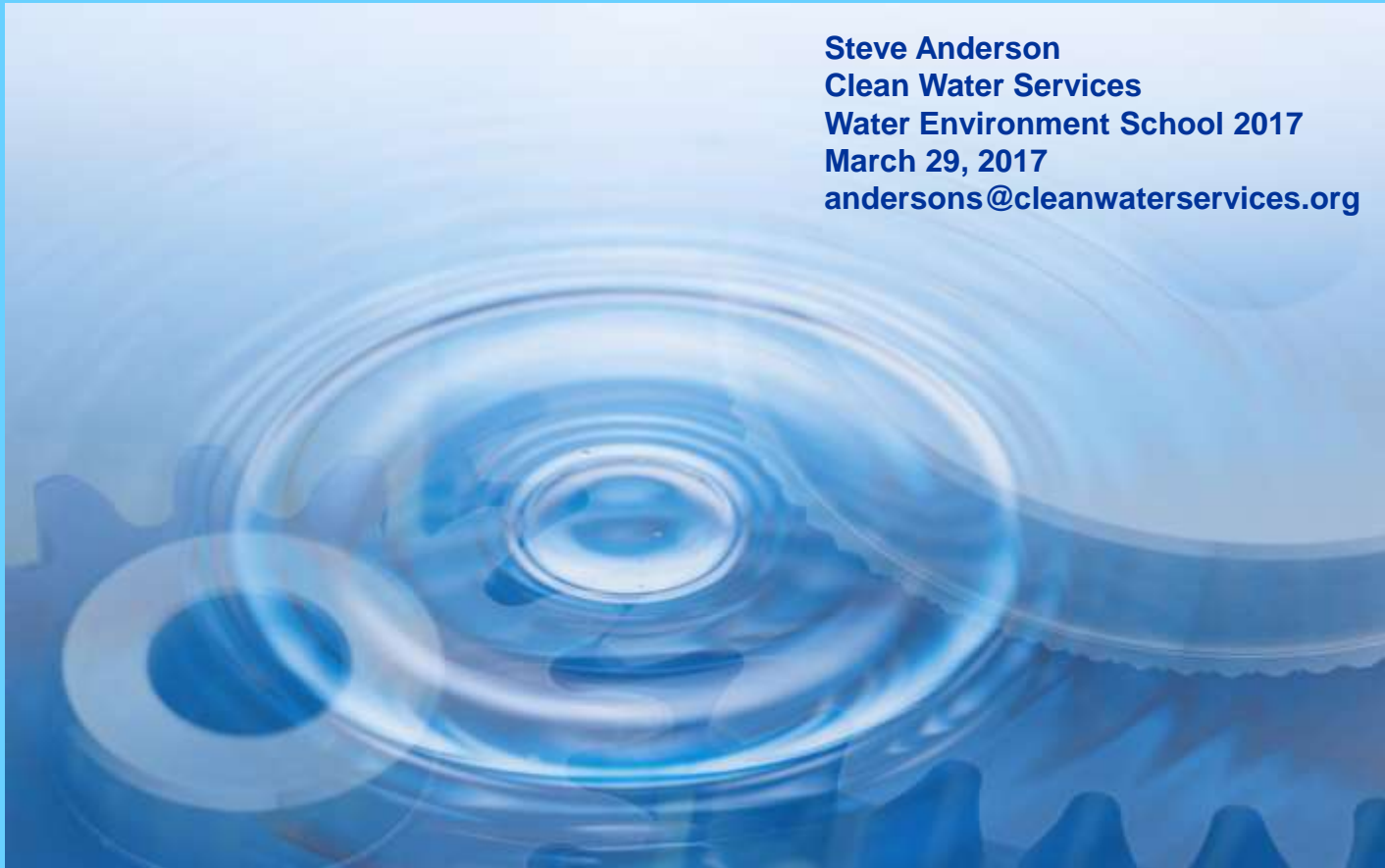


Understanding Industrial Permits

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The National Pretreatment Program

- Primary goal is to protect Publicly Owned Treatment Works (POTWs) and the environment from adverse impacts caused by pollutants discharged into a sewage system
- The Clean Water Act requires that EPA promulgate pretreatment standards and requirements
- EPA responded by establishing general and specific prohibited discharge standards at 40 CFR Part 403, and categorical pretreatment standards at 40 CFR Parts 405-471

National Pretreatment Program Goals

- Prevent pollutants from passing through the treatment works and causing NPDES permit violation
- Prevent interference with POTW operations, causing permit violation
 - Inhibition of treatment plant processes
 - Damage to plant and collection system
 - Threats to worker health and safety
 - Adversely affect sludge use and disposal
- Improve opportunities to recycle/reclaim wastewater and sludge

Local Pretreatment Programs

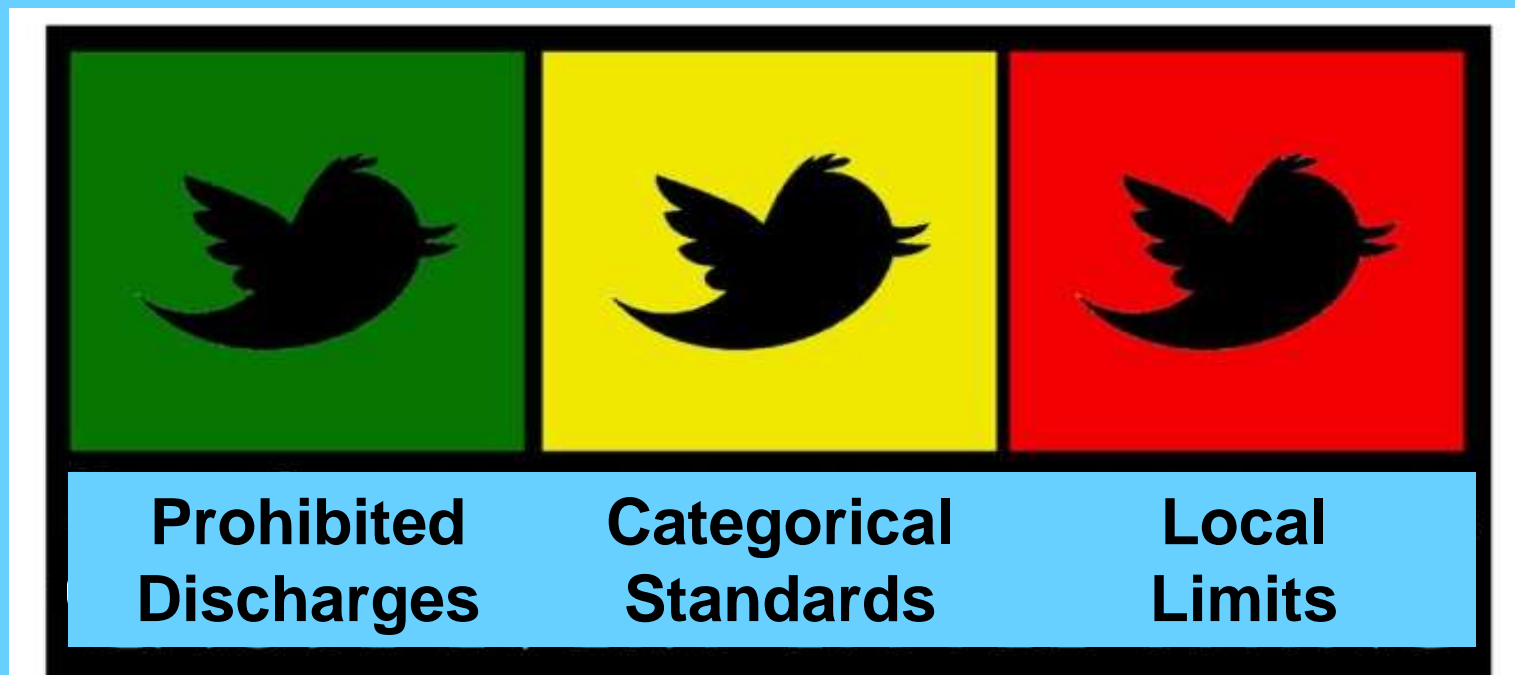
- **Must be developed by POTWs that:**
 - **Have a design flow > 5 MGD, and**
 - **Receive industrial discharges that pass through or interfere**
 - **Receive industrial discharges that are subject to Pretreatment Standards**
- **Can be developed by POTWs that do not meet the above conditions, but wish to control discharges from nondomestic sources**

Significant Industrial User (SIU)

- An IU for which any of the following is true:
 - Is subject to federal categorical pretreatment standards
 - Discharges an average of 25,000 gallons per day or more of process wastewater to the POTW
 - Contributes 5 percent or more of the average dry-weather hydraulic or organic capacity of the treatment plant
 - Has reasonable potential to adversely affect the POTW's operation or violate any pretreatment standard or requirement.

The National Pretreatment Program

- Three types of national pretreatment standards:



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The National Pretreatment Program

- Three types of national pretreatment standards:



National Prohibited Discharges

- Two types of National Prohibited discharges that apply to all nondomestic users:
 - **General Prohibitions**
 - **Specific Prohibitions**
- These are applicable whether or not the POTW has an approved Pretreatment Program

Prohibited Discharges - General

- The CFR Part 403 regulations forbid discharges that cause pass through and interference



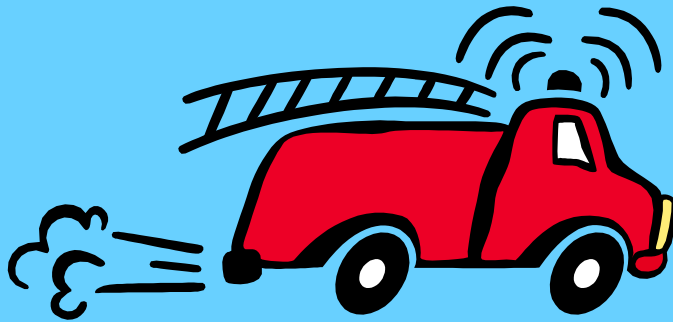
Prohibited Discharges - Specific

- The CFR Part 403 regulations also forbid discharges that meet any of eight criteria...



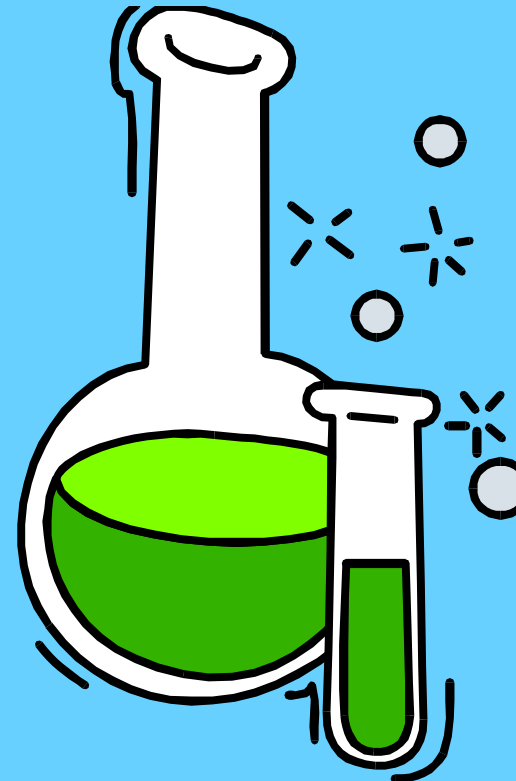
Prohibited Discharges - Specific

- Fire and explosion hazards



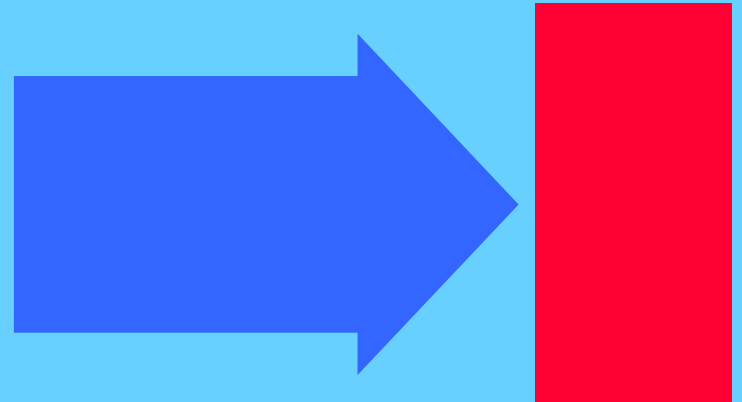
Prohibited Discharges - Specific

- Corrosive materials



Prohibited Discharges - Specific

- Solid and viscous materials in amounts that cause obstruction of flow



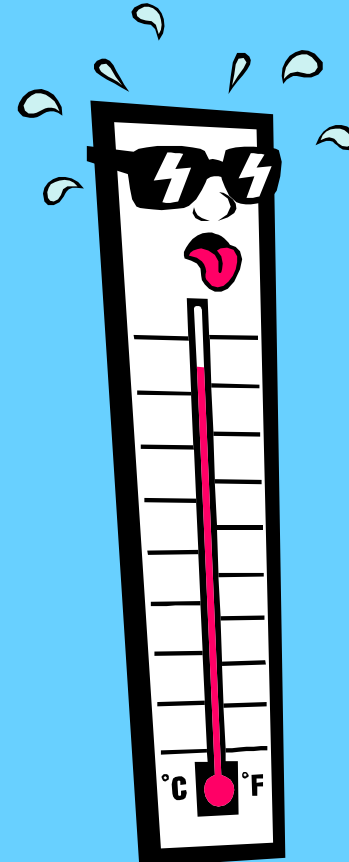
Prohibited Discharges - Specific

- Pollutants released at excessive rates of flow or concentrations



Prohibited Discharges - Specific

- Excessive heat in amounts that inhibit biological activity



Prohibited Discharges - Specific

- Oils, cutting oils, mineral oils in amounts that cause pass through or interference



Prohibited Discharges - Specific

- Pollutants that result in the creation of toxic gases, vapors, and fumes



Prohibited Discharges - Specific

- **Trucked or hauled wastes except at designated discharge points**



Categorical Pretreatment Standards

- Technology-based standards
- Apply to select group of industries; examples include:
 - Metal finishing
 - Leather tanning
 - Pharmaceutical manufacturing
 - Dairy products
 - Inorganic chemical manufacturing
- There are 58 categories

Local Limits

- **Local limits are POTW-specific limits on Industrial Users**
- **Local limits are developed by the POTW**
- **These limits are intended to enforce the general and specific prohibitions**
- **Local Limits are usually applied to SIUs, although a POTW can apply them to non-SIUs, if their Sewer Use Ordinance allows**
- **The Pretreatment Regulations require development of local limits where necessary to implement the prohibited discharge standards**

Why develop Local Limits?

- Local Limits are designed to prevent
 - Pass through



Why develop Local Limits?

- ...and to prevent
 - **Interference**



Which pollutants should be regulated?

- A pollutant of concern (POC) is any pollutant that has the potential to be discharged to a POTW in amounts that cause:
 - Pass through
 - Interference
 - Collection system problems
 - Threats to worker health and safety
- In addition, EPA recommends that a POTW screen for the presence of 15 pollutants...

Determining Pollutants of Concern

EPA's List of 15 Potential Pollutants of Concern:

Arsenic

Silver

Cadmium

Zinc

Chromium

Molybdenum

Copper

Selenium

Cyanide

BOD5

Lead

TSS

Mercury

Ammonia (if non-domestic sources)

Nickel

Addressing environmental concerns when calculating Local Limits

Environmental Concern	Applicable Criteria
Effluent quality	Water quality criteria, NPDES permit limits
Sludge quality	Sludge standards for land application or surface disposal
Prevention of inhibition	Inhibition criteria for various processes (activated sludge, tricking filters, nitrification, sludge digestion, etc.)

Local Limits can also address collection system and safety/health

- **pH limits, other corrosion risks (e.g. sulfide)**
- **Limits on chemicals causing toxic fumes**
- **Limits on chemicals presenting fire/explosion risk**
- **Fats, oils, and grease**

So what's in an industrial permit?

- Cover page
- Effluent limits
- Monitoring requirements
- Reporting requirements
- Standard conditions
- Special conditions, when necessary

Cover Page

- Name and address of the permittee
- Citation to legal authority
- Duty to comply
- Reapplication requirements
- Effective date and expiration date
- Signature of control authority (the POTW)

Effluent Limits

- POTW determines which pollutants are present
- POTW determines which ones require regulation
 - National prohibited discharges (general/specific)
 - Categorical pretreatment standards
 - Local limits

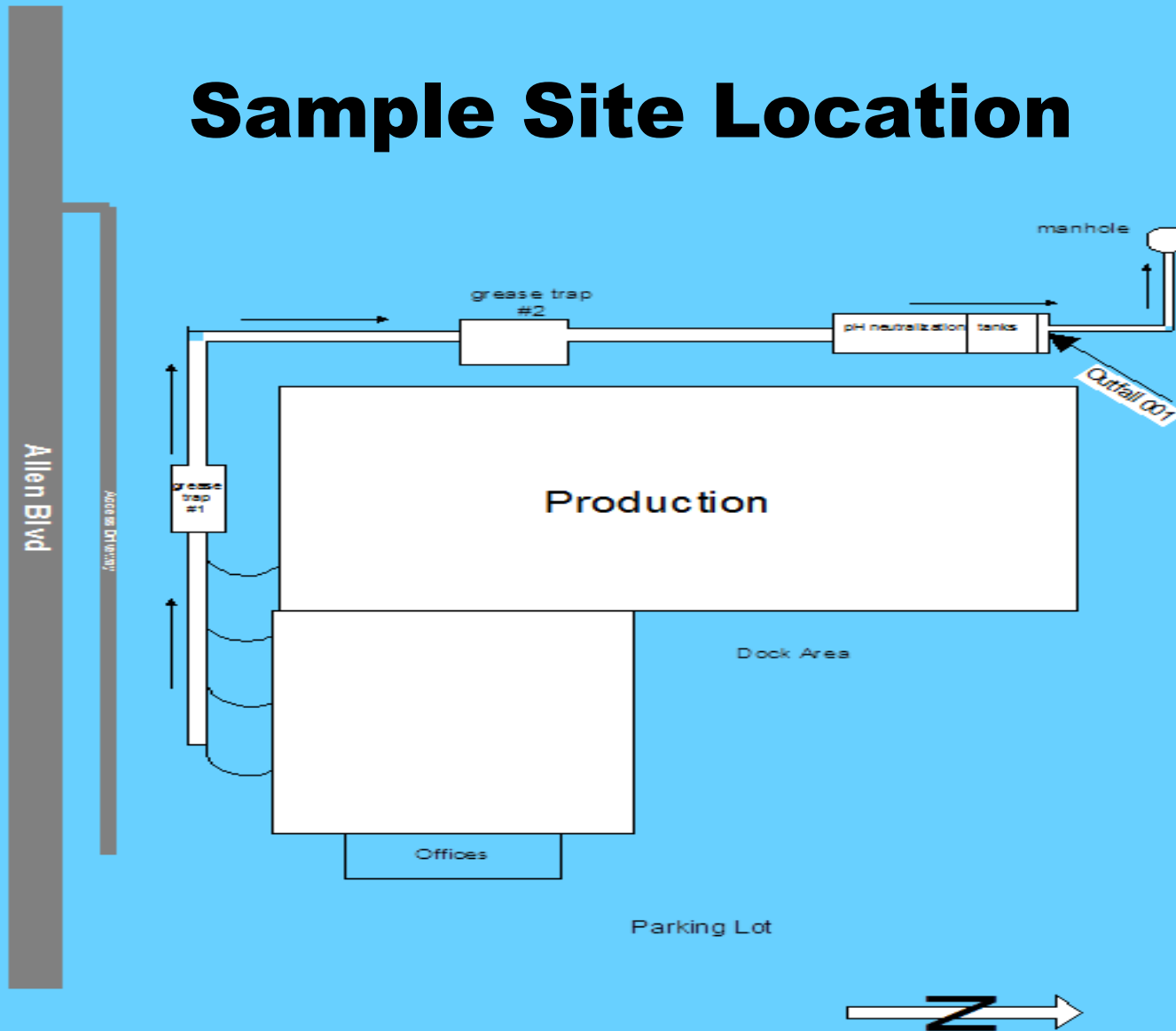
Effluent Limits/Monitoring

Parameter	Units	Outfall	Effluent Limitations		Sample Frequency	Sample Type
			DM	MA		
COD	mg/l	001	na	na	3/Month	Flow Propor Composite
pH minimum	S.U.	001	6.0	na	Continuous	pH Chart Recorder
pH maximum	S.U.	001	11.0	na	Continuous	pH Chart Recorder
TDS	mg/l	001	na	na	Monthly	Flow Propor Composite
CN-T	mg/l	002	1.2	0.65	Twice/Year	4 Grabs
Arsenic	mg/l	001	0.42	na	Twice/Year	Flow Propor Composite
Cadmium	mg/l	001	0.11	0.07	Twice/Year	Flow Propor Composite
Chromium	mg/l	001	2.77	1.71	Twice/Year	Flow Propor Composite
Copper	mg/l	001	3.38	2.07	Daily	Flow Propor Composite
Lead	mg/l	001	0.69	0.43	Daily	Flow Propor Composite
Nickel	mg/l	001	2.0	2.38	Daily	Flow Propor Composite
Silver	mg/l	001	0.43	0.24	Twice/Year	Flow Propor Composite
Zinc	mg/l	001	2.61	1.48	Twice/Year	Flow Propor Composite
Mercury	mg/l	001	0.008	na	Twice/Year	Flow Propor Composite
TTO	mg/l	001	2.13	na	TOMP	TOMP

Sample Site Accessibility

- Most of the required monitoring is performed by the permitted industries
- The POTW must also perform monitoring of all SIUs
- The monitoring performed by the POTW is intended to provide some verification of the industries' self-monitoring
- Thus, industrial permits usually specifies that the monitoring location must be accessible at all times for this POTW monitoring

Sample Site Location



Reporting Requirements

- Submittal of Self-Monitoring Reports
- Submittal of additional pollutant analyses
- Notification of new or changed discharges
- Notification of permit violations (24 hours or less)
- Notification of slug load or spill
- Notification of bypass

Standard Conditions

- Sets forth administrative and procedural requirements applicable to all IUs
- Outlines general duties and responsibilities
- Often are reiterations of provisions of the POTW's sewer use ordinance
- Sometimes taken verbatim from the sewer use ordinance

Standard Conditions - Examples

- Definition of terms
- Duty to comply with local sewer use ordinance, the permit, applicable Federal pretreatment standards
- Duty to mitigate duration and severity of permit violations
- POTW's authority to modify, revise, or revoke the permit
- Nontransferability of the permit
- Prohibition of using dilution as a partial or complete substitute for treatment

Special Conditions

- Tailored to a particular permittee
- Compliance schedules
- Development and implementation of management practices
- Accidental Spill Prevention Plan, if required
- Solvent and toxic organic management plan, if required
- Special monitoring requirements

Questions?

