## Coastal Georgia Regional Water Planning Council Meeting

June 6, 2023



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## Meeting Agenda

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Coastal Georgia Regional Water Council Meeting Draft Agenda – June 6, 2023

#### **Objectives:**

Review Public Comments on Regional Water Plan (RWP) and Outline Steps to Finalize the RWP Update
 Receive updates from Georgia Southern University Water Dashboard Seed Grant Project
 Receive updates on the Bryan County Mega Site - Including Short Term & Long Term Expected Water Needs
 Optional Tour of Mega Site after Council Meeting

10:00 - 10:30	Registration
10:30 - 10:45	Welcome and Introductions - Benjy Thompson
	Approve meeting minutes from November 15, 2022 Council Meeting
	Approve meeting agenda
10:45 - 11:30	Review Public Comments Received on the 2021-2022 Regional Water Plan Update
	- Discussion of response to comments
	- Discuss if any edits need to be made to the RWP as a result of public comments
11:30 - 12:00	Georgia Southern University Water Dashboard Seed Grant Demonstration
12:00 - 12:30	Lunch
12:30 - 1:00	Updates on Bryan County Mega Site - Including Expected Water Needs
	- Short term and long term potable water needs and preliminary infrastructure plan
	- Wastewater needs and preliminary infrastructure plan
1:00 - 1:15	Overview of Regional Water Plan Update Process to Finalize RWP for Adoption
1:15 - 1:30	Public Comments/Local Elected Official Comments
	Next Steps / Wrap Up
1:30	Adjourn
1:30	

Note: After the council meeting, council members are invited to attend an optional tour of the Mega Site.

# Welcome and Introductions





## **Council Business**

- Approve Meeting Agenda
- Approve Meeting Summary from the November 15, 2022 council meeting



# Review Public Comments 2021-2022 Regional Water Plan Update Cycle



- Review and Discussion Pubic Comments

 Discuss if any edits need to be made to the RWP as a result of the public comments received

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8 comments were received from the 100-miles organization

#### MEMO

TO: Georgia EPD, Watershed Protection Branch FROM: Alice M. Keyes, One Hundred Miles DATE: May 15, 2023

Submitted via email to: water.planning@dnr.ga.gov



RE: Comments on the Draft Updated Regional Water Plans, released March 2023

 Several "State-wide" comments were received that were generally associated with all 10 of the regions that GA EPD supports for development and updating of the RWPs – EPD has drafted responses to these comments for consideration by the councils





## Follow-up Notes for Discussion

- Current capacity of I&D Plant is 62.5 mgd
- Expansion to 75 mgd represents a 20% increase

The RWMP indicates that sufficient water supplies are available to meet growing demands through 2060. However, it fails to list the significant increase in water withdrawal expected by the City of Savannah. At best, the RWMP understates the expected growth that the City of Savannah Water is planning. GEFA's 2023 Comprehensive List of Drinking Water State Revolving Funds provides support for the City to increase its water withdrawals because the utility is nearing its current capacity. Specifically, the SRF summary document describes the project in the following way:

"The project will update and expand existing capacity of the city of Savannah I&D water treatment facility to 75MGD and will increase reliability of the aging treatment facility. Currently the facility is utilizing approximately 90% of its capacity of 58 MGD to meet the existing peak demand. Furthermore, the EPD groundwater permit reductions scheduled for January 2025 will result in an approximate 5 MGD reduction in existing ground what are you which will have to be backfilled with I&D surface water so the remaining 10% capacity or approximately 6 MGD will be nearly taken up by the near future ground water permit reductions in 2025."





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- Why does the RWMP fail to recognize these expected changes and the planned growth the City of Savannah is expected to implement?
- How can the models and the implementation plans in the RWMP be updated to reflect these expected increases?

- The updated RWP does note this increase in demand noted both in the Executive Summary and in Section 4
- Note discussion on Bryan County Mega site RWP notes that Mega site will require estimated 9.5 mgd
- Ask could be made of EPD to update the models with these demands after the Mega Site project comes online



Additionally, discussions have begun among City of Savannah Aldermen and women regarding possibly moving the Savannah River intake.

- o How will the RWMP account for moving a major water intake?
- Will the RWMP consider the cost of such changes and reflect the impact this will have on current customers and future customers?

- These appear to be preliminary discussions and the feasibility of moving the intake would likely have to be determined ahead of a permit submittal
- RWP is designed to focus regionally, not necessarily on a specific permit action. If the relocation of the intake were to move forward, it would likely be reflected in the next round of updates of the RWP





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The RWMP indicates that water conservation is a critical water management practice, yet very little information is included regarding how much water has been saved by implementing the practices since the last iteration of the water plan was adopted.

- Why does the RWMP not include information about how much water has been saved as a result of water efficiency and water conservation?
- How much water is expected to be saved by conservation and efficiency practices in this updated plan?

- Estimating progress made by conservation can challenging and can vary significantly by utility service area and county by county
- If we assume that some of the increases in water efficiency could be noted from the recent updated gpcd calculations, a range of 10% to 20% could be attributed to implementation of conservation management practices (assume from both active and passive conservation)
- Industry experts state that conservation can generally range from 5% to 15% in the early
  periods of implementation and grow to as much as 15% to 30% over the long term, especially
  with targeted "active" conservation programs



How can the RWMP be updated to further emphasize the need for greater water efficiency, especially considering the changes and increased demand the North Coast is expecting?

- The plan includes 12 Water Conservation Management Practices, with several tiers identified and a variety of MPs that are industry or sector focused (municipal, agricultural, industrial)
- Perhaps consider encouraging a Seed Grant Applicant to conduct a study, inclusive of a smallscale demonstration project, that could help inform future updates of the RWP?





Large water uses, like the Hyundai plant in Bryan County, are being built. These new facilities are expected to use large volumes of water and generate large volumes of wastewater and runoff.

- Why does the RWMP include so little information about the impact such heavy increases in water use, heavy increase in wastewater generation, and impervious surfaces will have on the region's water resources?
- How will such large future operations, like the Hyundai plant, impact water quality, especially the impact non-point source runoff will have from the large areas of impervious surface?
- What water efficiency measures and water reuse measures are required of large industrial water users, like the Hyundai plant?

- The plan does make mention of the Bryan County Mega site
- Timing of the project and this plan update period, made it difficult to add a lot of specifics into this RWP update. The next round of plan update will likely have much more specificity
- Georgia EPD Coastal Stormwater Supplement to the Stormwater Management Manual
- The plan does offer water efficiency and water reuse management practices for consideration



Section 4 indicates an expected growth in industrial warehouses and permitting processes (through the US Army Corps of Engineers) demonstrate a massive increase in warehouse and distribution centers along our coast.

- How will the RWMP account for the regional impact on water quality, water filtration and other services lost from the thousands of acres of wetlands that are being filled and paved to accommodate millions of square footage of warehouses that have already been permitted, especially in Chatham, Effingham, Bryan and Liberty Counties?
- Can the RWMP call for a comprehensive analysis of the impact of the hundreds of warehouse and distribution centers are and will continue to have on our water resources?

### Follow-up Notes for Discussion

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- Any potential wetland impacts would have to be permitted and usually come with significant mitigation requirements to offset these impacts
- The ask for a comprehensive analysis of warehouses and distribution centers this could be looked into by the technical team
- A recent GPA article cited 11 million new square feet of warehouse space. Energy Information Administration estimates 3.4 gallons per square foot per year of water use ~ 0.10 mgd



Glynn County is home to more four superfund sites and hundreds of hazardous sites. The RWMP fails to acknowledge that superfund sites exist anywhere in the coastal region. This only perpetuates the environmental injustice Glynn County residents and others have suffered from the legacy contamination.

- How can the RWMP be updated to account for the specific challenges to water quality and human health caused by the ongoing confirmation caused by these legacy industries?
- What specific management practices will be implemented by the industries responsible for these contaminants?
- How will the RWMP be updated to indicate that water quality will improve ty 2060 as a result of the remediation needed to remove the contaminants from the environment.
- Additionally, the most common risk facing the majority of superfund sites in the country is increased flooding due to rainier conditions brought about by warming temperatures.<sup>1</sup> How will the RWMP include plans to account for rising seas and the expected re-release of contaminants into our shared water resources as a result?

#### Follow-up Notes for Discussion

Requested an update from EPD on this question





The RWMP fails to acknowledge that sea level is rising on Georgia's coast and throughout the East Coast. Management practices from the past must be adjusted to account for these changes. Given the fact that sea level on the Georgia coast has risen on average 3 mm a year since 1933, translating to 11 inches in 87 years,<sup>2</sup> and that models predict that on our coast sea level will rise up to 6 more inches by 2031,<sup>3</sup>

• How can the RWMP and all models used to anticipate the impact of management practices be updated to reflect these changes?

#### Follow-up Notes for Discussion

 This was discussed by the council, including the topic of sea level rise, during the discussion related to updating the vision and goals. The council added this edit to the vision and goals section of the RWP during this plan update process,

*"Identify opportunities to prepare for and respond to climate variability and extremes as it relates to water resources and providing resiliency".* 

Discuss with EPD modeling team on how the models could be updated to reflect sea level rise





To: Georgia Department of Natural Resources
Re: Coastal Georgia Regional Water Plan
From: Dr. Amy Rosemond, Distinguished Research Professor, University of Georgia
cc: Governor Brian Kemp (sent via hard copy to the State Capitol address), Lieutenant Governor
Burt Jones (sent via email form on the Lieutenant Governor website), Speaker Jon Burns (sent via email)
Date: May 14, 2023

#### Follow-up Notes for Discussion

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- 3 general comments directed to all 10 of the Regions that EPD assists with updating the regional water plans (all regions except for MNGWPD)
- EPD has drafted responses for consideration



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Date: May 14, 2023

Dear Georgia Department of Natural Resources colleagues, and Governor Kemp, Lieutenant Governor Jones, and Speaker Burns:

Thank you for this opportunity to comment on the draft updated Regional Water Plans for our state. I was asked to serve on Georgia's State Water Plan Scientific and Engineering Advisory Panel in 2008. I applaud the work of Geogia's Environmental Protection Division (EPD) in creating a state water plan, to assess the status of water quality and water quantity, and to continuously improve this process. Ideally, the implementation of the Regional Water Plans will promote wise use of water and make sure that our streams, rivers, and lakes will serve future generations of Georgians.

In my review of the recent draft Regional State Water Plans, I see deficits in the implementation of the State Water Plan, which will likely result in negative impacts on people and water. It is my opinion that unless these deficits are addressed, that Georgia will face serious water shortages and water pollution issues in the future. In addition, the deficits that I outline below do not protect the health and functioning of freshwater systems for all Georgians. I am most familiar with the Upper Oconee Regional Plan because I have studied it in the most detail. But all of the Regional Water Plans have much in common, namely A) the appointment of persons with largely business interests to the Regional Planning Councils, B) water quality issues that are not dealt with adequately in the current plans, and C) the need for more direct feedback between monitoring of aquatic systems and management to protect water quality for future generations. I agree strongly with the recommendation in the draft Altamaha Regional Water Plan that EPD should consider institutionalizing regional planning (p. ES-11 of that plan). In that way, EPD can set benchmarks, monitor progress, and determine whether current management practices are adequate for protecting long-term access to quality water in Georgia. This job needs to be taken on by GA EPD, with more funding and staff, to ensure future success.

Regarding the Coastal Georgia Regional Water Plan:

A. Who are in positions to make decisions about Georgia's water? I am deeply concerned about the representation on the Regional Water Councils, which does not appear to be representative of the state of Georgia and those who depend on water supply and functioning freshwater ecosystems. I have reviewed the names of a few people who have been appointed to the Regional Water Councils. I have found that many appointed council members have business interests in the use of water and do not represent the vast diversity of Georgians who need access to water and unpolluted water bodies. In addition, I haven't been able to determine whether any

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**A. Who are in positions to make decisions about Georgia's water?** I am deeply concerned about the representation on the Regional Water Councils, which does not appear to be representative of the state of Georgia and those who depend on water supply and functioning freshwater ecosystems. I have reviewed the names of a few people who have been appointed to the Regional Water Councils. I have found that many appointed council members have business interests in the use of water and do not represent the vast diversity of Georgians who need access to water and unpolluted water bodies. In addition, I haven't been able to determine whether any council members have expertise dealing with safeguarding the condition of lakes and rivers or have expertise in the fields of water planning, hydrology, engineering, or ecology. I would encourage the appointment of council members who *do not* have business interests with water, who *do* have expertise with water planning and management, and who have diverse experiences with water.

### Draft Response Provided by EPD (Jennifer Welte):

Pursuant to Section 14 of the State Water Plan, Council members are appointed by the Governor, Lt. Governor, and Speaker of the House and must reside in the counties of each planning region. The appointing officials may "consider pre-qualified nominees for appointment, as well as such other individuals as they may choose." EPD is open to receiving any nominees that the Odum School of Ecology or others may recommend for appointment to the Regional Water Planning Councils. Those nominations can be sent to me, and they can then be included in any future recommendations shared with the appointing officials.





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**B.** There is limited recognition of the current poor condition of Georgia's waters and what each Regional Water Plan will do to address polluted waters and future water use. The regional water plans need to address the realities of water quality in Georgia, that include poor water quality in our lakes, rivers and streams. The EPD 2020 Integrated 305b/303d Report indicates that 58% of river and stream miles are impaired (they are not meeting their designated uses). In the 2022 Integrated 305b/303d Report, that went up slightly, with a reported 60.7% of Georgia's rivers and streams being impaired. Of Georgia's lakes and reservoirs, 40.8% are impaired according to the 2020 report. In many of the Regional Water Plans, Assimilative Capacity of water bodies is already exceeded and there are gaps in projected water supply.

### Draft Response Provided by EPD (Jennifer Welte):

Regarding your comments on water quality and monitoring of waters of the State, the plans do address the current water quality conditions in Section 3, including consideration of the Georgia's Integrated 305(b)/303(d) Report. During the planning process, the councils consider the most current water quality data that has been collected by Georgia EPD and other entities. The information that Councils receive is also available on EPD's database website <u>https://gomaspublic.gaepd.org/ and through USGS gage records</u>.





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C. More monitoring and oversight is needed to determine whether aquatic systems are declining in quality, given current management. This responsibility ultimately rests with the state of Georgia. It is laudable that many Regional Water Councils have recommended long-term monitoring. The current plans do not address how monitoring will be funded (it needs to be), nor how decision-making from monitoring would take place. This oversight would be more effective if it were under the auspices of, and in fact is the responsibility of, Georgia EPD. Also, more attention needs to be given to extreme weather events (e.g., long-term drought). There needs to be more monitoring and benchmarks in place to ensure that current systems do not decline in quality, that we are planning for extreme events, and that our state EPD has the management tools and personnel to address challenging future water quality and quantity needs.

### Draft Response Provided by EPD (Jennifer Welte):

The Council's Plans have and continue to stress the need for continuous monitoring, as well as the collection of additional data. Additionally, the Councils also consider surface water quality and quality modeling (resource assessment) results that analyze water quality parameters that correlate with the state's water quality standards. Importantly, these models analyze both current conditions (including model calibration) as well as future conditions based on water demands and returns that are projected 40 years into the future. These models analyze a variety of water quality conditions, including both dry/drought and wet/stormwater-driven conditions, and can continue to be utilized in future planning cycles to analyze extreme weather events (e.g., long-term drought).



United States Department of the Interior Fish and Wildlife Service Georgia Ecological Services Email: GAES\_Assistance@FWS.gov Website: FWS.gov/office/Georgia-Ecological-Services/



North Georgia Office 355 East Hancock Ave, Room 320, Box 7 Athens, GA 30601 Phone: (706) 613-9493 West Georgia Office P.O. Box 52560 Fort Moore, GA 31995-2560 Phone: (706) 544-6030 Fax: (706) 544-6419 Coastal Georgia Office 4980 Wildlife Drive NE Townsend, GA 31331 Phone: (912) 832-8739

#### May 17, 2023

State of Georgia Water Planning Division Regional Water Plsanning Councils Via <u>water.planning@dnr.ga.gov</u>

Re: Comments on Draft Updated Regional Water Plans

#### Follow-up Notes for Discussion

- 4 general comments directed to all 10 of the Regions that EPD assists with updating the regional water plans (all regions except for MNGWPD)
- EPD has drafted responses for consideration



#### United States Department of the Interior

Fish and Wildlife Service Georgia Ecological Services Email: GAES\_Assistance@FWS.gov Website: FWS.gov/office/Georgia-Ecological-Services/

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May 17, 2023

State of Georgia Water Planning Division Regional Water Planning Councils Via water.planning@dnr.ga.gov

Re: Comments on Draft Updated Regional Water Plans

Dear Regional Water Planning Councils:

Thank you for the opportunity to review State of Georgia Water Planning Division's Draft Regional Water Plans, updated in March 2023. We submit the following comments under provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531, *et seq.*) and the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et. seq.).

#### General Comments on all 10 Regional Water Plans:

Along with the State of Georgia Water Planning Division, we share your endeavor that all Georgians have the right to enjoy safe and sustainable water resources, while safeguarding our rivers and natural ecosystems for generations to come. By function of this letter, we invite the Regional Water Planning Councils to include our agency into your water planning efforts so that we may assist with development of projects that consider effects to natural habitats, threatened and endangered species, and other fish and wildlife resources.

- We recommend Regional Water Plans address the State Wildlife Action Plan (SWAP) High Priority Habitats, High Priority Species, and High Priority Conservation Actions within each area thoroughly and uniformly.
- All Plans should contain up-to-date numbers of species of Conservation Concern tracked by the Georgia Natural Heritage Program. For example, within the 16-county area of the Altamaha Water Plan, there are 202 Georgia Biotics tracked plants and animals, 65 Georgia Protected plants and animals, 12 tracked natural communities, and seven tracked mollusks. A list of the species for each of the Regional Plan areas can be obtained through the Environmental Review, Wildlife Conservation Section, Wildlife Resources Division,





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#### May 17, 2023

State of Georgia Water Planning Division Regional Water Plsanning Councils Via <u>water.planning@dnr.ga.gov</u>

Re: Comments on Draft Updated Regional Water Plans

### **Draft Response Provided by EPD (Jennifer Welte):**

- We recommend Regional Water Plans address the State Wildlife Action Plan (SWAP) High Priority Habitats, High Priority Species, and High Priority Conservation Actions within each area thoroughly and uniformly.
- All Plans should contain up-to-date numbers of species of Conservation Concern tracked by the Georgia Natural Heritage Program. For example, within the 16-county area of the Altamaha Water Plan, there are 202 Georgia Biotics tracked plants and animals, 65 Georgia Protected plants and animals, 12 tracked natural communities, and seven tracked mollusks. A list of the species for each of the Regional Plan areas can be obtained through the Environmental Review, Wildlife Conservation Section, Wildlife Resources Division, Georgia Department of Natural Resources (<u>https://georgiawildlife.com/environmental-review</u>).
- All Plans should contain up-to-date species and habitats protected under the Endangered Species Act. In **Appendix 1**, we provide information regarding federally listed species and critical habitats that occur in each region for further consideration. For the most up-to-date information, please request lists using the Service's free and publicly available Information for Planning and Consultation (IPaC) system (https://ipac.ecosphere.fws.gov/).
- All Plans should address Clean Water Act Section 303(d) impaired waters and objectives to bring impaired waters into compliance for the benefit of the community and ecological health in the water regions.

In general, your comments address items that the Councils would benefit from learning more about directly from the U.S. Fish and Wildlife Service. In particular, more detailed information about how the Endangered Species Act, Fish and Wildlife Coordination Act, and Georgia Natural Heritage Program intersect with the management of water resources in the planning regions would be helpful to the Councils. More detailed information will also enable to Councils to more fully consider how the Plans can reference and address the various species and habitats that your comments identify (including those that are terrestrial). Several of the Plans address the State Wildlife Action Plan (SWAP), but the Councils would also benefit from learning how they can more thoroughly and uniformly address the high priority items in the SWAP. Those Plans that reference the SWAP have already benefited from participation and information provided by representatives of the Georgia Wildlife Resources Division.

Based on your comments, we would like to invite you or other U.S. FWS staff to attend, and possibly present it to the Regional Water Planning Councils during their future meetings so that they can more fully consider this information in the next planning cycle. Each Council meeting also includes time for public comments.

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# Georgia Southern University Seed Grant Update/Demo





# Lunch Break





# Bryan County Mega Site Update



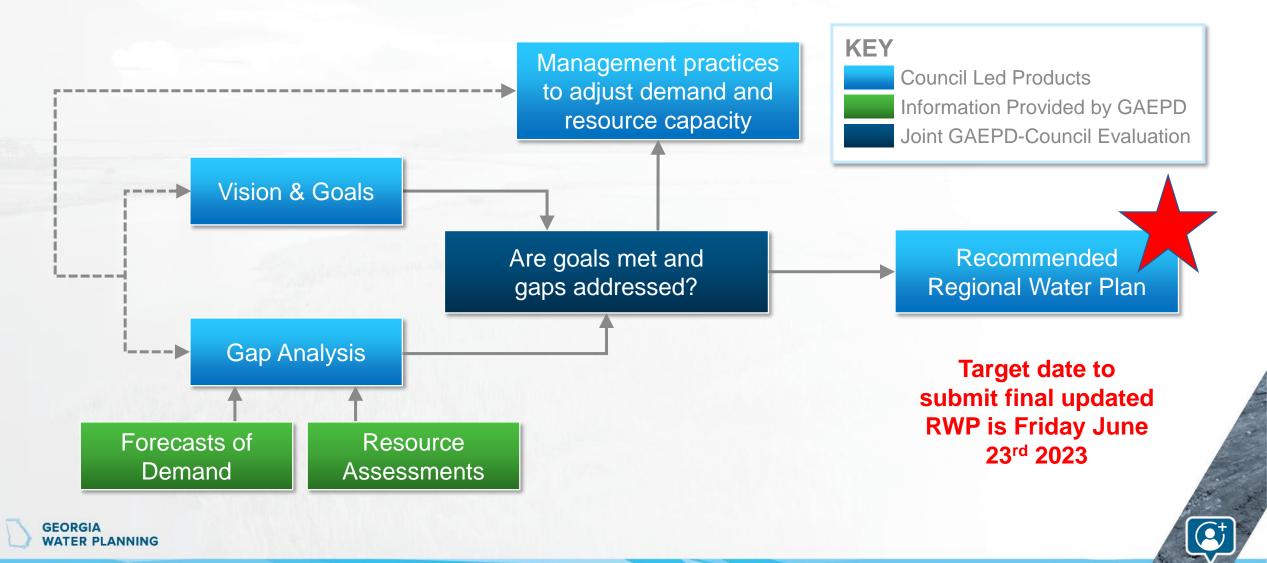


# Overview of Regional Water Plan Update Process and Schedule Moving Forward





## Path Forward: Information Flow/Products



# Public Comments



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# Next Steps



## Thank You



#### **BENJY THOMPSON**

Chief Executive Officer Development Authority of Bulloch County Council Chair for: Coastal Georgia <u>benjy.thompson@advantagebulloch.com</u> (912) 489-9115



#### **REID JACKSON** Ambient Monitoring Unit Manager – South Watershed Protection Branch Georgia Environmental Protection Division

Liaison for: Coastal Georgia <u>Reid.jackson@dnr.ga.gov</u> (912) 262-3001



SHAYNE WOOD CDM Smith

Council Lead for: Coastal Georgia woodsh@cdmsmith.com (904) 527-6703



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**Bullpen Slides if Backup Context is Needed** 



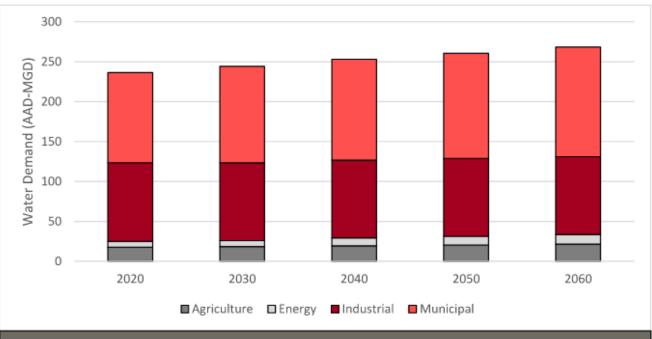
waterplanning.georgia.gov



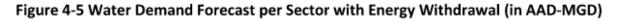
- Why does the RWMP fail to recognize these expected changes and the planned growth the City of Savannah is expected to implement?
- How can the models and the implementation plans in the RWMP be updated to reflect these expected increases?

#### 4.5 Total Water Demand Forecasts

Total water demand forecasts for the Coastal Georgia Region are summarized in Figure 4-5. This figure presents the forecasts for municipal, industrial, agricultural, and thermoelectric power. Overall, the region is expected to grow by 13% (32 MGD) in water demand from 2020 through 2060.



Source: Coastal Georgia Water and Wastewater Forecasting Technical Memorandum (2022). Note: Values represent forecasted annual average demand (AAD) in million gallons per day (MGD)



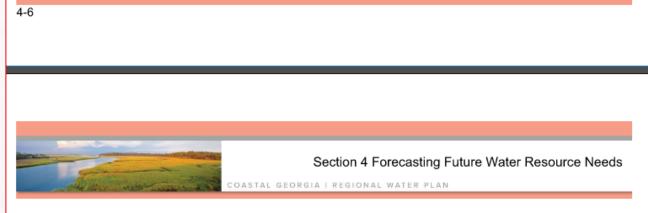




Large water uses, like the Hyundai plant in Bryan County, are being built. These new facilities are expected to use large volumes of water and generate large volumes of wastewater and runoff.

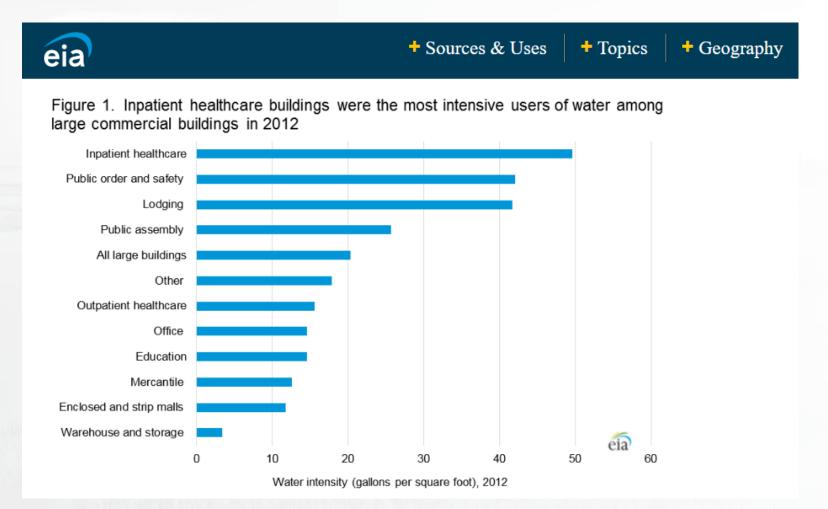
- Why does the RWMP include so little information about the impact such heavy increases in water use, heavy increase in wastewater generation, and impervious surfaces will have on the region's water resources?
- How will such large future operations, like the Hyundai plant, impact water quality, especially the impact non-point source runoff will have from the large areas of impervious surface?
- What water efficiency measures and water reuse measures are required of large industrial water users, like the Hyundai plant?

Discussions with the Coastal Regional Commission revealed that the locations of existing and near-term industrial sites are well established but predicting the type of industry that may locate there as well as that future industry's water demand are more elusive. However, the Coastal Regional Commission foresees future industry growth in the region occurring in four main categories: energy, aerospace, general manufacturing, and warehouse distribution. The Coastal Council is aware that near-term new industrial development in Bryan County will increase the industrial water demand forecast, with the current estimate for this increase being about 9.5 MGD (Council meeting minutes November 15, 2022). Therefore, this amount has been added to the industrial water demand forecast described in the Coastal Georgia Water and Wastewater Forecasting Technical Memorandum and is included in Figure 4-3. The new industrial complex is



expected to use 4 MGD of groundwater from Bryan County, 3.25 MGD of groundwater from Bulloch County, and 2.5 MGD of surface water from Effingham County. Similarly, 3 MGD of point discharge, a current estimate for the Bryan County industrial development, has been added to the industrial wastewater discharge.





https://www.eia.gov/consumption/commercial/reports/2012/water/

