

# INDUSTRIAL PRETREATMENT PROGRAM OVERVIEW

CSWEA INDUSTRIAL PRETREATMENT SEMINAR

AUGUST 24-25, 2021

Presented by: Katie Karow  
Kenosha Water Utility  
Director of Wastewater Treatment



# RESOURCES USED FOR THE OVERVIEW

- USEPA National Pretreatment Program website
- “USEPA Introduction to the National Pretreatment Program” publication
- Code of Federal Regulations, 40CFR Part 403—General Pretreatment Regulations For Existing And New Sources Of Pollution
- WI Administrative Code NR 211 General Pretreatment Requirements
- My professional experience...

# USEPA NATIONAL PRETREATMENT PROGRAM WEBSITE

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

**EPA** United States Environmental Protection Agency

Search EPA.gov

Environmental Topics ▾ Laws & Regulations ▾ About EPA ▾

CONTACT US

## National Pretreatment Program

The national pretreatment program is a component of the NPDES program. It is a cooperative effort of federal, state, and local environmental regulatory agencies established to protect water quality. Similar to how EPA authorizes the NPDES permit program to state, tribal, and territorial governments to perform permitting, administrative, and enforcement tasks for discharges to surface waters (NPDES program), EPA and authorized NPDES state pretreatment programs approve local municipalities to perform permitting, administrative, and enforcement tasks for discharges into the municipalities' [publicly owned treatment works](#) (POTWs).

The national pretreatment program is designed to:

- protect POTWs infrastructure, and
- reduce conventional and toxic pollutant levels discharged by industries and other non-domestic wastewater sources into municipal sewer systems and into the environment.

[Introduction to the National Pretreatment Program \(pdf\)](#) - Summary of the national pretreatment program.

### National Pretreatment Program Basics

- [Overview](#)
- [Implementation](#)
- [Regulatory History](#)
- [Other Federal Laws and Regulations](#)
- [Additional Information](#)

### Pretreatment Standards and Requirements

- [Applicability](#)
- [General and Specific Prohibitions](#)
- [Categorical Pretreatment Standards](#)
- [Local Limits](#)

### Pretreatment Roles and Responsibilities

- [Summary](#)
- [Approval Authorities](#)
- [Control Authorities](#)
- [Industrial Authorities](#)

### Program Events, Training and Webinars, and Publications

- [Events](#)
- [Training and Webinars](#)
- [Publications](#)

NPDES Home

About NPDES

All NPDES Program Areas

Animal Feeding Operations

Aquaculture

Forest Roads

Industrial Wastewater

Municipal Wastewater

**National Pretreatment Program**

Standards and Requirements

Roles and Responsibilities

Events, Training and Webinars, and Publications

Pesticide Permitting

Stormwater

Water Quality Trading

NPDES Technical Resources

## National Pretreatment Program Basics

- [Overview](#)
- [Implementation](#)
- [Regulatory History](#)
- [Other Federal Laws and Regulations](#)
- [Additional Information](#)

## Pretreatment Standards and Requirements

- [Applicability](#)
- [General and Specific Prohibitions](#)
- [Categorical Pretreatment Standards](#)
- [Local Limits](#)

## Pretreatment Roles and Responsibilities

- [Summary](#)
- [Approval Authorities](#)
- [Control Authorities](#)
- [Industrial Authorities](#)

## Program Events, Training and Webinars, and Publications

- [Events](#)
- [Training and Webinars](#)
- [Publications](#)

# "USEPA INTRODUCTION TO THE NATIONAL PRETREATMENT PROGRAM" PUBLICATION

[https://www.epa.gov/sites/default/files/2015-10/documents/pretreatment\\_program\\_intro\\_2011.pdf](https://www.epa.gov/sites/default/files/2015-10/documents/pretreatment_program_intro_2011.pdf)

U.S. Environmental Protection Agency

## Introduction to the National Pretreatment Program



U.S. Environmental Protection Agency  
Office of Wastewater Management (4203)  
EPA-833-B-11-001 • June 2011



Contents

### CONTENTS

CHAPTER 1. POTWs and the Need for the Pretreatment Program.....	1-1
Sewage Treatment.....	1-1
Need for the Pretreatment Program.....	1-2
CHAPTER 2. Overview of the National Pretreatment Program.....	2-1
The Clean Water Act.....	2-1
The General Pretreatment Regulations.....	2-2
POTW Pretreatment Programs.....	2-5
Attachment 2-1: State and Territory Program Authorization Status.....	2-8
CHAPTER 3. Pretreatment Standards.....	3-1
Prohibited Discharge Standards.....	3-2
Effluent Guidelines and Categorical Pretreatment Standards Development.....	3-2
Local Limits.....	3-6
Summary of Standards.....	3-8
Attachment 3-1: Summary of Categorical Standards.....	3-9
CHAPTER 4. POTW Pretreatment Program Responsibilities.....	4-1
Legal Authority.....	4-1
Industrial Waste Surveys.....	4-2
IU Permits/Control Mechanisms.....	4-3
Inspections.....	4-5
Sampling.....	4-7
Control Authority Enforcement.....	4-9
Program Management and Record Keeping.....	4-12
Public Participation.....	4-13
POTW Reporting.....	4-14
Approval Authority Enforcement.....	4-15
CHAPTER 5. Industrial User Pretreatment Program Responsibilities.....	5-1
Reporting Requirements.....	5-1
Categorical Industrial User Reporting Requirements.....	5-2
Significant Industrial User Reporting Requirements.....	5-5
Signatory and Certification Requirements [40 CFR 403.12(i)].....	5-7
Cross-Media Electronic Reporting [40 CFR Part 3].....	5-7
Self-Monitoring Requirements.....	5-8
Notification Requirements.....	5-10
Notification of Production Level Change in the Equivalent Limit Calculation [40 CFR 403.6(c)(9)].....	5-10
Notification of Material/Significant Change in the Alternative Limit Calculation [40 CFR 403.6(e)].....	5-10
Notification of Waived Pollutant Present [40 CFR 403.12(e)(2)(vi)].....	5-11
Notification of Middle-Tier Categorical Industrial User [40 CFR 403.12(e)(3)(iv)].....	5-11
Notification of Potential Problems Including Slug Loading [40 CFR 403.12(f)].....	5-11
Noncompliance Notification and Repeat Sampling Report [40 CFR 403.12(g)(2)].....	5-11
Notification of Changed Discharge [40 CFR 403.12(j) and 40 CFR 122.42(b)].....	5-11
Notification of Discharge of Hazardous Wastes [40 CFR 403.12(p)].....	5-11
Notification of Upset [40 CFR 403.16].....	5-12

Contents

Notification of Bypass [40 CFR 403.17].....	5-12
Record-Keeping Requirements.....	5-12
Attachment 5-1: Summary of Reporting and Notification Requirements for All IUs.....	5-13
Attachment 5-2: Summary of Notification and Citation Requirements That Might Not Apply to All IUs.....	5-15
CHAPTER 6. Hauled Wastes.....	6-1
Nature of Hauled Wastes.....	6-1
Control Programs.....	6-2
Concerns.....	6-3
CHAPTER 7. Pollution Prevention.....	7-1
P2 and the Pretreatment Program.....	7-3
Key Elements of a Successful POTW P2 Program.....	7-4
Benefits of P2 for POTWs.....	7-4
Benefits of P2 for IUs.....	7-5
Water Conservation as P2.....	7-6
Potential Impediments to P2.....	7-7
P2 Assistance.....	7-8

# ORIGINS OF NATIONAL INDUSTRIAL PRETREATMENT PROGRAM (IPP)

- Environmental Pollution & Growing Awareness
  - Rivers & Harbors Act - 1899
  - Federal Water Pollution Control Act - 1948
  - Publicized awareness:
    - *Silent Spring* by Rachel Carson published - 1962
    - 26 million fish killed in Florida lake - 1969
    - Cuyahoga River Fire - 1969 (among previous years)
  - Congress passed National Environmental Policy Act - 1969
    - established Environmental Protection Agency - 1970
  - Congress overrode veto to pass Clean Water Act - 1972



# ORIGINS OF NATIONAL INDUSTRIAL PRETREATMENT PROGRAM (IPP)

## Clean Water Act (CWA) of 1972

- Granted the EPA the authority to implement pollution control programs;
- Funded the construction of sewage treatment plants;
- Permitting for point-source, direct dischargers = discharge directly to waters of the United States;
- Established National Industrial Pretreatment Program as component of NPDES program. A regulatory program for indirect dischargers = industrial dischargers to publicly owned treatment works (POTWs).

# ORIGINS OF NATIONAL INDUSTRIAL PRETREATMENT PROGRAM (IPP)

General Pretreatment Regulations 40 CFR Part 403 promulgated in 1978 – Objectives:

- Prevent the introduction of pollutants into a POTW that will interfere with the operation of the POTW, including interference with its use or disposal of municipal sludge;
- Prevent the introduction of pollutants into a POTW that will pass through the treatment works or otherwise be incompatible with such works;
- Improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges

# ORIGINS OF NATIONAL INDUSTRIAL PRETREATMENT PROGRAM (IPP)

United States  
Environmental Protection  
Agency

Office Of Water  
(EN-336)

EPA 812-B-92-001  
NTIS No. PB92-173-236  
June 1992



## Guidance To Protect POTW Workers From Toxic And Reactive Gases And Vapors

Only environmental protection objectives???

# ORIGINS OF NATIONAL INDUSTRIAL PRETREATMENT PROGRAM (IPP)



United States  
Environmental Protection  
Agency

Office Of Water  
(EN-336)

EPA 812-B-92-001  
NTIS No. PB92-173-236  
June 1992

## Guidance To Protect POTW Workers From Toxic And Reactive Gases And Vapors

General Pretreatment Regulations 40 CFR Part 403 promulgated in 1978 – Objectives:

- Prevent the introduction of pollutants into a POTW that will interfere with the operation of the POTW, including interference with its use or disposal of municipal sludge;
- Prevent the introduction of pollutants into a POTW that will pass through the treatment works or otherwise be incompatible with such works;
- Improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges;
- **Protect POTW workers from the serious health and safety problems that can occur from exposure to toxic and reactive substances in industrial discharges (*added in 1990's*)**

# IMPLEMENTATION OF NATIONAL INDUSTRIAL PRETREATMENT PROGRAM

## Roles & Responsibilities

- Approval Authority
- Control Authority
- Industrial Users

# IMPLEMENTATION OF NATIONAL INDUSTRIAL PRETREATMENT PROGRAM

Approval Authority (1980 - EPA approved WDNR as IPP approval authority for Wisconsin)

- Notify POTWs of their responsibilities;
- Review and approve requests for POTW pretreatment program approval or modification;
- Review requests for site-specific modifications to categorical pretreatment standards;
- Oversee POTW program implementation;
- Provide technical guidance to POTWs;
- Initiate enforcement actions against noncompliant POTWs or industries.

# IMPLEMENTATION OF NATIONAL INDUSTRIAL PRETREATMENT PROGRAM

## Control Authority

- Develop, implement, and maintain approved pretreatment program;
- Evaluate compliance of regulated industrial users;
- Initiate enforcement action against industries as appropriate;
- Submit reports to Approval Authorities;
- Develop local limits where required (or demonstrate why they are not needed);
- Develop and implement enforcement response plan.

# REQUIRED COMPONENTS OF AN INDUSTRIAL PRETREATMENT PROGRAM

## Control Authority

- Legal Authority;
- Procedures;
- Funding;
- Local Limits;
- List of Significant Industrial Users;
- Enforcement Response Plan (ERP)

# LEGAL AUTHORITY

At a minimum, the legal authority must enable the POTW to:

- Deny or condition discharges to the POTW;
- Require compliance with pretreatment standards and requirements;
- Control industrial user discharges through permits, orders, or similar means;
- Require industrial user compliance schedules when necessary to meet applicable pretreatment standards and/or requirements and the submission of reports to demonstrate compliance;
- Inspect and monitor industrial users;
- Obtain remedies for industrial user noncompliance;
- Comply with confidentiality requirements

# PROCEDURES

POTW must develop/implement procedures to ensure compliance with pretreatment requirements:

- Identify and locate all significant industrial users subject to the pretreatment program;
- Identify the character and volume of pollutants contributed by such users;
- Notify significant industrial users of applicable pretreatment standards and requirements;
- Receive and analyze reports from significant industrial users;
- Sample and analyze significant industrial users discharges;
- Investigate instances of noncompliance;
- Submit reports to Approval Authority.

# FUNDING

POTW must have sufficient resources to carry out the authorities/procedures in its approved IPP:

- Qualified personnel
  - ✓ Program Administrator
  - ✓ Sampler/Lab Tech
  - ✓ Accountant
  - ✓ Legal
- Appropriate equipment



## Local Limits Development Guidance



# LOCAL LIMITS

Design based on site-specific conditions:

- POTW's efficiency in treating wastes;
- Its history of compliance with its NPDES permit limits;
- The condition of the water body that receives its treated effluent;
- Any water quality standards that are applicable to the water body receiving its effluent;
- The POTW's retention, use, and disposal of sewage sludge;
- Worker health and safety concerns

# LIST OF SIGNIFICANT INDUSTRIAL USERS

POTW must prepare, update & submit to the Approval Authority a list of all significant industrial users:

- Identify Significant Industrial Users (SIU)
  - ✓ Industrial surveys
  - ✓ Water & sewer billing records
  - ✓ Facility visits
  - ✓ Internet search
- Know the criteria for an SIU
  - ? Categorical, volume of process wastewater, % contribution to POTW

# ENFORCEMENT RESPONSE PLAN (ERP)

POTW must develop and implement an ERP that contains detailed procedures indicating how it will investigate and respond to instances of industrial user noncompliance:

- Identify applicable limits;
- Enforce objectively, consistently, and equitably;
- Stepped enforcement actions (example)
  - ✓ Informal notice – phone call, email, letter
  - ✓ Informal meeting – conversation to inform about non-compliance and enforcement actions
  - ✓ Notice of Violation – written notice of violation requesting explanation & measures to mitigate
  - ✓ Administrative Order & Compliance Schedule
  - ✓ Fines, Civil Suits, Criminal Prosecution
  - ✓ Revocation of permit

# IMPLEMENTATION OF NATIONAL INDUSTRIAL PRETREATMENT PROGRAM

## Industrial Users

- Understand permit requirements;
- Self-Monitoring;
- Reporting (baseline, periodic compliance, slug/spill plan...);
- Notification (production, staffing, discharge change, upset or spill...);
- Recordkeeping (discharge volume, monitoring, production...)

# RESOURCES & TIPS

- EPA Website & Publications;
- Strive to be knowledgeable, consistent & organized;
- Have staff learn about all parts of your IWPP;
- Build relationship with SIU's
  - ✓ Educate about the IWPP
  - ✓ Communication without confrontation
- Reach out to other municipal pretreatment coordinators and WDNR for assistance

