

UPPER OCONEE REGION

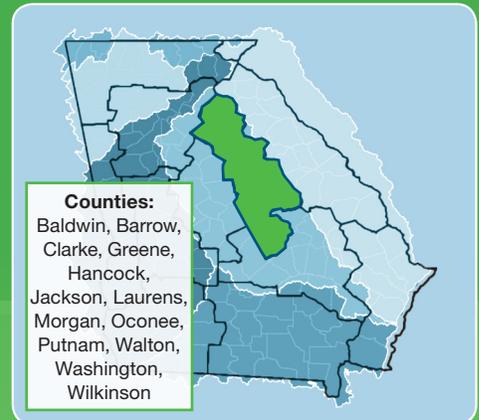
BACKGROUND

The Upper Oconee Regional Water Plan was initially completed in 2011 and subsequently updated in 2017. The plan outlines near-term and long-term strategies to meet water needs through 2050. Major water resources include portions of the Oconee, Ocmulgee, Ogeechee, Savannah, and Altamaha river basins and includes various groundwater aquifer systems. The Upper Oconee Region encompasses several major population centers including Athens and Dublin.

OVERVIEW OF UPPER OCONEE REGION

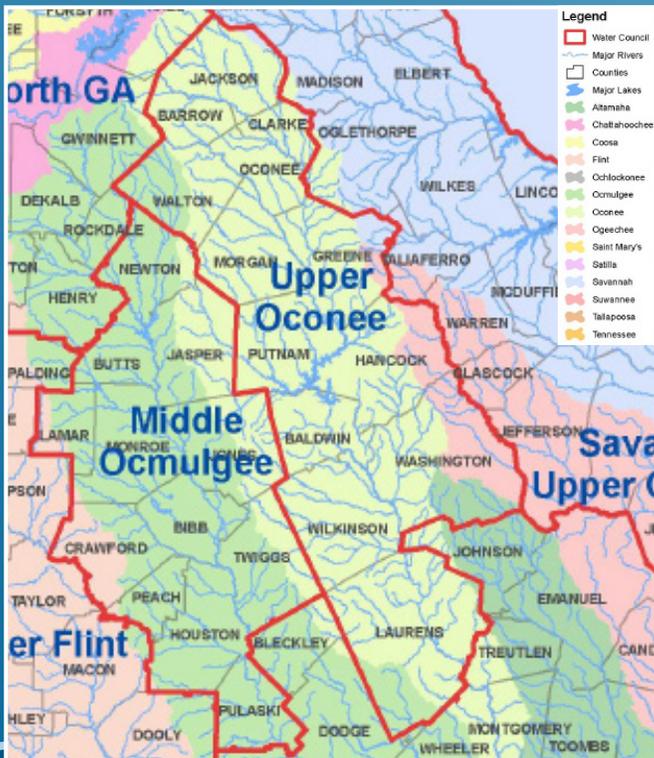
The Upper Oconee Region encompasses 13 counties in the central-northeast portion of Georgia. Over the next 35 years, the population of the region is projected to increase from approximately 577,000 to 877,000 residents. The region's leading economic sectors include government, health care, services, manufacturing, retail and construction.

In 2015, the Upper Oconee Region withdrew approximately 166 million gallons per day (MGD) for water supply to meet municipal (44 percent), industrial (37 percent) and agricultural (18 percent) uses. Surface water and groundwater demand in the region are currently evenly split and projected to increase proportionally over the planning horizon.



KEY WATER RESOURCE ISSUES ADDRESSED BY THE COUNCIL

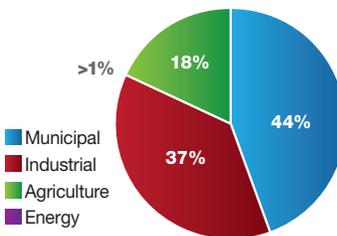
1. Efficient use of the water by all sectors, recognizing the diverse characteristics of the Upper Oconee.
2. Strategic wastewater management in fast growing counties (Barrow, Jackson, Oconee, and Walton Counties).
3. Potential limitations placed on future surface water supplies in existing impoundments.
4. Protecting the water quality of Lakes Oconee and Sinclair and the Oconee River by reducing both point and nonpoint source nutrient loads.
5. The natural capacity of the water bodies to process pollutants is exceeded in the middle (Morgan and Putnam Counties) and lower (Laurens and Wilkinson Counties) portion of the basin due to zones of low dissolved oxygen.



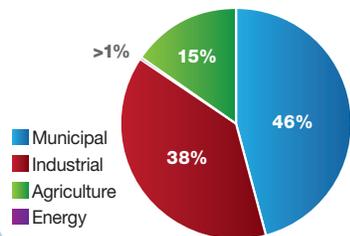
UPPER OCONEE WATER PLANNING REGION

FORECASTED REGIONAL WATER DEMANDS

2015 WATER DEMAND
TOTAL = 166 MGD



2050 WATER DEMAND
TOTAL = 226 MGD



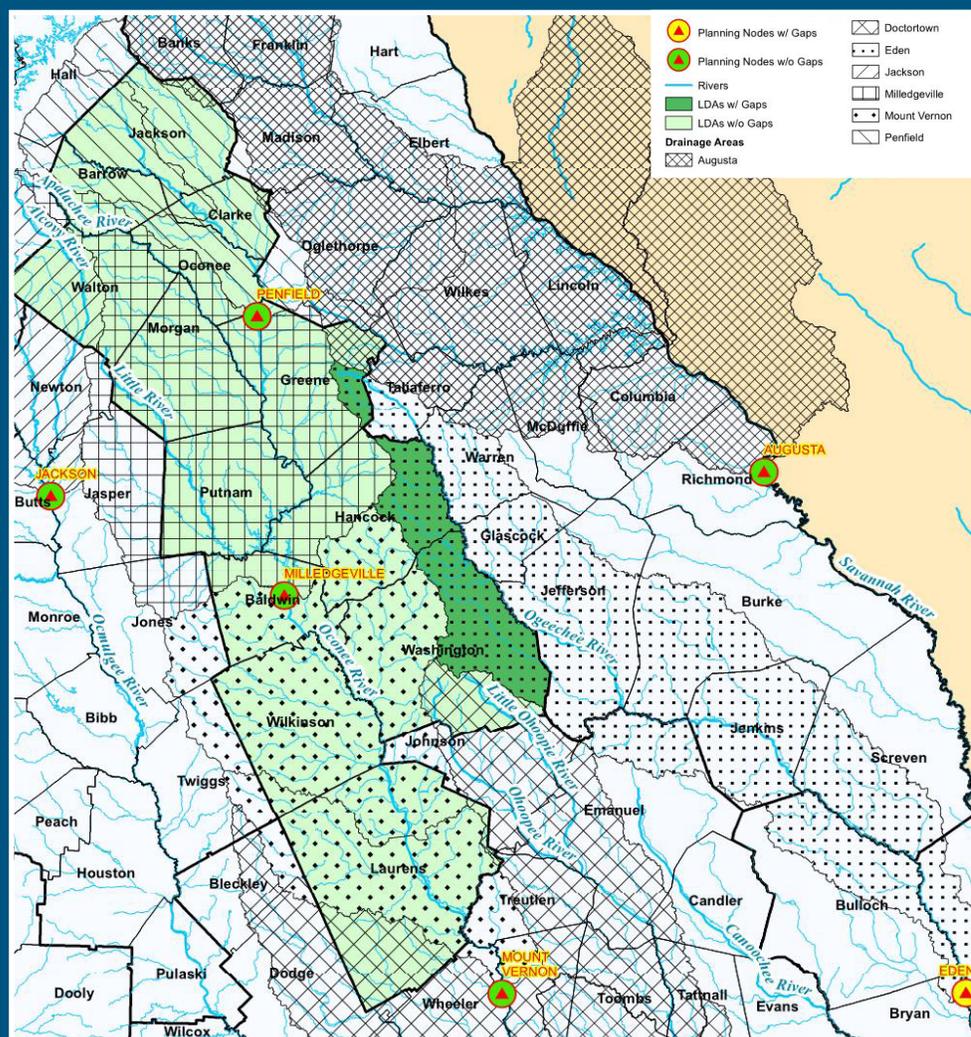
SUMMARY OF 2017 RESOURCE ASSESSMENT RESULTS

GROUNDWATER: At the regional level, there will be adequate supplies to meet the region's future groundwater supply needs over the planning horizon.

SURFACE WATER QUALITY: Water quality gaps were predicted to occur in Lakes Oconee and Sinclair due to excess nutrients in the future due to a combination of point source and nonpoint source pollutant loads from anticipated wastewater discharges and land use changes.

SURFACE WATER AVAILABILITY: Over the next 35 years, the modeling analysis indicates that forecasted surface water demand within the Upper Oconee Region is projected to cause stream flows in the Ogeechee River (at the Eden planning node) to fall below targets for support of instream uses (resulting in "potential gaps"). A map of the node locations, their drainage areas, and a summary of the potential gaps are provided below.

POTENTIAL 2050 SURFACE WATER GAPS IN THE UPPER OCONEE REGION



SUMMARY OF MODELED 2050 POTENTIAL SURFACE WATER GAPS

Node	Duration of Gap (% of total days*)	Avg. Flow Deficit (MGD)	Long-term Avg. Flow (MGD)
Eden	3	16	1,430

*Model simulation period is 1939 - 2013

UPPER OCONEE MANAGEMENT PRACTICES

The Upper Oconee Plan describes 25 management practices targeted toward current and future needs. Actions for surface and groundwater are grouped and listed by the water use sectors that will implement them. The Plan also includes practices for resources shared with other regions. Representative practices are summarized here.

WATER CONSERVATION: To prevent potential shortages in meeting instream flow needs, the Upper Oconee Plan encourages conservation pricing and development of water conservation goals.

WATER SUPPLY: Practices include expansion of existing reservoirs and construction of new water supply reservoirs.

WASTEWATER & WATER QUALITY: The Upper Oconee Plan calls for implementation of centralized sewer in developing areas where density warrants and development of local wastewater master plans to evaluate wastewater treatment and disposal options to meet future demands. Comprehensive land use planning and local government participation in construction erosion and sediment control are also encouraged.

RECOMMENDATIONS TO STATE: Focus on incentives, collaboration and cooperation with state and local planning agencies, support plan implementers; fund water planning; focus funding and assistance on areas with shortfalls; continue monitoring to help conserve Georgia's natural, historic, and cultural resources.