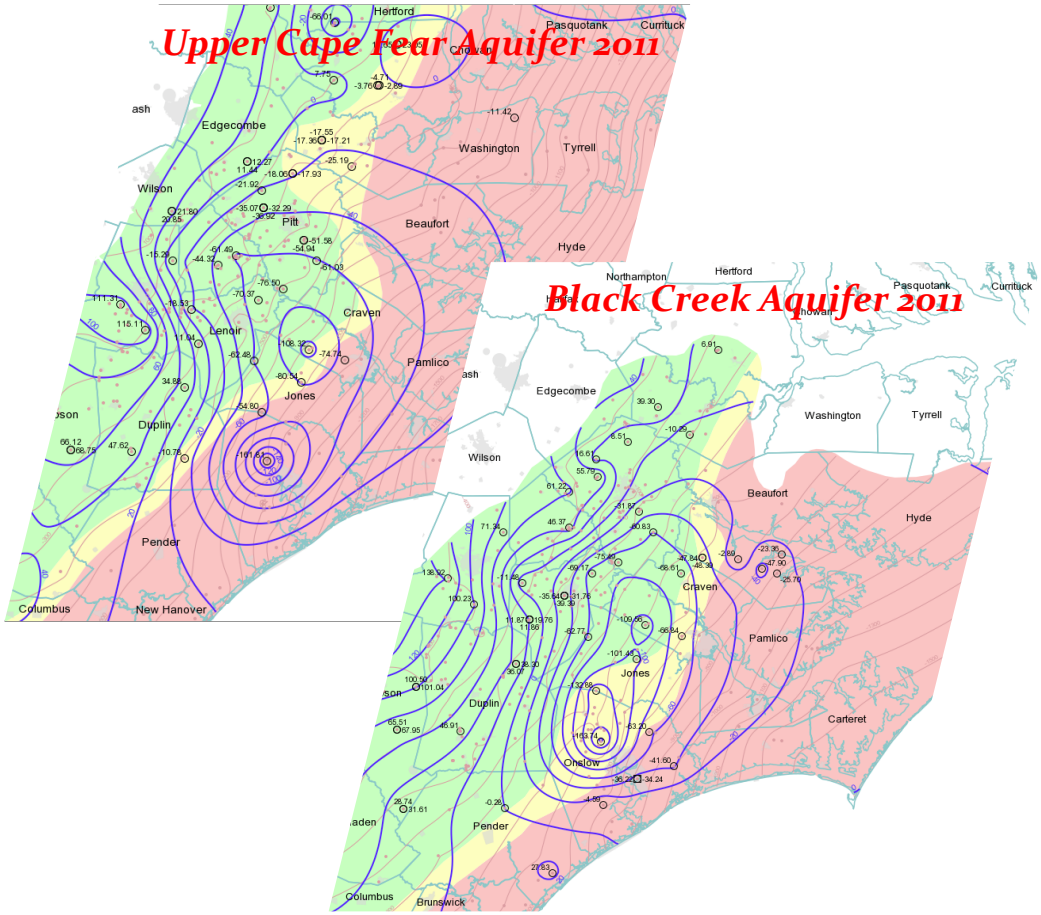
2013 CCPCUA Draft Assessment

Central Coastal Plain Capacity Use Area



Nat Wilson

Division of Water Resources

Ground Water Management Branch

Water Allocation Committee Meeting

Archdale Ground Floor Hearing Room

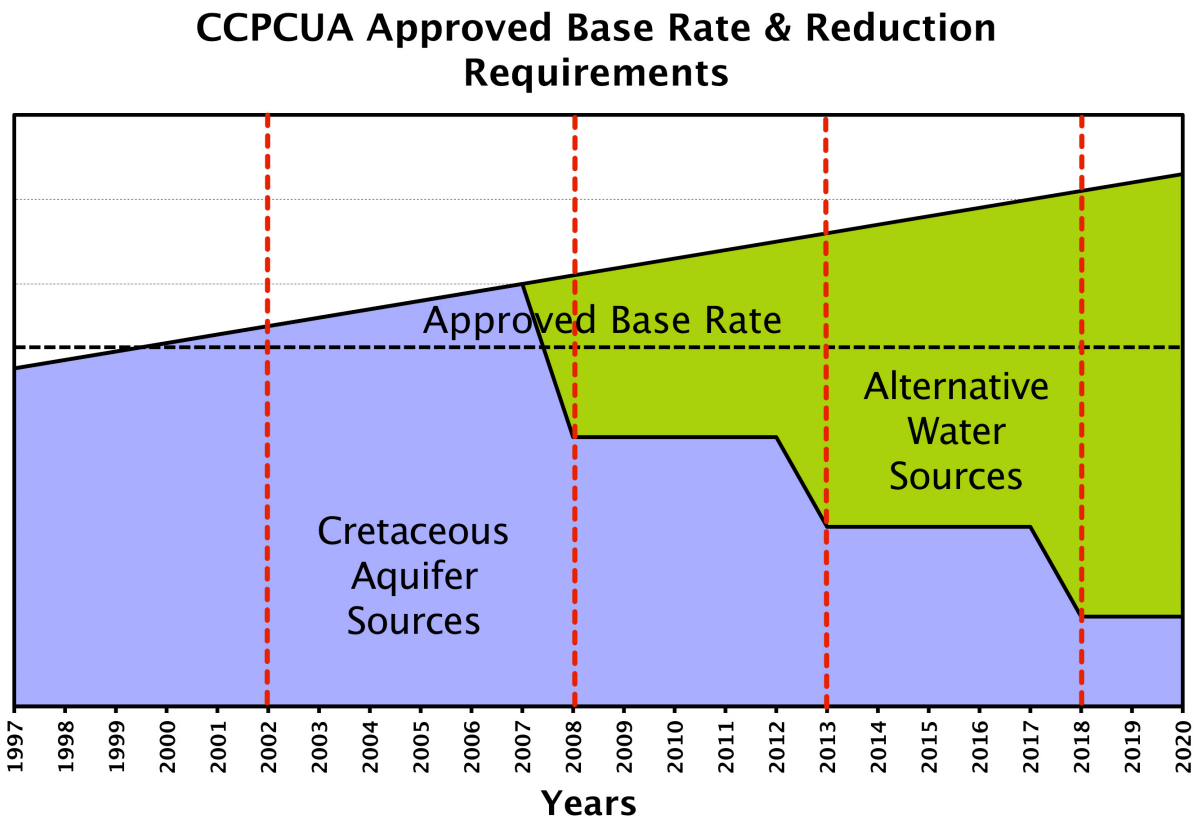
March 13, 2013

Introduction & Conclusions

- CCPCUA assessment background
- Current aquifer conditions
- Permit holder suggestions
- Criteria driven permit review
- No changes to reduction zone map or percentages
- Use provision .0502 (p) to allow more flexibility to manage reductions

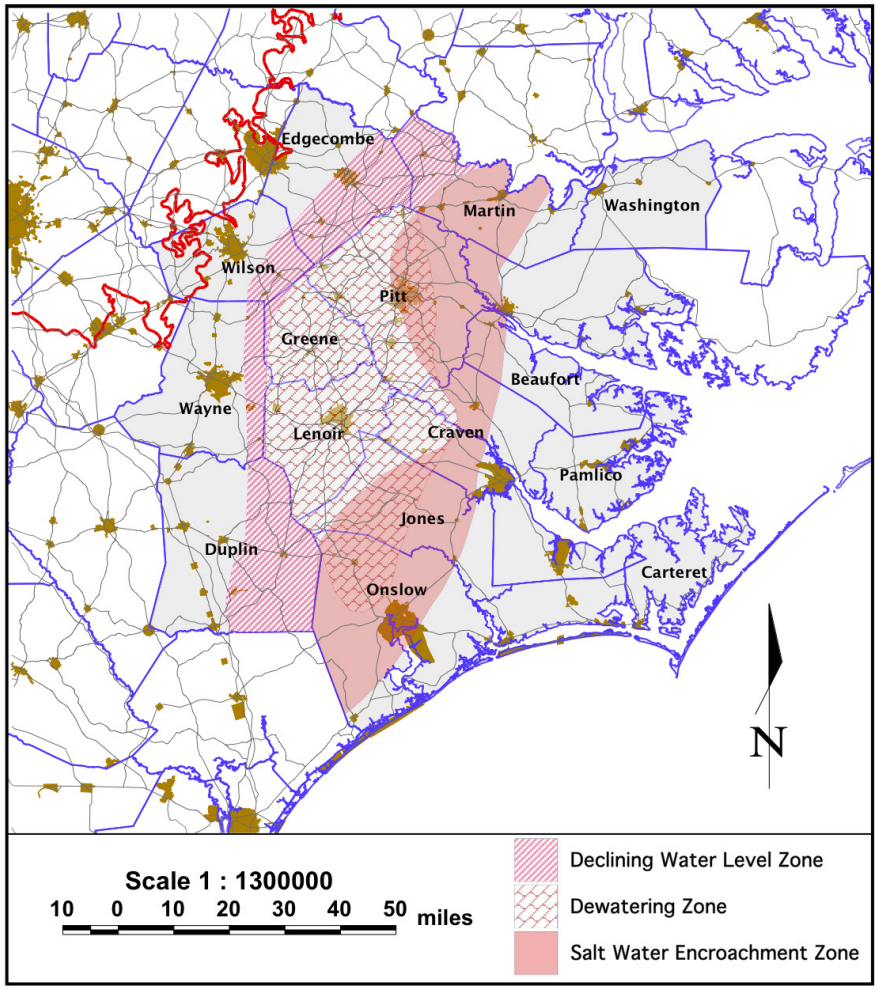
CCPCUA Assessments

- 15A NCAC .0503(7) requires an analysis of aquifer data in 2008, 2013 and 2018.
- These years coincide with the beginning of each phase of reduction.



How much recovery?

CCPCUA Cretaceous Aquifer Zones



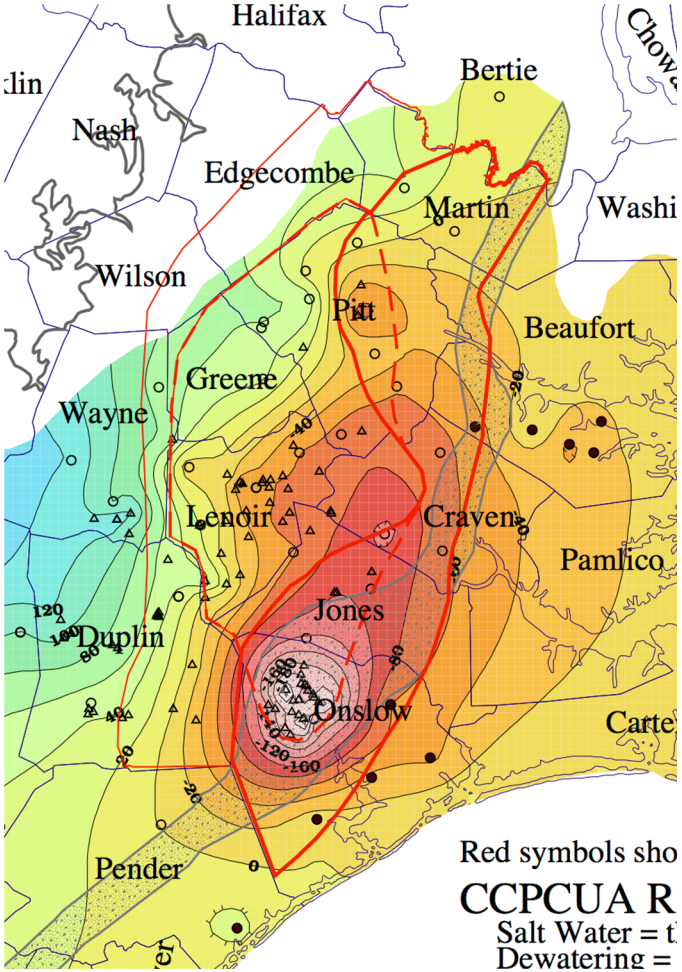
- Reduction zones dictate the percentage reduction from an approved base rate
- Permit holders are asking “give us a number” or “what recovery is necessary?”
- We may need more flexibility than broad brush zones

DWR Network & CCPCUA Reporting

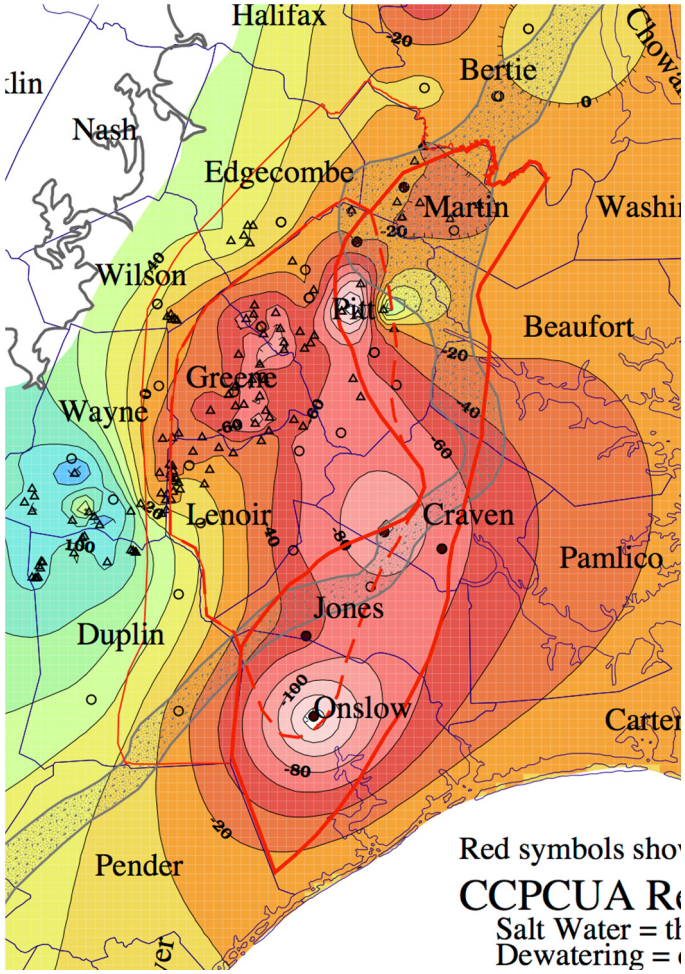
- CCPCUA requires reporting of daily water withdrawals by source
- Monthly static and pumping water levels
- Annual sampling and chloride analysis
- 607 wells at 204 sites statewide, 177 new wells at 53 sites since 1998
- Automatic recording equipment at over 74% of wells
- Chloride sampling every 2 – 3 years

2012 Pot Map vs. Reduction Zones

Black Creek Aquifer

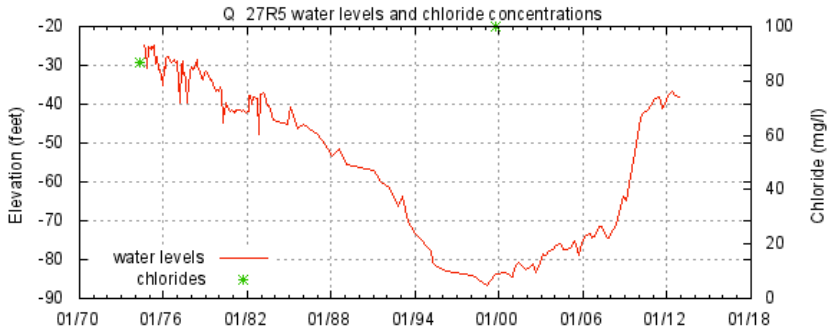


Upper Cape Fear Aquifer

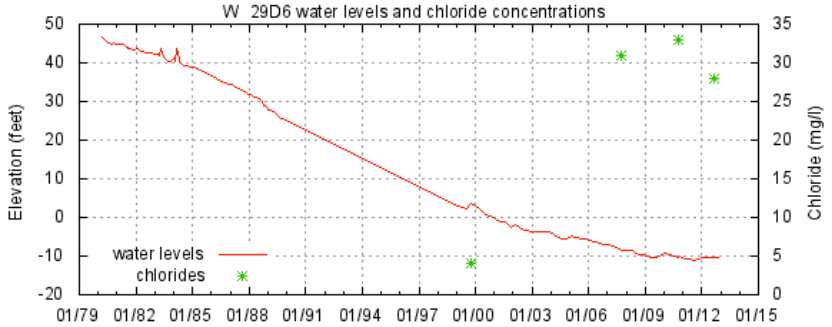


DWR Hydrographs

Kinston Yard Station, Lenoir County

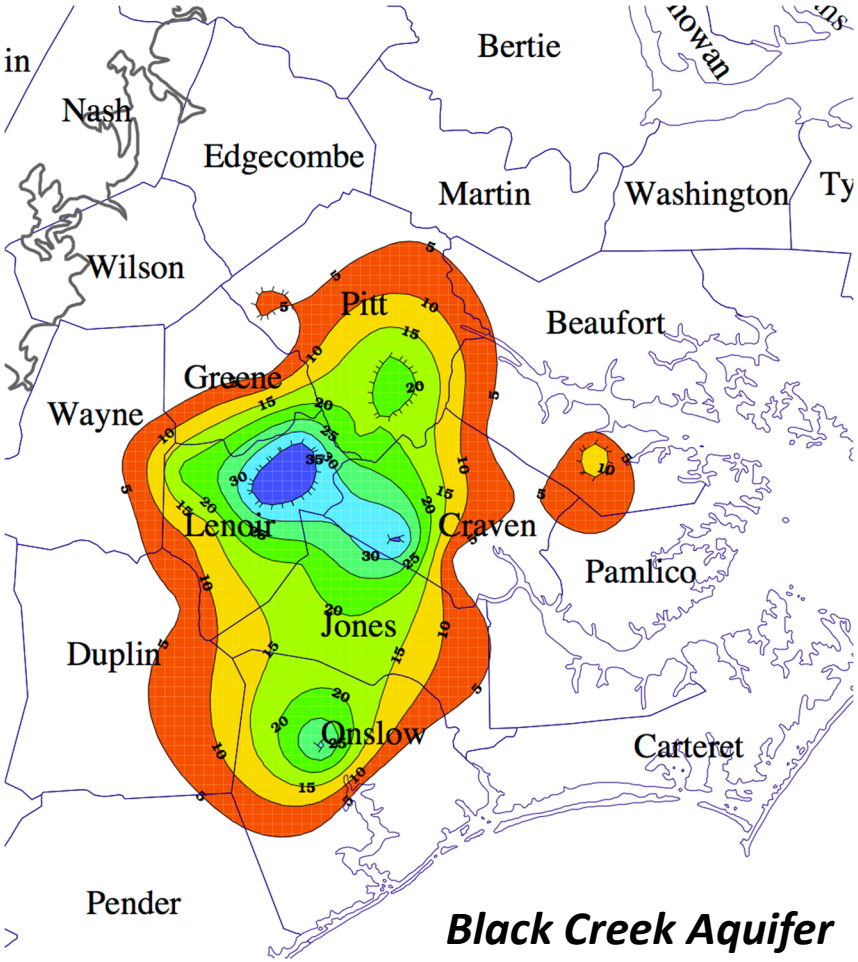


Chinquapin Station, Duplin County

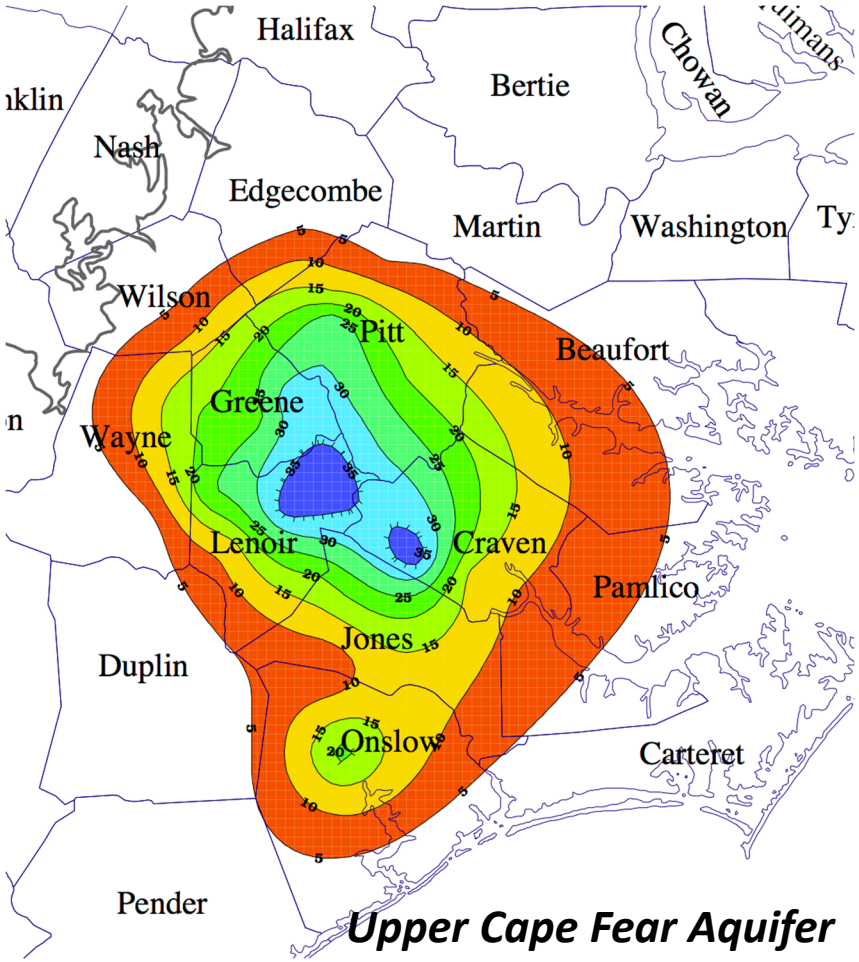


- Mixture of water level responses depending on location and aquifer
- Major rebounding of water levels after 2008
- New surface water intake on the Neuse and ~90% cutback in withdrawal from the Cretaceous aquifers

Cretaceous Aquifer Rebound



Black Creek Aquifer



Upper Cape Fear Aquifer

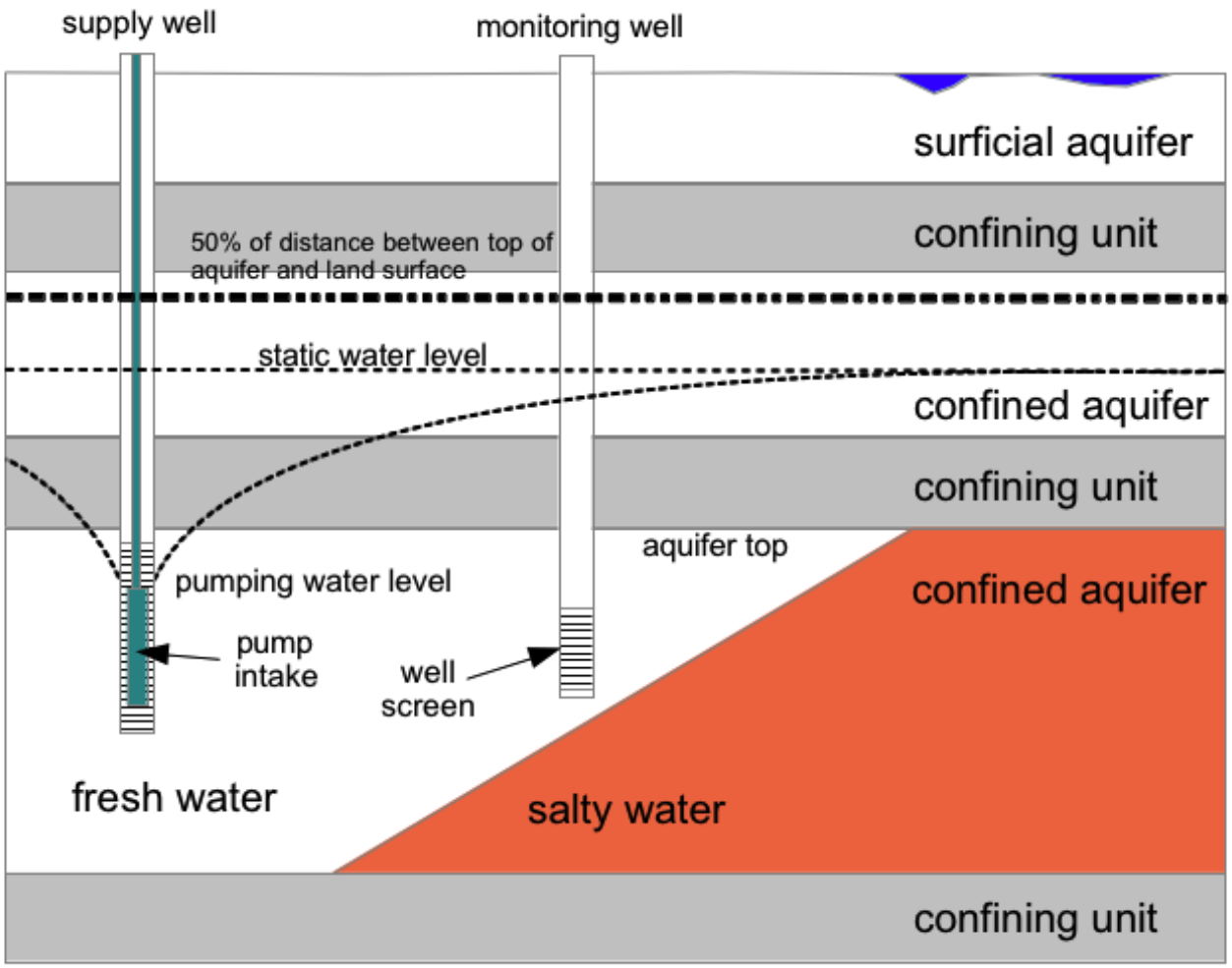
Permit Holder Recommendations & DWR Responses

- Shifting of the boundary between the declining water level and dewatering zones west of Kinston
  - Shifting of wells out of the dewatering zone which are currently drawing pumping water levels below the aquifer top or whose pumps are below the aquifer top
- Boundary between zones is politically based
  - Boundary between zones based on monitoring well water levels and mapped areas of dewatering from 1998
- Mapped rebound is the result of 25% reduction
  - Several permit holders in Lenoir and Pitt counties have reduced withdrawals about 90% -- well beyond the required 25%

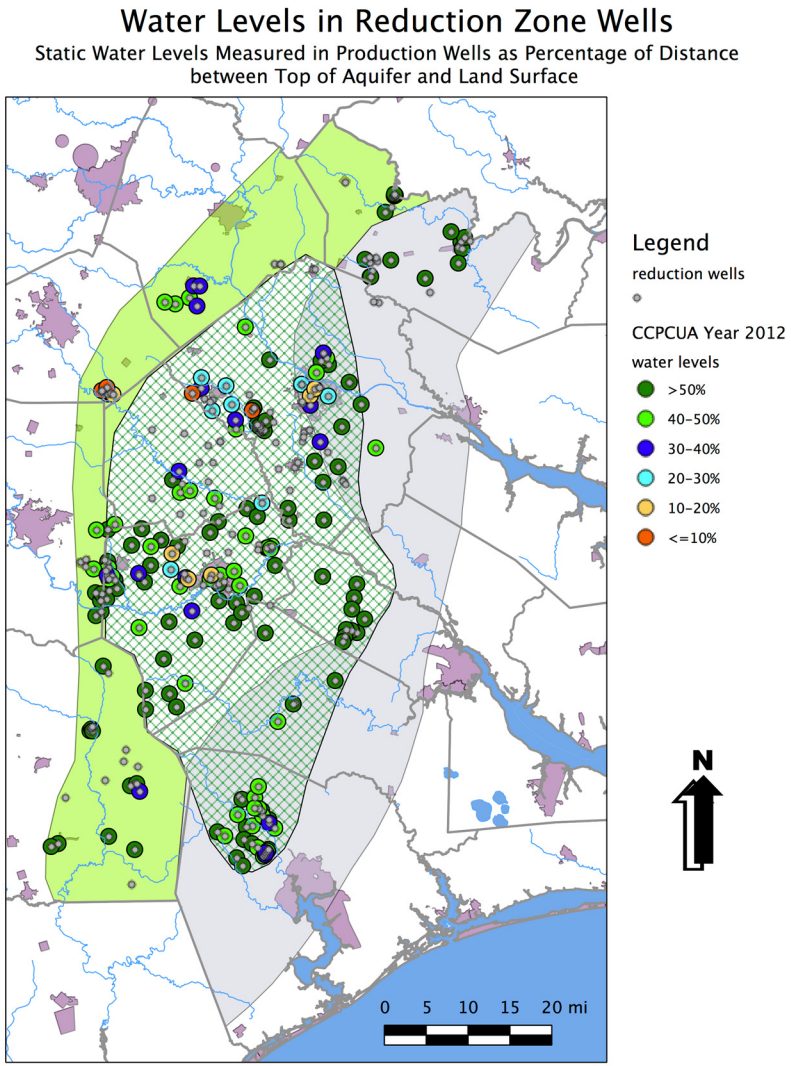
Proposed Changes to Permit Review Process

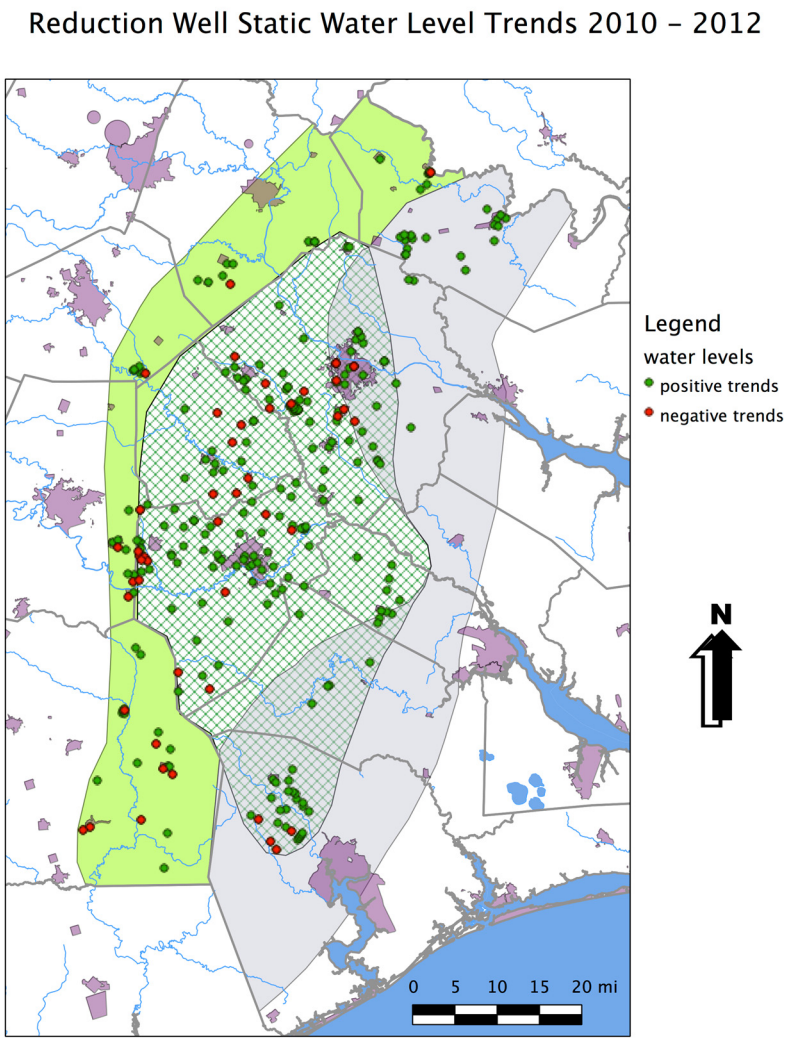
- Division needs flexibility to offer permit holders a different plan than reduction schedule in rule
- Only offer different plan if reduction wells meet certain criteria
- Economic hardship may be a valid factor for a different reduction plan
- More customer service oriented approach
- Static water levels must be at least 50% of distance between aquifer top and land surface
- Static water level trends must be level or upward trending
- Pump intakes must be above aquifer top
- Pumping water levels must be above aquifer top
- Chloride concentrations in monitoring wells are fresh with no upward trend

Criteria Diagram



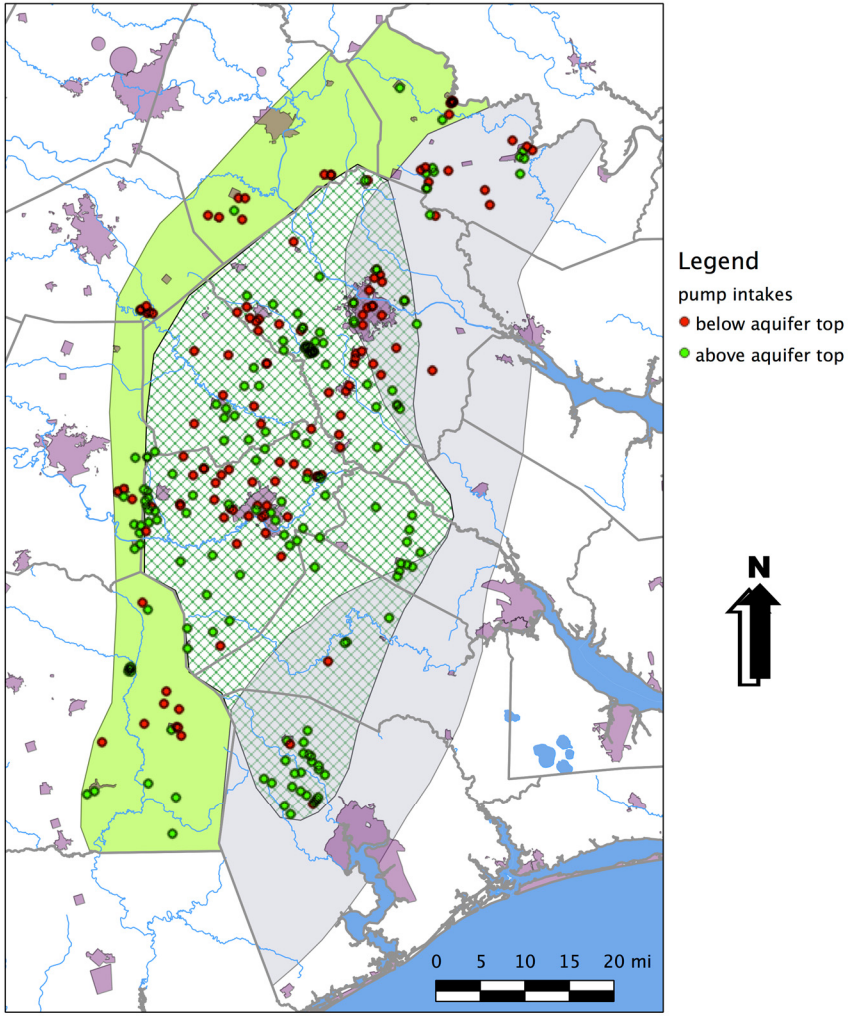
Current Reduction Well Status



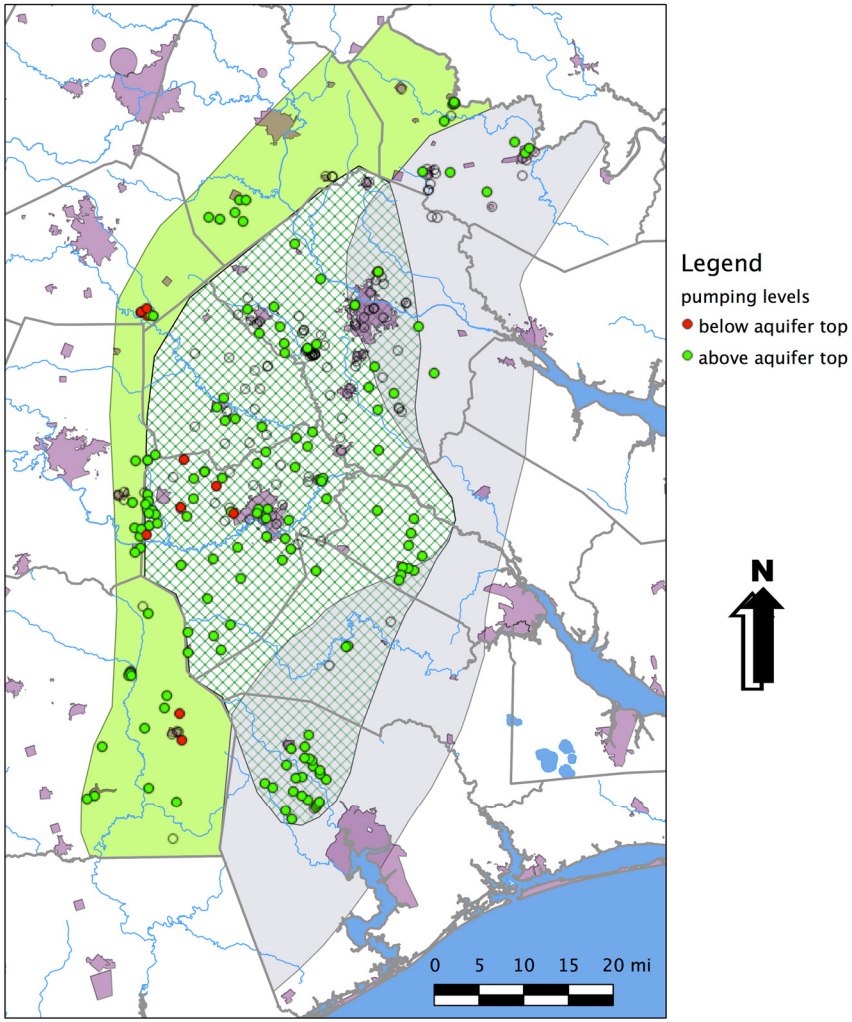


Current Reduction Well Status (cont.)

Current Construction of Reduction Wells



Pumping Water Levels in Reduction Wells
CCPCUA 2012



2013 Assessment Plans

- We'll distribute the draft as a downloadable document in March and hold a public meeting on April 16, 2013 at Lenoir Community College in Kinston
- DWR will accept public comments on the draft document before June 1, 2013
- The final document, integrating comments, will be submitted to the EMC in September 2013
- Public comment appendix