

## PFAS, the Clean Water Sector and Advocacy Asks – Spring 2022 Update

### The Issue

Per- and polyfluoroalkyl substances, or PFAS, are perhaps one of the most perplexing pollutants federal and state legislators and regulatory agencies have had to grapple with in decades. PFAS are synthetic substances, of which there are thousands of known chemical varieties, that have been in commercial use for decades. While PFAS use has persisted for more than 50 years, the scientific understanding of the potential public health and environmental impacts continues to grow. Increased public concern and awareness are driving enhanced analytical capabilities which can now detect PFAS at extremely low levels—in the parts per trillion (ppt) concentrations—across all environmental media from air to soil to water.

### Impacts on Clean Water Agencies

Publicly owned clean water utilities are “passive receivers” of PFAS, since they do not produce, manufacture, or profit from PFAS but de facto “receive” these chemicals through the raw influent that arrives at the treatment plant. This influent can come from domestic, industrial, and commercial sources and may contain PFAS constituents ranging from trace to higher concentrations, depending on the nature of the dischargers to the sewer system. Although the influent is not generated by the utility, the utility is responsible for treating it under the Clean Water Act.

Municipal clean water utilities were not traditionally designed or intended with PFAS treatment capabilities in mind. Today, there are no cost-effective techniques available to treat or remove or destroy PFAS for the sheer volume of wastewater, municipal stormwater, or tons of biosolids managed daily by clean water utilities. While the clean water community is not responsible for generating or profiting from PFAS or the PFAS-containing commercial products, public utilities would bear considerable economic costs for treating and removing these chemicals—costs that would be passed onto ratepayers.

### Understanding the Potential Unintended Consequences

The clean water community and other passive receivers are not responsible for creating PFAS concerns, yet they could face severe unintended consequences of potential liability and clean-up costs if federal or state legislation or regulators move forward *without* recognizing the key dichotomy between PFAS receivers and PFAS producers.

A broad Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substance designation without protective guardrails will have far reaching implications and severe consequences for public water and wastewater utilities that have played no role in placing PFAS into commerce or the environment in the first place. With a proposed U.S. Environmental Protection Act (EPA) rulemaking pending review with the Office of Management and Budget to list two of the more prominently found PFAS constituents—polyfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS)—as hazardous substances under CERCLA,

Congress must exclude public utilities to ensure CERCLA's core strength, a "polluter pays" model is adhered to for PFAS producers and not place the financial clean-up and liability burdens on communities.

Removing PFAS chemicals from wastewater influent and effluent to meet potential water quality standards requires advanced treatment techniques such as granular activated carbon, ion exchange or reverse osmosis which are prohibitively expensive for the volume that needs to be treated. It also remains unanswered how and where to dispose of the PFAS-containing concentrations generated from these processes. Utilities need real solutions and destruction technologies to truly eliminate PFAS or other emerging contaminants from their processes in the future.

Public wastewater flow and subsequent biosolids are generated 24/7/365 at massive volumes and cannot be halted, underscoring the need for greater PFAS source reduction, treatment, and destruction mechanisms *before* major PFAS policy changes come into effect.

## EPA Update: PFAS Strategic Roadmap and Other Actions

EPA's PFAS Council published this Administration's PFAS Strategic Roadmap in October 2021, updating the prior-Administrations PFAS Action Plans from 2019 and 2020.

Below are key EPA PFAS efforts and deadlines from its recent PFAS Strategic Roadmap that are relevant to the public clean water sector's advocacy efforts:

### National Primary Drinking Water Regulations —

EPA published its draft fifth Contaminant Candidate List (CCL5) on July 19, 2021, identifying unregulated contaminants that public water systems should monitor for. The draft CCL5 identifies PFAS *as a group*. CCL5 builds off prior EPA efforts, like the Agency's final regulatory determination for contaminants on the fourth Contaminant Candidate List (CCL4) on February 22, 2021, making a final determination to regulate PFOA and PFOS under the Safe Drinking Water Act.

To do so, EPA must move through a complex and lengthy process to develop national primary drinking water regulations (NPDWRs) that will replace EPA's existing lifetime drinking water health advisories (HAs) for PFOA and PFOS, which are non-regulatory and not enforceable. NPDWRs are legally enforceable maximum contaminant levels (MCLs) or treatment techniques that limit contaminants in drinking water under the Safe Drinking Water Act. EPA's Science Advisory Board (SAB) is currently reviewing recent scientific evidence and new analysis that indicate negative health effects occur at lower levels—driving the need to reduce the HAs from 70 parts per trillion to something lower. EPA expects to issue a proposed rulemaking in the Fall of 2022 (before a statutory deadline of March 2023) and a final regulation in the Fall of 2023.

EPA also published its fifth Unregulated Contaminant Monitoring Rule (UCMR 5) on December 27, 2021, requiring certain public water systems to collect samples for 29 PFAS. The final rule went into effect on January 26, 2022 and will require sampling from January 2023 through December 2025.

### **Toxicity Assessments —**

EPA continues to assess human health toxicity for several PFAS chemicals and most recently finalized toxicity assessments for GenX and PFBS. The chronic reference dose for GenX and PFBS are extremely low values, 0.000003 and 0.0003 mg/kg per day, respectively. For reference, these are much lower than EPA's previously published toxicity assessments for PFOA and PFOS that were finalized in 2016. The chronic reference doses for PFOA and PFOS are 0.00002 mg/kg per day for each chemical. Because of the order of magnitude difference in chronic reference doses between GenX/PFBS and PFOA/PFOS, EPA is now committing itself to reevaluating PFOA and PFOS toxicity information and could lower these values.

### **CERCLA Hazardous Substance Designation —**

In January 2022, EPA sent a proposed rulemaking to list PFOA and PFOS as hazardous substances under CERCLA to the White House's Office of Management and Budget (OMB) for review. While the contents of this proposal are unclear until a formal Federal Register notice is published, EPA has continuously acknowledged its intent to designate PFOA and PFOS as hazardous substances requiring facilities to report releases that meet or exceed a to-be-determined reportable quantity.

### **CWA Industrial Pretreatment Program —**

EPA plans to make significant progress by the end of 2024 to restrict industrial sources through its Effluent Limitations Guidelines (ELG) program. The Agency plans to finalize its Preliminary Effluent Guidelines Plan 15 this coming Fall. EPA is preparing rulemakings to restrict PFAS discharges where it has the data to do so, which will likely include guidelines for Organic Chemicals, Plastics and Synthetic Fibers (OCPSF), metal finishing, and electroplating categories. EPA is also continuing its Multi-Industry PFAS Study to support potential future rulemakings for other industries including electrical and electronic components, textiles, and landfills and will initiate data reviews for PFAS used in leather tanning, plastics, and paint formulating.

### **Toxic Release Inventory; Emergency Planning and Community-Right-to-Know Disclosures —**

EPA announced it will begin the rulemaking process to enhance facility reporting by changing eligibility requirements for industry to escape notifications for *de minimus* PFAS concentrations. As part of the 2020 National Defense Authorization Act (NDAA), 172 PFAS chemicals were added to the Toxic Release Inventory (TRI), requiring certain facilities to report annual management activities involving these chemicals and releases under the Emergency Planning and Community Right-to-Know Act. EPA's recent 2020 National Analysis revealed potentially severe underreporting, likely due to the current *de minimis* exemption under TRI that allows chemicals in mixtures or trade name products to escape reporting requirements. The clean water community supported the addition of 172 PFAS chemicals to the TRI program, noting greater transparency would help POTWs better understand upstream sources and quantities of PFAS entering treatment systems.

### **Analytical Method Development for Non-Drinking Water Media —**

EPA, in partnership with the Department of Defense (DoD), recently published Method 1633, a draft single-laboratory validated method for sampling 40 different PFAS compounds across a range of environmental media, including wastewater, surface water, biosolids, and others. In January 2022, EPA and DoD published the corresponding Single Lab Validation Study verifying the method's accuracy and precision for the 40 analytes across environmental matrices. Method 1633 is now moving through the multi-laboratory validation study which is expected to be completed sometime in 2022.

Since Method 1633 cannot be used for compliance or enforcement purposes, EPA has approved it for use in individual National Pollutant Discharge Elimination System (NPDES) permits. Once the multi-laboratory validation study is complete, EPA will begin the process to promulgate this methodology under the Clean Water Act's Part 136 approved analytical methods.

### **NPDES Monitoring and Sampling Requirements —**

EPA's Office of Water issued a Memorandum on November 22, 2020, recommending that federally issued Clean Water Act permits include phased-in monitoring and best management practices where PFAS is expected to be present in point source wastewater and stormwater discharges. While monitoring data cannot be used for compliance or enforcement, it can be used to help identify source contributions and inform future regulatory decisions.

Recently EPA Region 1 heeded this recommendation and issued a draft NPDES General Permit for medium-sized wastewater utilities in Massachusetts to begin monitoring 6 PFAS analytes in influent, effluent, biosolids, and requiring industrial pretreatment monitoring. EPA Region 1 is the Clean Water Act permitting authority in Massachusetts. This federally-issued permit is likely to be the lodestar for state regulatory authorities to follow suit in their next round of Clean Water Act permit iterations.

### **NPDES eReporting and PFAS Analytic Tool —**

EPA is moving forward with efforts to increase transparency of PFAS reporting, testing, and occurrence data in communities and is preparing to publish a user-friendly, searchable tool under its Enforcement and Compliance History Online (ECHO) platform where the public can readily search for facilities reporting PFAS discharges. While most of this information can be found under Freedom of Information Act (FOIA) requests, NPDES permits that contain PFAS sampling or monitoring *only* requirements and carry no compliance or enforcement potential at the moment, the data collected will be electronically uploaded to the ECHO database upon reporting in discharge monitoring reports (DMRs). EPA expects to publish these tools this summer.

### **Biosolids Problem Formulation and Screening Tool —**

EPA has completed the initial work on its problem formulation and pollutant screening tool—the first step in a risk assessment—for determining potential public health and ecological risks associated with chemicals, including PFOA and PFOS, in land applied biosolids. The problem formulation and pollutant screening tool will be reviewed by the Scientific Advisory Board (SAB) which was slated to begin early in 2022 but has been pushed back to Summer 2022. If SAB recommends EPA pursue a risk assessment based on its review of the problem formulation model,

EPA will then begin the regulatory process of establishing pollutant limits—which would not be completed until 2024 or later.

### **Water Quality Criteria —**

EPA’s PFAS Strategic Roadmap declares the Agency will publish national recommended ambient water quality criteria under the Clean Water Act for PFOS and PFOA and benchmarks for other PFAS that may not have sufficient data. Before EPA can move ahead with finalizing human health criteria for PFOA and PFOS, it must first finish assessing the latest scientific information used to inform whether an updated drinking water national health recommendation is necessary. Proposed rulemakings for water quality criteria for aquatic life are expected in Winter 2022 and human health criteria in Fall 2024.

### **While EPA Actions Are Pending; States Plow Forward with PFAS Efforts**

Some states, concerned over the absence of federal regulatory action, are moving forward with establishing state-specific regulations and/or guidance documents. These actions vary, but some states have established or are in the process of establishing maximum contaminant levels (MCLs) for drinking water, narrative and numeric surface water quality standards, industrial pretreatment standards, influent, effluent and biosolids sampling and monitoring requirements, and groundwater protection standards.

Michigan, as it relates to biosolids, may be taking the most practical steps to date with its PFAS interim strategy. Faced with similar concerns over PFAS in residual land application, Michigan has initiated a focused interim strategy that bifurcates “industrially-impacted” sludges from other “non-industrially impacted” biosolids and establishes a required PFAS sampling program. Based on a tiered system, if concentrations of PFOS exceed 150 parts per billion (ppb), which the data collected indicates are more commonly found in industrial sludges than municipal biosolids, land application cannot proceed and other notification/source reduction requirements are triggered. If concentrations are below 150 ppb but above 50 ppb, land application can move forward with some additional mitigatory steps and reduced site loadings. For any sampling that results in concentrations below 50 ppb, the state is allowing land application to move forward uninhibited but recommends POTWs consider investigating upstream industrial sources and effluent sampling.

Perhaps the most aggressive to date, Maine recently prohibited land application of municipal biosolids *regardless* of PFAS concentration. Massachusetts has pending legislation that would place moratoriums on any air emissions of PFAS until both US EPA and the Massachusetts Department of Environmental Protection promulgate air quality standards, which could take many years.

### **Clean Water Advocacy Asks**

#### **Support continued protections against PFAS contamination through TSCA requirements.**

EPA proposed to use its authority under TSCA Section 8(a)(7) to require industries and producers of PFAS since January 1, 2011 to report information to the Agency including use, production volume, disposal practices and other

detailed data. Given the near indestructibility of PFAS by their very design, increased source identification and source control is imperative to truly reduce PFAS prevalence. Clean water utilities are passive receivers of PFAS and will benefit greatly from increased transparency on upstream sources of PFAS. Further, municipal wastewater treatment systems and biosolids land application are not the sources of PFAS contamination, and clean water utilities should not bear the cost of removal alone.

### **Empower the CWA pretreatment program.**

EPA should continue to identify and address high-priority PFAS discharges to municipal wastewater facilities. The pretreatment program can have a significant impact on reducing PFAS loading into municipal wastewater streams by targeting upstream industries that indirectly discharge PFAS to POTWs.

EPA should provide utilities with any additional authorities and Congress should provide the funding necessary to help clean water utilities prevent the pass-through of these constituents and interference with the treatment process.

At the state level, a key component recognized by Michigan's interim PFAS strategy, but often missing from the broader PFAS conversation is the acknowledgement that clean water utilities can implement rigorous industrial pretreatment programs that investigate, identify, mitigate, and can enforce against industrial pollutants, like PFAS, from entering the wastewater treatment system in the first place.

### **Consider unintended consequences.**

Based on toxicity information and relative risk, wastewater effluent and biosolids containing low levels of PFAS must be exempt from CERCLA liability. While low levels of PFAS can be detected with advanced analytical techniques, the amounts may be well below background levels or amounts found in everyday consumer products and household items. Domestic source contributions alone could be enough to trigger potential CERCLA liability and clean-up costs.

### **Close the scientific gaps.**

Congress must provide U.S. EPA the resources it needs to address PFAS chemicals. Closing scientific gaps in risk assessment is imperative to gain a better understanding of the concentrations of these chemicals, individually or aggregated, that pose an actual risk to public health and the environment, as well as the fate and transport pathways by which these chemicals move in the environment. A greater focus on understanding exposure routes from various media (consumer goods; food; water; air etc.) will also help guide appropriate responses to reducing PFAS risks and understanding the best opportunities for source control and reducing unnecessary exposures.

**If you have questions, please contact Emily Rimmel, NACWA's Director of Regulatory Affairs at [erimmel@nacwa.org](mailto:erimmel@nacwa.org) or 202.533.1839 or Patrick Dube, WEF's Technical Program Manager at [pdube@wef.org](mailto:pdube@wef.org) or 703.684.2418.**