

1 Introduction

PFAS regulation is an area of rapidly changing information. Human health protection is the primary focus of the regulations, guidance, and advisories developed to date. Available regulatory and guidance values developed by federal, state, and international authorities for PFAS in water and soil are summarized in regularly updated PFAS Water and Soil Value Tables found at <https://pfas-1.itrcweb.org/fact-sheets/>. The PFAS regulatory values and criteria vary between programs due to the selection and interpretation of different key toxicity studies, exposure assumptions, choice of uncertainty factors, and approaches used for animal-to-human extrapolation. Additional information is available in the Guidance Document.

ITRC has developed a series of fact sheets that summarize recent science and emerging technologies regarding PFAS. The information in this and other PFAS fact sheets is more fully described in the **ITRC PFAS Technical and Regulatory Guidance Document (Guidance Document)** (<https://pfas-1.itrcweb.org/>).

This fact sheet highlights:

- Federal regulatory programs
- State regulatory programs
- Available regulations, advisories, and guidance

2 United States Federal Programs

Regulatory or guidance initiatives for PFAS by both the USEPA and the U.S. Food and Drug Administration (FDA) are summarized in this section. The USEPA's efforts and future priorities can be found in the USEPA PFAS Action Plan (<https://www.epa.gov/pfas/epas-pfas-action-plan>).

Other U.S. federal agencies and programs are actively involved in PFAS-related matters. For example, the U.S. Centers for Disease Control and Prevention (CDC) National Health and Nutrition Examination Survey (NHANES) program has been assessing the exposure of the U.S. population to certain PFAAs since 1999, and in recent years expanded their analysis to evaluate certain PFAAs in urine (Kato et al. 2018). The U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR) has funded studies to assess exposure and health effects of PFAS (<https://www.atsdr.cdc.gov/pfas/index.html>). Through SERDP and ESTCP, the U.S. Department of Defense (DOD) funds projects to assess PFAS occurrence, fate and transport, ecotoxicity, and remediation, as well as fluorine-free firefighting foams (<https://www.serdp-estcp.org/Featured-Initiatives/Per-and-Polyfluoroalkyl-Substances-PFASs>).

USEPA Safe Drinking Water Act (SDWA). The SDWA protects public drinking water supplies in the United States (USEPA 1974). USEPA has not established regulations for any PFAS under the SDWA. In 2016, the USEPA established a lifetime health advisory (LHA) of 70 nanograms per liter (ng/L) for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) (individually or combined) in drinking water. The third round of sampling in the SDWA Unregulated Contaminant Monitoring Rule (UCMR) program, conducted during 2013 – 2015, collected occurrence data for six perfluoroalkyl acids (PFAAs) in public drinking water. In February 2020, USEPA announced a proposed regulatory determination for PFOS and PFOA in drinking water. Information is included in the USEPA PFAS Action Plan, at the link given above.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) —“Superfund”. At the time of publication, no PFAS are listed as CERCLA hazardous substances. However, the USEPA is continuing to move forward with the regulatory process for proposing to designate PFOA and PFOS as hazardous substances under CERCLA. Information is included in the USEPA PFAS Action Plan, at the link given above.

Toxic Substances Control Act (TSCA). TSCA authorizes the USEPA to require reporting, record keeping, testing, and restrictions of chemicals and chemical mixtures that may pose a risk to human health or the environment. With the passage of a supplemental significant new use rule (SNUR) in June 2020, the USEPA has now restricted the manufacture, use, and import of hundreds of long-chain PFAS (<https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-and-polyfluoroalkyl-substances-pfas>).

Toxics Release Inventory (TRI) Program. The TRI program requires that companies annually report the environmental release of certain chemicals that the USEPA has concluded cause cancer, significant acute adverse human health effects, or significant adverse environmental effects. In 2020, the TRI program added 172 PFAS to the list of chemicals with reporting requirements (<https://www.epa.gov/toxics-release-inventory-tri-program/implementing-statutory-addition-certain-and-polyfluoroalkyl>).

Resource Conservation and Recovery Act (RCRA). RCRA provides the USEPA with the authority to regulate hazardous waste management, nonhazardous solid waste facilities and practices, and underground storage tanks holding petroleum or certain hazardous substances. At the time of publication, no PFAS have been formally listed as RCRA hazardous waste for regulation under this program.

Regulation of Per- and Polyfluoroalkyl Substances (PFAS) *continued*

Clean Water Act (CWA). The CWA gives the USEPA authority to control water pollution by regulating discharges into the nation's surface water, with wastewater standards for industry. There are no federal water quality standards for any PFAS at this time. USEPA's Final 2016 Effluent Guidelines Program Plan (May 2018) lists PFAS as a topic for future investigation (USEPA 2018f).

Clean Air Act (CAA). There are no federal air emission standards for PFAS at this time.

US Food and Drug Administration (FDA). The FDA regulates certain PFAS used as grease-proofing agents for food packaging. The FDA has banned three legacy perfluoroalkyl ethyl compounds from use in food packaging material (81 FRN 5, Jan. 4, 2016). In July 2020, the FDA announced that three manufacturers will voluntarily phase out food contact substances that contain 6:2 FTOH beginning in January 2021. A fourth manufacturer previously stopped U.S. sales of 6:2-FTOH-containing products. Certain side-chain acrylate and methacrylate fluoropolymers are currently approved and used in food contact materials.

National Defense Authorization Act (NDAA). The NDAA for Fiscal Year 2020 requires DOD to comply with several requirements, including: sharing monitoring and detection data with municipalities; establishing a clearinghouse for PFAS drinking water exposure data for DOD personnel, their families, and communities; providing blood testing for PFAS for all DOD firefighters during annual physical exams; and ensuring that water contaminated with PFOA or PFOS above USEPA's LHAs from DOD activities is not used for agricultural purposes (<https://www.congress.gov/bill/116th-congress/senate-bill/1790/text>).

3 State Programs

Several state regulatory agencies have been actively addressing PFAS contamination across multiple regulatory programs. Examples of key state programs at the time of publication for water, soil, remediation, hazardous substances, and consumer products are described below. For more information, see the Guidance Document.

Product Labeling and Consumer Protection Laws. Regulations limiting exposure to select PFAS in certain consumer products exist or are being developed in several states, including California (consumer products, carpets, rugs, and leather treatments), New York (food packaging), Maine (food packaging), and Washington State (food packaging). Washington state also requires reporting of PFOS and PFOA in children's products. Some states are considering legislation to prohibit or limit the use of PFAS in food contact materials.

Designation as Hazardous Waste or Hazardous Substance. States that regulate PFAS as hazardous wastes or hazardous substances include Vermont, New York, New Jersey, Colorado and Alaska. At the time of publication, several other states are in the process of developing such regulations.

4 Available Regulations, Advisories, and Guidance

At the time of publication, some states have established or are in the process of establishing guidance and/or standards for (examples listed): fish tissue (Michigan), use in AFFF (New York) and land application of biosolids (Maine). States with anti-degradation policies (California, Minnesota) utilize those policies and others for evaluating PFAS discharges and cleanups at spill and industrial cleanup sites. The ITRC PFAS Water and Soil Value Tables summarize available guidance values and are updated regularly <https://pfas-1.itrcweb.org/fact-sheets/>.

5 References and Acronyms

The references cited in this fact sheet and further references can be found at <https://pfas-1.itrcweb.org/references/>. The acronyms used in this fact sheet and in the Guidance Document can be found at <https://pfas-1.itrcweb.org/acronyms/>.



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