

Strategies for POTWs: Regulatory Overview

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US EPA Clean Water Act

- The Clean Water Act established regulatory authority for the US EPA over wastewater discharges
 - Enacted in 1972, amended several times after that
 - Covers all 50 states and all US navigable waters
- Individual homes connected to a municipal sewer system, a private septic system, or that do not discharge to surface waters are exempt
- All other discharges to surface waters are permitted through the NPDES program (**NPDES Permit**)
- NPDES stands for National Pollution Discharge Elimination System

Permit vs. permit

- A NPDES Permit is referred to as a **control document**
- Control documents contain:
 - specific information about what pollutants are controlled
 - what concentrations of those pollutants are allowed to be discharged
 - Reporting requirements
 - Other duties of the permittee
- Permitted does not equal allowed

Source of Discharge

- Non-point Source
 - Discharges that don't have a discrete conveyance to surface waters, no outfalls
 - Typically sheet flow from snow melt or rainwater
 - Not directed or channelized
- Point Source
 - Channelized or pipe directed flows
 - One point source can have multiple outfalls
 - In the wastewater treatment universe they are typically a POTW or Industrial Discharger

Industrial Discharger Types

- Direct dischargers
 - Wastewater goes into the surface waters
 - Permits are site specific
 - Each location has its own permit
 - One permit can have multiple outfalls
 - Permits have specific pollutant limits
- Indirect dischargers
 - Wastewater goes to a POTW
 - These facilities may or may not have specific pollutant limits

Indirect Dischargers

- Discharge to a sanitary sewer system or directly to a POTW via pipeline, truck, or rail
- Domestic wastewater does not fall under pretreatment standards at the federal level
- Industrial wastewater from indirect dischargers is subject to federal standards under **40 CFR 403, General Pretreatment Regulations**
 - (federal code references use a specific abbreviation style...Title 40, Code of Federal Regulations, Part 403 would be the full version of the above)

Indirect Industrial Dischargers

- Discharge to POTW
 - Several potential methods of conveyance
 - Into the POTW's sanitary sewer network
 - Via direct pipeline to POTW
 - Hauled by truck to POTW
 - Hauled by rail to POTW
- Regulated under 40 CFR 403 and possibly additional standards under categorical pretreatment regulations

Industrial Discharger Categories

- US EPA has categorized certain industrial dischargers as requiring additional pretreatment standards
 - These categories are formalized in Federal Code
 - Parts of Title 40, Chapter I, Subchapter N
 - 40 CFR 405 through 40 CFR 471
 - Categories are grouped by industry type
 - They are based on industrial processes
 - Usually called “**categorical dischargers**”

Categorical Pretreatment Limits

- Limits are based on the expected contaminants for industrial processes
 - They can be different for different steps in a manufacturing process, and include monitoring requirements and discharge limits
- The limits are usually concentration based
 - Hard concentration limits per pollutant
 - production based concentration limits for specific pollutants
- Limits could be different for the same processes at different facilities
 - Limits may vary depending on the age of the facility

Wisconsin Pollution Discharge Elimination System

- Sound familiar? It should!
- **WPDES is the same thing as NPDES**
 - The US EPA allows Wisconsin to act as a proxy for them in the state
 - WI must promulgate the same rules as the EPA
 - WI must enforce those rules equivalent to the EPA
 - WI is subject to audit and inspection to verify compliance, and enforcement by the EPA for failure to do so

Wisconsin Pretreatment Rules

- **Ch. NR 211, Wis. Adm. Code** is equivalent to 40 CFR 403
 - Written out, it is “Chapter NR 211, Wisconsin Administrative Code”
 - Contains all the same elements as the federal code
- Categorical pretreatment standards are found in chs. NR 221 through NR 297, Wis. Adm. Code

Federal to State translation

- Wisconsin's code must be functionally identical to the Federal code
 - Limits must be the same
 - Reporting requirements must be the same
 - Audits, inspections, and enforcement actions must be functionally equivalent, or meet with US EPA approval
 - US EPA sets minimum fine levels and requires specific numbers of audits and inspections to be carried out each fiscal year
- Wisconsin standards **cannot** be more stringent than federal standards

State to Local translation

- All POTWs in Wisconsin should have Municipal Codes or Ordinances equivalent to the discharge prohibitions in s. NR 211.10, Wis. Adm. Code
- If a POTW establishes a pretreatment standard it must be **at least** as stringent as the current categorical discharge standards
- Our focus today are the subchapters of ch. NR 211, Wis. Adm. Code that regulate industrial users and POTWs
 - Subchapter I – Industrial User Requirements
 - Subchapter II – POTW Requirements

Definition of Control Authority

- S. NR 211.03(4), Wis. Adm. Code defines “control authority” as-
 - The POTW in relation to POTWs which have a pretreatment program and means the department in relation to POTWs which do not have a pretreatment program.
- So what does THAT mean?
 - Control authorities issue control documents (permits) and establish standards
 - If a POTW has an approved PT program, they are the control authority inside their span of control
 - Otherwise the department is the control authority

Control Authority “handoff”

- Under s. NR 211.20, Wis. Adm. Code the department requires POTWs with a design flow of over 5 MGD to establish a pretreatment program
- POTWs with design flows of under 5 MGD can also be required to establish pretreatment programs if the department deems it necessary.
- In order to be an approved pretreatment program, the POTW must have ordinances or codes equivalent to federal and state standards
- The POTW **may** have pretreatment standards more stringent than state or federal standards

Pretreatment Programs

- Pretreatment program requirements are spelled out in Subsection II of ch. NR 211, Wis. Adm. Code
- The program must mirror the US EPA and Wisconsin programs, including:
 - Issuing control documents to industrial users (**permitting**)
 - Establishing discharge limits
 - Establishing monitoring requirements
 - Establishing reporting requirements
 - Inspections and audits
 - Enforcement actions for violations of standards
- Currently 27 approved pretreatment programs in WI

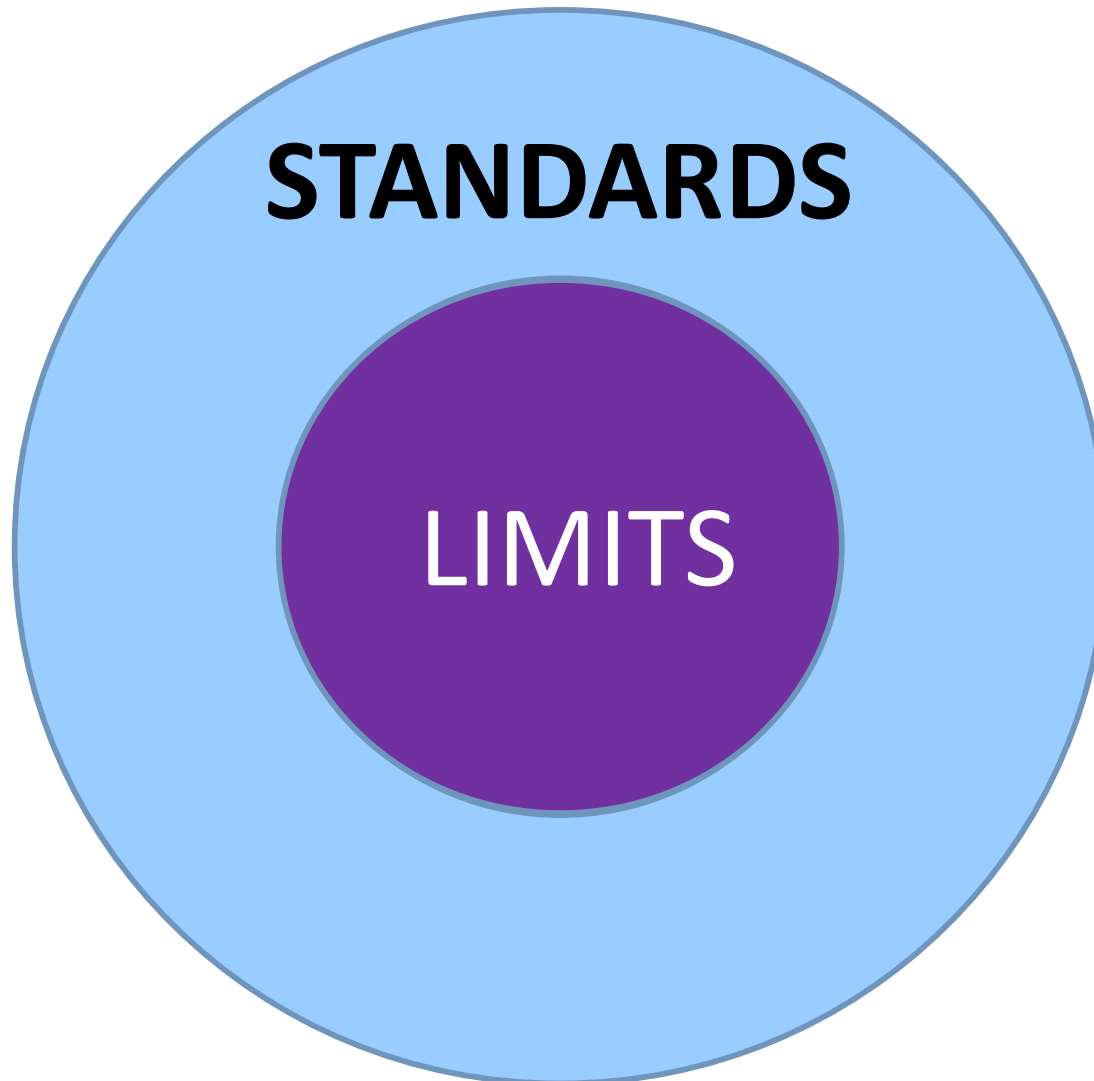
What about the other POTWs?

- POTWs with pretreatment programs **MUST** develop standards
 - Critical part of being a control authority
 - Required under federal and state code
- POTWs without pretreatment programs **MAY** develop standards
 - Subsection II of ch. NR 211, Wis. Adm. Code does not say a POTW must have a pretreatment program to enact standards. POTWs with pretreatment programs have to develop them

What exactly is a standard?

- A standard is a requirement that must be met by a discharger.
 - Reporting
 - Discharge limits
 - BMPs
 - Training
 - Inventory tracking of raw materials and/or finished product
 - Any other requirement established by a control authority over a discharger

Limits VS. Standards



Development of Standards

- Both the US EPA and WI DNR allow POTWs to develop discharge standards for industrial users
 - Standards must be based on the capabilities of the POTW to treat the discharge
 - May be more stringent than state or federal standards
 - Discharge limits may be expressed as concentration, mass, or both subject to department approval

Local Limits

- Many POTWs have industrial discharge “limits” in ordinances and codes.
- Frequently these “limits” spell out billing tiers for industrial users (i.e., Daily discharge in excess of 500 mg/L BOD or TSS will result in an additional charge of ***X*** per ***unit***)*
- These “limits” are not discharge standards enforceable under state and federal regulations.
- In order to be standards exceedance must be a violation (i.e., Discharge of BOD or TSS in excess of 500 mg/L is prohibited)*

*Examples paraphrased for brevity. I am not an attorney, nor do I play one on TV. Consult with your actual attorney before doing any of this.

Ability to Enforce Standards

- Standards are very difficult to enforce unless they are enshrined in local ordinances or codes
- Some mechanism to encourage compliance is a good idea
 - Ability to issue enforcement
 - Notices of non-compliance or violation
 - Municipal citations
 - Civil action and penalties
- Both US EPA and WI DNR have the ability to enforce POTW standards established in local ordinances or codes

Permit issuance

- POTWs without pretreatment programs may establish ordinances or codes to allow the issuance of discharge permits to industrial dischargers
- POTW does not become the control authority
- In order to establish a standard in a permit, it must be stated or allowed in the local ordinance or code

Summary

- US EPA, WI DNR, and POTW pretreatment program requirements are functionally identical
- POTWs may establish and enforce discharge standards (including limits) more stringent than federal or state standards depending on the ability of their plant to treat specific pollutants
- It is a good idea to establish standards for industrial dischargers
- Enforcement mechanisms will encourage compliance
- US EPA and WI DNR can use local standards as additional “leverage” in enforcement actions

Additional Information/References

- Title 40, Chapter I, Subchapter N
<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N>
- Chapters NR 200 through NR 299 Wis. Adm. Code
https://docs.legis.wisconsin.gov/code/admin_code/nr/200
- US EPA Local Limit Development Guidance Manual
<https://www.epa.gov/npdes/npdes-pretreatment-local-limits-additional-information>