National Pollutant Discharge Elimination System (NPDES):

Program Overview, Inspection Expectations, & What's New

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Goals and Objectives

- NPDES Permit Overview
- Information on the inspection process
- Common violations
- How to avoid those violations
- What's new?

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NPDES Permit Overview

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Why are Permits needed?

Rouge River -1969

Rouge River - 1971

Rouge River - 1987

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Who Needs an NPDES Permit?

- Any entity that discharges wastewater to surface waters of the state.
- Any entity that discharges storm water when associated with certain industrial, municipal, and construction activities.
- Concentrated animal feeding operations (CAFOs)

Three Types of NPDES Permits

1. *Individual Permits*

- Facility Specific
- Tailored to facility-specific discharges
- Specific to the receiving water they discharge to

Three Types of NPDES Permits

2. *Permit-By-Rule*

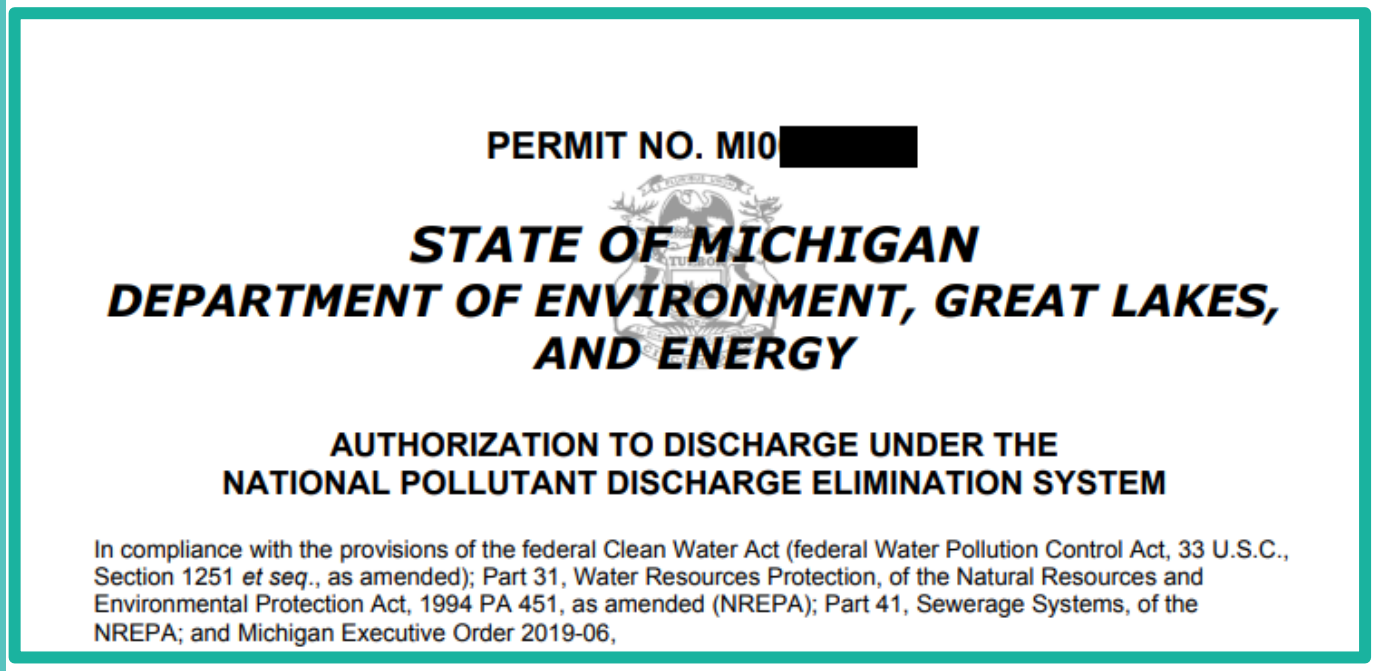
- Requirements stated in a formally promulgated administrative rule
- Facility must abide by the provisions written in the rule
- Storm water from construction sites of ≥ 1 acre are covered by a Permit-By-Rule

Three Types of NPDES Permits

3. *General Permits*

- Designed to authorize similar type discharges
- Must be complemented by a Certificate of Coverage
- Examples:
  - Storm Water
  - Wastewater Lagoons
  - Noncontact Cooling Water
  - Petroleum Contaminated Groundwater
  - Public Swimming Pools
  - Mining Wastewater

What do you know about your NPDES Permit?



PERMIT NO. MI0[redacted]

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the federal Clean Water Act (federal Water Pollution Control Act, 33 U.S.C., Section 1251 *et seq*., as amended); Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); Part 41, Sewerage Systems, of the NREPA; and Michigan Executive Order 2019-06,

PART I

PART II

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Part I: Key Elements of a NPDES Permit

- The authorization statement:

"During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is ***authorized to discharge a maximum of nine hundred and seventy thousand (970,000) gallons per day*** *of* ***process wastewater, noncontact cooling water, and an unspecified amount of well water and storm water*** *from* ***Monitoring Point 001A through Outfall 001****."*

Part I: Key Elements of a NPDES Permit

- Effluent limitations and monitoring requirements – parameters, sample type and location, and quantification levels.

PART I

Section A. Limitations and Monitoring Requirements

1. Final Effluent Limitations, Monitoring Point 001A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge a maximum of 1,395 MGD (currently discharging up to 20 MGD) of treated low volume wastewater and an unspecified amount of storm water from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the St. Clair River at Latitude [redacted], Longitude -[redacted]. Such discharge shall be limited and monitored by the permittee as specified below.

	Maximum Limits for Quantity or Loading			Maximum Limits for Quality or Concentration			Monitoring	Sample
Parameter	Monthly	Daily	Units	Monthly	Daily	Units	Frequency	Type
Flow	(report)	(report)	MGD	---	---	---	Daily	Report Total Daily Flow
Outfall Observation	(report)	---	---	---	---	---	5x Weekly	Visual
Total Suspended Solids	---	---	---	30	100	mg/l	Weekly	Grab
Oil & Grease	---	---	---	15	20	mg/l	2x Monthly	Grab

6. Pollutant Minimization Program for Total Mercury

The goal of the Pollutant Minimization Program is to maintain the effluent concentration of total mercury at or below 1.3 ng/l. The permittee shall continue to implement the Pollutant Minimization Program approved on June 29, 2006, and modifications thereto, to proceed toward the goal. The Pollutant Minimization Program includes the following:

- **Specific Programs** – industrial

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8. Discharge Monitoring Report – Quality Assurance Study Program

The permittee shall participate in the Discharge Monitoring Report – Quality Assurance (DMR-QA) Study Program. The purpose of the DMR-QA Study Program is to annually evaluate the proficiency of all in-house and/or contract laboratory(ies) that perform, on behalf of the facility authorized to discharge under this permit, the analytical testing required under this permit. In accordance with Section 308 of the Clean Water Act (33 U.S.C. § 1318); and R 323.2138 and R 323.2154 of Part 21, Wastewater Discharge Permits, promulgated under Part 31 of the NREPA, participation in the DMR-QA Study Program is required for all major facilities, and for minor facilities selected for participation by the Department.

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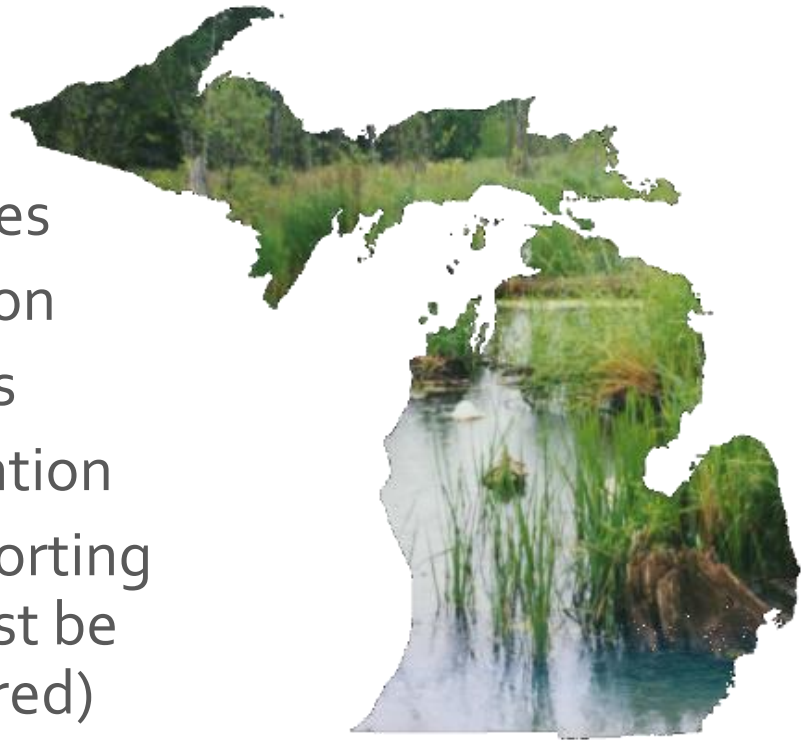
Part II: Key Elements of a NPDES Permit

- **Definitions** – of terms used in the permit
- **Monitoring Procedures**
  - Test Procedures
  - Instrumentation
  - Record Results
  - Records Retention
  - Electronic reporting (how data must be saved and stored)



Part II: Key Elements of a NPDES Permit

- **Reporting Requirements**
  - Additional Monitoring Requirements
  - Self-monitoring Requirements (DMRs)
- **Change in Operations/Discharge**
- **Noncompliance Notification**
  - 24-Hour Reporting (Verbal)
  - Other Reporting

Part II: Key Elements of a NPDES Permit

Noncompliance Notification

"a. 24-hour reporting - Any noncompliance which may endanger health or the environment (including maximum and/or minimum daily concentration discharge limitation exceedances) shall be reported, ***verbally****, within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission shall also be provided within five (5) days."*

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Part II: Key Elements of a NPDES Permit

- **Noncompliance Notification**

*" b. other reporting - The permittee shall report, in **writing**, **all other instances of noncompliance** not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring, within five (5) days from the time the permittee becomes aware of the noncompliance."*

Part II: Key Elements of a NPDES Permit

- **Noncompliance Notification**

"***Written reporting*** *shall include:*

1) a description of the discharge and cause of noncompliance; and

2) the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge."

Part II: Key Elements of a NPDES Permit

- **Management Responsibilities** – operator certification, facility operation, treatment system closure

- **Activities Not Authorized** – discharges to groundwater, property rights

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Why Do you Need to Know This?

These are some of the elements that we will evaluate when we conduct an inspection.

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Information on the inspection process

Why Do We Inspect?

- NPDES program is a self-monitoring program
- EPA Commitments
- EGLE Mission
- Complaints

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Inspection Planning

- These commitments ensure that our inspection schedules are unbiased
- All NPDES permitted facilities can expect regular inspection (announced and unannounced)
- More complex facilities and/or those not in compliance with their permit may be inspected more often
- Not all inspections will include the same level of review

Inspection Planning/ Scheduling

We will consider:

- When the facility was last inspected, and the type of inspection conducted
- The type of facility, complexity of the treatment system and nature of the wastewater discharge
- When the facility's permit will be reissued
- The compliance status
- Random selection

Types of Inspection

- **Compliance Sampling Inspection**

An unannounced high-level inspection with wastewater sampling

Types of Inspections

- **Compliance Evaluation Inspection**

Similar to the CSI, but it does not include sampling of the facility's wastewater

- **Reconnaissance Inspection (Recon)**

A low-level inspection may include a review of any number of topics

How Do We Prepare For An Inspection?

- We review the file to evaluate the overall compliance status
  - Compliance with effluent limitations
  - Has the facility reported and submitted information as required by the permit (Was it complete? Timely?)
  - Is the facility using the appropriate test methods? Quantification levels?
  - Is the test method sensitive enough to determine compliance?

How Do We Prepare For An Inspection?

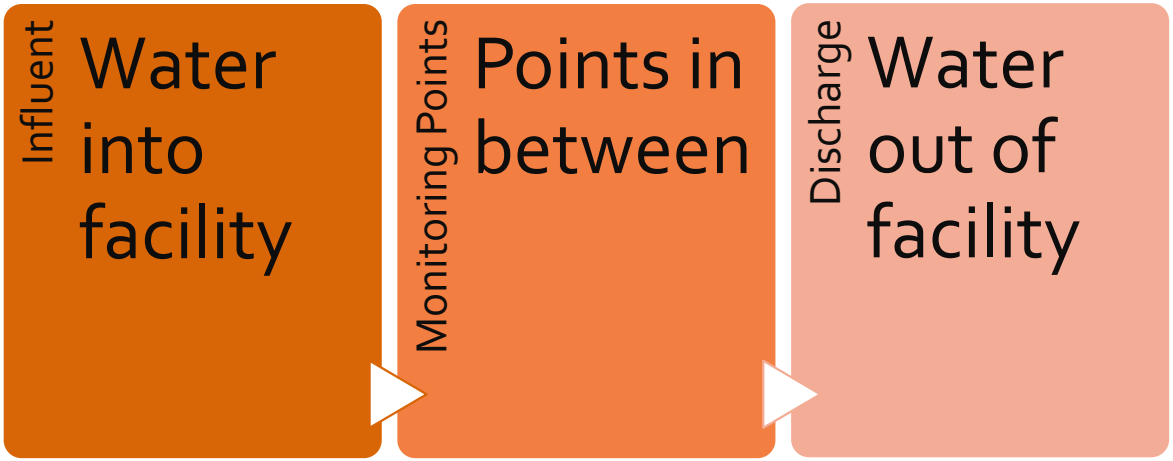
- Who is the certified operator?
  - Do they have the proper certification?
  - Has there been a change?
- Has the facility reported any spills?
  - Has the public complained
- Did the facility notify us of noncompliance as required?
  - 24-hour or "other" reporting

How Do We Prepare For An Inspection?

- Trends in operational problems?
- Is the facility proactive or reactive with issues regarding operation and maintenance?

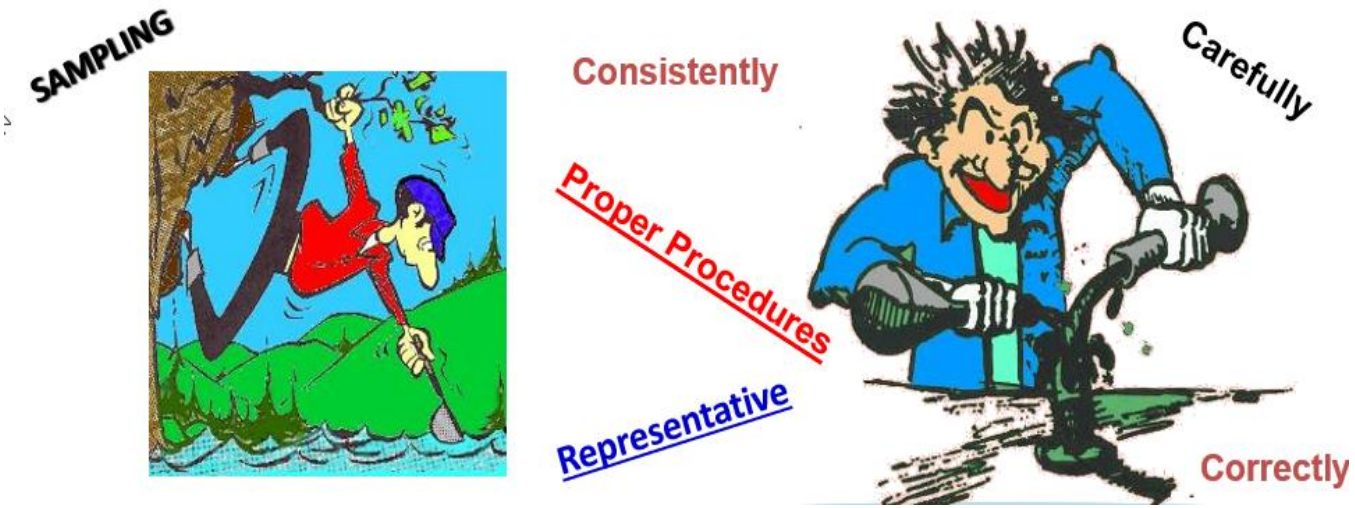
What Happens Next?

- Opening conference
  - Discuss purpose
  - Areas we would like to cover
- Review the facility records
- Follow the water flow:



What Happens Next?

- We may also review other areas such as sampling techniques, lab, and operations and maintenance



What Happens Next?

- We tour the facility and the waste treatment facilities.
- Evaluate:
  - Ground stains
  - Pipes
  - Treatment units
  - Housekeeping

What Happens Next?

- The visual quality of the wastewater being discharged

What Happens Next?

- Hold closing conference.
  - Areas of noncompliance identified
  - Areas that need improvement
  - Additional information requested
  - Information we will be providing to the facility
  - Likely next steps (a letter, violation letter, another inspection)

Common violations

Common Violations

- Improper test methods and quantification levels
  - Not documenting constant weight with TSS analysis (SM 2540 D-2020)
- No Standard Operating Procedures, QA/QC program, or they are out-of-date
- Transcription problems with reporting data

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Common Violations

- Improper calculations (e.g., geometric mean, 7-day averages)
- Facility did not have a properly certified operator

If you aren't sure if your operator is properly certified, please call your district office

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Common Violations

- Storm water issues
  - Exposure
  - Track-out
  - Secondary containment
- Overall housekeeping
- Unpermitted discharges

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Common Violations

- Failure to report noncompliance as required

6. Noncompliance Notification

Compliance with all applicable requirements set forth in the Clean Water Act, Parts 31 and 41 of the NREPA, and related regulations and rules is required. All instances of noncompliance shall be reported as follows:

a. 24-Hour Reporting
Any noncompliance which may endanger health or the environment (including maximum and/or minimum daily concentration discharge limitation exceedances) shall be reported, verbally, **within 24 hours** from the time the permittee becomes aware of the noncompliance by calling the Department at the number indicated on the second page of this permit (or, if this is a general permit, on the COC). A written submission shall also be provided via MiEnviro Portal (https://mienviro.michigan.gov/ncore/) **within five (5) days**.

b. Other Reporting
The permittee shall report, in writing via MiEnviro Portal (https://mienviro.michigan.gov/ncore/), all other instances of noncompliance not described in a. above **at the time monitoring reports are submitted**; or, in the case of retained self-monitoring, **within five (5) days** from the time the permittee becomes aware of the noncompliance.

Reporting shall include: 1) a description of the discharge and cause of noncompliance; and 2) the period of noncompliance, including exact dates and times, or, if not yet corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

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DMR Comment Exa

DMR: 02/01/2023-02/28/2023, 001A, Final Effluent [illegible]cal Coliform, Max 7-Day Geometric Mean - Permit Limit: 400 #/100mL; Value: 504 Comment: 'blower out'

DMR: 05/01/2025-05/31/2025, 001A , Prior to Disinfection (B), Ammonia Nitrogen (as N), Maximum Daily - Permit Limit: 2.0 mg/L; Value: 3.38, Comment: 'Influent pump# 2 shorted causing the main panel to trip therefore stopping the blower which supply the aerator for the mixed liquor tank. The issue was fixed is currently operational.'

DMR: 11/01/2023-11/30/2023, 001A , Prior to Disinfection (B), Total Suspended Solids, Maximum 7-Day Average - Permit Limit: 30 mg/L; Value: 32.2000 Comment: 'clarifier went down, caused several problems'

DMR Comment Example

DMR: 06/01/2024-06/30/2024, 001A , Prior to Disinfection (B), Total Phosphorus (as P), Maximum Monthly Average - Permit Limit: 1.0 mg/L; Value: 1.25, Comment: 'Aged leaking decant valves let mixed liquor into the effluent path, the same issue also caused huge flow swings which blew solids (and phosphorus) out of the clarifiers. Both vlaves are now replaced.'

General Report Comments

Chlorides and Sulfate samples were not sent in to be run. All retained November samples in house have been acid preserved. A CAP has been developed and is being implemented. Details reported to [redacted] via email/voice mail.

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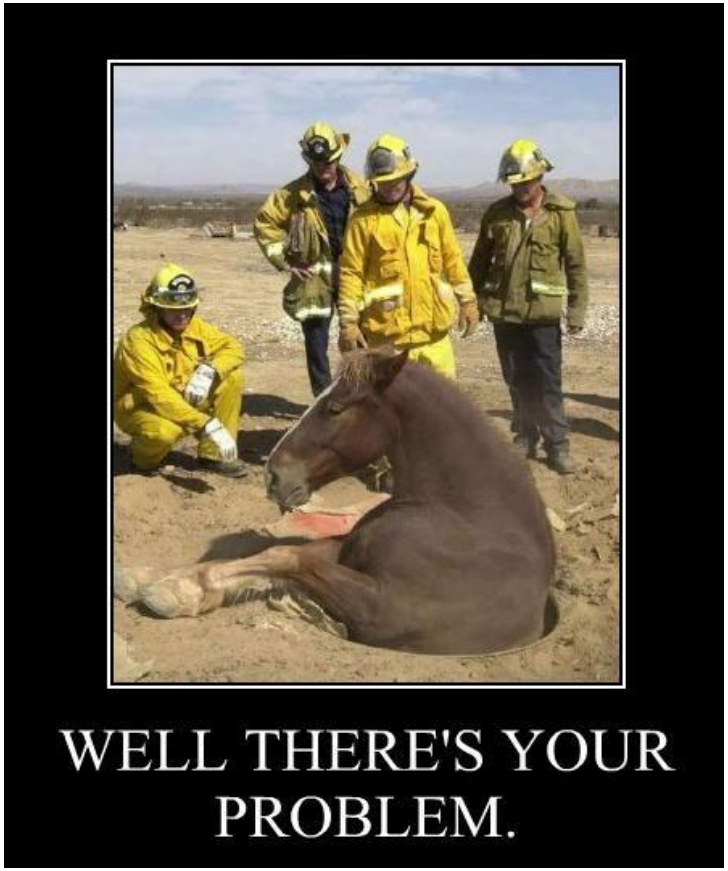
How to avoid those violations

How Can You Stay in Compliance With Your Permit?

- **Read & understand your permit**
- Track important dates
- Check all your forms to ensure that you are collecting all the required information
- Double check your monitoring data for accuracy before you submit it to us

How Can You Stay in Compliance With Your Permit?

- Learn to look in the right places
- Don't overlook the obvious



How Can You Stay in Compliance With Your Permit?

Educate your employees

If you don't know, ask!

What's new?

DMR QA Study

Discharge Monitoring Report Quality Assurance (DMR QA) Study Participants

New Email Inbox: EGLE-WRD-DMRQA@michigan.gov

Pollutant Minimization Programs (PMPs)

- Annual Reporting Changes
  - New Form in MiEnviro being developed
  - GovDelivery communication coming
  - Soft rollout planned **March 2027**

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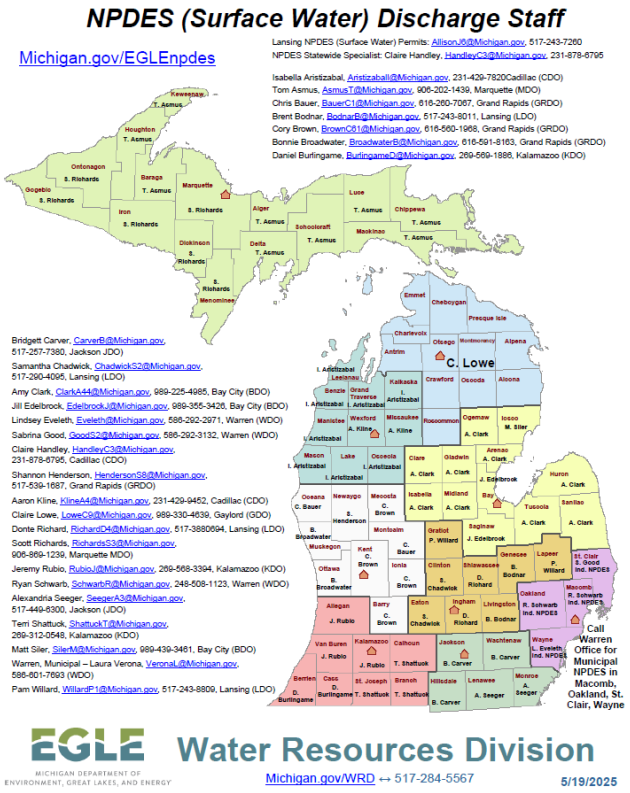
Lab Focus Areas

- Not distilling ammonia sample prior to analysis (also required with Hach TNT methods)- comparability study option

Parameter	Methodology [58]	EPA [52]	Standard methods [84]	ASTM	USGS/AOAC/Other
4. Ammonia (as N), mg/L	Manual distillation [6] or gas diffusion (pH > 11), followed by any of the following:	350.1 Rev. 2.0 (1993)	4500-NH_3 B-2021		973.49.[3]

- Not conducting constant weight with TSS analysis
  - SM 2540- D 2020
  - "Repeat successive cycles of drying, cooling, desiccating, and weighing until the weight change is less than 0.5 mg."



Find your NPDES Compliance Manager

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