Clean Water Advocacy Asks

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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 at least 3,000 known chemical varieties, that have been in commercial use for decades. While PFAS use has persisted for decades, the scientific understanding of the potential public health and environmental impacts is growing. Increased public concern and awareness is driving enhanced analytical capabilities which can now detect PFAS exists ubiquitously in the environment. PFAS can now be detected at down to 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 or manufacture 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 PFAS for the sheer volume of wastewater 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 receivers are not responsible for creating PFAS concerns yet could face severe unintended

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consequences of potential liability and clean-up costs if federal or state legislation moves forward without recognizing the key dichotomy between PFAS receivers and PFAS producers.

A CERCLA hazardous substance designation, one potential regulatory approach receiving significant interest as a means of advancing remediation of heavily contaminated sites, could create unintended consequences that hold public utilities potentially liable for cleanup costs, particularly where biosolids from the treatment process containing low levels of PFAS have been beneficially land-applied for their organic matter and fertilizer value.

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.

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

Federal Action Continues, EPA Action Plan and Other Actions

The U.S. Environmental Protection Agency (EPA) has a federal strategy to address PFAS. EPA's PFAS Action Plan, published in February 2019 and updated in February 2020, outlines this strategy and highlights progress made to date. Regulatory determinations have moved slowly, causing many stakeholders to urge more aggressive progress under various environmental statutes.

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 surface water quality standards, industrial pretreatment standards, surface water monitoring requirements, groundwater protection standards, and more.

Below are key EPA PFAS efforts in and outside the PFAS Action Plan and 2020 PFAS Action Plan Update that are relevant to the public clean water sector's advocacy efforts:

- **Drinking Water Standards —**

  EPA reissued its 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. EPA is now moving forward with developing national primary drinking water regulations for these two PFAS chemicals and may further evaluate whether additional PFAS chemicals or groups of PFAS should be included. Prior to this, EPA had issued lifetime drinking water health advisories for two of the more prominently found PFAS constituents—polyfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) at 70 ppt or 70 ng/L. Health advisories provide information on potential public health effects and offer a benchmark for evaluating when exposure to PFOA and PFOS in drinking water may present a risk; however, health advisories are non-regulatory and are not enforceable.

- **Hazardous Substance Designation —**

  In 2020, EPA issued a pre-publication notice for an Advanced Notice of Proposed Rulemaking (ANPRM) for the potential regulation of PFOA and PFOS under CERCLA and RCRA. This ANPRM was "frozen" according to a White House Memorandum issued on January 20, 2021. EPA's PFAS Action Plan and 2020 PFAS Action Plan Update both indicate the Agency's desire to move forward with the regulatory process to designate PFOA and PFOS as hazardous substances under CERCLA.

- **Industrial Pretreatment Program —**

  EPA published its biennial Effluent Guidelines Program Plan 14 in January 2021. Plan 14 included new and revised effluent guidelines and standards (ELGs) for certain industries and provided some insight into the PFAS multi-industry study, which is examining discharges from organic chemical manufacturers, airports, rug and textile manufacturers, pulp and paper mills, and the metal finishing category. EPA is currently soliciting data through an ANRPM for PFAS manufacturers and formulators. This data collection may lead to effluent guidelines for industry and pretreatment standards for clean water utilities.

- **Destruction and Disposal —**

  EPA published draft interim guidance on destroying and disposing certain PFAS and PFAS-containing materials. While EPA's interim guidance is narrow and acknowledges that land application of biosolids is not a destruction or disposal technique and is therefore outside the scope of the document, the vague language in the document alludes that biosolids land application is a pathway for PFAS-migration and contamination.

- **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. Monitoring requirements would be triggered at a time after EPA's analytical methods are "made available" to the public and published on EPA's website. These provisions only impact the few states whose CWA permits are issued directly by USEPA, but the provisions could ultimately guide state-issued CWA permits too.

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

  Currently, only drinking water has an EPA-approved analytical method. EPA is working to develop analytical methods for aqueous and solid samples (e.g., soil, biosolids, and sediment). EPA is close to finalizing Method 8327, a direct injection method, and is in the initial stages of developing an isotope dilution analytical method.

- **Biosolids Risk Assessment —**

  EPA continues its problem formulation—the first step in a risk assessment—for determining potential public health and ecological risks associated with PFOA and PFOS in land applied biosolids. This process includes a review by the Scientific Advisory Board which is expected to begin Spring 2021.

- **Water Quality Criteria —**

  EPA's Action Plan and 2020 PFAS Action Plan Update mentions the development of ambient water quality criteria under the Clean Water Act, if there is sufficient data. Proposed rulemakings for water quality criteria could be likely for human health in 2021 and for aquatic life in 2022.

- **Groundwater Remediation Levels —**

  In 2019 EPA published interim guidance recommending a groundwater screening level of 40 ppt to determine if PFOA/PFOS is present at a site and may warrant further attention.

Advocacy Asks

Support adding protections against PFAS contamination to TSCA requirements.

U.S. EPA should develop better source control strategies and better use existing statutory authority to control PFAS at its source. Given the near indestructibility of PFAS by their very design, source control is imperative to truly reduce PFAS prevalence. Since clean water utilities are passive receivers of PFAS, 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.

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

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.

Close the scientific gaps.

Congress must provide U.S. EPA the resources it needs to address PFAS chemicals. Closing scientific gaps on 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.

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