

THIRD QUARTER 2021 UPDATE

Georgia State Water Plan Savannah-Upper Ogeechee Regional Water Planning Council Newsletter

Updates from EPD



**HAYDN
BLAIZE, M.S. ENG.**

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 June 28. Once Lieutenant Governor Duncan and Speaker Ralston make appointments to the Council, then the appointments process will be completed. EPD and Chairman Azevedo 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!

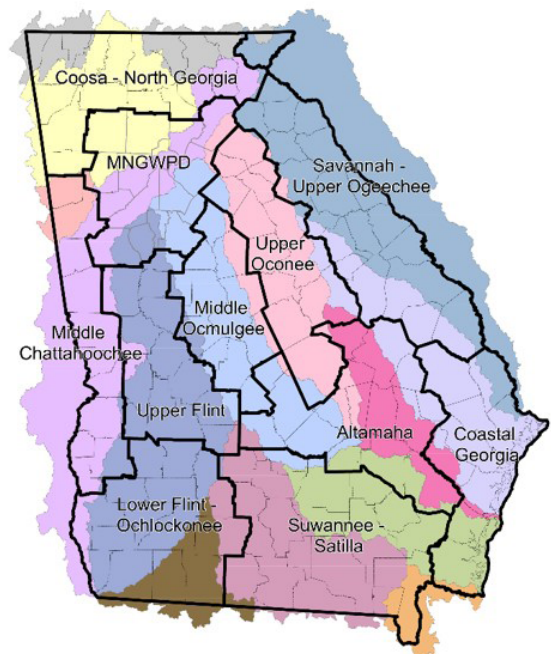
I hope this email finds you all healthy and prospering. Because it's been a while since we've been together, Ashley/CDM Smith have put together this Council Update to keep you informed of water planning activities that relate to our Council. I hope this update will help keep you engaged and prepared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

If you have any questions about anything that's been happening, please feel free to contact me or Ashley.

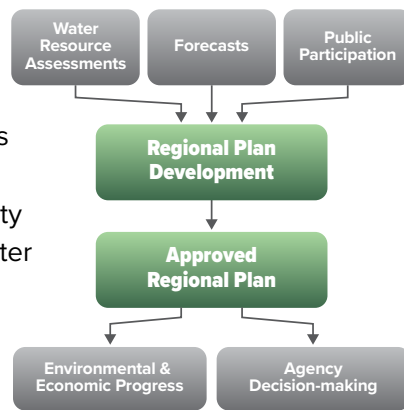
I look forward to seeing you all soon,
Bruce



Water Planning Regions



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 updates of the regional plan that the Council will prepare for public review and input and EPD adoption. 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 Savannah-Upper Ogeechee Regional Water Plan can be found [here](#).



Water Resource Assessments

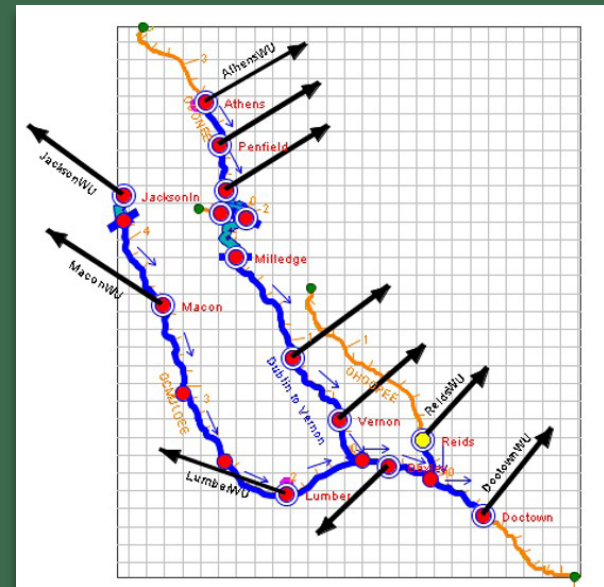
Georgia EPD has been working with a team at Hazen and Sawyer to develop a Basin Environmental Assessment Model (BEAM) to update the surface water availability resource assessment process. The Oconee-Ocmulgee-Altamaha (OOA) River system is the pilot watershed under this effort. The BEAM performs similar 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 RWP's 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. The Savannah-Ogeechee river basins BEAM model will be completed before the end of 2021, and results will be shared with the Council once they are available.

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

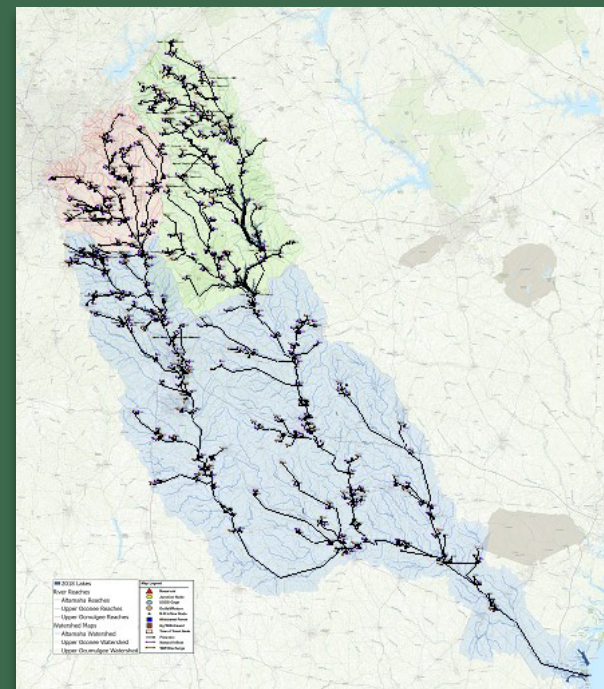
OOA BEAM Model Development



ReSim Model

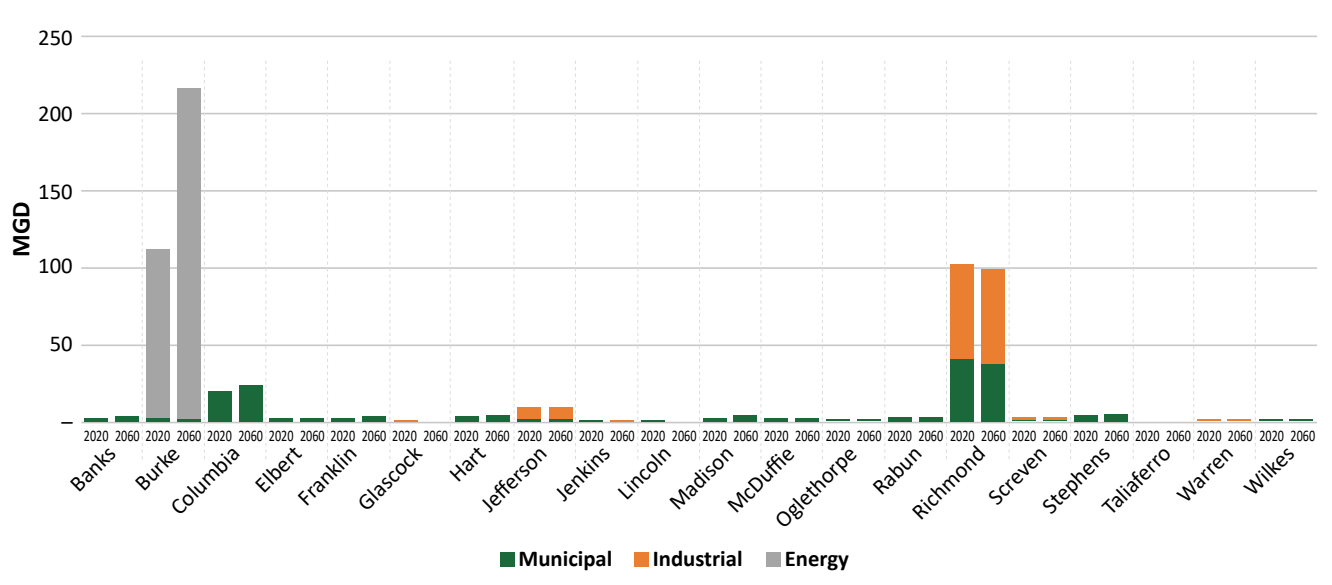


BEAM Model



INTRODUCTION

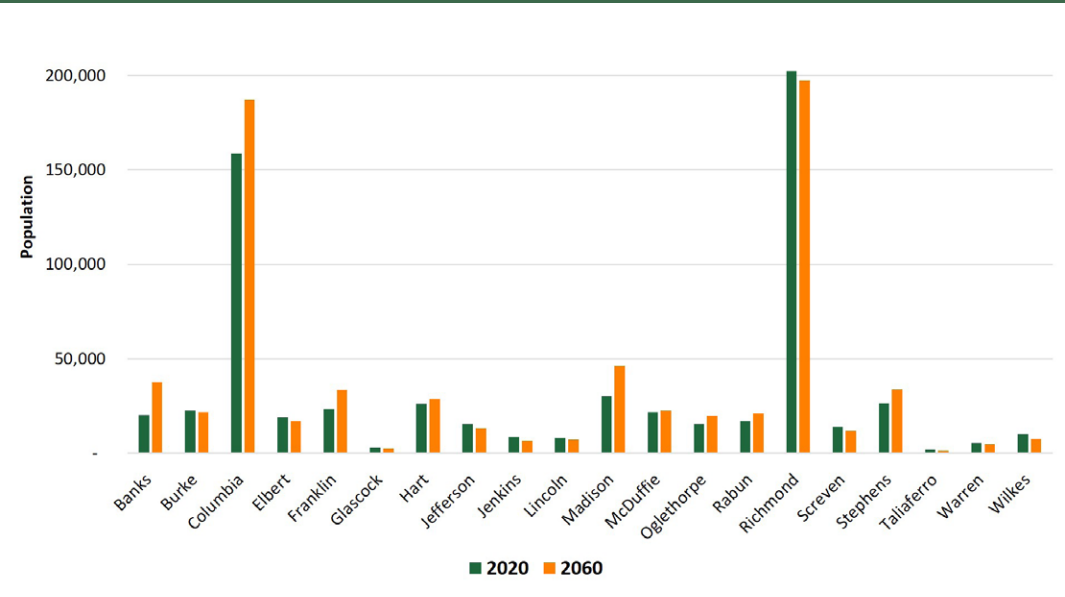
With the help of stakeholder groups and the planning contractor liaisons, the Black & Veatch team updated the Municipal Water Demand Forecast which has been finalized and is posted on the water planning website. CDM Smith developed the water demand forecasts for the Energy and Industrial sectors in Georgia. The Energy and Industrial water demand forecasts have been finalized and are posted to the website. Mark Masters with Albany State University has developed the agricultural water demand forecast, and results will be shared at the next Council Meeting. The graphic at right shows the results of the updated water demand forecasts for the Savannah-Upper Ogeechee region, for these three water use sectors.



Savannah-Upper Ogeechee Water Demand Forecast

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.

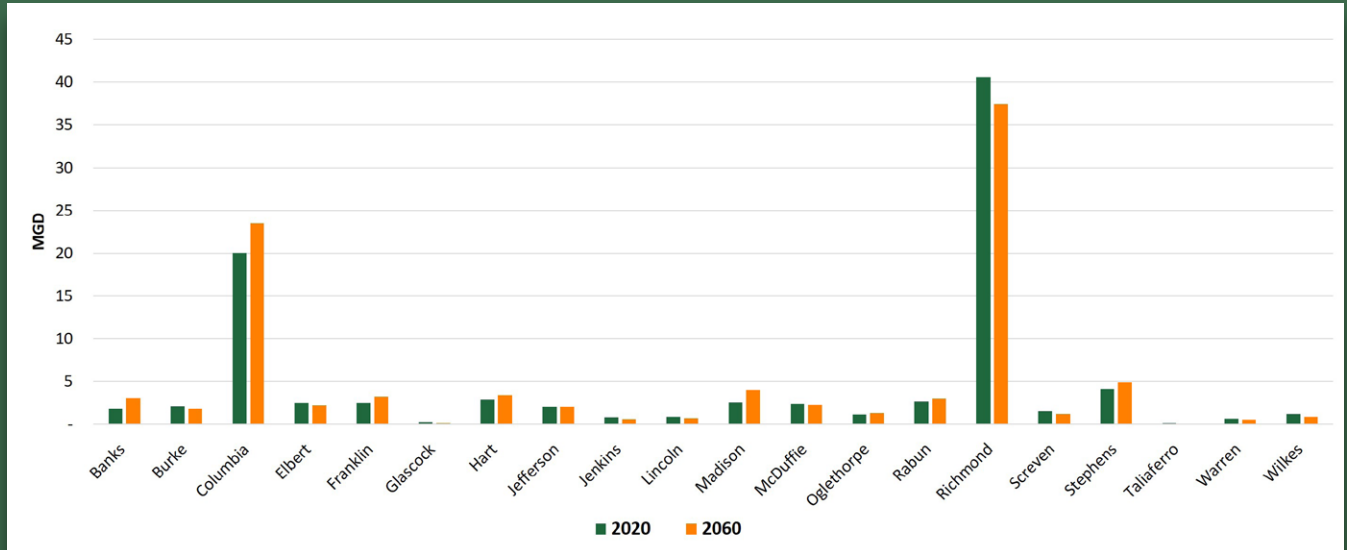


Savannah-Upper Ogeechee Population Projections (2019)



UPDATE OF THE MUNICIPAL WATER DEMAND FORECAST

A final copy of the Municipal Water Demand and Wastewater Flow Forecasting Methods Report is available [here](#). 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.



Savannah-Upper Ogeechee Municipal Water Demand Forecast

UPDATE OF THE AGRICULTURAL WATER DEMAND FORECAST

From 2015 to 2020, the Savannah-Upper Ogeechee Region has seen a 10% increase in total irrigated acres, groundwater irrigated acres, and the number of center pivot irrigation systems. Burke, Screven, Jefferson, and Jenkins Counties represent more than 95% of the irrigated acreage in 2020, where corn, cotton, and peanuts make up almost 80% of the crop acreage in the region. Over the same five-year period, average daily water uses for livestock and horticultural nurseries increased by 0.7 MGD and 1.1 MGD, respectively. Recorded agricultural use in 2019 was near the 2020 90th percentile that was estimated for the prior Water Plan for both groundwater and surface water. When finalized, more information on the Agricultural Water Demand Forecast can be found [here](#).

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, 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](#).

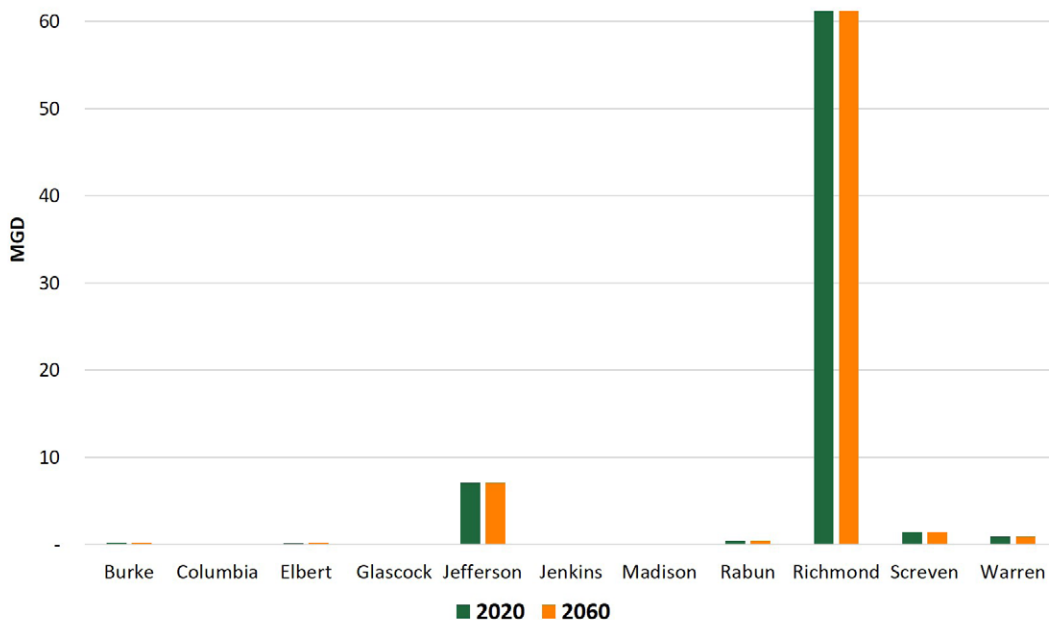
The 2020 updated forecast reflects Georgia's water needs for thermoelectric energy generation through 2060. The process used the 2019 population projections developed by the Governor's Office of

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 the Savannah-Upper Ogeechee region are in Burke and Hart Counties. Hart County is projected to have a minimal demand of 0.1 million gallons per day (MGD) at 2020 which increases to 0.2 MGD into 2060. Burke County has a larger water demand forecast where the starting withdrawal in 2020 is 110 MGD and the projected withdrawal into 2060 is 214 MGD (due to the expansion of Plant Vogtle).

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.



Savannah-Upper Ogeechee Industrial Water Demand Forecast

AMERICAN RESCUE PLAN

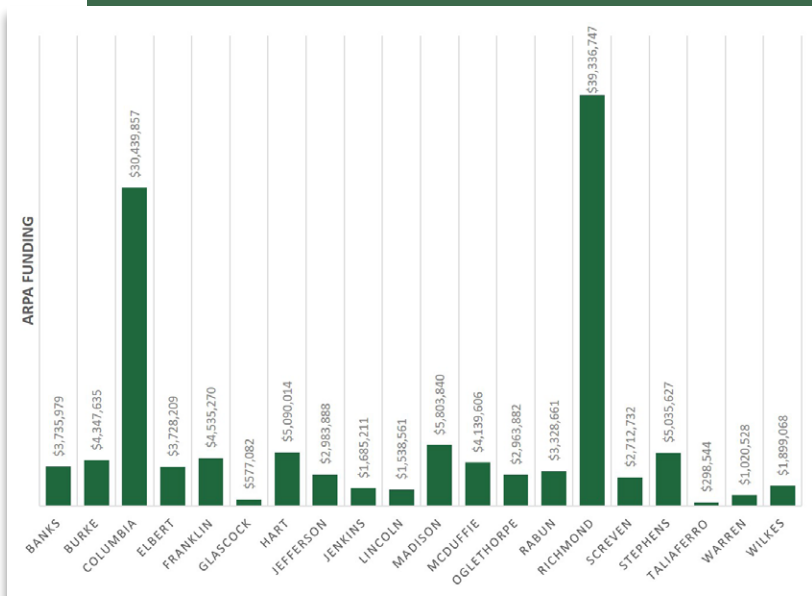
The American Rescue Plan provides a total of \$350 billion in Coronavirus State and Local Fiscal Recovery Funds to help eligible state, local, territorial, and tribal governments. Funding has been allocated to States, **Counties**, **Metropolitan Cities**, and **local governments typically serving populations of less than 50,000**. Local governments (counties and cities) in the **Savannah-Upper Ogeechee Region will receive approximately \$208M**. It is important to note that one of the four eligible use categories specified in the American Rescue Plan Act (ARPA) as it relates to the Regional Water Plan includes provisions to make the necessary investments in water and sewer infrastructure. The eligible uses for infrastructure are described in more detail in the U.S. Department of Treasury's Interim Final Rule.

owned treatment works, water reuse projects, security measures at publicly-owned treatment works, and technical assistance to ensure compliance with the Clean Water Act.

Under the DWSRF, categories of eligible projects include: treatment, transmission and distribution (including lead service line replacement), source rehabilitation and decontamination, storage, consolidation, and new systems development.

It should be noted that it will be up to each local government how ARPA local fiscal recovery funding is allocated among eligible uses, and allocation is a policy and budgetary question that local staff and elected leadership will work through together. There are several other resources that can be accessed to learn more about the ARPA and funding allocated to the State of Georgia:

- ▶ Governor's Office of Planning and Budget: [American Rescue Plan | Governor's Office of Planning and Budget \(georgia.gov\)](https://georgia.gov/american-rescue-plan-governors-office-planning-budget)
- ▶ Georgia Municipal Association: [American Rescue Plan Act \(gacities.com\)](https://gacities.com/american-rescue-plan-act)
- ▶ U.S Treasury Department FAQs:
 - ▶ [Coronavirus State and Local Fiscal Recovery Funds](#)
 - ▶ [Distribution of Funds to Non-entitlement Units of Local Government](#)



Anticipated ARPA Funding for Counties in the Savannah-Upper Ogeechee Planning Council (does not include city funding)

The Interim Final Rule generally includes a wide range of categories of projects that would be eligible through the USEPA's Clean Water State Revolving Fund (CWSRF) or Drinking Water State Revolving Fund (DWSRF):

Under the CWSRF, categories of eligible projects include construction of publicly-owned treatment works, nonpoint source pollution management, national estuary program projects, decentralized wastewater treatment systems, stormwater systems, as well as water conservation, efficiency, and reuse measures. Other categories are watershed pilot projects, energy efficiency measures for publicly-

INFRASTRUCTURE

While not yet final, under the Infrastructure Investment and Jobs Act, based on the traditional state revolving fund formula, Georgia will expect to receive \$913 million over five years to improve water infrastructure across the state. The Bipartisan Infrastructure Deal is expected to make large investments in clean drinking water and wastewater infrastructure. This will include including dedicated funding to replace lead service lines and the chemical PFAS (per- and polyfluoroalkyl). The Council will be updated once the act is final and more specifics are available. There are several other resources and jobs to learn more about the Infrastructure Investment Act:

- ▶ [White House Infrastructure Fact Sheet](#)
- ▶ [U.S. Chamber of Commerce Infrastructure Highlights](#)

Visions & Goals

Adopted in 2009, the Savannah-Upper Ogeechee vision is:

The Savannah and Ogeechee Rivers along with the region's groundwater resources will provide high quality and quantity water supplies for balanced growth while protecting the natural and built environments. The Savannah-Upper Ogeechee Regional Water Planning Council, through collaboration with stakeholders, will formulate river basin policies based on current and developing technologies and conservation methods. Because of the results of our Council and other councils' efforts, Georgia will be recognized across the country as the leader in water resource management.

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 Savannah-Upper Ogeechee 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 Savannah-Upper Ogeechee Council Meetings will highlight the forecasting results and updated resource assessments, and meetings in 2022 will be focused on plan revisions.

GOALS

- 1 Plan for sufficient water supplies to support planned economic development while providing residential, industrial, agricultural, recreational, and utility services in a sustainable manner. Request that the State consider and encourage future economic development in areas with adequate water resources.
- 2 Provide support for state laws regulating interbasin transfers in Official Code of Georgia (OCGA) 12-5-584(f) and OCGA 12-5-31 and further described in EPD Rule 391-3-6-.07. Promote the development of a mandatory comprehensive evaluation process that protects donor basins from adverse impacts from proposed interbasin transfers between State Water Planning Districts.
- 3 Work with EPD to establish ongoing relationships with South Carolina stakeholders and other Water Planning Councils to equitably address water sharing issues.
- 4 Work to enhance the public's understanding of regional water issues and the need for support of new policies to protect future resources.
- 5 Identify opportunities for water reuse and conservation in the region.
- 6 Maintain and strive to improve the quality and quantity of the water of the region to protect species and habitat while balancing the needs of humans.
- 7 Form a permanent Savannah and Ogeechee water planning organization as the conduit for bringing together all stakeholders and assisting the State with implementation of water resource goals in the entire basin. Grandfather one- third of the current Water Planning Council on the permanent organization.

FOR MORE INFORMATION, CONTACT:

Bruce Azevedo

Savannah-Upper Ogeechee Regional Water Planning Council Chair

azevedo@negia.net
706-296-3834

Ashley Reid

CDM Smith
reidan@cdmsmith.com
404-720-1344

Haydn Blaize

Georgia EPD Watershed Protection Branch
haydn.blaize@dnr.ga.gov
470-607-2604