20th Annual EPA/NERPCA New England Industrial Pretreatment Coordinator's Conference



Industrial Pretreatment Program Update 21st Annual Pretreatment EPA New England Workshop - October 22, 2019 Justin Pimpare – EPA New England

€EPA

Federal Pretreatment Issues and Updates -- Review



40 CFR 403.2

Objectives of general pretreatment regulations:

- Prevent introduction of pollutants into POTWs which will interfere with POTW operation, including interference with its sludge use or disposal;
- Prevent introduction of pollutants into POTWs which will Pass through the POTW
- Improve opportunities to recycle, reclaim [reuse] wastewater and sludge

40 CFR 403.5 *National Pretreatment Standards*:

- Prevent Pass through and interference (including NPDES permit conditions, sludge, solid waste, RCRA, Clean Air Act, TSCA, MPRSA regulations)
- Infrastructure protection
- Worker health & safety



Federal Pretreatment Issues and Updates -- Overview



- Rulemakings & Studies
- Initiatives
- Pretreatment Training & Technical Assistance



Recent and Upcoming Rulemakings

- NPDES Updates Rule
- Effluent Guidelines and Analytical Methods
 - Steam Electric
 - Petroleum Refining
 - Electronic & Electrical Components
 - Centralized Waste Treatment
 - Oil & Gas
 - Dental
- Management of Hazardous Waste Pharmaceuticals
- PFAS (Per- and Polyfluoroalkyl Substances)
- CROMERR vs. Electronic Reporting



NPDES Applications and Program Updates Rule

Focus: Eliminate inconsistences between <u>regulations</u> and <u>application forms</u>

Final Rule Published: Federal Register on February 12, 2019 Effective: June 12, 2019

Changes to: 40 CFR 122, 124, 125

- 40 CFR 122.21 NPDES Application form contents
- 40 CFR 122.44(k) Footnote added to supply BMP references
- 40 CFR 124.10 website use for public notice of NPDES permit actions

https://www.federalregister.gov/documents/2019/02/12/2019-01339/national-pollutant-discharge-eliminationsystem-npdes-applications-and-program-updates





EPA Webinars on October 1 and November 13

- EPA hosted webinars on October 1, 2019 and November 13, 2019, to assist NPDES permit applicants with the completion and submission of their NPDES permit application forms. The webinars are open to all NPDES permit applicants but will focus on EPA's NPDES permit application forms and not state-specific NPDES application forms. EPA and state permit writers are also welcome to participate.
- Webinar 1: Overview of EPA's NPDES Permit Application Forms: October 1, 2019, 2 p.m. – 3:30 p.m. ET
- Webinar 2: Tips for Submitting a Complete Application and Answers to Frequently Asked Questions: November 13, 2019, 2 p.m. – 3:30 p.m. ET



NPDES Permit Application Industrial User Information

- 40 CFR 122.21(j)(6)
- (i) Number of significant industrial users (SIUs) and non-significant categorical industrial users (NSCIUs), as defined at 40 CFR 403.3(v), including SIUs and NSCIUs that truck or haul waste, discharging to the POTW; and

FAC	ILITY NAME AND PERM	IT NUMBER:	Form Approved 1/1 4/0 0 ONE Number 2040-0050
SU	PPLEMENTAL A	PPLICATION INFORMATION	
All tr		LUSER DISCHARGES AND RCRA/CEI g discharges from significant industrial users or	RCLA WASTES which receive RCRA, CERCLA, or other remedial wastes must
GEI	IERAL INFORMATI	ON:	
	Yes No	Does the treatment works have, or is it subject to, a	an approved pretreatment program? Il Users (CIUs). Provide the number of each of the following types
F.2.		ischarge to the treatment works.	in osers (cros). Provide the number of each of the following types
	b. Number of CIUs.		
SIG		RIAL USER INFORMATION:	
Supp	oly the following inform:		ges to the treatment works, copy questions F.3 through F.8
F.3.	Significant Industrial U pages as necessary.	Iser Information. Provide the name and address of	each SIU discharging to the treatment works. Sub mit additional
	Name:		
	Mailing Address:		
		Describe all of the industrial processes that affect or	
F.Ə.	discharge.	no Raw Material(s). Describe all oftine principal pro	ocesses and naw materials that affect or contribute to the SIU's
	Principal product(s):		
	Raw material(s):		
F.6.	Flow Rate.		
		hether the discharge is continuous or intermittent.	ess wastewater discharged into the collection system in gallons
		er day (gpd) and whether the discharge is continuou:	f non-process wastewater flow discharged into the collection s or intermittent.
F.7.	Pretreatment Standard	s. Indicate whether the SIU is subject to the follow in	ıg:
	a. Local limits	Yes No	
	b. Categorical pretreat	ment standardsYesNo	
	If subject to categorical	pretreatment standards, which category and subcate	egory?

Effluent Guidelines and Standards Planning

- Final 2016 ELG Plan published on May 2, 2018
 - See: <u>https://www.epa.gov/eg/effluent-guidelines-plan</u>
- The Plan discusses:
 - New Rulemaking to potentially revise certain requirements in the 2015 Steam Electric ELGs
 - Results of 3 preliminary category reviews
 - 3 Continuing and New Detailed Studies
 - Petroleum Refining
 - Electrical and Electronic Components (E&EC)
 - CWT/Holistic Oil and Gas Study
- Other updates and announcements of new initiatives





New Rulemaking: Steam Electric (40 CFR part 423)

- EPA promulgated revisions to the Steam Electric ELGs in November, 2015; compliance with new, more stringent PSES required by November, 2018
- EPA received petitions for reconsideration that raised wide-ranging and sweeping objections to the rule
- In August, 2017, the Administrator announced his decision to conduct a rulemaking to potentially revise the new, more stringent BAT effluent limitations and pretreatment standards for existing sources that apply to bottom ash transport water and flue gas desulfurization (FGD) wastewater
- In September, 2017, EPA finalized a rule postponing the compliance dates for the new PSES for bottom ash transport water and FGD wastewater in the 2015 Rule to November 1, 2020
- EPA projects a proposed rule in Calendar year 2019





3 Preliminary Category Reviews Completed

Battery Manufacturing (40 CFR part 461)

- We did not identify any uncontrolled pollutants that represent a category-wide issue
- The industry is trending to zero discharge
- Few discharges are not subject to current ELGs
- We are not continuing to review this category

Miscellaneous Food and Beverage Manufacturing

- We conducted a preliminary review of the miscellaneous food and beverage sectors not currently regulated by existing ELGs, e.g. distilleries, breweries, soft drink manufacturers
- Majority of pollutants are nutrients and conventional pollutants, e.g. BOD, TSS, and O&G
- Distilleries and soft drink manufacturers account for one third of pollutant discharges most of which is to POTWs
- Further review is not warranted at this time



3 Preliminary Category Reviews (Continued)

40 CFR part 433 (Metal Finishing)

- Our preliminary review indicates that:
 - Processes that generate wastewater in metal finishing operations have not changed substantially since EPA first promulgated the Metal Finishing ELGs
 - Most metal finishing facilities continue to use conventional chemical precipitation and clarification wastewater treatment technologies (the technology basis for the existing ELGs)
 - EPA does not have, nor have stakeholders provided, any data to demonstrate that pollutants in metal finishing discharges are leading to environmental problems or causing issues for POTWs.
- We are not continuing the review of this category
- We are aware that because these ELGs are specific to "operations" there continue to be questions regarding the applicability of the rule and we will continue to respond to those questions and engage with stakeholders





Study – Petroleum Refining (40 CFR part 419)

- Detailed study of this category is <u>ongoing</u>
- Interested in effects of wet air pollution control and changing crude slates on wastewater characteristics
- Completed a questionnaire effort: responses from 22 refineries, visited 9
- Working with industry representatives to develop a limited sampling campaign to better understand presence/ absence

of pollutants in refinery discharges

• There are new technologies that treat nitrate, selenium, mercury and some toxic organics





Study- Electrical and Electronic Components (40 CFR part 469)

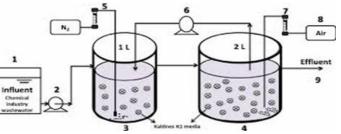
- Preliminary category review of this industry completed, <u>initiating a detailed</u> <u>study for this category</u>
- Information collected to date indicates that there are changes in E&EC processes since promulgation of the ELGs, particularly for semiconductor and electronic crystals manufacturing
- Preliminary information indicates the industry may now use different toxic and bioaccumulative compounds than covered by current ELG
- NACWA members expressed concerns about ammonia, sulfate, fluoride, copper and other metals, phosphates, pH
- <u>Data need</u>: wastewater characterization resulting from industry changes and associated treatment technology information, and population of facilities





Study – Centralized Waste Treatment (40 CFR part 437)

- Completed a report that summarizes information collected to date specific to facilities managing oil and gas extraction wastewater
 - See: <u>https://www.epa.gov/sites/production/files/2018-05/documents/cwt-study_may-2018.pdf</u>
- Conducted site visits to a range of facilities (zero discharge, direct discharge, indirect discharge)
- Reviewed permit limits and discharge data
- Conducted sampling at two facilities
- Reviewed available treatment technology information
- Found ~10 existing facilities discharging; many do not include adequate technology to manage pollutants found in the wastewater
- We will <u>continue to study</u> these facilities as part of the Holistic Oil and Gas Study





Study – New Holistic Oil and Gas Study

- We are conducting a holistic study of the management of produced water
- Not specific to an ELG
- Historical approach of managing produced water via underground injection may be changing
 - emerging constraints on underground injection of oil and gas wastewater
 - new thinking on reuse, recycling, and renewable water, particularly in areas of water scarcity
- The focus of the Agency's study will be to engage with stakeholders to consider available approaches to manage wastewater from both conventional and unconventional oil and gas extraction at onshore facilities.
- Review to include assessment of technologies for facilities that treat and discharge oil and gas extraction wastewater
- Following this study, EPA will determine if future Agency actions are appropriate to further address oil and gas extraction wastewater





Dental Pretreatment Standards – 40 CFR part 441

- Rule overview: Effective July 14, 2017 [New Source date]
 - Dental offices that place or remove amalgam must operate and maintain an amalgam separator (or equivalent device) and must not discharge scrap amalgam or use certain kinds of line cleaners
 - One-time compliance report and recordkeeping requirements
 - Existing source required compliance date: October 12, 2020.
 - The rule is self-implementing and minimizes the administrative burden to federal, state, and local regulatory authorities responsible for oversight of the new requirements
 - Requirements for new and existing sources are the same except for timing of compliance
- EPA developed 2 FAQs to help Dentists and Control Authorities
 - Frequently Asked Questions for Control Authorities on the Dental Rule (40 CFR Part 441)
 - Frequently Asked Questions on the Dental Office Category Rule



Management Standards for Hazardous Waste Pharmaceuticals and Amendment to the P075 Listing for Nicotine, 84 FR 5816

- Federal Register: 02/22/2019
- Rule Effective Date: 08/21/2019
- Rulemaking affected the following CFR parts:
 - <u>40 CFR Part</u> <u>261</u>, 262, 264-<u>266</u>
 - 40 CFR Part 268
 - 40 CFR Part 270
 - 40 CFR Part 273
- <u>https://www.epa.gov/hwgenerators/final-</u> <u>rule-management-standards-hazardous-</u> <u>waste-pharmaceuticals-and-amendment-</u> <u>p075</u>



Webinar archived on March 4, 2019



Regulation Excerpt:

Management Standards for Hazardous Waste Pharmaceuticals

40 CFR 261.4 Exclusions.

(a)*Materials which are not solid wastes.* The following materials are not solid wastes for the purpose of this part:

(1)(i) Domestic sewage; and

(ii) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment, except as prohibited by §266.505 and Clean Water Act requirements at 40 CFR 403.5(b). "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

40 CFR 266.505 Prohibition of sewering hazardous waste pharmaceuticals.

All <u>healthcare facilities</u>—including very small quantity generators operating under § 262.14 in lieu of this subpart— and <u>reverse distributors</u> are prohibited from discharging <u>hazardous waste pharmaceuticals</u> to a sewer system that passes through to a publicly-owned treatment works. Healthcare facilities and reverse distributors remain subject to the prohibitions in 40 CFR 403.5(b)(1).

Red text above is effective 08/21/2019, 84 FR 5816



Management Standards for Hazardous Waste Pharmaceuticals (continued)

Definitions 40 CFR 266.500

- Hazardous waste pharmaceutical refers you back to "solid waste, as defined in § 261.2, and exhibits one or more characteristics identified in part 261 subpart C or is listed in part 261 subpart D."
- 'Healthcare facility means any person that is lawfully authorized to-
 - (1) Provide preventative, diagnostic, therapeutic, rehabilitative, maintenance or palliative care, and counseling, service, assessment or procedure with respect to the physical or mental condition, or functional status, of a human or animal or that affects the structure or function of the human or animal body; or
 - (2) Distribute, sell, or dispense pharmaceuticals, including over-the-counter pharmaceuticals, dietary supplements, homeopathic drugs, or prescription pharmaceuticals.... This definition does not include pharmaceutical manufacturers, reverse distributors, or reverse logistics centers."
- 'Household waste pharmaceutical means a pharmaceutical that is a solid waste, as defined in § 261.2, but is excluded from being a hazardous waste under § 261.4(b)(1).
- Long-term care facility
- Reverse distributor



FAQ #1

1. The Resource Conservation and Recovery Act (RCRA) Hazardous Waste Pharmaceuticals Final Rule (February 22, 2019; 84 FR 5816) prohibits the sewering (i.e., flushing or pouring down the drain) of hazardous waste pharmaceuticals by healthcare facilities and reverse distributors (see 40 CFR 266.505). <u>To which pharmaceuticals does the sewer prohibition</u> <u>apply?</u>

Answer: 40 CFR 266.505 prohibits all healthcare facilities and reverse distributors from discharging any *hazardous waste pharmaceuticals* to a sewer system that passes through to a publicly owned treatment works (POTW). The sewer prohibition applies to <u>RCRA hazardous</u> waste pharmaceuticals that are also controlled substances under the Drug Enforcement <u>Administration (DEA) regulations and collected household pharmaceuticals (see 40 CFR 266.506)</u>. We note that although the sewer prohibition applies to healthcare facilities and reverse distributors with respect to hazardous waste pharmaceuticals, EPA strongly discourages sewering of any pharmaceutical in any setting (with few exceptions, such as sterile water, 0.9% sodium chloride (saline) and Ringer's lactate solution).

SEPA

FAQ #2. What is a pharmaceutical for purposes of the Hazardous Waste Pharmaceuticals Final Rule?

Answer: The definition of a pharmaceutical includes drugs for human or animal use, including prescription and over-the-counter pharmaceuticals, dietary supplements, homeopathic drugs, compounded drugs, investigational new drugs, as well as nicotine e-liquids packaged for retail sale and electronic nicotine delivery systems (e.g., e-cigarette or vaping pen).

FAQ #3. When is a pharmaceutical considered a hazardous waste pharmaceutical? Answer: A pharmaceutical is a RCRA hazardous waste if it is first a solid waste (i.e., a solid, liquid, semi-solid or contained gaseous material that is discarded) and that is also defined as a hazardous waste in 40 CFR Part 261. Solid wastes are defined as hazardous wastes if they are listed as a hazardous waste (i.e., on the P-list or U-list) and/or exhibit one or more of the characteristics of hazardous waste (ignitibility, corrosivity, reactivity or toxicity).



Who must comply with the Sewer Ban?

- Answer: 40 CFR 266.505
- All Healthcare facilities including very small quantity generators operating under § 262.14 in lieu of this subpart
- Long-term care facilities
- Reverse distributors





As a Pretreatment Control Authority, what am I responsible to do?

• Answer: Implement your pretreatment program.

Note: EPA has not established technology-based standards for discharges from healthcare facilities to POTWs, thus healthcare facilities are not categorical industrial users (CIUs).

Healthcare facilities continue to be industrial users (IUs), defined broadly at 40 CFR §403.3(j) as a "Source of Indirect Discharge," and may be significant industrial users (SIU), defined at 40 CFR §403.3(v).





As a Pretreatment Control Authority, what am I responsible to do? (continued)

- Can hazardous waste pharmaceuticals be discharged to the sewer from a healthcare facility or reverse distributor that has a pretreatment permit?
- Answer: No. 40 CFR 266.505 prohibits <u>all</u> healthcare facilities and reverse distributors from discharging any *hazardous waste pharmaceuticals* to a sewer system that passes through to a publicly owned treatment works (POTW), <u>regardless</u> of whether the POTW or state has issued a pretreatment permit to the healthcare facility or reverse distributor.



As a Pretreatment Control Authority, what am I responsible to do? (continued)

- Does the sewer prohibition apply to pharmaceutical manufacturers?
- Answer: No. The sewer prohibition does not apply to pharmaceutical manufacturers unless those same facilities are also reverse distributors.
- While the sewer prohibition legally applies only to healthcare facilities and reverse distributors with respect to hazardous waste pharmaceuticals, EPA strongly discourages sewering of any pharmaceutical in any setting.
- EPA's Effluent Guidelines and Standards for Pharmaceutical Manufacturing at 40 CFR 439 address CWA discharges of pollutants associated with the manufacturing industry.





As a Pretreatment Control Authority, what am I responsible to do? (continued)

- Who will be responsible for enforcing the sewer prohibition?
- Answer: The sewer prohibition of Subpart P will be enforced through RCRA inspections of healthcare facilities and reverse distributors by state or federal officials. The Clean Water Act's NPDES pretreatment program could also potentially apply and result in enforcement of requirements of the sewer prohibition if such requirements are adopted as part of a publicly owned treatment works' approved pretreatment program. Further, elements of the sewer prohibition may be reflected currently in the specific prohibitions on discharge by indirect users of POTWs in EPA's Pretreatment Regulations at 40 CFR Part 403.





So what is it that POTWs are supposed to do?

OPTION – Adopt the following into your Sewer Use Ordinance:

Prohibited Discharge Standard:

The discharge of pharmaceuticals, either listed or exhibiting hazardous waste characteristics, as defined in Subparts C, D and Appendices in 40 CFR 261 generated from healthcare facilities or reverse distributors is prohibited.



NPDES Electronic Reporting Rule Impact on Biosolids Data

40 CFR part 127 (22 October 2015; 80 FR 64064)

Federal Biosolids Annual Reports (EPA Biosolids Center of Excellence, Region 7)



Before Electronic Reporting (Approximately 2,400 paper submissions) 1st Year of Electronic Reporting (2,183 electronic submissions with 640 paper submissions).

CROMERR v. NPDES Electronic Reporting Rule

NEW



- CROMERR = <u>CRO</u>ss <u>M</u>edia <u>E</u>lectronic <u>R</u>eporting [Receipt] <u>R</u>ule [CROMERR]
 - 40 CFR Part 3
 - Requirements on the **Receiver** of the Data
 - <u>https://www.epa.gov/sites/production/files/2018-</u>05/documents/cromerr potw 1.pdf

• NPDES Electronic Reporting Rule

- 40 CFR Part 127
- Requirements to submit Certain Data Elements and Certain reports
- https://www.epa.gov/compliance/npdes-ereporting



CROMERR = \underline{CRO} ss \underline{M} edia \underline{E} lectronic \underline{R} eporting \underline{R} ule

Guidance issued May 2018

https://www.epa.gov/sites/production/files/2018-05/documents/cromerr_potw_1.pdf

"Roles and Responsibilities: POTW Pretreatment Program" for POTWs that want to <u>receive</u> reports from their Industrial Users

- Verify Integrity of the Electronic Document
- Very Legal Validity of Electronic Signatures
- Prepare CROMERR System Documentation, If Needed
- Review and Update Pretreatment Program Requirements



May 2018



OFFICE OF WATER OFFICE OF ENVIRONMENTAL INFORMATION

Roles and Responsibilities: EPA or Approved State Pretreatment Program Approval Authority

Specifically, upon notification from the POTW Pretreatment Program that the POTW wants to begin receiving reports electronically from its Industrial Users, the EPA Regional Pretreatment staff or Approved State Pretreatment Program staff will:

- 1) Work with the POTW Pretreatment Program to assist in identification of programmatic authorities and procedures that the POTW should modify to implement electronic reporting for its Industrial Users.
- 2) For solutions not CROMERR compliant out-of-the-box, receive the recommendation from the CROMERR Program that the CROMERR system documentation has been reviewed and/or revised as needed and determined to be CROMERR compliant.
- 3) Ensure that the POTW Pretreatment Program is aware of needed modifications to its programmatic and procedural requirements to implement electronic reporting.
- 4) Receive and process the POTW Pretreatment Program's program modification request in accordance with procedures in 40 CFR 403.18.



NPDES Electronic Reporting Rule: 40 CFR 127

<u>DMRs</u> reporting began <u>Dec. 21, 2016</u>

<u>Biosolids</u> reporting began <u>Feb. 19, 2017</u>

<u>Pretreatment Annual Reports</u> to begin reporting electronically <u>Dec. 21, 2020</u> <u>December 2023</u>

<u>NPDES programs</u> submit NPDES program data to EPA (data they collect and generate, such as inspections and enforcement actions).



Pretreatment Program Annual Reports in one EPA Region (Region 9, 2009)



Per- and Polyfluoroalkyl Substances (PFAS)

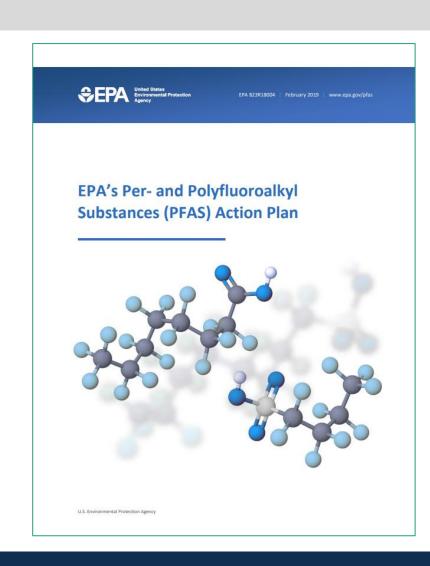
EPA's PFAS Action Plan - February 2019

Draft Interim Recommendations to Address Groundwater Contaminated with Perfluorooctanoic Acid and Perfluorooctane Sulfonate (PDF)

- Issued April 25, 2019; Open for comment through June 10, 2019
- Docket ID No. EPA-HQ-OLEM-2019-0229, at https://www.regulations.gov

PFAS Research

- <u>EPA Method 537.1</u> expanded to include 4 more PFAS
- Drinking Water Treatability Database
- <u>Reducing PFAS in Drinking Water with Treatment Technologies</u>

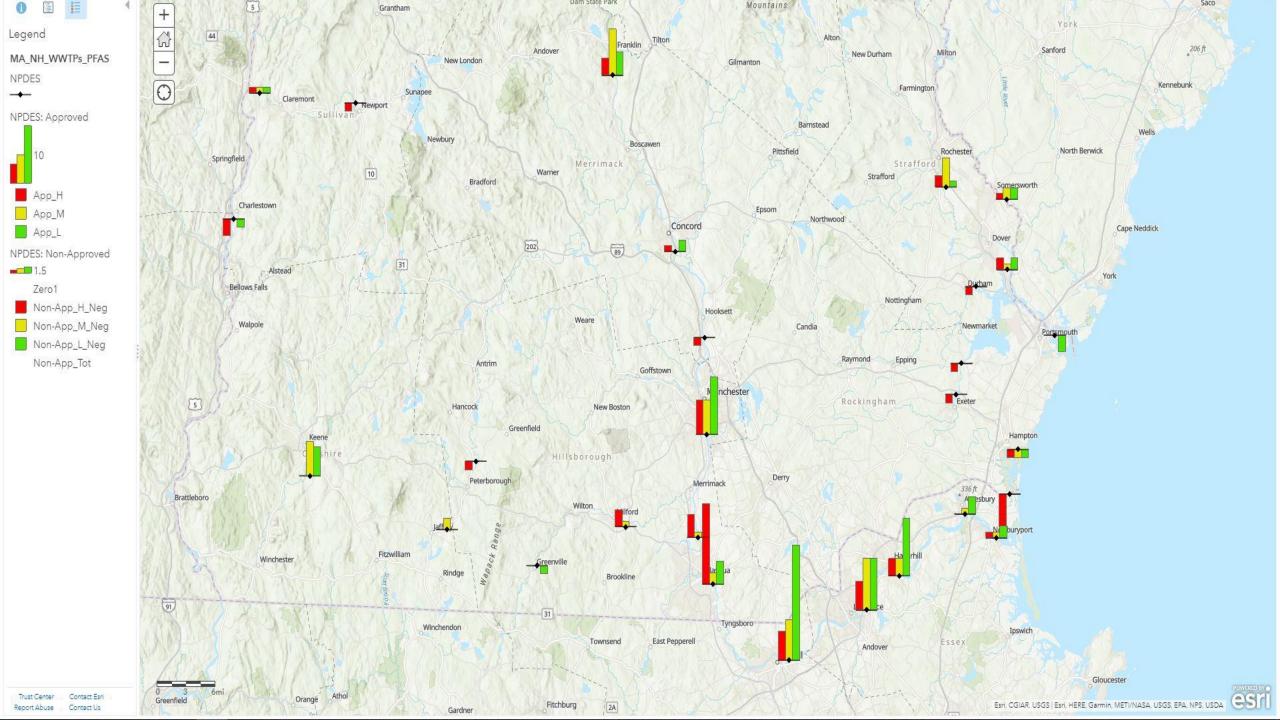


https://www.epa.gov/pfas

What are PFAS and where are they found?

• Per- and Polyfluoroalkyl Substances (PFAS) are a group of synthetic chemicals that have been used for decades to manufacture household and commercial products that resist heat, oil, stains, grease, and water. PFAS have been used in many consumer products, including non-stick cookware, stain-resistant furniture and carpets, waterproof clothing, microwave popcorn bags, fast food wrappers, pizza boxes, shampoo and dental floss. They have also been used in certain firefighting foams and various industrial processes. Because of their widespread use, many PFAS, including perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorohexane sulfonic acid (PFHxS), and perfluorononanoic acid (PFNA), have been found in our environment.





National Pretreatment Program Events, Training, and Publications



Introductory Pretreatment Training				
Dates	Locations			
November/December 2019	Baltimore			
Spring- <i>ish</i> 2020	Boise, Idaho			
April 2020	Chicago			

https://www.epa.gov/npdes/national-pretreatment-program-events-training-and-publications#training



National Pretreatment Program Events, Training, and Publications

Documents Under Revision	Original Date of Issuance
Guidance Manual for POTW Pretreatment Program Development	1983
Procedures Manual for Reviewing a POTW Pretreatment Program Submission	1983
Completion of Appendices to IU Permit Writing Manual: Appendix I – Production Based Standards Appendix J – Combined Wastestream Formula	1985
Guidance for Developing Control Authority Enforcement Response Plans	1989
Pretreatment Program pH Requirements – Summary/Fact Sheet	





11 EPA Audits Completed in FY19

Massachusetts

- Marlborough
- Leominster
- Holyoke
- Taunton
- Hoosac Water Quality District

New Hampshire

• Concord Jaffrey



Billerica Southbridge Pittsfield Westfield

12 EPA Audits to be completed in FY 2020 in Massachusetts and New Hampshire

• Facilities yet to be determined



Questions?



Vendor Introduction



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