



EPA's PFAS Roadmap and Pretreatment



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Recommendations for POTWs

Establish universe in the service area & downstream of the POTW

- Conduct IU inventory of PFAS industries, including non-SIUs
- Collaborate with drinking water to determine downstream intakes
- Consider sludge disposal goals



Develop sampling plan

- Use method 1633 in conjunction with 1621
- Include IUs identified in PFAS inventory
- Select collection system monitoring locations to differentiate industrial vs. domestic influent contributions where possible
- Frequency recommendation: quarterly



Implement solutions

- Incorporate monitoring requirements into IU control mechanisms
- Incorporate local limits into IU control mechanisms
- Local limits can be BMPs
- Ensure IUs are in ICIS and submitting data electronically
- Notify affected public water suppliers

EPA PFAS Memo issued December 5, 2022

Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

December 5, 2022

MEMORANDUM

SUBJECT: Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs

FROM: Radhika Fox
Assistant Administrator

A handwritten signature in blue ink, appearing to read "Radhika Fox".

TO: EPA Regional Water Division Directors, Regions 1-10

The National Pollutant Discharge Elimination System (NPDES) program is an important tool established by the Clean Water Act (CWA) to help address water pollution by regulating point sources that discharge pollutants to waters of the United States. Collectively, the U.S. Environmental Protection Agency (EPA) and states issue thousands of permits annually, establishing important monitoring and pollution reduction requirements for Publicly Owned Treatment Works (POTWs), industrial facilities, and stormwater discharges nationwide. The NPDES program interfaces with many pathways by which per- and polyfluoroalkyl substances (PFAS) travel and are released into the environment, and ultimately impact water quality and the health of people and ecosystems. Consistent with the Agency's commitments in the October 2021 *PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024* (*PFAS Strategic Roadmap*), EPA will work in cooperation with our state-authorized permitting authorities to leverage the NPDES program to restrict the discharge of PFAS at their sources. In addition to reducing PFAS discharges, this program will enable EPA and the states to obtain comprehensive information on the sources and quantities of PFAS discharges, which can be used to inform appropriate next steps to limit the discharges of PFAS.

This memorandum provides EPA's guidance to states and updates the April 28, 2022 guidance¹ to EPA Regions for addressing PFAS discharges when they are authorized to administer the NPDES permitting program and/or pretreatment program. These recommendations reflect the Agency's commitments in the PFAS Strategic Roadmap, which directs the Office of Water to leverage NPDES permits to reduce PFAS discharges to waterways "at the source and obtain more comprehensive information through monitoring on the sources of PFAS and quantity of PFAS discharged by these sources." While the Office of Water works to revise Effluent Limitation Guidelines (ELGs) and develop water quality criteria to support technology-based and water quality-based effluent limits for PFAS in NPDES permits, this memorandum describes steps permit writers can implement under existing authorities to reduce the discharge of PFAS.

¹ 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.

2022 PFAS Memo Recommendations – IU Inventory

- Update IU Inventory to include all IUs in industry categories expected or suspected of PFAS discharges listed above.
- Utilize BMPs and pollution prevention to address PFAS discharges to POTWs.

2022 PFAS Memo Recommendations – Pretreatment Permits/Control

- Update IU permits to require quarterly PFAS monitoring.
- Where Authority exists, develop IU BMPs or local limits to control PFAS.

2022 PFAS Memo Recommendations – Development of BMPs

- Product elimination or substitution when available in the industrial process.
- Accidental discharge minimization by optimizing operations and good housekeeping practices.
- Equipment decontamination or replacement to prevent discharge of legacy PFAS following the implementation of product substitution.

Impact to Pretreatment Programs

- Legal Authority
- Resources (training/implementation)/Funding (sampling budget increases?)
- IU inventory
 - Source Identification/Characterization, including existing SIUs
- Permits
 - Source Minimization/Control
 - Monitoring of SIUs and IUs (PFAS 1633 and AOF 1621)
- Develop Local Limits and BMPs
- Non-Domestic Sources
 - Outreach/Education

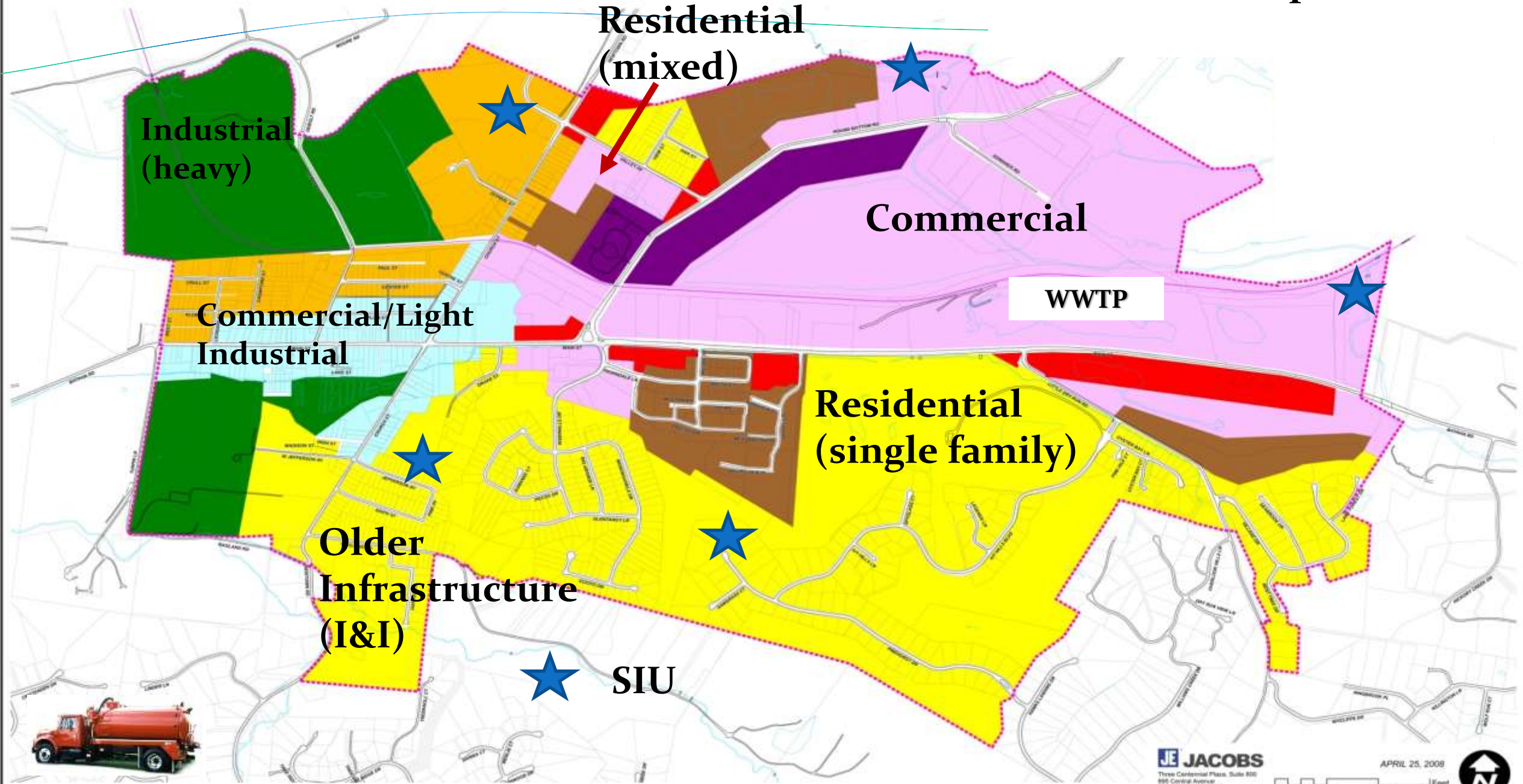
Legal Authority

- Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users.
- Right of entry
- Incorporate general/specific prohibitions, BMPs and Local Limits for the POTW's service area
- Deny or condition
- Establish enforcement authority

Source Identification

- Industrial User Inventory and Characterization
 - Service area non-domestic or industrial users
 - Yellow pages
 - Internal Municipal/County Departments
 - Surveys
 - Inspections
 - Review of MSDS
 - Information on process(es) or unit operations
 - Sampling of IUs and/or service area

Service Area Map



PFAS Non-Domestic Sources

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

Goals of a PFAS Sampling Program

- Determine the impact of industrial wastes on the POTW's collection and treatment system.
- Evaluate compliance by industrial users with applicable Pretreatment Standards and Requirements.
- Quantify PFAS loading in Service area

Sampling “Concepts”

- Right of Entry to perform sampling.
- Sampling must be independent of IU.
- Sampling must be representative of current operating conditions at the IU,
- Data generated from sampling event must be enforceable.

Sampling Data

- Proper Sampling Methods/Procedures, representative of the current operation and discharge conditions at the IU.
- Proper Analytical Methods
- QA/QC program to provide defensible data for sampling and analytical methods
 - Field QA-QC
 - Evaluation of Laboratory QA-QC
- Proper Chain-of-Custody Procedures

Quality Assurance-Quality Control

- Necessary in a sampling program to maintain a level of quality, such as legally defensible data, in the measurement, documentation, and interpretation of sampling data.
- The QA/QC procedures are used to obtain data that are:
 - Precise (degree of closeness between two or more samples)
 - Accurate (degree of closeness between the results obtained from the sample analysis and the true value that should have been obtained).

Sample Bottles/Preservation/Holding Times

EPA draft PFAS Method 1633

- Some PFAS are known surfactants, collect as grab samples. Collect multiple sample aliquots in HDPE bottles that have been lot-certified to be PFAS-free.
- Analyze as soon as possible: Holding time up to 28 days when stored at less than 6° C and protected from the light.
- Issues have been observed with certain perfluorooctane sulfonamide ethanols and perfluorooctane sulfonamidoacetic acids after 7 days.

Source Control

- Local Limits
 - based on NPDES permit limits or water quality standards of the receiving stream, if applicable
- Best Management Practices

Source Minimization

- Outreach
- Best Management Practices
 - Product Elimination or Substitution, when available
 - Equipment decontamination or replacement to prevent discharge of legacy PFAS.
 - Operational Controls and Good Housekeeping to minimize spills/slug discharges
 - Product Substitution
 - Waste Treatment
 - Others?

Summary

- PFAS are pollutants of concern
- NPDES permit actions will impact Pretreatment programs
 - Legal authority/Resources
 - IU inventory and characterization/identification
 - SIU permits – PFAS monitoring
 - BMPs/Pollution Prevention/Source Control
 - Beneficial to characterize PFAS sources and loadings in your service area