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www.ogeecheeriverkeeper.org
Working Together to Protect the Ogeechee, Canoochee and Coastal Rivers

September 30, 2024

Via E-Mail

Skye Lewis, Regional Planner
Coastal Regional Commission of Georgia
slewis@crc.ga.gov

Re: Comments on DRI #4290 - Hinely Tract PUD - Effingham

Dear Ms. Lewis:

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 primary roles is as watchdog on new land development projects throughout the watershed that could pose a significant threat to its water quality and aquatic environments.

ORK's comments on the Hinely Tract Subdivision and Planned Unit Development (PUD) fall into five overarching categories. First, the proposed development's conflict with the Joint Comprehensive Plan and other development maps should be fully considered. Second, all construction should be wholly avoided within floodplains and flood risk areas, and wetlands should be properly considered and preserved. Third, stormwater management should take a long-term view of projected demand over the whole life of the development. Fourth, water supply and wastewater treatment demand should be fully confirmed prior to any approval or construction. Fifth and finally, natural areas, wetlands and green spaces should be protected in order to preserve Effingham County's rural characteristics, ecosystem functions, and natural flood control. ORK urges careful consideration of these topics prior to any rezoning, permitting, or construction permission decisions from Effingham County. Ultimately, ORK urges the County to pause or deny this rezoning and development request until and unless all concerns are fully and sufficiently addressed.

1. Site Incompatibility with Planning and Future Land Use Maps

The proposed Hinely Tract PUD development conflicts with multiple planning and future use maps. Specifically, Effingham County's Future Land Use Map in its most recent Joint Comprehensive Plan,¹ the Coastal Region Commission's (CRC) Areas Requiring Special Attention (ARSA) Map, and the CRC's Green Infrastructure Map all highlight the property's incompatibility with the proposed development. Prior to approving any development, Ogeechee Riverkeeper urges Effingham County to fully consider the apparent unfavorable suitability of this site for the proposed development and to deny any construction, rezoning, and comprehensive plan amendments that will be needed for the Hinely Tract PUD.

The proposed development does not comply with Effingham County's Joint Comprehensive Plan. As noted in the Development of Regional Impact (DRI) application materials and notice, the property is currently designated as "Agricultural" under Effingham County's most recent Future Land Use Map (FLUM). The county's Joint Comprehensive Plan states that the only compatible uses for Agricultural areas are "Agriculture / Forestry."² Currently, the property is zoned as AR-1,³ a compatible and conforming use. The proposed PUD does not appear to conform with Effingham County's current FLUM. As such, an amendment to the Comprehensive Plan will be necessary. Likewise, a PUD would not conform with Effingham County's current zoning for the site, as the AR-1 zoning requires 5-acre lots - well above what it planned for this PUD.⁴ Further, the location of this development ignores the "Future Land Use Guiding Principles" adopted in the Joint Comprehensive Plan. The PUD's isolation from other developments and services ignores the call for "consistent development types and characteristics within similar land use areas," fails to "transition between different land use areas such that there is a 'step down' or 'step up'" between different use areas, and would result in "development in areas not served by public water and/ or sewer."⁵ The Guiding Principles call for less intensive land uses in non-sewered areas, which, according to the Effingham County Water, Sewer, and Reuse map⁶ shows, is where the Hinely development is located. The development's incompatible use and its isolation from other similar land uses clearly shows its nonconformity with Effingham County's Joint Comprehensive Plan. ORK urges county decision makers to carefully consider this nonconformity prior to making any necessary changes or amendments.

The Hinely Tract is also poorly suited according to the CRC's planning maps for a PUD. This is most clearly shown in the Areas Requiring Special Attention (ARSA) map, which designates the entirety of the property as an "Area of Significant Natural Resources." The wetlands and flood zone maps highlight this, showing nearly the entire property

¹ Effingham County 2020-2040 Joint Comprehensive Plan. Adopted October 2019. Available at: https://www.dca.ga.gov/sites/default/files/effingham_county_final_reduced_with_resolutions.pdf

² *Id.* at page 28.

³ See

<https://qpublic.schneidercorp.com/Application.aspx?AppID=666&LayerID=11348&PageTypeID=4&PageID=4716&KeyValue=02980009>

⁴ Effingham County Code of Ordinance. Zoning Ordinance § 4.1. Available at:

https://library.municode.com/ga/effingham_county/codes/code_of_ordinances?nodeId=PTIIOFCO_APXCZOOR_ARTIVESDI_4.1ZODI

⁵ Effingham County 2020-2040 Joint Comprehensive Plan. At page 27.

⁶ Effingham County Water, Sewer, and Reuse map. Printed March 1, 2013. Available at:

<https://www.effinghamcounty.org/DocumentCenter/View/617/Map-of-the-Effingham-County-Water-Sewer-and-Re-Use-System-PDF?bidId=>

covered in Freshwater Forested/Shrub Wetlands and a Zone A floodplain, leading to a nearby Ogeechee River tributary. The Green Infrastructure Maps further highlights the poor suitability of this site for a PUD. It shows nearly the whole property being occupied by either “Core” green infrastructure or “Multi-Use Buffer Areas.” These maps tell a clear story that this property is environmentally important, sensitive, and will necessarily be impacted by the proposed development. ORK urges Effingham County to carefully consider the CRC’s maps in determining whether the proposed Hinely Tract PUD is a suitable use for this ecologically sensitive area.

Ultimately, in light of the incompatibility with the Effingham County Joint Comprehensive Plan, the isolation of the property relative to other similarly developed areas, and the likely impacts to sensitive environmental and ecological areas, this project should not be developed on the proposed property. ORK urges Effingham County to not amend its Joint Comprehensive Plan, rezone the property, or approve any permits related to the proposed Hinely Tract PUD development.

In summary, ORK asks that:

- Effingham County fully considers the proposed development’s incompatibility in light of Joint Comprehensive Plan,
- Effingham County fully considers the likely environmental impacts of the proposed development in light of the Coastal Regional Commission’s planning maps, and
- Ultimately, Effingham County does not amend the Joint Comprehensive Plan, does not rezone the property, and denies any construction or development-related permits for the proposed location and development.

2. Preserve Floodplains and Wetlands to Reduce Long-Term Flooding Risk

Whenever this tract is developed, the floodplains and wetlands present on the Hinely Tract site should be central in refining the final, approved design and construction of this development. A significant portion of the property is located in the Federal Emergency Management Agency’s (FEMA) designated 1% Annual Chance Flood Hazard area, also known as the 100-year floodplain or Zone A or AE. Of particular concern are the proposed developments in the western and northern portions of the property, as noted in the CRC’s Flood Zone Map. Likewise, the wetlands located on more than two-thirds of the proposed site are not properly delineated, enumerated, otherwise represented, or considered in the General Development Plan. ORK asks that the floodplains and wetlands present on the property are properly considered, guide layout and siting decisions, and are preserved wherever possible.

Flooding will be a concern for structures built on this property’s floodplains. While the “100-year” flood zone name implies that floods will only occur once every 100 years, this obscures the actual risk. Over 30 years, the actual flood risk is 26%⁷ - a more than 1 in 4 chance for properties in the 100-year floodplain. This creates risk and financial pressure for all future property owners who may face significant flood damage and subsequent increases in insurance rates. It is also important to remember that the FEMA flood zones are based on historic rainfall and flooding data. As storm frequency and intensity is expected to increase in the coming decades, the actual risk of flooding will likewise

⁷ See <https://savannahga.gov/FAQ.aspx?QID=332> and <https://www.floodsmart.gov/flood-zones-and-maps>

increase, multiplying the likelihood and damage from flooding events.⁸ As such, ORK urges Effingham County's decision makers to keep these flooding concerns in mind when making these planning decisions and to avoid allowing new structures to be built within the floodplain whenever possible. Specifically, ORK asks that no structures, including roadways or ingress/egress locations are built in the 100-year floods.

The developer's failure to show or overlay these floodplain locations on the General Development Plan obscures the potential impact of the proposed property layout. The floodplains should be a central metric in deciding where construction should be located. Building within known special flood risk areas unnecessarily creates risk and financial burdens for future homeowners, who will have to deal with frequent threats of flooding, flood damage, and increased insurance rates. As seen in Richmond Hill during the recent rainfall of Tropical Storm Debby, even areas not within floodplains are vulnerable to flooding.⁹ By failing to show where those areas of increased risk are on the General Development Plan, Effingham County's decision makers cannot as easily see those risks and what alternative layout options might be available. ORK asks Effingham County to require the developers to update its General Development Plan to delineate, reconsider the impact of those floodplains and riverine areas, and adjust site layout accordingly. None of these lots, areas, and features should be built in the 100-year floodplain.

The General Development Plan also poorly represents and fails to sufficiently protect the wetlands present on the property. While no exact number is given, it appears that over two-thirds of the 247-acre property contains wetlands. Without delineation, enumeration, and communication from the applicants, the exact number of total wetlands acres impacted is unclear. While it is possible that the General Development Plan includes this total number in the "Site Data" column, the poor resolution of the map prevents the public from seeing that number or many other features of the map. ORK asks that the public and the Effingham County decision makers are provided a readable and usable map prior to any decisions being made.

Effingham County should seek clarification from the developers on the question of wetlands by requiring a separate wetlands plan to be developed. Failing to delineate and enumerate the wetlands present obscures the actual impact that this development will have on the property's existing aquatic features and appears to show the developers lack of sufficient consideration of these wetlands in their planning. To address this apparent oversight, ORK asks Effingham County to require the developers to create a wetlands plan that, at minimum, (1) clearly delineates all of the wetlands present on the property and enumerates the acreage proposed to be filled and preserved, (2) prioritizes and details how the development preserves the wetlands present on the site, (3) adjusts the General Development Plan and site layout to avoid wetland fill wherever possible, and (4) mitigates any lost wetlands with on-site mitigation or restoration efforts as close to the site as possible to reduce localized impacts.

⁸ Savannah Morning News. "Dawdling Debby's Savannah stay follows trend of slow, increasingly wet tropical storms." August 16, 2024. Available at: <https://www.savannahnow.com/story/weather/severe/2024/08/16/debbys-georgia-stall-follows-a-tropical-storm-trend-experts-say/74815549007/>

⁹ Savannah Morning News. "FEMA flood maps left Richmond Hill residents unprepared for Debby's impact." August 26, 2024. Available at: <https://www.savannahnow.com/story/news/environment/2024/08/26/debby-flooding-hit-unprepared-richmond-hill-residents-hardest/74921847007/>

In summary, ORK asks that:

- Effingham County does not allow construction within the 100-year floodplain,
- Specifically, any ingress and egress access points not be built in the 100-year flood plain,
- Effingham County requires the developers to create a wetlands plan that clearly delineates their location, prioritizes wetlands preservation, adjusts the site layout to avoid wetland fill, and mitigates wetland loss.

3. Require Forward-Looking Stormwater Management for Growing Management Demand

On-site stormwater management should be as resilient as possible. As noted above, storms are becoming stronger and more frequent. This, combined with addition of impervious surface cover on the properties, will increase stormwater management demand in the area. To reduce negative flooding and inundation impacts, the applicants should work to reduce pressure where possible. Reducing impervious surface coverage, constructing retention features well above minimum requirements, and preserving wetlands wherever possible will help to reduce this pressure.

ORK urges Effingham County to require the developers to go beyond the minimum required standards in constructing stormwater management facilities. In such a low-lying area, increased stormwater pressure can quickly lead to flooding issues on the proposed PUD property and onto neighboring properties. And with storms becoming more frequent, previous stormwater processing calculations are less intense than the retention ponds will likely be required to retain and process. To extend the functional lifetime of these retention ponds and to successfully prevent flooding, ORK urges developers and decision makers to go beyond minimum standards in constructing these stormwater features.

Further, Effingham County should take into account historic and future storm frequency and intensity when calculating stormwater demand and retention pond construction. ORK suggests basing management and construction on the 100-year and/or 500-year storms. Like with floods, these estimates are based on the likelihood of these storms occurring. Currently, the Savannah area's 100-year storm would add 10 inches of rain in a 24-hour period, with the 500-year storm raining 20 inches in 24 hours.¹⁰ In Effingham County, those numbers are 9.98 in and 13.6 in over a 24-hour period for the 100 and 500 year storms.¹¹ It is important to note that these storms are understood to be smaller than recent data show and future estimates predict, as the current NOAA calculations are based on 2016 data.¹² To extend the functional life of these features in protecting the area from flooding, ORK urges Effingham County to require stormwater features to retain 125% of the 100-year storm¹³ or 100% of the 500-year storm.

¹⁰ See Question 16 at <https://www.savannahga.gov/FAQ.aspx?QID=307>.

¹¹ NOAA Atlas 14 Point Precipitation Frequency Estimates. Available at: https://hdsc.nws.noaa.gov/pfds/pfds_map_cont.html?bkmrk=ga.

¹² See UGA

(<https://site.extension.uga.edu/climate/2020/05/has-the-100-year-storm-changed-over-time-it-may-depend-on-where-you-are/>) and Dudek Consultants (<https://dudek.com/will-your-flood-control-system-work-in-a-100-year-event/>).

¹³ 125% of a 9.98-in storm is 12.4675 in.

Additionally, impervious surface cover should be reduced as much as possible. These hard surfaces speed up stormwater runoff and prevent absorption into the ground, straining stormwater management facilities and increasing the risk of flooding. As such, Effingham County should require further reduction of impervious surface cover at the development.

ORK also calls into question the applicant's estimate of its expected impervious surface cover from the proposed development. According to the DRI application materials and public notice, only 15% of the property will be covered by impervious surfaces. This is exceedingly low compared to other recent DRI for PUDs, who have an average of 40% impervious surface cover.¹⁴ While Ogeechee Riverkeeper welcomes developments that reduce impervious surface cover well below the average, we urge Effingham County to confirm with the applicants and developers how it reached this estimate, especially on a comparatively small property with a large number of housing units.

In summary, ORK asks that:

- Effingham County ensures resilient construction of stormwater management structures able to process increasing storm intensity and frequency,
- Existing wetlands be preserved to ensure their continued role in natural, cost-free stormwater management,
- Artificial stormwater management structure be built to process either 125% of the 100-year storm or 100% of the 500-year storm,
- Impervious surface cover be reduced as much as possible to reduce increased stormwater pressure coming from the site, and
- Effingham County confirms how the estimated impervious surface cover was calculated for this development.

4. Confirm and Secure Water Supply and Wastewater Treatment Capacity

Both the water supply and wastewater treatment needs of any development in coastal Georgia must carefully consider its long-term impacts, implications, and viability. With existing restrictions on new groundwater withdrawals and large amounts of new housing developments being proposed, Effingham County should make a fully informed decision of the near- and long-term impacts and viability of this housing development in light of the additional strains it will place on groundwater resources. Likewise, wastewater treatment should take a forward-looking approach, interconnect into existing systems, and avoid on-site treatment options. ORK strongly urges Effingham County to require much more information about the developer's plans to meet these capacity needs and to condition any construction or occupancy on a water supply and wastewater treatment agreement approved by the County.

Any new water withdrawal demand should be carefully considered. Under the Georgia Department of Natural Resources' Coastal Georgia Water & Wastewater Permitting Plan for Managing Salt Water Intrusion (2006 Plan), this

¹⁴ DRI #4242 = 35%; DRI #4239 = 20%; DRI #4217 = 39.36%; DRI #4207 = 50%; DRI #4212 = 40%; and DRI #4215 = 60%.

portion of Effingham County south of Highway 119 falls into the “Red Zone” management area.¹⁵ The 2006 Plan establishes withdrawal restrictions for this zone that include conservation and reuse considerations as well as a justification of need. Likewise, further withdrawal permit reductions are expected to be instituted in 2025. Continued overutilization of the Floridan Aquifer threatens to increase the rate of saltwater intrusion, endangering the region’s main drinking water supply.

In light of the region’s anticipated growth, demand, and strain on the aquifer will only increase if piecemeal permitting is used rather than a methodically considered approach. As such, ORK urges Effingham County to carefully consider how it utilizes this finite resource to meet all of its growth and future needs. Further, ORK urges Effingham County, as well as regional and state decision makers, to take a regional, long-term, and holistic view of the water supply demand issue and develop comprehensive and sustainable solutions that will allow future generations to thrive throughout Georgia’s northern coastal region. This should include quickly pursuing alternative, non-groundwater sources of water to offset industrial water demands to preserve groundwater for drinking water and agricultural needs.

Additionally, the vaguely stated reliance on a “Private Community Water System” to meet water supply needs raises concerns. As noted above, the proposed location is within the “Red Zone” and, therefore, is restricted from obtaining new groundwater withdrawal. This is in addition to further withdrawal reductions expected in 2025. With these limitations, having specific and detailed water supply plans is essential at this planning stage. If water cannot be provided, there is no reason to rezone, clear and grade the land, fill wetlands and floodplains, and begin construction. Likewise, if a private supplier is planning to serve this development, it should be identified now to ensure that it has the capacity and capabilities to meet expected needs in an economically viable manner. Additionally, Effingham County’s decision makers should have detailed and specific plans of who will be serving their citizens prior to making these decisions. Considering all this, ORK strongly urges Effingham County to require detailed plans and information from the developers about how water will be supplied to the proposed development.

Additionally, ORK asks for clarification of how wastewater treatment demand will be met at this proposed development. As noted above in Section 1, the proposed site is in a “non-sewered” area.¹⁶ While the DRI application materials state that “an extension of a sewer line will not be required” and that “there is sufficient wastewater supply capacity available to serve the proposed project,” it does not explain how wastewater demand will be managed and treated. Beyond stating that a “Private Community Water System” will provide treatment capacity, no details are provided. ORK has serious concerns about how wastewater will be treated. The property’s extensive wetland and floodplain coverage make septic and other on-site wastewater treatment systems unattractive options. Flooding and inundation prevent these systems from operating correctly, with failure threatening to pollute this property, neighboring properties, and nearby wetlands, streams, and tributaries. Likewise, on-site septic, land application systems, and “package” treatment plants¹⁷ all present expensive and long-term maintenance concerns for relatively small amounts of treatment. Interconnection into the existing Guyton Service Area system is a preferable approach, as environmental impact and maintenance concerns are reduced. ORK asks that wastewater treatment plans be clearly

¹⁵ 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

¹⁶ See FN 6. See also: <https://www.effinghamcounty.org/356/Water-Waste-Water>.

¹⁷ EPA. “Wastewater Technology Fact Sheet - Package Plants.” Sept. 2000. *Available at:* https://www3.epa.gov/npdes/pubs/package_plant.pdf

explained, discussed, and consider long-term environmental, financial, maintenance costs, and the feasibility of interconnection into the existing service area.

In summary, ORK asks that:

- Effingham County confirms the private supplier's ability and detailed plans to meet water supply demand for this project,
- The applicant explains how the wastewater treatment demand will be met and why sewer interconnection is not the planned option,
- Effingham County not permit any on-site wastewater treatment facilities on the site, including individual septic, land application, and package plants, and
- Effingham County conditions any construction or occupancy on county-approved plans for water and sewer services.

5. Thoughtfully Preserve Wetlands, Natural Areas, and Green Space

In developing the Hinely Tract development, specific attention should be given to protecting and preserving the area's critical natural resources. The development should thoughtfully preserve the large amount of spaces designated as Areas of Significant Natural Resources in order to maximize these areas' positive benefits on the region and its residents through preserving its rural character, recreational activities, flood control, and ecological integrity. ORK asks the developers to proactively plan its open space, green space, and recreational areas.

While thoughtful open space, green space, and recreational areas can take many forms, ORK offers these suggestions for planning purposes. First, the existing wetlands and floodplains should be maintained and preserved for the reasons mentioned above. Second, other existing natural features, such as the riverine areas crossing the property, should be maintained, highlighted, and be the starting point for further development. Third, trees should be preserved and any cutting or clearing should be avoided. Finally, ORK suggests wherever possible that these open and green spaces are as contiguous as possible, avoiding a patchwork of smaller, less beneficial space.

Thank you in advance for your time and consideration; please let me know if you have any questions:

ben@ogeecheeriverkeeper.org.

Ben Kirsch, Legal Director
Ogeechee Riverkeeper