

Introduction to Pretreatment

Pretreatment Workshop

Sponsored by:

Colorado River Basin Water Board & EPA Region 9

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What is the Pretreatment Program?

- Pretreatment = pollutant control requirements for nondomestic sources discharging wastewater to sewer systems that are connected to publicly owned treatment works
- National program
- Implemented through Regions', States', and local programs

Common Acronyms

CWA – Clean Water Act

NPDES – National Pollutant Discharge Elimination System

POTW – Publicly Owned Treatment Works

IU – Industrial User

SIU – Significant Industrial User

CIU – Categorical Industrial User

CFR – Code of Federal Regulations

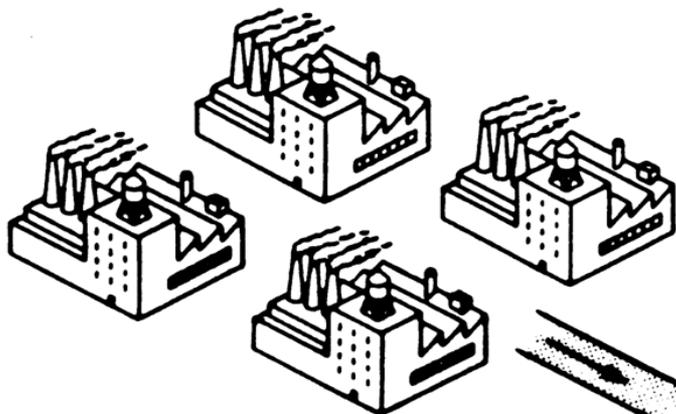
Common terms and phrases

- Approved pretreatment program
- Control Authority (CA)
- Approval Authority (AA)
- Interference
- Pass through

Definitions for pretreatment terms at 40 CFR 403.3

Purpose of the Pretreatment Program

- To prevent the introduction of pollutants into POTWs which will:
 - interfere,
 - pass through, and/or
 - be incompatible
- To improve opportunities to recycle and reclaim wastewaters and sludges
- To protect POTW workers

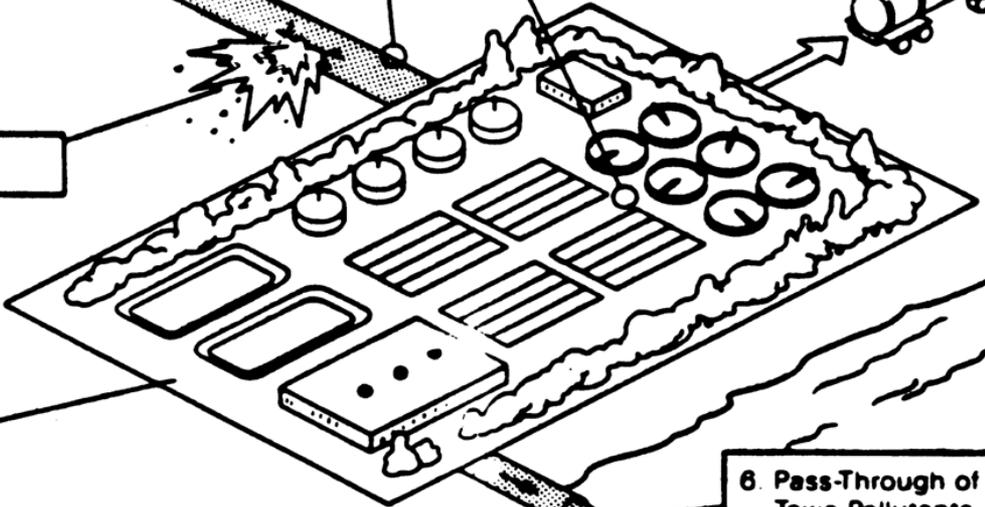


1. Corrosion of Collection System or of the Sewage Treatment Plant

2 Explosions



6. Pass-Through of Toxic Pollutants into Surface Waters



3. Exposure of Workers to Toxic Substances and Hazardous Fumes

4. Limited or More Expensive Sludge Disposal Options

5. Interference with Plant Treatment System

Who is affected?

- Approval Authority
- POTWs
- Industrial Users
- Waste haulers
- Commercial entities

Who is affected? (continued)

- Approval Authority
 - Goal: adequate implementation of pretreatment program requirements
 - Legal Authority
 - Oversight responsibilities:
 - POTW pretreatment program implementation
 - SIU/CIU pretreatment program implementation

Who is affected? (continued)

- The POTW
 - Goal: prevent interference and pass through at plant
 - Legal authority
 - Responsibilities:
 - Survey IUs
 - Control (permits) IUs, waste haulers, and commercial entities
 - Inspection
 - Monitoring
 - Receive and review reports
 - Enforcement
 - Annual Report

Who is affected? (continued)

- Industrial Users
 - Goal: comply with local, state, and federal pretreatment standards and requirements
 - CIUs – self-implementing standards (effluent limits and reporting requirements)
 - Responsibilities:
 - Compliance with control mechanism requirements
 - Self-monitoring
 - Reporting

Who is affected? (continued)

- Waste haulers and commercial entities
 - Goal: comply with local, state, and federal pretreatment standards and requirements
 - Responsibilities:
 - No hazardous waste
 - Known, constrained discharge
 - Comply with POTW requirements

Program Overview

Objectives of the Clean Water Act

- **Restore and maintain the chemical, physical and biological integrity of the Nation's waters**
 - **National goal to eliminate discharge of pollutants to navigable waters by 1985**
 - **Interim goal to provide waters that are fishable and swimmable by July 1, 1983**
 - **No discharge of toxic pollutants in toxic amounts**

Pretreatment Program

- **"Indirect" discharge to sewer**
- **Large number and variety of industry: electronics, aerospace, food processing**
- **Program Objectives are to Prevent:**
 - **Interference**
 - **Pass-through**
 - **Sludge contamination**
 - **No NPDES permits issued to "indirect" dischargers**
 - **see local agency**

Pretreatment cont.

- Basis for Discharge Limitations

- EPA-developed categorical standards**
 - 24 categories, BAT, PSES/PSNS**
 - Early development concerned conventional pollutants**
 - Consent decree in NRDC v. EPA required EPA to focus on 126 "priority pollutants" and industries discharging them**
- Local limits**
 - Developed by POTW to meet program objectives and maintain compliance with its NPDES permit**
- General and Specific Prohibitions in 40 CFR Part 403**

40 CFR Part 403

- U.S. Code of Federal Regulations (CFR)
 - Title 40 - Protection of the Environment
 - Chapter I - Environmental Protection Agency
 - Subchapter N - Effluent Guidelines and Standards
 - Part 403 - General Pretreatment Regulations for Existing and New Sources of Pollution

<http://www.gpoaccess.gov/cfr/>

or

<http://www.gpo.gov/fdsys/>

Program Implementation

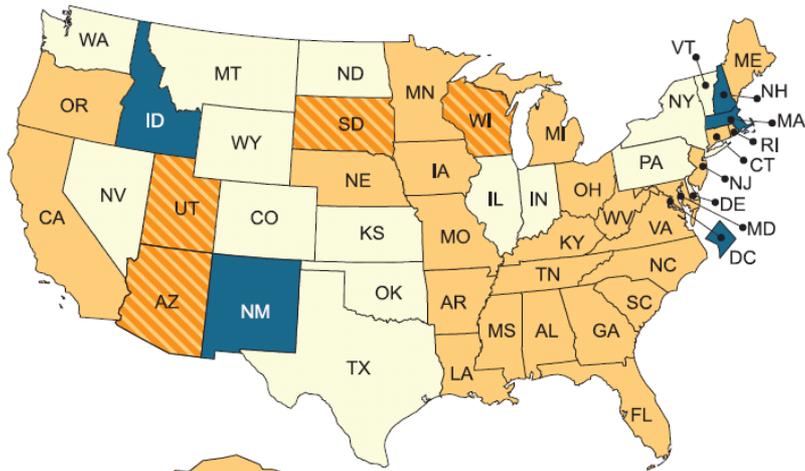
Who must develop a program?

- POTWs with:
 - combined design flow > 5 million gallons per day (MGD), **AND**
 - receiving flow subject to Pretreatment Standards **or**
 - receiving pollutants which pass through or interfere
- Approval Authority may require program to be developed, regardless
- NPDES States may assume responsibility

Oversight authority

- Control Authority (CA) vs. Approval Authority (AA)
 - CA - an entity that regulates IUs; can mean the EPA, State, or POTW
 - AA - entity that oversees CAs; can mean the EPA or the State
- Depends on pretreatment authorization status:
 - Delegated states
 - Non-delegated states
 - 403.10(e) states (CT, VT, AL, MS, & NE)

NPDES/pretreatment authorization status



- U.S. Territories**
- American Samoa
 - Guam
 - Johnston Atoll
 - Midway/Wake Islands
 - Northern Mariana Islands
 - Puerto Rico
 - Virgin Islands

State NPDES Program Status

- Fully authorized
- Fully authorized, including an approved biosolids program
- Partially authorized (click here for details)
- Unauthorized

State	Approved State NPDES Permit Program	Approved to Regulate Federal Facilities	Approved State Pretreatment Program	Approved General Permits Program	Approved Biosolids (Sludge) Program
Alabama	✓	✓	✓	✓	
Alaska*	✓	✓	✓	✓	
American Samoa					
Arizona	✓	✓	✓	✓	✓
Arkansas	✓	✓	✓	✓	
California	✓	✓	✓	✓	
Colorado	✓	✓	✓	✓	
Connecticut	✓	✓	✓	✓	
Delaware	✓	✓	✓	✓	
District of Columbia					
Florida	✓	✓	✓	✓	
Georgia	✓	✓	✓	✓	
Guam					
Hawaii	✓	✓	✓	✓	
Idaho					
Illinois	✓	✓		✓	

Data available at:

<http://cfpub.epa.gov/npdes/statestats.cfm>

Implementation oversight

- EPA and/or State:
 - POTWs
 - Receive and review annual reports
 - Pretreatment compliance inspections (PCIs)
 - Pretreatment compliance audits (PCAs)
 - Enforcement
 - Direct oversight of IUs
 - Control mechanisms
 - Monitor and inspect
 - Receive and review reports
 - Enforcement

Local Pretreatment Programs

- § 403.8 Requirements of a POTW developed pretreatment program
- § 403.9 Contents of a POTW submission for requesting program approval
- § 403.11 Approval procedures for POTW pretreatment program
- § 403.12 Reporting Requirements for POTWs and SIUs
- § 403.18 Modifications of POTW pretreatment programs

Pretreatment Program Components

40 CFR 403.8

- Legal authority
- Local limits
- Procedures
- List of Industrial Users
- Enforcement (Enforcement Response Plan)
- Funding

Legal Authority

[40 CFR 403.8(f)(1)]

- State law
- Local regulations
 - Sewer Use Ordinance, “SUO”
or
 - Rules and regulations

POTW Legal Authority

- Deny or condition discharges [403.8(f)(1)(i)]
- Require compliance [403.8(f)(1)(ii)]
- Control through permit or similar means [403.8(f)(1)(iii)]
- Require compliance schedules to comply [403.8(f)(1)(iv)]
- Inspect, survey, and monitor [403.8(f)(1)(v)]
- Enforce [403.8(f)(1)(vi)]
- Comply with confidentiality requirements [403.8(f)(1)(vii)]
- See EPA Model Pretreatment Ordinance

http://www.epa.gov/npdes/pubs/pretreatment_model_suo.pdf

What Procedures Must a POTW Pretreatment Program Have?

[40 CFR 403.8(f)(2)]

- Identify and locate all possible IUs [403.8(f)(2)(i)]
- Identify the character and volume of pollutants contributed to the POTW by IUs [403.8(f)(2)(ii)]
- Notify IUs of applicable pretreatment standards [403.8(f)(2)(iii)]
- Receive and analyze reports submitted by IUs [403.8(f)(2)(iv)]

What Procedures Must a POTW Pretreatment Program Have? (continued)

- Conduct random sampling, surveillance, and inspection events [403.8(f)(2)(v)]
- Conduct slug discharge evaluations [403.8(f)(2)(vi)]
- Investigate instances of noncompliance [403.8(f)(2)(vii)]
- Comply with public participation requirements [403.8(f)(2)(viii)]

Control Mechanisms

[40 CFR 403.8(f)(1)(iii)]

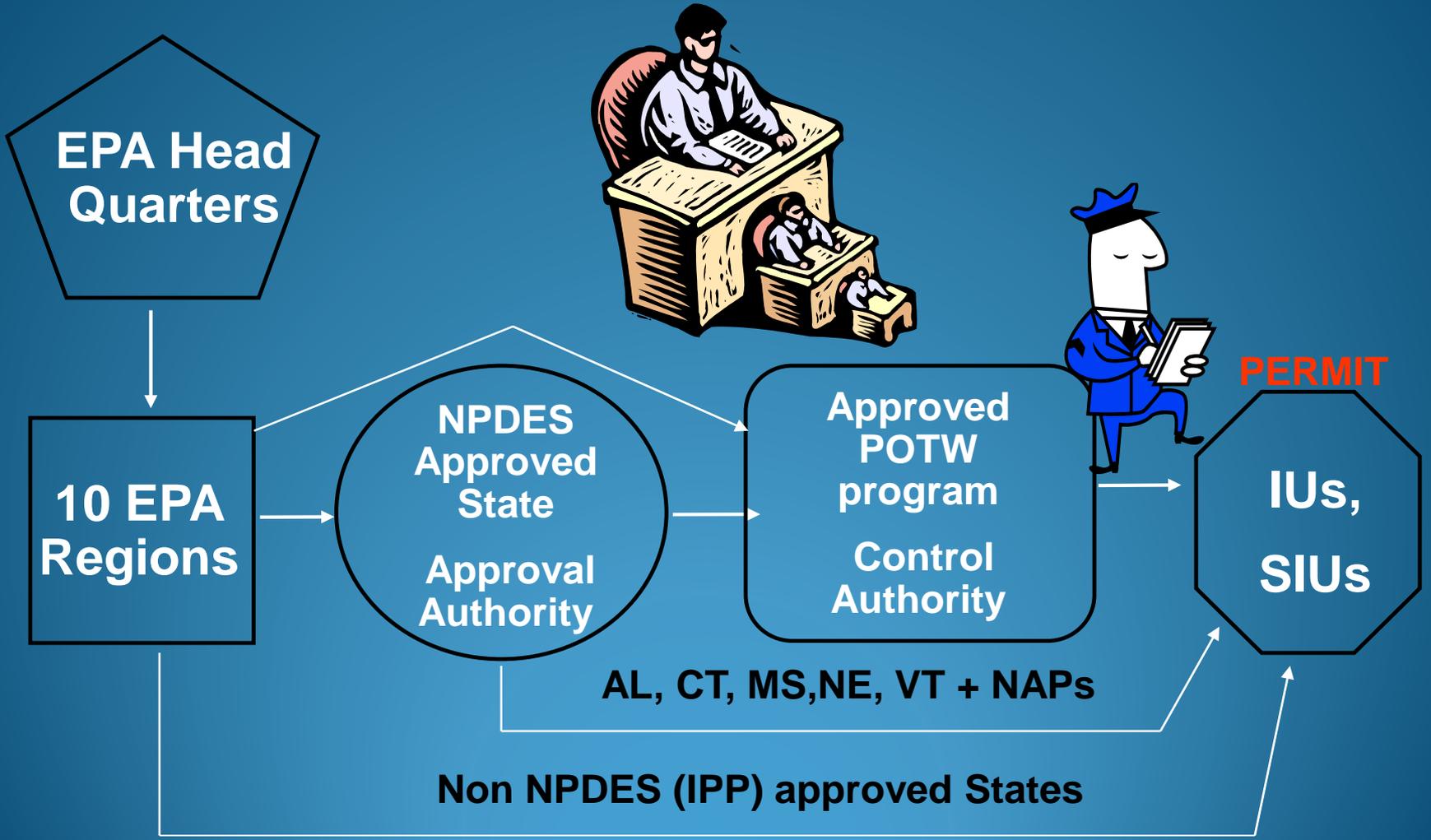
- Control through permit, order or similar means, the contribution from each IU to ensure compliance with applicable pretreatment standards and requirements
- Can be achieved through individual or general permits

Who to Permit

- Required permits
 - SIUs
 - CIUs
 - Other
- Optional permits
 - Non-significant IUs
 - Non-significant CIUs
 - Waste haulers
 - Groundwater remediation sites



Who Issues the Permit? Pretreatment Family Tree



POTW Compliance Monitoring

[40 CFR 403.8(f)(2)(v) & (vii)]

- Conducted by the POTW, independent from any IU self-monitoring
- Can be announced or unannounced
- Can be conducted independently or in conjunction with compliance inspections
- Used to satisfy the federal requirements
- Samples must be taken with sufficient care to provide defensible data

POTW Compliance Inspections

[40 CFR 403.8(f)(2)(v)]

- POTW must conduct surveillance activities
- POTWs are required to inspect each SIU at least annually except for:
 - Nonsignificant Categorical Industrial User (NSCIU)
 - Middle-tier CIU (MTCIU)
- Pretreatment 101 Series: POTW's Procedures for Conducting Compliance Inspections

http://cfpub.epa.gov/npdes/courseinfo.cfm?program_id=0&outreach_id=577&schedule_id=1123

Enforcement

[40 CFR 403.8(f)(1),(2), & (5)]

- Obtain remedies for noncompliance
- Authority to seek or assess civil or criminal penalties

Enforcement Response Plans

- Reflect POTW's responsibility to enforce pretreatment requirements & standards
- Identify how the POTW will investigate noncompliance
- Specifies official responsible for each type of enforcement
- Specifies types of and time frame for taking escalating enforcement for anticipated types of violations

Funding/Resources

[40 CFR 403.8(f)(3)]

- Personnel
- Equipment
- Funding

POTW Record Keeping Requirements

[40 CFR 403.12(o)]

- Industrial waste questionnaires
- Permit applications, permits and fact sheets
- Inspection reports
- IU reports
- Monitoring data (including laboratory reports)
- Required plans (e.g., slug control, sludge management, pollution prevention)
- Enforcement activities
- All correspondence to and from the IU
- Phone logs and meeting summaries

POTW Public Participation

- Annual publication of SIUs in significant noncompliance (SNC) [40 CFR 403.8(f)(2)(viii)]
- Local limits development [40 CFR 403.5(c)(3)]

POTW Annual Reporting

[40 CFR 403.12(i)]

- A list of all the POTW's IUs
- A summary of the status of IU compliance during the reporting period
- A summary of compliance and enforcement activities (including inspections) conducted by the POTW during the reporting period
- A summary of changes to the POTW's pretreatment program that have not been previously reported to the Approval Authority
- Any other relevant information requested by the Approval Authority

IU Responsibilities

IU Notification Requirements

- Notification of potential problems, including slug loadings [403.12(f)]
- Noncompliance notification and repeat sampling report [403.12(g)(2)]
- Notification of changed discharge [403.12(j)]
- Notification of discharge of hazardous waste [403.12(p)]
- Notification of Bypass [403.17]

CIU Reporting Requirements

- Notification of production level change [403.6(c)(9)]
- Notification of material or significant change in the alternative limit calculation [403.6(e)]
- Baseline Monitoring Report [403.12(b)]
- Compliance schedule progress reports [403.12(c)]

CIU Reporting Requirements (continued)

- 90-day compliance report [403.12(d)]
- Periodic Compliance Reports [403.12(e)]
- Notification of waived pollutant present [403.12(e)(2)(vi)]
- Notification of middle-tier CIU [403.12(e)(3)(iv)]
- Upset report [403.16]

Other SIU Reporting Requirements

- Periodic Compliance Reports [403.12(h)]
- Slug Discharge Control Plans [403.8(f)(2)(vi)]

**All SIUs are required
to conduct
self-monitoring**

Signatory and Certification Requirements

- Reports that must be signed and certified by an authorized IU representative [40 CFR 403.12(I)]
 - Baseline Monitoring Reports
 - 90-day compliance reports
 - Categorical Periodic Compliance Reports

IU Record Keeping Requirements

[40 CFR 403.12(o)]

- Records must be maintained a minimum of 3 years
- Must be made available to POTW and Approval Authority for review and copying
- Records include:
 - IU monitoring activities
 - Documentation associated with BMPs
 - Any other records required by POTW

Introduction to the National Pretreatment Program Manual

- Published in June 2011 (EPA-833-B-11-001)
- Updates the previous February 1999 version
- Available online at

http://www.epa.gov/npdes/pubs/pretreatment_program_intro_2011.pdf

EPA Update: What is HQ up to now?

- Guidance Manual Updates/Revisions
 - Procedures Manual for Reviewing a POTW Pretreatment Program Submission
 - Guidance Manual for POTW Pretreatment Program Development
 - Multijurisdictional Pretreatment Programs Guidance Manual
 - Completion of Appendices to IU Permitting Manual
 - Hauled Waste Guidance Manual Revision
- Regional EPA Office Assistance
 - Audit/Inspection Support
 - Training for Regions, States, and POTWs
 - Data Entry
 - Program Component Reviews

