



**EPA Update
Jay Pimpare
Regional Pretreatment Coordinator
EPA New England**

North Carolina Pretreatment Consortium
Wrightsville Beach, NC
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Who am I?

- Oversee the IPP in Region 1 comprised of 6 New England States
- Review Performance Partnership Agreements with each State
- 403.12(e) programs: Connecticut and Vermont
- Maine and Rhode Island are delegated NPDES Programs
- EPA Approval Authority for two States: Massachusetts and New Hampshire
- Review and approve Local Limits, Sewer Use Ordinance, Enforcement Response Plans, etc
- Review Annual IPP Reports
- Review NPDES IPP Language Requirements
- Perform Audit of POTWs
- Inspections of SIUs
- Provide Technical Assistance and to POTWs

• **LOTS OF TRAINING...**

Topics

- ▶ EPA Tools and Resources
- ▶ Funding Opportunities \$\$\$\$\$\$ - SHOW ME THE MONEY
- ▶ Reporting Programs/Annual Reports
- ▶ Effluent Guidelines and Analytical Methods
- ▶ Regional PFAS NPDES Permitting Strategy
- ▶ EPA New England Regional PFAS Approach & Results
- ▶ POTW Influent Study

EPA Webpages of interest

<https://www.ecfr.gov/>

<https://www.epa.gov/npdes>

<https://www.epa.gov/npdes/national-pretreatment-program>

<https://echo.epa.gov/>

Investing in Water Infrastructure

<https://www.epa.gov/water-infrastructure>

CONTACT US

Water Infrastructure



Protecting Communities from PFAS in Drinking Water

EPA is establishing the first-ever nationwide, legally enforceable drinking water standards to protect communities from PFAS in their drinking water.

- [Read about the final PFAS regulation](#)
- [Learn more about water infrastructure funding opportunities](#)

1 2 3 4

Water is essential. We rely on it from the moment we wake up in the morning and make a cup of coffee until we brush our teeth at night. While most water infrastructure is hidden from sight, it is foundational to our daily lives. Our water infrastructure is aging and in need of repair to withstand the challenges of the 21st century. We must maintain water infrastructure to deliver clean drinking water and safely carry away and treat wastewater.

EPA helps renew water infrastructure across the country by identifying needs, funding infrastructure projects through multiple programs, and providing technical assistance to connect communities and tribes to federal funding. This webpage highlights the Agency's suite of funding and technical assistance resources that can help address water infrastructure challenges in urban, suburban, tribal, and rural communities across the nation.

BIL Investments



- [Water Infrastructure Investments](#)
- [BIL Drinking Water Resources for States and Utilities](#)
- [BIL State Revolving Fund Information](#)

Grant Programs



- [Water Infrastructure Improvements for the Nation Act Grants](#)
- [319 NonPoint Source Grant Program](#)
- [National Estuary Program](#)
- [OSG Program](#)

WIFIA Program



- [Water Infrastructure Finance and Innovation Act \(WIFIA\)](#)
- [Learn How to Apply](#)
- [WIFIA Projects](#)
- [Attend Information Sessions](#)

Tribes & Alaska Native Villages



- [Alaska Native Villages and Rural Communities Grant Program](#)
- [Clean Water Indian Set Aside Program](#)
- [Drinking Water Infrastructure Grants Tribal Set Aside Program](#)

State Revolving Funds



- [Clean Water State Revolving Fund](#)
- [Drinking Water State Revolving Fund](#)
- [Clean Watersheds Needs Survey](#)
- [Drinking Water Needs Survey and](#)

Technical Assistance



- [Water Technical Assistance](#)
- [Get the Lead Out Initiative](#)
- [LSLR Accelerators](#)
- [Building System Capacity](#)

Clean Water State Revolving Fund

Emerging Contaminants

The Bipartisan Infrastructure Law appropriates \$1 billion over five years (FY 2022 to FY 2026) to the Clean Water State Revolving Fund specifically to address emerging contaminants, including perfluoroalkyl and polyfluoroalkyl substances (PFAS) in wastewater, stormwater, and nonpoint source pollution.

- ▶ FY2022: \$100 M
 - ▶ FY2023 to FY2026: \$225 M each year
 - ▶ All funds are to be awarded to funding applicants as **100% forgivable loans or grants**
-
- Website: <https://www.epa.gov/cwsrf/clean-water-state-revolving-fund-emerging-contaminants>
 - FACT SHEET: <https://www.epa.gov/system/files/documents/2024-04/cwsrf-ec-ta-fact-sheet.pdf>
 - Webinars
 - Case Studies
 - Frequently Asked Questions



What Types of Clean Water Projects are Eligible?

Planning, design, and construction activities that are eligible for the base CWSRF and CWISA program, specifically address one or more ECs, and result in a water quality benefit are eligible. Project types include:

- ✓ Laboratory and sampling equipment purchase
- ✓ Wastewater treatment (centralized & decentralized)
- ✓ Biosolids treatment/disposal
- ✓ Septic-to-sewer conversions
- ✓ Water reuse
- ✓ Source water protection
- ✓ Lagoon improvements and decommissioning
- ✓ Nonpoint source pollution control
- ✓ Stormwater management and treatment
- ✓ Landfill capping and leachate control
- ✓ Cleanup of contaminated sites
- ✓ Groundwater and surface water protection and restoration

CASE STUDIES OF CWSRF-ELIGIBLE EMERGING CONTAMINANTS PROJECTS

- [City of Tucson \(Arizona\) Water Department Reclaimed Water Emerging Contaminants Project \(pdf\)](#)
- [City of Orlando \(Florida\) Water Reclamation Division Technology Pilot of PFAS Destruction in Biosolids \(pdf\)](#)
- [City of Cedar Rapids \(Iowa\) Water Pollution Control Facility Emerging Contaminants Project \(pdf\)](#)
- [City of Belding \(Michigan\) Wastewater Treatment Plant Lagoon Decommissioning and Sludge Disposal \(pdf\)](#)
- [Montana Department of Public Health and Human Services Laboratory Equipment Purchase \(pdf\)](#)
- [Southern Nevada Septic-to-Sewer Conversion Emerging Contaminants Project \(pdf\)](#)
- [Town of Conway \(New Hampshire\) Landfill Leachate Treatment Emerging Contaminants Project \(pdf\)](#)
- [New York State's Solicitation Process Source Water Protection Planning Projects \(pdf\)](#)
- [Central Oklahoma Master Conservancy District Lake Thunderbird Emerging Contaminants Assessment Project \(pdf\)](#)
- [City of Norman, Oklahoma Water Reclamation Facility Land Application of Biosolids and Yard Waste Compost Demonstration Project \(pdf\)](#)



The Water Infrastructure Finance and Innovation Act (WIFIA) program accelerates investment in our nation's water infrastructure by providing long-term, low-cost supplemental loans for regionally and nationally significant projects.

\$191 MILLION

Closed 4/14/2023

PROJECT DESCRIPTION

The City of Wichita's Biological Nutrient Removal Improvements Program will reduce its nutrient contribution to the Arkansas River and Mississippi River Basin, address local odor concerns, and help meet future regulatory requirements. With this WIFIA loan, the City of Wichita will modernize its wastewater treatment facility to improve its reliability and resiliency. The City will **construct a biological nutrient reduction facility** that will reduce nutrient concentrations in wastewater discharge by 70-80%. Additionally, implementation of odor controls at a pump station and its wastewater treatment facility will benefit surrounding communities, including those with environmental justice concerns. The City will also **increase the volume of treated wastewater available to local manufacturers for industrial reuse, reducing their potable water demand.** This program supports compliance with future regulatory requirements and aligns with regional and national water quality objectives, including the Kansas Nutrient Reduction strategy and nutrient reduction in the Gulf Hypoxia zone.



Photo Credit: City of Wichita, Kansas



The Water Infrastructure Finance and Innovation Act (WIFIA) program accelerates investment in our nation's water infrastructure by providing long-term, low-cost supplemental loans for regionally and nationally significant projects.

\$131 Million

Closed 8/18/2021

PROJECT DESCRIPTION

The PFAS Treatment Projects will increase the area's climate resilience by ensuring a local drinking water source through water treatment upgrades throughout the County and reducing reliance on imported water. The project will improve drinking water quality by reducing PFOA and PFOS levels to ensure the groundwater supplied by the wells is complies with current California PFAS recommendations. The project will design, permit, and construct PFAS removal systems at 56 impacted wells operated by 10 cities and retail water districts within Orange County Water District.



Photo credit: Orange County Water District



The Water Infrastructure Finance and Innovation Act (WIFIA) program accelerates investment in our nation's water infrastructure by providing long-term, low-cost supplemental loans for regionally and nationally significant projects.

WIFIA LOAN AMOUNT: \$81 million

TOTAL WIFIA PROJECT COSTS: \$166 million

PROJECT DESCRIPTION

The Upper Santa Ana River Watershed Infrastructure Financing Authority's Watershed Connect project is a regional solution that will diversify the region's water supply portfolio, **recharge the groundwater basins, restore critical habitat,** and secure a sustainable water future in San Bernardino and Riverside Counties, California. This WIFIA loan will support Yucaipa Valley Water District's modernization of its **recycled water** facility and drinking water facility to increase production and improve operational efficiency. Upgrades to both facilities will increase water production to help offset the effects of drought and climate change on the community's water availability. In addition, the **installation of solar arrays and battery energy storage systems** at both facilities will improve energy efficiency, reduce greenhouse gas emissions, and produce 7 megawatts of renewable energy. This is the first loan under a master agreement that will commit \$123 million to accelerate the implementation of the \$252 million Watershed Connect program.



Source: Yucaipa Valley Water District



The Water Infrastructure Finance and Innovation Act (WIFIA) program accelerates investment in our nation's water infrastructure by providing long-term, low-cost supplemental loans for regionally and nationally significant projects.

WIFIA LOAN AMOUNT: \$38 million
TOTAL WIFIA PROJECT COSTS: \$79 million
PROJECT DESCRIPTION

Bloomington and Normal Water Reclamation District's Wastewater System Modernization and Rehabilitation Program will update the existing wastewater system to increase its reliability, enhance air quality, and better serve its customers. The district will complete several projects, including wastewater treatment plant renovation, sewer pipe lining, **combined sewer overflow improvements**, and **PFAS/PFOA source identification and reduction strategies**. Many of these projects will help the district increase resilience to extreme storm events. To reduce greenhouse gas emissions and energy costs, the district will convert backup generators from diesel fuel to natural gas and install a **solar microgrid** in the system. This is the first loan under a master agreement that will commit \$157 million in WIFIA assistance to the district to modernize its wastewater system.



Source: Bloomington and Normal Water Reclamation District

2 REGULATIONS WITH "ELECTRONIC REPORTING" IN THEIR NAMES

NPDES Electronic Reporting Rules –

40 CFR 127

- Identification of what data and reports must be reported to EPA's data system, either by
 - Permittee directly, or
 - State system upload [state receives and uploads to EPA]

Cross-Media Electronic Reporting Rule –

40 CFR 3

- Performance-based, technology-neutral standards
- Enforceability of info collected electronically



NPDES ELECTRONIC REPORTING RULE 40 CFR 127

- **Phase 1** – 21 DEC **2016** compliance deadline
 - Discharge monitoring Reports (DMRs)
 - Biosolids Reports
- **Phase 2** – 21 dec 2020 => **21 Dec 2025 deadline**
 - General Permits
 - CAFO annual Program Reports
 - Ms4 [municipal stormwater] reports
 - **Pretreatment** annual reports and SIUs where EPA or states are control authorities
 - Combined sewer overflow and bypass reports
 - 316(b) [cooling water intake] reports
- **EPA is currently developing Phase 2 e-reporting tools and systems:**
 - Data entry Technical papers: <https://www.epa.gov/compliance/data-entry-guidance-and-technical-papers>.



E-Rule (Part 127):

Overview of Pretreatment Electronic Reporting

- **POTWs with an approved pretreatment programs:** In accordance with 40 CFR 403.12(i), POTWs with an approved pretreatment program are required to submit **annual reports to the Approval Authority** documenting program status and activities performed during the previous year.
- **SIUs & CIUs with State or EPA as Control Authority:** In accordance with 40 CFR 403.12(e) and (h), SIU/CIUs must submit a **report on their compliance status at least semiannually** (once every 6 months).
 - These reports are generally filed in June and December; however, the Control Authority may modify the months in which the reports are to be submitted.
 - There are reduced reporting requirements for Middle-Tier Categorical Industrial Users and Non-Significant Categorical Industrial Users.
- **For BOTH GROUPS above:**
 - These reports are used to evaluate compliance with pretreatment regulations.
 - The NPDES eRule identified the data elements for each program report

E-Rule (Part 127): Data Elements Applicable to Pretreatment Annual Report – 40 CFR 403.12(i)

- SNC Published
- SNC with Pretreatment Enforceable Compliance Schedule Status
- Local Limits Adoption Date
- Local Limits Evaluation Date
- Local Limits Pollutants
- POTW Discharge Contamination Indicator (Program Report)
- POTW Biosolids or Sewage Sludge Contamination Indicator (Program Report)
- Industrial User Control Mechanism Status
- Industrial User POTW Discharge Contamination Indicator (Program Report)
- Industrial User Biosolids or Sewage Sludge Contamination Indicator (Program Report)
- Industrial User Wastewater Flow Rate (Program Report)
- Middle-Tier Significant Industrial User Reduced Reporting Status
- Non-Significant Categorical Industrial User (NSCIU) Certification Submitted to Control Authority
- Notification of Changed Discharge Submission

E-Rule (Part 127): Data Elements Applicable to Pretreatment Annual Report – 40 CFR 403.12(i)

- Number of Industrial User Inspections by Control Authority
- Number of Industrial User Sampling Events by Control Authority
- Number of Required Industrial User Self-Monitoring Events
- Actual Number of Industrial User Self-Monitoring Events
- Types of Industrial User Enforcement Action
- Number of Industrial User Enforcement Actions
- Industrial User Cash Civil Penalty Amount Assessed
- Industrial User Cash Civil Penalty Amount Collected
- Industrial User POTW Discharge Contamination Indicator (Program Report)
- Industrial User Biosolids or Sewage Sludge Contamination Indicator (Program Report)
- Industrial User Wastewater Flow Rate (Program Report)
- Middle-Tier Significant Industrial User Reduced Reporting Status
- Non-Significant Categorical Industrial User (NSCIU) Certification Submitted to Control Authority
- Notification of Changed Discharge Submission

E-Rule (Part 127): Data Elements Applicable to SIU/CIU Compliance Reports – 40 CFR 403.12(e)&(h) (Where State or EPA is Control Authority)

- NPDES ID
- Permitted Feature ID
- Limit Set Designator
- Monitoring Period End Date
- Monitoring Location Code
- Limit Season Number
- Parameter Code
- No Data Indicator (NODI)
- Value
- Quantity or Concentration Units
- Value Received Date (as determined by State or EPA)
- Value Type
- Value Qualifier
- Industrial User Wastewater Flow Rate

<https://test.epacdx.net/>

FUTURE: Improved Oversight and Transparency for the Pretreatment Program

- Full implementation of the final rule will allow states, EPA, and the public to more readily answer the following questions (and more!):

Number and names of

- POTWs with approved pretreatment programs;
- Industrial users (IUs) in cities without pretreatment programs inspected or sampled during a time period (not just as part of audits);
- SIUs & CIUs in approved pretreatment programs and number without control mechanisms
- IUs in cities without pretreatment programs that are in compliance/not in compliance with their monitoring/reporting requirements;
- SIUs discharging to POTWs with pretreatment programs that are not inspected or sampled annually by the Control Authority;
- IUs that have been issued enforcement actions including the type of enforcement (SNC publication, AO, APO), who issued it (EPA, state, POTW), and any dollar amounts;
- POTWs that are late in submitting local limits reevaluations.



Overview: EPA is piloting NPDES Phase 2 data sharing.

EPA and State Non-EDT Data

- EPA Region and state direct data entry (via web screens) such as permits, inspections, enforcement actions

ICIS Pipeline Capabilities

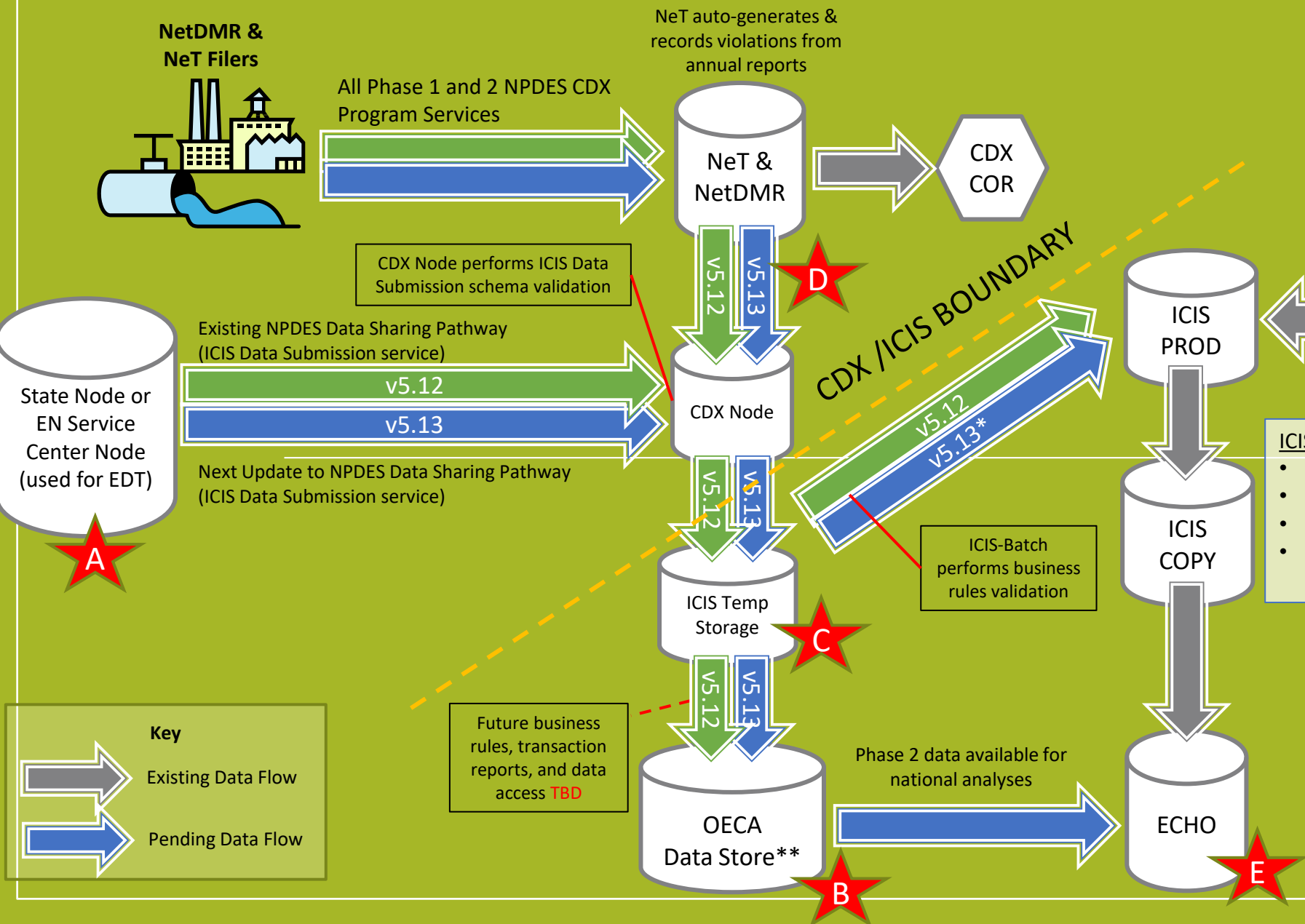
- Link enforcement actions w/violations
- Link compliance monitoring w/ violations
- Manual RNC detection and resolution of violations
- Used for NNCR, Annual Results, and NPDES SNC NECI Tracking

Additional Notes:

Payload router sends Phase 2 data to OECA Data Store.

*Includes all data on v5.12 but not the MS4 Phase 2 data.

**Not final name & only getting Phase 2 data (e.g., sewer spill and related data).



Key

Existing Data Flow

Pending Data Flow

CROSS MEDIA
ELECTRONIC
REPORTING
RULE
(CROMERR)
40 CFR PART 3

Allows a POTW Pretreatment
Program
to receive
electronic reports
from Industrial Users

- Requires a CROMERR certified electronic reporting system
- Requires modification of the approved Pretreatment program

40 CFR Part 3



Cross Media Electronic Reporting Rule (CROMERR)

- Documents cannot be altered without detection - Alterations must be recorded by the system
- Documents can only be submitted intentionally
- Submitters and signatories are provided with an opportunity to review and repudiate the COR
- Common questions / answers:
 - Attaching reports to emails is **not** considered to be a CROMERR-compliant system
 - Scanned signatures on pdfs are **not** considered to be valid e-signatures.
 - Can I scan and destroy my old paper records? Maybe.
 - Recordkeeping requirements are in 40 CFR 403.12(o):
 - Sample excerpt: "retain such reports for a minimum of 3 years"

CROMERR Roles

Control Authority

- Verify legal validity of electronic signatures
- Prepare CROMMER system documentation
 - Shared CROMERR Services (SCS) using CDX
 - EPA-vetted Commercial Off the Shelf (COTS) Systems
 - Custom or Hybrid Systems
- Evaluate implementation procedures/resources/legal authority

more PFAS
stuff

More NPDES
Program *stuff*

- ▶ PFAS Roadmap Review
- ▶ PFAS Requirements in NPDES Permit Applications
- ▶ POTW Influent PFAS Study and National Sewage Sludge Study
- ▶ Other NPDES regulation revisions (?)

Key Roadmap Actions:

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 (*Dec 21 & June 22*)

Develop technology-based PFAS limits for industrial dischargers (2022 & ongoing)

Address PFAS in Clean Water Act permitting, analytical methods, water quality criteria & fish advisories (*2022 & ongoing*)

Evaluate risks of PFAS in biosolids (*winter 2024*)



Effluent Guidelines Program

- OVERVIEW
- ELG Update

CWA Analytical Methods

- MUR

PFAS Updates

- Effluent Guidelines are national regulatory standards for wastewater discharged to surface waters and municipal sewage treatment plants. EPA issues these regulations for industrial categories, based on the performance of treatment and control technologies.
- The Clean Water Act Section 304(m) requires EPA to annually review existing effluent guidelines and pretreatment standards to determine if revisions are warranted.
- ▶ The Clean Water Act does not describe what activities must be included in the review and EPA's current process has evolved over the years, incorporating feedback from the public on how best to conduct these reviews.
- ▶ EPA publishes the results of these reviews in the ELG Plan
- ▶ ELG Plan 15 was published in the FR in January 2023
- ▶ ELG Plan 16 expected to be published.....

Summary of actions and discussions in ELG Program Plan 15

- ELG Program Plan 15 published in January 2023.
- Presents new findings of our 2021 annual review, summary of public comments we received, announces new rulemakings and studies while also providing updates on existing rulemakings and studies.
- Conducted category reviews for three industrial categories:
 - **Plastics Molding and Forming**
 - **Paint Formulating**
 - **Leather Tanning**



Summary of actions and discussions in ELG Program Plan 15

- New Rules and Studies:

- EPA is initiating a new **POTW Influent PFAS Study** to gather data on industrial PFAS discharges to POTWs.
- EPA intends to initiate a new rulemaking to revise the existing ELG for **landfills**, primarily to address PFAS in landfill leachate.
- EPA is initiating a new study to gather (non-PFAS) data on **Concentrated Animal Feeding Operations (CAFOs)** to better understand the potential discharges and current implementation of the existing rule.
- EPA's **Textile Mills detailed study** will collect data on PFAS use and discharge via an Information Collection Request (ICR). The first FR notice for the ICR was published in November 2023.



The commencement and pace for these activities will be a function of funding in FY24 and beyond.

Summary of actions and discussions in ELG Program Plan 15

- Updates to ongoing rulemakings and studies:
 - **Steam Electric ELG** – strengthening certain wastewater pollution controls from coal fired power plants. The proposed rule published in early March and the public comment period closed at the end of May. The final rule published on May 9, 2024.
 - <https://www.epa.gov/eg/steam-electric-power-generating-effluent-guidelines-2024-final-rule>
 - **Meat and Poultry Products ELG** – to address nutrient discharge from this industry. The proposed rule was published in December 2023. The public comment period closed March 25, 2024, 3 public hearings held, and comments are under review.
 - **PFAS Manufacturers (OCPSF) ELG** – to address wastewater discharge of PFAS from PFAS manufacturing facilities. EPA expects to published a proposed rule later in 2024.



The commencement and pace for these activities will be a function of funding in FY24 and beyond.

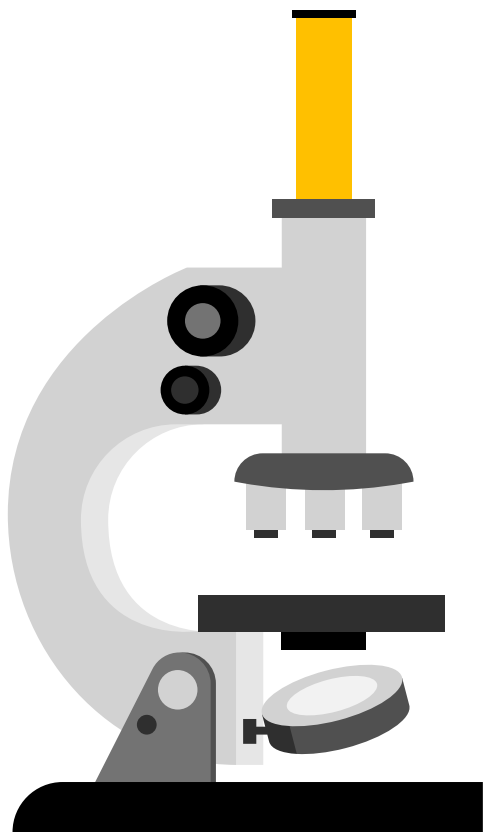
Summary of actions and discussions in ELG Program Plan 15

- Updates to ongoing rulemakings and studies:
 - **Metal Finishing & Electroplating ELG** – to address wastewater discharge of PFAS from metal finishing and electroplating operations focusing on facilities using PFAS-based fume suppressants and wetting agents. Industry questionnaire recently completed. Proposed rule is targeted for May 2026.
 - **Electrical and Electronic Component ELG detailed study** is complete with no further action pursued at this time. EPA will continue to monitor this industry through the POTW Influent PFAS Study to help identify any PFAS related issues.
 - EPA will continue to monitor and report on the PFAS phase-outs for **airports and pulp & paper manufacturing** industries until they are complete.



The commencement and pace for these activities will be a function of funding in FY24 and beyond.

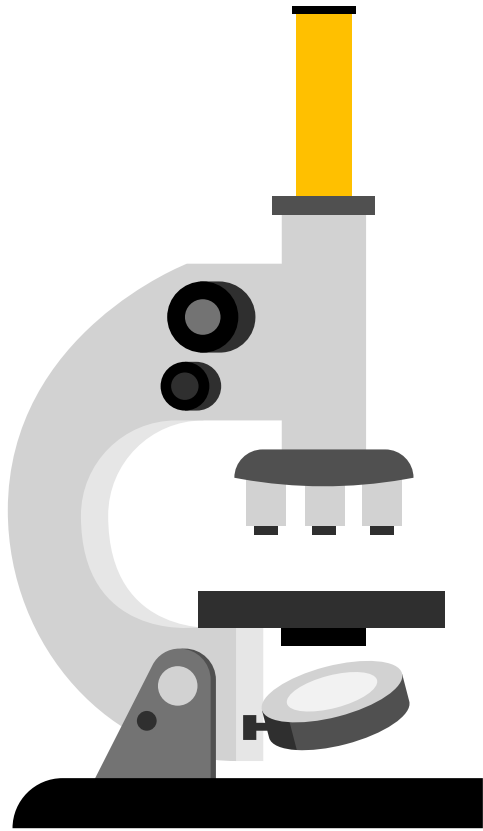
CWA Analytical Methods – PFAS



- EPA published **Method 1633 for 40 PFAS compounds**
 - Published in January 2024.
 - A method to test for 40 PFAS compounds in wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue.
 - Now validated by a multi-laboratory study for use in wastewater.
 - This method can be used in various applications, including NPDES permits.
 - The method supports NPDES implementation by providing a consistent PFAS method that has been tested in a wide variety of wastewaters and contains all the required quality control elements in CWA method.
- EPA published **Method 1621 for Adsorbable Organic Fluorine (AOF)**
 - EPA published Method 1621 in January 2024.
 - A multi-laboratory validated method to screen for organofluorines in wastewaters and surface waters by Combustion Ion Chromatography (CIC).

CWA Analytical Methods Update Rule (MUR)

Tables in 40 CFR 136.3



- EPA regularly publishes updates to the tables of approved CWA methods at 40 CFR 136.3.
- Next NPRM anticipated for January 2025.
- Methods may include:
 - PFAS methods 1633 and 1621
 - A method for poly-chlorinated biphenyl (PCB) congeners (a more accurate substitute for PCB Aroclors).
 - Other parameters proposed by Voluntary Consensus Standard Bodies (VCSB) as is consistent with the National Technology Transfer Act. These are most likely to propose: a PFAS method, peracetic acid, hydrogen peroxide, and total nitrogen.
- The EPA is not considering method revisions or Alternate Test Procedures that would be addressed more routinely in a routine MUR.

Around the nation with PFAS

- One of the major challenges is that once per- and polyfluoroalkyl substances (PFAS) are in the supply chain, it is like a “**glitter bomb**, and . . . once it gets out there it’s really hard to get it back,” Elizabeth Biser, secretary of the North Carolina Department of Environmental Quality, told the Environmental Council of States (ECOS) annual fall meeting on Sept. 4.

EPA New England Regional Initiatives

Region 1 Mapping PFAS



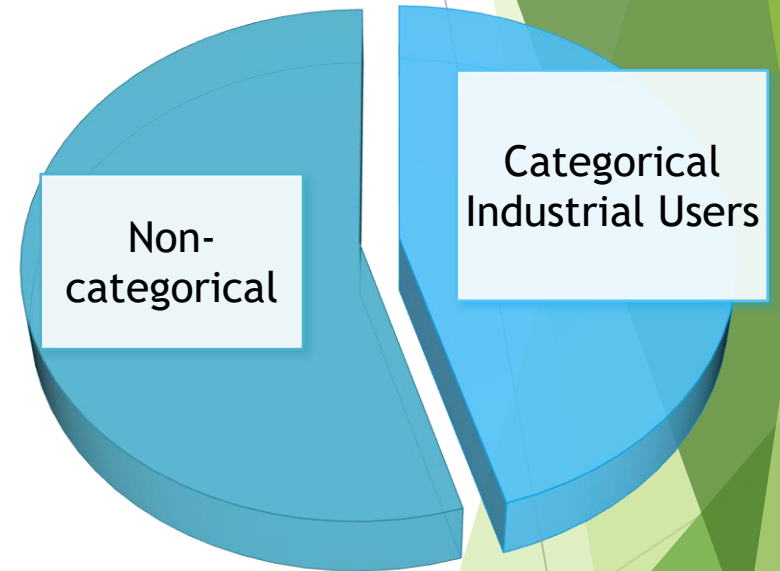
Mapped potentially known dischargers of PFAS

- Focused on MA and NH – EPA Authority
- Interested in drinking water sources
- Reviewed Annual Industrial Pretreatment reports
- Classified industrial sectors
- Ranked significant industrial users (High, Medium or Low)

PFAS Ranking System

- ▶ Reviewed 62 Annual Industrial Pretreatment Reports to identify Significant Industrial Users to determine ranking:
- ▶ Categorical Determination

CATEGORICAL DETERMINATION

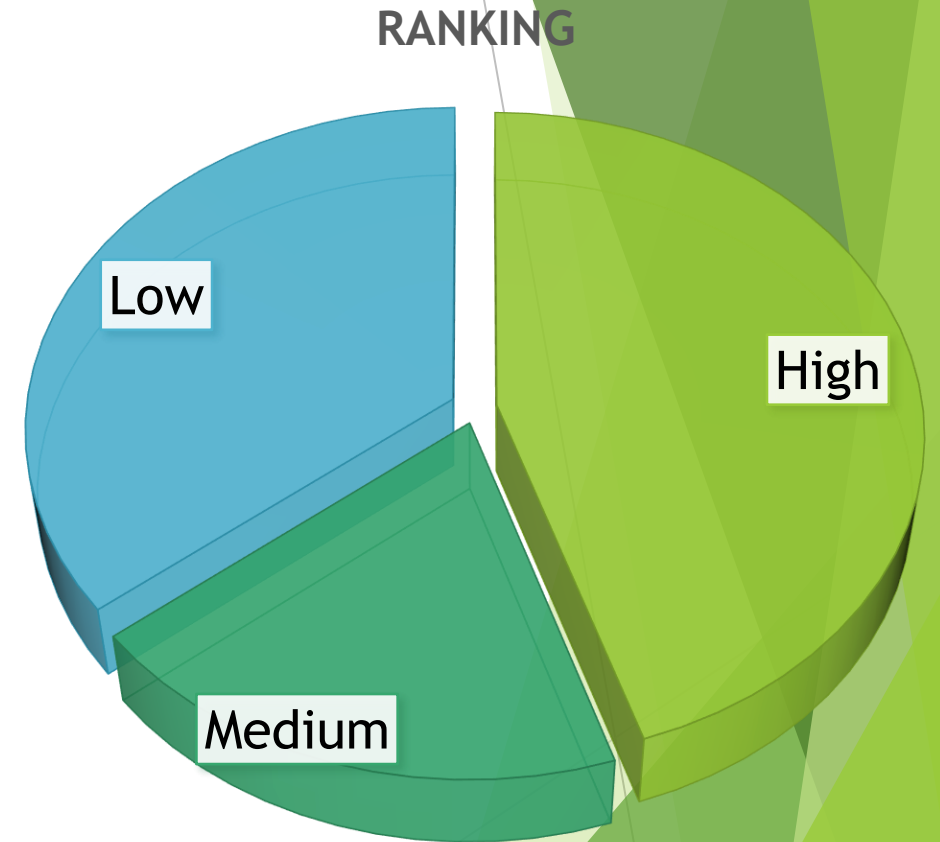


PFAS Ranking: High/Medium/Low

▶ High: All the industries identified as potential PFAS sources; example metal platers, textiles, landfill

▶ Medium: Has related activities that may include PFAS source; hospitals

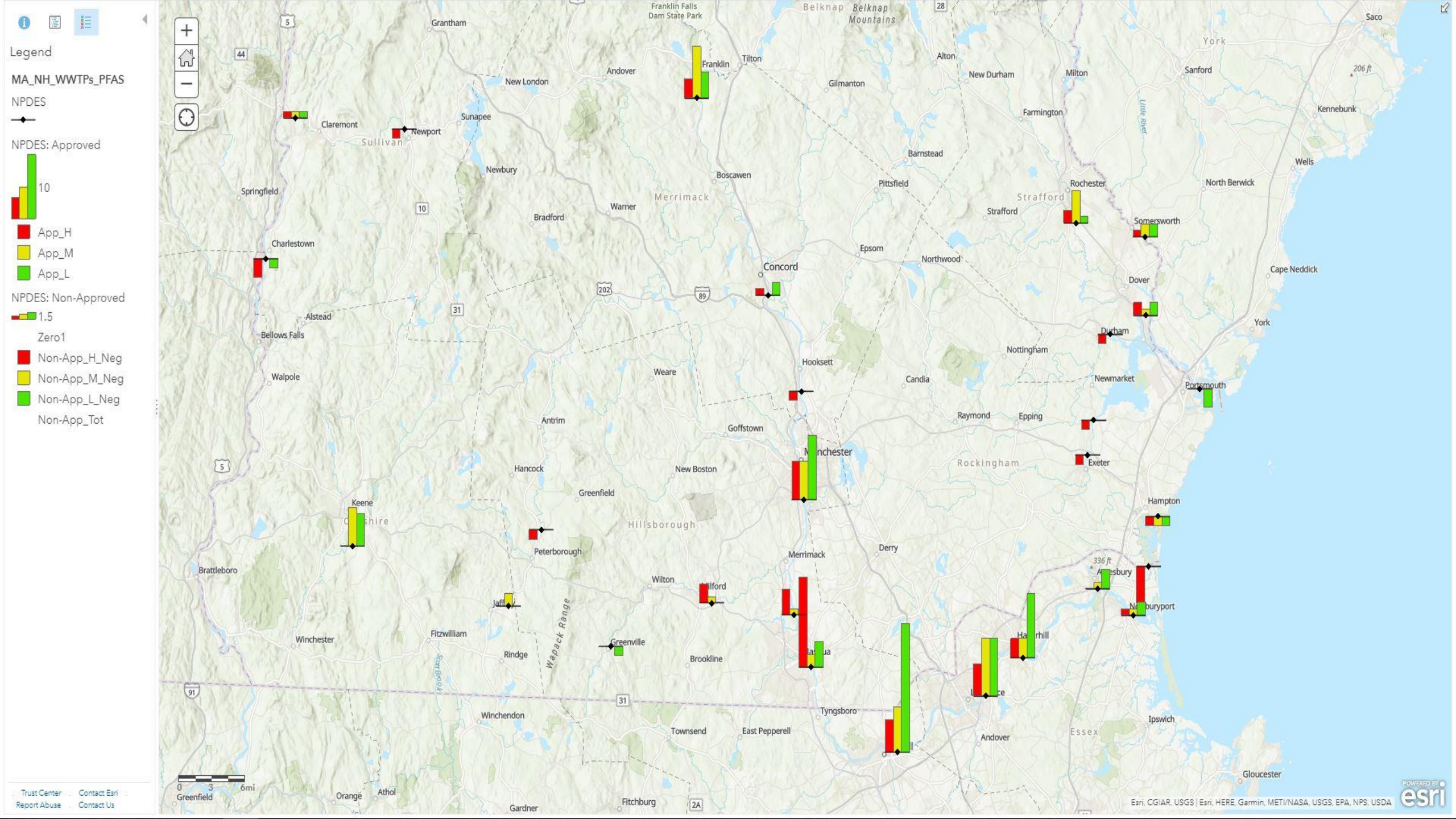
▶ Low: Unlikely to be related to PFAS; breweries or restaurants



PFAS Ranking Caveats

- Used best professional judgment
- Erred on conservative side
- Did not consider volume of wastewater





R1 Assessment of Wastewater Impacts to Drinking Water

- ▶ Using GIS analysis techniques to identify where the public water systems have the highest chance of wastewater contamination
- ▶ Findings
 - 60 Major NPDES facilities are upstream of drinking water intakes
 - 16 Drinking water intakes are downstream of major NPDES dischargers
 - Minimum amount of upstream NPDES = 1
 - Maximum amount of upstream NPDES = 33
 - Closest NPDES discharger to a drinking water intake = 0.18 miles

PFAS DRAFT Language in ALL NPDES Permits (Massachusetts) as of early 2020

- ▶ 6 PFAS compounds to be monitored
 - Perfluorohexanesulfonic acid (PFHxS)
 - Perfluoroheptanoic acid (PFHpA)
 - Perfluorononanoic acid (PFNA)
 - Perfluorooctanesulfonic acid (PFOS)
 - Perfluorooctanoic acid (PFOA)
 - Perfluorodecanoic acid (PFDA)
- ▶ Influent, Effluent, and Sludge Monitoring (1/quarter)
 - ▶ This reporting requirement for the above listed PFAS parameters takes effect 6 months after EPA's multi-lab validated method for wastewater/biosolids is made available to the public on EPA's CWA methods program website
 - ▶ Composite samples and report only - No numerical limits

Pretreatment Component on Industrial Dischargers

The Permittee shall commence annual sampling of the following types of industrial discharges into the POTW:

- ▶ Platers/Metal Finishers
- ▶ Paper and Packaging Manufacturers
- ▶ Tanneries and Leather/Fabric/Carpet Treaters
- ▶ Manufacturers of Parts with Polytetrafluoroethylene (PTFE) or teflon type coatings (i.e. bearings)
- ▶ Landfill Leachate
- ▶ Centralized Waste Treaters
- ▶ Contaminated Sites
- ▶ Fire Fighting Training Facilities
- ▶ Airports
- ▶ Any Other Known or Expected Sources of PFAS

Interim Strategy for Per- and Polyfluoroalkyl Substances in Federally Issued National Pollutant Discharge Elimination System (NPDES) Permits

- ▶ EPA HQ Memo - November 22, 2020
- ▶ **Workgroup Recommendations** include permit requirements for phased-in monitoring and best management practices, as appropriate, taking into consideration when PFAS are expected to be present in point source wastewater discharges.

Leverage NPDES permits to reduce PFAS discharges

- ▶ December 2022 - EPA issued *Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs*
- ▶ This memo integrates previous policies into a holistic NPDES response for all NPDES permitting authorities, replacing earlier versions that were targeted at federally-issued permits only
- ▶ Describes steps permit writers and pretreatment authorities can implement under existing authorities, in the absence of final criteria/ELGs/methods
- ▶ Includes recommendations for NPDES permitting authorities as well as pretreatment program recommendations



What's Recommended in the HQ Memo?

- ▶ Effluent-monitoring for **NPDES Industrial Permits (Direct Dischargers)**
- ▶ Influent/Effluent/Biosolids monitoring for **POTW NPDES Permits**
 - Quarterly monitoring for PFAS using Draft Analytical Method 1633
 - Electronic Reporting of Data via DMRs
 - Data submission via annual pretreatment reports
- ▶ Update SIU Inventory
- ▶ Best Management Practices
 - Product Elimination or substitution
 - Accidental Discharge minimization

Regional Pretreatment Component on Industrial Dischargers

Permittee shall commence annual sampling of specific types of industrial discharges into the POTW:

- ▶ Commercial Car Washes
- ▶ Platers/Metal Finishers
- ▶ Paper and Packaging Manufacturers
- ▶ Tanneries and Leather/Fabric/Carpet Treaters
- ▶ Manufacturers of Parts with Polytetrafluoroethylene (PTFE) or teflon type coatings (i.e. bearings)
- ▶ Landfill Leachate
- ▶ Centralized Waste Treaters
- ▶ Known or Suspected PFAS Contaminated Sites
- ▶ Fire Fighting Training Facilities
- ▶ Airports
- ▶ Any Other Known or Expected Sources of PFAS

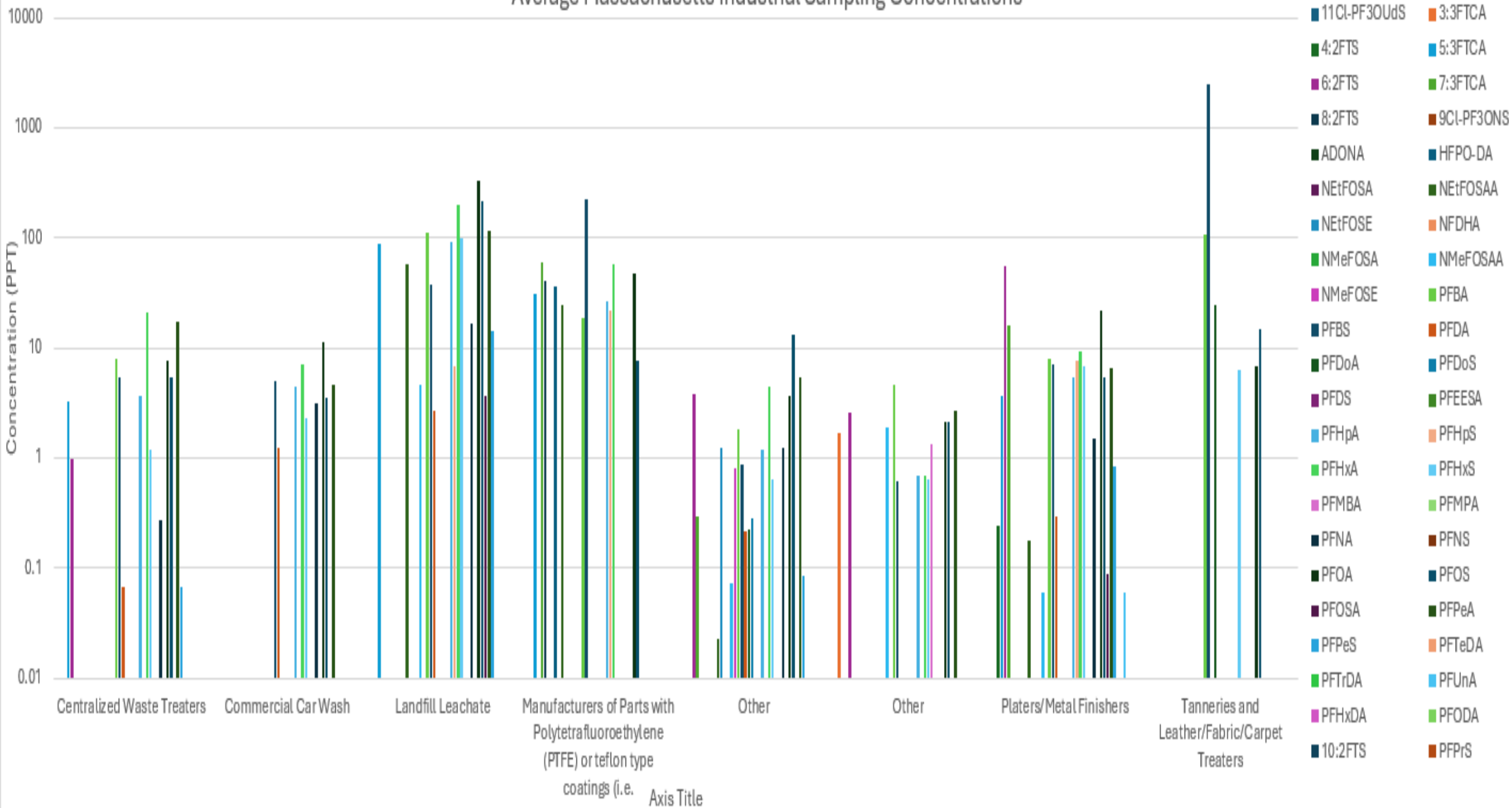
EPA New England NPDES Permit Approach

▶ <https://www.epa.gov/npdes-permits/massachusetts-npdes-permits>

Case Study #1 (Massachusetts)

Centralized Waste Treaters	Commercial Car Wash	Landfill Leachate	Manufacturers of Parts with Polytetrafluoroethylene (PTFE) or teflon type coatings	Other	Platers/Metal Finishers	Tanneries and Leather/Fabric/Carpet Treaters
3	1	2	2	49	15	1

Average Massachusetts Industrial Sampling Concentrations



EPA Region 1 Initiative

What's the Big Deal with Car Washes?

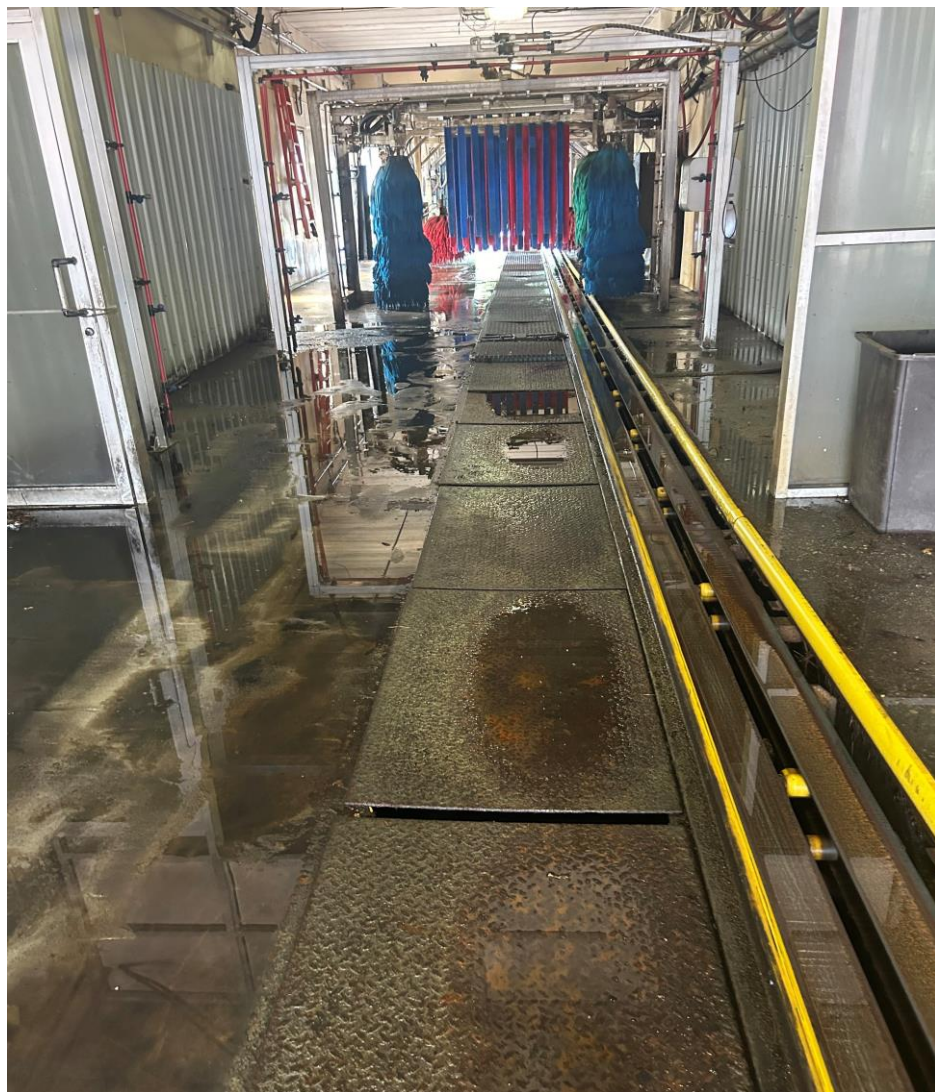
Self Car Wash (Individual Bay Operation)



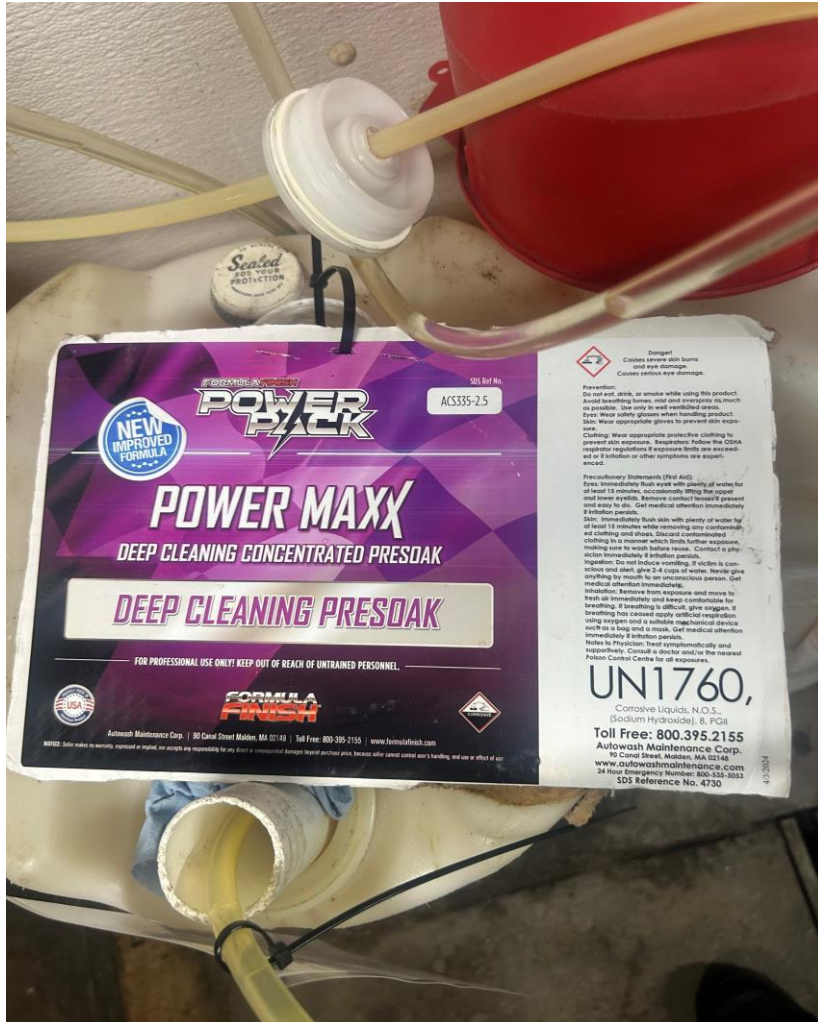
Self Car Wash Process



Car Wash Drive Through



Car Wash Products



Car Wash Product



Where to Sample?



Car Wash Case Study #1

- ▶ Self Wash Bay
 - ▶ 9 PFAS compounds detected <7.7 ng/l
- ▶ Large Scale Drive Through Operation
 - ▶ Recycled Wastewater
 - ▶ PFBS - 67 ng/l
 - ▶ PFHS - 16 ng/l
- ▶ Liquid Towel (Drying Agent - Raw Product Diluted 100:1)
 - ▶ PFHS - 440 ng/l equates to 44 ug/l in Product
 - ▶ PFDS - 220 ng/l equates to 22 ug/l in Product

Car Wash Case Study #2

▶ Drive Through Operation

▶ PFHxA - 9.8 ng/l

▶ PFOA - 11 ng/l

▶ PFBS - 24 ng/l

▶ PFHxS - 17 ng/l

▶ PFOS - 11 ng/l

▶ Ceramic Coat (Raw Product Diluted 250:1)

▶ PFOS - 57 ng/l equates to 14.2 ug/l in Product

POTW Case Study

- ▶ POTW in New England
- ▶ 450 Samples collected from 2020 - present
- ▶ 5,687 Data Points
- ▶ All SIUs now permitted to sample for PFAS (DW and MF facilities could be monthly or quarterly)
- ▶ 53 Different Industrial Process Lines from a variety of Industrial Sectors
 - ▶ Metal Finishing, Hospitals (research, labs, etc.), Landfills, University Labs, CWT, vehicle/truck wash, drinking water treatment, etc

Metal Finishing Highest Values Detected

▶ Perfluorohexanesulfonic Acid (PFHxS)	1500	ng/l
▶ Perfluorooctanesulfonic Acid (PFOS)	1300	ng/l
▶ Perfluorooctanoic Acid (PFOA)	900	ng/l
▶ Perfluorobutanoic Acid (PFBA)	790	ng/l
▶ Perfluorobutanesulfonic Acid (PFBS)	700	ng/l
▶ Perfluorooctanesulfonic Acid (PFOS)	120	ng/l

Various Processes (Results in ng/l)

► Landfill Leachate

► Perfluorooctanoic Acid (PFOA)	900
► Perfluorohexanoic Acid	230
► Perfluorobutanoic Acid (PFBA)	380

► hand vehicle washing and detailing

► Perfluorohexanesulfonic Acid (PFHxS)	1500
► 9-Chlorohexadecafluoro-3-ox (9Cl-PF3ONS)	310

► Metal Diagnostic Machine Manufacturing

► Perfluorohexanoic Acid	290
► Perfluoropentanoic Acid	120

► Drinking water Plant

► Perfluorooctanesulfonic Acid (PFOS)	1300
► Perfluorooctanesulfonic Acid(PFOS)	184
► Perfluorononanoic Acid	512
► Perfluorooctanesulfonic Acid	235
► Perfluorooctanesulfonic Acid (PFOS)	389
► Perfluorooctanoic Acid (PFOA)	170
► Perfluorooctanesulfonic Acid (PFOS)	161

More Sectors (Results in ng/l)

▶ Centralized Waste Treatment Facility

▶ Perfluorobutanoic Acid (PFBA)	790
▶ Perfluorohexanoic Acid	180
▶ Perfluorooctanesulfonic Acid (PFOS)	143
▶ Perfluorobutanesulfonic Acid	240

▶ Fire Fighting Gear Cleaning

▶ Perfluorobutanesulfonic Acid	260
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▶ Nut Processing Facility

▶ Perfluorooctanesulfonic Acid (PFOS)	200
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▶ Hospital Clinical and Pathology Lab

▶ Perfluorobutanoic Acid (PFBA)	170
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▶ Commuter Train Wash

▶ Perfluorohexanoic Acid	160
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▶ Research Laboratories

▶ Perfluorobutanesulfonic Acid	700
▶ Perfluorobutanoic Acid (PFBA)	190

More Sectors (Results in ng/l)

- ▶ Brewery
 - ▶ Perfluoroheptanoic Acid 143
- ▶ Hospital Central Processing Department
 - ▶ 1H,1H,2H,2H-Perfluorooctane s (6:2FTS) 120 ng/l
- ▶ Various process
 - ▶ 34 Detections between 100 and 30 ng/l
 - ▶ 23 Detections between 30 ng/l and 20 mg/l
 - ▶ 63 Detection between 20 mg/l and 10 mg/l

POTW Case Study

Parameter	Maximum Contaminant Level (MCL)	Town of XXX Results	Town of XXX Results	Town of XXX Results
PFNA	10ppt	ND	ND	5.07
PFHxS	10ppt	ND	ND	6.42
PFOA	4ppt	13.2	4.54	19.2
PFOS	4ppt	2.70	2.98	13.6

POTW Case Study

Average results of ~55 Monthly Samples January 2020 - July 2024

Parameter	Drinkwater limits	Influent Results	Effluent Results	Sludge Results	Ash Results	Septic Results	Landfill Leachate
		ng/L	ng/L	ng/g	ng/g	ng/L	ng/L
PFNA	11ppt	ND	ND	0.2	ND	13.6	ND
PFHxS	18ppt	4.9	4.3	0.1	ND	4.6	32.9
PFOA	12ppt	14.1	9.0	1.0	ND	18.9	52.2
PFOS	15ppt	15.5	8.8	15.3	ND	29.2	20.3

Other PFAS News

Final FPAS National Primary Drinking Water Regulation: Federal Register published April 26, 2024

- ▶ MCLS for 6 PFAS in drinking water: PFOA, PFOS, PFHxS, PFNA, HFPO-DA and “PFAS Mixture” (2 or more of PFHxS, PFNA, PFPO-DA, PFBS)

Designation of PFOA and PFOS as CERCLA Hazardous Substances - Effective July 8, 2024

- ▶ Questions and Answers about Designation of PFOA and PFOS as Hazardous Substances under CERCLA.
- ▶ Factsheet on Release Notification Requirements.
- ▶ PFAS Enforcement Discretion Settlement Policy Under CERCLA (April 19, 2024)

Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances - signed April 9, 2024

- ▶ Evaluation framework assessing emerging innovative destruction & disposal methods
- ▶ Focuses on 3 existing technologies (UIC, landfills, thermal treatment under certain conditions) and identifies key data gaps for ongoing research
- ▶ comments for 180 days from the date of the Federal Register notice

Proposal to Clarify Authority to Address Releases of Hazardous Waste at Treatment, Storage, & Disposal Facilities :

Federal Register published February 8, 2024

- ▶ Amend definition of Hazardous waste as it applied to Corrective action from solid waste management units at permitted hazardous waste TSDFs
- ▶ Comments accepted through March 26, 2024

POTW Influent PFAS Study: Purpose

- Collect and analyze nationwide data on industrial sources of PFAS discharge to the environment.
- Produce a robust set of data to characterize the type and quantity of PFAS in industrial discharges.
- Identify and prioritize industrial point source categories requiring further study or rulemaking.

National Sewage Sludge Survey (NSSS): Purpose

- Collect data on PFAS in POTW sewage sludge and biosolids.
- Inform upcoming risk assessments.
- Assess need for future regulations and guidance for sewage sludge and biosolids.

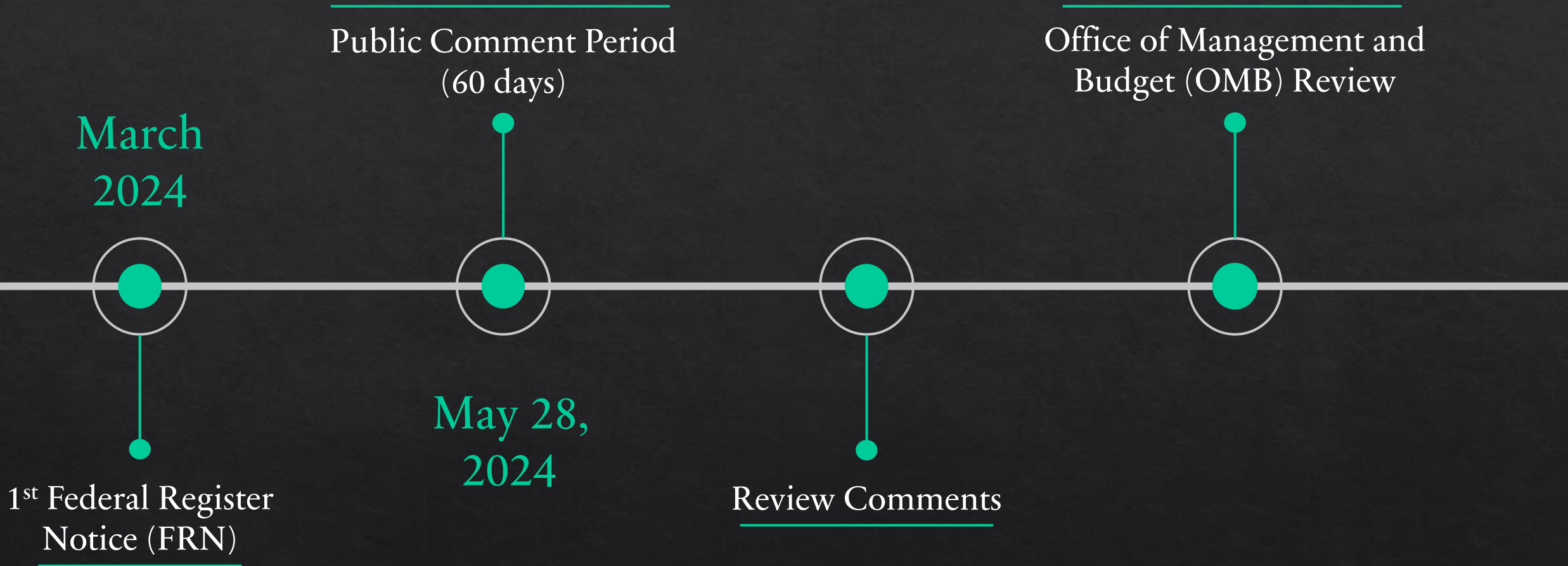
Why is the POTW Influent PFAS Study necessary?

- National dataset
- All 59 industrial categories that have ELGs
- Fully validated EPA PFAS wastewater methods
 - 1633 (40 PFAS Analytes)
 - 1621 (Adsorbable Organic Fluorine)
 - Comparable dataset

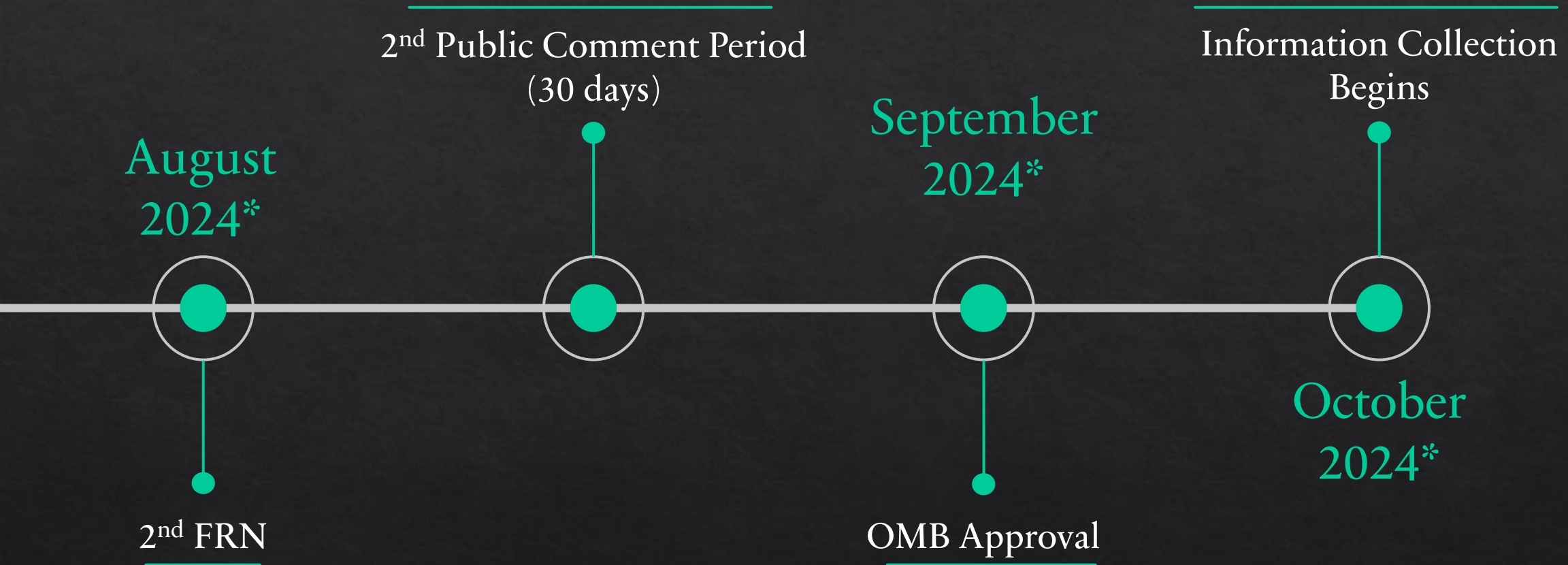
Information Collection Request (ICR)

- The questionnaire and sampling program will be a mandatory ICR under Clean Water Act Section 308 Authority
 - An ICR is required when collecting information from more than 9 entities
 - Requires approval from the Office of Management and Budget (OMB)
- 2 rounds of public comment for stakeholder input/feedback

ICR Timeline



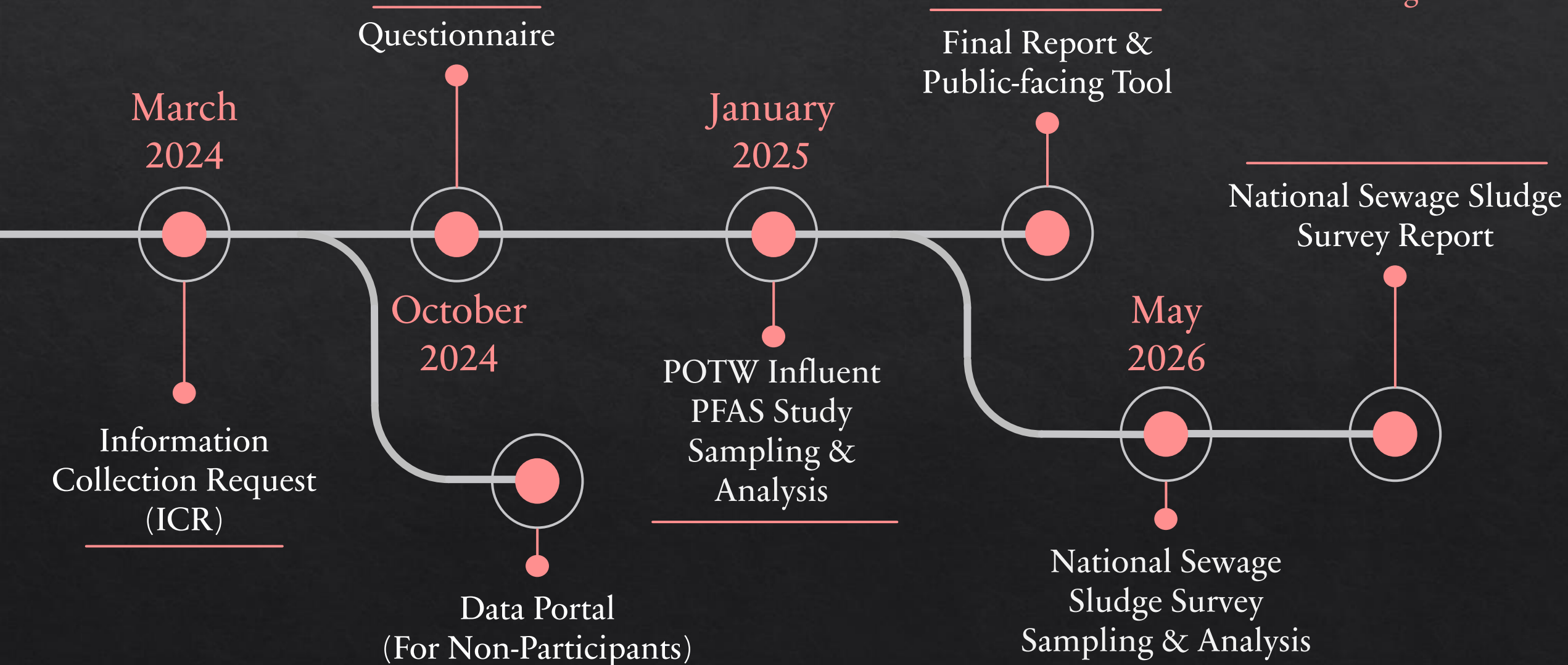
ICR Timeline



*Dates Subject to change

Timeline

Note: Dates subject
to change



Sampling Requirements

- ▶ **Phase 1** will require each selected POTW to collect and analyze one-time grab samples of industrial user effluent, domestic wastewater influent, POTW influent, and POTW effluent for forty specific PFAS and adsorbable organic fluorine (AOF). For each POTW selected, the EPA intends to specify no more than ten industrial users for which the POTW must collect and analyze effluent samples. The total number of industrial users sampled as part of the sampling program is not expected to exceed 2,000 facilities.

Region 1 Audits

- ▶ FY2024 - Performed 12 Audits of 59 for 20% Coverage
- ▶ Target Goal
 - ▶ Audits - 20% of the Universe annually
 - ▶ Pretreatment Compliance inspections - 40% annually

Annual Industrial Pretreatment Program Awards

Questions?

Justin Pimpare
EPA New England
Pimpare.justin@epa.gov
(617) 918-1531