

*You have arrived at:*

# EPA's PFAS Strategic Roadmap Regulatory Updates

# *Welcome!*

We will get started  
soon.



EPA MID-ATLANTIC REGION 2022 SUMMIT

Working Together to Build a Better, More Equitable Region

# Friendly Reminders Before We Get Started

Please **mute yourself** and **turn off your webcam** during presentations.

If you encounter technical difficulties during the meeting, you can put a request in the chat. The IT support person for this session is Susie Warner.

*This session is being recorded and will be made available after the summit.*

# EPA's PFAS Strategic Roadmap Regulatory Updates

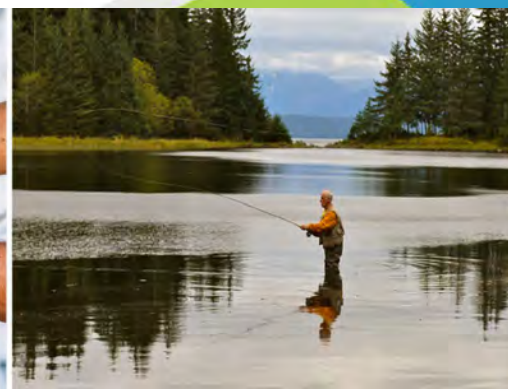
May 25, 2022

EPA Mid-Atlantic Summit

Rick Rogers, Ruby Stanmyer, Charles Brown, Laura  
Mohollen

EPA Region Mid Atlantic Region

[epa.gov/pfas](https://epa.gov/pfas)



# Overview

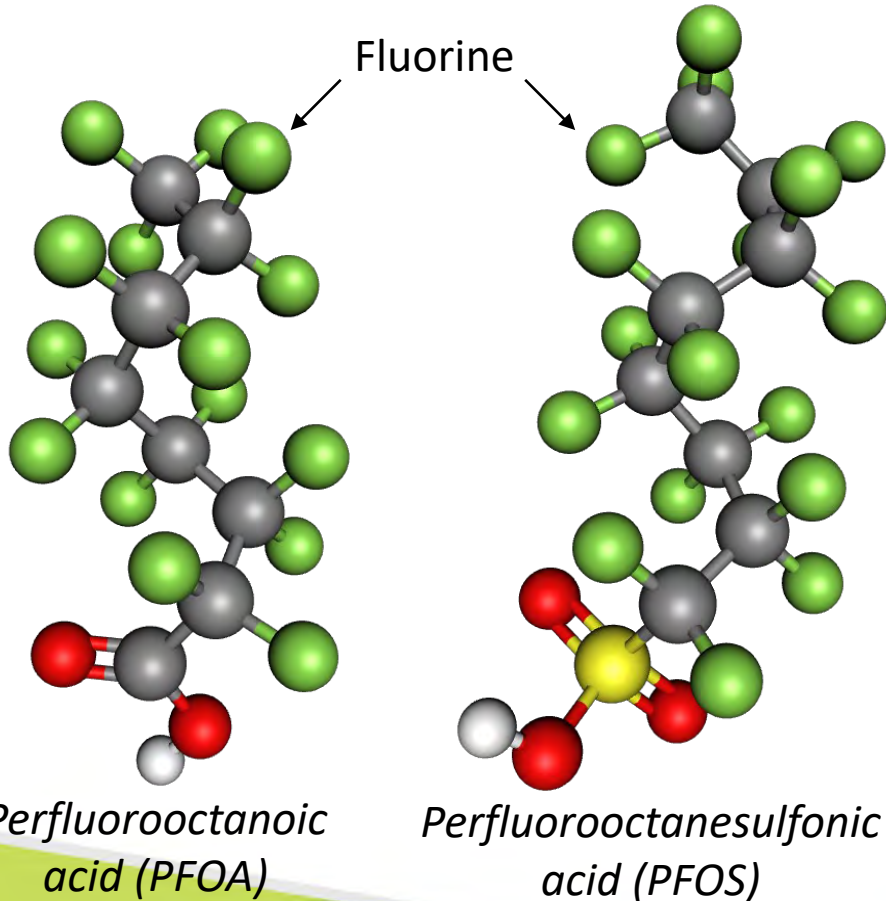
- EPA's PFAS Strategic Roadmap
- Background on Per- and Polyfluoroalkyl Substances (PFAS)
- EPA's Approach and Goals
- Bipartisan Infrastructure Law and PFAS
- Key Water Roadmap Actions
- Key CERCLA and RCRA Roadmap Actions

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

- EPA Administrator Michael Regan established the EPA Council on PFAS in April 2021.
- The Council developed the PFAS Strategic Roadmap, released in October 2021 – a bold, strategic, whole-of-EPA strategy to protect public health and the environment from PFAS.
- The PFAS Strategic Roadmap:
  - Lays out EPA's whole-of-agency approach to tackling PFAS;
  - Sets timelines for concrete actions from 2021 to 2024;
  - Fills a critical gap in federal leadership;
  - Supports states' ongoing efforts; and
  - Builds on the Biden-Harris Administration's commitment to restore scientific integrity.



# What Are Per- and Polyfluoroalkyl Substances (PFAS) and Why are We Concerned?



**PFAS captures a large class of synthetic chemicals.**

- Chains of carbon atoms surrounded by fluorine atoms.
- Wide variety of chemical structures.

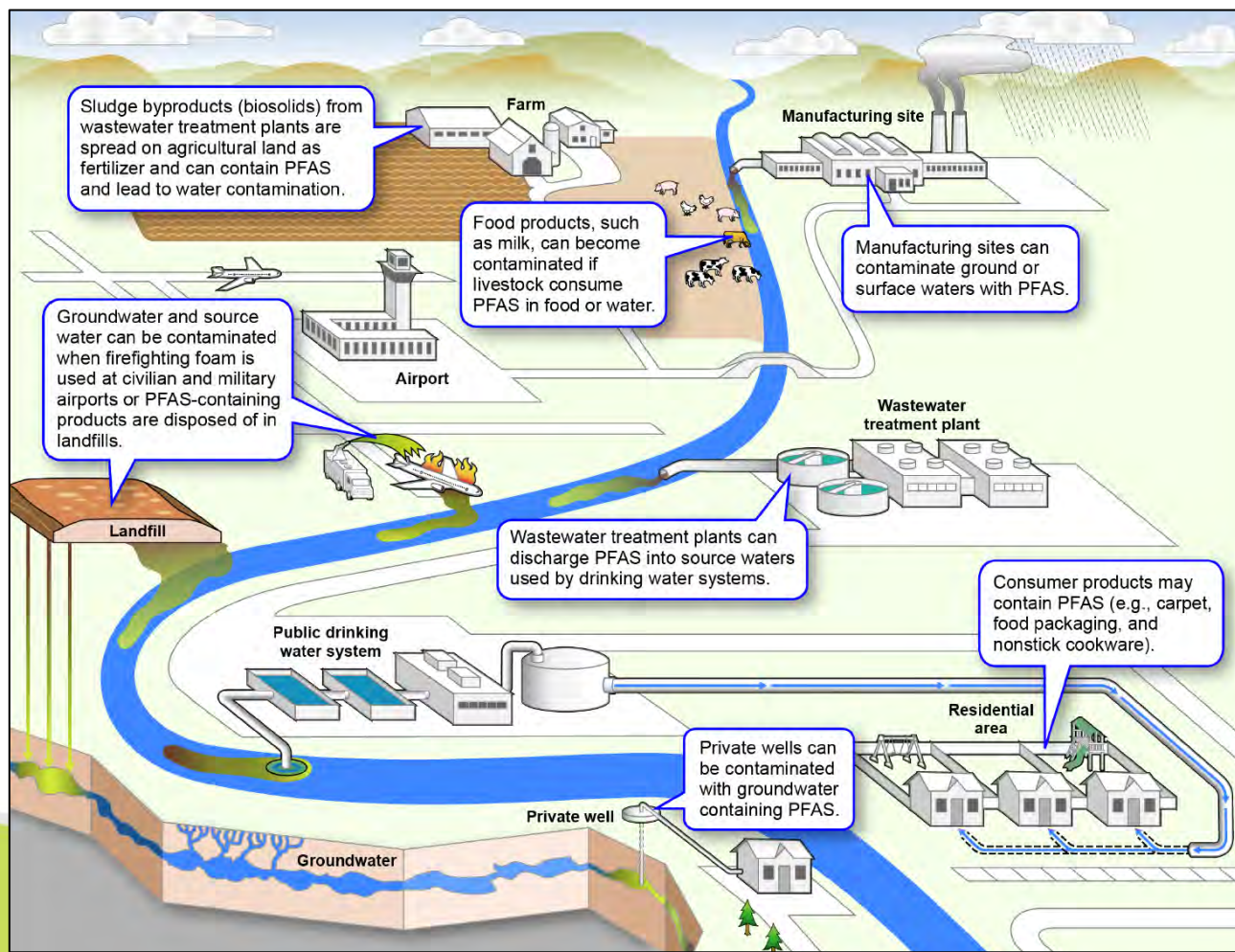
**Used in homes, businesses, and industry since the 1940s.**

- Used by a number of industries and found in many consumer products.
- Detected in soil, water, and air samples.
- Most people have been exposed to PFAS.

**Known or suspected toxicity.**

- Potential developmental, liver, immune, and thyroid effects.
- Some are relatively well understood; many others are not.
- Resist decomposition in the environment and in the human body.

# PFAS Lifecycle and EPA's Approach



US EPA – Mid-Atlantic (Region 3)

**PFAS contamination presents unique challenges. 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

- PFAS exposures and toxicities;
- Human health and ecological effects; and
- Effective interventions that incorporate the best-available science.

## 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.



# Cross-Program Actions

**Engage directly  
with affected  
communities**

**Use  
enforcement  
tools to  
identify and  
address PFAS  
releases**

**Report on EPA's  
progress and  
communicate  
PFAS risks**

**Coordinate  
with federal  
partners on  
policy  
strategies**

# Bipartisan Infrastructure Law and PFAS

The Bipartisan Infrastructure Law makes transformational investments in America's water infrastructure. It provides \$10 billion in **relief** for 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 and Disadvantaged Communities Drinking-Water Grants**

# Water Regulatory Updates

May 25, 2022

EPA Mid-Atlantic Summit

Ruby Stanmyer and Charles Brown

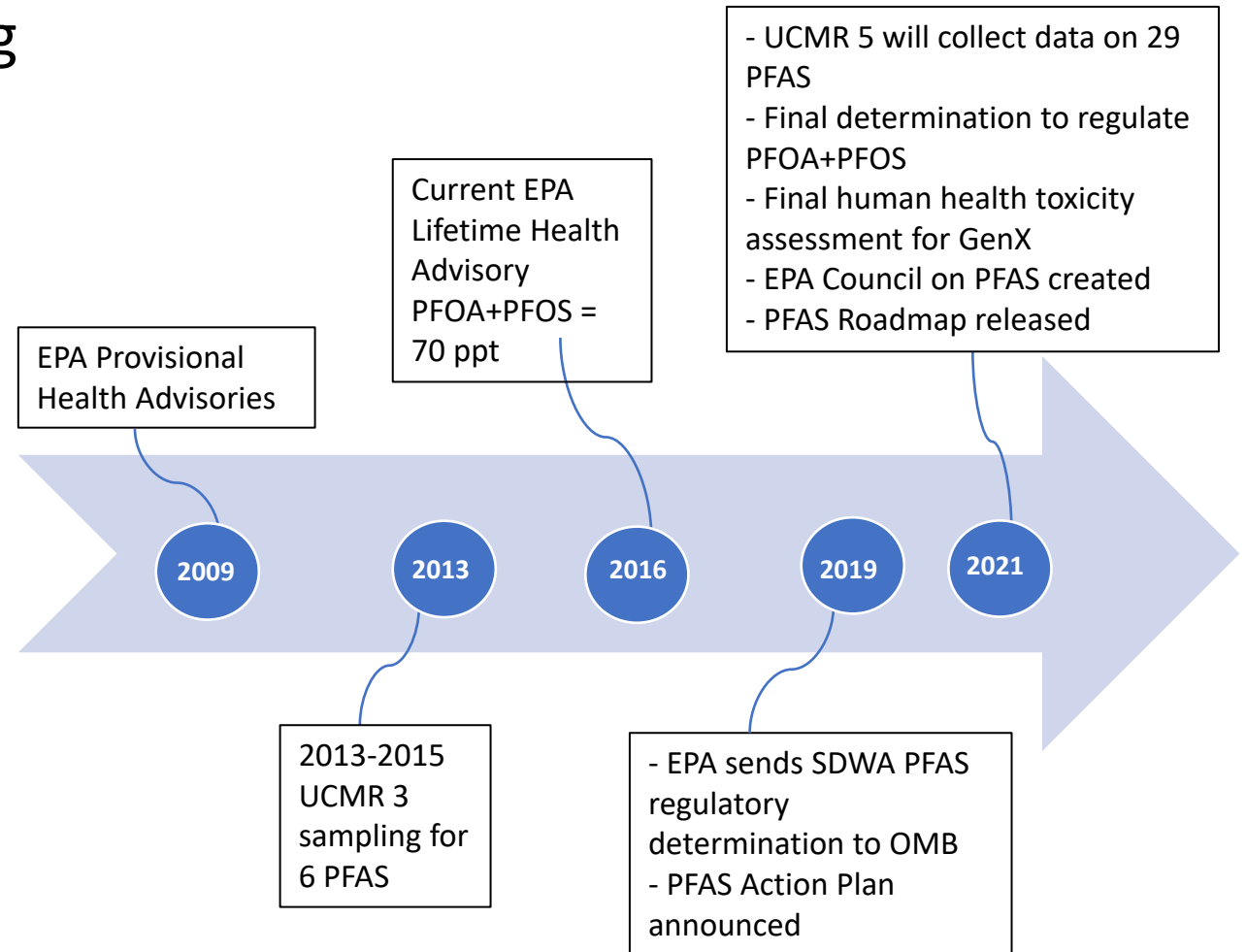
EPA Region 3 Water Division

# Water Regulatory Updates

- Drinking water vs. clean water regulatory actions
- Methods for analysis
- National Primary Drinking Water Regulation (NPDWR) process
- Future drinking water actions
- Clean water criteria
- NPDES
- Conclusion

# Overview: Current and Past PFAS Actions

- Health Advisories
- Unregulated Contaminant Monitoring Rule (UCMR) 3
- UCMR 5
- Emerging Contaminant Funding
- State-level regulations: PA & DE



# Upcoming Actions

2021

- UCMR 5 to sample for 29 PFAS at large + small public water systems.
- Final regulatory determination to regulate PFOA/PFOS.
- PFAS Roadmap released.
- Bipartisan Infrastructure Law/Infrastructure Investment and Jobs Act passed.

2022 (Expected)

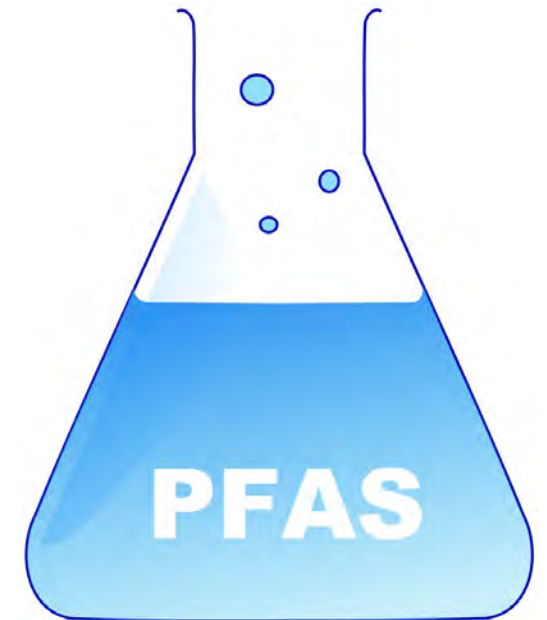
- Publish proposed NPDWR for PFOA and PFOS (Fall).
- Publish Health Advisories for GenX and PFBS (Summer).
- Leverage NPDES permitting to reduce PFAS discharges.

2022-2024

- Publish final recommended ambient water quality criteria for PFAS.
- Publish final NPDWR for PFOA and PFOS (Fall 2023).
- Enhance data availability on PFAS in fish tissue.
- Finalize risk assessment for PFOA + PFOS in biosolids.

# Analytical Testing: Current and Future 2022

- Current Methods - Multi-lab/EPA validated
  - 533 and 537.1 (LC-MS/MS)
    - Drinking water
    - 29 PFAS
  - 8327 (LC-MS/MS)
    - Surface water/ groundwater/ wastewater
    - 24 PFAS compounds
- Draft Methods - Validation on-going
  - 1633 (LC-MS/MS)
    - Aqueous, solid, biosolid, and tissue samples
    - Tests for 40 PFAS compounds (~ 4,700 exist, still being identified)
  - 1621 – Adsorbable Organic Fluorine
    - Combustion Ion Chromatography
    - Does not identify which organofluorines
    - Tests for thousands of PFAS at the ppb ( $\mu\text{g/L}$ )



# PFOA/PFOS NPDWR Development

- National Primary Drinking Water Regulation (NPDWR) for PFOA and PFOS
  - Draft Maximum Contaminant Level Goals (MCLGs) being reviewed by the Science Advisory Board (SAB). Their final review is expected Spring 2022
  - Updated health advisory expected Summer 2022
  - Proposed NPDWR expected Fall 2022
  - Final rule expected Fall 2023
  - Expedited timeline



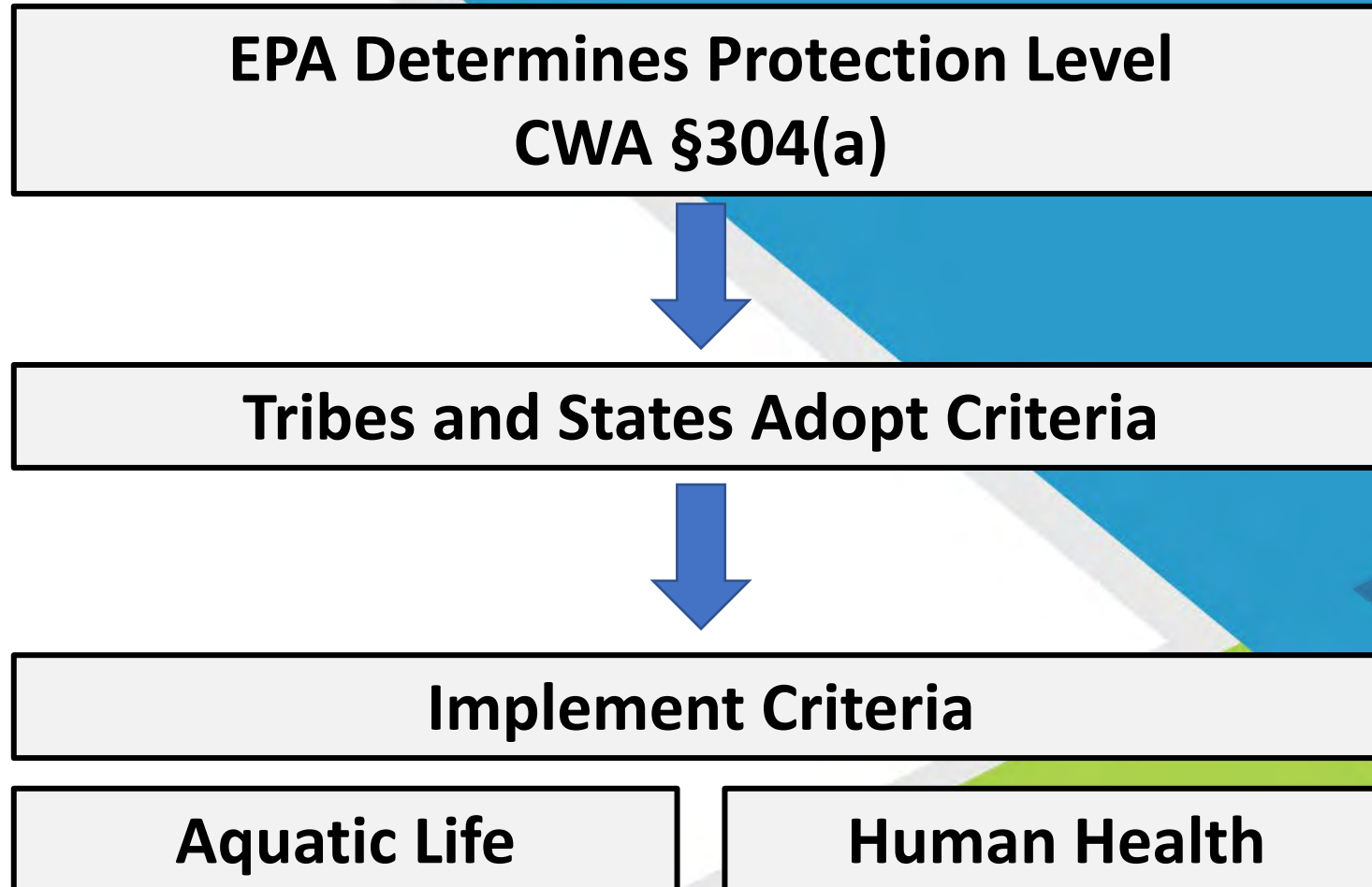


# Further EPA Drinking Water Steps

- Health Advisories for GenX and PFBS
  - Expected early Summer 2022
- UCMR 5 Sampling for 29 PFAS
  - Sampling to occur between January 2023-December 2025.
  - All PWSs serving 3,300 or more people + representative PWSs serving <3,300 will collect samples
- Future UCMR cycles likely to include PFAS
- Emerging contaminant funding
- State-level sampling, analysis, and remediation



# What are Water Quality Criteria?



# WQ: Aquatic Life Criteria - Draft



	Acute 1-Hour Average		Chronic 96-Hour Average	Instantaneous		
	Fresh water (mg/L)	Salt water* (mg/L)	Fresh water (mg/L)	Invertebrate Whole Body (mg/kg ww)	Fish Whole Body (mg/kg ww)	Fish Muscle (mg/kg ww)
PFOA	49	7	0.094	1.11	6.10	0.125
PFOS	3	0.55	0.0084	0.937	6.75	2.91

\*New Approach Method – Available toxicity data and modeled estimates

- Chronic criteria designed to be protective from bioaccumulation
- Published May 3rd – currently under public comment period
- Chronic FW and Tissue criteria are independently applicable
- Consumption of fish



# WQ: Human Health Criteria

- Difficult to establish criteria because it's difficult to determine health effects for several reasons
  - Use the latest science to determine what is protective of human health
  - Rapidly evolving
  - Route of exposure (ingestion of water and fish consumption); Duration and Frequency; Age
  - Many PFAS compounds
- Expected Fall of 2024



# NPDES: Eliminating PFAS Prior to Discharge

2022

- The National Pollutant Discharge Elimination (NPDES) will be leveraged to reduce PFAS discharges to waterways
  - Additional guidance to come about NPDES permits for PFAS.
  - Applicable to POTWs, stormwater permits, and the following industries:
    - Organic chemicals, plastics & synthetics, metal finishing & electroplating, landfills, pulp, paper & paperboard, leather tanning, plastics molding, textile mills, paint formulating, airports.
  - NPDES Permits

April 28, 2022  
Memorandum:  
“Addressing PFAS  
Discharges in  
EPA-Issued NPDES  
Permits and  
Expectations Where  
EPA is the  
Pretreatment  
Control Authority”

[https://www.epa.gov/system/files/documents/2022-04/npdes\\_pfas-memo.pdf](https://www.epa.gov/system/files/documents/2022-04/npdes_pfas-memo.pdf)

# Superfund and RCRA Regulatory Updates

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Laura Mohollen

EPA Region 3 Superfund Division

# Superfund and RCRA

- Develop regulations to designate PFOA and PFOS as CERCLA hazardous substances- *proposed spring 2022*
- Update the RSL and RML Tables- *Completed May 2022*
- Take regulatory action to tackle PFAS under RCRA- *ongoing*
- Update research and guidance on PFAS destruction- *fall 2023*



# Research and Development

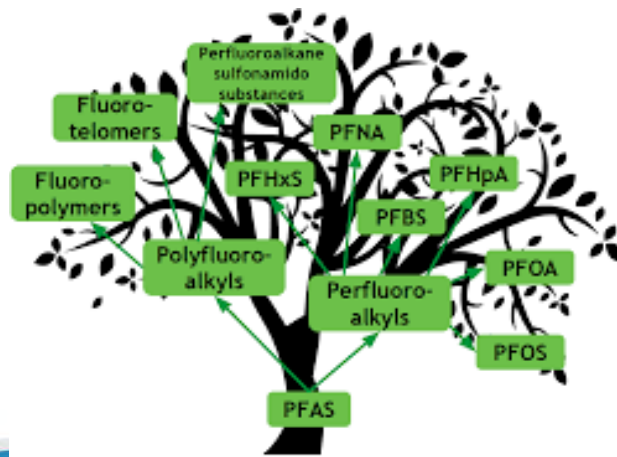
- Develop and validate methods to detect and measure PFAS-*ongoing*
- Advance the science to assess human health and environmental risks from PFAS- *ongoing*
- Evaluate and develop technologies for reducing PFAS in the environment- *ongoing*





# Questions?

- For more information on PFAS in Water:
- Review the PFAS Roadmap and go to EPA's Website
- <https://www.epa.gov/pfas>
- <https://www.epa.gov/pfas/epa-actions-address-pfas>



Thank you!

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