



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Protecting Water Resources When Growing and Processing Marijuana

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Protecting Water Resources When Growing and Processing Marijuana

- Programs
 - Water withdrawal
 - Land Use
 - Floodplain
 - Wetlands
 - Wastewater
 - NPDES
 - Groundwater
 - Construction Storm Water
 - Industrial storm water



Groundwater or Surface Water Withdrawals

- >100,000 gallons of water per day (GPD)
- ≥ 70 gallons per minute (GPM)
 - Must use Water Withdrawal Assessment Tool (WWAT)
<http://www.egle.state.mi.us/wat>



Groundwater or Surface Water Withdrawals

- Withdrawals that can't pass the WWAT
 - Site-Specific Review
 - Alternative analysis under MCL 324.32706c

Groundwater or Surface Water Withdrawals

- Withdrawals $> 100,000$ GPD are required to report their annual water use
 - MDARD (for farms)
 - EGLE (others including municipal water supplies)



Groundwater or Surface Water Withdrawals

- New or increased withdrawals >2,000,000 GPD (2 MGD) require a Part 327 permit
 - This may vary depending on depletion status of the watershed

Municipal Water

Contact the
municipality



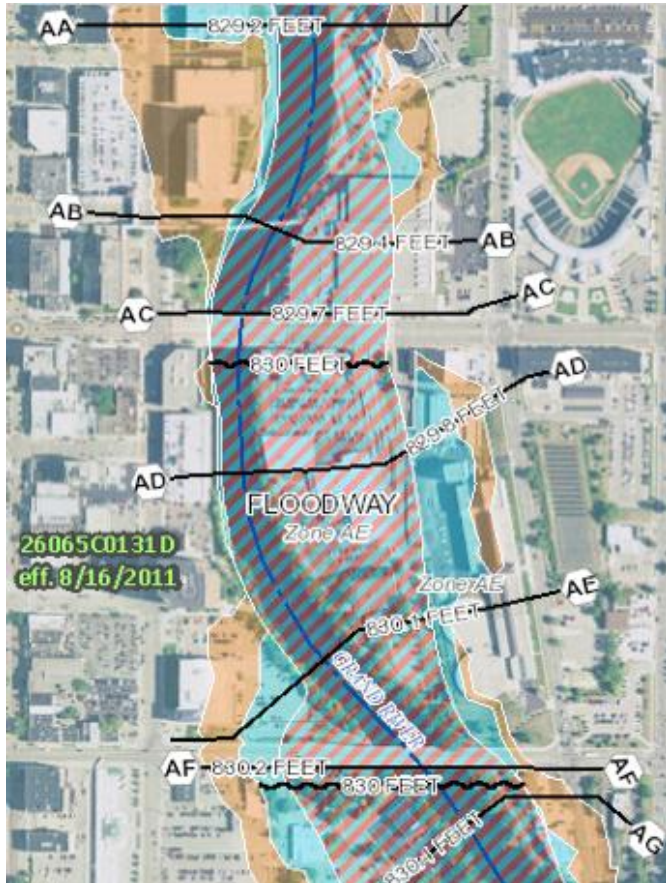
Determine if they
can supply the
quantity of water
required



Floodplains

- Any occupation, filling, or grading below the 100-year floodplain elevation requires a permit
- Many floodplains are mapped
 - <https://msc.fema.gov/portal/home>

Floodplains



- Tiling within 100-year floodplain – no permit
- Altering topography within 100-year floodplain – permit needed
- Fill in regulated floodplains – compensating cut may be required
- Local floodplain regulations



Wetlands, Inland Lakes and Streams

- Section 404 of the federal Clean Water Act for wetlands, inland lakes and stream dredge and fill activities
- Permitted under Natural Resources and Environmental Protection Act 451 of 1994
 - Part 303 Wetlands Protection
 - Part 301 Inland Lakes and Streams

Wetlands

Part 303, Wetlands Protection

- Requires a permit to deposit or allow the placing of fill material; dredge, remove, or permit the removal of soil or minerals; construct, operate, or maintain any use or development; or drain surface water in wetlands
 - Note water discharge into a wetland may be considered maintaining a use in wetland



Wetlands

Part 303, Wetlands Protection

- Requires a permit to deposit or allow the placing of fill material; dredge, remove, or permit the removal of soil or minerals; construct, operate, or maintain any use or development; or drain surface water in wetlands
 - Note water discharge into a wetland may be considered maintaining a use in wetland.

Wetlands

Part 303, Wetlands Protection

Regulated by EGLE if ANY of the following are true:

- Connected to inland lake, pond, river, or stream
- Located within 500 feet of inland lake, pond, river, or stream
- Connected to Great Lake or Lake St. Clair
- Located within 1,000 feet of Great Lake or Lake St. Clair
- > 5 acres
- Contain documented threatened/endangered species or community identified as rare and imperiled in Part 303
- None of the above but are Waters of the United States under the federal Clean Water Rule


Inland Lakes and Streams

Part 301, Inland Lakes and Streams

Permit required

- Dredging
- Filling
- Construction or placing a structure on bottomlands
- Interfering with the natural flow of water
- Connecting a ditch or canal
- Creating a waterbody greater than 5 acres in size or within 500 feet of an inland lake or stream





Inland Lakes and Streams

Part 301, Inland Lakes and Streams

Inland Lakes and Streams defined:

- A natural or artificial lake, pond, or impoundment; a river, stream, or creek which may or may not be serving as a drain
- Having definite banks, a bed, and visible evidence of continued flow or occurrence of water
- Does not include lake/pond with surface area < 5 acres OR the Great Lakes, Lake St. Clair.
- None of the above, but is Waters of the United States

Wastewater

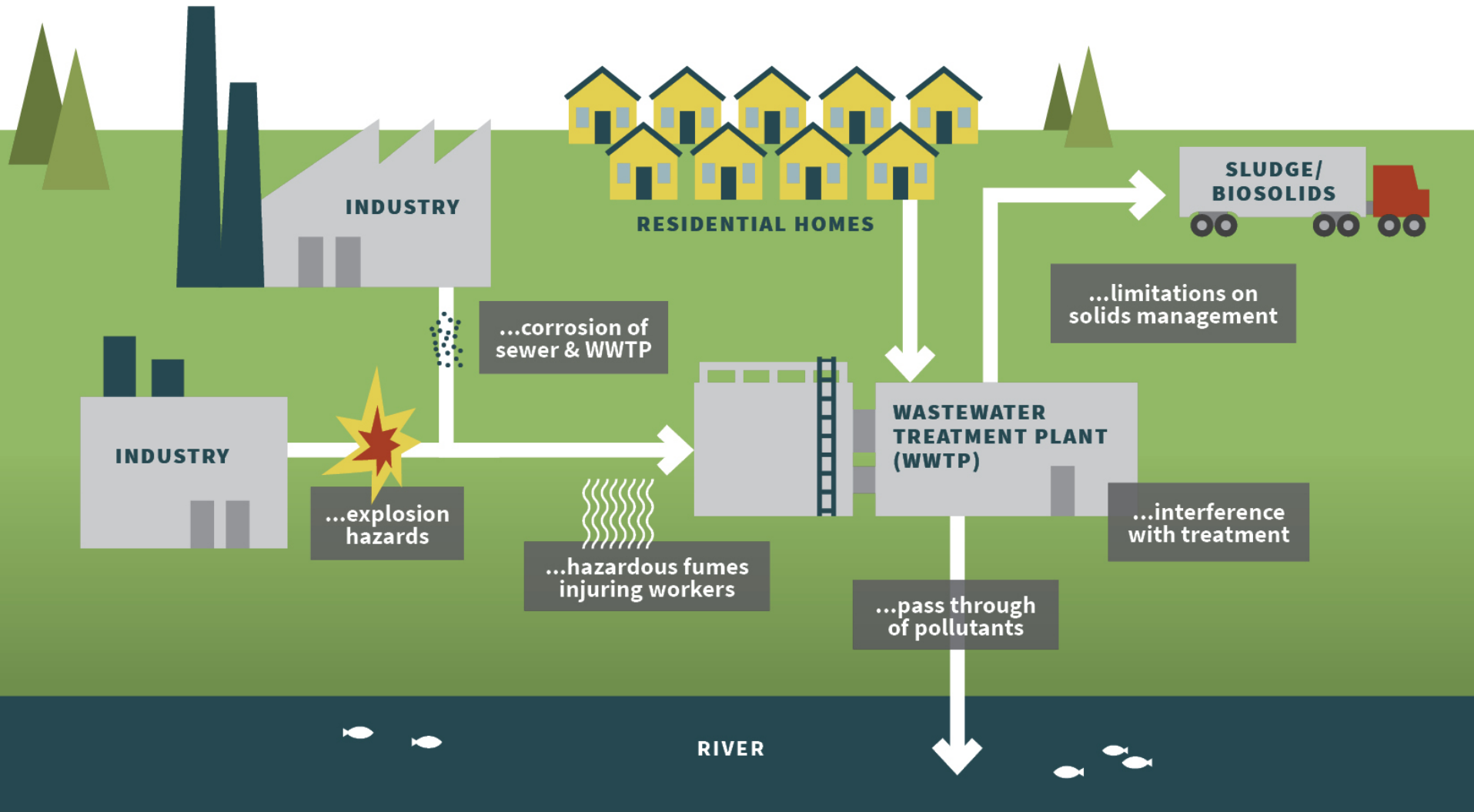
- NPDES Permits
 - Section 402 of the federal Clean Water Act National Pollutant Discharge Elimination System Permit program
 - Permitted under Part 31 Water Resources Protection
 - Regulates pollutant discharges to lakes, ponds, rivers, streams, or wetlands
- Groundwater permits
 - Permitted under Part 31



Wastewater

- Indirect discharge to a municipal wastewater treatment plant (WWTP)
 - May be subject to the Industrial Pretreatment Program (IPP)

Industrial Pretreatment Programs Protect Against...





Wastewater NPDES Permits

- NPDES permit – direct discharge to lake, pond, river, stream, or wetland
 - Requires limits and monitoring of effluent
 - Vary by process and effluent type

Wastewater Groundwater Permits

- Part 31
 - Separate sewage from process water
 - Sewage can be permitted by Local Health Department
 - Processing of marijuana
 - likely not be permitted by EGLE
 - Local Health Departments do not have authority to permit
 - Process wastewater must be collected, stored, then pumped and hauled

Wastewater Groundwater Permits

- Part 31
 - Growing operations
 - Local Health Departments do not have authority to permit wastewater
 - Wastewater can be collected, stored, then pumped and hauled





Wastewater Groundwater Permits

- Part 31
 - Growing operations
 - If not pumped and hauled
 - Treatment of irrigation water
 - » Reverse osmosis, softening, filtration
 - Humidifier and HVAC use and wastewater
 - Irrigation system design
 - Additive/chemical/pesticide use
 - Water flow diagrams



Construction Storm Water

Any earth movement activity requires permits from local enforcing agencies and possibly EGLE

Construction Storm Water

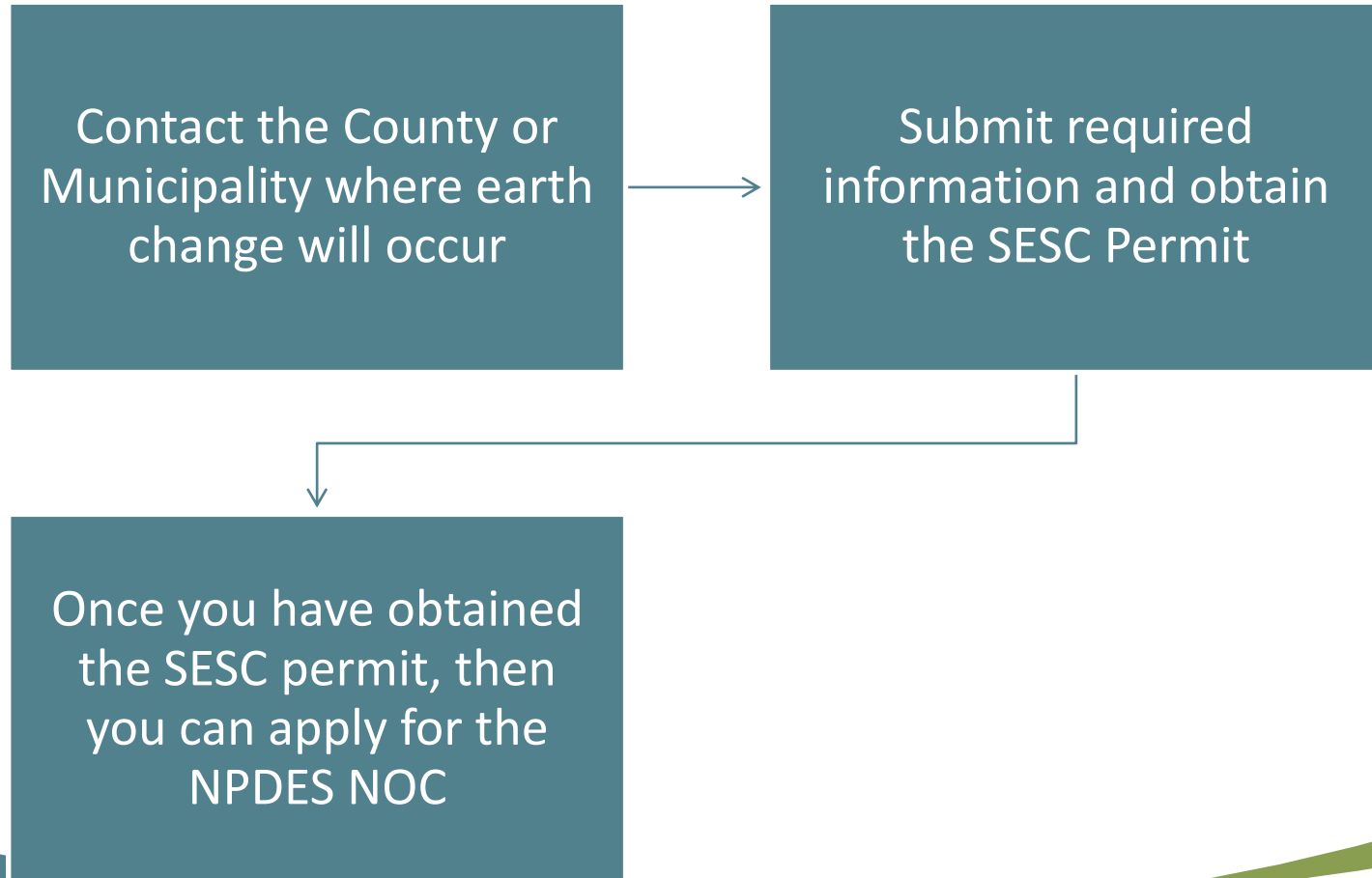
Soil Erosion and Sedimentation Control Program (SESC) – Part 91

- Permit is issued by County or Municipality
- Earth change of 1 or more acres of land
- Earth change is within 500 feet of a lake or stream

Construction Storm Water Program (NPDES)

- A NPDES Notice of Coverage (NOC) is required for earth change activity over 5 acres with a storm water discharge to surface waters

Soil Erosion and Sedimentation Control Program and Construction Storm Water Program



Construction Storm Water NPDES Notice Of Coverage

- Disturbing one to five acres
 - Automatic storm water coverage with a Part 91 (SESC) permit
- Disturbing over 5 acres
 - Apply for a NPDES Notice of Coverage (NOC)
 - Must submit a copy of the SESC permit, approved SESC plan, NOC application and \$400 fee.



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❖ ***All sites over 1 acre in size must follow Permit-By-Rule requirements***

NPDES Industrial Storm Water

- Regulations apply to wide variety of industrial and municipal facilities
 - Consider primary industrial activity and industrial exposure
 - Requires a certified operator
 - Requires development of a Storm Water Pollution Prevention Plan





NPDES Industrial Storm Water Permits

- The processing of marijuana (SIC code 2833) is a regulated activity
- Processing facilities discharging storm water to surface waters of the state:
 - NPDES ISW discharge permit; or
 - No Exposure Certification

MiWaters

MiWaters – Water Resources Information and Forms

Create and manage **Permit Applications** and **Service Requests**

Why Create a MiWaters Account?

If you are planning on any of the following:

... Building on a sensitive area, such as a **dune** or a **wetland**?

... **Discharging wastewater** of any kind?

... Applying **pesticides** to a **water body**?

... or similar activities, you'll need to [create a MiWaters account](#)

CREATE AN ACCOUNT >

SIGN IN WITH AN EXISTING ACCOUNT >

Resources

- Land Use

- Floodplain

- www.michigan.gov/floodplainmanagement

- Wetlands

- www.mi.gov/wetlands

- Wastewater

- NPDES

- www.mi.gov/eglenpdes

- Groundwater permits

- www.mi.gov/groundwaterdischarge

- Wastewater

- Construction Storm Water

- SESC Agencies

- https://www.michigan.gov/documents/deq/wrd-sesc-agency-list_539870_7.pdf

- Construction storm water and SESC Web page

- https://www.michigan.gov/egle/0,9429,7-135-3311_4113---,00.html

- Industrial storm water

- www.mi.gov/industrialstormwater

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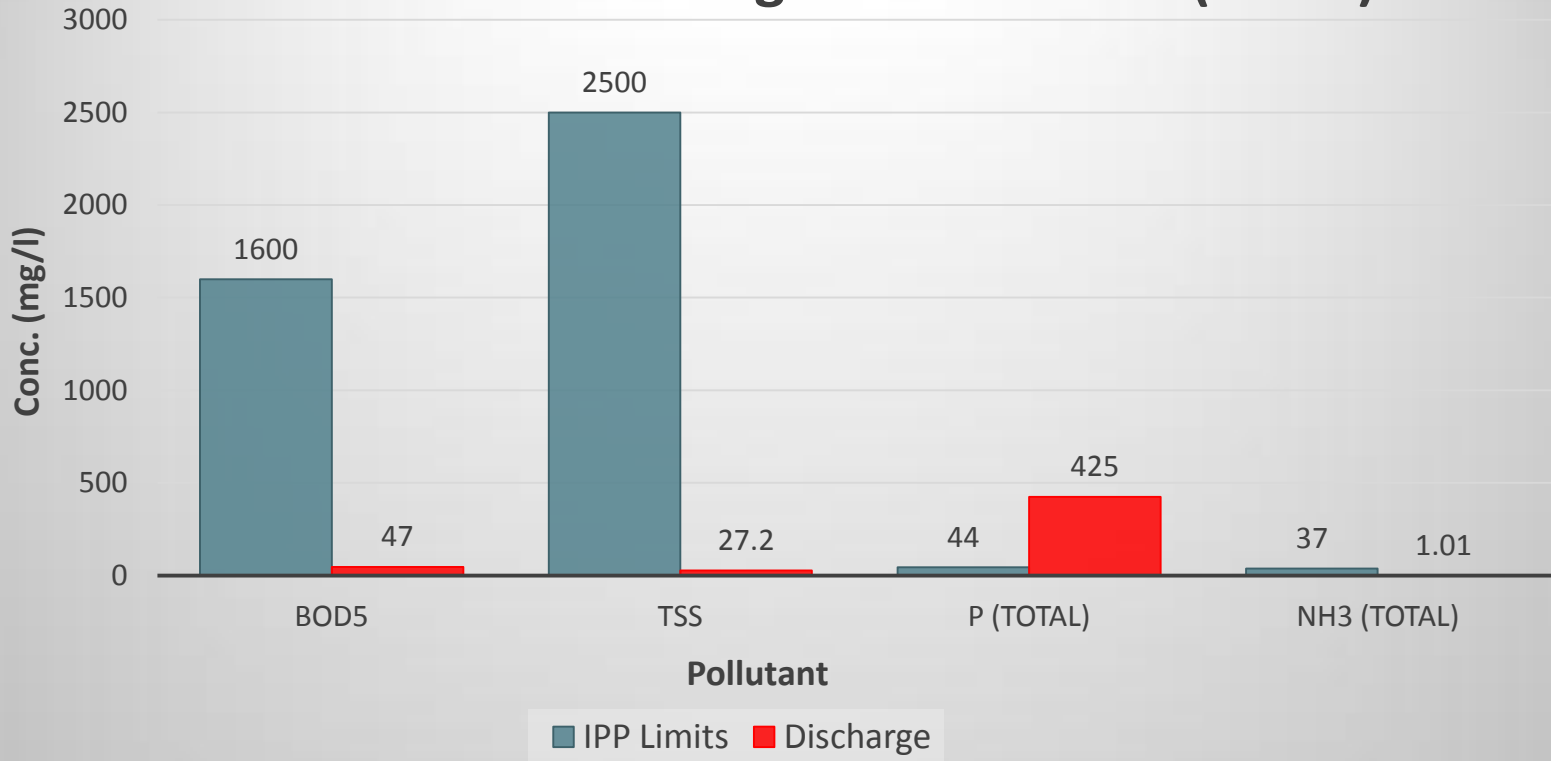
800-662-9278

Michigan.gov/EGLE



Follow us at: Michigan.gov/EGLEConnect

Flush Discharge vs. IPP Limits (Conc.)



Flush Discharge vs. IPP Limits (Mass)

