



Randy E. Hayman, Water Commissioner

April 27, 2022

Philadelphia Water Department
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Department of Environmental Protection
Policy Office
400 Market Street
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Re: Proposed Rulemaking – Safe Drinking Water PFAS Maximum Contaminant Level Rule [25 Pa. Code Ch. 109]

To Whom It May Concern:

The Philadelphia Water Department (PWD) appreciates the opportunity to comment on the rulemaking proposed by the Pennsylvania Department of Environmental Protection (PaDEP) to set a maximum contaminant level (MCL) for perfluorooctanoic acid (PFOA) of 14 nanograms per liter (ng/L) and perfluorooctane sulfonic acid (PFOS) of 18 ng/L in drinking water. Per- and polyfluoroalkyl substances (PFAS) are one of the most complex environmental and public health challenges of our time and we support the efforts of the PaDEP to address its occurrence in drinking water in the absence of a federal regulation.

The Philadelphia Water Department (PWD) takes pride in providing safe, high-quality drinking water to 1.6 million residents of the City of Philadelphia, including our own families and neighbors. Our multi-barrier approach aims to address potential contamination risks at the source and involves rigorous monitoring of our drinking water throughout the treatment and distribution processes to ensure our drinking water continues to meet our safety and quality standards.

As part of PWD's steadfast commitment to providing safe, reliable drinking water, we continue to proactively research the occurrence of emerging contaminants, such as PFAS, within our source watersheds. In 2019, PWD began voluntarily testing for PFAS in the city's rivers and creeks to better understand the occurrence of these compounds in the city's water resources. This document, available on our [website](#), details the methodology and results of the study. PWD has not detected concentrations at our water treatment plant intakes that exceed the proposed maximum contaminant levels of 14 ng/L PFOA and 18 ng/L PFOS. PWD welcomes the opportunity to further discuss our PFAS monitoring efforts with PaDEP staff.

Additionally, PWD continues to collaborate with neighboring water utilities, agencies, and academics to better understand ongoing research and findings within southeast Pennsylvania. Our scientists and

engineers work to stay on top of the evolving state of the science to ensure the integrity of our water supply.

It is important to note that substances in the PFAS family are not found in water resources alone. These compounds have been used globally for decades and PFAS occurrence is widespread around the world, even found in remote environments such as the Arctic.¹ Potential sources of PFAS exposure extend far beyond drinking water – ranging from industrial sources like manufacturing facilities to consumer products like waterproof clothing, stain resistant fabrics, non-stick frying pans, grease resistant food packaging, cleaning products, cosmetics, and paints. PWD supports the need for PFAS drinking water standards but recognizes that PFAS producers and manufacturers must be held accountable for clean-up and that proper measures must be taken, concurrently with the promulgation of drinking water standards, to control the introduction of PFAS into our shared water resources. A complete PFAS management strategy begins upstream of water suppliers and considers the full life cycle of these persistent chemicals; drinking water standards alone cannot resolve decades of environmental pollution and water utilities and their ratepayers should not be forced to shoulder the full financial cost of remediating a pollutant that other entities have introduced at scale throughout the environment.

PWD recognizes and applauds the efforts of Governor Wolf’s interagency PFAS Action Team to protect Pennsylvanians from PFAS exposure and commends the Bureau of Safe Drinking Water for embracing the task of developing state specific MCLs for the first time in its history. However, this ambitious undertaking presents several challenges as the Environmental Protection Agency (EPA) works simultaneously to implement its national PFAS management strategy outlined in [PFAS Strategic Roadmap: EPA’s Commitments to Action 2021-2024](#) (October 18, 2021):

1. State and Federal Rulemaking Timing and Alignment

As stated in EPA’s *PFAS Strategic Roadmap*, the EPA is committed to proposing national primary drinking water standards for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) in the Fall of 2022, with its final rule expected in the Fall of 2023. With any regulation there is a period of time between its promulgation and its effective date that allows regulated entities time to plan for compliance with all aspects of the regulation. Given the anticipated timeline of the federal rule, it is possible that the federal drinking water standards will be promulgated after the state’s but *before* the effective date of statewide maximum contaminant levels for PFOA and PFOS.

The overlap of these two analogous rulemakings may create confusion among regulated entities as they work to ensure compliance with the promulgated regulations. We recommend that PaDEP and the PFAS Action Team actively engage water suppliers to keep them informed of these two rulemaking processes as they develop.

Furthermore, potential differences in assumptions and methodologies applied to derive federal and state PFAS drinking water standards may lead to differences in compliance requirements. In the event that the state’s PFOS and PFOA drinking water standards, monitoring requirements, and/or public notification requirements differ from the national primary drinking water

¹ (Kelly et al., 2009; Kwok et al., 2013; Young et al., 2007)

standard for PFOA and PFOS, it is recommended to demonstrate how PaDEP's rulemaking would be impacted.

2. Redundancy in State and Federal Monitoring Efforts

There will be some redundancy in data collection efforts with planned sampling under the EPA's fifth Unregulated Monitoring Contaminant Rule (UCMR5), published in the Federal Register on December 27, 2021. Sampling for the UCMR5 program is scheduled to occur from January 2023 through January 2026, while the initial monitoring period for the proposed rulemaking is scheduled for January 2024 for systems serving more than 350 people and January 2025 for public water systems serving less than 350 persons. UCMR5's quarterly drinking water sample collection will produce occurrence data for a total of 29 species of PFAS, including PFOS and PFOA. EPA anticipates publicly posting the first UCMR5 dataset from that national sampling effort in mid-2023 with quarterly updates as available.

Given that the UCMR5 data will be publicly available and implemented around the same time as compliance monitoring for the proposed rule, we recommend using the UCMR5 data for compliance with the initial monitoring period. The additional PaDEP sampling requirement for the initial monitoring period may add unnecessary analytical costs with minimal informational benefit for those community water systems participating in UCMR5.

3. State Certified Environmental Lab Capacity for Data Analysis

PWD appreciates the survey conducted by PaDEP of Pennsylvania accredited laboratories for PFAS to gather information on capacity, costs, and potential services. However, of the 14 laboratories identified, responses from only nine laboratories were recorded. Seven of the nine respondents suggested that they may be currently operating at reduced capacity for EPA Method 537.1.

As previously mentioned, sampling for the UCMR5 program overlaps with the initial monitoring period schedule in the proposed rulemaking. Given that there is only a limited number of state certified laboratories that can perform EPA Method 537.1, it is recommended that a more detailed logistical analysis be performed to ensure there is adequate lab capacity to accommodate sample collection and analysis under both the PaDEP proposed rulemaking and the federal UCMR5 sampling program. As stated above it is recommended that PaDEP consider using the UCMR5 data where possible and/or coordinating compliance monitoring schedules around UCMR5 sampling so as not to overwhelm state-accredited laboratories.

4. Conflicting Toxicology Information from an Evolving State-of-the-Science

Preliminary health effects information and recommendations presented to the EPA's Science Advisory Board PFAS Review Panel in December 2021 suggest that the limitations of the Goeden model used in the derivation of PaDEP's maximum contaminant level goals (MCLGs) may not be the most appropriate one-compartment toxicology model to apply and, furthermore, that one-compartment toxicology models may not be the most suitable selection for the derivation of PFOA and PFOS maximum contaminant level goals (MCLGs).

As mentioned in the [preamble](#) to the proposed rulemaking, six states have established their own PFAS maximum contaminant levels ahead of any federal drinking water standard; however, there is inconsistency among approaches. Some states, such as Vermont and Massachusetts, have taken a summative approach and implemented a combined maximum contaminant level. As the Drexel PFAS Advisory Group states in its report “No clear consensus exists on this approach...” for regulation of PFAS as a group or class of compounds.

There is also disagreement among toxicological endpoints. Current state MCLs and health advisory levels haven’t consistently followed derivation guidelines for non-carcinogenic effects. California developed PFOA response and notification levels based on carcinogenic risk, while other states assumed non-carcinogenic effects. For those following non-carcinogenic methodologies, different critical effects were identified.

It is strongly recommended that PaDEP and the PFAS Action Team consider and discuss any differences between the PA Rulemaking and the recommendations of the Science Advisory Board’s PFAS Review Panel once finalized.

PWD recognizes that our comments reflect those of a large water system in Pennsylvania and we cannot speak for the multitude of small water systems. However, past regulations have struggled with setting one regulation that would effectively address all the large and small, community and non-community water systems at once. PWD recommends that open discussion be encouraged to address aspects of the regulation that would affect the different systems in different ways. There may be non-regulatory or other means by which to address issues that would affect one type of system, such as surface water vs ground water, differently than another. We greatly appreciate the opportunity to comment on the PFAS proposed rulemaking and are requesting clarification on select additions to Chapter 109 as quoted and explained below:

5. General Monitoring Requirements

“Invalidation of PFAS Samples. (A) The Department may invalidate results of obvious sampling errors.” (*§ 109.301(16)(viii)(A)*)

It is requested that clarification be provided on the process for determining sampling errors and how that will be consistently applied across PaDEP regional offices. The PaDEP’s laboratory accreditation unit in the Bureau of Laboratories should be included in discussion about how best to address the invalidation of samples, for which sampling and laboratory error can occur.

6. Sampling Requirements

“Samples shall be collected by a person properly trained by a laboratory accredited by the Department to conduct PFAS analysis.” (*§ 109.303(a)(6)(ii)*)

Clarification on this provision is requested. The summary of responses from PaDEP’s survey of Pennsylvania accredited laboratories for PFAS listed only three accredited laboratories that provide sample collection services for Pennsylvania, most with restricted service areas.

If this provision requires that a trained member of the accredited laboratory conduct compliance sampling on behalf of the utility, it is requested that a more thorough evaluation of the laboratory staff capacity, geographic availability, and associated costs to accommodate proposed compliance monitoring be performed.

If this provision indicates that public water system sample collection staff can obtain training from an accredited laboratory, it is requested that PaDEP provide a list of accredited labs that can provide this service, training duration and location (on-site versus off-site), documentation needed, and an estimation of the associated costs per trainee.

PWD has been collecting water samples for analysis of PFAS compounds for almost three years and shipping the samples to a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory in Indiana for analysis. During sample collection, PWD staff adhered to the sample collection SOP provided by the NELAP accredited laboratory. The results of our field samples and blanks indicate that no samples have been compromised by collection by non-laboratory personnel. Additionally, it should be noted that there are other regulated contaminants that are subject to easy contamination, such as volatile and semi-volatile organic compounds and trace elements and there is no requirement that these samples are collected by the laboratory accredited to perform the analysis. The labs generally provide the customer (i.e., the public water supplier) with instructions for sample collection. We recommend that the PaDEP allow trained water supplier personnel to perform collection of their own samples in adherence to laboratory-provided SOPs.

7. Analytical Requirements (§ 109.304(f))

We recommend analytical requirements be removed from the rulemaking and instead be placed in guidance documents. Unlike many years ago, there are now places to consolidate and capture standardized analytical requirements, such as through 25 Pa Code § 252 and NELAC Institute standards, which are overseen in Pennsylvania by PA DEP's Laboratory Accreditation Program (LAP). Including analytical requirements in a Chapter 109 rule may lead to confusion and discrepancies between other laboratory rule requirements. As analytical methods and lab practice requirements may change over time, it is better for those to be addressed in the rules and standards that environmental laboratories are already subject to, without also then needing to update the relevant section(s) in Chapter 109.

8. Content of a Public Notice

“Public water systems shall include the following health effects language in each Tier 2 public notice for violation of the primary MCL for PFOA: ‘Drinking water containing PFOA in excess of the MCL of 14 ng/L may cause adverse health effects, including developmental effects (neurobehavioral and skeletal effects).’” (§ 109.411(e)(1)(ii))

“Public water systems shall include the following health effects language in each Tier 2 public notice for violation of the primary MCL for PFOS: ‘Drinking water containing PFOS in excess of the MCL of 18 ng/L may cause adverse health effects, including decreased immune response.’” (§109.411(e)(1)(iii))

Given the evolving understanding of the health effects of PFAS, it is recommended that the specific language detailing health effects be removed from the rulemaking and incorporated into a guidance document that can be updated as needed to reflect the current state of the science.

9. CCR Requirements

"Public water systems shall include the health effects language specified in § 109.411(e)(1)(ii) and (iii) for violation of a primary MCL for PFAS specified in § 109.202(a) (relating to State MCLs, MRDLs and treatment technique requirements)." (*§109.416(3.1)(ii)*)

PWD provides extensive information about our drinking water quality data on our website, water.phila.gov/, including copies of our annual Consumer Confidence Reports to keep our customers and the general public informed. However, as stated in the previous comment, the understanding of health effects with this emerging class of chemical compounds is constantly evolving. It is recommended to limit the regulation to general content requirements and include specific language in supplemental technical guidance.

PWD strongly encourages the Commonwealth of Pennsylvania to exercise its authorities to control the introduction of PFAS into the environment and account for the full life cycle of PFAS in its environmental management approach. As the farthest downstream drinking water supplier in the Schuylkill and Delaware River watersheds, we want to ensure that upstream PFAS contamination is addressed to the full extent possible given the persistence of these compounds in the environment.

We appreciate the opportunity to provide these comments and look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to read "Marc Cammarata", with a long, sweeping horizontal line extending to the right.

Marc Cammarata, P.E.
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References

1. Kelly et al. (2009). Perfluoroalkyl Contaminants in an Arctic Marine Food Web: Trophic Magnification and Wildlife Exposure. *Environmental Science & Technology*, 43(11), 4037-4043.
2. Kwok et al. (2013). Transport of Perfluoroalkyl substances (PFAS) from an arctic glacier to downstream locations: Implications for sources, *Science of The Total Environment*, 447, 46-55.
3. Young et al. (2007). Perfluorinated Acids in Arctic Snow: New Evidence for Atmospheric Formation. *Environmental Science & Technology*. 41(10), 3455-3461