



January 19, 2024

Via E-Mail

Bill Frechette, Unit Manager
Water Supply Program – Groundwater Withdrawal Unit
2 Martin Luther King Jr. Dr., S.E. East Floyd Towers, Suite 1052
Atlanta, Georgia 30334
Bill.Frechette@dnr.ga.gov

Re: Comments on Groundwater Withdrawal Permit – City of Hinesville – Long County Operations; Permit No. 091-0005

Dear Mr. Frechette:

Ogeechee Riverkeeper 501(c)(3) (ORK) works to protect, preserve, and improve the water quality of the Ogeechee River basin, which includes the Canoochee River, tributary streams, and all of the streams flowing out to Ossabaw Sound and St. Catherine's Sound. The Ogeechee River system drains more than 5,500 square miles across 21 counties in Georgia. ORK works with local communities to retain the ecological and cultural integrity of rivers, streams, wetlands, and related habitats throughout the Basin. One of ORK's roles is to ensure the long-term health of the watershed's aquifers, including the Upper Floridan Aquifer, which supports not only residents, but also the aquatic health of the Ogeechee and Canoochee Rivers as well as their tributaries.

Altamaha Riverkeeper 501(c)(3) (ARK) protects, defends, and restores the Altamaha Watershed: from our largest rivers (Ocmulgee, Oconee, Ohooppee, and Altamaha) to the smallest tributaries and coastal marshlands. ARK takes action against threats to "swimmable, drinkable, fishable waters for all" throughout the 14,000 sq mi Altamaha basin.

One Hundred Miles (OHM) is a non-profit conservation organization that works to protect Georgia's coastal communities and natural resources through education, advocacy, and civic engagement. We represent 1,200 members that support the continued protection of coastal Georgia.

ORK, ARK, and OHM offer these comments on the proposed well located in Long County planned to provide water to the City of Hinesville. Broadly, we urge careful consideration of any new withdrawals from the Floridan Aquifer. Saltwater intrusion and the negative impacts to Coastal Georgia's main drinking water supply could make this

short-term solution result in wider-spread, long-term problems. ORK, ARK, and OHM strongly urges the Georgia Environmental Protection Division (EPD) to require all measures aimed at reducing any additional pressure on the aquifer and utilizing alternative sources of water prior to allowing any new groundwater withdrawal from the Floridan Aquifer. Additionally, we call on the EPD, the Georgia Department of Natural Resources (DNR), the Coastal Georgia Water Planning Council, and municipal, county, and other localities to come together and plan collaboratively for the region's long-term sustainable use of the aquifer. Until that time, we urge the EPD to place a moratorium on this and any new groundwater withdrawals requested from the Floridan Aquifer.

1. Background

The Floridan Aquifer is a vital but vulnerable resource for Coastal Georgia. It is the main source of water that supports Coastal Georgia's economy and population. From agriculture to business and industry to its residents, the region's ongoing health and prosperity are directly linked to the Floridan Aquifer. A healthy aquifer is essential to Coastal Georgia's long-term population and economic growth.

Salt water intrusion into the Floridan Aquifer and a falling water table directly threaten the region's growth. Increasing water demand has grown with Coastal Georgia's population and economic growth over the last half-century, straining the aquifer. As a result, salt water intrusion has negatively impacted coastal communities while inland wells dry up and require deeper drilling. Increased salinity levels negatively impact the water's usability for human consumption, agriculture, and industrial use. Likewise, the need for new and deeper wells is a difficult expense that many rural and agricultural water users cannot bear.

Reduced pumping, water conservation, and other measures are necessary to maintain the Floridan Aquifer for future generations. In response, the Georgia DNR created and has utilized the Coastal Georgia Water & Wastewater Permitting Plan for Managing Salt Water Intrusion since 2006 (the "2006 Plan" or the "Plan").¹ Through a combination of pumping restrictions and reductions, conservation measures, and water source diversification, the Plan seeks to support the aquifer by reducing growing demand. Further, the Plan calls for ongoing monitoring to continually assess the effectiveness of the Plan's measures.

The continued population and economic growth over the last two decades in Coastal Georgia highlights the ongoing need to protect the Floridan Aquifer. As noted in the well application documents, the City of Hinesville, Liberty and Long Counties have been growing in population as well as commercial and industrial development.² This follows the larger trend of residential, commercial, and industrial development in the Savannah and the wider Georgia Coastal regions. In addition, the 2022 announcement of the Hyundai Motor Group of America's Mega-Site brings new industrial

¹ Georgia Department of Natural Resources. "Coastal Georgia Water & Wastewater Permitting Plan for Managing Salt Water Intrusion" (2006 Plan). June 2006. *Available at:*

https://www1.gadnr.org/cws/Documents/saltwater_management_plan_june2006.pdf

² Simonton Engineering, LLC. "Preliminary Engineering Report Water Supply for City of Hinesville & Long County" ("Preliminary Engineering Report"). November 22, 2023. At page 1.

development, with estimates of between 40,000-70,000 new jobs over the next two decades.³ Finally, the recent⁴ and potential future⁵ expansion at the Port of Savannah will bring additional growth, which is seen in the continued construction activity, commercial and employment development, and residential development in Long County and around Hinesville.⁶ All of this growth will be accompanied by water demands far above what was considered in the GA DNR's 2006 Plan.

2. Comprehensive Groundwater Assessment and Renewed Regional Water Planning Needed

Prior to any large-scale increase in groundwater withdrawals in Coastal Georgia, the State of Georgia and local decision makers must fully consider and sufficiently plan for the long-term health of the Floridan Aquifer. ORK, ARK, and OHM call on the GA EPD and GA DNR to fully model the groundwater impacts that this well and its 1.4 million gallons a day (MGD) increase in withdrawals will have on the aquifer. Likewise, ORK, ARK, and OHM ask the GA DNR, GA EPD, and local elected officials and decision makers to pause any permitting related to new, large groundwater withdrawals until after comprehensive region-wide water planning sufficiently protects Coastal Georgia's water resources for generations to come.

The EPD should fully assess the long-term impact on the Floridan Aquifer from this new groundwater withdrawal planned to supply the City of Hinesville. The GA DNR's 2006 Plan advises that justification of need and ongoing monitoring are required for the areas where these wells will be located. At minimum, these steps must be considered. However, due to the significant withdrawal proposed and the extremely close proximity to a more restrictive zone per the 2006 Plan, additional assessments should be undertaken related to this proposed withdrawal. This should include, but not necessarily be limited to, impacts to surface water flows and availability, the water table, and impacts to residential and agricultural wells.

Further, EPD should strongly consider taking a renewed look at the Floridan Aquifer modeling that was the basis of the 2006 Plan. After more than decade and a half, and with exponential growth coming to the region, an up-to-date model of the Floridan Aquifer's overall capacity is essential for sustainable growth in Coastal Georgia. This should look at net increases of water withdrawals in specific areas and throughout the region, increased pressure on Red and Yellow Zone salinity levels, impacts to aquifer recharge, and a fresh look the sub-regions, or "Zones," their boundaries, and whether additional restrictions are necessary in light of incoming growth and development.

Additionally, all of the Coastal region's elected officials and decision makers, including the City of Hinesville and Long County, should join with the State of Georgia to begin a renewed and effective comprehensive water planning

³ Hofstadter & Associates, Inc. "Preliminary Engineering Report for Countywide Water System for Bulloch County Georgia". August 2023. At page 5.

⁴ "Port of Savannah Expansion, Georgia." *Ship Technology*. December 15, 2020. Available at: <https://www.ship-technology.com/projects/port-of-savannah-expansion-georgia/>

⁵ Georgia Ports Authority. "Port of Savannah to grow capacity by 60 percent." February 24, 2022. Available at: <https://gaports.com/press-releases/port-of-savannah-to-grow-capacity-by-60-percent/>

See also "Savannah's port files plans for huge expansion. This time on an island." *Atlanta Constitution-Journal*. October 4, 2023. Available at:

<https://www.ajc.com/politics/georgia-plans-a-third-cargo-container-terminal-for-busy-port-of-savannah/A7HR3RR5OBHVHBAWZ3EX72BCRU/>

⁶ Preliminary Engineering Report, at page 9-11.

process. Coastal Georgia's water resources have been under strain for decades. The 2006 Plan was the first step in beginning to address this strain and the region's long-term water demands. The Plan itself identifies the need to utilize and prioritize alternative sources of water to reduce pressure on the Floridan Aquifer. Nearly two decades later and at the precipice of a steep and continuous increase in water demand, now is the time to comprehensively plan for how the region's long-term water resource needs will be met and sustainably managed.

ORK, ARK, and OHM call on the State of Georgia and the region's elected officials (including the county boards of commissioners, city mayors and councils, and other municipalities' executives) to proactively plan for its residents' and economies' long-term future. As population and industry continues to grow in the region, water will become an increasingly important issue. Current generations will see impacts in their lifetimes if nothing is done. ORK, ARK, and OHM strongly urge proactive, collaborative, and inclusive water resource planning so that Coastal Georgia and its residents and economy can continue to thrive for generations to come.

- What models has EPD employed to evaluate the health and abundance of the Floridan aquifer since the 2006 Plan was adopted?
- What site specific models are being employed to assess the local impact water withdrawals will have on the surrounding wells and supplies?

3. Concerns with the Permit Application

Ogeechee Riverkeeper, Altamaha Riverkeeper, and One Hundred Miles are also concerned about certain portions of the information, plans, and analysis provided in the application documents. In particular, ORK, ARK, and OHM are concerned about the alternatives analysis, the lack of broad local and environmental impacts analyses, and portions of the Water Conservation Plan. Without additional analyses in these areas, this well and its associated groundwater withdrawal should not be permitted. ORK, ARK, and OHM ask the EPD to deny this permit unless the applicants can show that all preferred alternatives are infeasible and can sufficiently ensure that the additional withdrawals will not create additional pressure on the Floridan or new local groundwater impacts.

- What additional information will EPD be requesting of the applicants to be able to fully evaluate the efficacy of this application?
- If additional information is available from the applicants, can EPD post the information online for the public to review?

a. Alternatives Analysis

The alternatives analysis present in the Preliminary Engineering Report deserves more discussion than it is given. For such a consequential decision, the applicants' evaluation is scant. While the financial and procedural processes are discussed at an acceptable level of depth, the "Non-Monetary Factor Evaluation" receives next to no analysis. The factors considered (system control, reliability, meets customer needs, implementation time, and water availability) are never explained. Likewise, the score that each of the alternatives receive are not explained or discussed. In the wider context of the long-term aquifer sustainability and growing water insecurity, utilizing non-Floridan Aquifer water sources should be prioritized whenever possible. The GA DNR's 2006 saltwater intrusion plan and the Coastal

Georgia Water Planning Council's most recent Water Resource Plan both emphasize utilizing new sources when meeting water capacity needs. ORK, ARK, and OHM ask that EPD require the applicants to take a harder look at the alternatives, more wholly explain its evaluations, and give additional priority to non-Floridan Aquifer water sources.

Specific explanation and additional consideration should be given to Alternative #2, discussing Miocene wells. Perhaps most telling, this alternative scores the highest mark for "Meets Customer Needs," addressing water capacity needs. Less clear are the applicants' scores for "System Control," "Reliability," and "Water Availability." Considering both this alternative and the applicants' preferred alternative are wells, it is not clear how these alternatives differ in "System Control" or "Reliability." Further, the "Reliability" and "Water Availability" scores are very unclear. The Miocene Wells could pose to be more reliable than the preferred alternative, as this aquifer is not likely to be subjected to withdrawal limitation like the Floridan Aquifer could be. These differences in withdrawal limitations also play into our confusion with the "Water Availability" factor. While the Floridan has more total water available, it is not likely that the applicants will be able to use most of that available water, unlike the Miocene aquifers which do not have similar usage concerns. Additionally, how can the alternative fully meet customer needs, while scoring so lowly on its availability? ORK, ARK, and OHM strongly urge EPD and the applicants to more fully consider this alternative, especially given its non-Floridan source.

Additional consideration should also be given for Alternative #1, discussing a Surface Water Plant. Long-term, it is almost certain that surface water treatment will need to be utilized to meet long-term water supply needs in Georgia's coastal communities. While the cost and implementation time for a surface water plant will be significant, it will provide long-term water supply security for Hinesville and its service area that is not dependent on increasingly restrictive groundwater rules. It also provides Hinesville the opportunity to enter into agreements and provide water beyond its service area. Regionalization of water supply through interconnection and a network of surface water sources could allow construction costs to be shared, water availability to be increased, and for groundwater to be avoided. ORK, ARK, and OHM ask EPD and the applicants to consider this in its permitting decision.

- How can the alternative evaluated by the applicants fully meet customer needs, while scoring so low on its availability?
- Because this plan is interjurisdictional, how does the regionalization of water supplies comply with the Coastal Regional Water Management Plan?
- Currently, the City of Hinesville holds a surface water withdrawal permit to help meet their needs. How will this application and withdrawal affect Hinesville's permits?

b. Local and Environmental Impacts

The applicants' impact analysis of the proposed well in its Preliminary Engineering Report does not sufficiently consider the range of potential outcomes that could negatively affect the area. The environmental analysis reads more as a justification of need rather than an assessment of possible issues with solutions-oriented responses. In addition, there is very little discussion of the impact to nearby communities and property owners. ORK, ARK, and OHM ask EPD to require the applicants to provide a more detailed assessment of the proposed well's impacts.

The environmental impacts analysis needs more analysis from the applicants. Our first concern is the short amount of discussion given to 35 topics considered. The five pages dedicated to these topics do not allow for sufficient discussion beyond the quick 'no impact' determinations that the applicants include. When more explanation is given for these topics, the discussion focuses on why the wells must be permitted rather than the impacts themselves or a cost-benefit analysis. For example, topics 3, 29, 30, and 31's discussion of water-related issues emphasize how the preferred alternative will meet needs in comparison to how no action will cause issues. This is not an impact analysis. In addition, the analysis of species, habitat, and water body impact in topics 4, 12, 13, and 24, among others, is fairly shallow and needs more analysis. ORK, ARK, and OHM call on EPD to require actual analysis of all of the proposed action's impacts.

Additionally, we call on the applicants to more wholly consider the local impacts from this proposed withdrawal, particularly the impact to existing wells and the water table. Due to the significant withdrawals proposed and the extremely close proximity to a more restrictive zone per the 2006 Plan, additional assessment should be undertaken. This should include, but not necessarily be limited to, impacts to surface water flows and availability, the water table, and impacts to residential and agricultural wells in both Green Zone Long County and Yellow Zone Liberty County. Beyond a quick dismissal of agricultural impacts in topic 26 and of environmental justice issues in topic 35, the applicants provide no discussion of local impact. ORK, ARK, and OHM ask that these potential issues be more thoroughly considered prior to any permitting decision. Further, the applicants must also consider the long-term ramifications of cross-jurisdictional transfer of water. Co-ownership of the well gives the City of Hinesville a long-term interest in Long County water that will outlive any withdrawal permit or Intergovernmental agreement. Although water is coming from the same source, moving water from Long to Liberty County risks Long County's ability to meet its own jurisdictional needs in the future. We urge the applicants to take a long-term view of jurisdictional needs in light of expected exponential population and economic growth.

ORK, ARK, and OHM take issue with the applicants' characterization of the Upper Floridan Aquifer in the environmental impact section. There, the Floridan is described as "bountiful" and able to "support additional growth."⁷ This is simply not the case. The DNR's 2006 Plan would not exist if the aquifer was able to support additional growth. Even Green Zone withdrawals are advised to occur in conjunction with other conservation and alternative source considerations. Likewise, the 17-year old Plan was created in a much different population and economic context than Coastal Georgia now faces. And with this well proposed essentially just over the arbitrarily-chosen line between Yellow and Green Zones, this description of the aquifer is overly optimistic in our region's current groundwater conditions. We urge the EPD to reconsider the applicants' description of the Floridan Aquifer and to make a permitting decision based on our current understanding of the pressures facing the aquifer.

Finally, Long County is home to many agricultural operations that depend on water for fields and crops. The application for this large water withdrawal could impact farmers' ability to withdraw water to maintain their livelihood. EPD must carefully consider all water uses in Long County before permitting this water withdrawal largely for Liberty County users.

⁷ See Preliminary Engineering Report. At page 25.

- How can the applicants be allowed to qualify this portion of the Floridan aquifer as bountiful and able to support additional growth? What data or modeling is this claim based on? Are those data and models based on current and predicted growth rates and expected increases in water demand?
 - What additional information does EPD need to evaluate the application in light of the growth the region has experienced?
 - What protections can EPD require of the applicants to ensure farm operations in Long County are not negatively affected by this inter-jurisdictional transfer of water supplies?
- c. Water Conservation Plan

Additional conservation measures should be considered for the Water Conservation Plan to further reduce pressure and demand on groundwater. In addition, the efficacy of the existing measures should be discussed, including stronger monitoring and enforcement measures. The DNR's 2006 Plan and the 2023 Coastal Regional Water Plan both prioritize water usage reduction and efficiency. As such, those goals should be aggressively pursued through this Water Conservation Plan.

EPD should ask for additional conservation measures from the applicants. It appears that the applicants have only implemented one new water conservation measure since the the original groundwater withdrawal permit's issuance in 2008,⁸ with that being the radio read system in 2018. In the intervening 15+ years, population increases and industrial development⁹ have increased pressure on water resources. The 2006 Plan calls for "aggressive and practical" conservation measures to be implemented.¹⁰ ORK, ARK, OHM call for a renewal of urgency in water conservation measures to reduce pressure on the Floridan Aquifer. We recommend that the applicants be required to demonstrate progress toward water conservation goals and water efficiency measures as outlined in the Georgia Water Conservation Implementation Plan.¹¹ This plan outlines goals, benchmarks and best practices that industrial and commercial facilities, domestic and non-industrial public uses should implement before any new permit is considered to meet demand.

Additionally, ORK, ARK, and OHM remind the agency that the State Water Management Plan adopted by the Georgia General Assembly in 2008 requires that "... water conservation must be incorporated into long-term water demand and supply planning and measurable progress must be made toward water conservation goals and more efficient use of water."¹² The State Water Management Plan goes on to describe that any water withdrawal applicant must demonstrate acceptable water conservation results and/or compliance with water use efficiency standards or goals. We ask that the effectiveness of these conservation measures required to be collected by EPD be shared with the public. The applicants' conservation measures are minimal and have been in place since 2008, but there is no data to show reductions in water usage by certain water users. The explanation of the applicants' water reuse program, which

⁸ Simonton Engineering, LLC. "Water Conservation Plan for the City of Hinesville Permit No. 089-0007" ("Water Conservation Plan"). March 3, 2023. At page 2.

⁹ Water Conservation Plan. At page 1.

¹⁰ GA DNR 2006 Plan. At pages 19 and 40.

¹¹ Georgia Environmental Protection Division. "Georgia's Water Conservation Implementation Plan. March 2010. Available at: <https://epd.georgia.gov/watershed-protection-branch/water-conservation>.

¹² Georgia Environmental Protection Division and Georgia Water Council. "Georgia Comprehensive State-wide Water Management Plan." January 8, 2008. See Section 8, Management practice #1. Available at: <https://waterplanning.georgia.gov/state-water-plan>.

provides data points on the quantity of reuse water utilized¹³ can be used as a model for showing the benefit of the existing conservation measure. Likewise, providing data for the number of times the radio read system resulted in problem identification would be beneficial. Finally, enforcement numbers and monitoring statistics for the Water Waste Prevention procedures¹⁴ would further show the benefit and efficacy of those procedures. With more data and information, EPD and the applicants can work together and improve these measures to more effectively achieve the goals laid out in the DNR's 2006 Plan and reduce pressure on the Floridan Aquifer. The U.S. Environmental Protection Agency offers a guide for evaluating the effectiveness of water conservation measures - "Best Practices for Water Conservation and Efficiency as an Alternative for Water Supply Expansion"¹⁵ is a tried and true guide that GA EPD can use to evaluate the measures used to reduce demand on the limited resources in the Floridan aquifer.

- What methods are being used by EPD to evaluate the water conservation and efficiency efforts of water providers and users requesting additional water supplies”?
- Since this application is for cross-jurisdictional service, how does EPD evaluate the water conservation and efficiency in the receiving region/area?

Thank you in advance for your time and consideration. We look forward to your response to our questions and concerns. If you have any questions regarding this letter, please contact ben@ogeecheeriverkeeper.org, maggie@altamahariverkeeper.org, and susan@onehundredmiles.org.

Ben Kirsch, Legal Director
Ogeechee Riverkeeper

Maggie Van Cantfort, Coastkeeper
Altamaha Riverkeeper

Susan Inman, Mid-Coast Advocate
One Hundred Miles

¹³ Water Conservation Plan. At page 3.

¹⁴ Water Conservation Plan. At pages 4-5.

¹⁵ U.S. Environmental Protection Agency. "Best Practices for Water Conservation and Efficiency as an Alternative for Water Supply Expansion." December 2016. Available at: <https://www.epa.gov/sustainable-water-infrastructure/best-practices-water-conservation-and-efficiency-alternative-water>.