

FAST NEWS ON PFAS NEWSLETTER

In the fast-paced news cycle of PFAS, discerning priorities can be a challenge. Weston's PFAS newsletter takes you out of the minutia and into the bigger picture. We have assembled key regulatory updates, expert insights, and state-of-the-science facts, and distilled them to the essentials of what you need to know, why it matters, and how it could impact you. Make this quick quarterly newsletter your starting point to understanding the latest information on PFAS.

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GOVERNMENT ACCOUNTABILITY OFFICE'S REPORT ON PERSISTENT CHEMICALS

The report titled "Persistent chemicals: DoD needs to provide Congress more information on costs associated with addressing PFAS" (Report), issued by the U.S. Government Accountability Office (GAO), examines the Department of Defense's (DoD) efforts to address impacts from per- and polyfluoroalkyl substances (PFAS) at military installations (U.S. Government Accountability Office, 2025).

Since 2017, the DoD has spent \$2.6 billion addressing PFAS releases resulting from the use of firefighting agents and activities such as metal plating. These releases have potentially exposed service members, their families, and surrounding communities to PFAS. With the cleanup process expected to take decades and cost billions of dollars more, the National Defense Authorization Act for Fiscal Year 2024 tasked the GAO to assess the DoD's PFAS remediation efforts. The resulting report analyzes the pace, thoroughness, and cost of these efforts, drawing on DoD and U.S. Environmental Protection Agency (EPA) guidance, regulations, and interviewing officials.

- **What You Need to Know:** The report aims to describe the status of DoD's efforts to characterize and remediate PFAS at current and former installations; assess the extent to which DoD's efforts to-date are on pace, thorough, and cost-effective; and describe the steps the DoD has taken to address the challenges related to investigating and remediating PFAS. The GAO notes that although there are thousands of PFAS, the DoD's efforts are focused on the 10 chemicals that have final peer-reviewed toxicity values: PFOS, PFOA, PFBA, PFBS, PFNA, PFHxA, PFHxS, TFSI, GenX, and PFPrA.

GAO's methods for achieving the objectives of their report included:

Data Collection and Analysis: The GAO's analysis of DoD's PFAS investigation and cleanup efforts, from fiscal years (FY) 2017 to 2024, involved both data collection and data analysis. This included obtaining and reviewing DoD reports sent to Congress, analyzing the number of installations identified, the completion of preliminary assessments and site inspections, and the number of installations where interim removal actions are being or will be performed.

Document Review: To evaluate the thoroughness of the DoD's PFAS efforts and understand reporting requirements, the GAO reviewed relevant documents, including DoD guidance and PFAS Task Force memorandums.

► Progress on DoD PFAS Investigations and Removal Actions

DoD has completed initial assessments at 712 of 718 installations (>99%). Of those, 132 installations were deemed "no further action needed." However, following the EPA's promulgation of PFAS National Primary Drinking Water Regulations, 60 installations will need reevaluation and may need additional remedial investigations.

As of June 2024, the DoD has completed the following measures to mitigate imminent PFAS risks:

- **Completed 85 on-base interim removal actions at 47 installations.**
- **Planned on-base interim removal actions at 15 installations.**
- **Currently performing off-based interim removal actions at 55 installations.**

Interviews: Interviews with DoD and service environmental restoration officials, including officials from the PFAS Task Force, were conducted to understand how DoD identified installations with potential PFAS releases, conducted assessments, and tracked the status of its efforts.

Random Sampling: A nongeneralizable sample of 18 installations across a range of cost and pace categories was selected by GAO to analyze the thoroughness of specific activities, including environmental analyses, land surveying, and sampling procedures.

Regulatory Review: EPA regulations and DoD's related implementing guidance were reviewed to understand the impact of new and upcoming PFAS-related regulations and policies on DoD's efforts.

Challenges and Mitigation: Challenges faced by DoD in investigating and remediating PFAS, and the steps taken to address these challenges, were identified. Key challenges include limited treatment technology, the vast number of installations undergoing investigation/remediation, rapidly evolving PFAS regulations, shifting PFAS analytical methods, and the ubiquitous nature of PFAS.



Source: GAO analysis of DoD information (GAO-25-107401)

► **Impact:** The Report recommends that the DoD enhance its reporting to Congress by providing more comprehensive information on the total fiscal liability related to PFAS investigations and cleanups. This includes detailed explanations and examples of how changing assumptions about key cost drivers may affect future cost estimates. For example, the DoD estimates that for FY 2025 and beyond more than \$9.3 billion will be needed to complete future investigation and cleanup efforts. This number has more than tripled since 2022. Additionally, the study recommends that the DoD conduct risk and uncertainty analyses to guide decision-makers about potential cost ranges and drivers. These steps will help Congress make more informed decisions regarding future funding for PFAS investigation and cleanup activities.

Table 1: DOD Actual and Estimated Costs for the Investigation and Cleanup of PFAS (in millions)

	Through	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025 and	Total
		actual	actual	actual	actual	beyond	actual+ estimated
Investigate		673.1	352.1	339.5	142.3	989.7	2,496.70
Cleanup		351.1	62.3	82.7	55.3	6100	6651.4
Total		1024.2	414.4	422.2	197.6	7089.7	9148.1

Source: DOD PFAS Report to Congress (GAO-25-107401)

Note: Spending as of May 2024. The table includes active installations, National Guard facilities, and Formerly Used Defense Sites with funding provided by either the environmental restoration or operation and maintenance appropriation accounts. This table does not include PFAS investigation and cleanup costs at Base Realignment and Closure locations with funding provided by military construction appropriation accounts.

The Report carries significant implications across future policy, funding, public health, technology, and regulatory compliance decisions. By providing comprehensive information on the full scope of financial liabilities associated with PFAS cleanup, Congress will be better equipped to make informed long-term planning and budgeting decisions. Furthermore, effective remediation efforts are crucial for mitigating the environmental impact of these persistent chemicals, thereby safeguarding the health of service members, their families, and surrounding communities. Achieving efficient and effective cleanup requires innovation and investment in PFAS investigation and remediation technologies. Finally, the DoD must maintain alignment with evolving regulations, issuing clear guidance to mitigate legal and financial risks. Collaborative efforts with the EPA and state regulators are also essential for establishing and meeting consistent cleanup standards.

DRAFT SEWAGE SLUDGE RISK ASSESSMENT FOR PFOA AND PFOS

The Draft Sewage Sludge Risk Assessment for PFOA and PFOS (Draft Risk Assessment), released by the EPA in January 2025, characterizes “the potential human health and environmental risks associated with the land application, surface disposal, and incineration of sewage sludge containing PFOA and PFOS” (EPA, 2025). EPA prioritized evaluation of PFOA and PFOS in biosolids because they are the two most widely studied chemicals, were produced in high volumes, and are prevalent in the environment. Furthermore, the presence of PFOA and PFOS in wastewater treatment plant effluents and sewage sludges is well documented. These contaminants originate from commercial and industrial discharges, and potentially from domestic use of consumer products.

For the purposes of the Draft Risk Assessment, EPA defines biosolids as “treated sewage sludge intended for land application as a soil amendment or fertilizer” (EPA, 2025). This definition is significant because EPA acknowledges that biosolids can be applied to pastures, feed crops, crops for direct human consumption, forests, tree farms, golf courses, turf farms, and other types of land.

► **What You Need to Know:** The EPA’s acceptable risk thresholds may be exceeded in certain scenarios when sewage sludge containing PFOA and PFOS is land-applied for beneficial reuse, leading to adverse environmental risks such as wildlife and aquatic organism harm, as well as soil/groundwater contamination. The persistence and bio accumulative properties of these chemicals are the primary drivers of this negative impact, posting a significant concern for those near, or consuming products from, areas where sewage sludge is applied.

Data gaps identified in the Draft Risk Assessment:

- Limited data on the efficacy of sewage sludge incinerators in destroying PFOA and PFOS, as well as the health effects of exposure to the products of incomplete combustion.
- Additional data are needed to fully understand the fate and transport of PFOA and PFOS in soil and water systems.
- Comprehensive data gaps remain regarding exposure pathways for individuals living on, near, or consuming products from land on which biosolids are applied, including PFOA and PFOS bioaccumulation in crops and livestock.
- Ongoing data gaps persist on the long-term health effects of exposures to low concentrations of PFOA and PFOS.

Improved risk assessment models and more data are needed to refine risk assessments and to fully capture the variability and uncertainty associated with exposures to PFOA and PFOS.

On January 15, 2025, the comment period for the Draft Risk Assessment was extended to April 16, 2025. As of March 10, 2025, 15 comments have been received, largely acknowledging the need for regulation. However, the primary concerns pertain to the feasibility and cost of implementing the standards, as well as the need for flexibility to accommodate industry practices.

► **Impact:** As anticipated, the primary comments on the draft risk assessment note the technical and financial challenges most wastewater treatment facilities will face to adequately address the risk associated with PFOA and PFOS in sewage sludge. Conventional wastewater treatment systems do not remove or destroy these contaminants, and current technologies effective for PFAS removal are not well suited for a complex medium like wastewater, resulting in PFAS release through effluent and sewage sludge (Houtz E. W.-S., 2018) (Houtz E. S.-S., 2016). These limitations result in technically complex and high-cost solutions, potentially unsustainable for many wastewater utilities. Consequently, utilities may attempt to pass costs to upstream industries, which in turn could burden consumers or result in facility closures, triggering a cascade of economic impacts.

Despite these potential drawbacks, regulating PFOA and PFOS in sewage sludge offers significant benefits. It would likely enhance environmental quality, improve food safety, and yield positive health outcomes for populations exposed to PFAS-contaminated biosolids. Moreover, by highlighting data gaps in the Draft Risk Assessment, the EPA has identified crucial areas for further research, which will not only refine this single regulation but also provide critical data for the environmental investigation and cleanup community.

LET’S MEET UP!



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