



# **TPDES Pretreatment Program & Updates**

## **Stormwater & Pretreatment Team Water Quality Division**

September 16, 2014

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&  
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# Today's Presentation

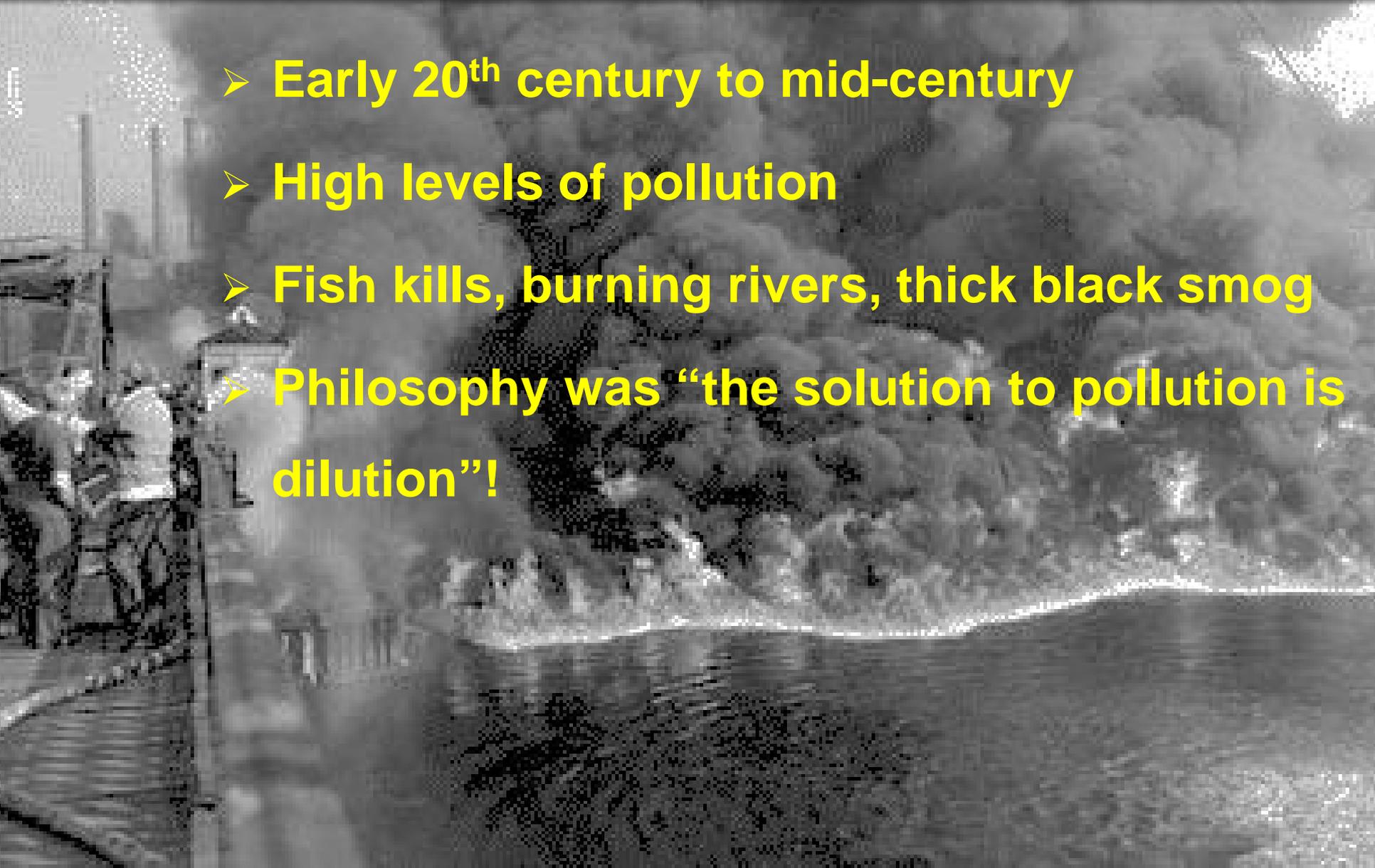
- **Pretreatment History, Objectives, and Introduction**
- **TPDES Permit Application – Domestic Worksheet 6.0**
- **TPDES Pretreatment Permit Options 1 & 2**
- **Industrial Users Identification and Survey**
- **Categorical Industrial Users (CIUs)**
- **Pretreatment Program Development**
- **TPDES Pretreatment Permit Options 3 & 4**
- **TPDES Updates**
- **Resources and Contacts**



**Pretreatment History,  
Objectives,  
and  
Introduction**

# History

- Early 20<sup>th</sup> century to mid-century
- High levels of pollution
- Fish kills, burning rivers, thick black smog
- Philosophy was “the solution to pollution is dilution”!



# The Federal Clean Water Act

## Objective

Restore and maintain the chemical, physical, and biological integrity of the Nation's waters.

## Goals

- Eliminate the discharge of pollutants
- Support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water"
- Prohibit the discharge of toxic pollutants in toxic amounts



Photo credit: tautologous.com/

# National Pretreatment Program Goals and Objectives

- **Prevent Interference and Pass Through**
- **Protect Worker Health and Safety**
- **Encourage Recycling/Reuse**



# Pretreatment Standards to Achieve Objectives

## General Prohibitions

Discharges that cause Interference or Pass Through

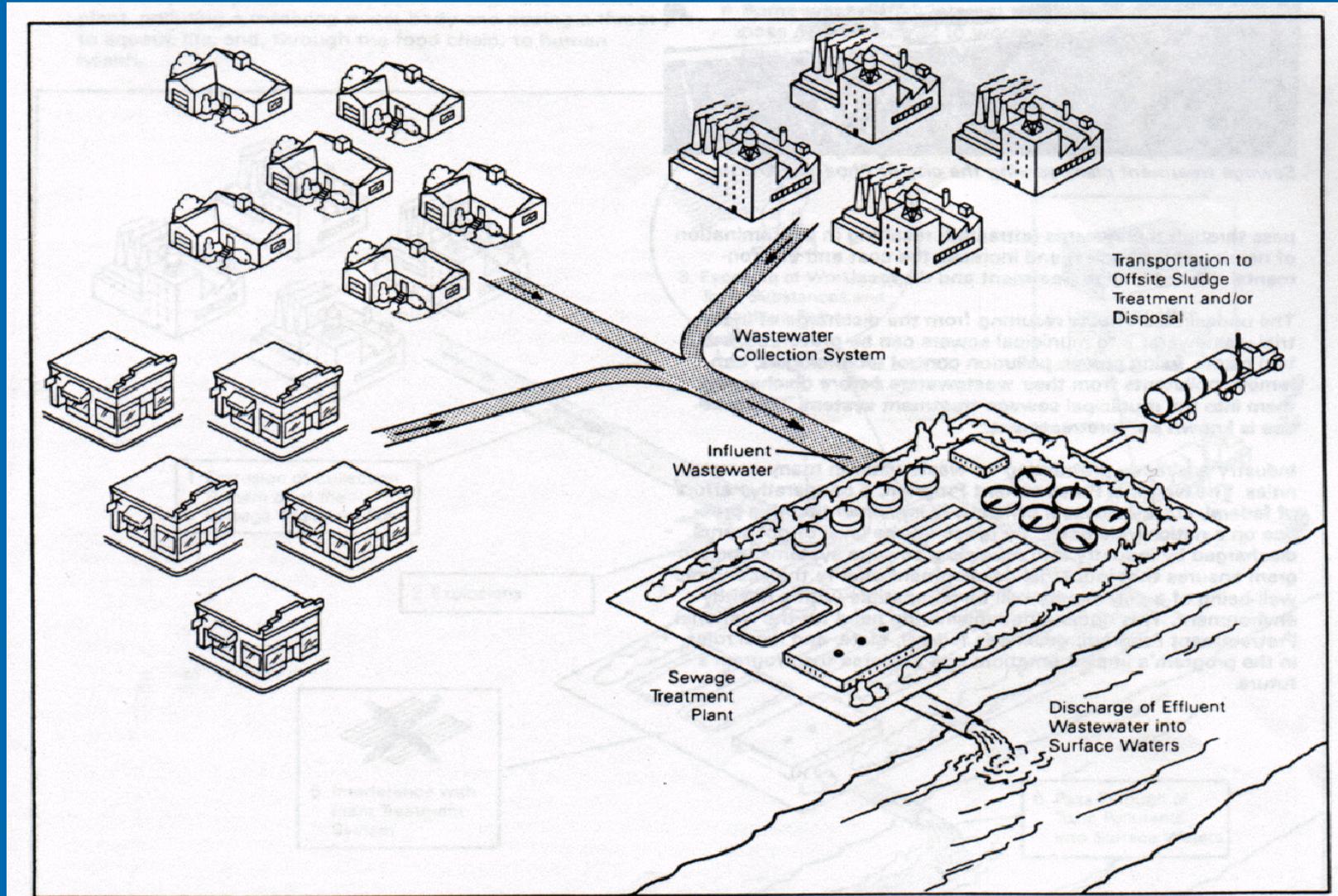


# Pretreatment Standards to Achieve Objectives

## Specific Prohibitions

- Fire or explosion hazard
- Corrosive structural damage
- Solid or viscous pollutants obstructing flow
- Flow rate causing interference
- Heat inhibiting biological activity
- Oils causing interference/pass through
- Toxic gases causing worker health problems
- Trucked/hailed pollutants unless designated

# Wastewater Collection and Treatment



# Who is regulated?

## The Pretreatment Program regulates:

- Significant Industrial Users (SIUs)
- Categorical Industrial Users (CIUs)
- Other Industrial Users (IUs)

*Based on character and volume of wastewater discharged to the POTW*



# What is a Significant Industrial User (SIU)?

## 40 CFR Part 403.3(v)

- Discharges 25,000 gallons per day (gpd) or more of **process** wastewater
- Subject to categorical pretreatment standards (CIUs)
- Contributes 5% or more of the hydraulic or organic capacity of the WWTP
- Reasonable potential to adversely impact the POTW or for violating any standard

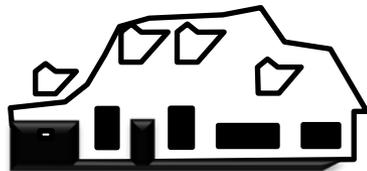




# What is a Categorical Industrial User (CIU)?

- **Industrial categories listed in 40 CFR Parts 405-471**
- **Subparts according to processes or manufactured products or raw material used**
- **Existing Source or New Source in 40 CFR §403.3(m)**
- **National technology based limits that apply at the CIU's "end-of-process"**

Domestic

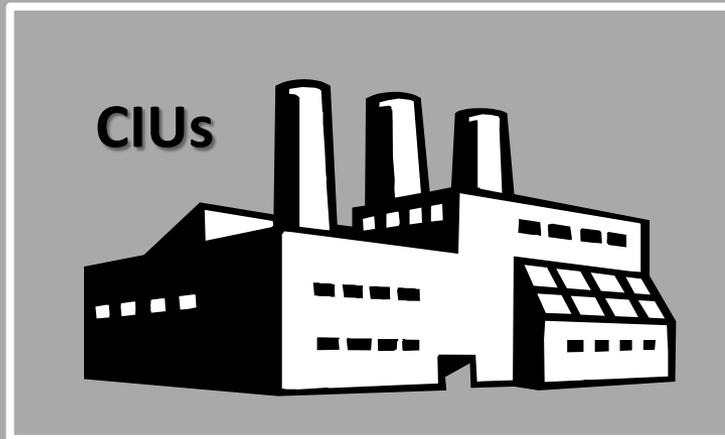


IUs

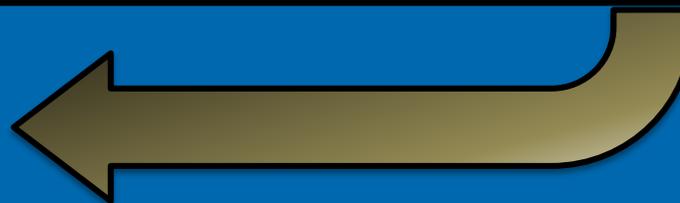
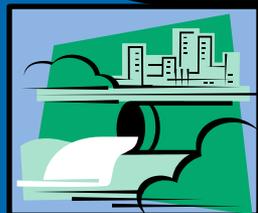
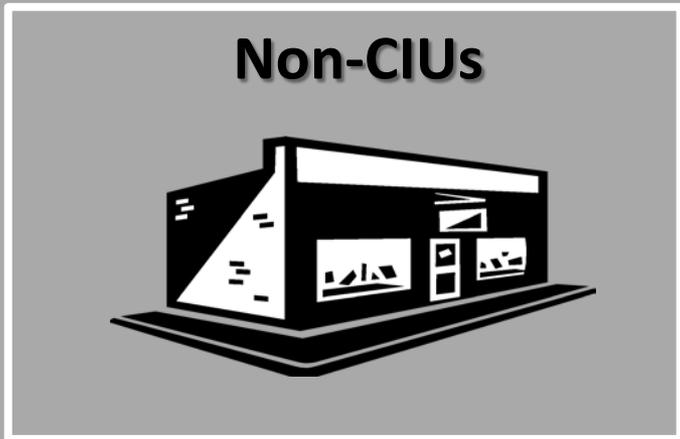


Non-SIUs

SIUs



Non-CIUs



# Pretreatment Standards to Achieve Objectives

## ➤ **Categorical Pretreatment Standards**

- National standards
- Apply to specific industrial categories
- Emphasis on toxic pollutants
- Technology-based
- Apply at the “end-of-process”

## ➤ **Local Limits**

- Developed individually by each POTW
- Based on local, site-specific data
- Protect plant, workers, sludge quality and water body
- Apply at the IU’s “End-of-Pipe”



# **TPDES Permit Application Domestic Worksheet 6.0**

# TPDES Domestic Wastewater Permit Application Worksheet 6.0 of the Technical Report

- All POTWs must complete Worksheet 6.0 as part of their TPDES permit application
- Include SIUs, CIUs, & other IUs discharging to the WWTP
- Based on total number, average process flow, & other information



**DOMESTIC WORKSHEET 6.0  
INDUSTRIAL WASTE CONTRIBUTION**

**1. ALL POTWs (Instructions, Page 70)**

a. Provide the number of each of the following types of industrial users that discharge to your POTW and the flows from each.

Type of industrial user	Number of industrial users	Average Flows in MGD
CIUs		
SIUs - Non-categorical		
Other IUs		

b. In the past three years, has your POTW experienced treatment plant interference as defined in the Definitions section of the instructions?

Yes     No    If yes, identify all dates, duration, description of interference, probable cause(s) and possible source(s).

c. In the past three years, has your POTW experienced pass through as defined in the Definitions section of the instructions?

Yes     No    If yes, identify all dates, duration, description of pollutants passing through the treatment plant, probable cause(s) and possible source(s).

d. Does your POTW have, or is it required to develop an approved pretreatment program?

Yes     No    If yes, answer all questions in item 2, but skip item 3 questions. If no, skip item 2 and answer all questions in item 3 for each significant industrial user.

**2. POTWs WITH APPROVED PROGRAMS OR THOSE REQUIRED TO DEVELOP A PROGRAM (Instructions, Page 70)**

a. Have there been any substantial modifications to the POTW's approved pretreatment program that have not been approved according to 40 CFR Section 403.18?

Yes     No    If yes, identify on a separate attachment all substantial and nonsubstantial modifications that have not been submitted to the Approval Authority (TCEQ).

# TPDES Domestic Permit Application – Worksheet 6.0

- Use water billing records or survey results in Table 1a
  
- Be sure to enter “0” or “none” if there are no CIUs, SIUs, non-categorical, or Other IUs.
  
- Do NOT enter “N/A”



# TPDES Domestic Permit Application – Worksheet 6 (Page 2)

- b. List all parameters measured above the MAL in the POTW's effluent annual monitoring scans during the last three years.

Pollutant	Concentration	MAL	Units	Date

- c. Has an IU caused or contributed to any problems (e.g., interferences, pass through) at your POTW in the past three years?

Yes     No

If yes, identify the industry, describe each episode, including dates, duration, description of problems, and probable pollutants. Submit a separate attachment if necessary.

**3. SIGNIFICANT INDUSTRIAL USER (SIU) INFORMATION** (Instructions, Page 71)

a. Company Name: \_\_\_\_\_ SIC Code: \_\_\_\_\_  
 Telephone number: \_\_\_\_\_ Fax number: \_\_\_\_\_  
 Contact name: \_\_\_\_\_  
 Street No.: \_\_\_\_\_ Street name: \_\_\_\_\_ Street type: \_\_\_\_\_  
 City: \_\_\_\_\_ State: TX \_\_\_\_\_ Zip Code: \_\_\_\_\_

- b. Describe the industrial processes of other activities that affect or contribute to the SIU's discharge.

➤ Include required information for all SIUs and CIUs in Number 3.

➤ Provide as much detail as possible for Process Description.

# TPDES Domestic Permit Application – Worksheet 6 (Page 3)

c. Provide a description of the principal product(s).

d. Flow rate information:

Flow information	Gallons per day discharged	Continuous, batch or intermittent discharge
Process wastewater		
Non-process wastewater		

e. Pretreatment Standards: Indicate whether the SIU is subject to the following.

Technically based local limits as defined in the Definitions section of the instructions:

Yes  No

Categorical pretreatment standards (40 CFR Parts 405-471):  Yes  No

If subject to categorical pretreatment standards, indicate the applicable category and subcategory for each categorical process.

Category in 40 CFR	Subcategory in 40 CFR			

f. Has the SIU caused or contributed to any problems (e.g., interferences, pass through) at your POTW in the past three years?

Yes  No

If yes, identify the SIU, describe each episode, including dates, duration, description of problems, and probable pollutants. Provide a separate attachment if necessary.

- 3c-e: Describe the product and process
- 3f: Describe any problems, i.e. interference or pass through

# **TPDES Pretreatment Permit Options 1 and 2**



# TPDES Pretreatment Permit Language

## ➤ Option 1:

- POTWs **not required** to have an approved pretreatment program

## ➤ Option 2:

- POTWs are required to conduct an industrial waste survey (IWS) and **may be required** to develop a pretreatment program.



# TPDES Pretreatment Option 1

## Permit Language Requirements

### ➤ General and Specific Prohibitions

40 CFR §403.5

### ➤ Notification requirements

- New introduction of pollutants
- Changes in volume or character of pollutants



# TPDES Pretreatment Option 2

- **POTWs that are (or may) be required to develop pretreatment program**
- Activity No. 1
  - **Submit an industrial User (IU) survey**
  - **Due within 60 days of issued permit**
  - **Based on results, TCEQ will determine if program development continues or terminates.**



# **Industrial Users Identification and Survey**

# Problems and Discharges to Consider

## Collection System:

- Stoppages or Overflows?
- Corrosion of lines?



## Wastewater Treatment Plant:

- Exceeding permit discharge limits?
- Biomonitoring failures?
- Exceeding sludge criteria for its disposal method?
- Unusual or noxious odors?

## Industrial users (IUs):

- Excessive amounts of pollutants or hydraulic loads?
- Excessive fats, oils or grease (FOG)?
- Wastewater with a high or low pH?

# How to Identify Industrial Users?

- **Water billing records**
- **Applications for sewer service**
- **Building permits**
- **Property tax records**
- **POTW collection system personnel**
- **POTW treatment plant operator(s)**



# How to Identify Industrial Users?

- **Business & Telephone directories**
- **Chamber of commerce records**
- **Economic Development Board records**
- **Direct observation (drive-by)**
- **Internet searches**
  - Toxic Release Inventory [www.epa.gov/TRI/](http://www.epa.gov/TRI/)
  - Envirofacts [www.epa.gov/enviro/](http://www.epa.gov/enviro/)



# Facility Types

Commonly missed facilities:

- **Small metal plating facilities**
- **Truck washing facilities**
- **Facilities that don't have categorical standards**
  - Meat and Poultry Products (40 CFR 432)
  - Plastic Molding & Forming (40 CFR 463)



# Industrial User Survey

## Compile master list of potential IUs in service area

- IUs with high water usage
- IUs that might impact the POTW
- Standard industrial classification (SIC) code
- North America Industry Classification System (NAICS) codes
- Compare categories 40 CFR Part 405-471



# Industrial User Survey

- **Survey each IU to collect information**
- **Send a questionnaire**
- **Conduct follow-up inspections & phone calls**
- **Summarize data**
- **Maintain and update IU list**



# **Categorical Industrial Users (CIUs)**

*Discharging to POTWs without an approved pretreatment program*

# CIUs discharging to POTWs without an approved TPDES pretreatment program

- TCEQ is the Control Authority
- Send semi-annual self-monitoring reports to:
  - *TCEQ Stormwater & Pretreatment Team (MC-148) Water Quality Division*
- TCEQ's guidance
  - *Reporting Requirements for CIUs Discharging Wastewater to POTWs Without Approved Pretreatment Programs (RG-401)*
  - [www.tceq.texas.gov/assets/public/permitting/wastewater/pretreatment/rg401.pdf](http://www.tceq.texas.gov/assets/public/permitting/wastewater/pretreatment/rg401.pdf)
- CIUs and the POTWs may be inspected by the TCEQ's Pretreatment Compliance Investigators

# **Pretreatment Program Development**

# Who Must Develop Pretreatment Program?

## 40 CFR § 403.8

### **POTWs with:**

- **Combined design flow of  $\geq 5$  MGD, and**

  - **Receive wastewater contributions from CIUs**
  - **Receive pollutants which cause pass through or interference at the WWTP**

- **Program development required by TCEQ**

# Pretreatment Program Elements

## 40 CFR § 403.8

- **Legal Authority (ordinance)**
- **Enforcement response plan and guide**
- **Standard operating procedures**
- **Adequate funding & resources**
- **Local Limits**
- **List of IUs, SIUs, CIUs**

# **TPDES Pretreatment Permit Options 3 and 4**

# TPDES Pretreatment Permit Language

## ➤ Option 3:

- POTWs within an approved pretreatment programs
- With SIUs discharging to that specific WWTP

## ➤ Option 4:

- POTWs within an approved pretreatment program
- Without SIUs discharging to that specific WWTP



# TPDES Pretreatment Permit Language

## Option 3 WWTPs:

- An approved TPDES pretreatment program
- 40 CFR Part 403 with Streamlining Rule requirements
- Technically based local limits (TBLLs):
  - Reassessment certification of existing TBLLs
  - Notification to redevelop existing TBLLs
  - Either due 60 days after permit issuance



# TPDES Pretreatment Permit Language

## Option 3 WWTPs:

- **Annual report - due a specific month**
  - **WWTP influent and effluent monitoring**
    - 40 CFR Part 122 Appendix D & 30 TAC Chapter 307
  - **List of SIUs in SNC and newspaper publication**
- **Notification requirements**
  - New introduction of pollutants
  - Changes in volume or character of pollutants



# TPDES Pretreatment Permit Language

## Option 4 WWTPs:

- Covered under approved TPDES pretreatment program
- Without SIUs in the service area of the covered plant
- TBLLs still may be applicable
- Influent/effluent sampling not required
- Notification requirements still apply



# TPDES Pretreatment Program

## *Universe*

- **73** Approved TPDES Pretreatment Programs
  - Includes approximately 1,300 SIUs
  - 150 WWTPs
  - 160 municipalities
- **5** Developing Pretreatment Programs
- **34** CIUs – discharging to POTWs without an approved pretreatment program



# TPDES UPDATES

# TPDES Updates

- **Wastewater Potable Reuse**
- **EPA's Sufficiently Sensitive Methods Rule**
- **EPA's NPDES Electronic Reporting Rule**
- **TCEQ's Minimum Analytical Limits (MALs)**
- **Revised TPDES Permit Applications**
- **TPDES Permits and EPA Review**
- **Hazardous Waste Notification**



# Wastewater Potable Reuse Projects

- Due to the drought and considering the future...
  - Cities have requested approval to send their wastewater effluent to their drinking water plant.
- Cities with projects on their way include:
  - City of Wichita Falls - **Approved June 27, 2014!**
  - City of Brownwood - *Approved pretreatment program*
  - City of Big Spring - *No approved pretreatment program*
  - City of Houston - *considering*
  - El Paso Water Utilities Board - *considering*

# Sufficiently Sensitive Methods Rule

EPA published Final Rule on September 2,  
2014

- Effective on September 18, 2014
- Federal Register, Vol. 79, No. 160
- Compliance date is September 18, 2015



# Sufficiently Sensitive Methods Rule

## *Purpose*

NPDES applicants and permittees must use EPA-approved analytical methods ... capable of detecting and measuring the pollutants at, or below, the applicable water quality criteria or permit limits. The rule affects only chemical-specific methods; they do not apply to the Whole Effluent Toxicity (WET) methods or their use.





# NPDES E-Reporting Proposed Rule

- **Published on July 15, 2013**
- **Requires electronic reporting of certain documents**
- **Comments to EPA closed December 12, 2013**
  - **169 public comments received - 849 pages**
    - **50% from government agencies**
    - **42% from industrial sectors**



# NPDES E-Reporting Proposed Rule

## NPDES required data:

- Discharge Monitoring Reports (DMRs)
- General Permit reports (Notices of Intent to discharge)
- Program reports (Pretreatment Program Annual Reports)
- Semi-annual reports for CIUs in non-pretreatment POTWs.
- Biosolids (Sludge) Program Annual Reports
- Sanitary Sewer Overflow (SSO) and Bypass Event Reports

For more information:

<http://www2.epa.gov/compliance/proposed-npdes-electronic-reporting-rule>

# NPDES E-Reporting Proposed Rule

- Publish supplemental notice in the Federal Register in September 2014 for comment
  - Summarize key issues, clarify misunderstandings, and possible modifications to be considered
- Conducted weekly discussions with Environmental Council of States (ECOS) and Association of Clean Water Agencies (ACWA) technical workgroup



# Minimum Analytical Levels (MALs)

- On July 12, 2013 - EPA partially approved
  - The 2010 version of the Implementation Procedures (IPs)
  - New and or revised MALs were approved as part of this
- **Implementation began July 14, 2014**
- New MALs for additional pollutants were added
- Some MALs were updated
  - Lowered due to EPA's lowered Minimum Quantification Limits (MQLs)
- Download 2010 IPs at:
  - [https://www.tceq.texas.gov/waterquality/standards/WQ\\_stds](https://www.tceq.texas.gov/waterquality/standards/WQ_stds)

# Revised TPDES Permit Applications

- Application Forms and Instructions revised July 2014
- Posted on TCEQ's website
- Application forms have fillable fields
- Revision include:
  - Analytical testing using new 2010 MALs and methods
  - Alkalinity testing required (all industrial & major municipal)
  - Industrial and Municipal Pretreatment Worksheet
  - Stormwater coverage questions - major facilities (Sector T)



# TPDES Permit Permits & MALs

- 2003 MALs or previously authorized MALs in existing issued Industrial, Municipal, and Stormwater permits stay in effect until permit is renewed or amended.
- Permits issued to POTWs with approved pretreatment programs use 2010 MALs **after July 14, 2014.**



# Hazardous Waste Notification

## 40 CFR 403.12(p)

- Office of the Inspector General is conducting an evaluation of hazardous waste (HW) discharges to and from POTWs.
- Preliminary Research Phase conducted:
  - March 13 - July 23, 2013
- Fieldwork Phase addresses:
  - Does EPA regulate HW discharges to and from POTWs?
  - Do POTWs monitor discharges for HW?
  - Has EPA taken actions to address discharges of HW to and from POTWs?

# Hazardous Waste Notification

## 40 CFR 403.12(p)

Data sets used for one POTW:

- 2011 TRI Waste Transfers to POTWs
- DMR permit data in the DMR Pollutant Loading Tool



# Notifications



IU: Notify POTW of HW discharges to the POTW



IU: Notify State/EPA of HW discharges to the POTW



POTW: Notify IU about HW reporting requirements



POTW: Notify State/EPA of HW (e.g., hazardous sludge, HW removed from collection system)



# Notification by IU [403.12(p)]

- Written notification sent to:
  - Control Authority (approved program POTW)
  - TCEQ
    - Industrial and Hazardous Waste Permitting Section
    - 512-239-2335 or [ihwper@tceq.texas.gov](mailto:ihwper@tceq.texas.gov)
  - EPA Region 6
    - Multimedia Planning and Permitting Division



# POTW Notification to IU

- Notify all IUs of applicable requirements under RCRA Subtitle C and D [40 CFR §403.8(f)(2)(iii)]
- Notify SIUs of reporting requirements



# **Training and Resources**

# Pretreatment Training

## TCEQ – Pretreatment

- [www.tceq.texas.gov/permitting/wastewater/pretreatment/raining\\_seminars.html](http://www.tceq.texas.gov/permitting/wastewater/pretreatment/raining_seminars.html)

## EPA

- **Industrial User Permitting (*Potential Fall 2014*)**
  - Production-based Standards
  - Combined Wastestream Formula
  - Best Management Practices
- **Pretreatment webcasts**
  - [www.epa.gov/npdes/training](http://www.epa.gov/npdes/training)
  - Including archived presentations





# EPA Guidance

## Recently updated:

- Introduction to the National Pretreatment Program (2011)
- Industrial User Permitting Guidance Manual (2012)

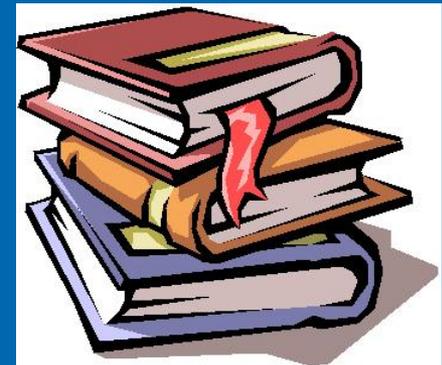
## Forthcoming:

- Industrial User Permitting Guidance Manual Appendices
  - Production Based Standards & Combined Wastestream Formula
- Guidance Manual for the Control of Wastes Hauled to Publicly Owned Treatment Works (1999)
- Industrial User Inspection & Sampling Manual (1994)

# EPA Manuals

## Currently updating:

- **Procedures Manual for Reviewing a POTW Pretreatment Program Submission**
- **Guidance Manual for POTW Pretreatment Program Development**



# TPDES Pretreatment Program Contacts

## Water Quality Division

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# TCEQ Regional Contacts

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# Questions and Discussion?



**Thank You!**