

FIRST QUARTER 2021 UPDATE

Georgia State Water Plan Coastal Georgia Regional Water Planning Council Newsletter

Updates from EPD



**JENNIFER
WELTE**

The Georgia Environmental Protection Division (EPD) has been actively working with the state's appointing officials to ensure that Council appointments and re-appointments occur. I am pleased to report that Governor Kemp made appointments to the Council on March 15, and Lieutenant Governor Duncan made appointments to the Council on April 6 (both included many reappointments). Once Speaker Ralston makes his appointments to the Council, then the appointments process will be completed. EPD and Chairman Thompson will be notifying all those reappointed, and we will work to provide meaningful orientation sessions for the new members to the Council.

Now that the forecasting effort is wrapping up, the planning update process has just about begun. The Council may expect to meet roughly quarterly during the planning update process, which will conclude in December 2022.

PURPOSE

The purpose of this newsletter is to inform Council Members of work that has already been completed and what is still to come to support the 2020-2022 Regional Water Plan (RWP) Update.

Good morning/afternoon, everyone!

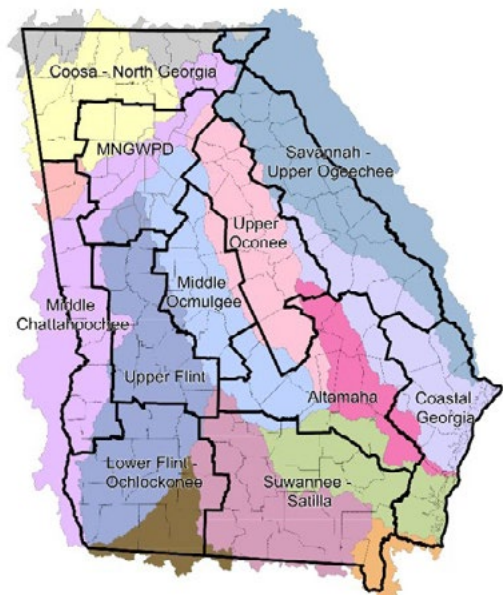
I hope this email finds you all healthy and prospering. Because it's been a while since we've been together, Shayne/CDM Smith have put together this Council Update to keep you informed of water planning activities that relate to our Council. I hope this update will help keep you engaged and prepared for our next meeting, most likely to be held in June/July and in person!

If you have any questions about anything that's been happening, please feel free to contact me (benjy.thompson@advantagebulloch.com or 912-536-5054) or Shayne.

I look forward to seeing you all soon,
Benjy

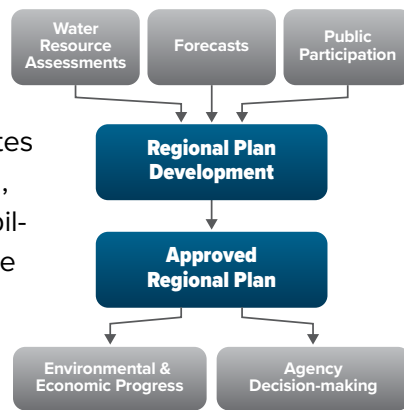


Water Planning Regions



Planning Process Overview

As part of preparation for the 2020–2022 Regional Water Plan (RWP) update, work over the past year has included updates to the water demand forecasting, surface and groundwater availability resource assessments, surface water quality/assimilative availability resource assessments, and public participation through Council Meetings.



These factors will go into the development of the regional plan, which will later be reviewed and approved by the Council and EPD. RWPs play a role in the state’s water-related permitting and project funding decisions as well as environmental and economic progress of the state of Georgia. Activities related to the water planning cycle include EPD seed grant and 319(h) grant funding in each planning region, surface and groundwater availability studies, and surface water quality studies. The current Coastal Georgia Regional Water Plan can be found [here](#).

Water Resource Assessments

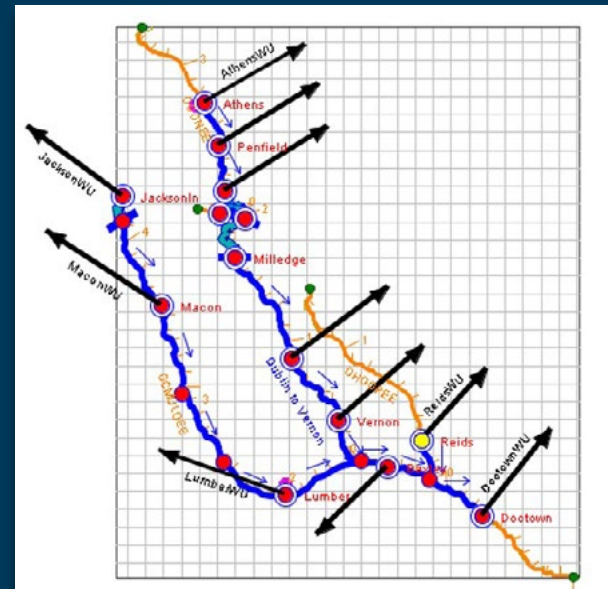
Georgia EPD has been working with a team at Hazen and Sawyer to develop a Basin Environmental Assessment Model (BEAM) to update the surface water availability resource assessment process. The Oconee-Ocmulgee-Altamaha (OOA) River system is the pilot watershed under this effort. The BEAM performs similar assessments as the HEC-ResSim models which were used in the previous planning efforts. However, the BEAM is being developed at a much finer scale using the OASIS modeling platform. The BEAM will be used for updating RWPs and also by EPD for future evaluations of proposed water use permits. Compared to the previous ResSim model, the BEAM model has a much higher resolution and more accurately represents the tributaries that contribute to the main stems. The model also has a variety of metrics that can be considered including water supply, ecological and recreation. As scenarios change in the regions, the model can be re-visited to see where additional changes may be needed to meet regional goals or support stream conditions.

Surface and groundwater availability as well as surface water quality resource assessments relevant to the previous plan update can be found [here](#).

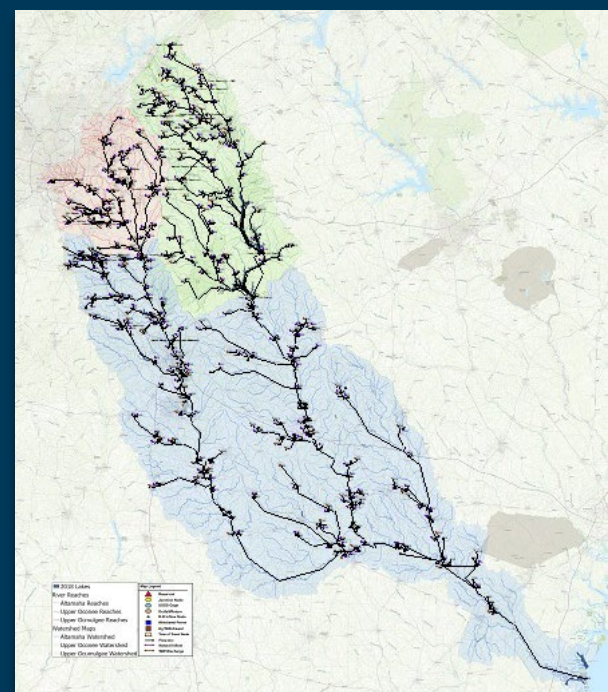
OOA BEAM Model Development



ReSim Model



BEAM Model

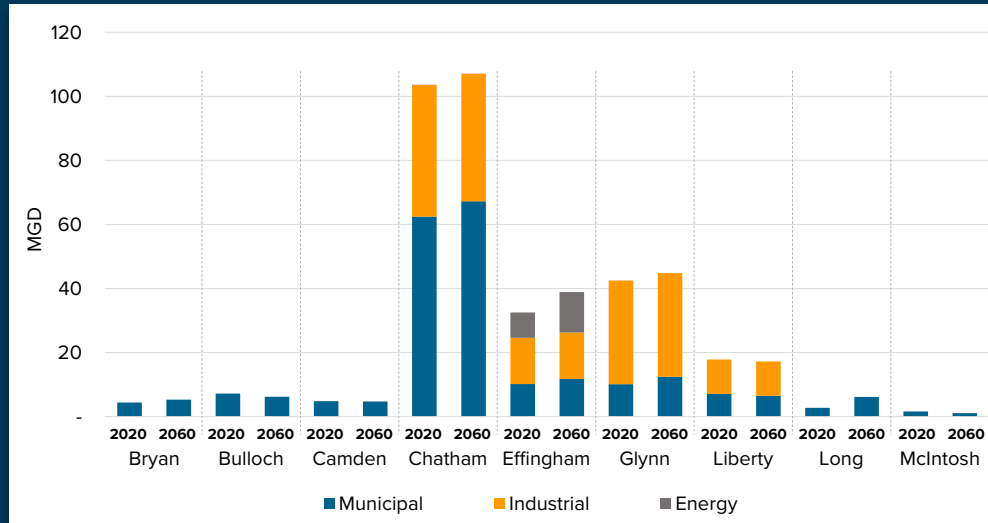


INTRODUCTION

With the help of stakeholder groups and the planning contractor liaisons, the Black & Veatch team updated the Municipal Water Demand Forecast which is currently being finalized. CDM Smith developed the water demand forecasts for the Energy and Industrial sectors in Georgia. The Energy and Industrial water demand forecasts have been finalized and are posted to the website. Mark Masters with Albany State University is currently developing the agricultural water demand forecast and preliminary results are anticipated to be ready later this spring. The graphic at right shows the results of the updated water demand forecasts for Coastal Georgia, except for the agricultural water demand.

POPULATION PROJECTIONS

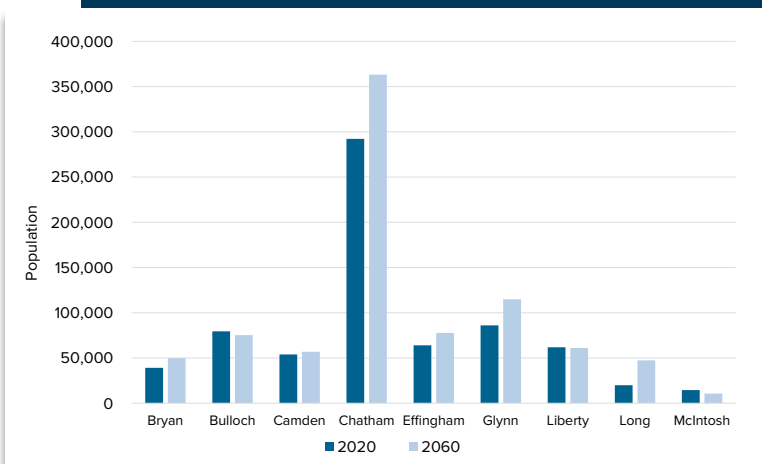
State and County population projections are prepared by the Governor’s **Office of Planning and Budget** (OPB). These population projections are used consistently by all state agencies for multiple purposes. A Cohort-Component model is used to develop county level projections based upon age specific fertility and death rates, and migration rates. The OPB population projections released in October 2019 were used in the forecasting process and are based upon the fertility, mortality and migration rates from 2014–2018. The graph below shows the population projections for each county at 2020 compared to 2060.



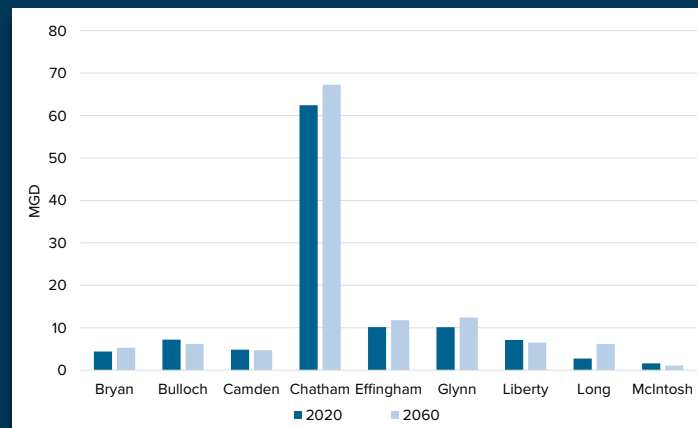
Coastal Georgia Water Demand Forecast

UPDATE OF THE MUNICIPAL WATER DEMAND FORECAST

A draft of the Municipal Water Demand and Wastewater Flow Forecasting Methods Report is available [here](#). Please note that comments on this draft report have been submitted and a Final Report is pending. This report outlines the updated data sources used for this update of statewide municipal water demand forecasts, the methodology for performing the forecasts, the stakeholder review process, input received to date, and draft forecast results by water planning region. County-level details of permitted water withdrawals and wastewater facilities are included in the report. A visual of the municipal water demand forecast from 2020 into 2060 for each County is shown below.



Coastal Georgia Population Projections (2019)



Coastal Georgia Municipal Water Demand Forecast



UPDATE OF THE INDUSTRIAL WATER DEMAND FORECAST

The 2020 update of the water demand forecast for the industrial sector is posted [here](#). This updated forecast was prepared to inform the next updates to the Regional Water Plans and reflects Georgia’s water needs for the industrial sector through 2060, and the results for this region are shown on the image below. An industrial sector advisory group, which was convened in June 2020, provided input and review on the methodology and results of the updated forecast. The advisory group was further subdivided into four subsector advisory groups representing food processing, paper and forest products, mining, and manufacturing. Each subsector group developed its own approach to estimating future water needs for these subsectors. Thus, the update of the industrial water demand forecast is based upon input and expert opinions by industry leaders from across the state.

The approach used in 2020 to estimate future industrial water demand differs from the approach previously used, which relied upon employment projections to inform the industrial water demand projections. There has been no update to the prior industrial water demand forecast since the 2011 Regional Water Plans. Since that time, industrial water use in Georgia has decreased, in part due to more efficient use of water. Based on those decreases, and the change in the approach for this forecast, the 2020 update of the industrial water demand forecast includes significantly lower projections than the prior forecast. Industrial water demands in Georgia will be re-evaluated every 5–10 years to adjust for changing conditions.

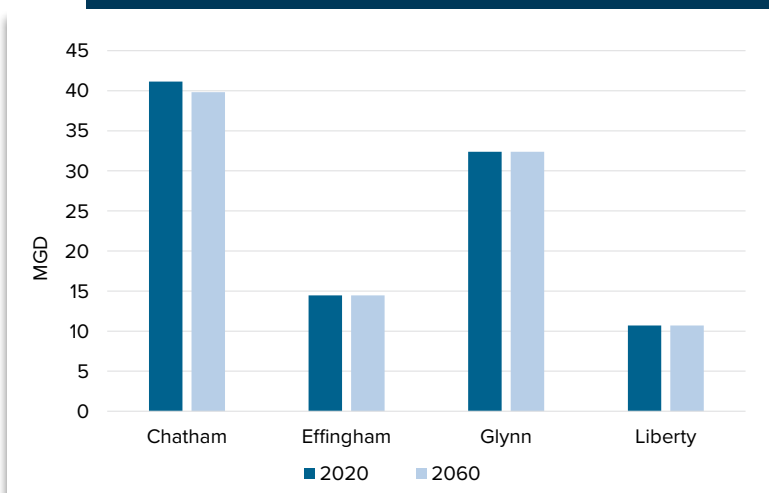
UPDATE OF THE ENERGY WATER DEMAND FORECAST

The updated water demand forecast for the energy sector has been finalized based on input from a stakeholder group comprised of representatives from Georgia’s major power companies. It will inform the next Regional Water Plan updates and is available on the [Georgia Water Planning website](#).

The 2020 updated forecast reflects Georgia’s water needs for thermoelectric energy generation through 2060. The process used the 2019 population projections developed by the Governor’s Office of Planning and Budget (OPB) and average energy consumption per capita to project future energy needs in Georgia. Note that both population projections have shifted lower than before and average energy consumption per capita has declined. Therefore, the projected need for energy in Georgia is lower than in prior energy water demand forecasts. The only thermoelectric energy demands in Coastal Georgia are in Chatham and Effingham Counties. Chatham County is projected to have a minimal demand of 0.01 million gallons per day (MGD) at 2020 which increases to 0.02 MGD into 2060. Effingham County has a larger water demand forecast where the starting withdrawal in 2020 is 7.91 MGD and the projected withdrawal into 2060 is 12.63 MGD.

An energy sector advisory group, which was convened in April 2020, provided input and review to EPD during the forecast update process. Future energy production by type of generating facility is estimated statewide, from which the future water withdrawal and consumption by type of generating facility is estimated. The recent retirement of generating facilities and the expansion of nuclear power generation at Plant Vogtle are accounted for in this update. Assumptions are made regarding the gradual future retirement of coal-fired generating facilities across the state. The need for additional energy generation in the future is assumed to be provided by natural gas and renewable energy sources.

The results of this forecast update provide region-specific forecasts of water needs for thermoelectric energy generation from existing and known planned facilities. Future addition of natural-gas generation is assumed to be co-located with existing natural gas facilities. Councils may wish to address the issue more qualitatively by trying to understand the water resources implications as some percentage of future additional power generating capacity located within their regions.



Coastal Georgia Industrial Water Demand Forecast



Visions & Goals

Adopted in 2009, the Coastal Georgia vision is:

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.

Previously adopted goals pertain to water systems and supply sustainability, economic sustainability and development, and quality of life and public health enhancement. Similar to the last plan update cycle, visions and goals will be revisited for each region entering this upcoming plan update cycle. These will guide and frame the selection of management practices and will ensure resources are managed to meet the region's needs.

Questions to consider when revisiting these visions and goals include:

- ▶ Are there any major water issues that have surfaced in the region?
- ▶ Has what you hoped to see for this region regarding water resource changed substantially over the past 5 years?
- ▶ Is there anything on the horizon that may influence the vision for the region?

Revisions to visions and goals are not necessary if the answers to the questions above are substantively no. More information about the visions and goals of the Coastal Georgia Region can be found [here](#).

Anticipated Timeline

Similar to the last plan update cycle, quarterly Council Meetings may be held to facilitate the process. Meeting topics will include forecasting results, resource assessment/gap analysis results, and review and update of management practices. With the forecasting effort nearly wrapped up, the planning process has essentially begun. The next few Coastal Georgia Council Meetings will highlight the forecasting results and updated resource assessments, and meetings in 2022 will be focused on plan revisions.

GOALS

- 1 Manage and develop high quality water resources to sustainably and reliably meet domestic, commercial, industrial and agricultural water needs.
- 2 Identify fiscally responsible and implementable opportunities to maximize existing and future supplies including promoting water conservation and reuse.
- 3 Optimize existing water and wastewater infrastructure, including identifying opportunities to implement regional water and wastewater facilities.
- 4 Protect and maintain regional recreation, ecosystems, and cultural and historic resources that are water dependent to enhance the quality of life of our current and future citizens, and help support tourism and commercial activities.
- 5 Identify and utilize best available science and data and apply principles of various scientific disciplines when making water resource management decisions.
- 6 Identify opportunities to manage stormwater to improve water quantity and quality, while providing for wise land management, wetland protection, and wildlife sustainability.

FOR MORE INFORMATION, CONTACT:

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