



Georgia's
State Water Plan

**Regional Water Planning Outreach Meeting
Agricultural & Forestry Sector Focus
April 4, 2019**

waterplanning.georgia.gov

Presentation Outline

Overview of Water Planning in Georgia

Regional Water Planning Implementation - Agricultural and Forestry Panel Discussion

Agricultural Metering Program Updates

Seed Grant Project Update

Local Case Study Related to Regional Water Plan



Issues for Regional Water Planning

Rapid population growth of Georgia

Balance increasing and sometime conflicting demands

Address water challenges in a more proactive and comprehensive manner

Flexible and adaptive process utilizing a regional focus



ional Water Planning Efforts Statewide

Comprehensive Statewide Water Management Planning Act (2004)

- Georgia Water Council
- Stakeholder process
- State Water Plan (2008)

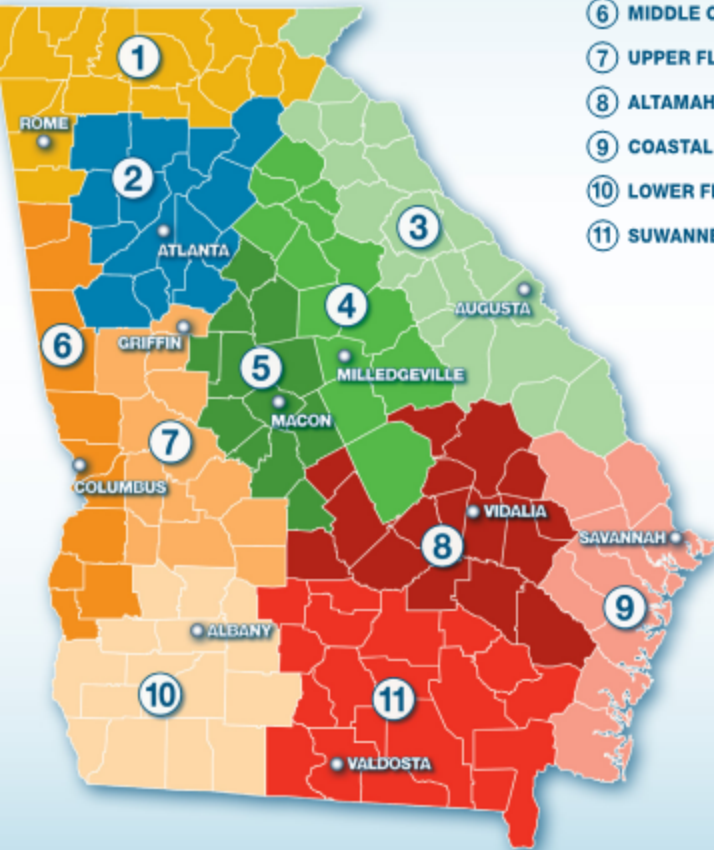
Regional Water Planning

- Councils appointed (2009)
- Initial plans adopted after 3-year planning process (2011)
- Updated plans adopted (2017)
- Plans reviewed, revised every five years

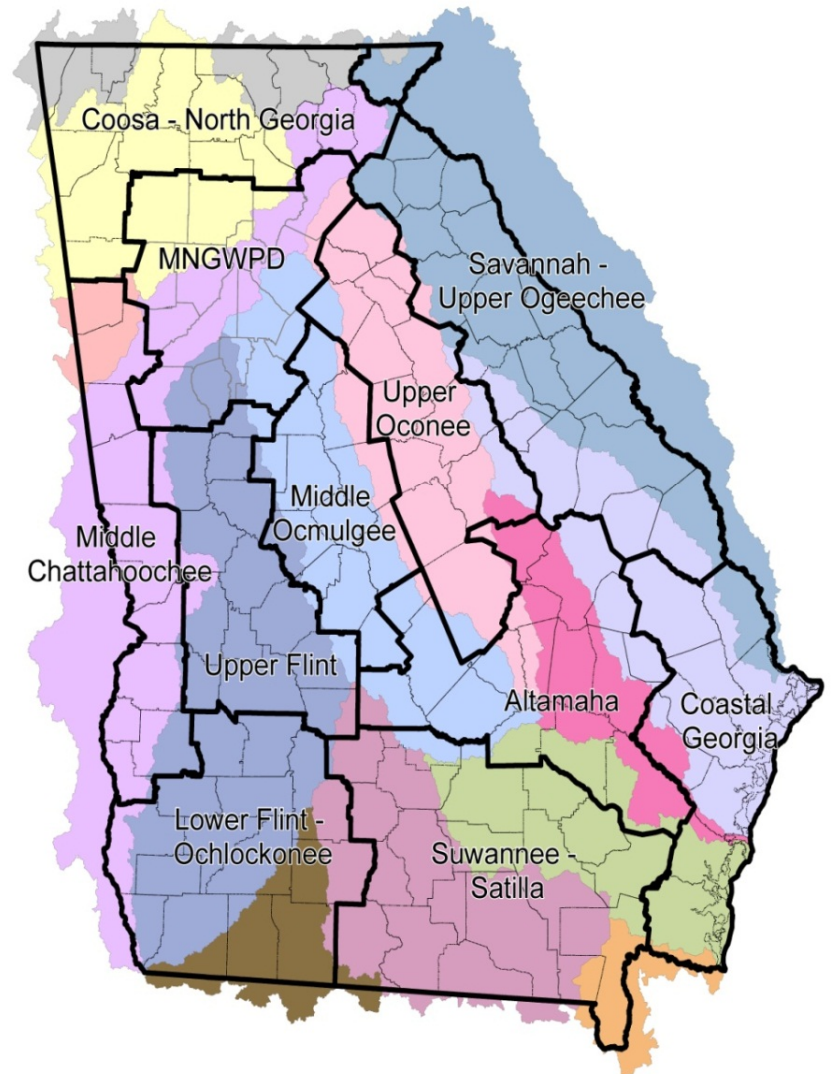


Georgia's Water Planning Regions

- ① COOSA-NORTH GEORGIA
- ② METRO WATER DISTRICT
- ③ SAVANNAH-UPPER OGEECHEE
- ④ UPPER OCONEE
- ⑤ MIDDLE OCMULGEE
- ⑥ MIDDLE CHATTAHOOCHEE
- ⑦ UPPER FLINT
- ⑧ ALTAMAHA
- ⑨ COASTAL
- ⑩ LOWER FLINT- OCHLOCKONEE
- ⑪ SUWANNEE-SATILLA



Water Planning Regions





Georgia's

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Regional Water Planning Implementation - Agricultural and Forestry Panel Discussion

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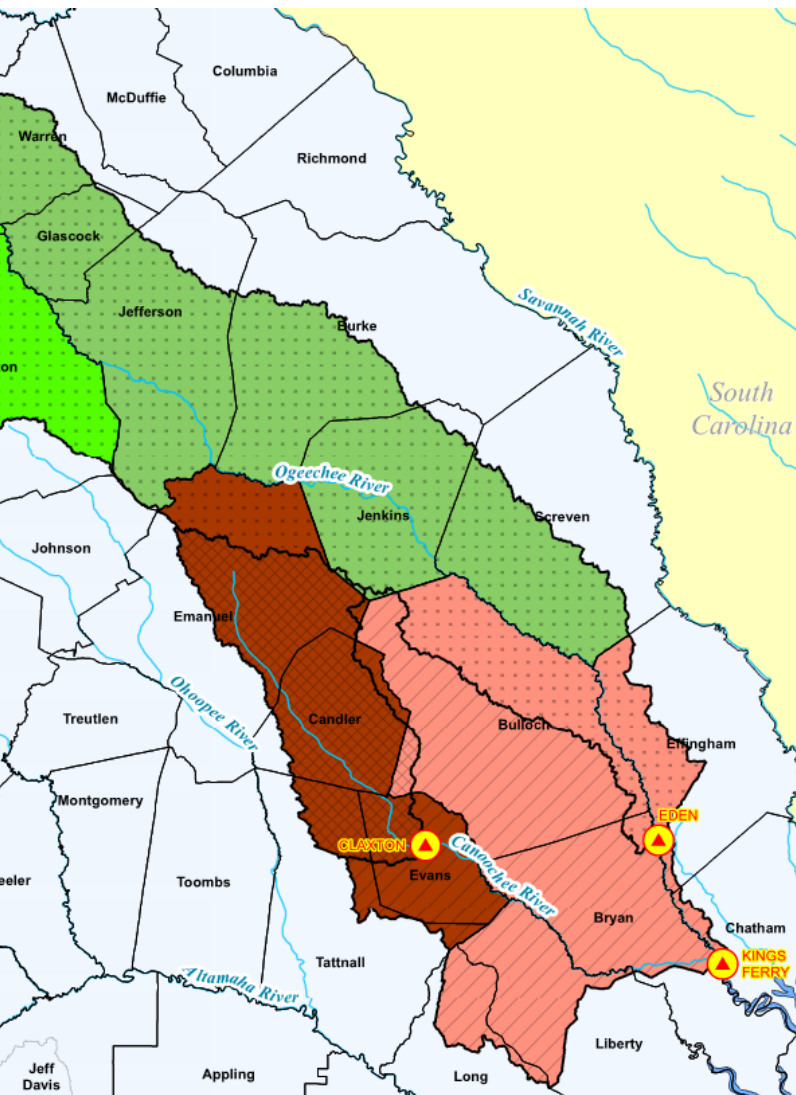
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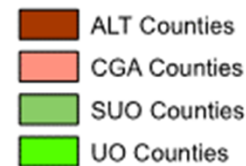
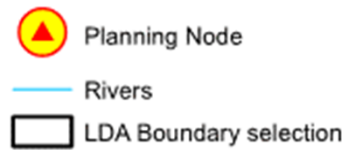


Local Case Study Related to Regional Water Plan

A Closer Look at the Ogeechee Watershed

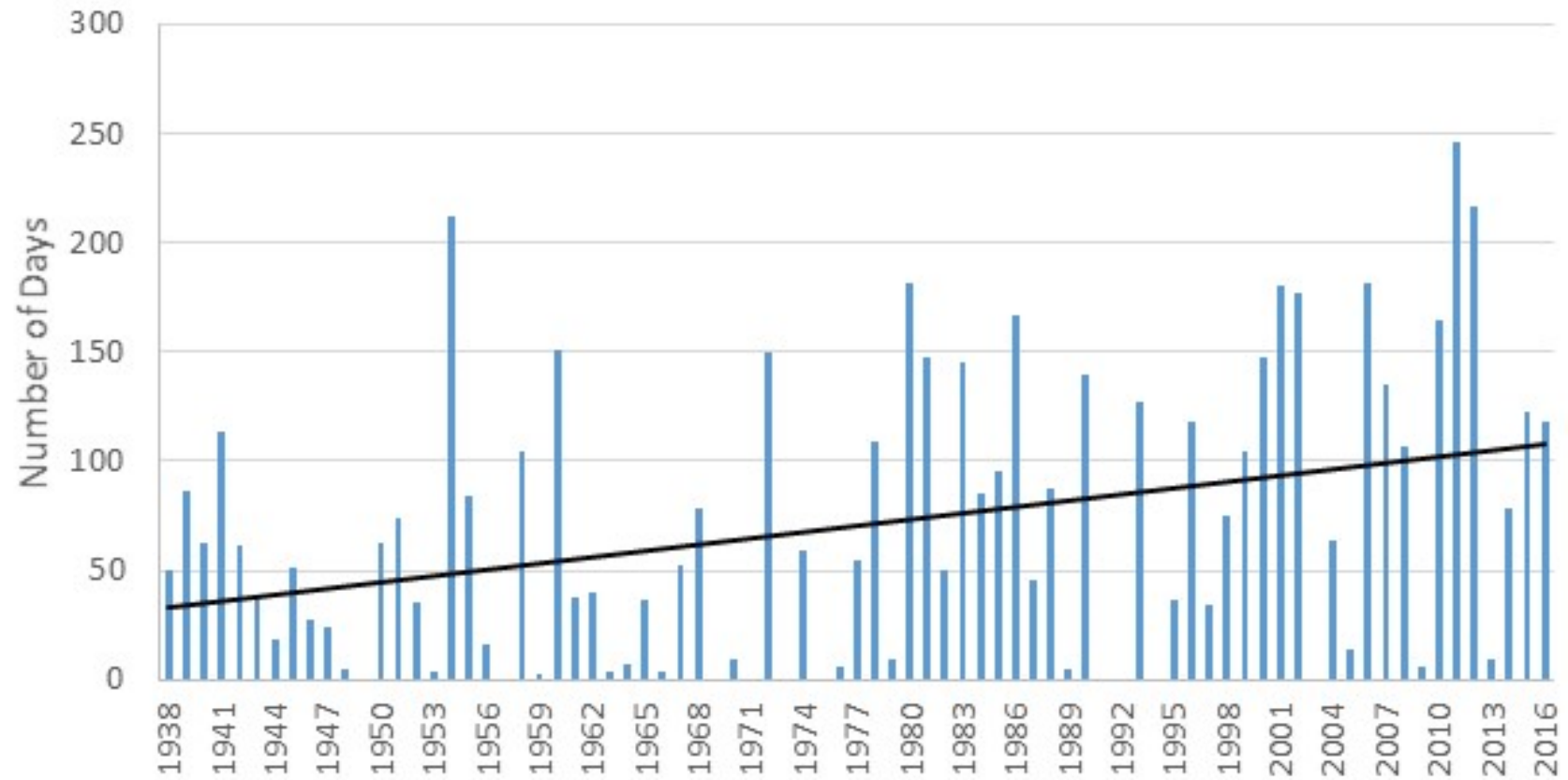


- Regional Council and Local Drainage Area (LDA) Boundaries – Claxton, Eden and Kings Ferry Planning Nodes



Observed Surface Water Flow Conditions

Number of Low Flow Days (< 15 cfs):
Canoochee near Claxton (02203000)



ton Planning Node - Surface Water Forecast and Summ

otential Gaps by Region

	Councils and Associated Counties That Are Within in the Local Drainage Area with Potential Gaps	Total 2050 Forecasted Surface Water Demand at Planning Node Summarized by Sector (MGD) ¹	2050 Potential Gap Information: Average Daily Flow Deficit per Gap Event Summarized by Planning Node ²		2050 Forecasted Surface Water Withdrawals Summarized by Planning Council ³ (MGD)
			1-7 Day Duration	8 - 14 Day Duration	
Canochee River	Altamaha – Candler, Emanuel, Evans, Tattnall	Agriculture: 4.98	2 MGD (3 cfs) 51% of all potential gap events	3 MGD (5 cfs) 20.4% of all potential gap events	4.98
	Coastal Georgia - Bulloch	Agriculture: 0.27			0.27
	Savannah Upper Ogeechee - Jenkins	Agriculture: 0.02			0.02
TOTAL:					5.26

1 – Represents average annual demand

2- Source: Surface Water Availability Resource Assessment Updates: Current and Future Conditions, November 17, 2016 Council Member Handout, Savannah and Ogeechee Basins

3 - Surface water withdrawals by County were obtained from 2050_Final_Yearly_Withdrawals_MGD_Atlantic GIS layer (Georgia Water Planning & Policy Center, 2016)

Working at Bulloch County Only as a Case Study (2015 Data)

366 total farm acres in Bulloch County

Nearly equal split based on irrigation source water

~ 23,700 acres surface water irrigation

~ 22,700 acres groundwater irrigation

Farm sizes vary from

Largest 547 acres

Smallest is 3 acres

Average is 87 acres

Surface Water permitted withdrawals varies from

Total permitted withdrawals 292,290 gpm (~421 mgd)

Largest 7,200 gpm (~10.4 mgd)

Smallest 65 gpm (~ 0.1 mgd)

Average is 1,029 gpm (~ 1.5 mgd)

Working at Bulloch County Only as a Case Study (2015 Data)

Category	Irrigated Acres (GW + SW)
	5,869
	4,763
	3,173
	1,948
Vegetables, Fresh	784
	618
	468
g_Irr	191
Vegetables, Used	31
	27
rry	14
Total	17,885

Bulloch County Only	Irrigated Acres (SW)
Canoochee River Source	4,554
CLAXTON Node Only / Surface Water	564
Corn	
Cotton	
Peanut	
Soybean	
Vegetables, Fresh	

County of GA EPD and Georgia Water Planning & Policy Center (Mark Masters 2015)
 Area of Bulloch County ~ 689 sq. miles or 440,970 acres

Management Practices (MPs) in RWPs to Address Potential Surface Water Gaps Associated with Agricultural Irrigation

Several MPs focus on more Data Collection/Additional Research (DCAR) that should be completed, for example:

- Acquire additional data/information on agricultural consumptive use
- Modeling scenario analysis to bracket a reasonable range of consumption
- Refine surface water agricultural forecasts and Resource Assessment models to improve data on source of supply and timing/operation of farm ponds
- Refine and improve surface water Resource Assessment and agricultural forecasts to address spatial and temporal hydrologic variations in relationship to forecasts, climate conditions
- Continue to fund, improve, and incorporate agricultural water use metering data and use

Management Practices (MPs) in RWPs to Address Potential Surface Water Gaps Associated with Agricultural Irrigation

General MPs focus on Additional/Alternate to Existing Surface Water Supply Sources (AWS), for example:

- Future surface water uses – Utilizing incentives and collaborative partnerships, examine opportunities to optimize farm and other pond operations to obtain releases during dry periods
- Encourage use of groundwater from the Floridan aquifer, within acceptable amounts analyzed by the groundwater modeling, as an alternate source to surface water use during dry conditions
- Replace a portion of existing surface water use with groundwater, from the Floridan aquifer, within acceptable amounts analyzed by the groundwater modeling, as an alternate source to surface water use during dry conditions
- Evaluate incentive-based programs to increase wastewater returns; modify land application systems, septic systems, and manage stormwater to improve return flows while maintaining water quality

Canoochee River Study

During dry years, flows on the Canoochee River are a concern

Groundwater modeling was conducted to determine whether groundwater from the Floridan aquifer could support those using surface water to switch over to groundwater

Finding: there is additional groundwater capacity to handle those users, but withdrawals should occur outside of area outlined in red (Gulf Trough)



More Information

The screenshot shows the Georgia Water Planning website. At the top left is a logo of the state of Georgia. To its right is the text "Georgia Water Planning". In the top right corner, there are links for "Contact Us", "Get Email Updates", and "Translate". Below these is a search bar with the text "Search within this site" and a magnifying glass icon. A dark blue navigation bar contains five menu items: "Water Planning", "Water Planning Regions", "Forecasting", "Resource Assessments", and "More Information". The main content area has a dark blue header for "Water Planning Regions" with a list of sub-regions: Altamaha, Coastal Georgia, Coosa-North Georgia, Lower Flint-Ochlockonee, Metro Water District, Middle Chattahoochee, Middle Ocmulgee, Savannah-Upper Ogeechee Region, and Suwannee-Satilla. The main heading is "Water Planning Regions" with a breadcrumb "Home » Water Planning Regions". Below the heading is a search prompt: "Search for your county in the box below to find your Water Planning Region." and a search input field with the placeholder text "Search to filter results..". To the right of the search field is a map of Georgia showing the water planning regions. Below the map is a "Maps" section with two links: "Water Regions Map (PDF)" and "River Basins Map (PDF)". At the bottom of the main content area is a table with two columns: "Region" and "Counties Served".

Contact Us | Get Email Updates | Translate

Search within this site

Water Planning | Water Planning Regions | Forecasting | Resource Assessments | More Information

Water Planning Regions

- ▶ Altamaha
- ▶ Coastal Georgia
- ▶ Coosa-North Georgia
- ▶ Lower Flint-Ochlockonee
- Metro Water District
- ▶ Middle Chattahoochee
- ▶ Middle Ocmulgee
- ▶ Savannah-Upper Ogeechee Region
- ▶ Suwannee-Satilla

Home » Water Planning Regions

Water Planning Regions

Search for your county in the box below to find your Water Planning Region.

Search to filter results..

Region	Counties Served
Altamaha	Counties: Appling, Bleckley, Candler, Dodge, Emanuel, Evans, Jeff Davis, Johnson, Montgomery, Tattall, Telfair, Toombs, Treutlen, Wayne, Wheeler, Wilcox
Coastal Georgia	Counties: Bryan, Bulloch, Camden, Chatham, Effingham, Glynn, Liberty, Long, McIntosh
Coosa-North Georgia	Counties: Catoosa, Chattooga, Dade, Dawson, Fannin, Floyd, Gilmer, Gordon, Habersham,

Maps

- [Water Regions Map \(PDF\)](#)
- [River Basins Map \(PDF\)](#)

<https://waterplanning.georgia.gov/water-planning-regions>

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Thank You!

