



Georgia's
State Water Plan

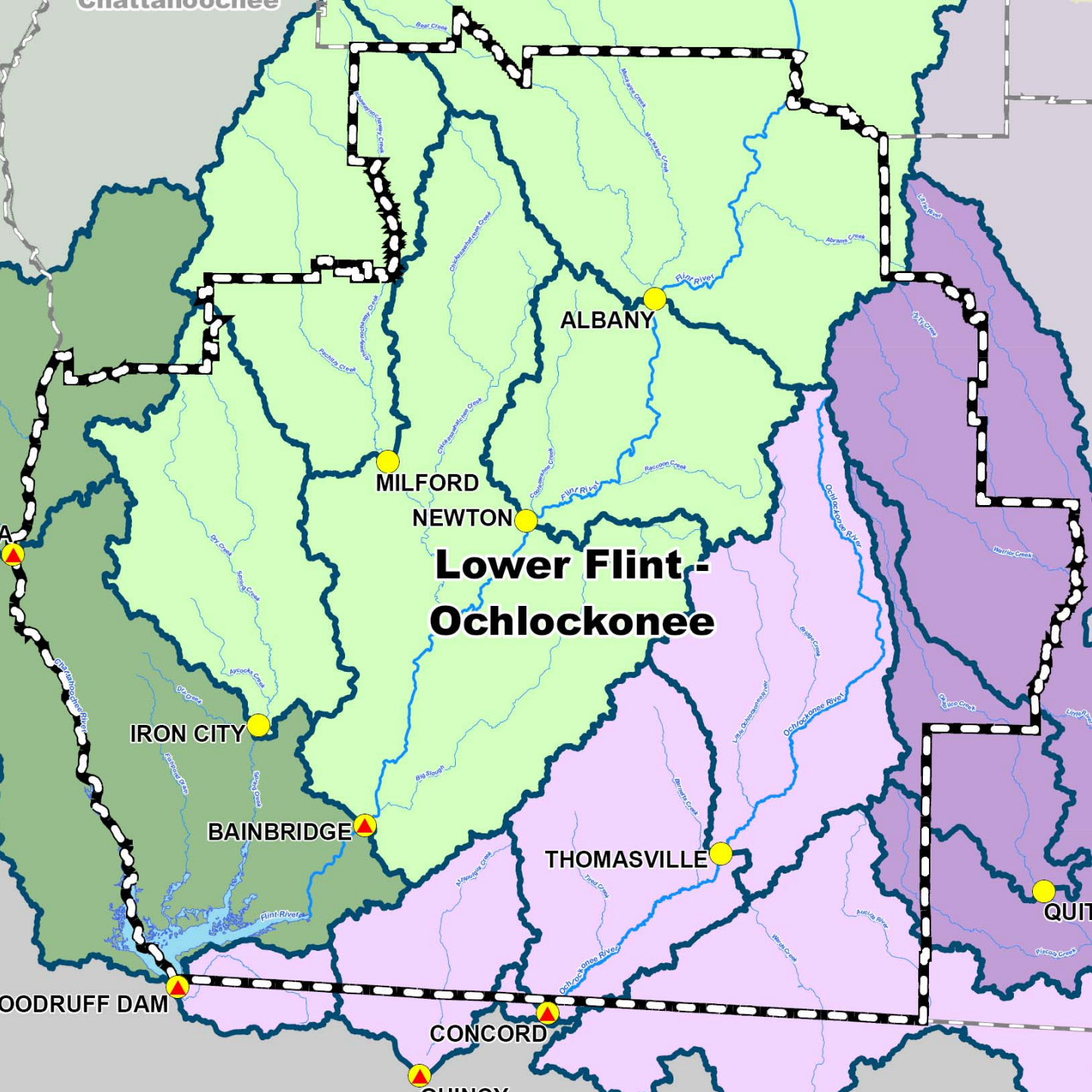
**Baseline and Future
Resource Assessment
Council Input**

Baseline Resource Assessments

- Presented at six Joint Meetings Jan. 15 – Feb. 1, 2010
- Synopses and detailed technical report to be released in Q1 2010 at: www.georgiawaterplanning.org
- 60 day public comment period
- EPD will consider all comments, provide responses, and make necessary revisions
- Assessment refinements expected based on input from:
 - Council members
 - Interested groups
 - General public
 - Scientific and engineering advisory panel
- Councils use preliminary baseline resource assessments to begin the initial selection of management practices

Future Resource Assessment Process

Resource	Scale of Assessments	Required inputs (active Council participation)
Surface water availability	Local Drainage Area	<ul style="list-style-type: none">■ Withdrawals (mgd)■ Storage (mg)■ Returns (%)■ Interbasin transfers (mgd)
Groundwater availability	Aquifer unit	<ul style="list-style-type: none">■ Withdrawals (mgd)■ Location
Assimilative capacity	Stream reach or lake	<ul style="list-style-type: none">■ Surface water availability assessment inputs■ Discharge (mgd)■ Location



Bainbridge Node:

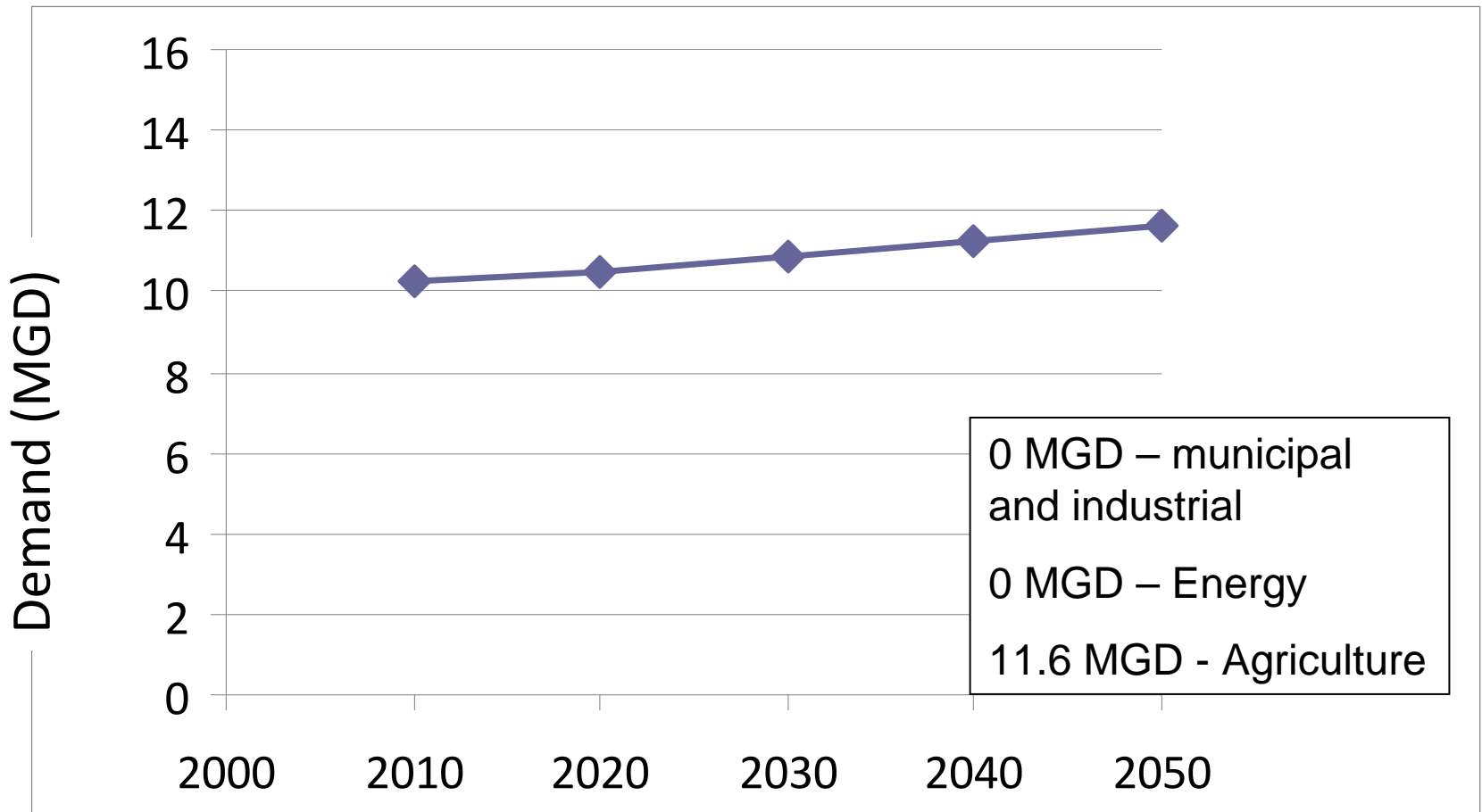
Municipal Users:
none

Industrial Users:
Weyerhaeuser Co

Energy Users:
Crisp Co Power Comm
GA Power Plant
Mitchell

Agriculture Users:
various

2050 Forecasted Surface Water Demand To Node Bainbridge



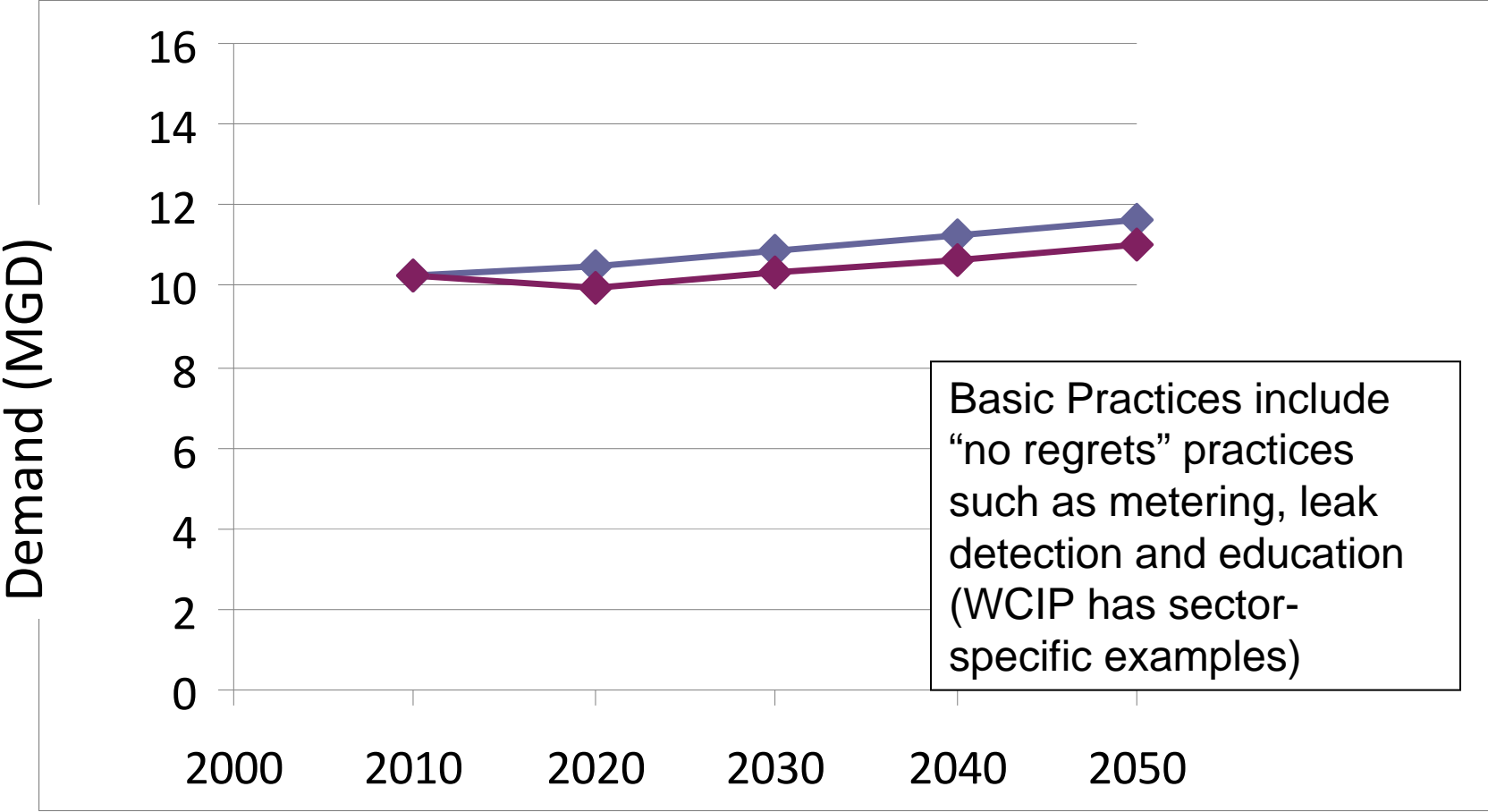
1 BASELINE

2 BASIC PRACTICES

3 FUTURE DEMAND

4 PROVIDE MODELING INPUT

2050 Forecasted Demand w/ Basic Practices



1 BASELINE

2 BASIC PRACTICES

3 FUTURE DEMAND

4 PROVIDE MODELING INPUT

Use Management Practices Portfolio Inputs for Modeling

Resource	Scale	Existing (MGD)	Future (MGD)
SW	Planning Node	0.0 M&I 10.2 Ag <u>0.0 Energy</u> 10.2 Total	0.0 M&I 11.0 Ag <u>0.0 Energy</u> 11.0 Total
GW	Aquifer	72.4 M&I 147.1 Ag <u>0.0 Energy</u> 219.5 Total	91.2 M&I 166.8 Ag <u>0.0 Energy</u> 258.0 Total
WQ	Stream Reach		

Water Quality Management Practices Evaluation Process

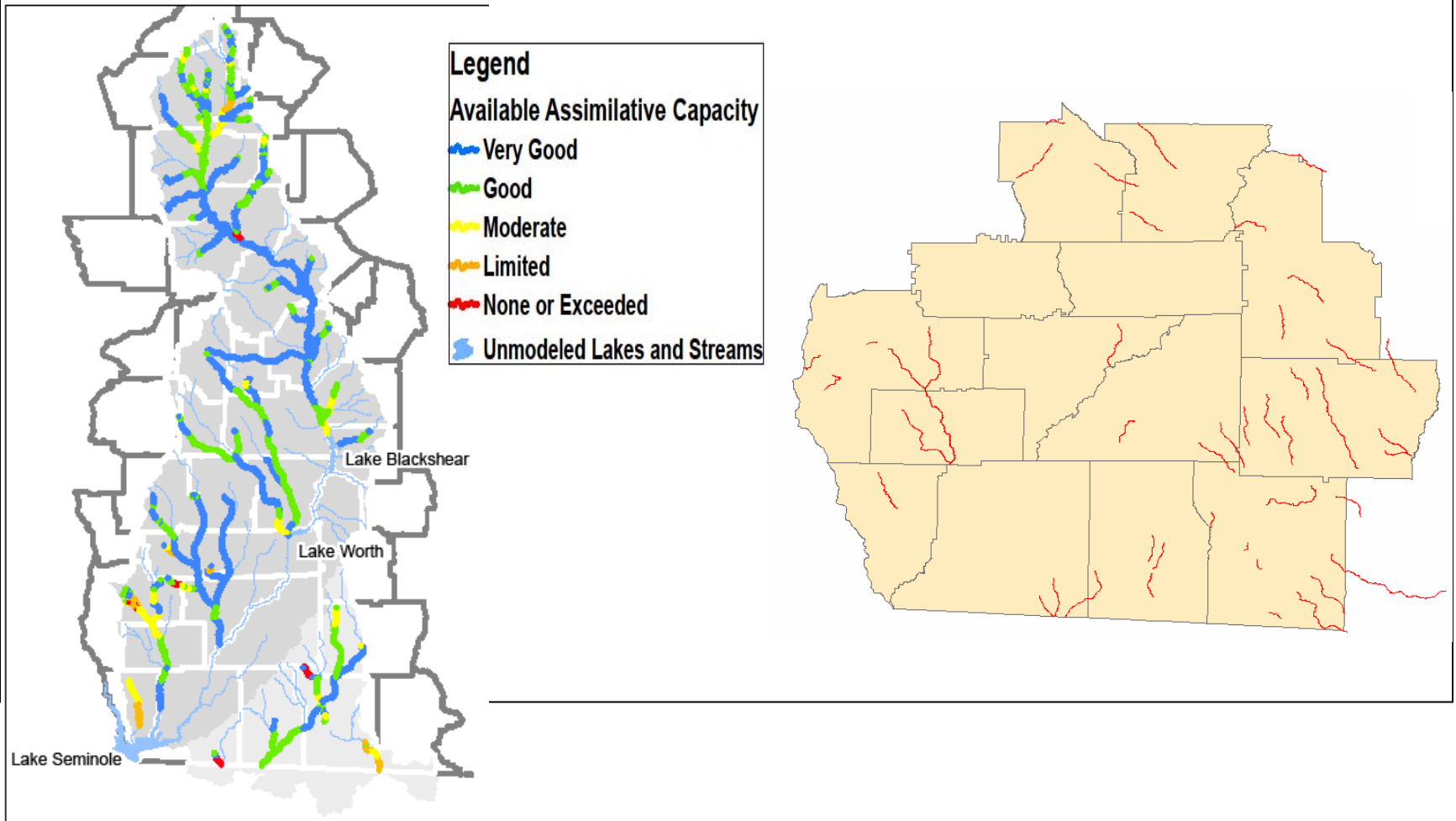
- Water quality modeling approach was “different” from quantity modeling
 - not based on planning “nodes”
 - includes stream reach modeling for dissolved oxygen (available assimilative capacity) and watershed models for nutrients
- Therefore, the process for developing water quality management practices will be slightly different

Where do we begin?

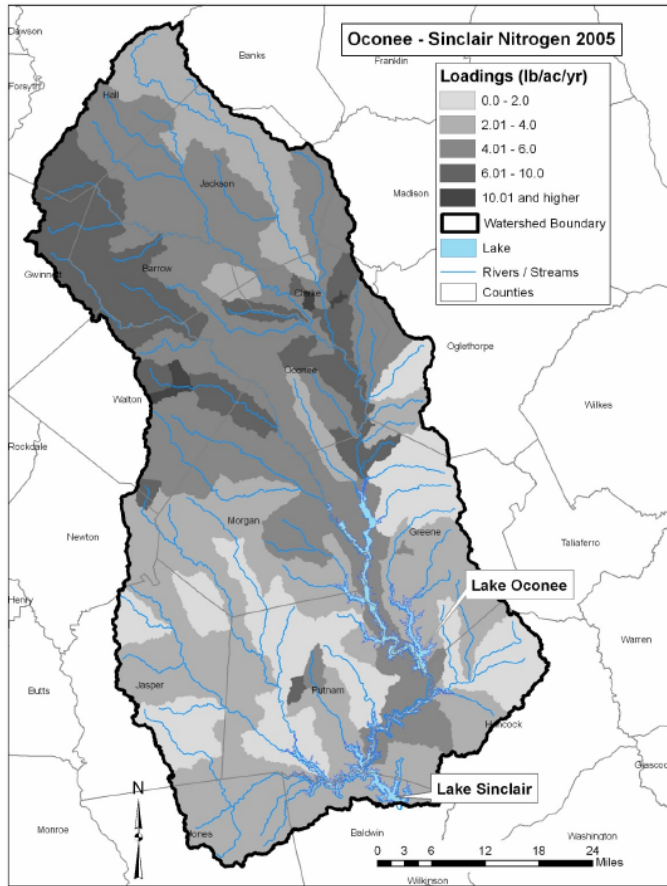
- Evaluate by sub-watershed/reach:
 - where are their existing or potential future water quality concerns?
 - what are the primary sources of pollutant loadings in these areas (point source or NPS)?
 - what kinds management practices are most appropriate for the pollutant and source (point source or NPS)

Review Available Data to Determine Potential Water Quality Needs

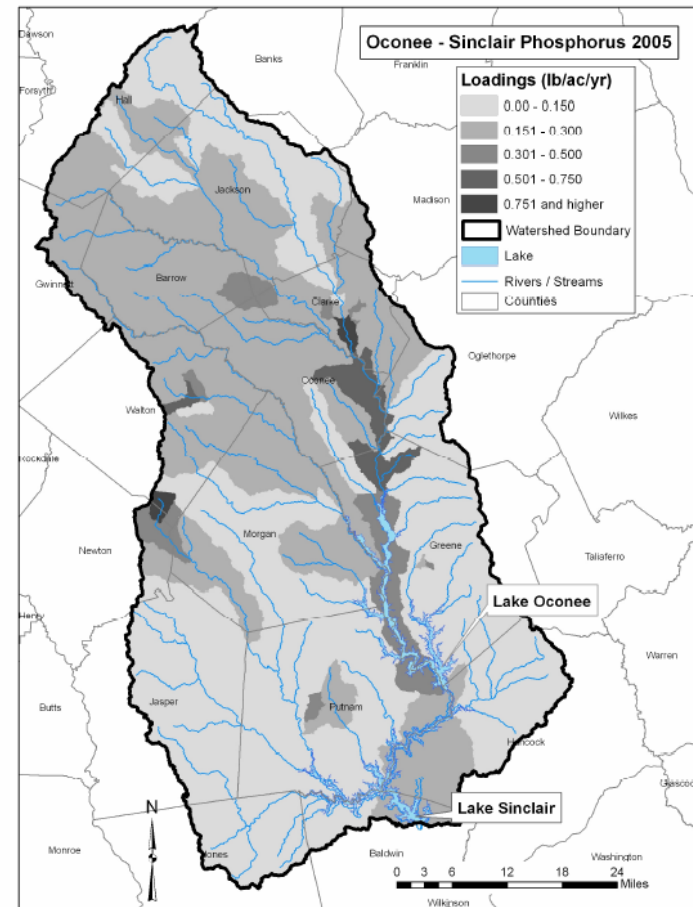
- DO modeling results and Impaired Waters



Nutrient Results – Total Nitrogen and Phosphorus



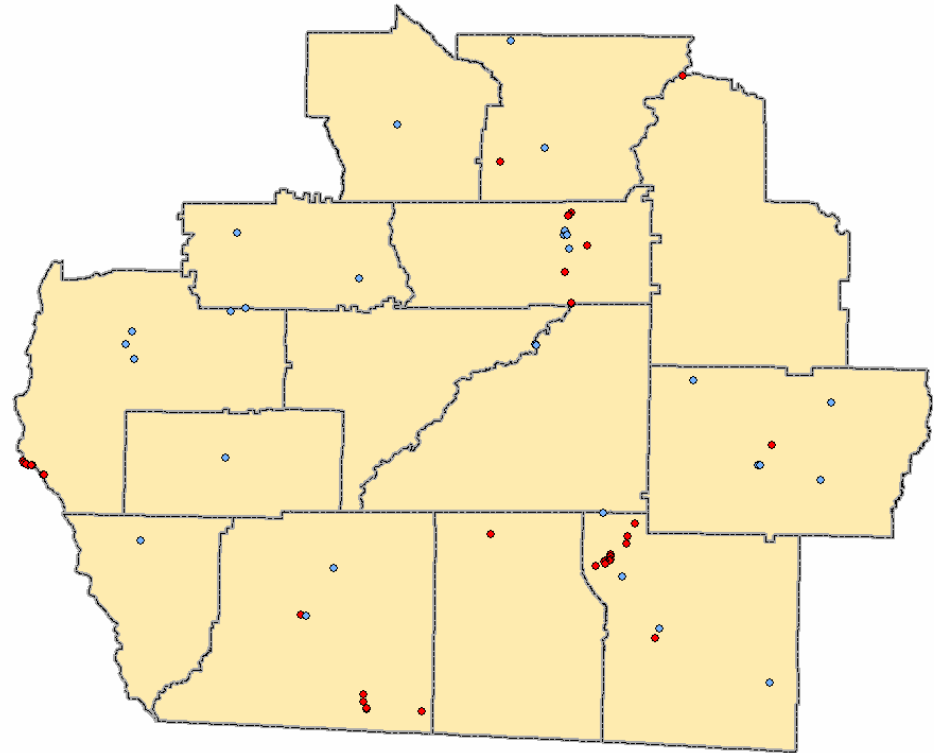
Nitrogen



Phosphorus

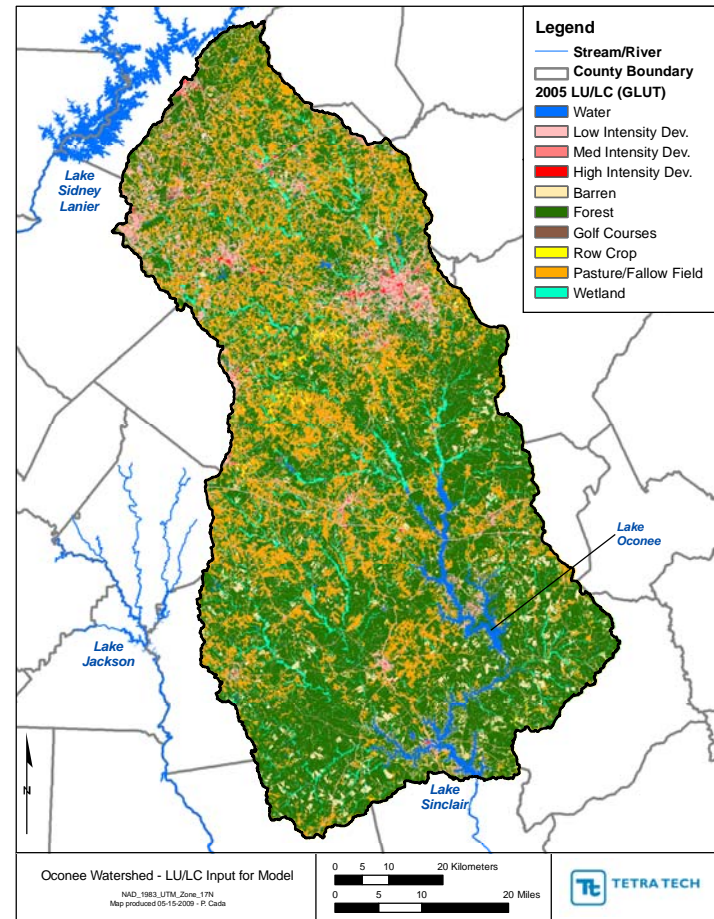
Point Sources

- Review existing discharges
- Identify future plans and potential point source loadings
- Determine potential improvements that maybe needed



Non-Point Source

- Review land uses and potential NPS contributions
- Determine dominant sources
- Identify potential management measures for improvement



Example Management Practices to Address Water Quality

- Non-Point Source
 - ag nutrient management plans – reduce nutrient loadings
 - improved stormwater controls on urban development – improves hydrology and reduces pollutant loadings
 - improved enforcement of sediment and erosion laws – reduces sediment and associated pollutant loadings
 - implementation of existing TMDL plans – addresses watershed specific issues

Path for Selection of Management Practices

- Management practice selection process is iterative
- Appoint council subcommittees
 - Water quantity
 - Water quality
 - Management practices
 - WDCP review
- Subcommittees work with B&V to define “first cut” to bring to the Council at CM6