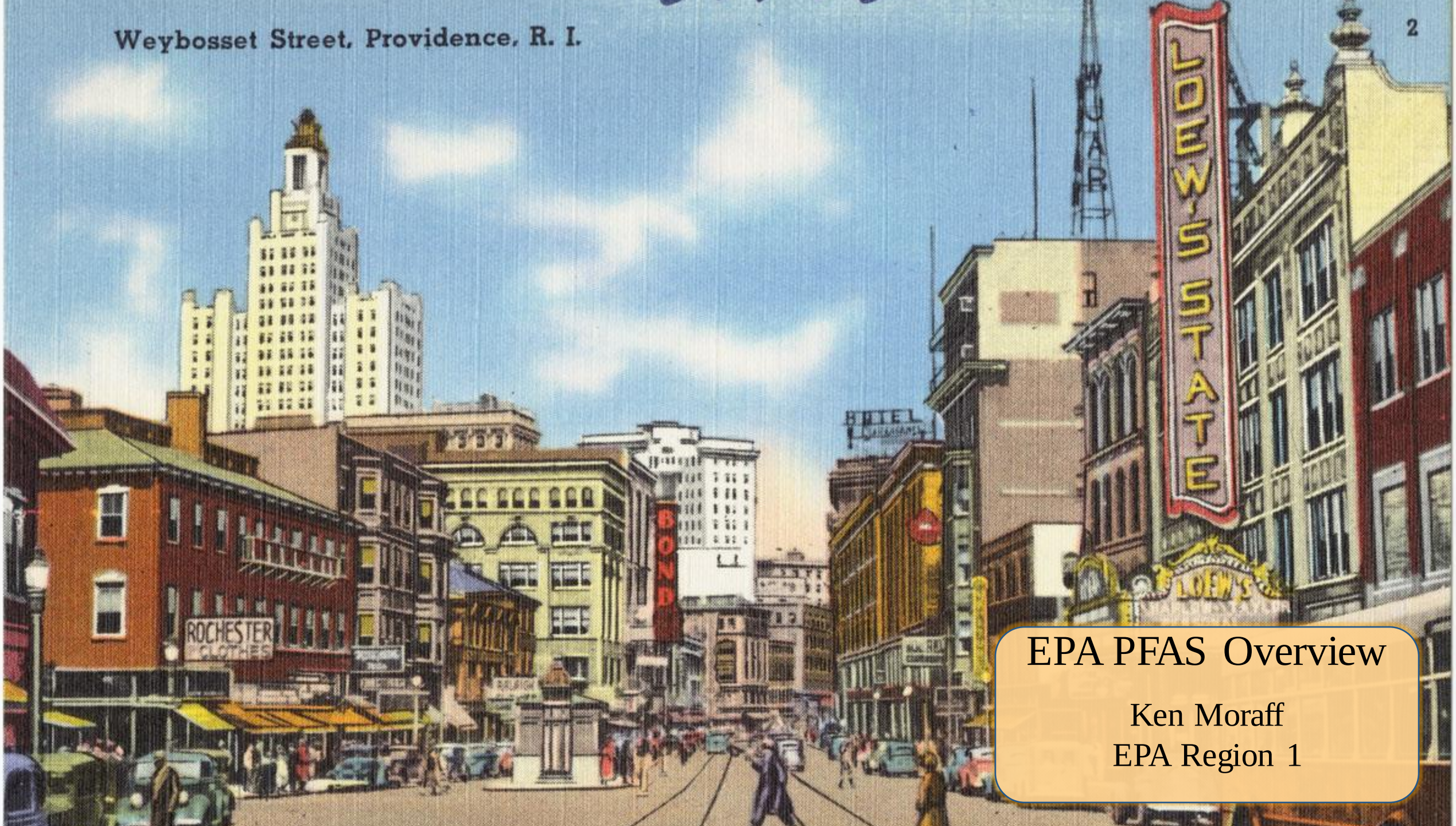
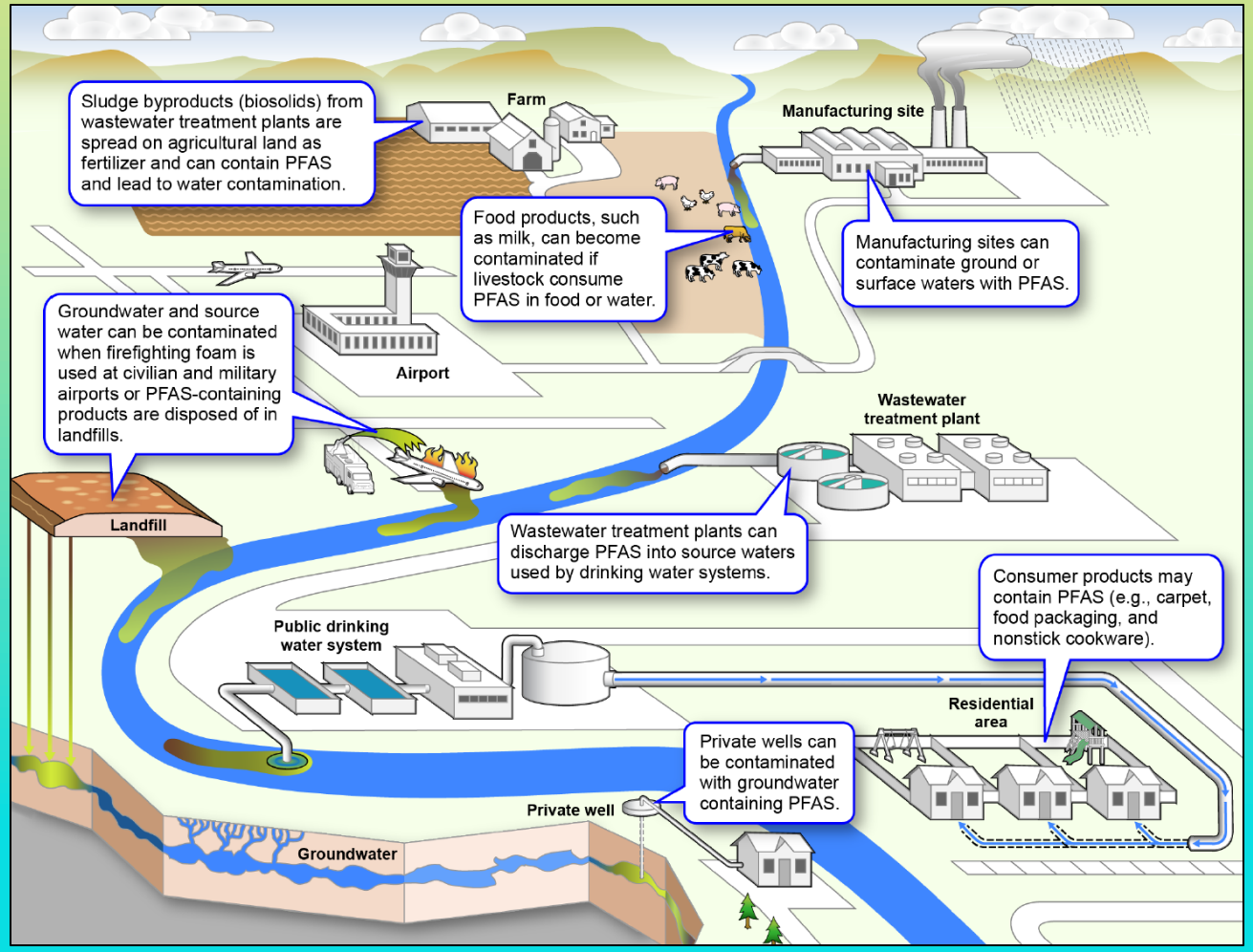


EPA PFAS Overview

Ken Moraff
EPA Region 1

PFAS Lifecycle and EPA's Approach



PFAS Strategic Roadmap: EPA's Commitments to Action 2021–2024

EPA's approach is centered around the following principles:

- Consider the lifecycle of PFAS.
- Get upstream of the problem.
- Hold polluters accountable.
- Ensure science-based decision-making.
- Prioritize protection of disadvantaged communities.

Source: GAO | GAO-21-37

EPA's Goals in the Strategic Roadmap

RESEARCH

Invest in research, development, and innovation to increase understanding of

- Methods for measuring PFAS in the environment
- Assessing human health and environmental risks
- Evaluating and developing technologies for reducing PFAS

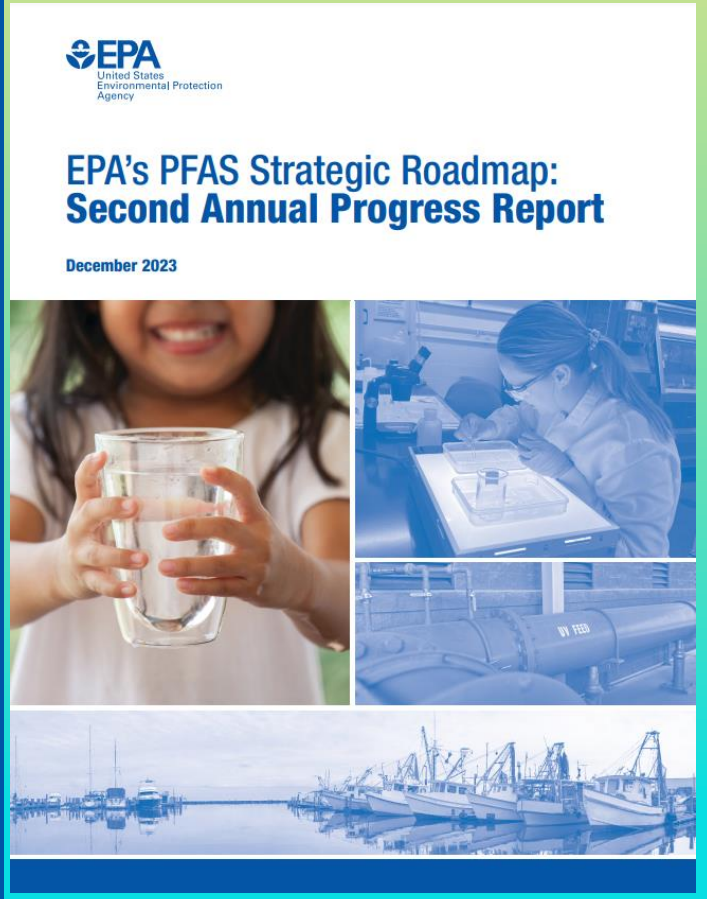
RESTRICT

Pursue a comprehensive approach to proactively prevent PFAS from entering air, land, and water at levels that can adversely impact human health and the environment.

REMEDIATE

Broaden and accelerate the cleanup of PFAS contamination to protect human health and ecological systems.

Key PFAS Roadmap Accomplishments



- **Making PFAS use safer** through robust chemical reviews and improving data
- **Holding polluters accountable** through enforcement and compliance and hazardous-substance designations
- **Protecting America's drinking water** through national drinking water standards and nationwide monitoring
- **Turning off the tap for industrial polluters** using Clean Water Act authorities
- **Advancing the science** of PFAS toxicity, exposures, and methods
- **Incorporating equity and environmental justice** through analyses, funding, data, and tools

Key Roadmap Actions: Protecting our Water

Set enforceable limits for PFAS in drinking water	RESTRICT
Improve PFAS drinking-water data through monitoring, toxicity assessments, and health advisories	RESEARCH
Develop technology-based PFAS limits for industrial dischargers	RESTRICT
Address PFAS in Clean Water Act permitting, analytical methods, water quality criteria, and fish advisories	RESEARCH RESTRICT
Evaluate risks of PFAS in biosolids	RESEARCH

PFAS Strategic Roadmap: EPA's Commitments to Action 2021–2024

U.S. ENVIRONMENTAL PROTECTION AGENCY

NEWS RELEASE

EPA.GOV/NEWSROOM

U.S. Environmental Protection Agency, Region 1 - 5 Post Office Square, Suite 100, Boston MA 02109
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont , and Ten Tribal Nations

Biden-Harris Administration Finalizes First-Ever National Drinking Water Standard to Protect 100M People from PFAS Pollution

As part of the Administration's commitment to combating PFAS pollution, EPA announces $1B investment through President Biden's Investing in America agenda to address PFAS in drinking water

Contact: EPA Press Office (press@epa.gov)

WASHINGTON - Today, April 10, the Biden-Harris Administration issued the first-ever national, legally enforceable drinking water standard to protect communities from exposure to harmful per-and polyfluoroalkyl substances (PFAS), also known as 'forever chemicals.' Exposure to PFAS has been linked to deadly cancers, impacts to the liver and heart, and immune and developmental damage to infants and children. This final rule represents the most significant step to protect public health under EPA's PFAS Strategic Roadmap. The final rule will reduce PFAS exposure for approximately 100 million people, prevent thousands of deaths, and reduce tens of thousands of serious illnesses. Today's announcement complements President Biden's government-wide action plan to combat PFAS pollution.

Regulatory Levels: Summary

Chemical	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt
PFHxS	10 ppt	10 ppt
HFPO-DA (GenX chemicals)	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	Hazard Index of 1	Hazard Index of 1

*Compliance is determined by running annual averages at the sampling point

Regulatory Levels: Hazard Index

- The Hazard Index is a long-established approach that the EPA regularly uses, for example in the Superfund program, to determine the health concerns associated with exposure to chemical mixtures.
- The Hazard Index is calculated by adding the ratio of the water sample concentration to a Health-Based Water Concentration.

$$HI\ MCL = \left(\frac{[HFPO-DA_{water}]}{[10\ ppt]}\right) + \left(\frac{[PFBS_{water}]}{[2000\ ppt]}\right) + \left(\frac{[PFNA_{water}]}{[10\ ppt]}\right) + \left(\frac{[PFHxS_{water}]}{[10\ ppt]}\right) = 1$$

- Details are provided in EPA's fact sheet

Costs and Benefits

	How Much?	What From?	The Potential Impact
Costs	$1.5 Billion per year	Monitoring, communicating with customers, and if necessary, obtaining new or additional sources of water or installing and maintaining treatment technologies.	States, Tribes, and territories with primacy will have increased oversight and administrative costs. **66,000 regulated water systems** will have to conduct monitoring and notifications. **4,100 – 6,700 water systems** may have to take action to reduce levels of PFAS.
	Non-quantified*	Costs for some systems to comply with the Hazard Index, HFPO-DA, and PFNA MCLs.	
Benefits	$1.5 Billion per year	The rule results in fewer cancers, lower incidence of heart attacks and strokes, and fewer birth weight-related deaths. Actions taken to implement the rule may also lead to associated health benefits from reductions in other PFAS and unregulated disinfection byproducts. Benefits will prevent over **9,600 deaths and reduce approximately 30,000 serious illnesses.**	**83 – 105 million people** will have improved drinking water as a result of lower levels of PFAS
	Non-quantified*	Increased ability to fight disease, reductions in thyroid disease and impacts to human hormone systems, reductions in liver disease, and reductions in negative reproductive effects such as decreased fertility.	

***Non-quantified benefits and costs are those that EPA could not assign a specific number to as part of its national level quantified analysis, but it doesn't mean their benefits or costs are less important than those with numerical values.**

Implementation

- Monitor
- Meet MCLs
- Inform the public

What changed from the Proposed Rule?

- Compliance deadline for MCLs increased to 5 years instead of 3
- Set individual MCLGs/MCLs for GenX chemicals
- Flexibility to reduce monitoring based on results

Key Roadmap Actions: Protecting our Water

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Evaluate risks of PFAS in biosolids	RESEARCH

PFAS Strategic Roadmap: EPA's Commitments to Action 2021–2024

Bipartisan Infrastructure Law and PFAS

The Bipartisan Infrastructure Law makes transformational investments in America's water infrastructure. It provides $10 billion to invest in communities impacted by PFAS and other emerging contaminants, including:

$4 billion	**Drinking Water State Revolving Fund**
$1 billion	**Clean Water State Revolving Fund**
$5 billion	**Small or Disadvantaged Communities Drinking-Water Grants**

Technical Assistance

https://www.epa.gov/water-infrastructure/water-technical-assistance-waterta

Help for Your Community

EPA WaterTA aims to assist communities with applications for federal funding, quality infrastructure, and reliable water services. If your community is facing water infrastructure challenges and could benefit from support, we encourage you to learn more about **who can receive WaterTA services and the challenges WaterTA can help your community address** then complete and submit a webform request via the following button:

Click Here to Request Water Technical Assistance for Your Community

PWSID or NPDES permit number (if applicable/known)

Please format your permit number to include the state abbreviation (e.g., "TX0000000").

Population size served *

- Select -

Type of system or project (select the best fit) *

This information will be used to direct your request to the best fit program. If you have additional needs, you can describe them in the text box below.

- ◯ Drinking water
- ◯ Wastewater
- ◯ Stormwater
- ◯ Source water protection
- ◯ Nonpoint source
- ◯ Decentralized wastewater (e.g., septic systems)
- ◯ Other

Briefly describe your water quality or infrastructure concerns. Please be as specific as possible and include what assistance you are hoping to receive. *

(750-character maximum limit; NO bullets or numbered lists)

Is your community currently working with a TA provider? *

- Select -

Does your community qualify as a "disadvantaged community" within your state or meet your state's affordability criteria?

As defined by your state's Drinking Water or Clean Water State Revolving Fund program.

- None -

Submit form

EPA Region 1 PFAS Highlights

- EPA Region 1 & New England states PFAS working group
- EPA ORD PFAS research collaborations
- Addressing PFAS at Superfund sites
- NPDES permits

Questions?

Ken Moraff

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