizing state of the art equipment and the latest treatment technologies to ensure all requirements of the Safe Drinking Water Act (SDWA) are continuously met. Ratepayers keep these plants running.

CDPU drinking water facilities do not use, produce, or profit from PFAS compounds. We passively receive source water into our facilities that may contain PFAS from industrial, commercial, and domestic sources. We treat and distribute water 24 hours a day, 7 days a week, 365 days each year. And we comply with our permits and protect public health and the environment by providing safe drinking water.

EPA requested comment on implementation challenges and considerations for setting the maximum contamination level (MCL) at the practical quantification level (PQL) for PFOA and PFOS, including on the costs and benefits related to this approach. EPA also asked for comment related to its evaluation of feasibility under the SDWA for the proposed PFOA and PFOS and hazard index MCLs. CDPU concurs with the comments made by the National Association of Clean Water Agencies (NACWA) and makes the additional comments below.

As a vested stakeholder with a duty to the public, CDPU supports EPA in its efforts to set its initial federal drinking water standard for PFAS at a protective, feasible (MCL). But CDPU urges EPA to consider the active loading of PFAS into water occurring through the manufacture and use of PFAS and PFAS containing products. CDPU also urges EPA to consider the accurate costs and feasibility, consumer confidence, and regulatory alternatives before it mandates its first MCL at the PQL. Several states have established feasible state standards for PFOA and PFOS at twice the currently proposed federal standard. Those plans would result in the best use of limited resources because they address the greatest health risks by prioritizing systems with the highest concentrations of PFAS.

I. EPA should consider source control as it implements its PFAS Strategic Roadmap to avoid cost-shifting PFAS remediation to water utilities and ratepayers.

Working its way through its PFAS Strategic Roadmap, EPA is using CERLCA to address sites that are contaminated with PFAS, and the SDWA to address water that is contaminated with PFAS. One option that it did not consider is a direct campaign to eliminate additional PFAS load in our water and soil: to ban the manufacture and use of PFAS, except for in extraordinary circumstances with stringent controls. While most manufacturers voluntarily phased out PFOA and PFOS in the early 2000's for most uses, there is nothing being done to stop the active loading of new PFAS into our environment—onto our soil and into our water—from PFAS laden products that continue to be rolled out to consumers. At this very minute, manufacturers that produce and use PFAS are profiting from the pollution that ratepayers will be paying to clean out of their water for years to come. Water utilities can dedicate billions of dollars to treat water for decades but will never be able to tackle the source. And the source, those companies profiting from a product that is a known health concern, can continue to lawfully pump those pollutants into our world.

An MCL set without proper recognition of implementation, social, and opportunity costs shifts the financial burden of minimizing risk of human exposure to PFAS from private businesses to the public. The proposed drinking water regulation (as currently written) would shift the financial and technical responsibility from the manufacturers that create and use PFAS in their processes to downstream utilities. This burden will be borne by ratepayers.

The MCL should be set with the understanding that PFAS exists in the background of the environment and everyday life. The cost-benefit to achieve these regulatory requirements in the water industry needs to be weighed against the cost-benefit of removing it from food packaging, personal care products, clothing, and other direct and indirect exposure routes. The only way to address and stop the growing concentration of PFAS contaminants in the hydrological cycle is to stop introducing additional PFAS loads. EPA should re-assess the navigation of its PFAS Roadmap.

II. EPA should consider costs and timing before settling its initial MCL at the PQL.

EPA is mandated to consider costs when setting the MCL. The standard is feasibility, which contemplates expense, rather than mere capability. The regulation as proposed is not feasible, nor is it capable of being met under EPA's proposed timeline.

A. MCLs at 4 ppt PFOA and PFOS are not feasible.

Under section 1412(b)(4)(B) of SDWA, EPA must conduct an economic analysis during the development of drinking water contaminant regulations. EPA must take costs into consideration when setting an enforceable MCL as close to the maximum contaminant level goal (MCLG) *as feasible*. The SDWA analysis on feasibility is only acceptable if it uses accurate assumptions for its inputs. EPA's cost estimate falls short.

The actual costs that water utilities will face for treatment are significantly higher than EPA's estimate. EPA's estimate of nationwide proposed costs to treat to 4 ppt PFOA and PFOS falls between $776M and $1.2B. This range is much too low. First, there are a few factors that will drive the true cost of meeting 4 ppt much higher. The first is inflation. Last summer, construction costs skyrocketed 25 to 30% higher than 2021 costs.[1] EPA used 2021 dollars in its estimates so construction costs will already be 25 to 30% higher than the estimates used in the analysis. Second, supply and demand will force additional upward pressure on prices. Prices will increase significantly based on scarcity in the supply chain and labor force as 3,500 utilities nationwide hustle to comply.[2] This demand will continue to drive up prices on equipment, lab services, media, and reactivation. Third, EPA's cost estimate fails to account for the increased costs associated with increased health risks from the GHG emissions that will result from these treatment processes. Reactivation, disposal, incineration, and trucking of granulated activated carbon media will all result in additional greenhouse gas emissions. This treatment process (and its resulting emissions) does not currently exist at most plants so there will be an increase in overall emissions industry-wide. EPA should balance the benefits of pushing the MCL down to the PQL with the costs—financial, human health, and environmental—that will come from the added greenhouse gas emissions created through treatment.[3]

As part of its cost analysis, EPA also failed to recognize the factor of the opportunity costs of this regulatory action. As drinking water rates soar in response to the MCL and the required implementation of expensive treatment technologies, there is also an opportunity cost that will be realized by households and businesses. Consumers will have to make tough choices as they have less money. Businesses will raise prices to reflect their increased costs. Products and services will then cost consumers more and they will have even less money for discretional spending. This cycle is exacerbated in Justice40 neighborhoods where there is already a lack of extra money and increases in the cost of basic needs results in going without basic necessities.

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[1] *Inflation Taking the Bite out of New Infrastructure Projects,* US News and World Report article. June 19, 2022. Inflation Taking Bite Out of New Infrastructure Projects (usnews.com)

[2] In the proposed rule, EPA estimates that 3,400-6,300 water systems will be impacted by the proposed regulation of 4 ppt for PFOA and PFOS with the 1.0 hazard index for the four other PFAS.

[3] Beyond the factors that are not yet reflected in EPA's cost estimate, NACWA's members participated in a survey that proved that EPA's estimates were significantly lower than real world data from utilities that have already implemented treatment. EPA's estimate for capital costs was 2.9 times lower on average than the reported value for 60 utilities.

EPA's acute underestimation is borne out in CDPU's numbers. In February 2023, CDPU received an estimate for the cost of implementing granulated activated carbon treatment at its water plants, which includes three existing plants and one plant currently in design.[4] Estimated capital costs for CDPU's four plants falls between $338 million to $363 million, but could realistically approach $544 million. Additionally, the current estimate for *annual* operation and maintenance costs is between $29.4 million to $43.9 million, depending on whether virgin or reactivated carbon is used. To put that in perspective, CPDU—one public water system out of 3,500—may need to spend over half a billion dollars by 2030 to treat the very low levels of PFAS in our drinking water. The result would be an extreme cost for miniscule benefit. EPA's cost-benefit analysis is distorted because its nationwide estimate does not come close to being accurate.

Even with a historically high level of federal funding reaching billions of dollars, the proposed rule's estimated costs will far exceed available funding. NACWA's benefit-cost report projected that water utilities and their ratepayers will pay six times the amount allocated, plus operation and maintenance costs.[5] While the federal funding will provide much needed assistance, it will not offset the necessary expenditure enough to prevent adverse outcomes for water utilities and ratepayers.

Utilities are struggling with maintaining affordable rates as they face an onslaught of mandated capital and regulatory projects.[6] Public water utilities are stewards of public funds and must choose how to best protect human health with limited resources. To accommodate the costs of new treatment, public water utilities will either have to devote fewer resources to ongoing operations, infrastructure repairs, and responses to other health priorities, or they will have to raise rates. Ratepayers—especially in our environmental justice communities—will feel the burden of higher utility bills. Regulating without proper consideration of cost will affect affordability and could result in negative outcomes in disadvantaged communities.

Importantly, these resource intensive efforts by water utilities are only treating the symptoms rather than the disease. Treatment might reduce the current amount of PFOA and PFOS in a cup of water from low parts per trillion to an amount in parts per quadrillion, but it will not reduce the amount of PFAS that the public is exposed to everyday through other common household and environmental sources. This continued exposure will continue unabated so long as PFAS chemicals are permitted to be used in consumer goods manufactured in, or imported to, the United States.

B. Public water utilities will need more time to comply, especially if the MCL is 4 ppt.

Even if EPA believes that the 4 ppt MCL is generally feasible, EPA's proposed timeline to meet it is not. Meeting an MCL of 4 ppt will require the commitment of an extremely large amount of public money to accomplish these significant construction projects. Public water utilities across the nation,

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[4] Engineers at Hazen and Sawyer produced a memo detailing the Cost of Implementation of GAC for PFAS Treatment at Columbus, OH Water Plants, dated March 9, 2023. Hazen and Sawyer is a National A/E firm which has worked in surface water and groundwater plants, developed solutions for meeting PFAS targets, installed granular activated carbon and ion exchange facilities, and researched innovative treatment approaches.
[5] *Federal Funding Analysis*, at page 67 of the Black and Veatch Study attached to NACWA's comment letter.
[6] Impending regulatory challenges for water utilities are the Lead and Copper Rule Revision, Lead and Copper Rule Improvements, and CERCLA designation of PFAS. Additionally, water utilities are struggling with replacing aging infrastructure and meeting the challenges of climate change, including reducing greenhouse gas emissions while simultaneously preparing for its effects.

like CDPU, must navigate their budgeting, funding, and procurement processes before a shovel strikes the ground to add a treatment process. It will take time to do enough sampling to ensure that the expenditure of hundreds of millions of dollars is warranted, and then to design and plan the project. Then comes the long haul of actually constructing the treatment. Added to these considerations is the requirement that the public water utility must maintain 100% of their operations while building out the treatment. In short, public projects of this magnitude take time.

On top of the typical lengthy project timeline, if 3,500 water utilities enter the market for the same few treatment techniques, there will be massive supply/demand issues. There are already limited resources for granular activated carbon equipment, media, and regeneration services. The same can be said for lab services for sampling. Even though EPA received dozens of applications for certification, on a recent call NACWA members from around the country only identified two labs that the entirety of utilities present were using for PFAS analysis. Compounding this difficulty are the general supply chain issues and labor shortages that linger across the United States. Build America, Buy America and other federal requirements add more hurdles. Three years is not enough time to get us to the finish line, especially when compliance and the corresponding consumer confidence are hanging in the balance.

Allowing more time for compliance will also enable EPA to tackle the data gap issues that are currently plaguing water utilities and PFAS science. UCMR 5 data will be instrumental in the nation's understanding of its PFAS problem. This crucial information will come too late with the current compliance timeline to allow EPA and water utilities to respond accordingly.

One option to solve the timing issues would be to extend the compliance timeline. Another option is a phased approach to the MCL (starting with a higher initial MCL) that would address these problems by reducing the competition for limited resources for installing treatment and allowing the science to catch up to policy. It would tackle the bulk of, and most significant, human health risks by targeting systems with the highest PFAS concentrations first.

III. EPA should consider reliability and consumer confidence before setting its initial MCL at the PQL.

Issuing the initial MCL at the PQL has high consequences because once EPA sets the MCL, water utilities will have to start expending the billions of dollars to comply to meet it. Here, where there is scientific uncertainty and the proposed MCL is pushing the available treatment and sampling techniques to their physical extremes, EPA should set a MCL that meets the requirements of the SDWA that also can be supported as rational to the public. As more data becomes available from UCMR 5 and other studies, there will be opportunities to issue a more stringent MCL.

A. The MCL and the PQL are too close.

EPA requested comment on setting the MCL so close to the PQL and its effect on water utilities. In that discussion, EPA recognized that "[t]he agency must have a high degree of confidence in the quantified result as it may compel utilities to make potentially costly compliance decisions in order to comply with the MCL." It also recognized that water utilities operate conservatively to maintain water quality and "typically aim to achieve lower than the MCL to avoid a violation." In reality, this results in proactively adding treatment if there is any possibility of violating the MCL (as will play out at CDPU).

But when the MCL is so low—measured in parts per trillion—and the difference between installing hundreds of millions of dollars of treatment, or not having to treat, is one drop in 20 Olympic size swimming pools, it is absolutely necessary to provide for quantitative reliability. The margins are too tight right now when the science is still emerging and the risks of overcommitting public money is high. The reality is that a water utility could graze the MCL level if the sampler applied deodorant that morning, wore a jacket while grabbing the sample, or used a typical sampling container.[7] CDPU supports EPA in its decision that sample results below the PQL are to be recorded as zero. Setting the first ever PFAS MCL this low is not feasible (as discussed above) or reasonable when so much benefit can be realized with setting a higher MCL first to address the systems with significant PFAS contamination.

B. An overly-aggressive MCL for PFAS will shake consumer confidence.

Consumer confidence is key in any water regulation. Clean, safe drinking water is ultimately only as drinkable as the public understands it to be. In the case of PFAS, the science is clear on the risks of consuming high levels of the most damaging formulas of PFAS. Where science is still developing is in relation to the impacts and risks of health implications of low levels of less studied versions. Still further undeveloped is the science on how exposures vary between drinking water and the hundreds of other ways humans are exposed every day. What we know is that drinking water only accounts for 20% of human exposure to PFAS,[8] but the risk that the public will be dissuaded from drinking safe tap water is increasingly high. This is especially true if the MCL is issued at the level proposed by EPA alongside the current compliance timeline. Widespread violations of the MCL may be triggered by EPA's proposed approach, and even if levels are close to the PQL and much lower than other sources of PFAS exposure, consumers will lose confidence in the safety of publicly supplied drinking water.[9]

Additionally, EPA's use of a hazard index adds another layer of confusion. If EPA includes a hazard index in the final version of the regulation, water utilities will be relying on EPA to develop a communication strategy to protect consumer confidence. Feasible standards with reasonable timelines will safeguard consumer confidence and protect our most vulnerable residents from additional burden.

IV. EPA should reconsider the proposed alternatives before setting its initial MCL at the PQL.

As it conducted its required analysis when crafting the proposed rule, EPA deliberated various options to reduce PFAS from drinking water. One option that was considered but not selected, was to address the water systems with the most harmful, highest concentrations first with a MCL at 10 ppt. As discussed above, the feasibility analysis for that decision was flawed.

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[7] https://www.epa.gov/sites/default/files/2020-01/documents/pfas_methods-sampling_tech_brief_7jan2020-update.pdf

[8] Relative Source Contribution (RSC) is an estimate that drinking water contributes 20% of total exposure to PFOA and PFOS. Other sources contributing 80% of exposure to PFOA and PFOS include but are not limited to air, foods, incidental soil/dust ingestion, and consumer products (U.S. EPA, 2016b) (U.S. EPA, 2016a).

[9] Consumer confidence concerns affect low-income and underserved environmental justice area residents even more if they spend their limited resources on purchasing bottled water that is less-regulated.

The crux of EPA's decision to set the MCL at 4 ppt instead of 10 ppt is that EPA found the former to be feasible. But that determination was erroneous because EPA did not accurately account for the cost of treatment and other social costs to environmental justice communities and from increased GHG emissions. Once EPA adjusts its calculation, if it determines that an MCL of 4 ppt is not feasible, then it will have an opportunity to revisit the regulatory alternative of 10 ppt and perform the analysis again with more realistic costs and benefits to determine if a higher MCL is appropriate and justifiable under the SDWA statutory criteria.

EPA has already acknowledged that a higher MCL would decrease the number of water utilities that will need to treat their water at this time. But it will would also result in targeted funding and treatment in the areas across the country that need it the most, which will protect our most vulnerable citizens from soaring utility bills that may threaten their food and housing stability. It will lessen the impact of such a large number of water utilities vying for limited treatment equipment, labor, and resources. It will give time for regulation or legislation to prevent further introduction of PFAS into our environment through consumer products. It will allow labs to develop the capability to test on a larger scale. It will allow public water utilities to have flexibility in their budgets to address the current, multiple regulatory challenges of PFAS, lead and copper, and aging infrastructure. And it will preserve consumer confidence in the safety of people's utmost necessity: drinking water.

V. CONCLUSION

CDPU looks to EPA to help ensure that access to the most basic human necessity—safe, clean drinking water—continues to be affordable and equitable. As EPA continues its determination on a final National Drinking Water Regulation related to these six PFAS, CDPU asks that EPA recognize that public water utility resources are limited as we try to rise to the challenge of meeting each increasingly stringent drinking water standard simultaneously. Additionally, CPDU asks that EPA's feasibility analysis include accurate costs for treatment, a quantification for the burden of opportunity costs, and the financial, human health, and environmental costs of increased greenhouse gas emissions, which will result from an MCL of 4 ppt. Finally, CPDU asks that EPA re-examine alternatives—regulations, timelines, and limits—that would provide a reliable, comprehensive benefit to the public by removing the greatest PFAS hazards, judicially using public funds, and ensuring the eventual end of the PFAS cycle.

The City of Columbus, Department of Public Utilities appreciates your consideration of these comments. Should you have any questions, please contact Kristin Atha at klatha@columbus.gov or call (614) 645-7541. Thank you again for your attention to and consideration of these comments.

Sincerely,

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