

ADDRESSING PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Internal deliberative pre-decisional - FOR USE BY 2024 PRESIDENT-ELECT TRANSITION TEAM MEMBERS ONLY

ISSUE SUMMARY:

EPA has undertaken coordinated, cross-agency action to address the human health and environmental risks of per- and polyfluoroalkyl substances (PFAS) contamination since 2019 described in the PFAS Action Plan and since 2021 under the PFAS Strategic Roadmap. EPA's October 2021 *PFAS Strategic Roadmap: Commitments to Action 2021-2024* built on the Action Plan and discusses commitments and timelines for specific actions EPA has taken or is taking to restrict, remediate, and research PFAS across its key environmental programs. The Roadmap describes key actions for

- The Office of Chemical Safety and Pollution Prevention (under the Toxic Substances Control Act (TSCA), Toxics Release Inventory (TRI), and other statutes);
- The Office of Water (under the Safe Drinking Water Act (SDWA) and Clean Water Act (CWA));
- The Office of Land and Emergency Management (under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or Superfund; and the Resource Conservation and Recovery Act (RCRA));
- The Office of Air and Radiation (under the Clean Air Act (CAA));
- The Office of Research and Development (under multiple authorities); and
- The Office of Enforcement and Compliance Assurance (under multiple authorities).

EPA reached foundational milestones in the PFAS Strategic Roadmap in spring 2024 with final drinking water regulatory standards for six PFAS and final CERCLA designations for two PFAS, PFOA and PFOS. EPA committed to issuing final public progress reports on PFAS each year, including reports published in November 2022 and December 2023, and plans to publish an additional report in 2024.

Since its creation in April 2021, the EPA Council on PFAS has led development and implementation of the PFAS Strategic Roadmap. The PFAS Council includes senior technical and policy leaders from across the EPA programs listed above and from several EPA Regions. The Council is currently co-chaired by senior AA/RA leaders in the Office of Chemical Safety and Pollution Prevention and Region 1. EPA also coordinates its efforts with other federal agencies through the White House Council on Environmental Quality (policy coordination) and the White House Office of Science and Technology Policy (research and development coordination).

KEY POINTS:

PFAS are a class of chemicals that include carbon-fluorine bonds that have been manufactured and used for decades. Because PFAS can confer resistance to oil and water and withstand high temperatures, they are used in a variety of applications, including firefighting foams, food packaging and contact materials, textiles, and various industrial uses. PFAS are generally resistant to complete degradation in the environment due to their strong carbon-fluorine bonds and therefore pose a potential threat to human and environmental health because of their persistence in the environment and bioaccumulation in organisms. Due to their widespread use and environmental persistence, most people in the United States have been exposed to certain PFAS. PFAS are a concern to human health due to their known or suspected toxicity. Their health effects are better known for some PFAS, and the most commonly known and studied PFAS include perfluorooctanoic acid (PFOA), perfluorooctane sulfonate (PFOS), and hexafluoropropylene oxide dimer acid (HFPO-DA) (also known as 'GenX chemicals'). Current scientific research suggests that exposure to certain PFAS may lead to adverse health outcomes, including reproductive and developmental effects, weakened ability to fight disease, increased risks for some cancers, liver damage, and elevated cholesterol.

In October 2021, EPA issued the PFAS Strategic Roadmap, a strategic, whole-of-EPA approach to protect public health and the environment from PFAS through concrete actions to research, restrict, and remediate these chemicals. In

December 2023, EPA released its second-annual public progress report highlighting EPA's key accomplishments to safeguard public health and the environment from these dangerous 'forever chemicals.' That report highlighted EPA's whole-of-agency progress on PFAS, including:

- Making PFAS use safer through robust chemical reviews and improving data on how PFAS are released and used;
- Holding polluters accountable by prioritizing PFAS in enforcement and compliance and working toward final hazardous-substance designations (*since finalized*);
- Protecting America's drinking water through first-ever proposed drinking water standards (*since finalized*) and nationwide drinking water monitoring;
- Deploying infrastructure funding through the Bipartisan Infrastructure Law (BIL) to address PFAS in drinking water and wastewater;
- Preventing PFAS pollution using CWA permitting and regulatory authorities;
- Advancing the science of PFAS toxicity, exposures, and methods;
- Incorporating equity and environmental justice through analysis, targeted funding, data collection, and tools; and
- Listening to and learning from communities through virtual listening sessions and recommendations from key advisory committees.

Additional details on EPA's actions in each of these areas are included below.

Making PFAS Use Safer

EPA is working to make PFAS use safer by taking action under TSCA and TRI. EPA is using TSCA and TRI as foundational tools to enhance oversight of new and existing PFAS and to improve data on how PFAS are released and used. EPA has:

- Finalized rules for PFAS reporting under TSCA and TRI to provide significant new data on PFAS uses and releases;
- Released a framework for reviewing new PFAS to ensure a robust review process and no unreasonable risk to human health and the environment;
- Proposed to make new PFAS categorically ineligible for low-volume or low-release exemptions, ensuring new PFAS would go through the full robust safety review process;
- Finalized a rule on 329 legacy PFAS to prevent their resumed manufacture without a complete EPA review and risk determination; and
- Issued test orders to better understand categories of PFAS under the National PFAS Testing Strategy.

EPA is also working to reduce the presence of PFAS in products purchased by the federal government. In January 2024, EPA updated its online list of Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing with a new feature that highlights how these standards and ecolabels address PFAS. In April 2024, EPA and the General Services Administration announced the launch of a new "PFAS Addressed" filter in one of GSA's main product research tools, and an effort to cut PFAS from U.S. government custodial contracts. EPA has also worked to evaluate and address the presence of PFAS in fluorinated plastic containers and to develop methods to detect PFAS in pesticide products.

Holding Polluters Accountable

EPA is holding PFAS polluters accountable by using the full breadth of EPA's enforcement tools to identify and address PFAS contamination that poses a risk to human health and the environment. In 2023, EPA announced that "addressing exposure to PFAS" would be one of EPA's six National Enforcement and Compliance Initiatives for Fiscal Years 2024-2027. Under this initiative, EPA is continuing its proactive approach to use its enforcement tools to better identify and address PFAS releases at facilities. Near military installations with known, significant, PFAS contamination, for example, EPA is sampling private drinking water wells to assess whether alternative drinking water is needed. EPA continues to ensure federal facilities on the CERCLA National Priorities List are meeting their enforceable Federal Facility Agreement requirements.

In spring 2024, EPA issued a PFAS CERCLA enforcement discretion policy, a supplement to the CERCLA hazardous substance designations, that makes clear that EPA will focus enforcement on those who significantly contributed to the release of

PFAS into the environment, such as manufacturers and users of PFAS, federal facilities that are significant sources of PFAS, and other industrial parties.

Protecting America's Drinking Water

In April 2024, EPA issued the first-ever national, legally enforceable drinking water standard to protect communities from exposure to harmful PFAS. This rule sets limits for five individual PFAS: PFOA, PFOS, PFNA, PFHxS, and GenX Chemicals. The rule also sets a limit for mixtures of any two or more of four PFAS: PFNA, PFHxS, PFBS, and GenX chemicals. By reducing exposure to PFAS, this final rule will prevent thousands of premature deaths, tens of thousands of serious illnesses, including certain cancers and liver and heart impacts in adults, and immune and developmental impacts to infants and children. The new limits in this rule are achievable using a range of available technologies and approaches including granular activated carbon, reverse osmosis, and ion exchange systems. EPA is working closely with state co-regulators in supporting water systems and local officials to implement the rule.

EPA is also taking important steps to monitor drinking water in communities across the country through our fifth Unregulated Contaminant Monitoring Rule (or UCMR 5). Compared to a previous round of monitoring from 2013-2015, UCMR 5 is testing for nearly five times more PFAS (29), at significantly more water systems, and using methods that can detect PFAS at much lower levels. EPA is regularly releasing the data collected under UCMR 5 on a quarterly basis.

Deploying \$10 Billion in Infrastructure Through the Bipartisan Infrastructure Law

The BIL is making transformational investments in America's water infrastructure, especially in the area of addressing PFAS and other emerging contaminants. The BIL builds on the research, restrictions, and remediation called for in the PFAS Roadmap by providing \$10 billion for communities impacted by PFAS and other emerging contaminants, especially in small or disadvantaged communities. All of these funds are provided without a requirement for state matching funds, and all funds are provided either as grants or principal-forgiveness loans. The BIL provides the \$10 billion under the following three programs:

- \$4 billion through the Drinking Water State Revolving Fund;
- \$1 billion through the Clean Water State Revolving Fund; and
- \$5 billion in grants to address emerging contaminants in small or disadvantaged communities.

Preventing Clean Water Act PFAS Pollution

EPA is focused on limiting PFAS pollution to waterways using its CWA permitting and regulatory authorities, which are key tools to safely remove PFAS pollution before it enters the environment or wastewater streams. EPA has taken several steps to use CWA permitting and regulatory authorities to restrict PFAS—including:

- Developing Effluent Limitations Guidelines rules to limit PFAS discharges to waterways, including upcoming proposed rules in 2024 for PFAS manufacturers and in 2025 for metal finishers, future rulemaking to address PFAS discharges from landfills, and carrying out a Publicly Owned Treatment Works influent study;
- Releasing guidance to states in December 2022 on how to leverage CWA permits and pretreatment programs to increase monitoring and to reduce PFAS discharges to waterways, including at known or suspected dischargers of PFAS; and
- Releasing final CWA PFAS methods to measure more PFAS in more places, including two final methods released in January 2024 that measure for 40 PFAS chemicals in eight different types of environmental media (EPA Method 1633), and that screen for levels of organic fluorine in wastewater (EPA Method 1621).

Cleaning up PFAS Contamination

In April 2024, EPA released a final rule that designates PFOA and PFOS as hazardous substances under CERCLA. The rule will increase transparency on PFOA and PFOS releases and help to hold polluters accountable for cleaning up their contamination. At the same time, EPA continues to work closely with stakeholders to better understand and address equity concerns, and (as noted above) EPA released a separate PFAS CERCLA enforcement discretion and settlement policy in April 2024.

In April 2024, EPA also released updated interim guidance on the destruction and disposal of PFAS-containing materials, building on an earlier document the Agency issued in 2020 as required by the Fiscal Year 2020 National Defense Authorization Act. Congress requires EPA to update this guidance every three years. The updated guidance reflects the latest, best-available science to provide information that managers of PFAS wastes can use to evaluate the most appropriate destruction, disposal, or storage method among those currently available. The guidance also recommends that decision-makers prioritize the use of technologies with the lowest potential for environmental release.

In February 2024, EPA proposed two rules that would amend regulations under RCRA. With these proposals, EPA is working to protect communities by strengthening its ability to address PFAS contamination and other emerging chemicals of concern under RCRA. In the first rulemaking, EPA is proposing to amend its RCRA regulations by adding nine PFAS compounds, their salts, and their structural isomers, as hazardous constituents. In the second rulemaking, EPA is proposing to modify the definition of hazardous waste as it applies to cleanups at permitted hazardous waste facilities to assure that EPA's regulations clearly reflect authority to require cleanup of PFAS and other emerging chemicals of concern where they pose a substantial hazard. EPA is currently reviewing public comments received on these proposals.

Advancing the Science of PFAS Exposures, Toxicity, and Methods

Science and research are the foundation of EPA's work on PFAS. EPA is working to improve the scientific understanding of PFAS in three primary areas:

- First, developing and validating methods to detect and measure PFAS in the environment;
- Second, advancing the science to assess human health and environmental risks from PFAS; and
- And third, evaluating and developing technologies for reducing PFAS in the environment.

EPA is investing in research to fill gaps in our understanding of PFAS, including research to characterize the toxicity of additional PFAS and mixtures of PFAS; to study the contributions of different sources to people's overall exposure to PFAS; and to develop methods to test, measure, remove, and destroy them.

Incorporating Equity and Environmental Justice

EPA is incorporating equity and environmental justice into its PFAS work through analyses, targeted funding, data collection, and tools. EPA is delivering on its Roadmap commitment to ensure that all communities have equitable access to solutions, and to integrate recommendations from the National Environmental Justice Advisory Council. EPA has incorporated a focus on PFAS responses and resources into its PFAS work, while:

- Weaving environmental justice analyses into the Agency's PFAS regulatory actions;
- Targeting unprecedented infrastructure investments and technical assistance to small and disadvantaged communities; and
- Collecting and releasing data to deepen our understanding of how PFAS may impact communities with environmental justice concerns.

Listening to and Learning from Communities

EPA has been listening to and learning from communities through virtual listening sessions and recommendations from key advisory committees. The Agency held a series of community engagement sessions in early 2023 in each of its 10 Regions, as well as a session specifically designed to hear from EPA's Tribal partners. Feedback shared during these sessions continue to inform the Agency's policy, infrastructure, and communications work – as well as recommendations from EPA's environmental justice and local government advisory committees.

ONGOING/UPCOMING REVIEWS FOR FY2024:

EPA expects to take additional actions under the PFAS Roadmap later in 2024, including:

- A proposed rule for adding additional PFAS to the TRI;
- Additional TSCA test orders for specific PFAS under the National PFAS Testing Strategy;
- A proposed Effluent Limitations Guidelines rule to address PFAS discharges from the PFAS manufacturing industrial category (Organic Chemicals, Plastics and Synthetic Fibers);

- A proposed rule to revise CWA National Pollutant Discharge Elimination System permit application forms to include PFAS;
- Final list of PFAS for use in fish advisory programs
- Final recommended aquatic life ambient water quality criteria for PFOA and PFOS
- Public notice draft human health water quality criteria for PFOA and PFOS; and
- Public notice draft risk assessment for PFOA and PFOS in biosolids

In 2024, EPA will be prioritizing implementation of its recently finalized regulatory actions SDWA and CERCLA.

KEY EXTERNAL STAKEHOLDERS:

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| <input checked="" type="checkbox"/> Congress | <input checked="" type="checkbox"/> Industry | <input checked="" type="checkbox"/> States | <input checked="" type="checkbox"/> Tribes | <input checked="" type="checkbox"/> Media | <input checked="" type="checkbox"/> Other Federal Agency |
| <input checked="" type="checkbox"/> NGO | <input checked="" type="checkbox"/> Local Governments | <input checked="" type="checkbox"/> Public | | | |

MOVING FORWARD:

As EPA nears the end of the 2021-2024 timeline of the PFAS Strategic Roadmap, external stakeholders are increasingly seeking clarity from EPA on priority actions the agency will take from 2025 and beyond.