



Georgia's

State Water Plan

2017 Regional Water Plan Update

Coastal Georgia Regional Water Planning Council

Outreach Presentation for Glynn and Camden Counties

January 22, 2019

www.georgiawaterplanning.org

Presentation Outline

Background of State Water Planning

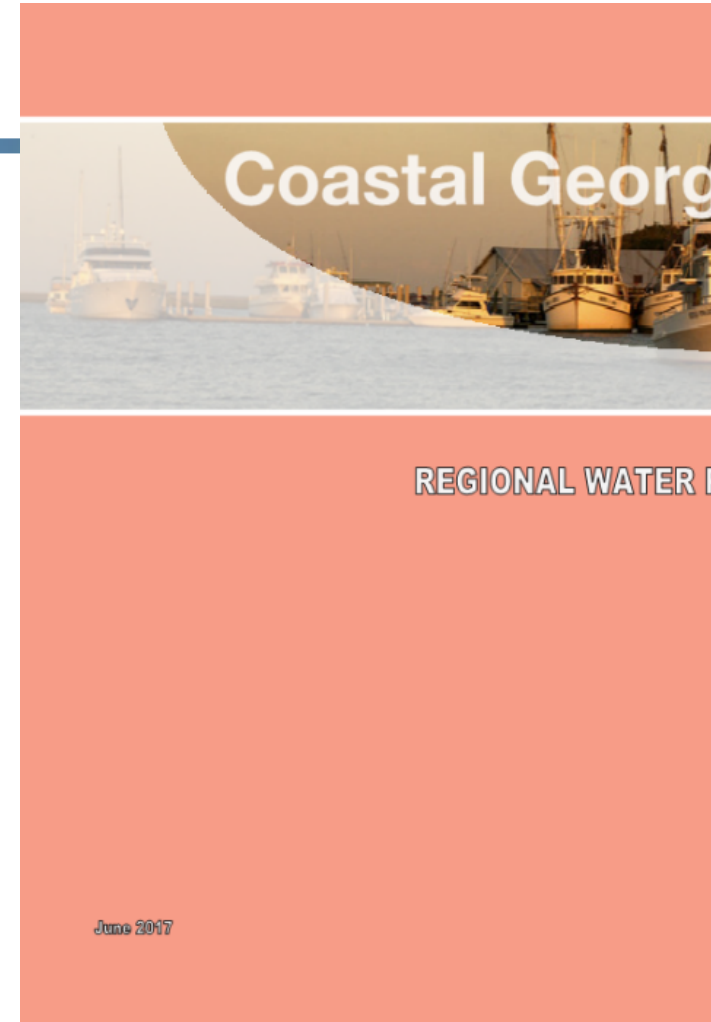
- Findings during the Recent Coastal Georgia Regional Water Plan Update
- Specifics to Camden and Glynn Counties
- Plan Recommendations and Next Steps

USGS Brunswick-Glynn Saltwater Intrusion

Updates from St. Marys River Management Committee

Update from EPD Grants Unit Manager

Public Comments / Q&A



Challenges 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)

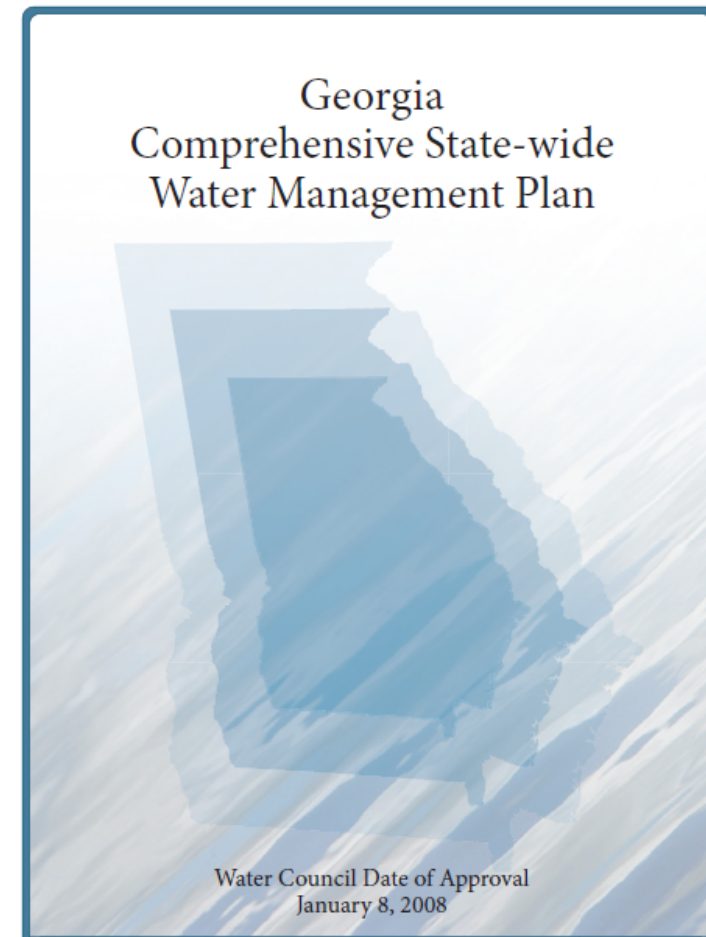
Regional Water Planning

Councils appointed (2009)

Initial plans adopted after 3-year planning
process (2011)

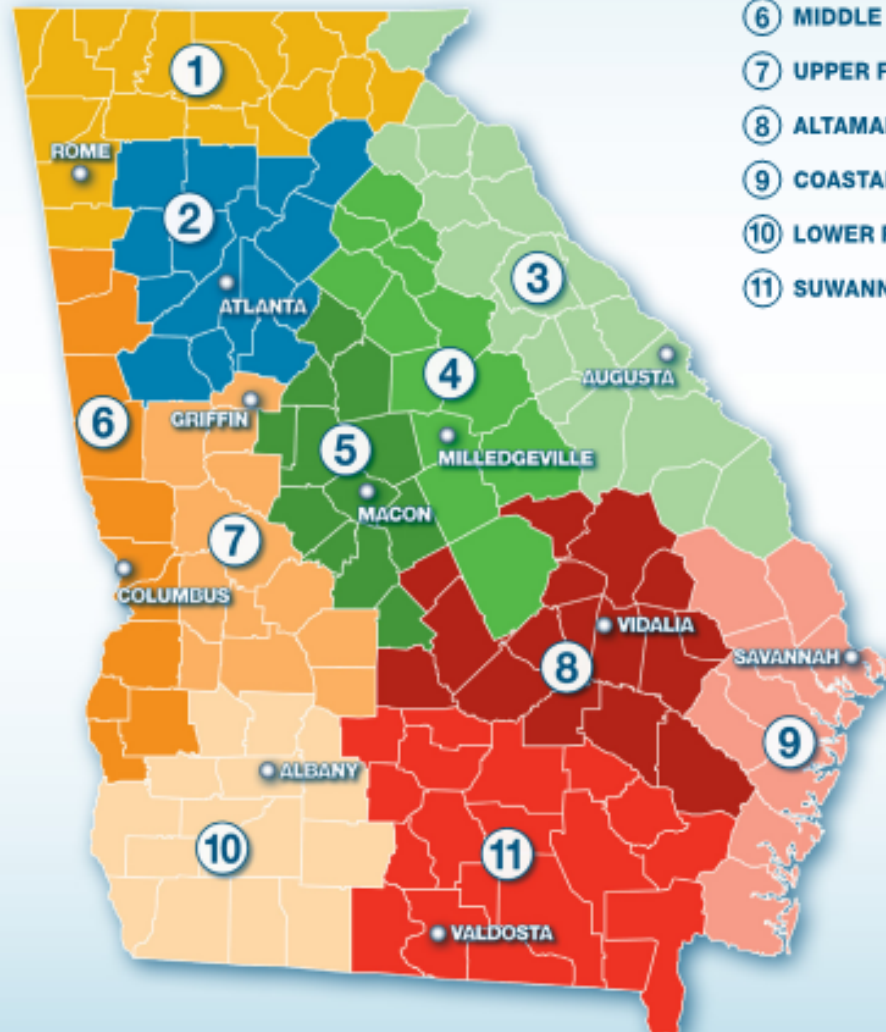
Updated plans adopted (2017)

Plans reviewed, revised every five years

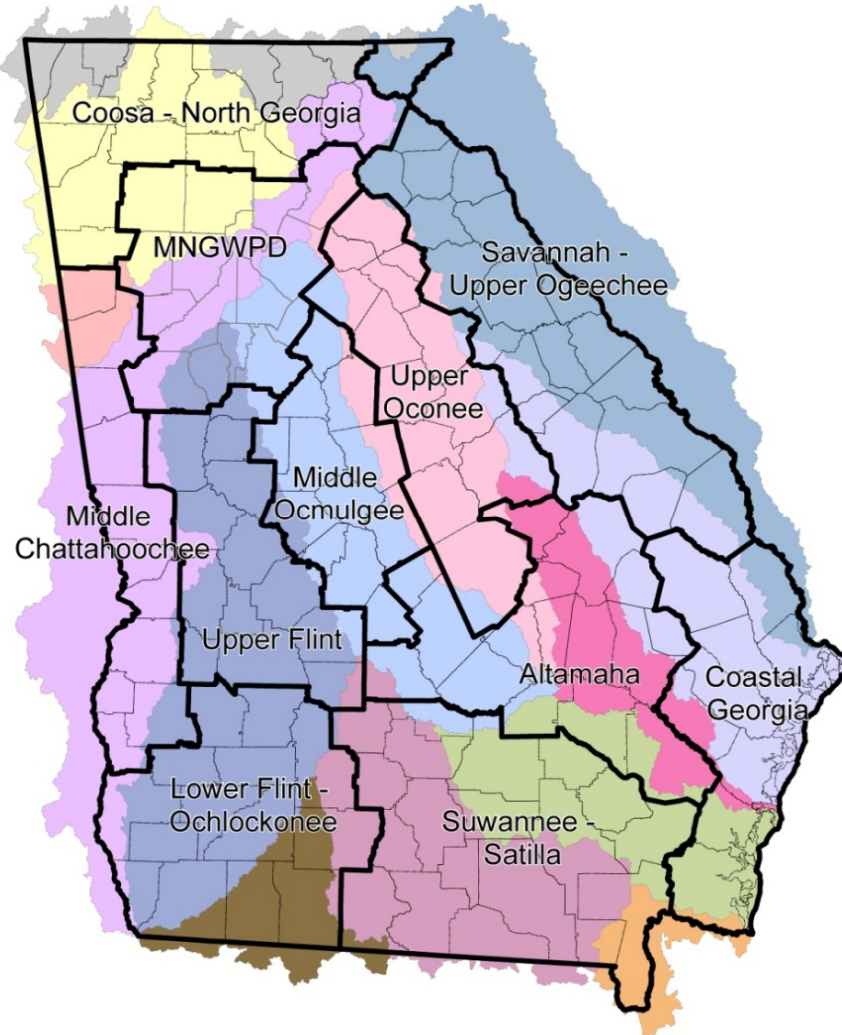


Georgia's Water Planning Regions

- 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



0 5 10 20 30 40 Miles



March 2009

Coastal Georgia Region

Nine counties, including six along the coast.

680,000 residents in 2015.

Major cities include: Savannah, Statesboro, Hinesville, St. Mary's, and Brunswick



Coastal Georgia Regional Water Planning Partnership

Regional Water Planning (RWP) Councils

- Up to 30 members appointed by Governor, Lieutenant Governor, & House Speaker
- Represent local governments, water users, & other water-related interests

Georgia Environmental Protection Division (EPD)

Planning contractors

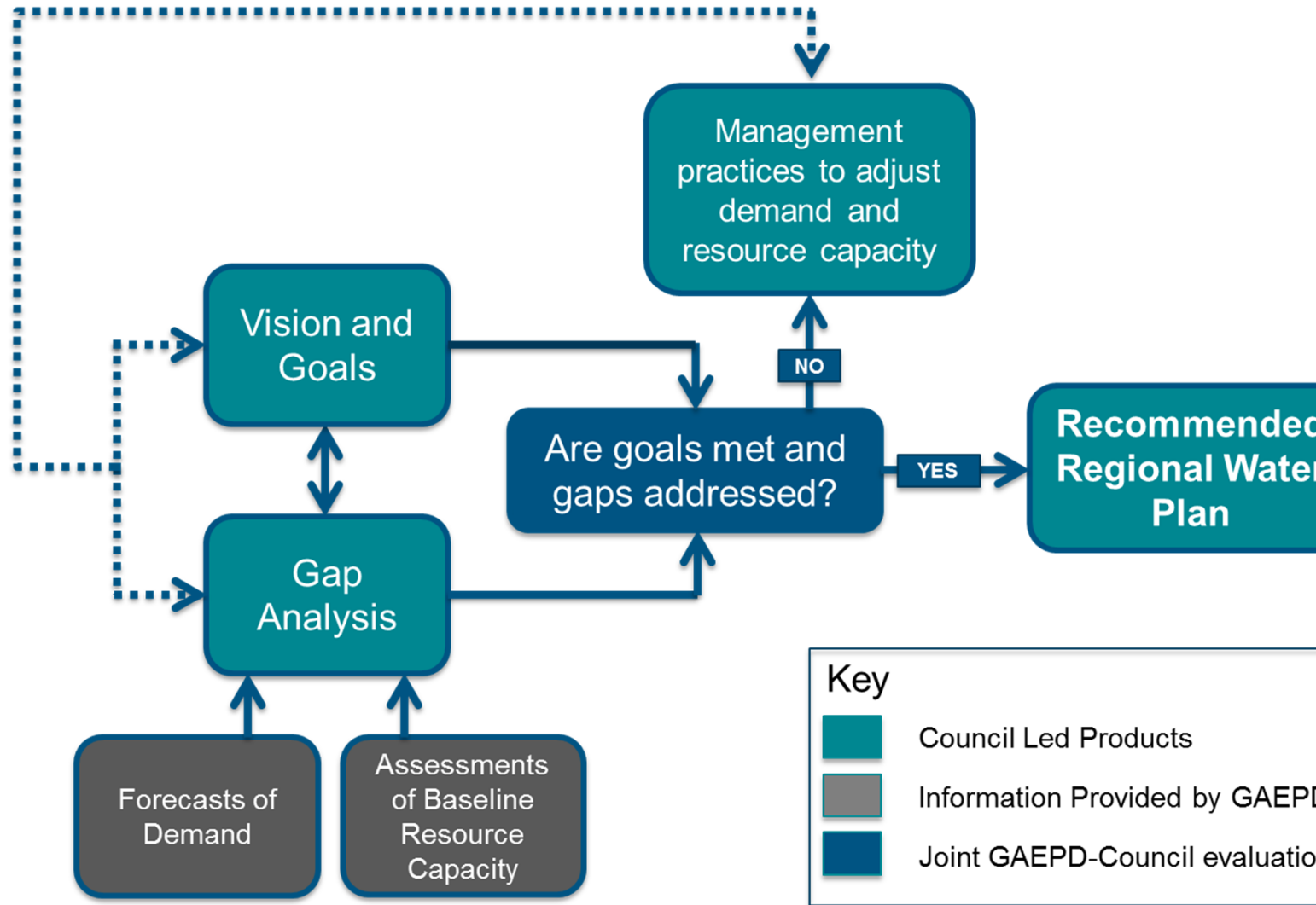
Other agencies

Stakeholders

Implementing actors



Coastal Georgia Regional Water Planning Process



Components of the Coastal Georgia Regional Water

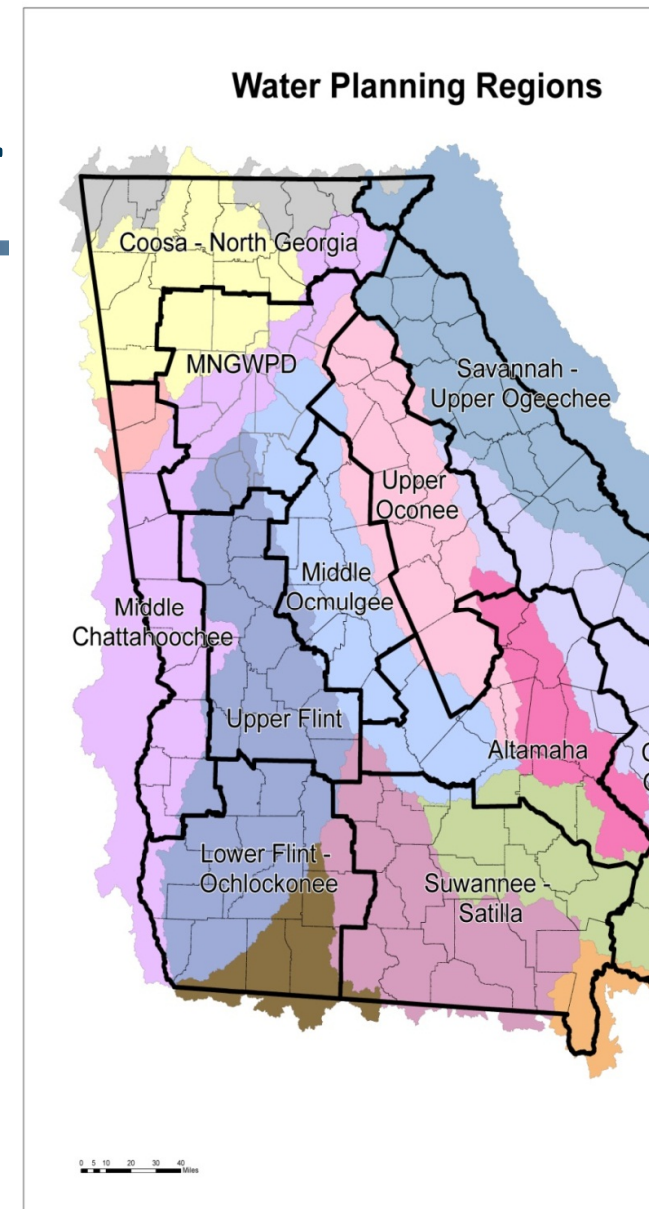
Vision & goals

Current & future water supply,
wastewater needs

Resource assessments

Management practices

Recommendations to the
State



Coastal Georgia Region Vision

Coastal Georgia Adopted Vision

as adopted by the Council 9.24.09

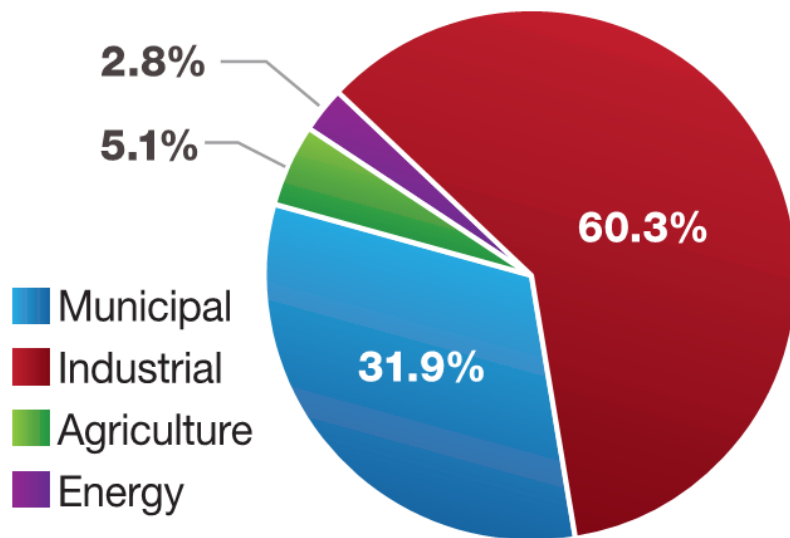
“The Coastal Georgia Regional Water Planning Council seeks to conserve and manage our water resources in order to sustain and enhance our unique coastal environment and economy of Coastal Georgia.”



Coastal Georgia Forecast of Water Demands

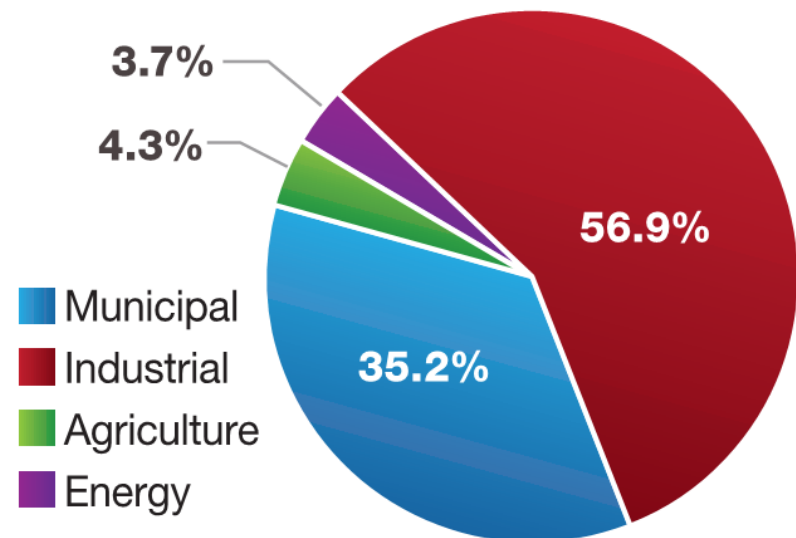
2015 WATER DEMAND

TOTAL = 275.4 MGD



2050 WATER DEMAND

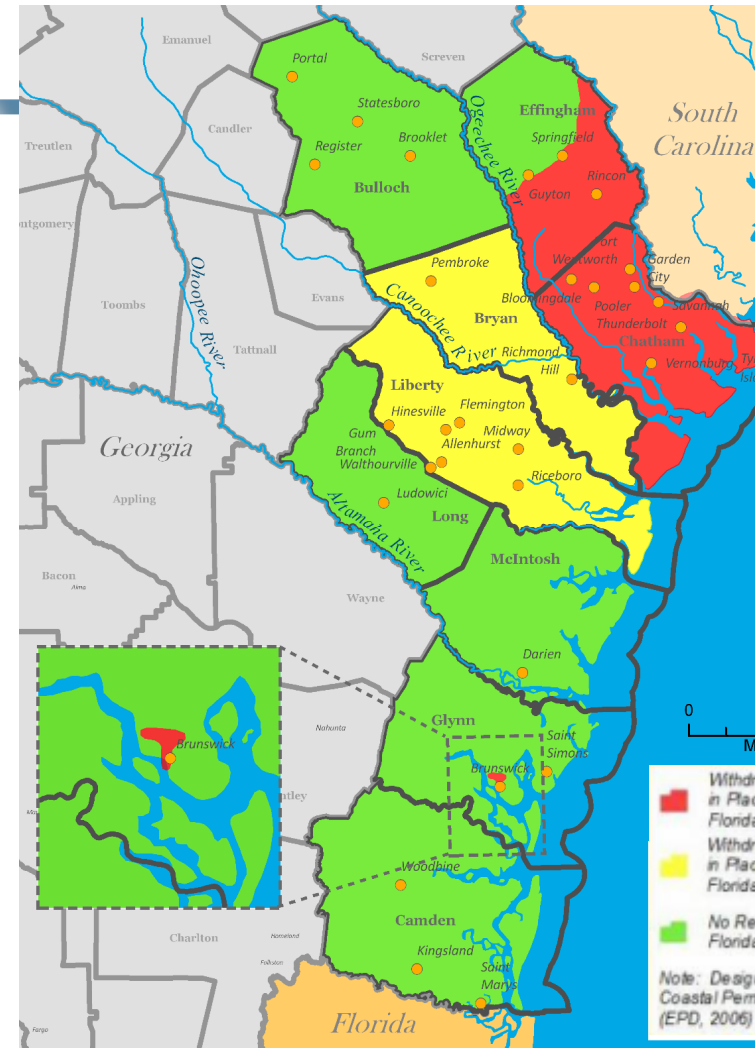
TOTAL = 345.7 MGD



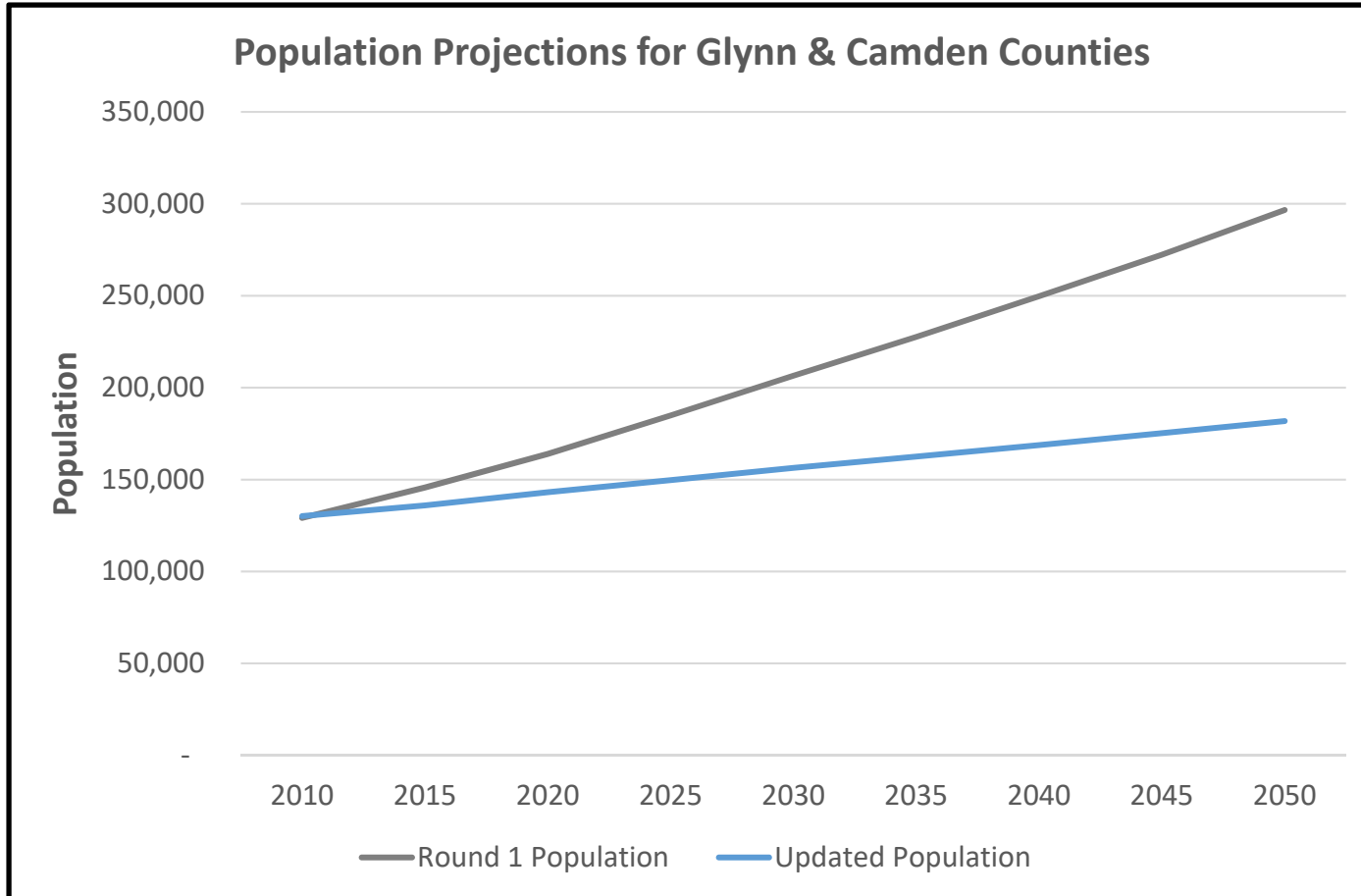
Coastal Georgia Region Groundwater Availability Assessment

Coastal Georgia groundwater usage comes largely from the Floridan aquifer

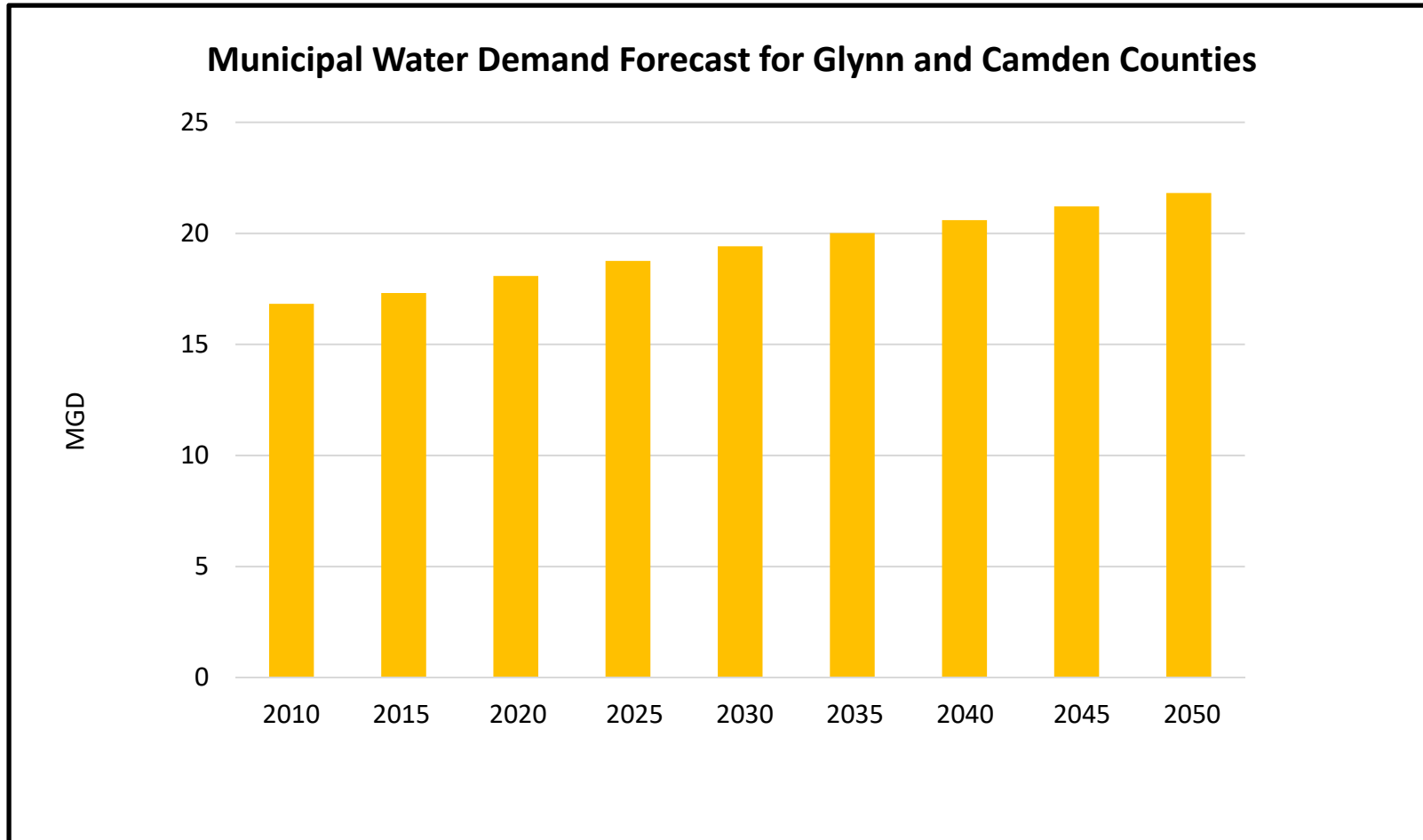
Regionally, there is sufficient groundwater to meet current needs; however, pumping restrictions have been locally implemented in some areas in response to effects from salt water intrusion.



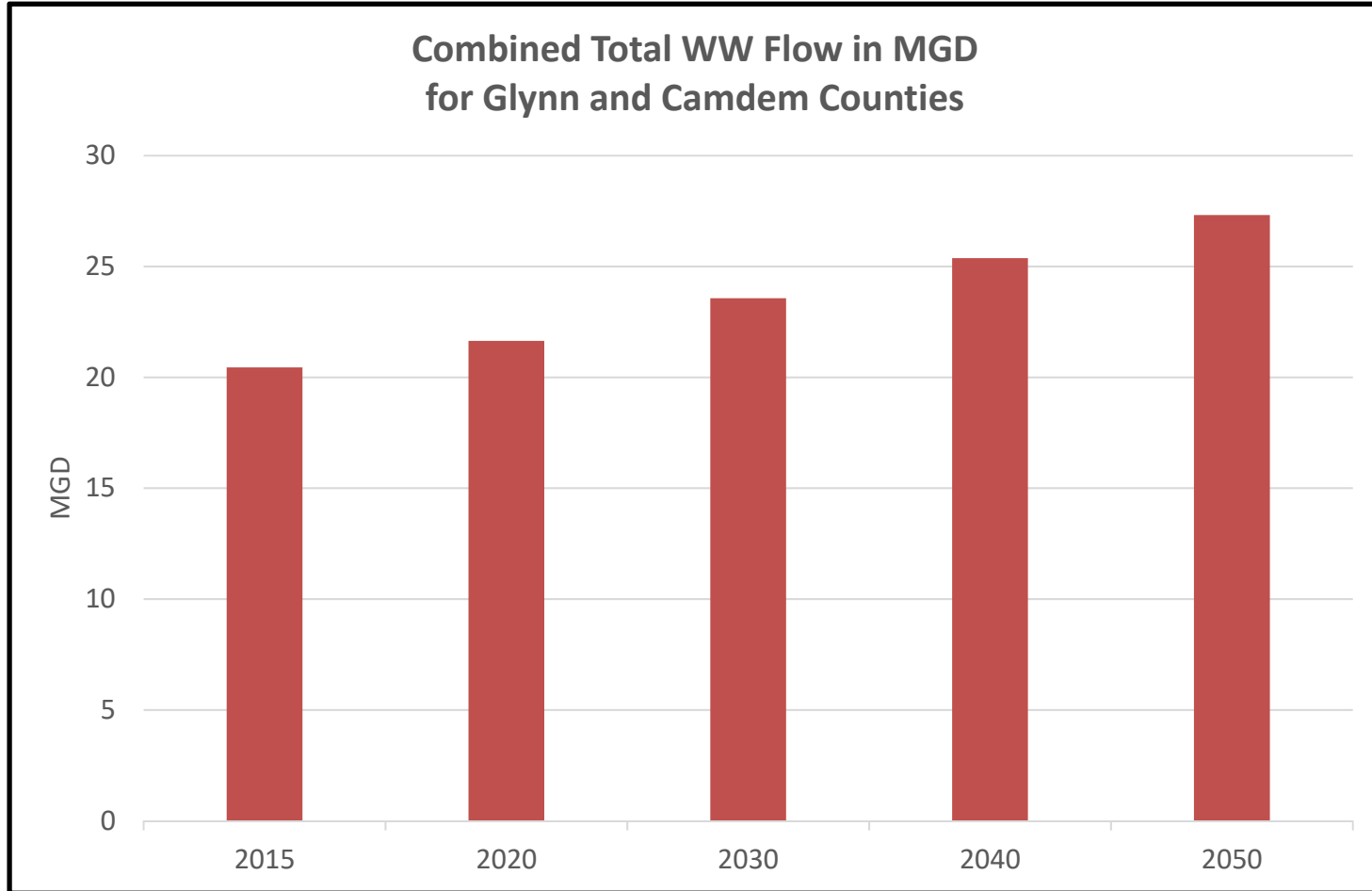
Projections for Glynn and Camden Counties



ifics for Glynn and Camden Counties



Specifics for Glynn and Camden Counties



Coastal Georgia Region Management Practices

The Coastal Georgia Plan describes over 80 management practices targeted toward current and future needs.

Some representative practices include:

- Water Conservation: adherence to Tier 1/Tier 2 conservation measures from the 2010 Water Conservation Implementation Plan
- Water Supply: multi-jurisdictional groundwater development outside the saltwater intrusion areas
- Water Quality: relocate discharges, upgrade treatment facilities
- Information Needs: confirm agricultural consumptive use

Coastal Georgia Region

Recommendations To The State

Focus on education, incentives, collaboration, cooperation and enabling and supporting plan implementers

Institutionalize and fund water planning with a focus on funding and assistance on areas with shortfalls.

Continue monitoring to help conserve Georgia's natural, historic, and cultural resources.



Coastal Georgia Region Water Plan Implementation

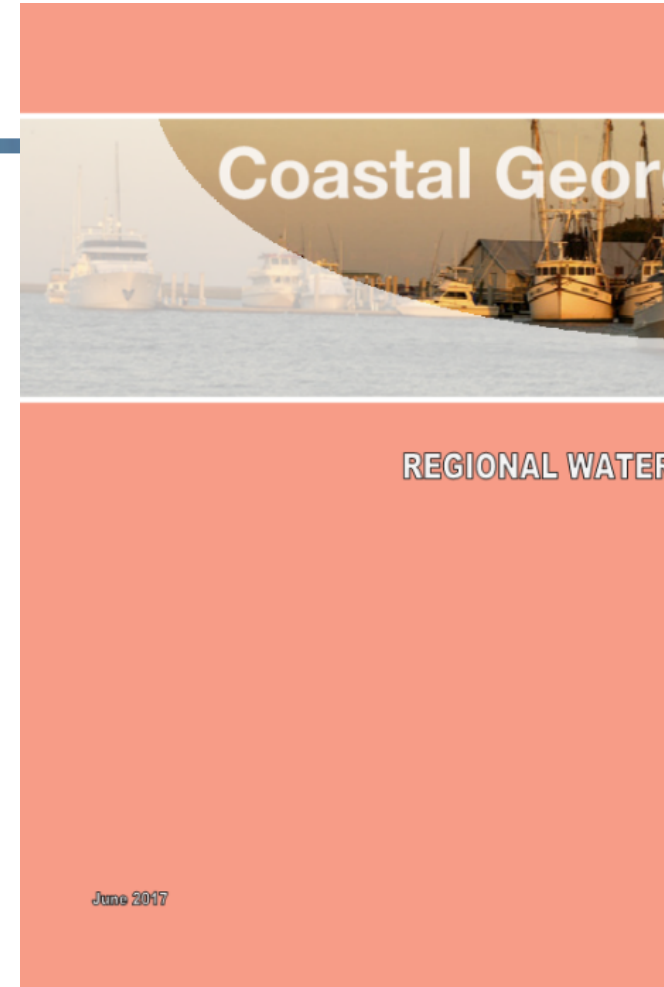
Council working to raise awareness of Plan

Council identifying and coordinating with partners to facilitate implementation

State providing funds to support Council activities, technical work

Seed grants available to support Plan implementation

Next review and revision of Plan in 2021 through 2022



Where to Find the Plan

The screenshot shows the Georgia Water Planning website. The header includes the Georgia state outline logo, the text "Georgia Water Planning", and a search bar. A navigation menu contains "Water Planning", "Water Planning Regions", "Forecasting", "Resource Assessments", and "More Information". The main content area is titled "Coastal Georgia Water Planning Region" and features four buttons: "REGIONAL WATER PLAN" (highlighted with a red arrow), "Regional Highlights", "Technical Information", and "Get Regional Email Updates". Below this are sections for "Counties Included" (listing Bryan), "Upcoming Meetings" (stating no meetings are scheduled), and a map of the region.

waterplanning.georgia.gov/documents/coastal-georgia-regional-water-plan



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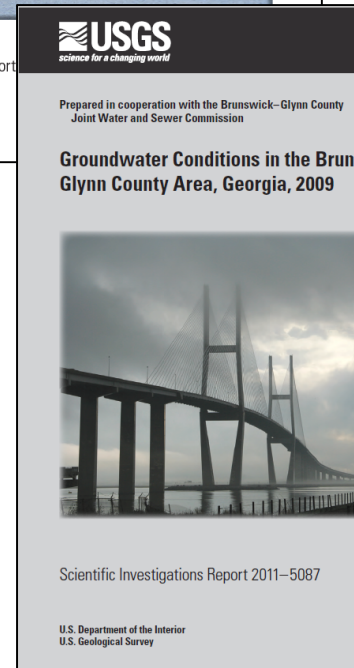
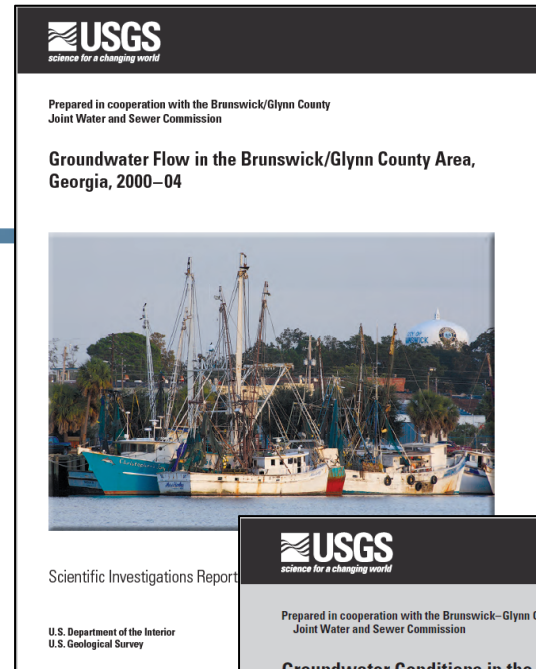
Brunswick-Glynn County Saltwater Intrusion

www.georgiawaterplanning.org

Content/References

Groundwater Monitoring Program for the Brunswick-Glynn County Area, Georgia
<https://www2.usgs.gov/water/southatlantic/ga/projects/intrusion/brunswick.html>

USGS Publications SIR 2015-5061, SIR 2011-5087, OFR 2008-1297, OFR 2006-1368



Overview

Sea water intrusion in Upper Floridan aquifer has occurred in Brunswick area over 50 years

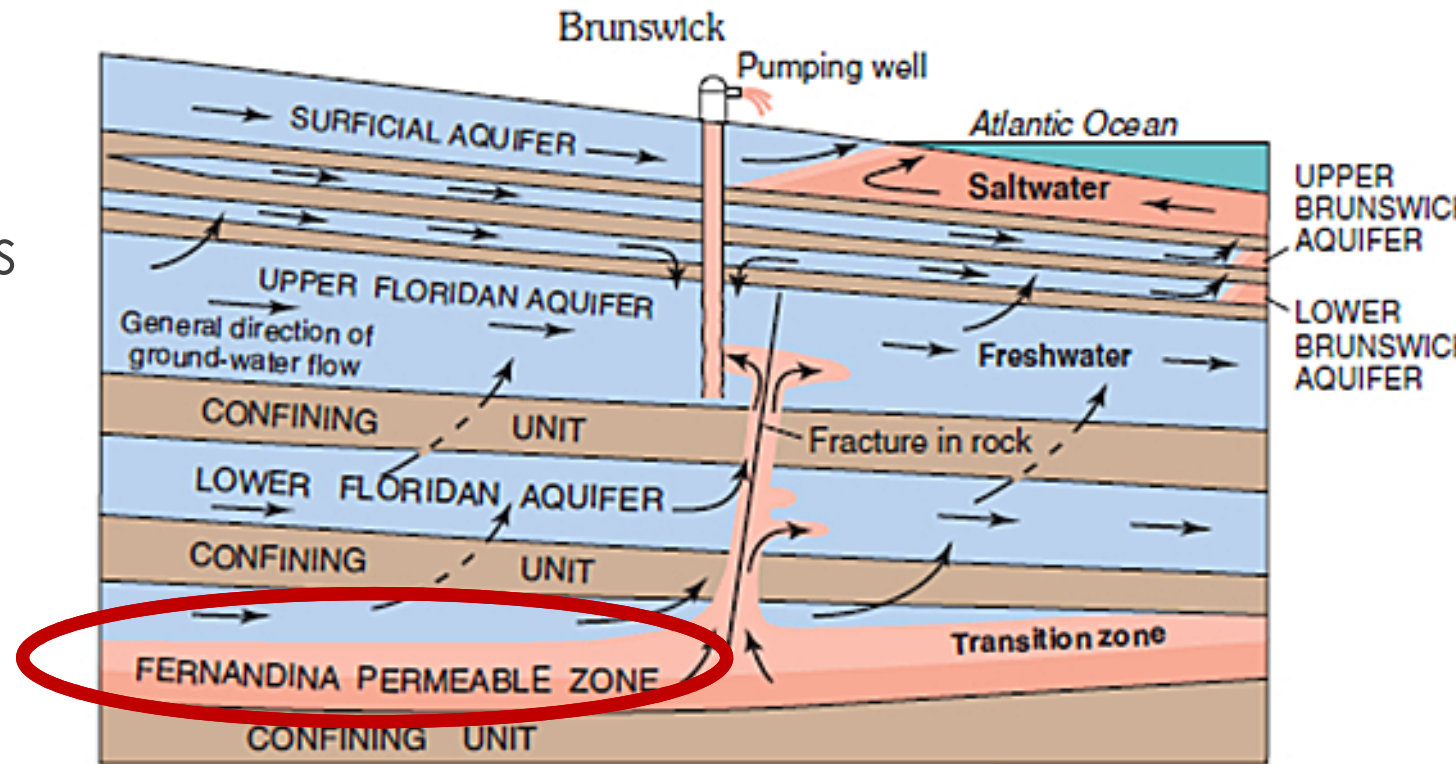
Many decades of monitoring by local agencies and USGS

USGS groundwater modeling studies have been conducted to evaluate pumping effects on plume migration



Source of Saltwater Intrusion in Brunswick, GA

Pumping from Upper Floridan aquifer wells has induced saltwater intrusion from the Fernandina Permeable Zone



Saltwater contamination in the Upper Floridan aquifer near Brunswick, Georgia.

Upper Floridan Aquifer Groundwater Pumping History

Industrial groundwater production peaked in the 1930s and has been decreasing since then.

Public water supply pumping relatively constant since 1980s.

Industrial pumping > public water supply pumping

Source: USGS SIR 2011-5087

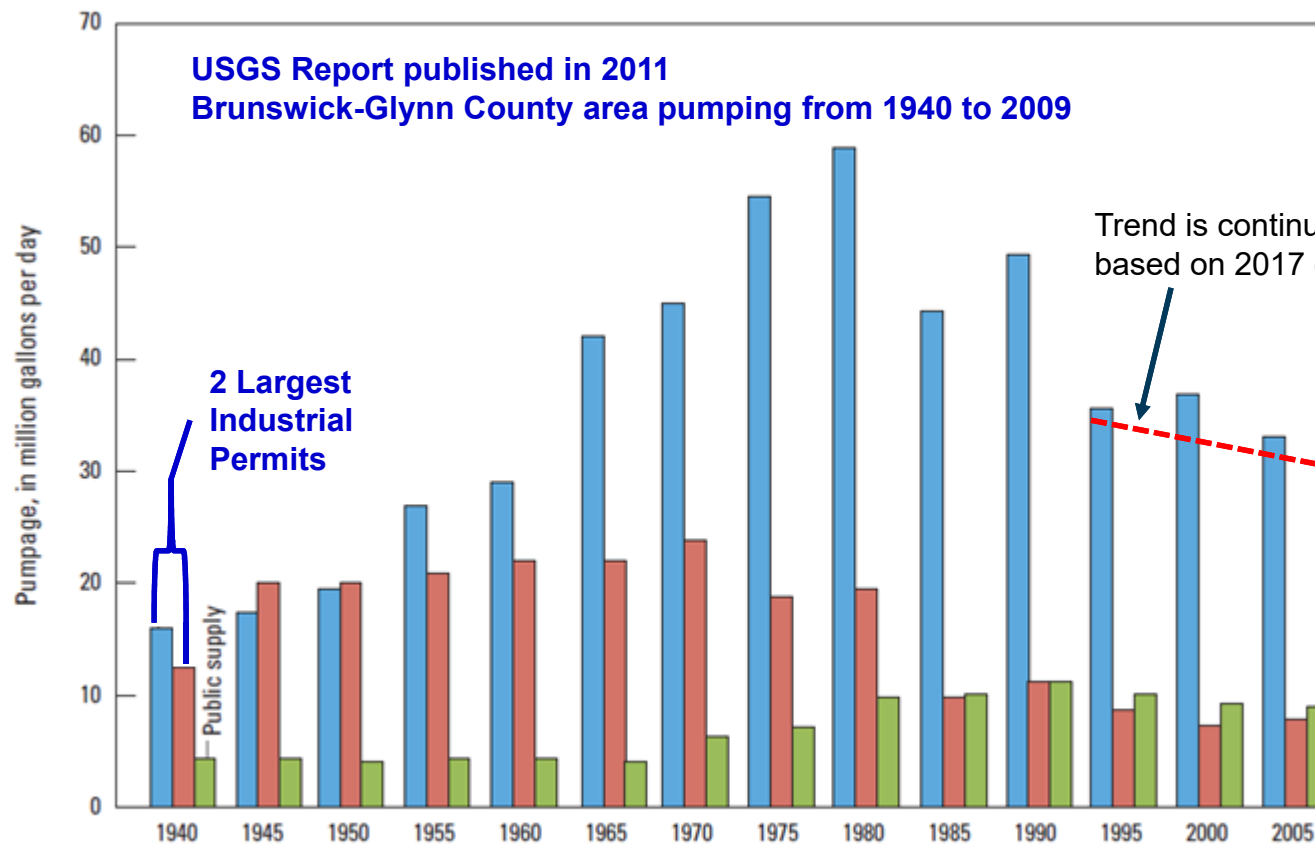


Figure 6. Major groundwater pumpage from the Upper Floridan aquifer in the Brunswick-Glynn County area, Georgia, 1940–2009.

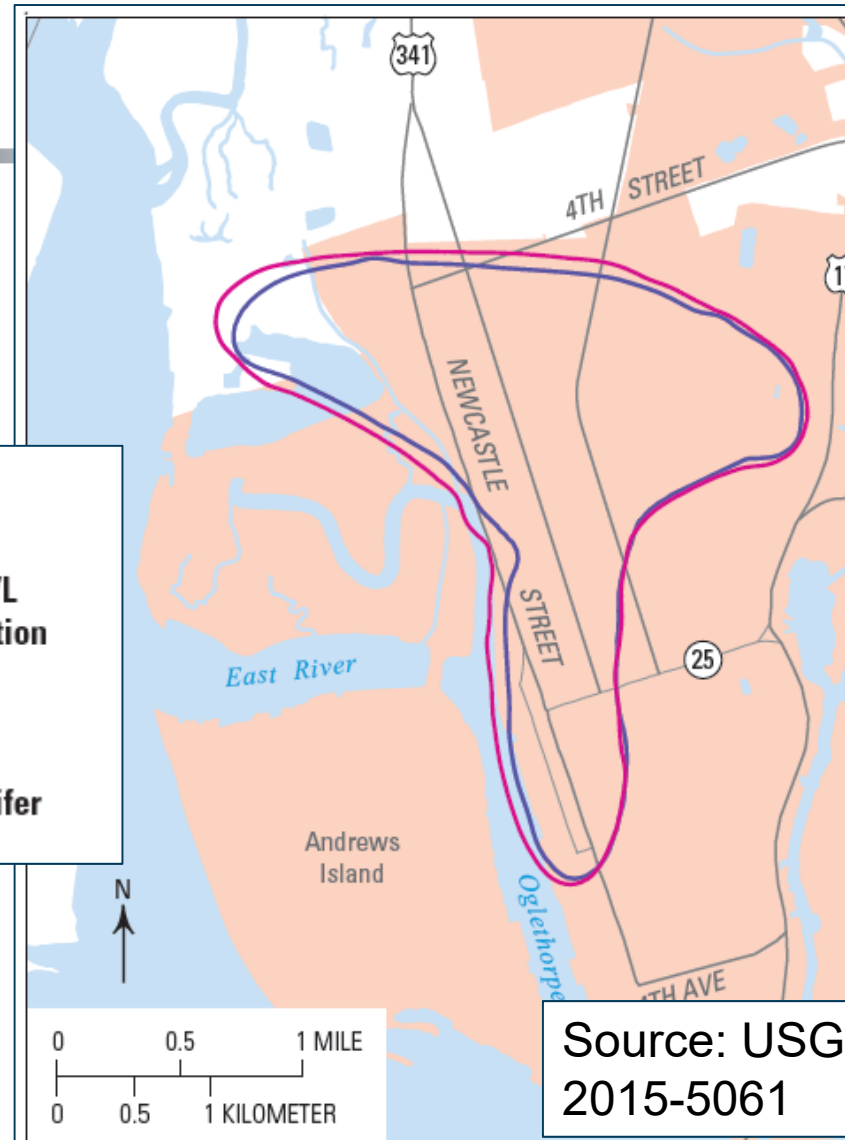
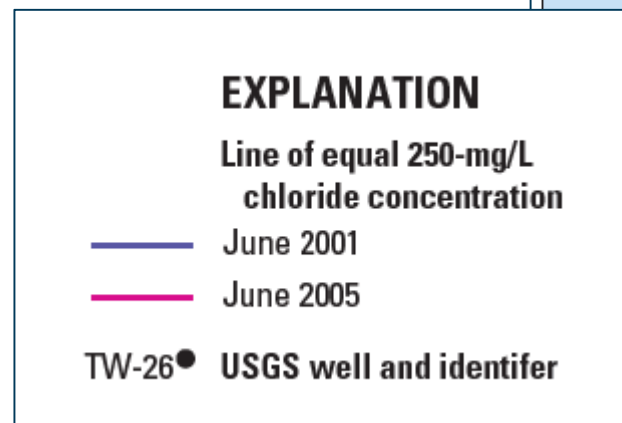
Groundwater Saltwater Plume Limits 2001 and 2005

Small change in
saltwater plume extents
as defined by 250-mg/L
chloride or greater)

However, groundwater
chloride concentrations
have increased within
the plume

Glynn County is ~ 585 sq. miles

Shaped saltwater plume is ~ 2.7 sq. miles which
is less than 0.5% of the total area of Glynn County



Context is always important

United States
Environmental Protection
Agency

Water Topics Laws & Regulations About EPA

Search EPA.gov

Drinking Water Contaminants - Standards and Regulations

CONTACT US

SHARE



Secondary Drinking Water Standards

150 mg/L chloride is the **EPA Secondary Drinking Water Standard**

Secondary standards are levels that are not health threatening

Municipal water systems only need to test for them on a voluntary

basis.

Why is it necessary to set secondary standards?

Chloride believes that if water has constituents at levels that exceed the secondary standards, they can cause the water to appear cloudy or colored, or to taste or smell bad.



Let's have fun – who wants to guess how many mg of Chloride in a can of

Planned Activities by the USGS

Continue USGS/Brunswick-Glynn County cooperative monitoring program

USGS is updating their models to better understand the potential for impacts to future drinking water supplies from saltwater intrusion

The updated USGS modeling will include looking at future water use scenarios



Questions?





Georgia's

State Water Plan

Updates from the St. Marys River Management Committee

www.georgiawaterplanning.org



Georgia's
State Water Plan

EPD Updates on Grant Opportunities

www.georgiawaterplanning.org

Additional Information

periodic updates for Seed Grant → Partner Resources sidebar

<https://site.extension.uga.edu/water/>

search using “wateratuga”

can subscribe for alerts of new postings

Water at UGA
Provided by the UGA/CAES Water Resources Team

Home Drought On-site Waste Treatment Stormwater Water Conservation Water Quality & Quantity

Home

The **Water at UGA** site is provided by the UGA CAES Water Resource Management Specialist, Dr. Gary L. Hawkins, and the UGA CAES Water Resources Team. The Water Resources Team is comprised of County Extension Agents representing the three different programs areas (Agriculture and Natural Resources, 4-H and Family and Consumer Sciences) within UGA Extension. The Team members are: Terri Black, Helen Carter, Chesley Davis, Katie Hammond, Brenda Jackson, Sonya Jones, Kevin Livingston, Dana Lynch, Wanda McLockin, Jennifer Miller, Steven Patrick, Jake Price, Chris Tyson, Jessica Warren, Trish West, Suzanne Williams, Tripp Williams and Wade Parker. The blog is designed to provide information on water issues in Georgia spanning an area from the Coast to the Mountains.

Posts

- [Altamaha/Suwanee-Satilla Joint Water Council](#) September 7, 2018
- [Bath bombs and your septic tank](#) August 18, 2018
- [USGS report indicates water use across the US declines to levels not seen since 1970](#) July 22, 2018
- [National Hydration Day 2018](#) June 22, 2018
- [Weed Your Garden Day 2018](#) June 13, 2018
- ["Toilet to Tap" Water Taste Test](#) June 6, 2018

Resources

- [USGS Water Resource Website](#)
- [USGS South Atlantic Water Science Center's \(SAWSC\) Website](#). This resource provides water information for Georgia, North Carolina, and South Carolina.

Links

- [The 40 Gallon Challenge](#) is a call for residents and businesses to reduce our region's water use on average by 40 gallons per person, per day. The challenge began in 2011 as a voluntary campaign to increase water conservation.

Search this website


PARTNERS

- [Water @ UGA \(UGA\)](#)
 - Instruction
 - Research
 - Classes
- [Agricultural & Environmental Labs](#)
 - Household Water Publications
- [GA Department of](#)
 - Individual - P
 - Wastewater M
- [GA Environmental](#)
 - 2018 Altamaha Satilla/Coastal Activities

UGA EXTENSION

- [Agricultural and](#)
- [Family and Consumer Issues](#)
- [4-H Youth activities](#)

For More Information

- waterplanning.georgia.gov/coastal-georgia-water-planning-region
 - waterplanning.georgia.gov/documents/coastal-georgia-regional-water-plan
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Public Comments / Q&A

