



# DAWSON

*Kūpono Ka Hana  
Excellence in Service*

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# Background

- **Question**
  - If pollutants from an upland pipe reach navigable water, does the CWA require a NPDES permit?
- **Answer**
  - Functional Equivalence
- Functional Equivalence attempts to find balance between 9<sup>th</sup> and 4<sup>th</sup> Circuit decisions
- Gives basic framework without bright-line test



# What can we make of this?



- 7 factors of functional equivalence
- Outer limits established
- Determined by regulators and courts over time

- Given some, but not all factors that could determine permit status
- States will have different standards
- Unknown enforcement
- Unknown future legal guidance
- Multitude of projects requiring fact-intensive, site-specific, case-by-case determinations
- Overwhelmed regulators
- Backed up courts
- Current pandemic
- What happens in 2020

*This will be a long process. There are too many variables to consider.*

# The New Standard

- **Narrower focus**
  - Not necessarily unmanageable expansion of the program
  - Still seems broad and uncertain
- **Multipart Testing**
- **Citizen suits**
  - Lawsuits alleging indirect discharges are illegal because they lack a permit
  - May have to contend with conducting multipart testing, which could discourage litigation
  - On the other hand, it could be used as more powerful leverage to get facilities that are discharging into groundwater to reduce discharges
- **Preemptive Action**
  - Facilities concerned about litigation may preemptively seek permits
  - Discharge conditions would be determined by regulator rather than a judge
  - Would not bar a lawsuit but would prove valuable

# Practically Speaking

- **Projects that could now require permits**
  - Green infrastructure
  - Recycled water
  - Groundwater recharge
  - Septic tanks
  - Wastewater treatment plants
- **Green Infrastructure, indirect potable reuse and groundwater recharge projects**
  - Typically involve injecting water containing pollutants into groundwater
  - *Provide increase in water quality, use stormwater or recycled wastewater into shallow subsurface aquifers to augment public water supplies, create seawater intrusion barriers, and eliminate surface outfalls, among other benefits*
  - Permitting could delay beneficial processes and increase costs



# Problems abound

- **Septic tanks**
  - Generally considered to fall outside of the permitting process
  - Designed to discharge pollutants into soil, which could reach groundwater
  - There are 26 million of them in the US
- **Wastewater treatment facilities**
  - Over 500,000 Class V injection wells
  - Regulations vary by state
- **California Sustainable Groundwater Management Act**
  - Develop and implement Groundwater Sustainability Plans
  - Calls for balancing levels of pumping and recharge
  - Reach sustainability within 20 years of implementing their plans
- **EPA Guidance**
  - Unlikely to implement significant change in the short-term
  - What do we do now?

# What About My Project?

- **Determine the basics**
- **Do your research**
- **Find your experts**
- **Conduct a groundwater survey (if needed)**
- **Examine the results**

# What About My Project?

- **Determine the basics**
  - What's your project?
  - Are you likely to face litigation?
  - Who is your regulator?
- **Do your research**
  - What's your watershed?
  - Where are your navigable waterways?
  - Know your contaminants and how they are regulated
  - How proactive is your state? Does it implement NPDES?
- **Find your experts**
  - Call your (environmental) lawyer
  - Those that understand state/local watersheds and regulations could already know enough to determine your project status
  - What are your existing groundwater protections?



# State Groundwater Guidelines

- **California Groundwater Ambient Monitoring and Assessment Program**
  - Improve statewide comprehensive groundwater monitoring
  - Increase the availability to the general public of groundwater quality and contamination information
- **Texas**
  - Groundwater availability models focus on quantity over quality but include information such as aquifer recharge, geology, river, lake and stream water levels to reasonably reproduce past water levels and groundwater flows
  - Texas has regulations for protecting groundwater as sources of drinking water require more monitoring and reporting than those required by the EPA

# Additional Groundwater Guidelines

- **North Carolina**

- Prohibits disposal of wastes via wells, with the exception of closed-loop groundwater remediation systems.
- Restrictions on injection wells

- **South Carolina**

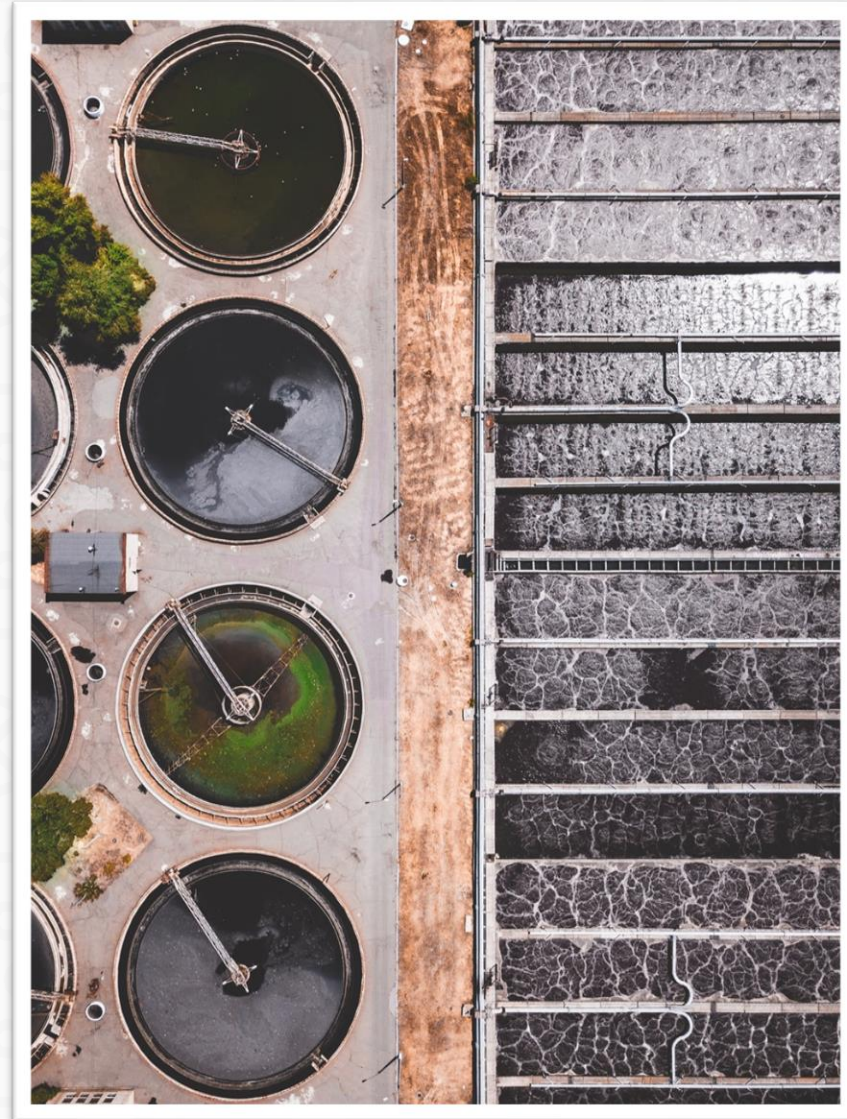
- Pollution Control Act: unlawful to discharge without a permit
- Less stringent restrictions on injection wells

- **Louisiana**

- No state specific groundwater quality standards
- Groundwater contamination is handled on a case-by-case basis
- Point and Nonpoint source pollution BMPs and permits focuses on surface water
- LSU is working on a statewide groundwater model focusing on quantity, not quality

# Conducting a Survey

- **What do I do when I need to do groundwater testing?**
  - If we talked to our experts and know we need data
  - No firm definition of functional equivalence
- **Ninth Circuit: Fairly Traceable**
  - Relying on the results of the dye tracer test to conclude that the treated sanitary wastewater reaching the Pacific Ocean was “fairly traceable” to the county’s injection wells.
  - The 9<sup>th</sup> Circuit decision could be our interim guiding legislation





# Fairly Traceable

- **Three basic questions commonly encountered in groundwater hydrology are:**
  - Where does the water go?
  - How long does it take to get there?
  - What happens along the way?
- **Maui Groundwater Study**
  - Determined hydrological connection through tracer dye
  - Minimal travel time of 84 days to reach coastal springs a half mile away
  - Springs were predominantly wastewater from the treatment plant
  - That wastewater wasn't identical to source wastewater but was still contaminated
- **Is this functional equivalence?**



# Functional Equivalence in a Practical Sense

- **Factors Determining Functional Equivalence**
  - Transit time;
  - Distance traveled;
  - The nature of the material through which the pollutant travels;
  - The extent to which the pollutant is diluted or chemically changed as it travels;
  - The amount of pollutant entering the navigable waters relative to the amount of the pollutant that leaves the point source;
  - The manner by or area in which the pollutant enters the navigable waters; and
  - The degree to which the pollution (at that point) has maintained its specific identity.

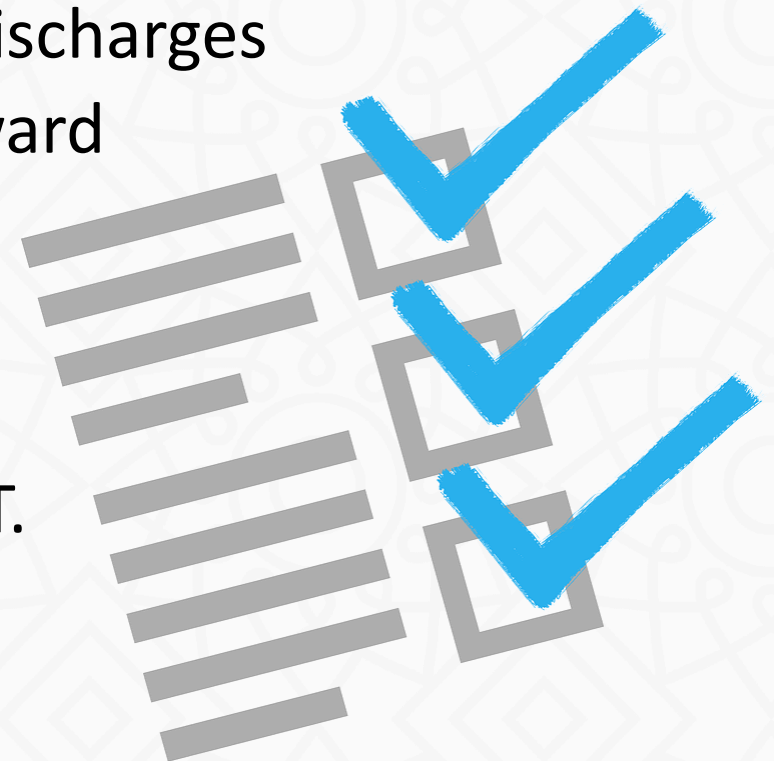
# How do you conduct this survey?

- **Minnesota Groundwater Tracing Database**
  - Information from nearly 400 groundwater traces
  - Links to reports and associated documentation
- **Groundwater Tracing Handbook**
  - 12 rules for groundwater tracing
- **Lean on existing groundwater regulations**
  - Could already have standards for groundwater sampling
  - Review states that focus on groundwater quality
- **Modeling**
  - There are several states with comprehensive NPS models for surface water that has a groundwater component (Arizona, Wisconsin, and Virginia)
- **Engineering Firms with Proprietary Calculators**
  - Groundwater calculation simulates one-dimensional transport of a chemical in a confined groundwater aquifer



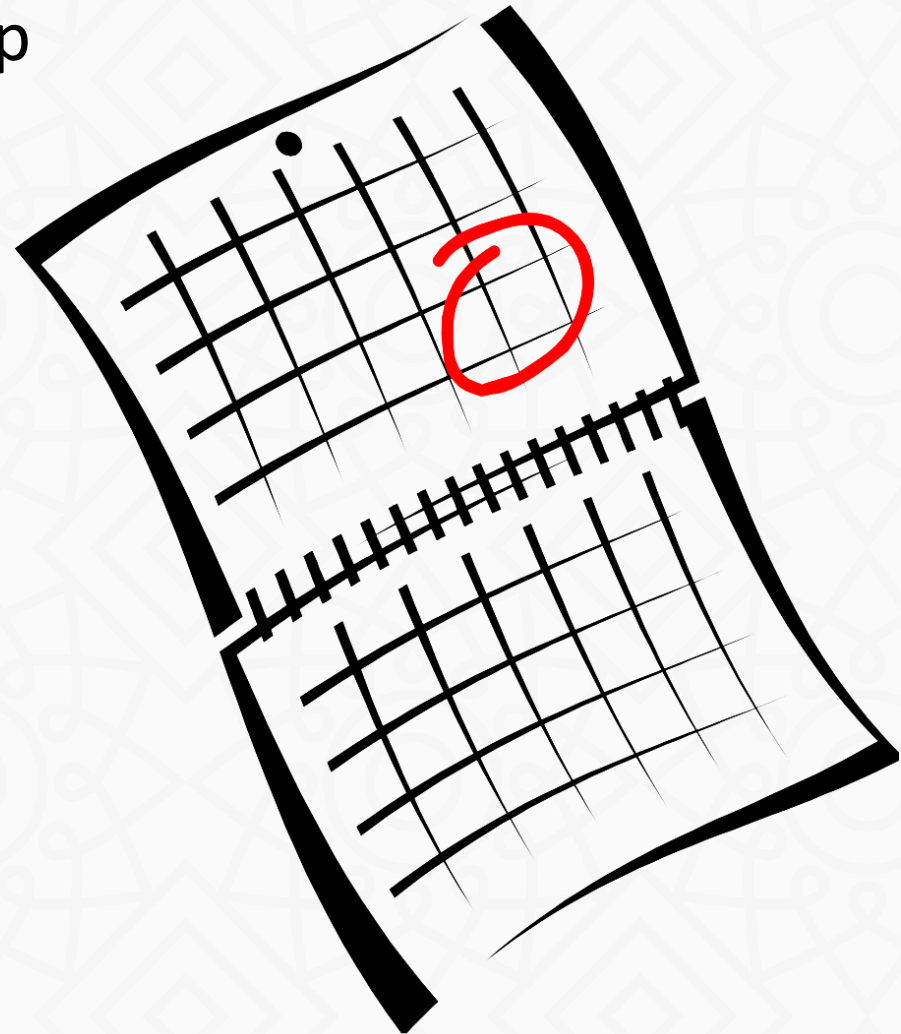
# Conclusions

- Discharge into groundwater will require a NPDES permit for some projects
- Functional Equivalence is vague
- Defining FE will be a long, drawn out process with a large amount of uncertainty
- EPA will likely have to issue a general permit and provide guidance for more common discharges
- Use tools to determine your path forward
- Golden Rule
  - Review your project
  - Do your testing
  - If you're still unsure, GET A PERMIT.



# Shameless Plug: NAEP Practice Groups

- NEPA Working Group
  - 2<sup>nd</sup> Wednesdays 2:30pm ET
  - Chuck Nicholson
- Biological Resources Working Group
  - 3<sup>rd</sup> Wednesdays 2:30pm ET
  - Mike Mayer
- Water Resources Working Group
  - 4<sup>th</sup> Wednesdays 2:30pm ET
    - 401 Permitting
    - Nationwide 12 Permit Vacated
    - WOUS definition
    - Mineral Ownership Underlying the Missouri River within the Boundaries of the Fort Berthold Indian Reservation





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