MID-ATLANTIC REGION

EPA PFAS & Drinking Water Updates

Local Government Advisory Committee

Chesapeake Executive Council

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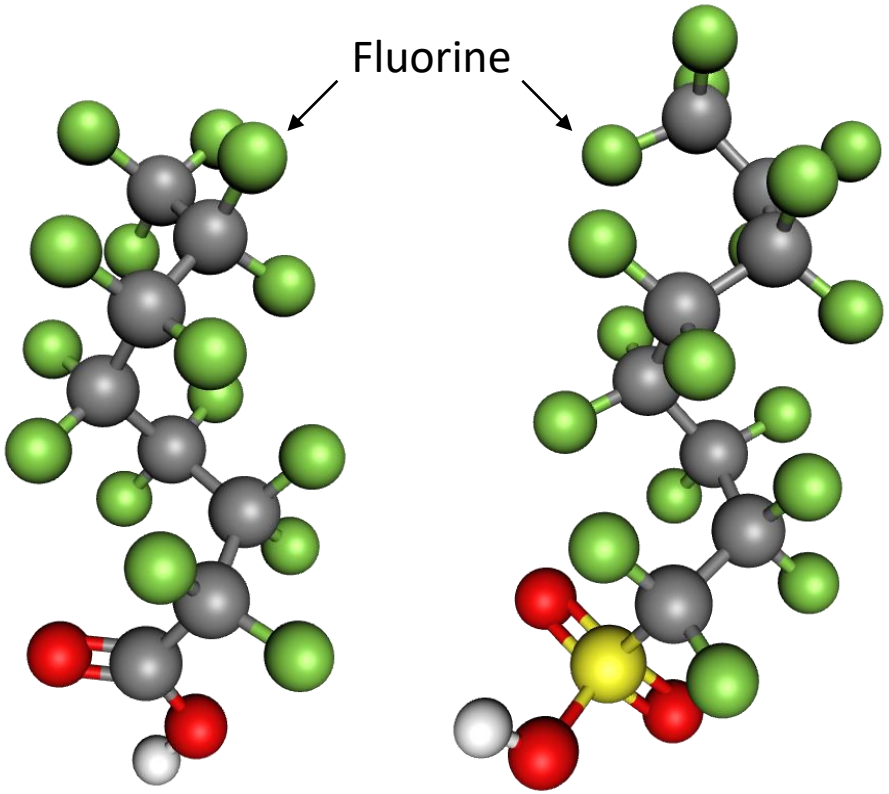
EPA Region 3 Water Division

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



Perfluorooctanoic acid (PFOA)

Perfluorooctanesulfonic acid (PFOS)

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 Background

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- PFAS are a category of manufactured chemicals that have been used in industry and consumer products since the 1940s.
- PFAS have characteristics that make them useful in a variety of products, including nonstick cookware, waterproof clothing, and firefighting foam, as well as in certain manufacturing processes.
- PFAS tend to break down extremely slowly in the environment and can build up in people, animals, and the environment over time.
- Even though some specific PFAS have been largely phased out due to health and environmental concerns, they may still be found in the environment and in drinking water.

EPA PFAS Roadmap

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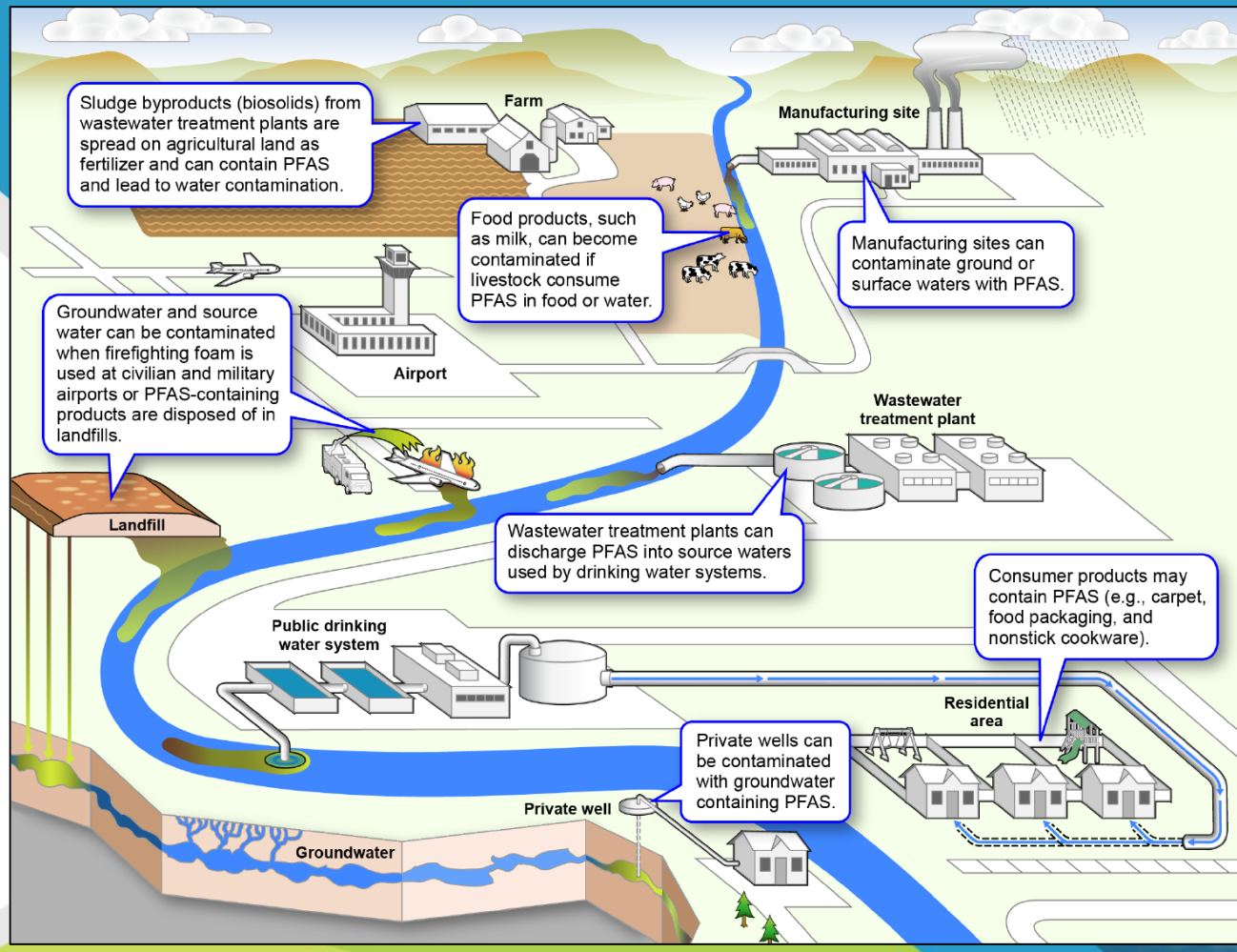
- EPA Administrator Michael Regan established the EPA Council on PFAS in April 2021.
- The Council developed the PFAS Strategic Roadmap, released in October 2021 – a bold, strategic, whole-of-EPA strategy to protect public health and the environment from PFAS.
- The PFAS Strategic Roadmap:
  - Lays out 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.



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.

Protecting our Water

Set enforceable limits for PFOA and PFOS in drinking water

Improve PFAS drinking-water data through monitoring, toxicity assessments, and health advisories

Develop technology-based PFAS limits for industrial dischargers

Address PFAS in Clean Water Act permitting, analytical methods, water quality criteria, and fish advisories

Evaluate risks of PFAS in biosolids

EPA's Proposed Action for the PFAS NPDWR

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- EPA is proposing a National Primary Drinking Water Regulation (NPDWR) to establish legally enforceable levels, called Maximum Contaminant Levels (MCLs), for six PFAS in drinking water.
  - PFOA and PFOS as individual contaminants, and
  - PFHxS, PFNA, PFBS, and HFPO-DA (commonly referred to as GenX Chemicals) as a PFAS mixture
- EPA is also proposing health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these six PFAS.
  - MCLGs are the maximum level of a contaminant in drinking water where there are no known or anticipated negative health effects allowing for a margin of safety.

EPA's Proposed Action for the PFAS NPDWR

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Compound	Proposed MCLG	Proposed MCL (enforceable levels)
PFOA	0 ppt*	4.0 ppt*
PFOS	0 ppt*	4.0 ppt*
PFNA		
PFHxS	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index
PFBS		
HFPO-DA (commonly referred to as GenX Chemicals)		

The Hazard Index is a tool used to evaluate potential health risks from exposure to chemical mixtures.

- EPA held a public hearing on May 4, 2023, where members of the public provided verbal comments to EPA on the rule proposal.
- The public comment period was open through May 30, 2023.

EPA's Proposed Action for the PFAS NPDWR

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- The proposed rule would require public water systems to:
  - Monitor for these PFAS;
  - Notify the public of the levels of these PFAS; and
  - Reduce the levels of these PFAS in drinking water if they exceed the proposed standards (based on a running annual average approach)
- EPA is requesting comment on the proposed rule.
- EPA is also requesting comment on its preliminary determinations to regulate PFHxS, PFNA, PFBS, GenX Chemicals, as well as mixtures of these four PFAS.
- This action is not final and does not require any actions until after EPA considers public input and finalizes the regulation.
- EPA anticipates that if fully implemented the rule will prevent tens of thousands of serious PFAS-attributable illnesses or deaths.

EPA's Proposed Timeline for the PFAS NPDWR

- March 2023: The proposal was published
- Fall 2023: EPA plans to publish the final rule by end of 2023
- Fall 2026: Compliance date (typically 3 years after promulgation)
  - Initial monitoring timeframe to be finalized
  - UCMR 5 monitoring will qualify for initial monitoring requirements
  - Alternative state sampling may also be considered to fulfill requirements

Public Comment Period

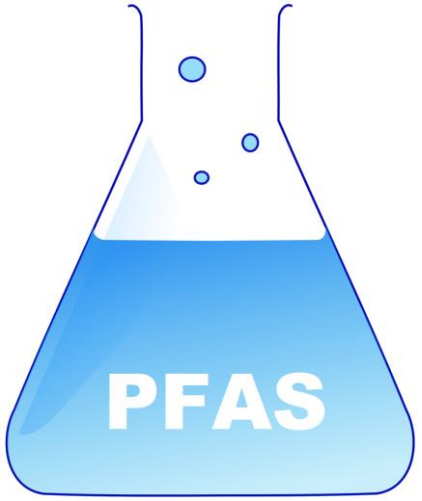
- Rule overview presentations recorded and uploaded: EPA's PFAS NPDWR Website
- The largest number of submitted comments in SDWA history
- Recorded presentations include EPA’s:
  - general overview,
  - technical overview,
  - the public hearing.

Unregulated Contaminant Monitoring Rule (UCMR5)

- EPA's Fifth Unregulated Contaminant Monitoring Rule (UCMR5) will sample 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.
  - EPA to arrange for the analysis of small-system samples and will pay for shipping and analytical costs.
  - This significantly expands the number of water systems participating in sampling.
  - First round of samples publicly released summer 2023

Analytical Method Development and Lab Capacity

- 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
- Draft Methods - Validation on-going
  - 1633 (LC-MS/MS)
    - Aqueous, solid, biosolid, and tissue samples; 40 PFAS
  - 1621 – Adsorbable Organic Fluorine
    - Does not identify which organofluorines
    - Tests for thousands of PFAS at the ppb (µg/L)



Bipartisan Infrastructure Law and PFAS

The Bipartisan Infrastructure Law provides $10 billion to invest in communities impacted by PFAS and other emerging contaminants.

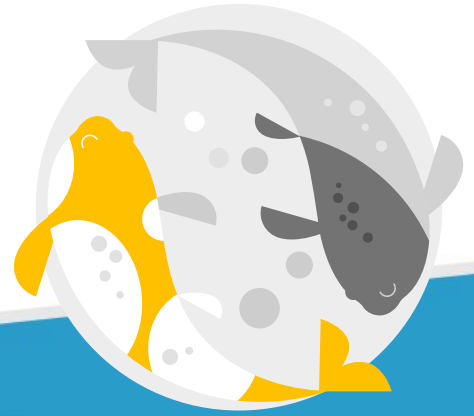
$4 billion	Drinking Water State Revolving Fund
$1 billion	Clean Water State Revolving Fund
$5 billion	Small or Disadvantaged Communities Drinking Water Grants

February 13 allotment announcement:

- EPA announced the first round of allotments under the ***Emerging Contaminants in Small or Disadvantaged Communities*** grant program for FY22/FY23.
- EPA will award $178.5 Million to Region 3 grantees (DC, DE, MD, PA, VA, and WV)
- Guidance available at: https://www.epa.gov/dwcapacity/emerging-contaminants-ec-small-or-disadvantaged-communities-grant-sdc

Chesapeake Bay Program

- The Toxic Contaminants Workgroup is conducting quarterly meetings dedicated to PFAS.
- These meetings are partially due to the Chesapeake Bay Scientific and Technical Advisory Committee (STAC) workshop and report on PFAS.
- The Toxic Contaminants Workgroup is also helping with coordination across the watershed for the Emerging Contaminants in Small or Disadvantaged Communities grant program (EC-SDC).

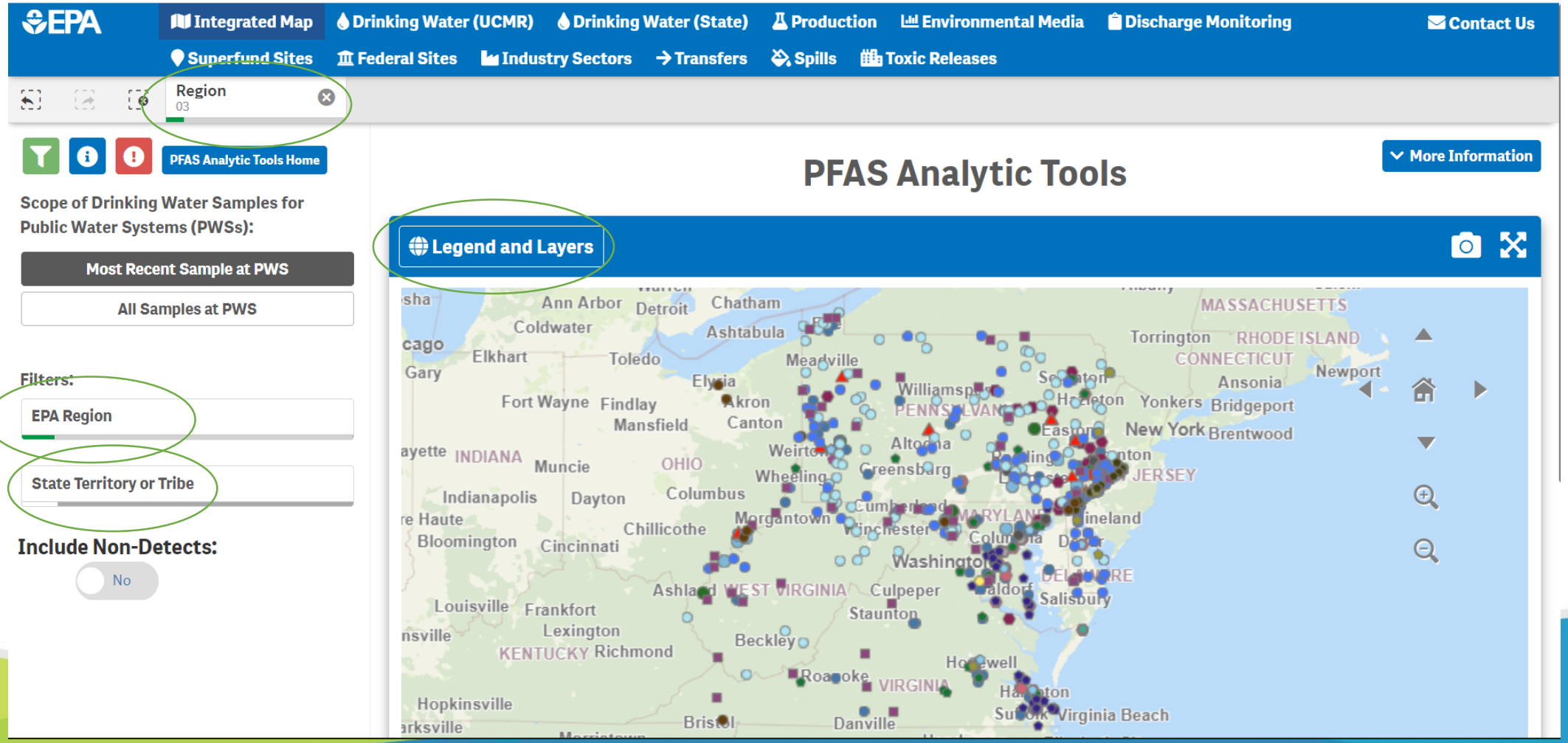


Interested in more? Try The PFAS Analytic Tools

- EPA released the PFAS Analytic Tools in January 2023.
- EPA created the PFAS Analytic Tools to integrate data about PFAS reporting, testing, and occurrences in communities.
- Information includes:
  - Clean Water Act discharges from permitted sources;
  - a log of spills reported containing PFAS constituents;
  - lists of facilities historically manufacturing and importing PFAS chemical;
  - federally owned locations where PFAS is being investigated;
  - a history of transfers of PFAS waste;
  - PFAS detections in the environment (e.g., surface water and fish tissue); and
  - drinking water testing results.

PFAS Analytic Tools

Available at https://echo.epa.gov/trends/pfas-tools



EPA PFAS Roadmap and Actions

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2021

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

2022 (Expected)

- ***Published Health Advisories for GenX and PFBS.***
- *Develop regulations to designate PFAS as CERCLA hazardous substances.*
- Leverage National Pollutant Discharge Elimination System to reduce PFAS discharges.
- Publish proposed rulemaking for PFOA and PFOS (Fall).

2023-2024

- Publish final drinking water regulation for PFOA and PFOS (Fall 2023).
- Publish final recommended ambient water quality criteria for PFAS.
- Enhance data availability on PFAS in fish tissue.
- Finalize risk assessment for PFOA + PFOS in biosolids.
- Update research and guidance on PFAS destruction and disposal (Fall 2023).
- Build technical foundation for potential Clean Air Act regulation.

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Thank you!
Questions?

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https://www.epa.gov/pfas