

1 Introduction

This fact sheet summarizes concerns of stakeholders who have been or may be affected by PFAS contamination. The term “stakeholder” is defined broadly by ITRC as members of environmental organizations, community advocacy groups, tribal entities or other citizens’ groups that deal with environmental issues, or a concerned citizen who is not a member of any organization or group.

Stakeholders are located worldwide, as PFAS have been detected in ecological receptors (animals and plants) and blood serum in many humans around the globe, and linked to releases of PFAS to the environment.

Given that PFAS are emerging contaminants, the lack of scientific knowledge about many PFAS may be an impediment for educating stakeholders, leading to misconceptions and controversy over the development of site-specific characterization and remediation strategies. As such, early and effective community engagement is imperative. For further information about risk communication and stakeholder engagement, refer to the Guidance Document and the ITRC Risk Communication Toolkit.

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

This fact sheet describes general stakeholder perspectives associated with environmental impacts of PFAS.

2 Stakeholder Concerns

This section summarizes many concerns expressed by stakeholders. This list is not all inclusive, as developments in science and identification of contaminants in the environment are likely to lead to additional concerns. This list is not intended to be a definitive statement of the technical merits of these concerns.

PFAS Impacts to Human Health and the Environment

- Evaluation of exposure levels and potential human health consequences are of paramount concern to stakeholders.
- Lack of disclosure of information on the health effects of all PFAS by product manufacturers
- Lack of comprehensive monitoring information for drinking water
- Limited programs for health monitoring and blood testing
- Numerous questions about the safety of short-chain substitutes used as replacements for long-chain products.

Uses of PFAS

- PFAS in consumer products, such as carpets, cookware, stain resistant fabrics and waterproof clothing
- PFAS in food packaging, such as molded dishes, and boxes that are “grease proof”
- Lack of disclosure by product manufacturers about PFAS content

Management of PFAS-containing Wastes

- Potential PFAS contamination in recycling and compost
- Wastewater discharges that may contain PFAS
- Wastewater sludge and other biosolids used for soil amendments may contain PFAS
- Landfill leachate may contain PFAS
- Stormwater discharges may contain PFAS
- Lack of scientific evidence that current PFAS cleanup methods and remedies are fully protective of human and ecological health and prevent toxic emissions

Management of AFFF

- All release sites should be thoroughly investigated. This includes military bases and airports with fire training facilities or that have used AFFF, crash sites (both airplanes and other modes of transport where AFFF was used), and other fuel storage and refining facilities where AFFF was used.
- Unused AFFF should be disposed of safely. There is a lack of regulation for incineration of unused AFFF. Incineration of AFFF may create dangerous byproducts.
- Lack of warning of potential hazards to first responders who have used, or have the ability to use AFFF

Stakeholder Perspectives Associated with Environmental Impacts of Per- and Polyfluoroalkyl Substances (PFAS) *continued*

Regulations for PFAS

- No advisories for thousands of PFAS
- Desire for one standard/screening level approach for PFAS, similar to PCBs or dioxin/furan
- Lack of toxicological data for most PFAS and PFAS mixtures, and communities advocate for use of a precautionary approach regarding use, treatment, and analysis of PFAS, until such time as they are proven safe by toxicological data.
- Need to reduce limitations in sampling and analytical methods
- Advisories/standards are generally limited to drinking water, with a lack of advisories for food consumption, occupational exposure and ecological risk.

Other Community Concerns

- Economic consequences of local PFAS contamination
- Psychological effects

3 Specific Tribal Stakeholder Concerns

In addition to the concerns in Section 2 above, federally recognized tribes may have additional concerns, given that the tribes are each culturally, governmentally, and socially unique, and view any level of contamination of their lands and natural and cultural resources as unacceptable. For PFAS contamination, additional considerations important to tribes include impacts to:

- plants and animals (e.g., birds, feathers, game animals, and herbs) and water with religious or cultural significance
- surface waters and lakes used for fishing where these areas are relied on for sustenance
- limited drinking or irrigation water resources in the arid Southwest
- the environment from AFFF releases, given that tribal lands are often close to installations that used AFFF (notably DOD) or other industrial sources of PFAS (e.g., manufacturers, leather tanneries).
- occupational exposures from use of PFAS-containing chemicals through inhalation and dermal exposure
- the environment from landfills, as outside waste may have been disposed on tribal land, but the sampling plan did not include assessment for PFAS
- tribal farmlands or grazing lands due to application of biosolids
- limited funding resources to perform appropriate site investigations to evaluate PFAS impacts to the tribal community

4 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/>. Links to further stakeholder resources, such as websites of environmental organizations that aim to help environmental and community groups understand issues and science about PFAS, can be found at https://pfas-1.itrcweb.org/13-stakeholder-perspectives/#13_3.



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