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May 25, 2023

Michael S. Regan
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Submitted Electronically & U.S. Mail

Re: Docket ID: EPA-HQ-OW-2022-0114, PFAS National Primary Drinking Water Regulation Rulemaking

Dear Administrator Regan,

Washington Suburban Sanitary Commission (or WSSC Water) appreciates the opportunity to provide comments on EPA's PFAS National Primary Drinking Water Regulation Rulemaking. WSSC Water is a public water system (PWS ID: MD0150005) serving 1.9 million customers in Montgomery County and Prince George's County in Maryland. In 105 years of service, WSSC Water has never had a Safe Drinking Water Act violation. This is a track record we are working diligently to continue to safeguard the health of our customers.

WSSC Water commends EPA's dedication to safeguarding public health against PFAS contamination through its PFAS Action Plan. Considering the relatively brief history of PFAS as an emerging contaminant, the advancements made in science, regulatory initiatives, and public awareness have been remarkable. WSSC Water is equally concerned about this issue, and our efforts to address PFAS in our drinking water surpass the requirements of regulatory measures. We have been voluntarily monitoring PFAS at our Potomac and Patuxent Water Filtration Plants since January 2020, using the latest EPA-approved analytical methods. In 2020, we conducted an initial source water risk assessment on PFAS, and more recently, we are collaborating with other water systems in the National Capital Region to conduct source water assessments and developing plans to update our risk assessment to inform future mitigation measures.

While we appreciate EPA's efforts to establish regulatory measures to combat PFAS contamination in drinking water, wastewater, and biosolids, we are concerned that regulating PFAS under the SDWA and CWA framework, as well as designating PFOA and PFOS in municipal treatment works discharges as hazardous substances under CERCLA, ultimately places the cost burden on the public, despite the limited availability of supporting funds. Within this framework, the public is

responsible for demonstrating the harm to public health after PFAS has been discharged and is also responsible for remediation. Therefore, we strongly urge EPA to consider altering its regulatory approach to regulate PFAS at the source, placing the burden of proof that the products are safe for consumers and the environment on those who manufacture and utilize PFAS products before they are manufactured. This preventive approach aligns with environmental justice and equity from a broader perspective, shifting the cost burden from the public, especially disadvantaged communities, to the polluters. We recognize EPA's proposed Significant New Use Rule on several products containing PFAS and encourage the agency to continue expanding and strengthening these efforts to eventually eliminate all PFAS chemicals from our everyday products.

WSSC Water believes that the regulation of PFAS in drinking water can be achieved through the SDWA's multi-step rulemaking process, which includes contaminant identification and occurrence via CCL and UCMR processes, risk assessment, preliminary and final regulatory determinations, proposed and final MCLs, and a six-year review process. We observe that the proposed MCLs for PFOA and PFOS, as well as the preliminary regulatory determinations for four PFAS compounds released concurrently with their proposed MCLs, do not adequately meet the statutory criteria for proving adverse health effects, occurrence, and meaningful opportunities for public health protection. We urge EPA to adhere to these mandates and ensure that future regulatory actions are based on sound science, conclusive evidence, and accurate analysis of cost and health risk reduction.

We offer our comments based on decades of successful compliance with Safe Drinking Water Act regulations, and many other voluntary steps that we have taken to protect the safety of our customers. We hope that our comments help EPA develop a final rule that is practical, implementable, and yet still provides meaningful opportunities for public health protection. We thank you in advance for your consideration.

If you have any questions regarding our comments, please contact me or Jin Shin at jin.shin@wsscwater.com.

Sincerely,



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Attachment (1)

Cc: Radhika Fox, Assistant Administrator for the Office of Water, U.S. EPA
Aklile Tesfaye, Deputy General Manager of Operations, WSSC Water
James "J.C." Langley, Director of Production, WSSC Water

Comments by Washington Suburban Sanitary Commission:

Docket ID: EPA-HQ-OW-2022-0114

PFAS National Primary Drinking Water Regulation Rulemaking

1. Maximum Contaminant Levels

Hazard Index approach:

EPA is proposing an MCL for mixtures of PFHxS, HFPO-DA, PFNA, and PFBS expressed as a Hazard Index (HI). WSSC Water is concerned that regulating a group of contaminants in this complex manner will make future compliance incrementally difficult as additional PFAS chemicals that exhibit similar dose-additive health impacts are identified. This approach would practically lower the allowable Health Quotient for individual chemical each time new contaminants are added and regulated in the group. In contrast, under the Stage 2 DBP Rule, EPA successfully regulated a group of co-occurring contaminants by setting an implementable MCL supported by available analytical and treatment technologies. WSSC Water suggests that EPA explore an alternative approach to regulate PFAS chemicals as a class, in a sustainable and consistent manner. We also recognize that developing such a novel approach will require a significant amount of time, and urge that EPA set aside adequate amount of time for soliciting input from stakeholders and experts to ensure the legitimacy of the approach.

Regulatory determination for PFHxS, HFPO-DA, PFNA and PFBS:

EPA has requested comments on its preliminary regulatory determination of PFHxS, HFPO-DA, PFNA, and PFBS in this rulemaking. WSSC Water disagrees with EPA's interpretation of Section 1412(b)(1)(E) of SDWA, which allows for proposing a drinking water regulation concurrently with a determination to regulate. WSSC Water believes that the three statutory criteria - adverse health effects, occurrence, and meaningful opportunity for public health protection - must be met prior to the final determination to regulate, at which point EPA can propose a regulation. Additionally, since HFPO-DA was not included in the UCMR3 monitoring program, we recommend that EPA postpone the regulatory determination for this compound until a substantial amount of data has been gathered through the UCMR5 program.

MCL for PFOA and PFOS:

The proposed MCLs of 4 ppt for PFOA and PFOS are considerably lower than any other final or proposed MCLs established by states. According to a survey of state-enacted MCLs, final or proposed MCLs for PFOA are set within a range of 8 – 14 ppt, and for PFOS within a range of 8 – 18 ppt. WSSC Water recommends that EPA conduct a review of the health risk reduction and cost analysis assessments conducted by the states to ensure that EPA's analysis is in line with the most accurate health effects and cost information.

In this rulemaking, EPA refers to certain contaminants under Phase I VOC rule as a basis for setting the MCL at the same level as practical quantitation level (PQL). While WSSC Water

agrees that those rules have been implemented successfully, it should be noted that compliance management of PFAS at such low levels, near the analytical limit of precision and accuracy, will be much more challenging than VOCs, due to its environmental ubiquity and analytical sensitivity.

Regulatory alternatives:

EPA is soliciting comments on 5 ppt and 10 ppt as regulatory alternatives. WSSC recommends that EPA establishes the MCL at a level above the PQL of 4 ppt to provide adequate margin of confidence for water systems to better gauge relative risk levels with respect to MCL, and to identify and correct issues that could potentially impact compliance status. EPA may also consider a phased approach, in which MCLs are set at 10 ppt initially, then lowered to 5 or 4 ppt in the next six-year review cycle. Although 10 ppt is considerably higher than the MCLG, and it is technologically feasible to reduce PFOA and PFOS levels to 4 ppt, adopting this approach would provide more water systems with opportunities to prepare for mitigation measures and allow the EPA to gather more evidence to support lower MCLs in the future. As EPA correctly noted in reference to Phase I rule, advancements in analytical technology in the coming years will provide opportunities to lower the MCL closer to MCLG while maintaining an appropriate margin of confidence between the MCL and PQL.

2. Implementation Timeline

Initial monitoring period:

Under the proposed rule, water systems are required to achieve full compliance beginning three years after the promulgation of the final rule. If initial monitoring results exceed the MCL, mitigation measures, which often require capital improvements, must be implemented within the same three-year period. This timeline is significantly shorter than the usual minimum duration of 10 years needed to complete capital improvements. In WSSC Water, bench testing, pilot testing, design, budget allocations, procurement, site acquisition, and permitting and construction for a treatment process of this complexity has historically required 9 to 11 years. WSSC Water acknowledges that delaying rule compliance for 10 years may adversely impact public health protection. As such, we suggest that EPA consider extending the compliance timeline to a total of eight years, with a standard three-year compliance timeline, a nationwide blanket two-year extension, and another three-year extension at the discretion of the primacy agency, in accordance with SDWA §1416. EPA may also consider providing states with specific guidance tailored for PFAS to assist states determining which systems would qualify for additional 3-year extension. While a total of 8 years is still insufficient for water systems to adopt necessary mitigation measures in order to comply with the rule, when combined with the phased MCL approach recommended above and an initial MCL set at 10 ppt, water systems would have more appropriate opportunities to prepare for the required capital improvement measures.

Alternatively, EPA may consider a risk-based approach, where water systems with low levels of PFAS during the initial monitoring period may be granted an extended implementation schedule before beginning compliance. This approach would have minimal impact on public

health protection, considering the demonstrated low risk. EPA has successfully adopted this approach with its arsenic rule, where systems demonstrating low level of risk are eligible for an exemption from compliance for a certain period depending on the levels found. EPA could also explore a similar risk-based implementation framework that has been successfully adopted in the Long Term 2 Enhanced Surface Water Treatment Rule. Under this framework, water systems conducted two rounds of two-year source water monitoring, with a six-year interval between each round, to assess the level of risk. Based on the identified risk, water systems would then be subject to Bin Placement, a tiered mitigation measure consistent with the level of risk detected.

Final rule promulgation:

WSSC Water also recommends that EPA postpone the promulgation of the final rule until it has collected sufficient or full occurrence data through UCMR5. This data will provide opportunities for the EPA to more appropriately assess nationwide occurrence and to identify possible issues with implementing compliance, such as laboratory proficiency, capacity, and monitoring costs. The statutory deadline for EPA to finalize the rule is September 2024, which provides additional time to ensure that this regulatory action aligns with the occurrence criterion.

3. Monitoring and compliance requirements

Trigger Levels:

EPA set trigger levels at one third of the proposed MCLs: 1.3 ppt for PFOA and PFOS, and 0.33 for PFAS regulated by the HI (PFHxS, HFPO-DA, PFNA, and PFBS). Trigger levels are used to determine monitoring requirements: after one-year initial monitoring, systems with PFAS less than the trigger levels are eligible for reduced monitoring. Systems already under reduced monitoring must revert to standard monitoring after one incidence of PFAS exceeding the trigger level.

Proposed trigger levels for PFOA and PFOS are not supported by the PQL of 4 ppt established by EPA for this rule and UCMR5, making it difficult for water systems to obtain quantifiable data at these levels. WSSC Water recommends that EPA establish the trigger level for PFOS and PFOA at 4 ppt or another reliable quantifiable level supported by current analytical technologies. This aligns with WSSC Water's earlier proposal to set the MCL initially at 10 ppt, providing sufficient margin of confidence. As analytical technology advances in the future, EPA can reconsider the feasibility of lowering MCLs and trigger levels.

EPA is proposing that systems with existing monitoring data from UCMR5 will not be required to conduct separate initial monitoring for regulated PFAS. WSSC Water supports this approach. However, although some labs are capable of performing at a PQL of 2 ppt, the UCMR5 framework involves different QA/QC requirements than non-UCMR methods 537.1 and 533, making it impossible for labs to report any quantifiable results below the required PQL of 4 ppt. This makes it impossible to evaluate UCMR5 results against trigger levels below the PQL. Considering these limitations, WSSC Water supports EPA's approach for

any results below the PQL to be reported as zero in determining running annual average, consistent with the method used in Standard Monitoring Framework.

Running annual average approach:

EPA is proposing that compliance with the proposed MCLs for regulated PFAS will be determined by calculating running annual averages at the sampling point. PFAS is ubiquitous in the environment, and analysis of PFAS is subject to greater variability compared to other contaminants regulated as a running annual average under the Standard Monitoring Framework. A single monitoring result exceeding four times the MCL in a quarter will result in non-compliance, even if it is a false positive. WSSC Water recommends that EPA consider extending the period for calculating the running average from four quarters to eight consecutive quarters to ensure that compliance is based on a representative amount of data. In addition, EPA may consider allowing primacy agencies to invalidate false positive data meeting specific criteria. For instance, State of California has implemented repeat sampling protocols following a detection above the Notification Level. These protocols allow invalidation of original sample results if subsequent repeat samples indicate non-detect. Similarly, EPA has successfully implemented comparable procedures, as outlined in 40 CFR §141.21(c)(1)(ii), to grant states the authority to invalidate false positive bacteriological results based on the repeat sampling results. Incorporating a statistical measure in the compliance calculation method, such as procedures to remove outliers outside of the standard deviation, could also eliminate the impacts of false positive sampling results. Compliance calculation over a two-year period or removing false positive results would not adversely affect public health protection as the human health impacts of PFAS are based on lifetime exposure.

4. Treatment technologies

Waste management costs:

The EPA has identified three treatment methods, granular activated carbon (GAC), ion exchange (IX), and nanofiltration/reverse osmosis (NF/RO), as the Best Available Technologies (BAT) for removing PFAS. WSSC Water agrees with EPA's assessment of technological feasibility and the agency's conclusion that compliance can be accomplished at the MCL of 4 ppt utilizing these treatment processes. However, all of these BATs generate waste streams or spent media, which require reactivation, waste treatment, and disposal. Taking a holistic view of the fate of PFAS, these treatment processes simply shift PFAS from drinking water to another media, which could be subject to further regulation and require additional treatment. As such, the EPA must carefully consider lifecycle waste management needs for the holistic reduction of PFAS in the environment when evaluating the technological feasibility and associated compliance costs of these treatment methods.

Supply of adsorbents:

Due to the challenges of adsorbent regeneration, many utilities that have implemented PFAS treatment already have selected to replace adsorbents with virgin GAC or IX media. The EPA should evaluate the sufficiency of the national supply of GAC and IX adsorbents as well as sustainability and PFAS destruction effectiveness of disposal services in the

determination of cost feasibility and implementation timeline.

Risk assessment:

PFAS are almost universally present in drinking water samples due to their widespread environmental presence. In many water systems, detected levels are only slightly below the MCL of 4 ppt, which leaves little margin for safety in maintaining compliance. This makes it challenging to make capital improvement decisions, as the risks primarily depend on future vulnerability, including changes in the regulatory landscape as new PFAS compounds are identified and regulated, and potential changes in certain PFAS levels as new variants are continuously produced and released into the environment without regulatory control. As such, we encourage the EPA to create risk assessment guidelines tailored specifically to PFAS, similar to EPA's PFAS Analytic Tools, and to make the necessary resources available to assist water systems in quantifying their PFAS risk levels and to inform future treatment and non-treatment mitigation measures.

5. Cost analysis

Underestimation of cost:

WSSC Water finds that EPA's analysis of costs for implementing the BATs for PFAS removal significantly underestimates the necessary capital and operational expenses. For instance, the capital cost of constructing a GAC process for our Potomac Water Filtration Plant (WFP) is estimated about \$1.4 billion, including expenses for land acquisition, booster pumping, and engineering and legal fees. Our projected operating expenses cover the costs of replacement, disposal, and reactivation of spent GAC. To treat our average production at our 285 MGD rated plant, the operating cost alone is a large and continuing cost. Estimated to be about \$38 million, O&M represents about 35 – 50% of the total annualized cost. Furthermore, operating costs may not be eligible for federal/state funding, in which case the cost must be borne solely by the public.

After annualizing the combined total of capital and operating costs over 30 years of the asset life cycle, we arrived at an estimated annual cost of \$108 million for PFAS treatment with GAC. This figure is significantly higher than EPA's estimated annualized cost of \$16 – 67 million for an average Type 2 System. We believe this difference is attributed to several factors. First, EPA's cost model does not include ancillary costs associated with capital improvements, such as costs to address site constraints. A GAC treatment system with adequate contact time for PFAS removal would be about four times the size of our existing high-rate filters, exceeding any available space at our treatment plant. Second, the EPA's cost model must be re-calibrated with a scale-up factor for large treatment plant. The largest system size considered in EPA's cost model is >500,000 population served, about four times smaller than WSSC Water.

Additionally, we recommend that EPA revise all of its cost estimates to reflect current labor and material cost increases and supply chain and workforce issues, using \$2023 dollars. We are also concerned that EPA's annualized cost proposal does not include the costs associated with disposing of spent media as hazardous waste, on the basis that PFAS-contaminated

waste is not currently classified as hazardous waste. This approach contradicts EPA's Action Plan to potentially regulate municipal treatment discharge under CERCLA, and we urge the agency to revise its cost assumptions in line with its future rulemaking directions.

Feasibility of NF/RO:

WSSC Water concurs with EPA's assessment that the disposal of PFAS-contaminated reject water presents a challenge for the viability of NF/RO treatment for many water systems. Additionally, we agree that the operational costs of NF/RO are likely to be higher than those of GAC due to the handling of the reject water. If water systems are unable to dispose of the concentrated reject waste to a brackish water or a sanitary sewer, NF/RO may not be a feasible option. We urge EPA to consider these technological constraints when determining the practicality of regulating PFAS at the proposed MCLs.

6. Financial support

Availability of funding assistance:

We suggest that EPA consider expanding the eligibility criteria for various funding opportunities that are currently available to support PFAS mitigation. While the Bipartisan Infrastructure Law (BIL) offers a major funding opportunity to support such efforts, it is important to note that this funding is limited to capital expenditures or related planning and design work. Unfortunately, funding for PFAS research, including synoptic studies, source water assessments, or treatment alternative studies and related pilot tests, remains scarce, and costs for operations and mitigation efforts thus fall on ratepayers.

Furthermore, it is imperative that EPA ensures that the funding allocated to support compliance costs aligns with the accurate cost estimates. Although we acknowledge EPA's pledge to support water systems, particularly those in disadvantaged communities, we note that the amount of funding falls short of the high costs of treatment and waste disposal. This inadequacy is primarily attributed to the inaccurate cost assessments presented in this rulemaking.