

Government Affairs Seminar 2021

Developing a Permit Through Data and Permittee Engagement

Tim Ryan,
Field Operations Director

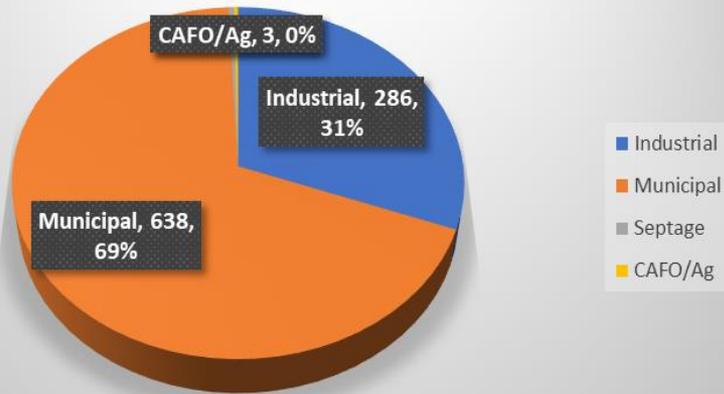


Presentation Overview

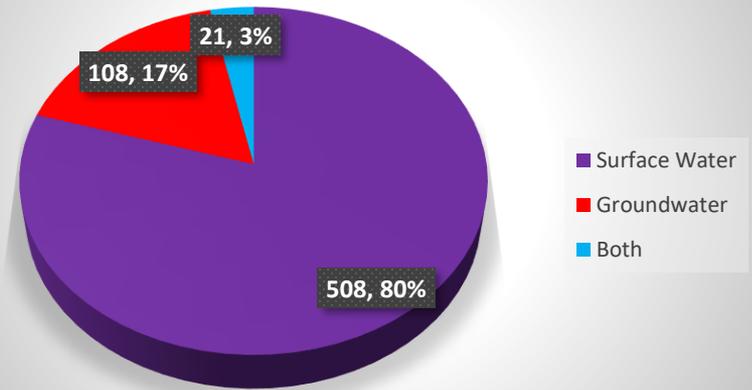
- Permit Basics
- Engagement - Permit Steps and Timelines
- Guidance
- Decision Making Using Good Data

Permit Universe

931 WPDES WW Individual Permits

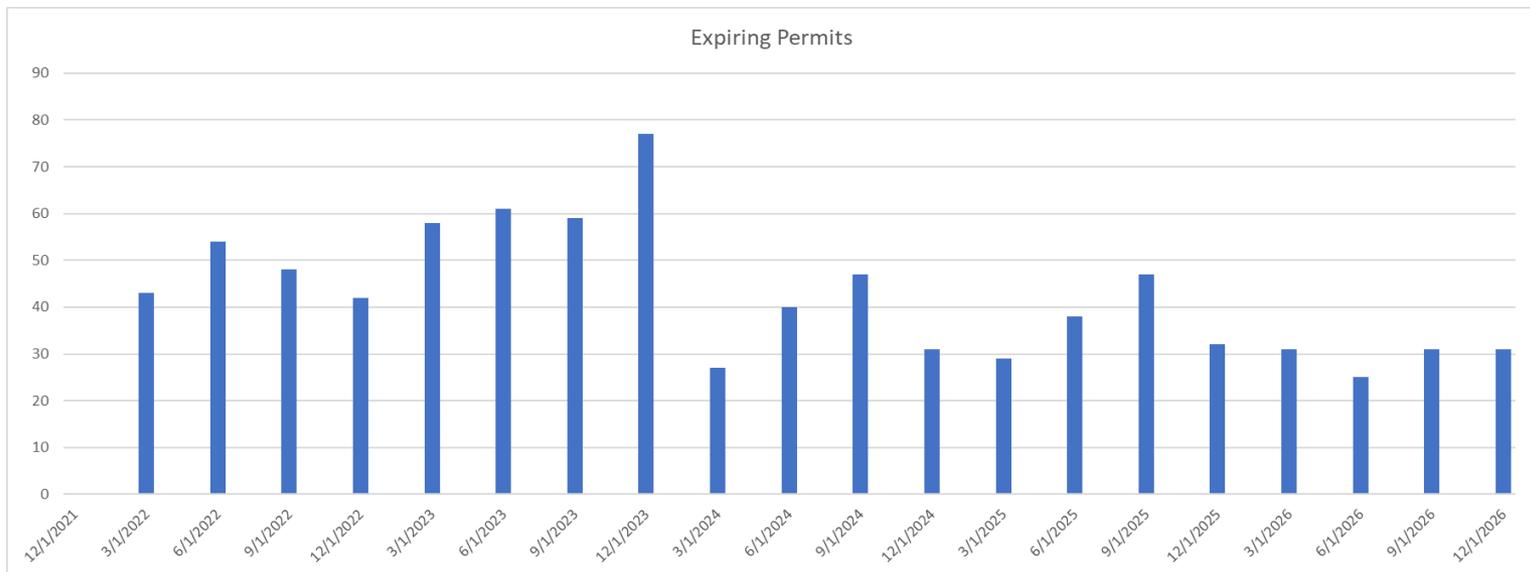


Municipal Discharges



Permit Universe

- Target backlog of expired permits <10%
- Current Backlog of expired permits is 6.9%
- Target reissuance of 168 permits per year
- Anticipating a surge of expired permits in the next 24 months.



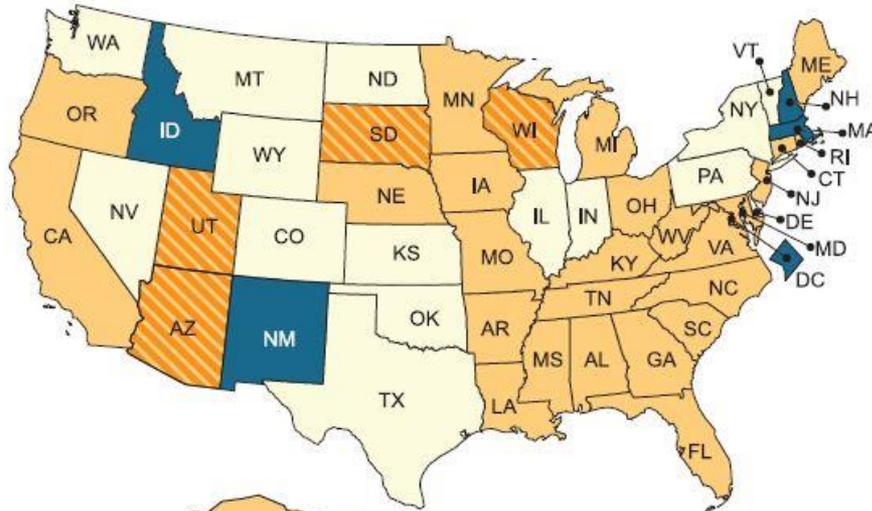
Clean Water Act & NPDES Program

- Regulate Discharges
- Envisions States Will Administer NPDES Program



NPDES Delegated States

State NPDES Program Authority



State NPDES Program Status

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



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

WPDES Program and State Authority

- Chapters 283 and 281, Wisc. Stats.
- Wisconsin Administrative Code
 - NR 101 – NR 297 Series
- <https://dnr.wisconsin.gov/topic/Wastewater/WastewaterRules.html>

WPDES Program History



- Feb. 1974 – Authority to administer WPDES Program granted
- Dec. 1980 – General Permits Program authority granted
- Dec. 1986 – Pretreatment authority granted
- July 2000 – Biosolids Program authority granted

Working with EPA

- EPA Oversight of WPDES Program
 - Permit Quality Review
 - State Review Framework
 - Real Time Permit Reviews
 - Variances



“Permit Package”

- Permit
- Fact Sheet
- Supporting Technical Documents
 - Water Quality Based Effluent Limits (WQBEL) Memo
 - Groundwater Evaluation
 - Substantial Compliance Determination
 - AM & Trading Documents
 - Variance Documents
- Public Notice/Hearing
- Notice of Final Determination



Permittee Engagement

- Stay engaged with your Compliance Engineer
- Submitting required reporting and getting feedback
- Inspection
- Application
- “Fact Check”
- Public Comment Period
- Gov Delivery Messages/website
- WWOA Meetings



Guidance

- Defined in s. 227.01(3m), Wis. Stats.
- Any formal or official document or communication that:
 - Explains the agency's implementation of a statute or rule.
 - Provides guidance or advice with respect to how the agency is likely to apply a statute or rule.

Guidance

- Formal written direction to DNR staff that explains how to approach making decisions when there are not specific details in the law.
- May include recommended actions or suggested permit conditions when certain factors or criteria are present.
- May clarify implementation of legal authority or guide decision making where legal authority allows discretion in decisions.

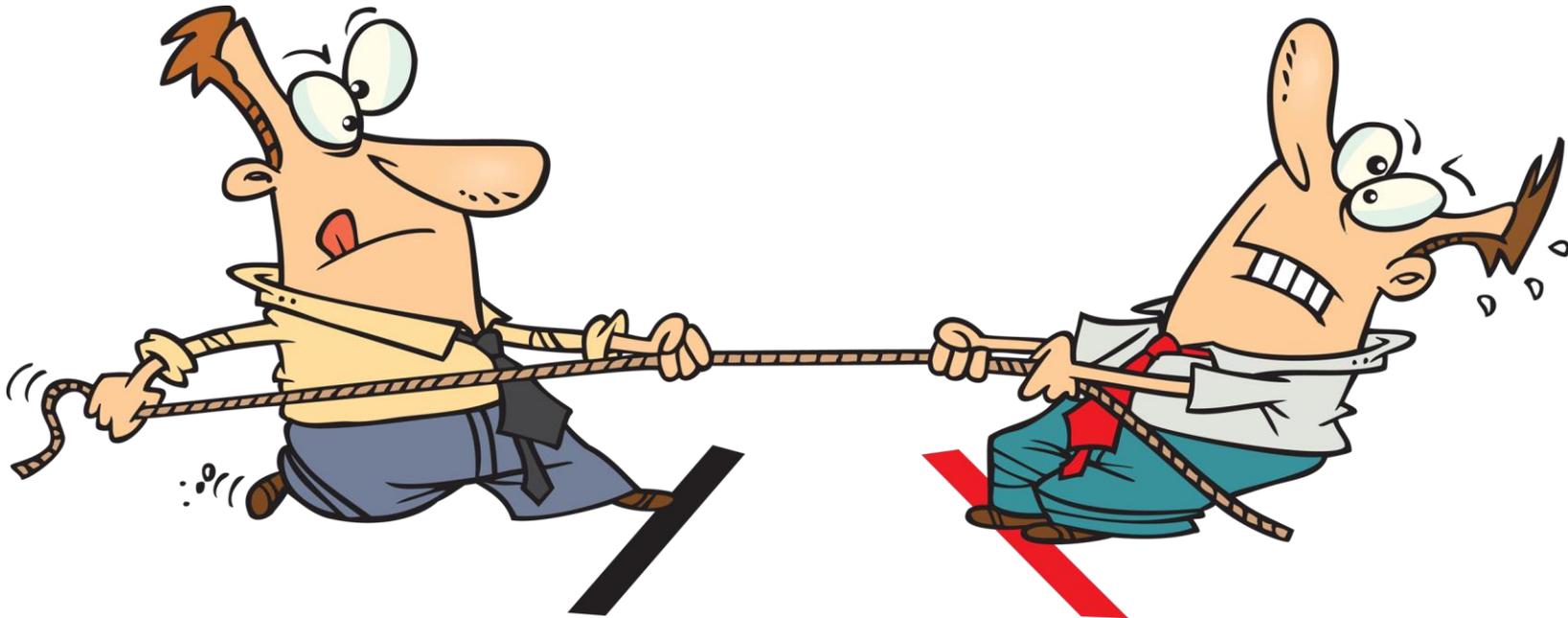
Guidance

- Does not have the effect and force of law.
- Will not see “shall” or “must” unless referencing code or statute.
- Fact Sheet includes documentation of why permit conditions are included in the permit.
- Permit decisions may be documented as consistent with guidance.
- Site specific factors may result in a different permit condition.
- Guidance undergoes staff, management, and legal reviews.
- Although not required by law, guidance documents typically go through a public comment period.

Guidance

CONSISTENCY!

FLEXIBILITY!



Decision Making Using Good Data

Rachel Fritz,
Water Resources Engineer

- WQBEL Calculation
- Reasonable Potential Determination
- Representative Data

WQBEL Equation

$$WQBEL = \frac{WQC \times (Q_s + [1 - f]Q_e) - (Q_s - fQ_e) \times C_s}{Q_e}$$

WQC = Water Quality Criteria

From administrative code

Dependent on designated use of the receiving water

Effluent and receiving water hardness data affect some metals criteria

Q_s = Receiving Water Flow Rate

Low flow estimate of stream flow specified by NR 106, often the 7Q10

Can be updated by USGS

USGS can also provide monthly low flows useful for parameters that vary seasonally

Q_e = Effluent Flow Rate

Municipal Facilities: Annual Average Design Flow

Industrial Facilities: Measured maximum annual average flow (typically based on most recent 5 years of data)

Representative flow data

Request rerated design flow if needed

C_s = Receiving water concentration

Geometric mean of receiving water pollutant concentration

Usually DNR collected data

Data can be collected by the facility, affects the WQBEL most when Q_s is high

f = fraction of effluent sourced from receiving water intake

Zero for most facilities

Updated based on permit application info

Reasonable Potential Determination

If ≥ 11 sample results are available, a WQBEL is needed if :

$$P_{99} > WQBEL$$

A P_{99} is calculated from the **mean, standard deviation, and number of detect and non-detect results**

If < 11 sample results are available a WQBEL is needed if:

$$Average > \frac{1}{5} WQBEL$$

The second procedure often triggers RP

Collecting additional data to calculate a P_{99} often removes RP

A WQBEL is also needed if a sample result exceeds the daily max limit (or the 4-day average exceeds a weekly average limit)

Representative Data

Effluent data that reflects current treatment capability,
current conditions at the facility,
and variability in effluent characteristics

Representative data is not necessarily:

- Data excluding all outliers
- Data collected during typical conditions
 - Atypical conditions can be representative if they may reoccur
- The same data considered when determining permit compliance
 - Compliance and enforcement decisions are made separately from representative data decisions.

Representative Data

Decisions about when to exclude data are made on a case-by-case basis
Generally the last 3-5 years of monitoring data is used

To select representative data we consider:

- Are there any known sample contamination or QA/QC issues with this data?
- How likely is it that the conditions under which this data was collected will reoccur?
- Have changes in operations, upgrades, or SRM/PMP implementation affected effluent data? Are these changes expected to be permanent? How much data has been collected since the change?

Communicate with DNR staff about potentially unrepresentative data and the factors involved

Questions?

Thank you.

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