

2010 Michigan Environmental Compliance Conference

NPDES Permit Program and Compliance Inspections

Presented by
Chris Veldkamp
Senior EQA-Water Resource Division
Grand Rapids District Office



Goals and Objectives

- A discussion about the NPDES permit
- Information about the inspection process
- Common violations found during an inspection
- How to avoid those violations
- What's New?

Why Are Permits Needed?



Rouge River -1969



Rouge River - 1971



Rouge River - 1987

Red Cedar River



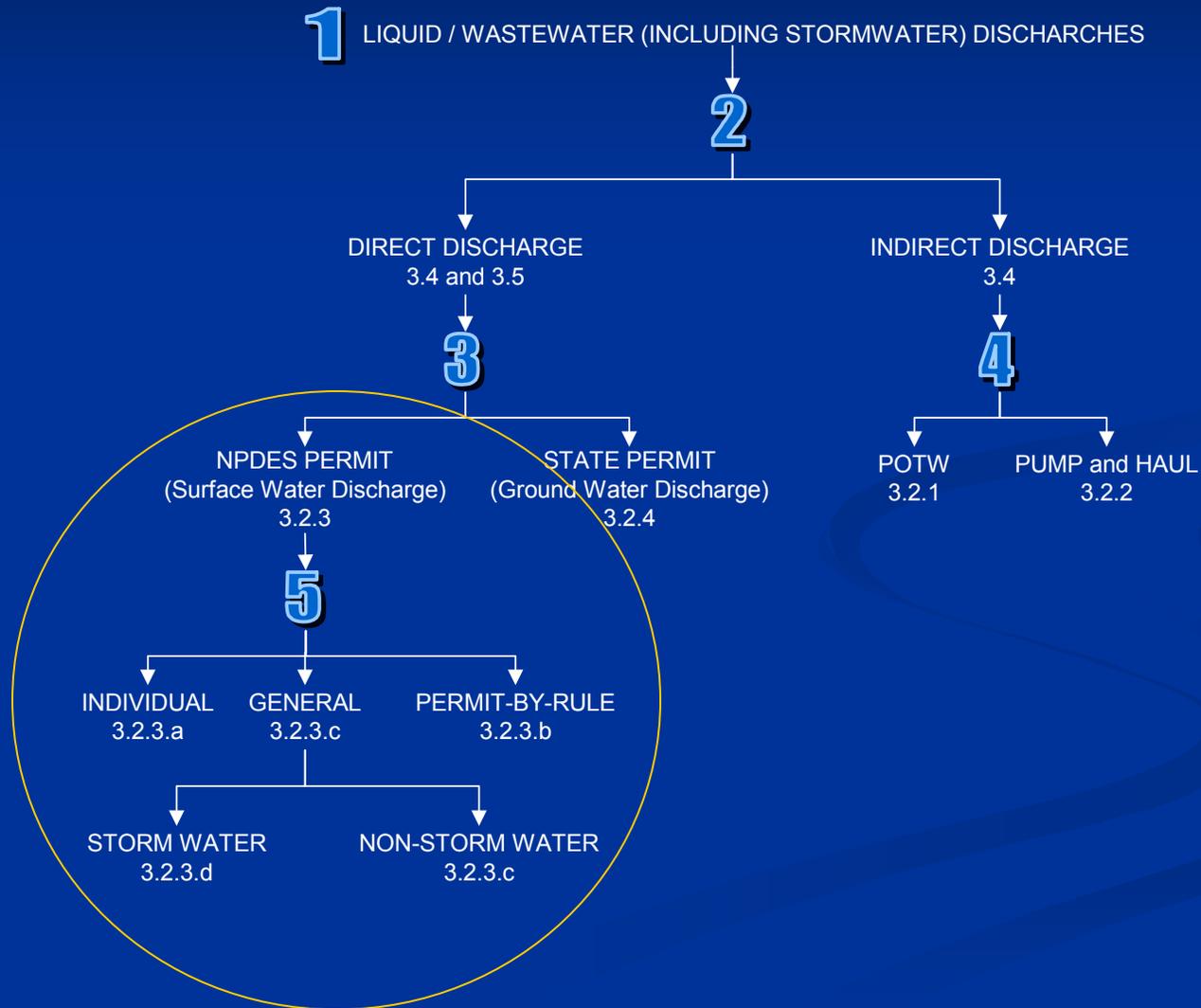
1966



2000

Regulatory Programs

Wastewater Destinations (3.1)



Who Needs A 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

Three Types of NPDES Permits

1. *Individual Permits* – these permits are facility specific and are written to authorize discharges that are tailored to the facility's discharge and the receiving water they discharge to.



See Section
3.2.3.a

Three Types of NPDES Permits



At this time, storm water from construction sites of one acre or more are covered by a Permit-By-Rule.

2. *Permit-By-Rule* - The requirements are stated in a formally promulgated administrative rule. A facility requiring this coverage must abide by the provisions written in the rule.

See Section
3.2.3.b

Three Types of NPDES Permits

3. *General Permits* – are designed to authorize similar type discharges. A general permit must be complemented by a Certificate of Coverage to constitute a valid authorization to discharge.

EXAMPLES

Storm Water

Wastewater Lagoons

Noncontact Cooling Water

Sand and Gravel Operations

Petroleum Contaminated Groundwater

See Section
3.2.3.c

**WHAT DO YOU
KNOW ABOUT
YOUR NPDES
PERMIT?**

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.”

Key Elements of a NPDES Permit

- Effluent limitations and monitoring requirements – parameters, sample type and location, quantification levels, and the **narrative standard**

“The receiving water shall contain no unnatural turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits as a result of this discharge in quantities which are or may become injurious to any designated use.”

Key Elements of a NPDES Permit

- **Additional Studies** - mercury study, waste characterization study, whole effluent toxicity, thermal plume study
- **Specific Programs** – industrial pretreatment program, pollutant minimization program and storm water



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)

Key Elements of a NPDES Permit

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

Key Elements of a NPDES Permit

➤ Noncompliance Notification

“a. 24-hour reporting - Any noncompliance which may endanger health or the environment (including maximum 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.”

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.

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.”*

Key Elements of a NPDES Permit

- **Management Responsibilities** – operator certification, facility operation, treatment system closure
- **Activities Not Authorized** - discharges to groundwater, property rights

Why Do You Need to Know This?



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

Our Vision



Michigan Department of Environmental Quality

We, in the Michigan Department of Environmental Quality (DEQ), protect and enhance Michigan's environment and public health. As stewards of Michigan's environmental heritage, we work on behalf of the people of the Great Lakes state for an improved quality of life and a sustainable future. In service to the public, we administer programs and enforce laws that protect public health and promote the appropriate use of, limit the adverse effects on, and restore the quality of the environment. We encourage voluntary actions to enhance our natural resources and the environment. We preserve biologically diverse, rare, sensitive, or endangered plants, animals, and ecosystems through identification, education, management, and public/private partnerships and initiatives. We advance environmental protection through innovation and improvements to regulations and programs.



Our Commitment

We act with integrity and strive for excellence in all we do. We act professionally, within the authority granted to us by law. Our decisions are timely, principled, and based on facts and our best professional judgment. We fairly and consistently apply regulations. We are open to criticism and accept responsibility for our actions. We make the best possible use of the financial and other resources entrusted to us.

Our success depends on working in partnership with others. We communicate with all interests, welcome their input, and respect all viewpoints. Through teamwork, we develop solutions that move us toward our long-term goals. We foster environmental awareness and stewardship.

We are the DEQ's most important resource. We create an enjoyable working environment that fosters teamwork and promotes leadership. We invest in ourselves and our coworkers to ensure success. We encourage creativity, innovation, and personal growth. We approach our purpose with enthusiasm, dedication, and courage.

Why do We Inspect?

- The NPDES program is a self-monitoring program
- EPA Commitments
- DNRE Vision & Values
- Complaints

Do You Feel Like A Target?

- These commitments ensure that our inspection schedules are unbiased
- All NPDES permitted facilities can expect regular inspections (announced and unannounced)
- More complex facilities and/or those not in compliance with their discharge permit may be inspected more frequently
- Not all inspections are equal. Some may include sampling and be very detailed, others will be short and sweet

How Do We Decide Who Will Get Inspected?

- We look at when the facility was last inspected and the type of inspection that was 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 of the facility
- Random selection

Types of Inspections

- ***Compliance Sampling Inspection*** – This unannounced high-level inspection will include a collection of the facility's wastewater for analysis by the DEQ lab



Types of Inspections

- ***Compliance Evaluation Inspection***– This high-level inspection is similar to the CSI, but it does not include sampling of the facility's wastewater
- ***Reconnaissance Inspection (recon)***– This low-level inspection may include a review of any number of topics or it may just be touching base with the operator to see how things are going



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?

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 problems?



What Happens Next?

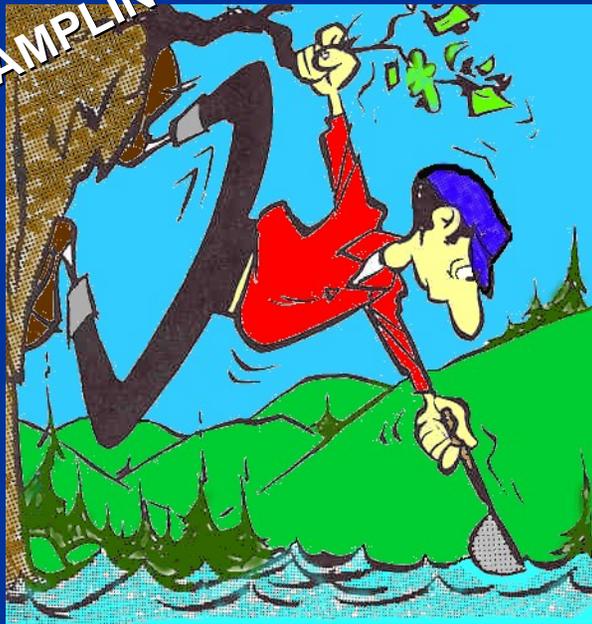
- We have an opening conference with the operator and/or manager of the facility to discuss the purpose of the inspection and what areas we would like to cover
- We review the facility records
- We follow the water flow:

Water into the facility → where it leaves the
facility → and every point in between

What Happens Next?

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

SAMPLING



Representative

Consistently

Proper Procedures



Carefully

Correctly

What Happens Next?



- We tour the facility and the waste treatment facilities. **We'll evaluate:**
 - Pavement staining, pooled liquids, pipes located in interesting places



What Happens Next?

Plugged
weirs



- Operation and Maintenance problems

What Happens Next?

Secondary Clarifier
Problems



- Operation and Maintenance problems

What Happens Next?

- Housekeeping issues



What Happens Next?



- The visual quality of the wastewater being discharged

What Happens Next?

- We have a closing conference. This conference will summarize:
 - Those areas of noncompliance that were identified
 - Those areas that need improvement
 - What additional information we may need
 - What information we will be providing to the facility
 - What our next steps are likely to be (a letter, violation letter, another inspection)

Common Violations



- Violations of the narrative standard
- The facility failed to report their noncompliance as required

Common Violations

- The facility is not monitoring at the specified frequency
- Improper test methods and quantification levels
- Transcription problems with reported data

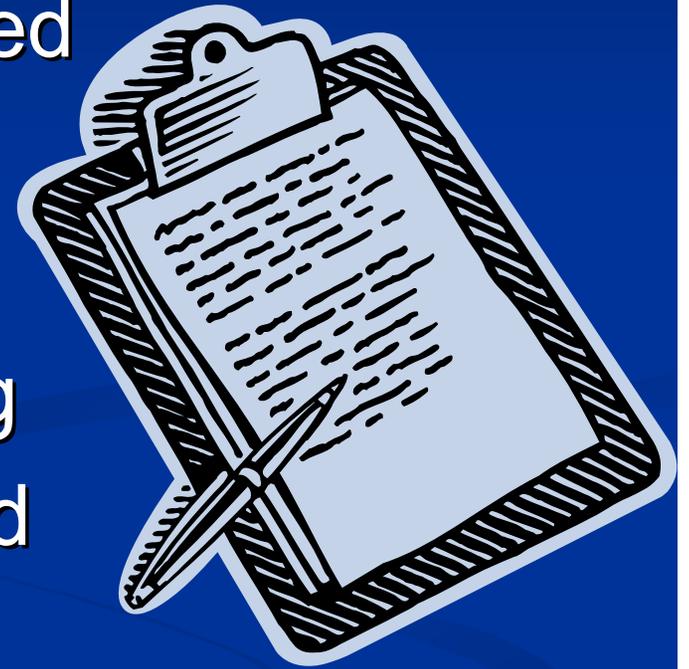
Common Violations

- Improper calculations (e.g. averages, geometric mean)
- The facility did not have a properly certified operator

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

Common Violations

- The facility failed to send us something that was required or it was not sent timely
- The facility is not collecting or retaining all the required monitoring data



You may have done the monitoring, but you must write it down to prove it!

Common Violations

- Storm water issues (such as exposure, track-out, or secondary containment issues)
- Overall housekeeping of the facility



Common Violations



➤ Unpermitted discharges

So How Can You Stay in Compliance With Your Permit?

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



So How Can You Stay in Compliance With Your Permit?

- Read and understand your permit
- Write down 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



So How Can You Stay in Compliance With Your Permit?

- Educate your employees so they don't unknowingly create a problem
- If you aren't sure we need to be called for a problem, call anyway
- Get to know your compliance person so you can work together when problems arise
- **READ YOUR PERMIT** 😊

What's New?

- eDMR Frequently Asked Questions
- Multiple Discharger Variance
- Averaging of TRC data
- NPDES Pesticide Permit
- Tracer Dye Authorizations

eDMR - Frequently Asked Questions



- Problem solving
- Suggestions for better reporting
- What are the Dos and Don'ts?
- On the DNRE website & eDMR Home Page

Multiple Discharger Variance

- Michigan's mercury permitting strategy is no longer a part of the Multiple Discharger Variance as approved by EPA for FY 2010-2014
- Facility-specific Level Currently Achievable
- Still includes the use of Pollutant Minimization Plans to maintain, or be below, the WQS of 1.3 ng/l
- Compliance with the LCA will be determined as a 12-month rolling average

Averaging of Total Residual Chlorine (TRC) Data

- A daily maximum limitation
- NPDES Permit allows for it
- All monitoring must consist of representative samples
- It is representative of the discharge because it is a Standard Operating Procedure
- Not acceptable to take extra samples and average the results just when an upset or violation occurs

NPDES Pesticide Permit



- Must obtain coverage by 4/9/11
- Anticipate the use of a General Permit
- Will ask stakeholders to participate in the development process

Tracer Dye Authorizations

- New process – Can be completed online
- Notice of Intent (NOI)
- Approval applies only during the dates of use identified in the NOI
- Must use acceptable dye from Tracer Dye List



Water

Rule 97 Certifications

Rule 97 - General Information
 All projects involving the application of materials to waters of the state for resource management purposes require a Rule 97 Certification of Approval from the Michigan Department of Natural Resources and Environment (DNRE).

Bacterial Augmentation
 Click here for: The Michigan Department of Environmental Quality (MDEQ) has regulatory jurisdiction over application of bacterial augmentation products to surface waters of the state and facilities covered by National Pollutant Discharge Elimination System (NPDES) permits.

Mosquito Control
 Click here for: The Michigan Department of Environmental Quality (MDEQ) has regulatory jurisdiction over control strategies involving the application of pesticides to surface waters of the state, facilities covered by National Pollutant Discharge Elimination System (NPDES) permits, and the filling of floodplains and wetlands, including wetland restoration projects.

Tracer Dye Studies
 Click here for: The Michigan Department of Environmental Quality (MDEQ) has regulatory jurisdiction over the application of tracer dyes to surface waters of the state and facilities covered by National Pollutant Discharge Elimination System (NPDES) permits.

Water Treatment
 Click here for: Any water treatment facility that discharges water of the state from a National Pollutant Discharge Elimination System (NPDES) permitted discharge point requires prior review and approval from the Michigan Water Bureau.

Rule 97 Certifications

Michigan Department of Natural Resources and Environment

Michigan.gov Home | DNRE | DEQ | Online Services | Permits | Programs | Site Map | Contacts

Water

Tracer Dye Studies

Tracer Dye Studies - General Information
 The MDEQ has regulatory jurisdiction over studies involving the application of tracer dyes to surface waters of the state and facilities covered by National Pollutant Discharge Elimination System (NPDES) permits.

Information

- MDEQ Process for Obtaining Authorization to Use Tracer Dyes
- Acceptable Michigan Tracer Dye List PDF
- General Rule 97 Certification for the Use of Tracer Dyes PDF
- Notification of Intent PDF
- Notification of Intent PDF
- 2009 - 2010 Authorized Tracer Dye Study Applicants PDF
- Individual Rule 97 Certification of Approval PDF

Contact Renee Comage with questions
 517-241-8714 or comager@michigan.gov

Did You Know?

- Mercury found in sulfuric acid – lower quality acid has more mercury



Did You Know?

- Mining Operations may be subject to Water Use Reporting



- Contact Andrew LeBaron with questions
517-241-1435 or LEBARONA@michigan.gov

We Share The Same Goals

- Maintain compliance with the permit
- Protect public health and the environment