

Wastewater / Stormwater 101

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Public Wastewater Unit



Eureka!

- 4 Great Lakes
- 3,288 miles of Great Lakes shoreline
- 11,000 inland lakes
- 36,000 river miles
- 6.5 million acres of wetlands



Groundwater

Michigan has:

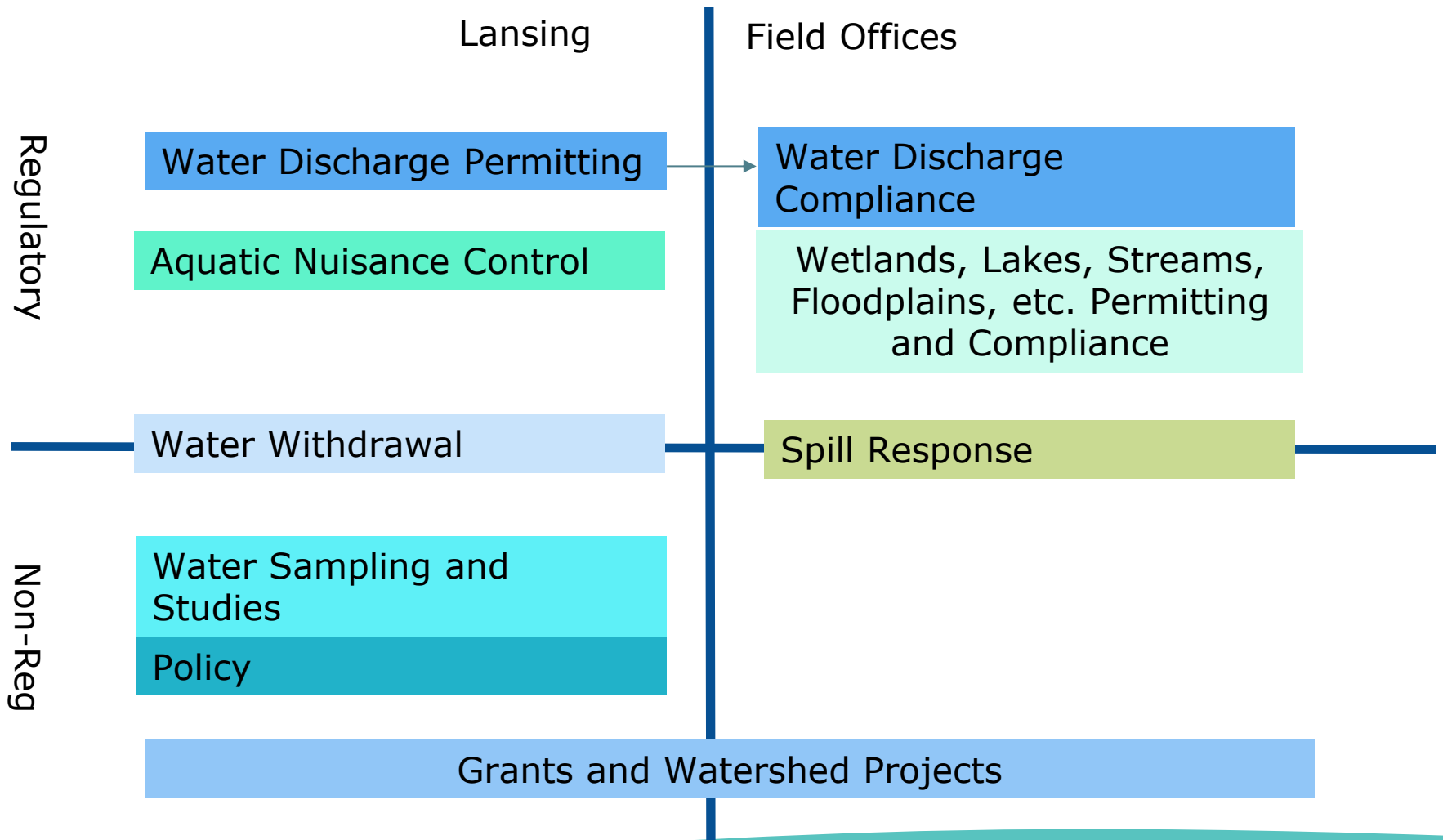
- Over 1,000,000 private drinking water wells. On average 25,000 new domestic wells are drilled per year
- Almost 2.6 million Michiganders depend on groundwater as their sole source of drinking water

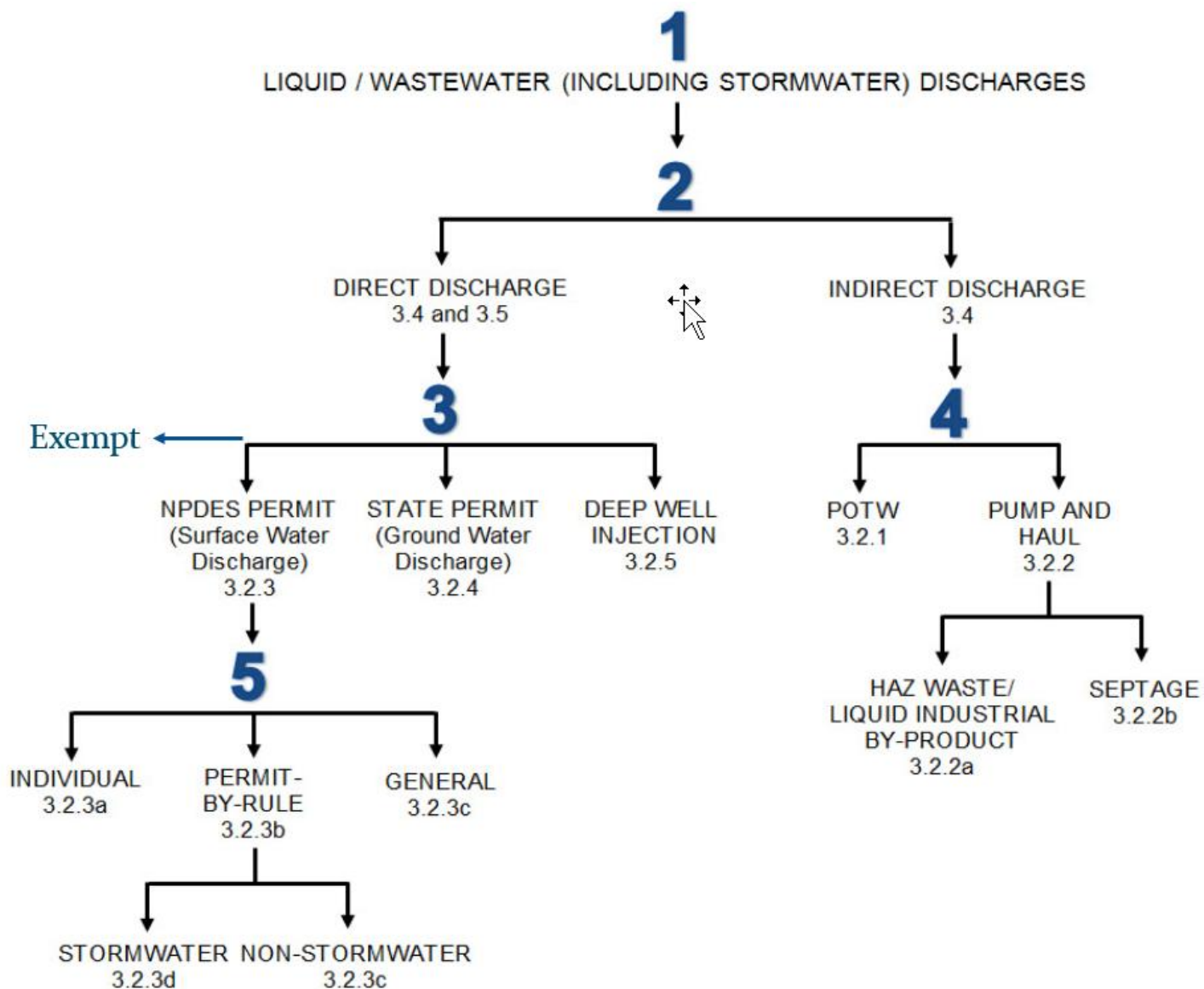
Water Resources Division

- 302 Employees
- > 30 Programs
(regulatory & non-regulatory)
- ~ 8,000 permits / year
- 4,800 inspections / year
- 1,500 complaint
responses / year
- < 100 Enforcement Actions



WRD Organization





This seems like it might be confusing ...

You are right!

It should be your expectation that we help you!

- Environmental Assistance Center:
800-662-9278
- Google: “EGLE District Offices” and find your district by county
- Call Laura: 586-601-7693

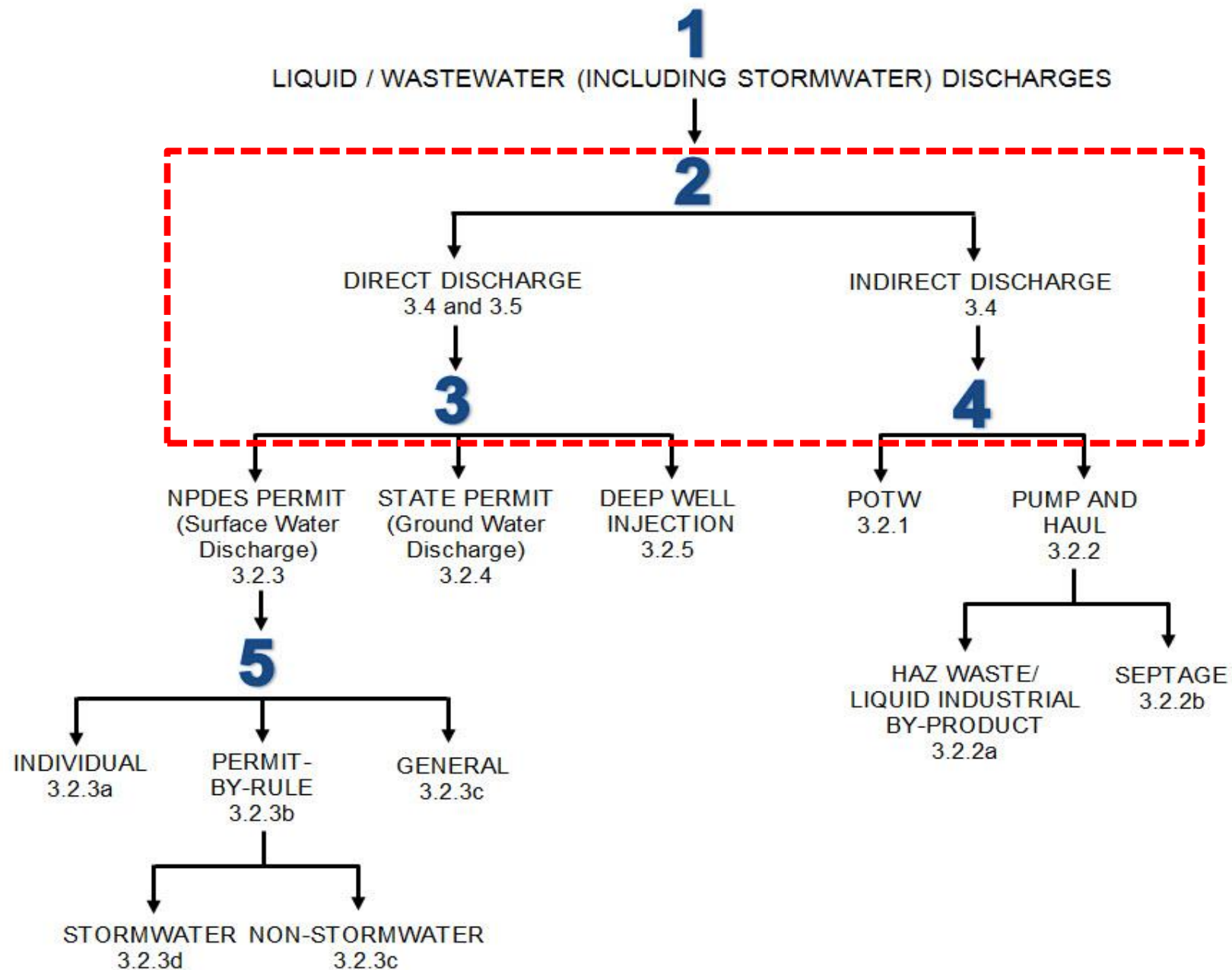
“Don’t quote me” definitions

What is storm water?

Generally, it’s direct rain and snowmelt runoff. Certain types of storm water discharges require a permit.

What is wastewater?

Pretty much everything else ... if not exempted, requires a permit.



Waters of the State



Direct Discharges



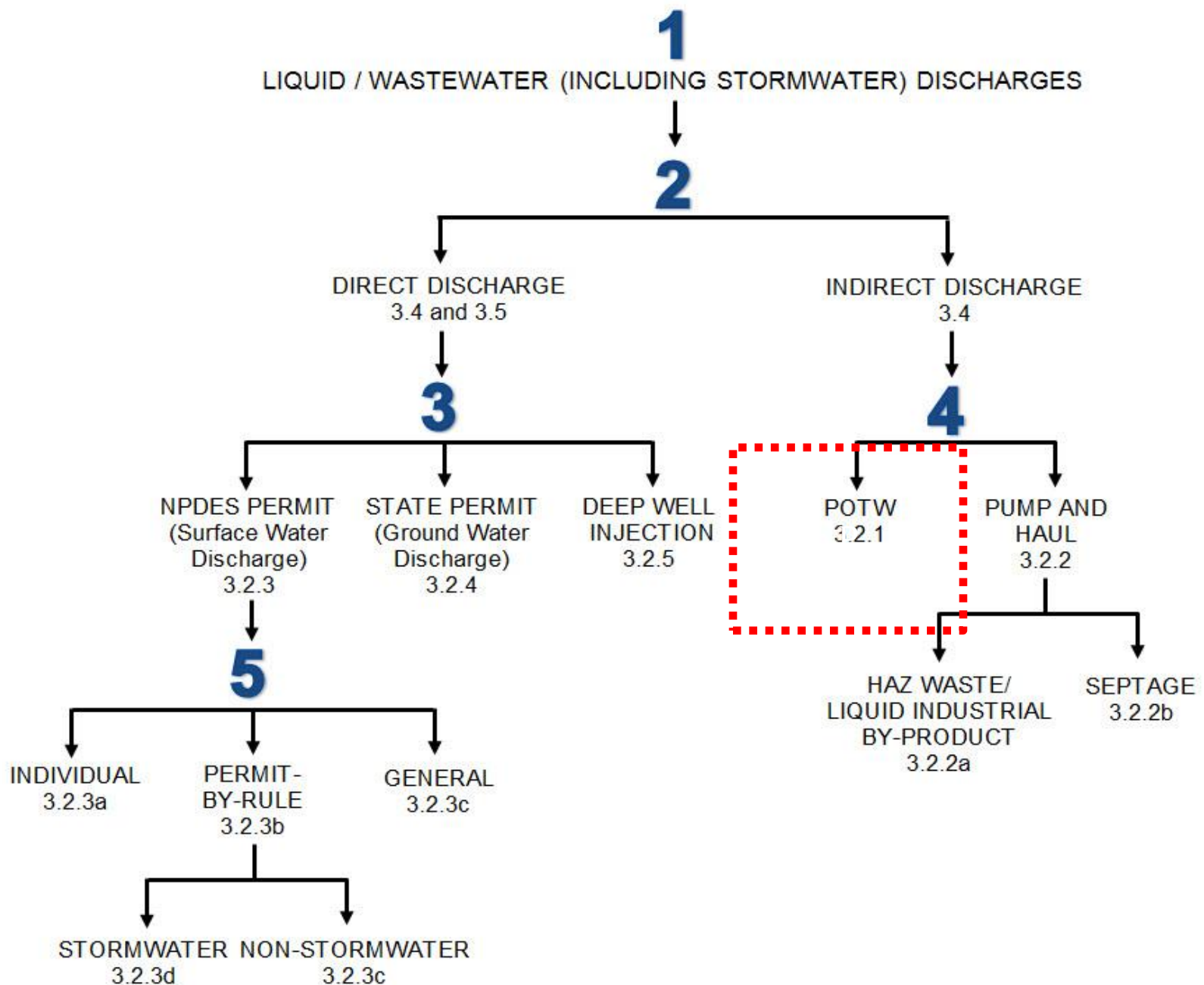
You've got this!

Indirect Discharge

Sending or giving the wastewater to someone else to deal with.

Direct or Indirect Discharge?

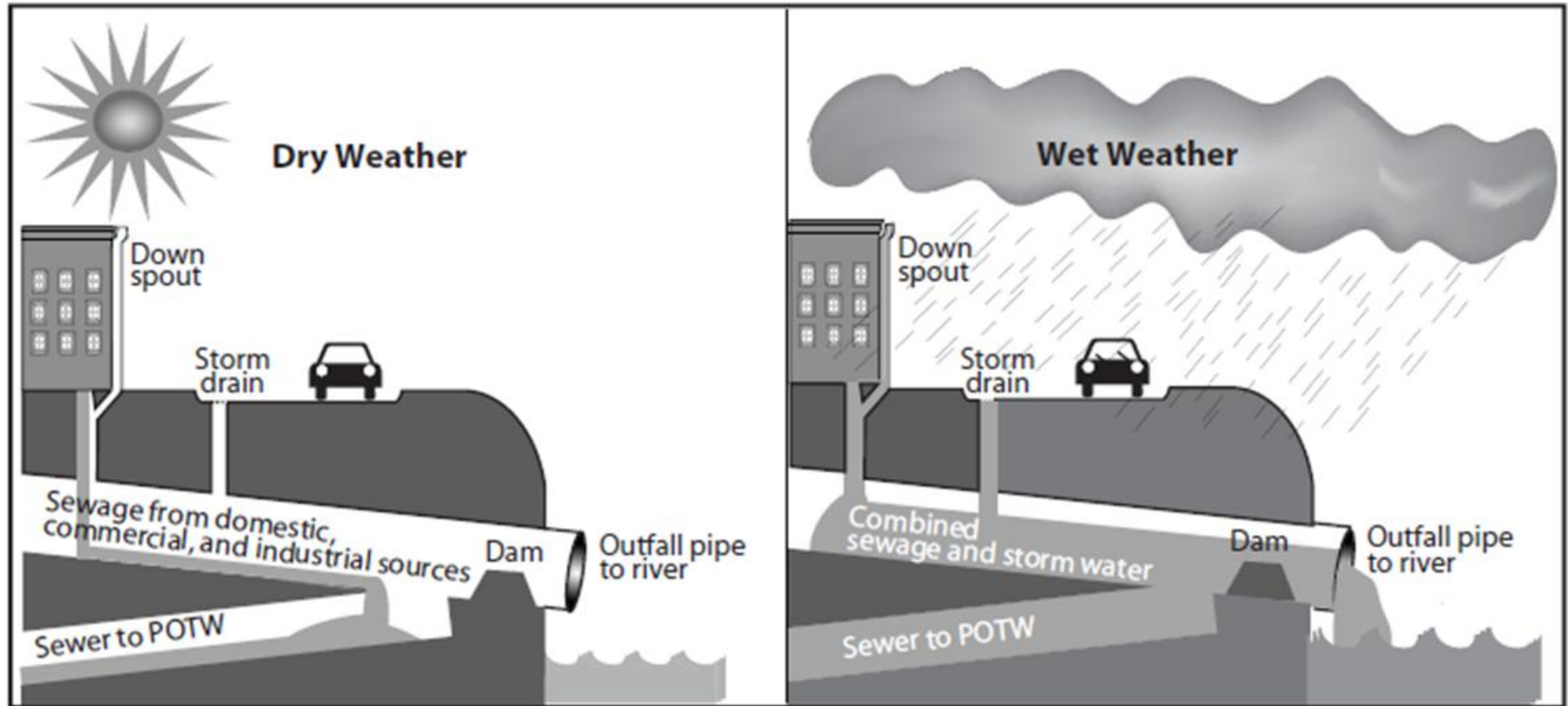


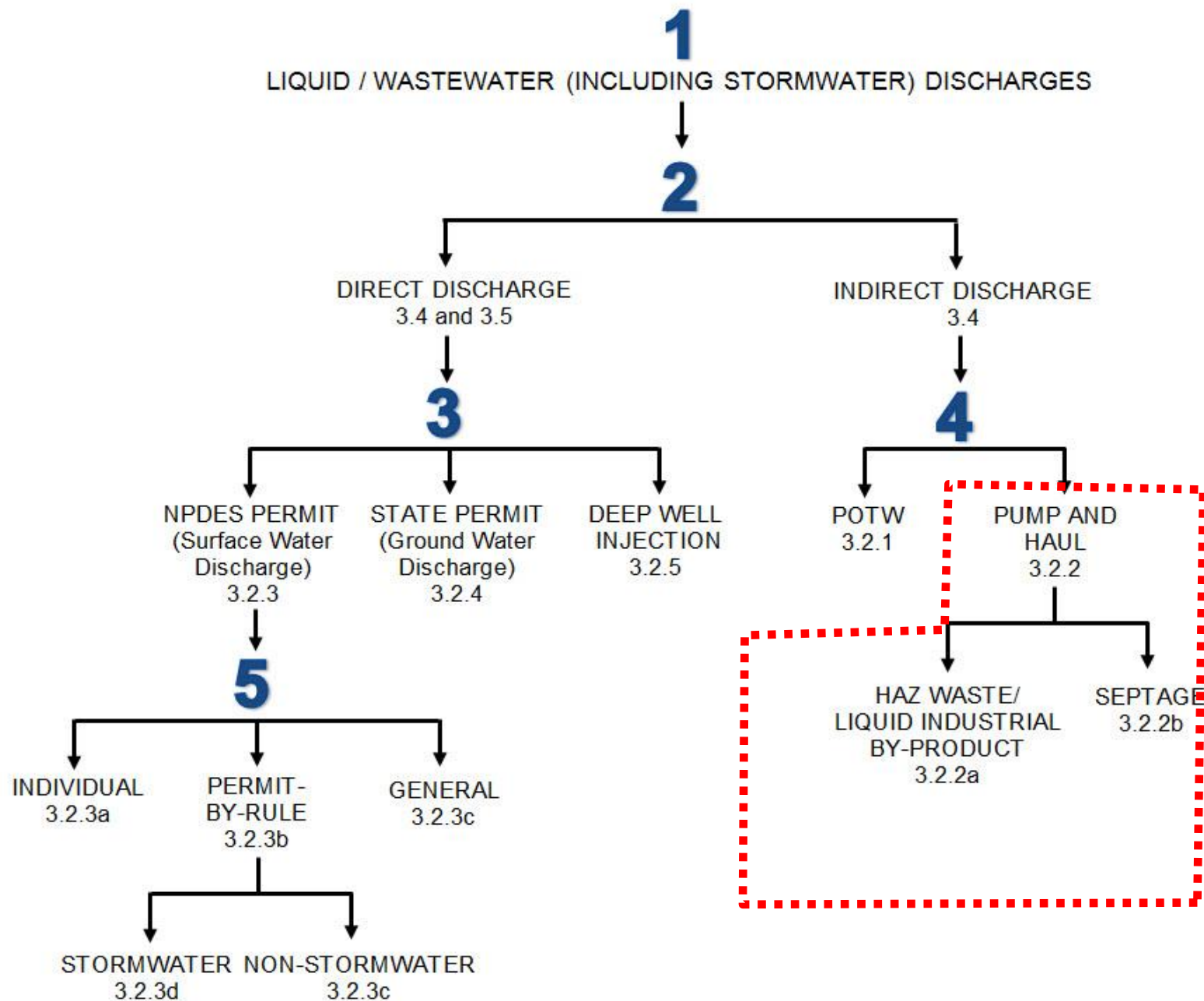


Indirect Discharge to Publicly Owned Treatment Works (POTW)



Indirect Discharge to POTW through combined system

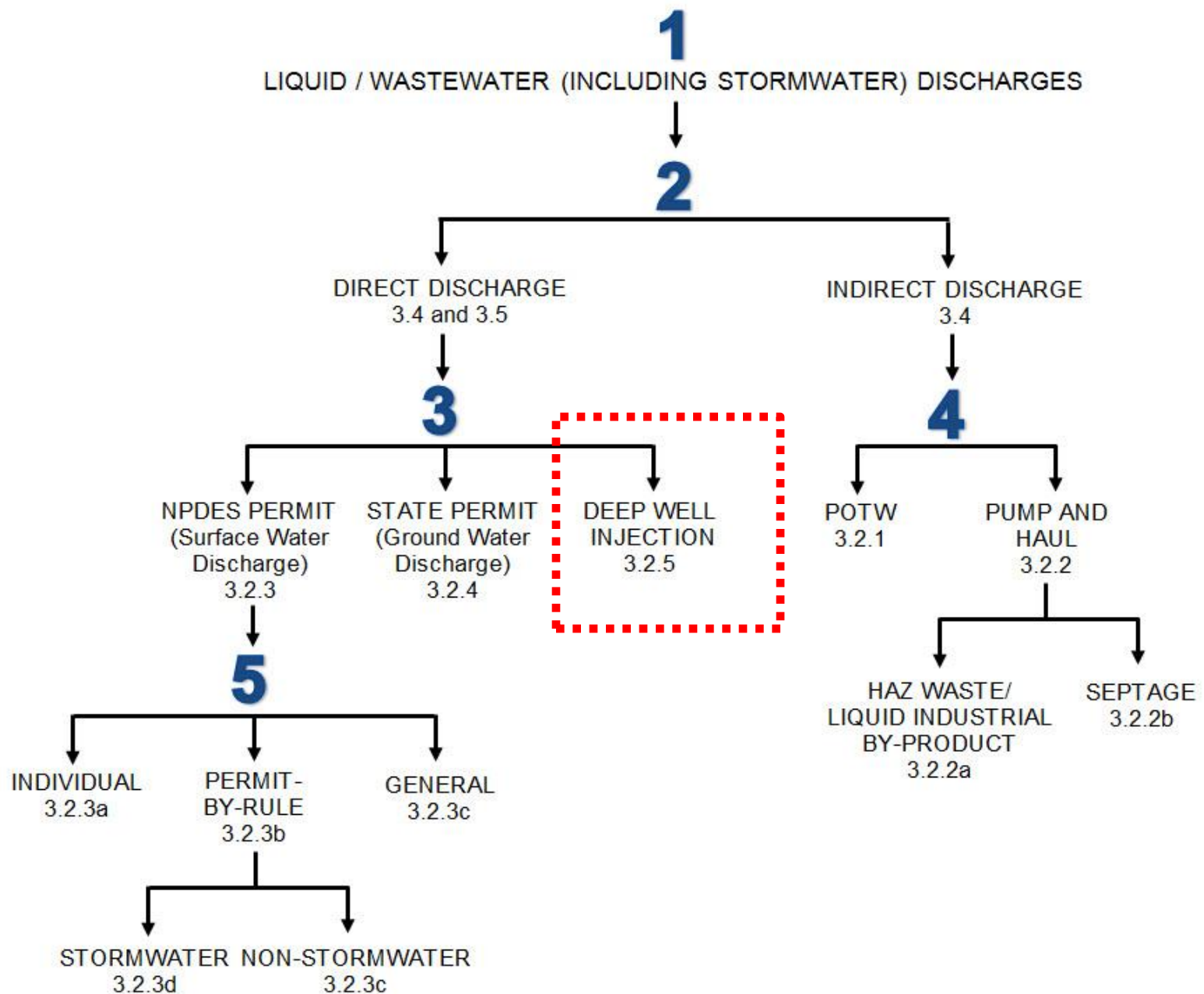




Pump and Haul

- Septage
- Liquid Industrial By-Product
- Hazardous Waste



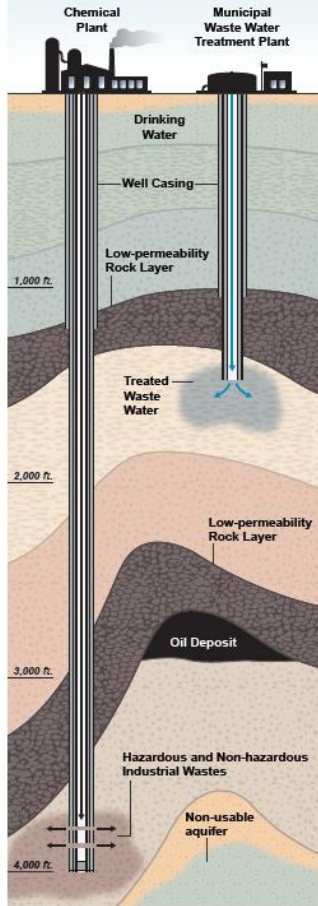


Deepwell Injection

Classes of Injection Wells

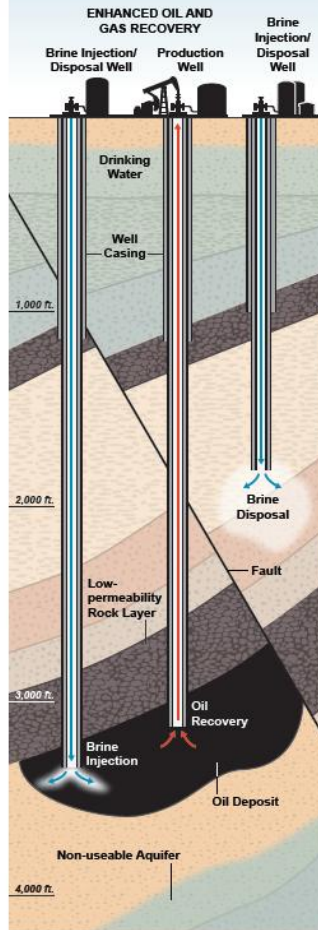
Class I Wells

Class I wells inject industrial and municipal wastes thousands of feet below sources of drinking water.



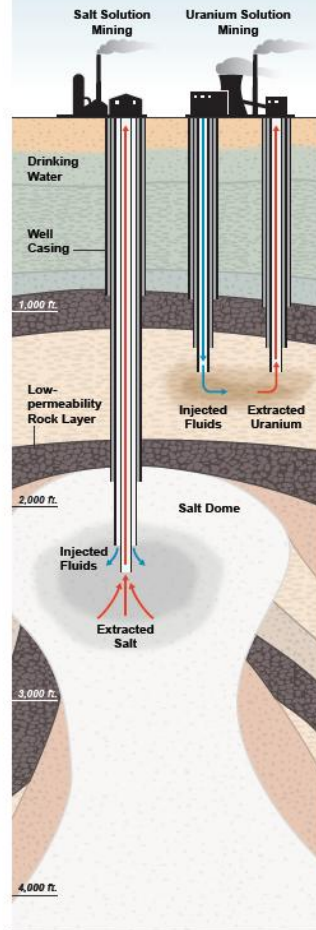
Class II Wells

Class II wells inject brine into oil deposits to recover oil and natural gas and also dispose of brine after recovery.



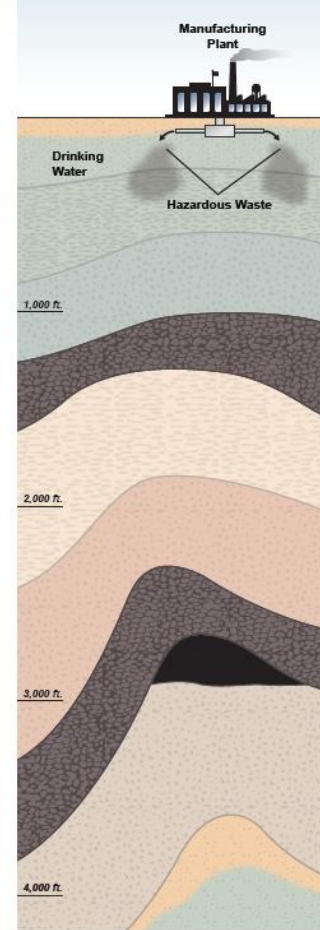
Class III Wells

Class III wells inject fluids to dissolve and extract minerals like uranium, salt, copper and sulphur.



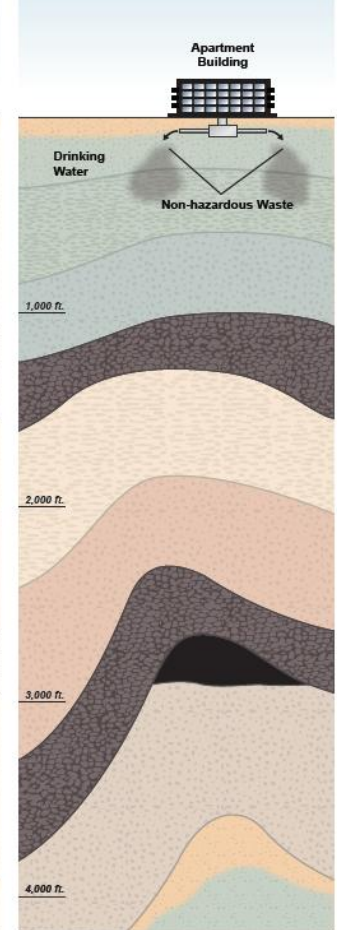
Class IV Wells

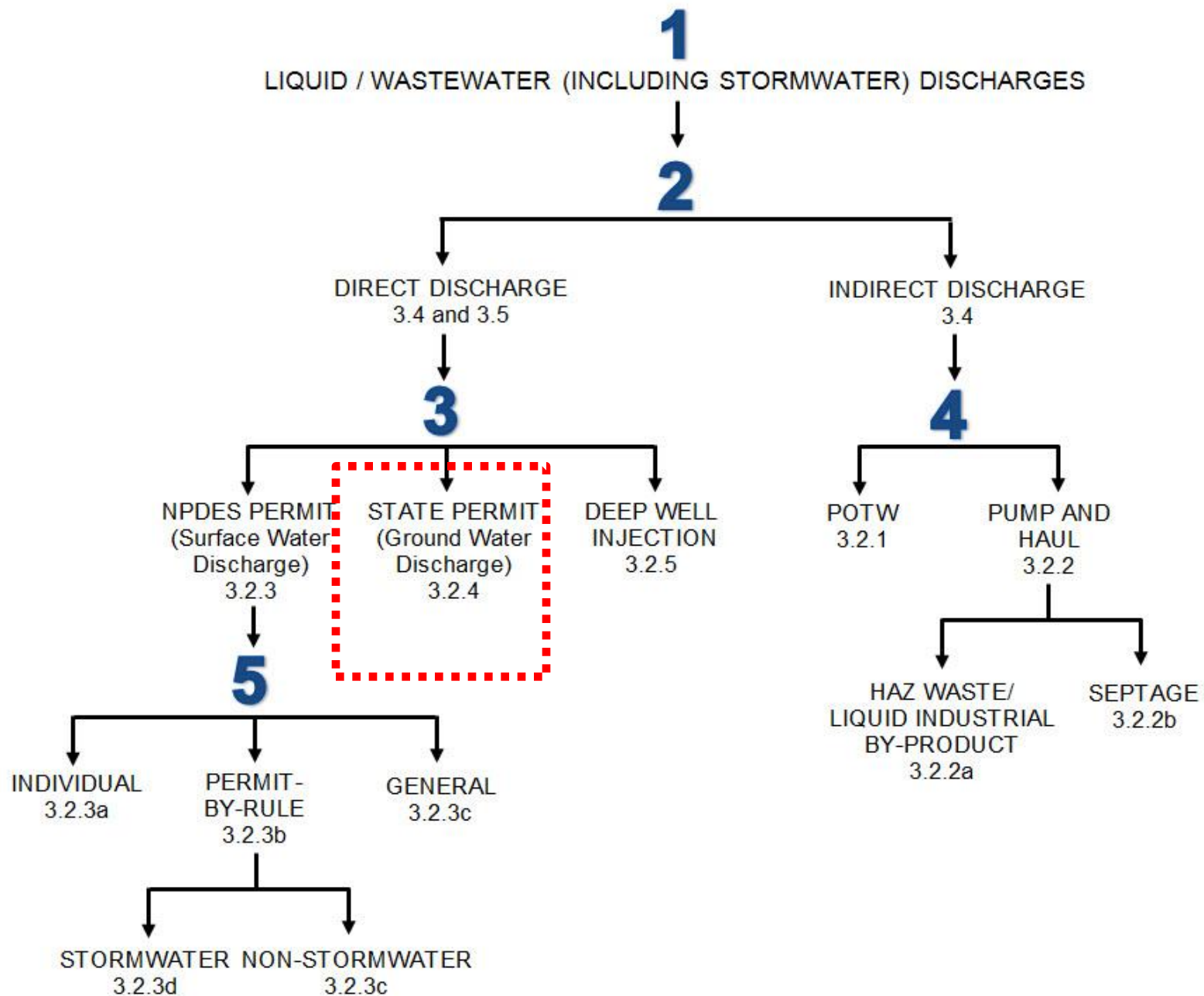
Class IV wells, banned by the EPA, are shallow wells used to dispose of hazardous or radioactive waste.



Class V Wells

Class V wells are shallow wells used to dispose of non-hazardous waste.





Groundwater Discharges

Legal Authority

- No Federal groundwater discharge permit program
- Authority comes from Part 31 of Michigan's regulations (NREPA) and the associated rules, to regulate both groundwater and surface water
- Surface water and groundwater are both "Waters of the State"

Groundwater Discharge

AUTHORIZATIONS by RULE

2210(y)

2211

2213

2215

2216

2218

LOW IMPACT



HIGH IMPACT

Groundwater Discharge Options

Drainfield / Subsurface



Groundwater Discharge Options

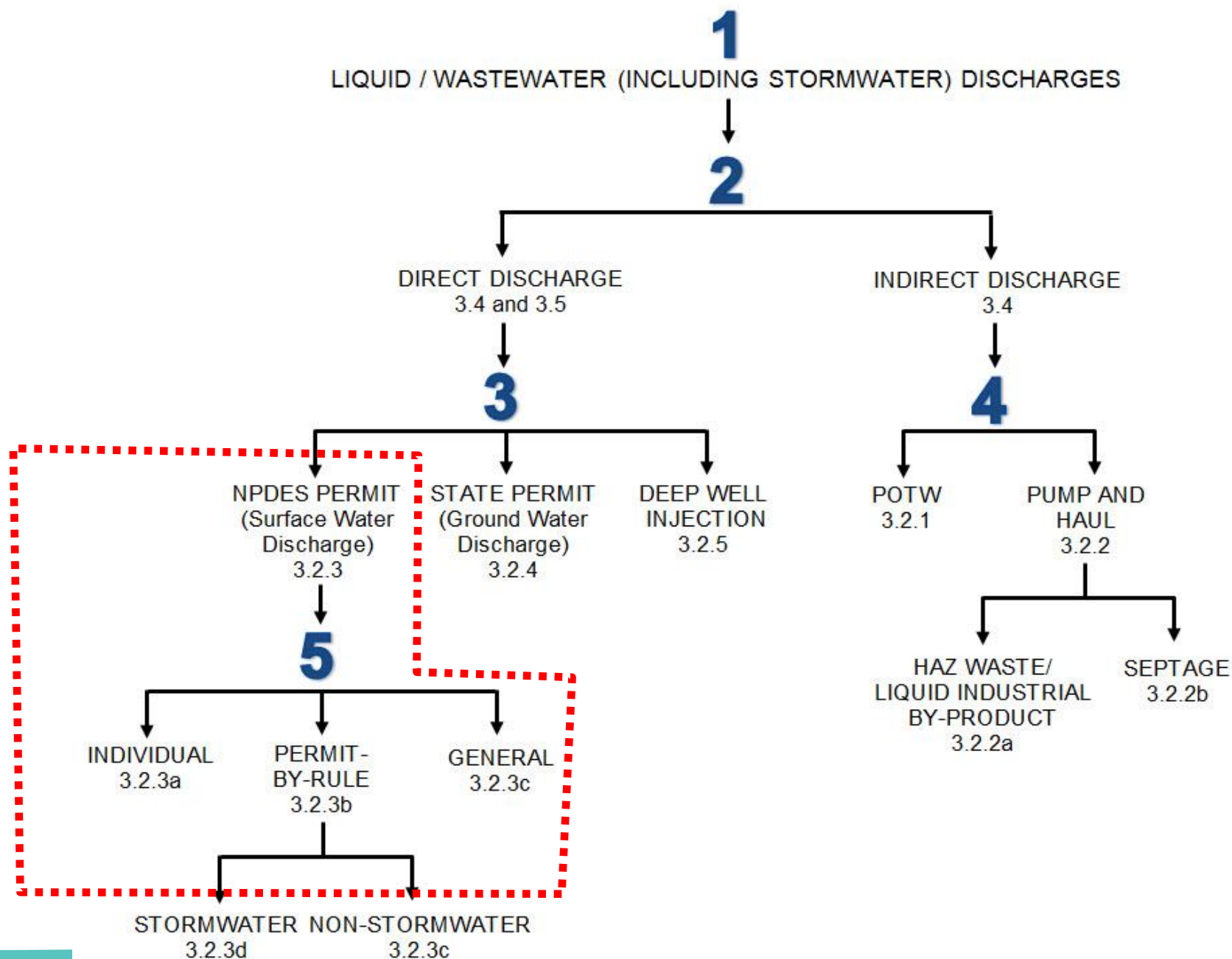
Rapid Infiltration Bed



Groundwater Discharge Options

Spray Irrigation





NPDES Permit Types

Stormwater

- Construction – Permit by Rule
- Industrial – General or Individual
- Municipal Separate Storm Sewer System (MS4)

NPDES Permit Types

Individual:

- Site-Specific
- Based on discharge type, amount of discharge, facility operation, and receiving stream

General Permit:

- Available to permittees with certain similar operations and/or types of discharges
- Only applies when the General Permit is protective of the receiving water body
- Must get a COC to be eligible for discharge under a General Permit

NPDES Permit Types

General Permit Examples



- Hydrostatic Pressure Testing
 - Sewage Lagoon
 - Noncontact Cooling Water
- Groundwater Cleanup of Petroleum

NPDES Permit Types

Part 91 - SESC

- 1 acre or within 500 ft of a lake or stream
 - Local permit required

Permit By Rule – Construction Stormwater

- 1 to 5 acres with a discharge from the site
 - Permit-by-Rule coverage automatic
 - Certified Operator required
- Over 5 acres with a discharge from the site
 - Permit-by-Rule coverage with notification
 - Certified Operator required

Construction Site Storm Water



Industrial Storm Water Permit

(General or Individual)



Industrial Storm Water

- Based on Federal SIC Code
- Requires having a storm water plan (SWPPP) and self monitoring
- Can get a No Exposure Certificate (NEC) if no industrial materials are exposed to rainfall or runoff
- Requires a Certified Operator

Municipal Separate Storm Sewer System (MS4)

- Local governments that meet certain population density criteria need a permit
- Requires a storm water plan and a lot of activities
 - Illicit discharge elimination program
 - Public education
 - Post construction storm water controls
 - Etc, etc, etc.

Other Items in the EHS Guidebook

Water Treatment Additive Information

Common discharges and how to handle them

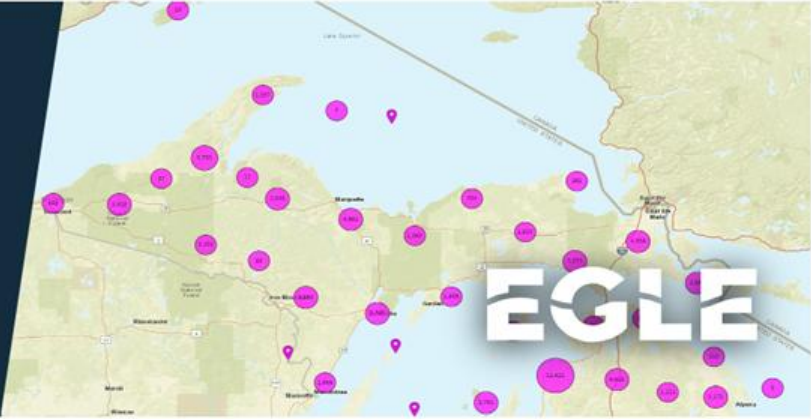
- Cleaning equipment and floors
- Cooling water
- Floor drains
- Restrooms and Breakrooms
- Pit or trench drain sludge
- Air compressor condensate
- Power washing

MiEnviro!!!!!!!!!!!!

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Search public information



Public notices and comments



Sign in for permitting and compliance actions



All other actions

Need More Help?

- Environmental Assistance Center:
 - 800-662-9278
- Google:
 - “EGLE District Offices” and find your district by county
- Call Laura:
 - 586-601-7693