Georgia Water Planning

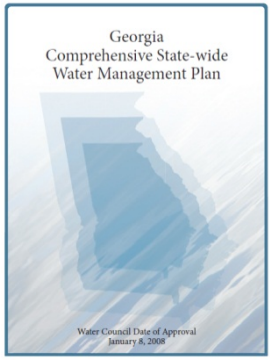
Regional Water Planning

Policy Statement

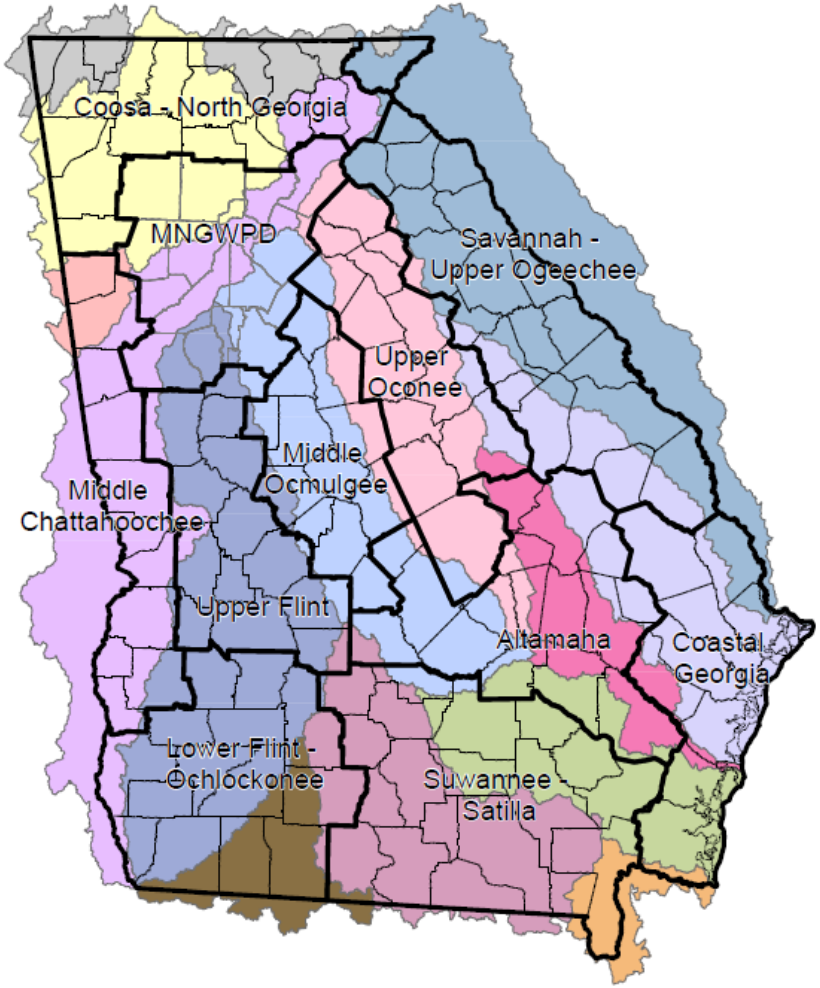
"Georgia manages water resources in a sustainable manner to support the state's economy, to protect public health and natural systems, and to enhance the quality of life for all citizens."

2004 Comprehensive Statewide Water Management Planning Act

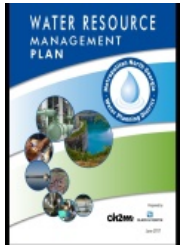
Water Planning in Georgia



State Water Plan
2008



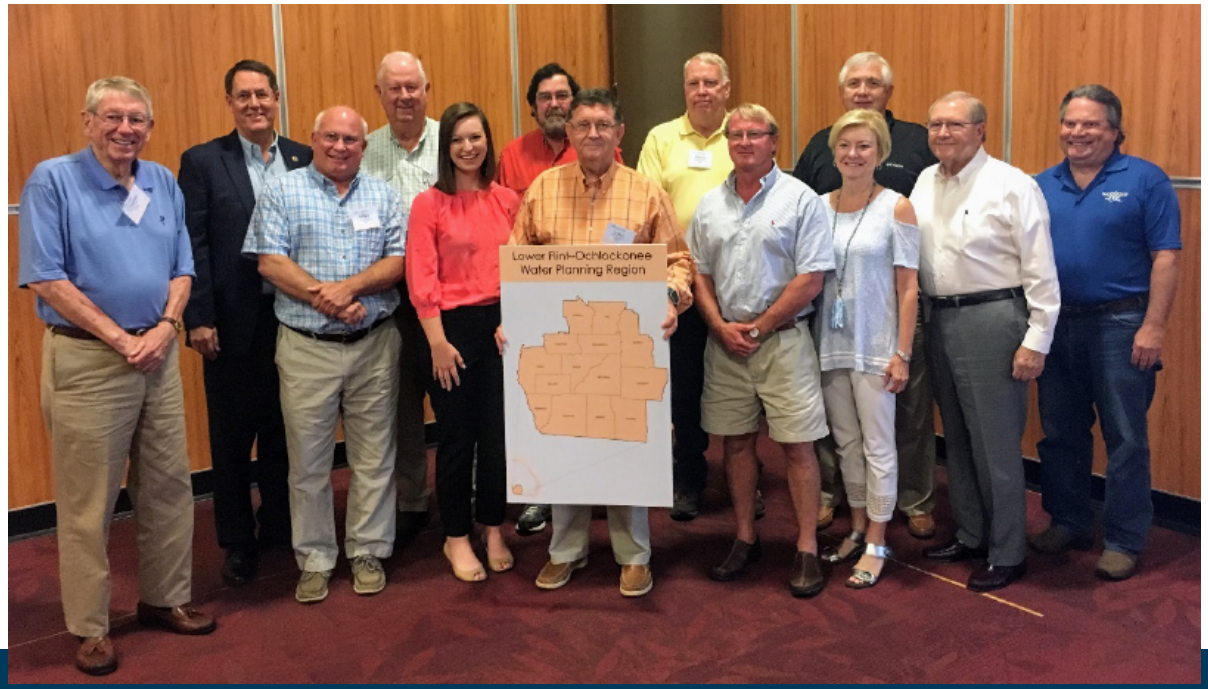
Water Planning Regions
Adopted in 2011
Updated in 2017



Metro Water District
Plans in 2003 & 2009
Integrated Plan in 2017

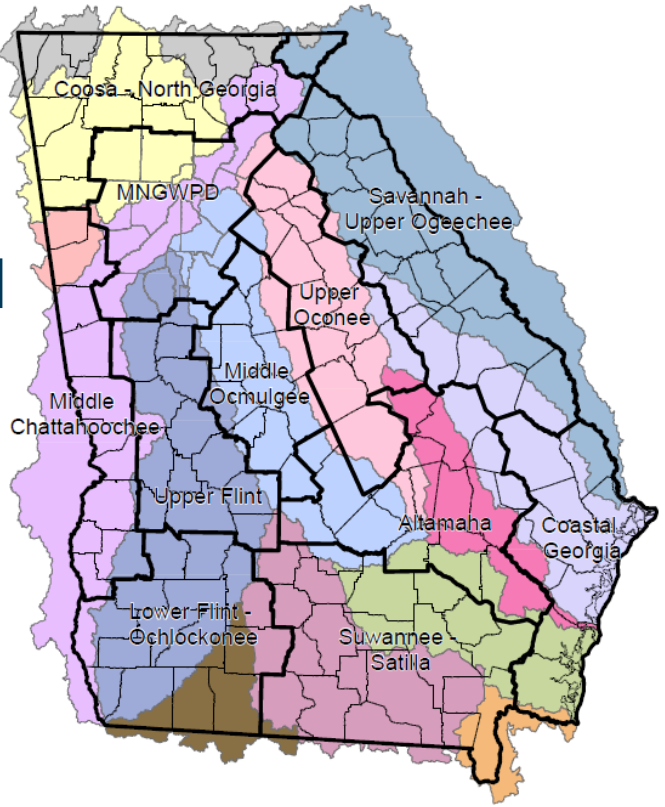
Regional Water Planning Councils

- 10 Regional Water Planning Councils
  - Council members appointed by Gov., Lt. Gov. and Speaker
    - 28 members + House & Senate Ex-Officio members



Regional Water Planning

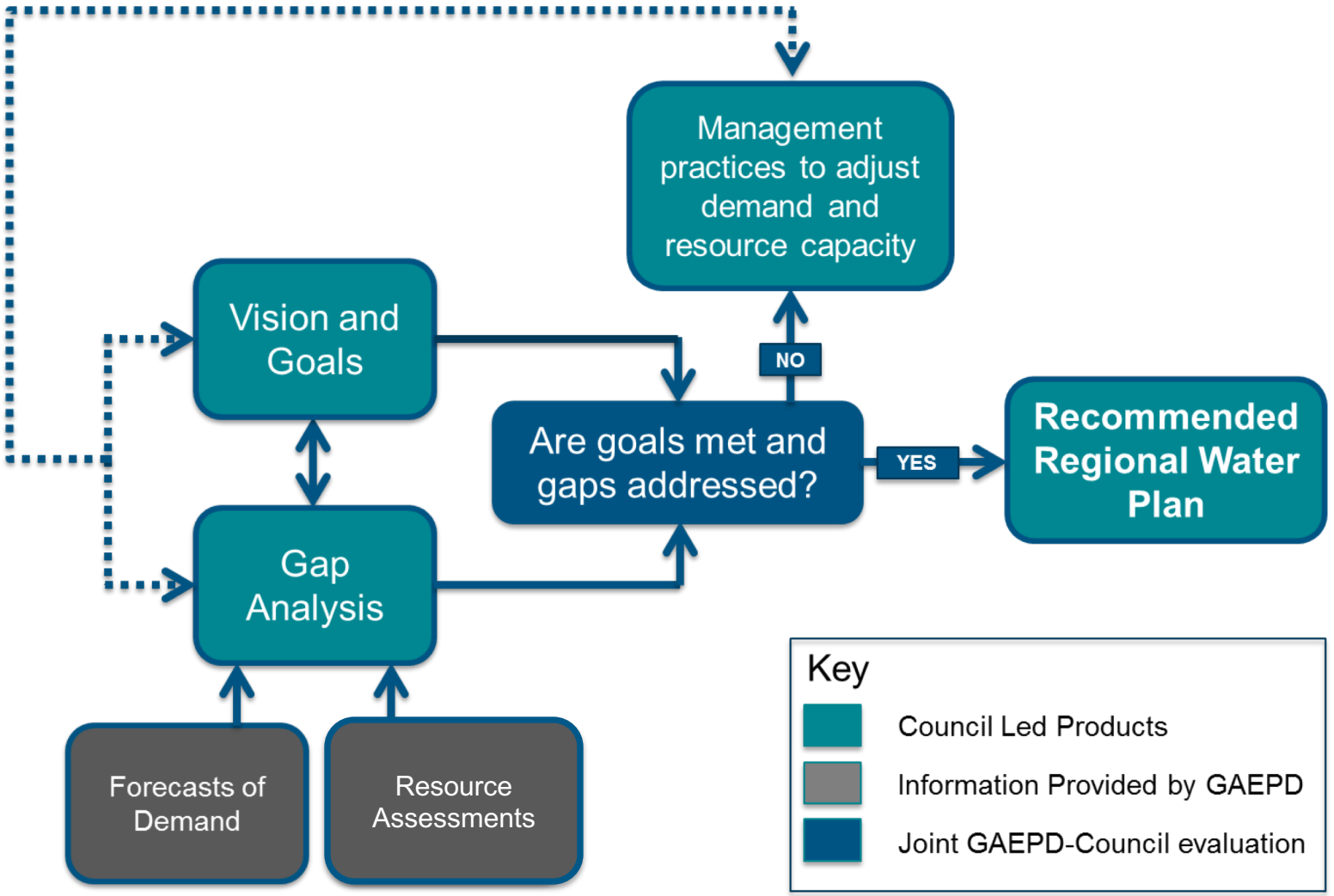
- Why is it important?
  - Rapid population growth in Georgia
  - Address water challenges in a more proactive and comprehensive manner
  - Adaptive process utilizing a regional focus
- How do the Regions coordinate and collaborate?
  - Joint Council meetings
  - Focus on shared resources
  - Plan coordination
  - Subcommittees/meetings focused on common issues
  - Targeted outreach to water users in region



Georgia's Planning Timeline

- Regional Water Plans reviewed and updated every 5 years
- Plan update process will begin during 2020, with Plans updated by June 2022
- Plan revisions begin with discussion of technical information:
  - Forecasts of water demands
  - Resource Assessments

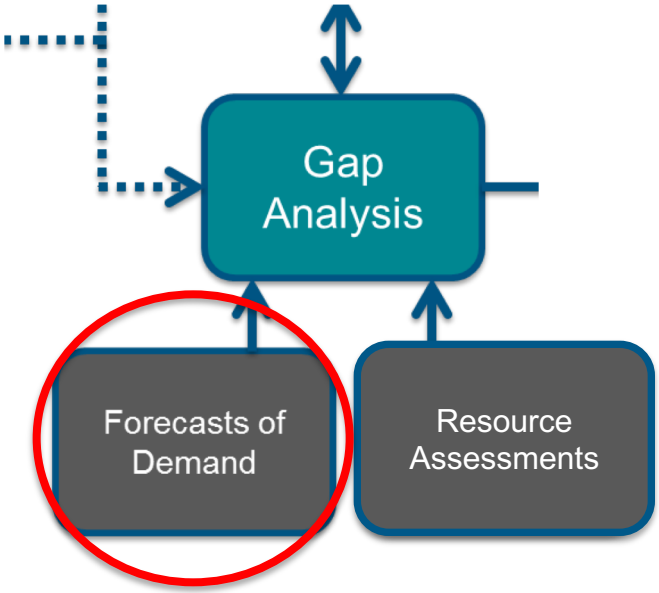
Steps in Developing Regional Water Plans



Forecasts of Demands

Water demands and wastewater returns are estimated under current and future conditions:

- Municipal
- Industrial
- Thermoelectric energy
- Agricultural



Municipal Forecast

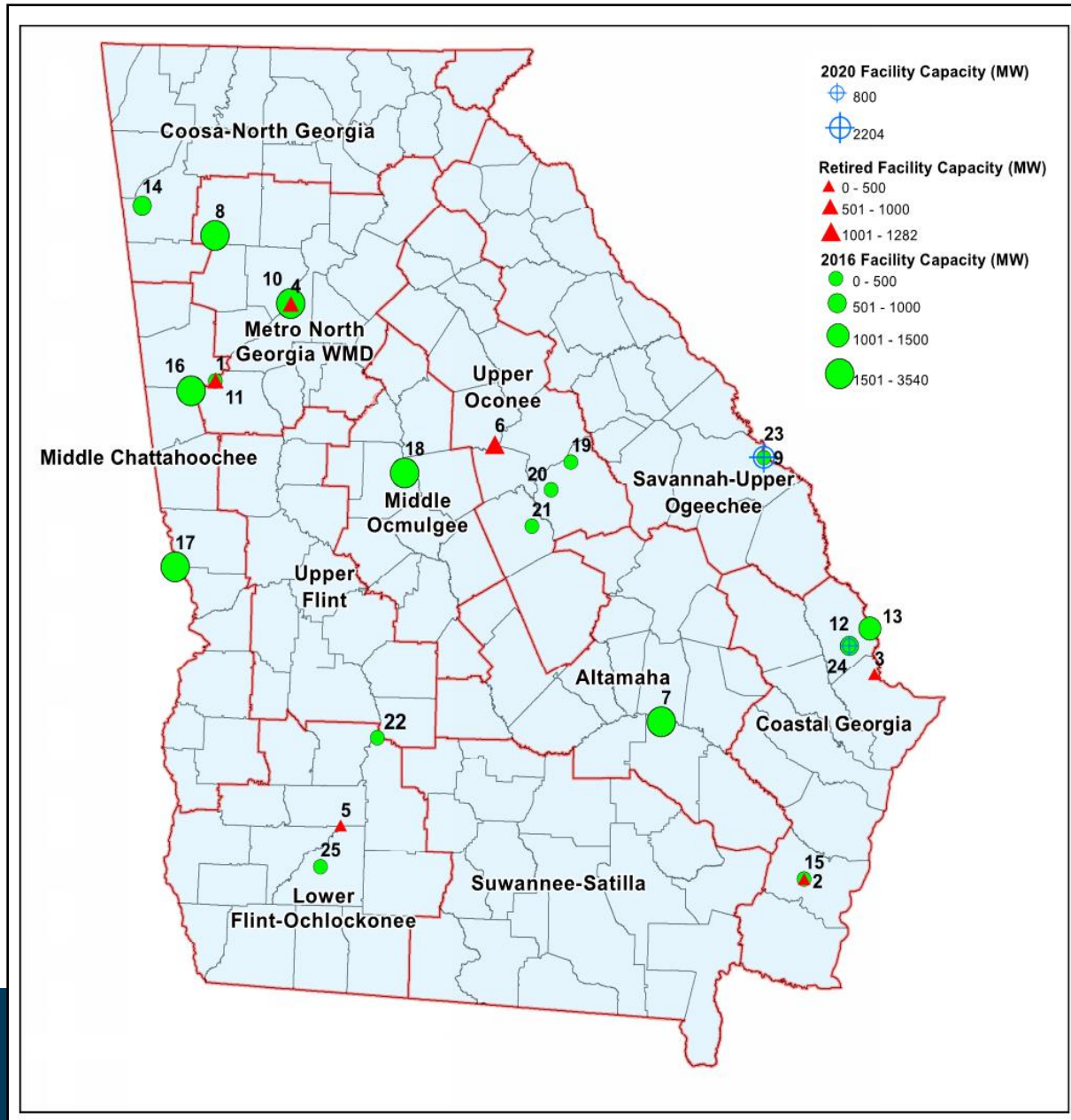
- Population projections inform water use and wastewater return projections
- Governor's OPB prepares population estimates
- Returns include direct discharges, land application systems and septic systems

Industrial Forecast

- Employment projections used to inform industrial water use projections
- Industrial facilities may manage their own wastewater discharges, or they may pretreat and send to municipal wastewater facilities

Thermoelectric Energy Forecast

- Forecast informed by input from power sector
- Generating facilities
- New, retired or converted units
- Withdrawals and returns



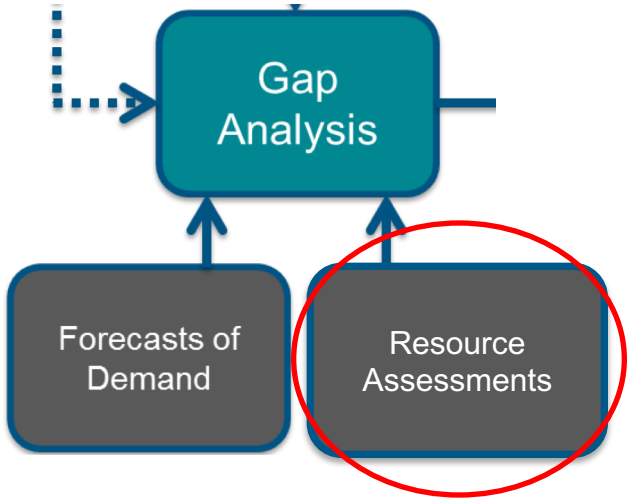
Agricultural Forecast

- Forecast includes irrigated land and other agricultural uses
- Estimates of irrigation water use informed by estimates of wetted acreage and irrigation use
  - Wetted acreage informed by aerial surveys and site visits
  - Irrigation use informed by meters and crop types
- Forecasts informed by economic models that look at crop projections

Resource Assessments

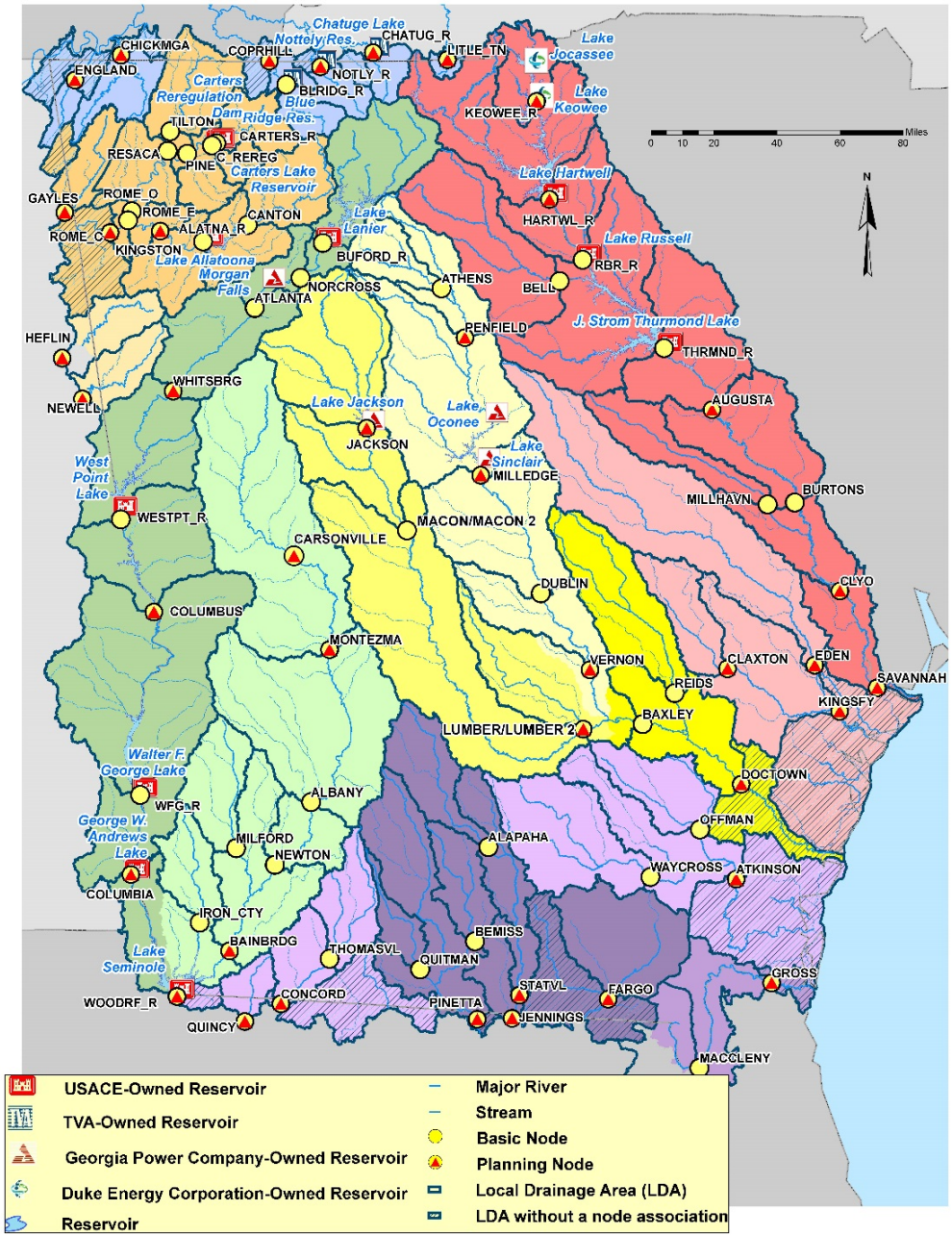
Resource Assessments are conducted under current and future conditions:

- Surface water availability
- Groundwater availability
- Surface water quality



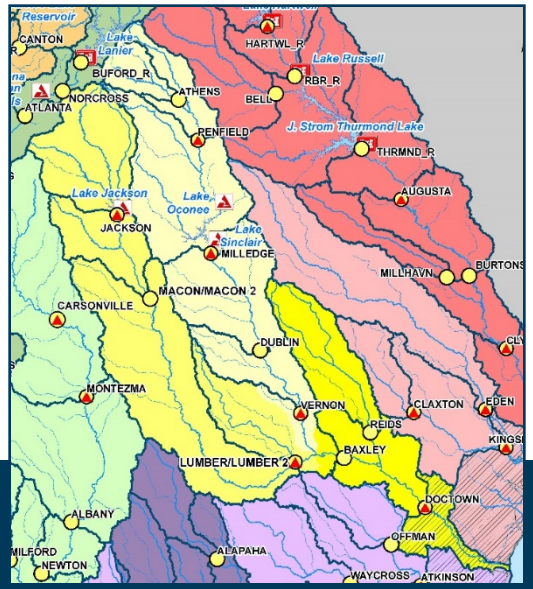
Surface Water Availability

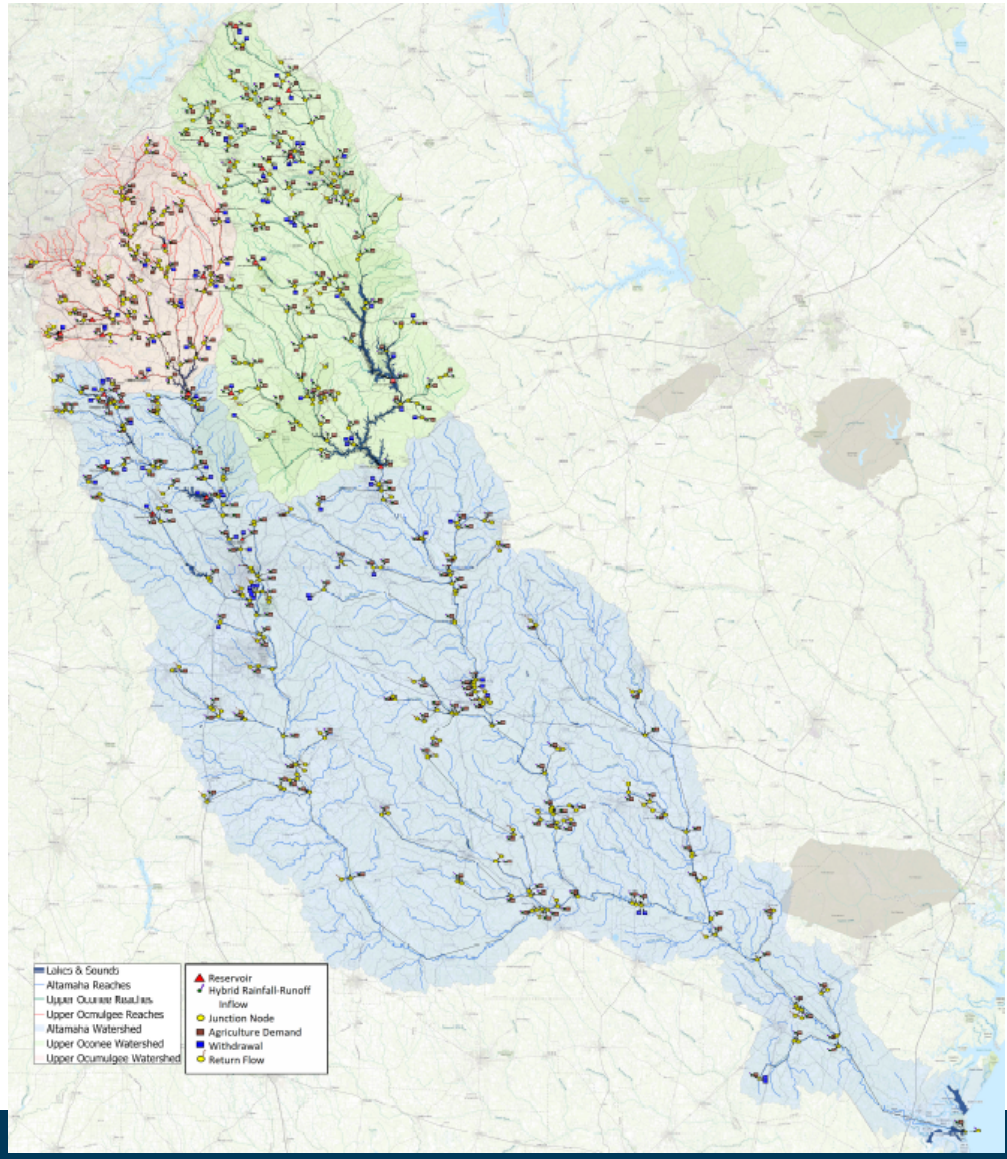
- Hydrologic modeling of major rivers
- Analysis at “planning nodes” (correspond to long-term river gages)
- Develop unimpaired (“natural”) flows
- Current and future demand modeling scenarios
- Compare modeled flows to low flow thresholds



Surface Water Availability

- Developing finer-scale hydrologic models (nodes at discharge and withdrawal points, at reservoirs and at flow gages)
- Starting with Oconee, Ocmulgee and Altamaha basins



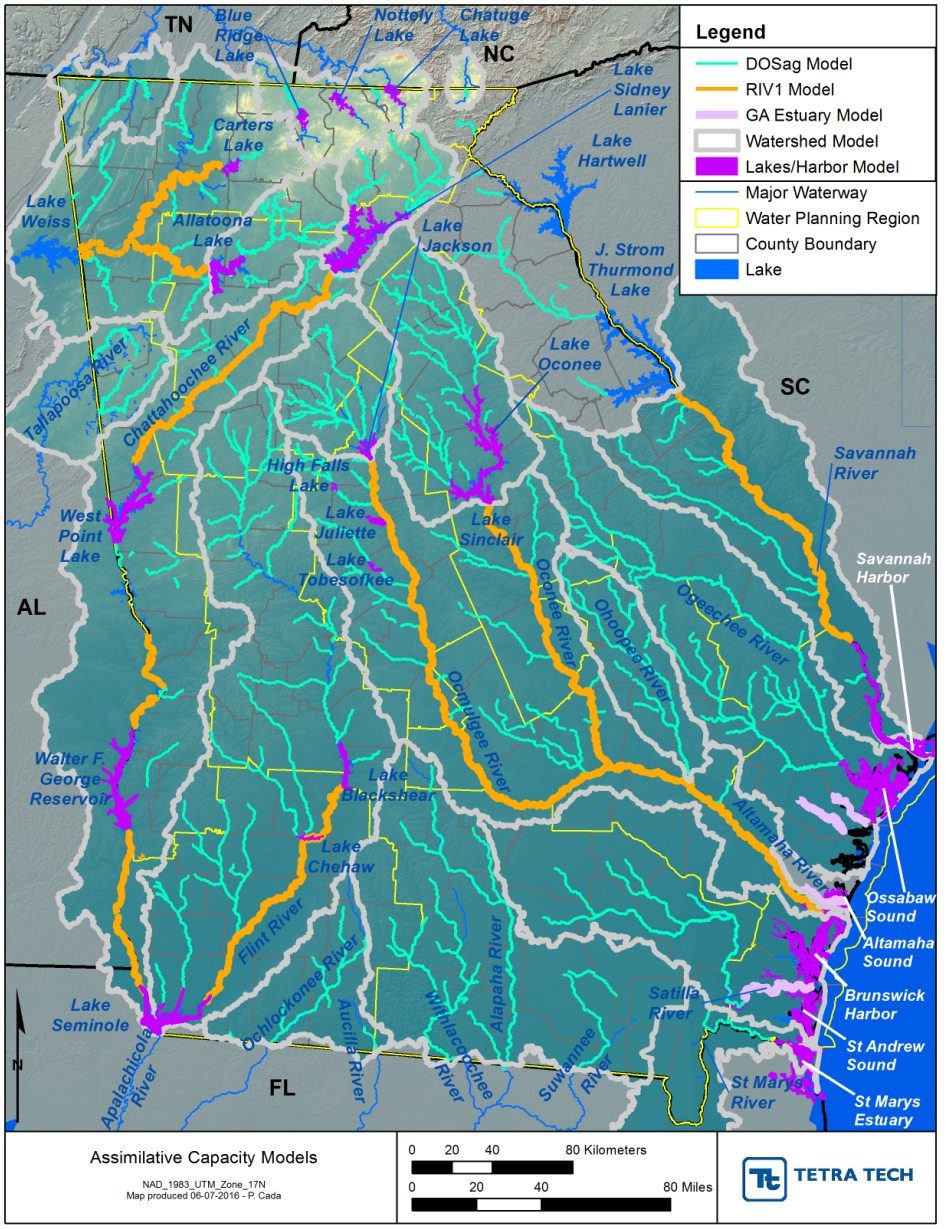


Groundwater Availability

- Groundwater modeling of prioritized aquifers
- Estimated range of sustainable yield compared to current & future demands
- Moving from steady-state to transient analyses in specific areas

Surface Water Quality

- Water quality modeling using various river and watershed models
- Flow, water quality and other data is used to develop the models
- Analyzing levels of dissolved oxygen, nutrients, and chlorophyll *a* under current and future conditions



Regional Water Plans

- Based on technical information, and in consideration of their Vision and Goals, the Councils develop:
- Management Practices for the region
  - Water Conservation
  - Water Supply
  - Wastewater
  - Ordinances
  - Additional data/research
- Recommendations to the State

Regional Water Planning

- Flexible and adaptive process utilizing a regional focus (with updates every 5 years)
- Address water challenges in a more proactive and comprehensive manner
- Regional Water Plans are used by:
  - EPD to guide water permitting decisions
  - GEFA to guide decisions regarding state loans for water-related projects
- Metro Water District's Plan is directly implemented through permits & EPD conducts annual reviews

Regional Water Plan Implementation

- Councils working to raise awareness of Plans through ongoing outreach
- Councils identifying and coordinating with partners to facilitate implementation
- Seed grants available to support Plan implementation

Councils' Plans and More Information

waterplanning.georgia.gov

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