



R8PA ANNUAL CONFERENCE – PFAS & PRETREATMENT

PFAS – PRETREATMENT AND CONSIDERATIONS FOR UPCOMING EPA STATUTORY ACTIONS

KEY RECENT & UPCOMING RULES & GUIDANCE

NPDES PFAS Memo (Dec 2022)

Drinking Water Rule (March 2023)

CERCLA LISTING of PFOA & PFOS
(anticipated 2023)

RCRA hazardous constituents
(anticipated 2023)

EPA'S PFAS ACTIONS TIMELINE

2002

TSCA

Two Significant New Use Rules (SNURs). Required manufacturers to provide the EPA with a notification about the manufacture or import of 13, and later 75, PFAS chemicals. Updated 2007, 2013, 2015, 2020.

2009

SDWA HALs

In 2009, EPA released provisional health advisories for PFOS (200 ppt) and PFOA (400 ppt).

2016

LIFETIME DW HAL

EPA issued a lifetime DW HAL of 70 parts per trillion (ppt) for PFOS and PFOA.

2020

TRI

EPA added certain PFAS to the Toxics Release Inventory (TRI) toxic chemical list. Bars companies from manufacturing, processing or importing “significant new uses” of products containing long-chain PFAS, without explicit EPA approval.

2022

SDWA HALs

In 2022, EPA updated HLAs for PFOA (0.004 ppt), PFOS (0.02 ppt), GenX (10 ppt) & PFBS (2,000 ppt)

NPDES MEMO

2022 NPDES PFAS guidance document for POTWs

2023

CERCLA, RCRA, TSCA

Coming soon:
CERCLA and RCRA proposed listings,
TSCA SNURs

SDWA Proposed MCLs

In March, EPA proposed a National Primary Drinking Water Regulation to establish legally enforceable levels (MCLs) for six PFAS

- *AI will talk about pretreatment standards that are coming for metal finishers and manufacturers and fabricators*

PFAS ROADMAP

In 2021, the PFAS Roadmap was developed to demonstrate EPA's commitment to addressing PFAS as well as define our multifaceted approach to do so.

EPA's integrated approach to PFAS is focused on three central directives:

- **Research**
- **Restrict**
- **Remediate**

NPDES MEMO

PFAS GUIDANCE FOR NPDES PERMITS

December 5, 2022 memo: Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs

- Enables EPA and the states to obtain comprehensive information on the sources and quantities of PFAS discharges
- This info can be used to inform appropriate next steps to limit the discharges of PFAS (TBELs, WQBELs, Pre-Treatment Programs/Enforcement, BMPs, etc.)

Take home

- Targeting known PFAS-emitting industries/sources
 - Memo highlights control options: permit limits, pretreatment program, BMPs
- Emphasis on Monitoring – identifying problems and sources

2022 PFAS MEMO RECOMMENDATIONS – IU INVENTORY, BMPS

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

PFAS

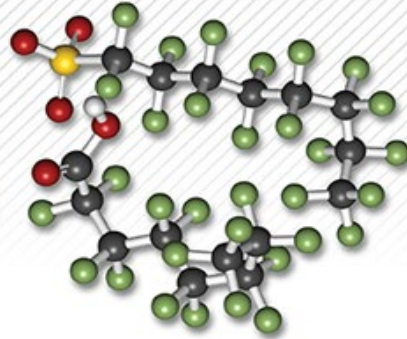
PERFLUOROALKYL AND
POLYFLUOROALKYL
SUBSTANCES



RAINCOATS



MICROWAVE
POPCORN
BAGS



FIRE
RETARDANT
FOAMS



ELECTRONICS



FAST FOOD
CONTAINERS



NONSTICK
COOKWARE



PERSONAL
CARE
PRODUCTS



STAIN-
RESISTANT
CARPET

PFAS SOURCES

Airports (AFFF)

Mechanic Shops/Facilities (hydraulic fluid, fuel lines, brake lines, valves, batteries)

Landfills

Wastewater Treatment Plants (WWTPs)

Petroleum Products

Organic chemicals

Plastics & synthetic fibers (OCPSF)

Metal finishing

Electroplating

Electric and electronic components

Pulp, paper & paperboard

Leather tanning & finishing

Plastics molding & forming

Textile mills

Paint formulating

This is not an exhaustive list and additional industries may also discharge PFAS

*Image From Water Online
<https://www.wateronline.com/doc/the-microplastics-and-pfas-connection-0001>*

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.

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 METHOD 1633

- Draft EPA Method 1633 for PFAS is a multi-laboratory validated method that provides a standardized approach for measuring up to 40 PFAS in a diverse range of environmental matrices including: wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue.
 - Current status: the Method has been multi-lab validated for all aqueous matrices (wastewater, surface water, groundwater, leachate), but is still awaiting final validation for solid-phase media (soil, biosolids, sediment and fish tissue).
 - Final approval expected sometime in 2023
 - NPDES Memo recommends its use in NPDES permits/monitoring requirements

EPA PFAS METHOD 1621

- Draft EPA Method 1621 for Adsorbable Organic Fluorine is a single-laboratory validated method to screen for organofluorines in wastewater.
- Detects organofluorines (molecules with a carbon-fluorine bond), which are rarely naturally occurring. The most common sources of organofluorines are PFAS and non-PFAS fluorinated compounds such as pesticides and pharmaceuticals.
- Method is labeled as a screening method because it does not quantify all organofluorines with the same accuracy and has some known interferences.
- The strength of the method is that it can broadly screen for thousands of known PFAS compounds at the part per billion level in aqueous (water) samples.

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PROPOSED PFAS NATIONAL PRIMARY DRINKING WATER REGULATION

Compound	Proposed MCLG	Proposed MCL
PFOA	0	4.0 ppt (ng/L)
PFOS	0	4.0 ppt (ng/L)
PFNA	1.0 (unitless) Hazard Index	1.0 (unitless) Hazard Index
PFHxS		
PFBS		
GenX Chemicals (HFPO-DA)		

PROPOSED PFAS NATIONAL PRIMARY DRINKING WATER REGULATION

- Monitor for 6 PFAS
- Notify Consumers
- Treat to Achieve the MCLs



PFAS DRINKING WATER RULE & CERCLA & RCRA LISTING

CONSIDERATIONS FOR WASTEWATER TREATMENT AND SOLID WASTE DISPOSAL/MANAGEMENT

Drinking Water Rule

DW treatment waste streams will need to be shipped for disposal or destruction, or discharged to wastewater

May have considerations for future NPDES/State permit requirements - e.g monitoring or effluent limits, disposal of POTW biosolids/treatment residuals, landfill limitations (may not accept PFAS-containing waste), and impacts on biosolids land application or disposal options.

Pretreatment programs may be used to limit what DW facilities can discharge to POTWs.

CERCLA Listing (PFOA and PFOS)

CERCLA Liability for any industry that manufactures and/or releases PFOA and/or PFAS into the environment

Wastewater and Solid Waste Management Facilities have concerns about liability, in addition to the same considerations for the DW Rule/NPDES Requirements

RCRA - An EPA Notice of Proposed Rulemaking is planned for August 2023 to list PFOA, PFOS, PFBA, and GenX (HFPO-DA) as RCRA hazardous constituents in Appendix VIII to 40 CFR Part 261.



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

THANK YOU

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