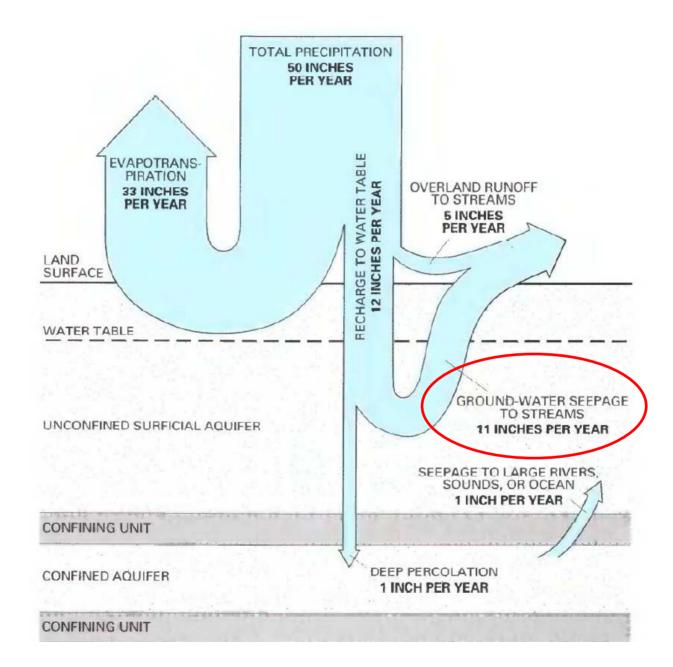
## Rule Making Petition – Division Response

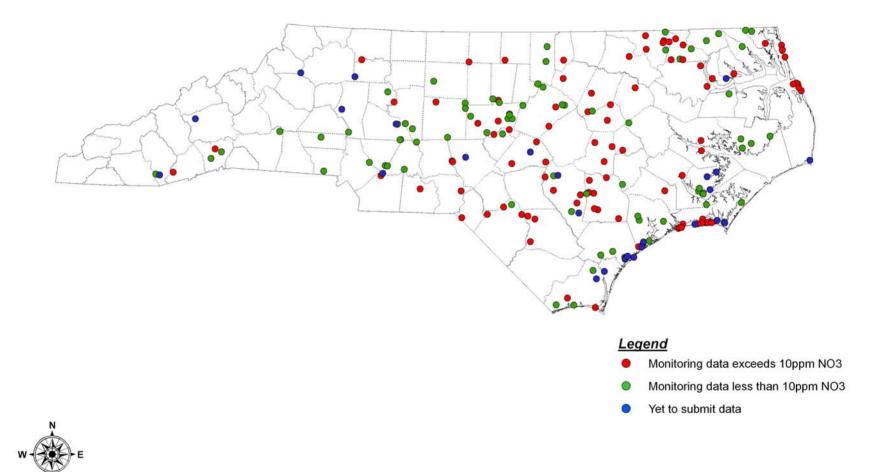
- Interaction of Ground Waters and Surface Waters
- Evaluation of Existing Non-discharge Data
- Review of Technical Issues
- Overview of Proposed Rules



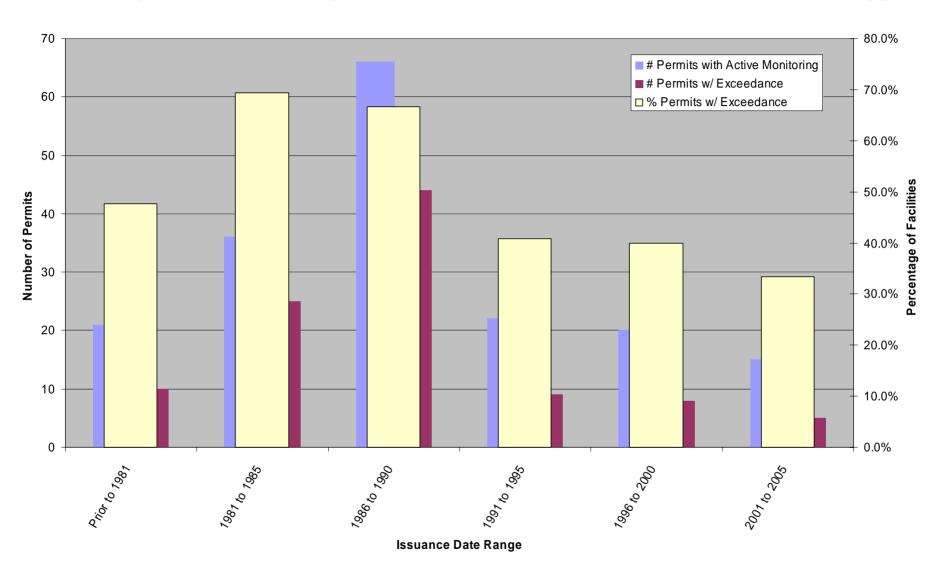


Giese, G.L., Eimers, J.L., and Coble, R.W., 1997, Simulation of ground-water flow in the Coastal Plain aquifer system of North Carolina USGS Professional Paper 1404-M

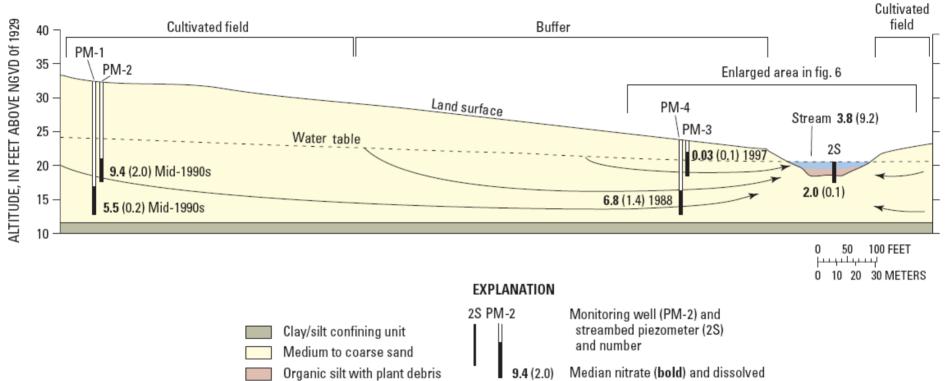
### Non-Discharge Wastewater Facility Groundwater Nitrate Monitoring



#### Percentage of Non-discharge Wastewater Facilities with Nitrate Values > 10 ppm



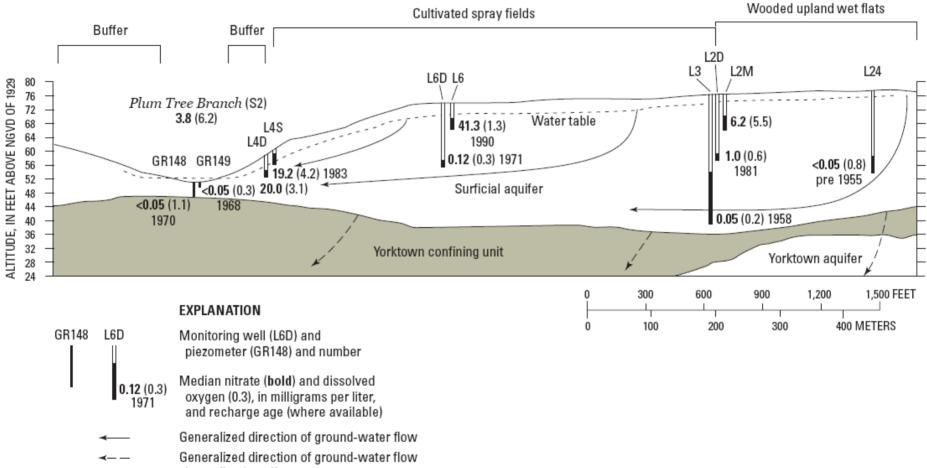
### Cross Section of Surficial Aquifer



Generalized direction of ground-water flow 9.4 (2.0) Median nitrate (bold) and dissolved Mid-1990s oxygen (2.0), in milligrams per liter, and recharge age (where available)

Harden, S.L., and Spruill, T.B., 2008 Factors Affecting Nitrate Delivery to Streams From Shallow Ground Water in the NC Coastal Plain, USGS SIR 2008-5021

### Cross Section of Surficial Aquifer



in confined aquifer

Harden, S.L., and Spruill, T.B., 2008 Factors Affecting Nitrate Delivery to Streams From Shallow Ground Water in the NC Coastal Plain, USGS SIR 2008-5021

# Proposed Monitoring Rule – 2T .1310

- Surface Water Monitoring

   Waste Discharge Monitoring
   Routine Monitoring
- Monitoring Coalitions
- Groundwater Monitoring
- Reporting (annual)



# Waste Discharge Monitoring

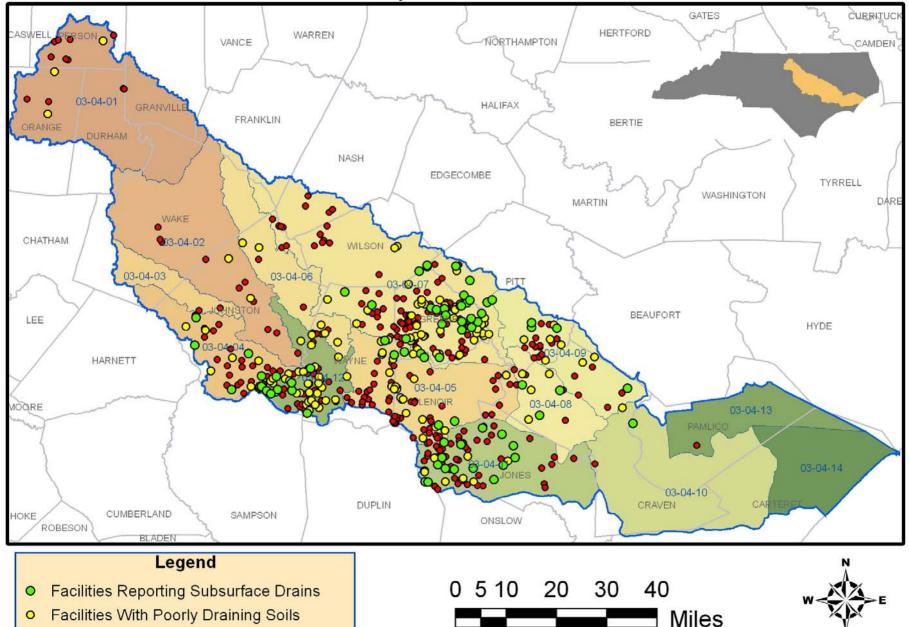
- Based on Current NPDES General Permit Requirements
- New Visual Observations for Subsurface Drains
- Two Visual Observations Per Year
  - One after land application
  - One after land application and subsequent rainfall event
- Take Samples If Needed

# Routine Surface Water Monitoring

- General Criteria Provided
- Site by Site Evaluation
- Rule Gives Basis for Decisions
- Implementation Schedule in Rule .1311
- Monitoring Coalitions (optional)



### Permitted Active Animal Operations in the Neuse River Basin



- Facilities With Poorly Draining Soils 0
- Facilities Not Reporting Subsurface Drains

## Routine Surface Water Monitoring

- Increase or Decrease (including elimination) Monitoring
- Based on Results and Other Available Data
  - From on-site data
  - Based on applicable data of BMPs, buffers



# Groundwater Monitoring

- Reflects Current Policy
- Risk Based
- Monitoring Changes Similar to SW

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# Proposed Implementation Rule – 2T .1311

- Notification to Submit Plan
- Rule Provides Basis
- Emphasis
  - Nutrient impaired watersheds
  - Presence of drains, ditches, etc.
  - Lack of riparian buffers
  - Number of operations in basin
- Flexibility to Adjust Priorities



## **Division Recommendation**

The Division recommends granting the petition by initiating the rule making process with the Division proposed rules 15A NCAC 02T .1310 and 15A NCAC 02T .1311.

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