

WATER PERMITTING 101

Kristen Belcredi, P.E.



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Indiana Chamber 2019
Environmental Permitting and Reporting Conference

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Outline

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- ❑ Types of Discharges
- ❑ Types of Permits
- ❑ Water Permitting Regulations
- ❑ Contents and Structure of Permits
- ❑ Discharging under a Permit(s)



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What types of water discharges require a permit?

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Direct Discharge



Indirect Discharge



Direct Discharge



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What types of water discharges require a permit?

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Activities in:
Wetlands
Floodway
Dredging



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What types of water discharges require a permit?

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Direct Discharge



2 Types of Direct Discharge Permits:

General Permits

Or

Individual Permits



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General Permit Categories In Indiana

- Discharges of the following types or from the following categories of facilities may be made under NPDES general permits.*
 - Noncontact Cooling Water (327 IAC 15-8)
 - Mining of Coal, Coal Processing, and Reclamation Activities (327 IAC 15-7)
 - Petroleum Products Terminals (327 IAC 15-9)
 - Ground Water Petroleum Remediation Systems (327 IAC 15-10)
 - Hydrostatic Testing of Commercial Pipelines (327 IAC 15-11)
 - Sand, gravel, dimension stone and crushed stone operations (327 IAC 15-12)
 - Storm Water Run-Off Associated with Municipal Separate Storm Sewer System Conveyances (327 IAC 15-13)
 - Concentrated Animal Feeding Operations (327 IAC 15-16)

*subject to certain exclusions



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AND.....Storm Water General Permits

- General Storm Water Permits
 - Storm Water Run-Off Associated with Construction Activity
 - Rule 5 (327 IAC 15-5) which applies to sites with 1 acre or more of disturbed area.
 - Storm Water Discharges Exposed to Industrial Activity
 - Rule 6 (327 IAC 15-6) which applies to storm water discharges exposed to industrial activity that are composed entirely of storm water and allowable nonstorm water (327 IAC 15-6-2(a)(4))

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Individual Direct Discharge Permits

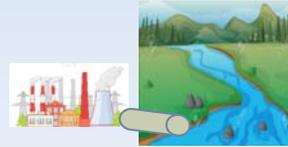
- Issued to a single facility that discharges directly to a water body
- Contains standard language on what is permitted and applicable requirements
- Monitoring and actions the permittee must take to stay in compliance
- “Customized” to each facility’s situation

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Direct Discharge Permit Triggers

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- The purpose of the NPDES permit is to control the **point source discharge** of **pollutants** into the **waters of the State** such that the quality of the water of the State is maintained.
- Do I have a point source discharge?
- Does the discharge contain pollutants?
- Is the discharge into a water of the State?



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Do I have a point source discharge?

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- Any discernible, confined, discrete conveyance.
- e.g. pipes, ditches, channels, tunnels, conduits, wells, discrete fissures, containers, from which pollutants are or may be discharged.
- Less obvious real world examples are floor drains; outdoor power washing; condensates, blowdowns, and sumps with oil and chemicals; that are routed to a ditch.

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Does the discharge contain pollutants?

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- >500 pollutants in the NPDES application
 - Constituents of concern, such are metals, organics, BOD, COD, pH, ammonia, etc.
 - Also, temperature, solids, floatables, turbidity, chlorine, nutrients
- Consider ALL sources. Look at SDSs, chemical reactions, by-products, incoming water, info from other similar facilities.



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Is the discharge into a Water of the State?

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- Accumulations of water, surface and underground, natural and artificial, public and private.
- Does not include private pond, any off-stream pond, reservoir, or treatment/cooling ponds prior to discharge.
- So..... Assume any contaminated water in a pipe that leaves your property and is not in a sanitary sewer, needs an NPDES permit or a documented exemption.



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Yep, I need an Individual Permit

Clean Water Act – An Overview

Key program elements of CWA:

- ▣ Water Quality Standards – §303
- ▣ Water Quality Certification – §401
- ▣ NPDES Permit Program for Point Sources – §402
- ▣ Pretreatment Program for Discharges to POTWs – §307
- ▣ Dredge & Fill Permits - §404



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Effluent Limitations

There are two fundamental types of effluent limitations for NPDES permits.

- Water Quality-Based Effluent Limitations
 - Aquatic toxicity
 - TMDL – Total maximum daily load
 - Waste Load Allocation (WLA)
- Technology-Based Effluent Limitations
 - Categorical Standards

An NPDES permit will incorporate the more stringent of water quality-based and technology-based effluent limitations.



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So I need an Individual Permit

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- Determine the pollutants and concentrations
 - Sample the discharge if you can
 - If not available, make estimates through:
 - pilot tests, info from other facilities, mass balance, SDSs
 - Incoming water
- Determine the estimated flow rates and volumes
- If you need to treat the wastewater to meet permit limits,
 - Apply for and obtain an Industrial WWT Construction before you apply for the NPDES discharge permit



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So I need an NPDES permit

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- Review and complete the NPDES permit application
 - General Information
 - 2C or 2D – Existing or New Process Discharge
 - 2E – Non-Process Wastewater Discharge
 - Water Treatment Additives (including cooling/boilers)
 - Notification of Interested Parties



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How will IDEM determine my permit limits?

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- Review sampling data in your application. May ask for more samples or additional pollutants you did not analyze.
- Do technology-based effluent guidelines apply?
 - Industry and Process Specific (40 CFR 400's)
 - “metal products and machinery” is the most broad rule
- Which water quality-based limits apply?
 - Some apply no matter what – no floating solids, etc.
 - Others apply based on the receiving stream quality.
 - Limits are included if there is a “reasonable potential to exceed”



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How will IDEM determine my permit limits?

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- The permit limits are based on either the technology-based limits or water quality-based effluent limits, whichever are more stringent.
- The permit may contain a time schedule to achieve compliance. But,
 - If it is a new facility or an existing facility with a new discharge, they are NOT allowed a schedule of compliance.



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Draft Permit vs. Final Permit

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- Take all opportunities to discuss with permit writer before draft is issued
- Review and comment on all drafts before the permit is issued
- If there are issues after final permit is issued, you can appeal the permit



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Major Components of Individual Permit

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- Part I – Effluent Limits and Monitoring Requirements
 - Daily, Weekly, Monthly, Semi-Annual
 - Flow and Quality
 - Monthly Reports
 - Noncompliance notification and resampling
- Part II – Standard Conditions
 - Boiler Plate language



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After I get the Permit

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- NetDMR reporting system. Learn the system before you get your permit. Things will move fast.

- Permit Exceedances and other Noncompliance
 - ▣ Follow requirements to resample and report
 - ▣ NOV's and Agreed Orders and Enforcement Process

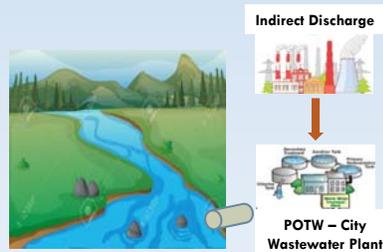


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Indirect Discharge Permit

- Applies to industrial & commercial discharges of other than sanitary wastewater to a POTW

- a.k.a. – Pretreatment Permit



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Pretreatment Program

- Applies to industrial & commercial discharges of other than sanitary wastewater to a POTW
- The State pretreatment program has the following three (3) objectives:
 - (1) To prevent the introduction of pollutants into a POTW that will interfere with the operation of a POTW, including interference with the use or disposal of municipal sludge.
 - (2) To prevent the introduction of pollutants into a POTW that will pass through the treatment works without receiving effective treatment or otherwise be incompatible with such works.
 - (3) To improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges.



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Pretreatment Permit

- If your City has an authorized Pretreatment Program, the City will issue the Permit

Anderson	Connersville	Gary	Jeffersonville	Marion	Plymouth	Speedway
Auburn	Crawfordsville	Goshen	Kendallville	Michigan City	Princeton	Terre Haute
Batesville	East Chicago	Greensburg	Kokomo	Mishawaka	Richmond	Valparaiso
Bloomington	Elkhart	Hammond	Lafayette	Muncie	Seymour	Vincennes
Bremen	Evansville	Huntington	LaPorte	New Albany	Shelbyville	Wabash
Butler	Fort Wayne	Indianapolis	Logansport	New Castle	South Bend	Warsaw
Columbus	Frankfort	Jasper	Madison	North Vernon		

- IDEM issues pretreatment permits in all other cities



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Indirect Discharge Permit Triggers

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- Wastewater source is covered by a federal categorical standard
- 58 different categories (mostly manufacturing)

Various metals related Manf.	Plastics Manf.
Chemicals Manf.	Transportation Equipment Cleaning
Food related Manf.	Hospitals
Cement Manf.	Airports



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Indirect Discharge Permit Triggers

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- You are a “significant industrial user”
 - Discharge 25,000 gpd or more of process wastewater (process wastewater excludes sanitary, noncontact cooling and boiler blowdown wastewaters);
 - Contribute a process wastestream that makes up five percent or more of the average dry weather hydraulic or organic (BOD, TSS) capacity of a treatment plant; or
 - Have a reasonable potential, in the opinion of the control or approval authority, to adversely affect the POTW treatment plant (inhibition, pass-through of pollutants, sludge contamination, or endangerment of POTW workers).



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Yep, I need a Pretreatment Permit

Limits will be based on two effluent limitations

- Technology-Based Effluent Limitations
 - Categorical Standards
- City's local ordinance

- If there is a limit in both regulations, the more stringent will apply
 - E.g. 40 CFR 433 – Zn = 2.61 mg/l
 - local ordinance – Zn = 2.0 mg/l

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Pretreatment Permit Application

- Review and complete the NPDES permit application
 - General Information
 - Existing or New Process Discharge
 - Non-Process Wastewater Discharge
 - Water Treatment Additives (including cooling/boilers)
 - Notification of Interested Parties (only for IDEM issued permits)
 - Do you also need a construction permit from the City to tie in to the sanitary sewer?

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Major Components of Pretreatment Permit

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- Part I – Effluent Limits and Monitoring Requirements
 - Daily, Weekly, Monthly, Semi-Annual
 - Flow and Quality
 - Monthly Reports
 - Noncompliance notification and resampling

- Part II – Standard Conditions
 - Boiler Plate language



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How long will it take to get a permit?

- IDEM issued permits
 - Construction Permits – For treatment system. 90 days to review
 - Direct Discharge Permits – 180 days to review
 - + 30 day public comment period.
 - + Notification of potentially affected parties
 - Pretreatment Permits - 180 days to review
 - + 30 day public comment period.
 - + Notification of potentially affected parties



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How long will it take to get a permit?

- City issued permits
 - Construction Permits – For treatment systems. 90 days to review (Issued by IDEM)
 - Pretreatment Permits – 30 – 90 days (varies by City)
 - No 30 day public comment period
 - No Notification of potentially affected parties

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Don't forget about General Permits!

Storm Water Permit (Most Common)

- Publish notice in local newspaper
- Notice of Intent (180 days prior to discharge)
- Timing – Discharge can begin 180 days after submittal
- Application Information
 - Facility Information and Activities
 - Where are your outfalls?
 - Receiving Stream

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Storm Water Permit

- More detail on requirements is covered in separate session of this conference

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Conclusions

- Identify the Type of needed
Direct, Indirect (Pretreatment), Construction, General, Storm Water, Wetlands, Floodway
- Leave yourself time to get the permits
270 days – Construction and Discharge Permits
- Develop procedures for sampling and monitoring prior to getting the permit
- Get set up in NetDMR

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Conclusions

- Request a pre-application meeting with IDEM or City for Direct and Pretreatment Permits
- Negotiate schedule to comply with discharge limits
- Develop procedures for sampling and monitoring prior to getting the permit

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Questions?

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