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[www.ogeecheeriverkeeper.org](http://www.ogeecheeriverkeeper.org)  
*Working Together to Protect the Ogeechee, Canoochee and Coastal Rivers*

July 10, 2024

**Via E-Mail**

Caity McKee, Senior Regional Planner  
Coastal Regional Commission of Georgia  
[cmckee@crc.ga.gov](mailto:cmckee@crc.ga.gov)

**Re: Comments on DRI # 4215 - Blue Fern Village - Statesboro**

Dear Ms. McKee:

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 Blue Fern Village development fall into four overarching categories. First, Little Lotts Creek's protection and preservation should be the center of planning and construction plans. Second, stormwater management should take a long-term view of projected demand over the whole life of the development. Third, water supply and wastewater treatment demand should be fully confirmed prior to any approval or construction. Fourth and finally, housing diversity and thoughtful construction phasing should be carefully considered. ORK urges careful consideration of these topics prior to any rezoning, permitting, or construction permission decisions from the City of Statesboro and, ultimately, urges the City to deny this rezoning and development request unless all concerns are fully and sufficiently addressed.

1. Protect and Preserve Little Lotts Creek

Little Lotts Creek's presence on this property should be central in the planning, design, and construction of the Blue Fern Village development. In particular, the Little Lotts' floodplain should guide construction layout choices, its wetlands and natural features should be preserved, and construction phases should proceed in less environmentally sensitive areas first. Do we need to say it leads directly to the Canoochee? Implied?

Little Lotts Creek and its floodplain should be the defining feature of how this development is built. The long path it takes through the property is not just a unique natural feature, but also highlights how increasing stormwater and flooding will impact any future homes and businesses. A significant portion of the proposed properties are located in the Federal Emergency Management Agency's (FEMA) designated 1% Annual Chance Flood Hazard area, also known as the 100-year floodplain. Of particular concern is the southeastern portion of the proposed development, especially in the Phase 4 area. In addition, even more of the proposed development is within the 0.2% Annual Chance Flood Zone areas, also known as the 500-year floodplain. A development with the vast majority of its properties within flood zones is concerning.

Flooding will almost certainly be an issue for any structures built on this property. 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%<sup>1</sup> - a more than 1 in 4 chance for properties in the 100-year floodplain. And while the 500-year floodplain, or 0.2% Annual Chance Flood Zones, sees a lower likelihood of flooding, the risk still exists. This creates risks and financial pressure for all future property owners who may face significant flood damage and the following 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 increase, increasing the likelihood and damage from flooding events. ORK urges the City of Statesboro'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. In particular, ORK asks that no structures are built within the 100-year flood zone.

Further, construction should prioritize protecting, preserving, and restoring Little Lotts Creek's natural features. Its wetlands play many important roles in the natural and human environment, from flood control and pollution filtration to providing habitat and maintaining healthy aquatic and terrestrial environments. Prioritizing the preservation of these existing natural features and spaces is vital, and their destruction and replacement with artificial features should be avoided wherever possible. This concerted effort will help to maximize the areas' positive benefits on the region and its residents through preserving its rural character, recreational activities, flood control, and ecological integrity.

While thoughtful natural areas preservation can take many forms, ORK offers these suggestions for planning purposes. First, the existing wetlands and floodplains should be maintained wherever possible. Second, other existing natural features should be maintained 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 remain as contiguous as possible, avoiding a patchwork of smaller, less beneficial spaces while acting as a natural buffer.

Should the development still plan to fill wetlands, ORK urges the City of Statesboro to require a detailed wetlands plan from the developers. As a prerequisite, the developers should more clearly delineate the wetlands present on the property. While the Conceptual Site Plan notes a general location of "preserved jurisdictional wetlands, the plan fails to clearly demarcate where any wetlands are located. With the precise numeration of 287.7 acres of

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<sup>1</sup> See <https://savannahga.gov/FAQ.aspx?QID=332> and <https://www.floodsmart.gov/flood-zones-and-maps>

jurisdictional wetlands, the developers should have easy access to their location. This delineation and demarcation should also include non-jurisdictional wetlands, as these wetlands also provide important water quality, flood control, and habitat services that filling would disrupt and harm. Delineation will also show the precise impact from the proposed layout and offer a picture of how alternate layouts could further reduce wetlands impact. Finally, if wetlands are ultimately filled, ORK strongly urges the City of Statesboro to require mitigation on the properties or as close to the site as possible. Doing so will minimize the localized impacts of wetlands loss on the human and natural environment. Likewise, new restoration projects are preferable to merely purchasing credits, as this actually adds wetlands rather than merely “borrowing” credits from already-existing wetlands and leading to a net loss of overall wetland acreage.

Finally, the City of Statesboro should consider Little Lotts Creek’s listing by the State of Georgia as having impaired water quality and how this development may exacerbate its pollution issues. While the DRI materials correctly note impairment for biota, Little Lotts Creek is also listed as an impaired water for bacteria, based on high fecal coliform and *E. coli* levels.<sup>2</sup> Total Maximum Daily Load (TMDL) plans for both impairments have been established to begin restoring this stream’s water quality. A development of this magnitude threatens to further impair waters not just during construction but throughout its lifetime if proper precautions are not taken, ultimately harming ongoing restoration efforts. Unchecked stormwater and wastewater each contribute to pollution and threaten to increase already high biota and bacteria levels. These contributing factors should receive specific attention. ORK strongly encourages the City of Statesboro to require the developers to show that sufficiently protective precautions are in place to prevent further water quality impairment throughout the project’s lifetime before rezoning or permitting this development.

In summary, ORK asks that:

- The City of Statesboro does not allow any construction within the 100-year floodplain,
- Careful consideration goes into building within the 500-year floodplain,
- Little Lotts Creek’s wetlands, natural spaces, and aquatic features are protected, preserved, and restored wherever possible,
- The City of Statesboro requires the developers to create a detailed wetlands plan that clearly delineates all wetlands (jurisdictional and non-jurisdictional) on the property, avoids wetland fill wherever possible, and requires restorative mitigation projects on-site or as close to the development as possible, and
- Little Lotts Creek’s biota and bacteria impairment listing is strongly considered and sufficiently protective precautions are included in any rezoning or permitting decision so as to not further impair water quality.

## 2. 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 increasing the impervious surface cover on the properties, will increase stormwater management demand in the area. To reduce negative flooding and inundation impacts, the

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<sup>2</sup> Georgia Environmental Protection Division. “Draft 2024 Integrated 305(b)/303(d) List - Streams.” Available at: <https://epd.georgia.gov/https%3A/epd.georgia.gov/assessment/water-quality-georgia>

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 and the related pollution impacts to already-impaired waters.

The stormwater retention ponds or other similar features planned for the site should go beyond the minimum required management standards. 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 intensive than the retention ponds will likely be required to retain and process in the coming years and decades. 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, The City of Statesboro 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. At the proposed development, those numbers are 8.9 in and 12.1 in over a 24-hour period for the 100 and 500 year storms.<sup>3</sup> 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.<sup>4</sup> To extend the functional life of these features in protecting the area from flooding, ORK urges the City of Statesboro to require stormwater features to retain 125% of the 100-year storm<sup>5</sup> or 100% of the 500-year storm.

Additionally, impervious surface cover should be reduced as much as possible. Currently, the developers are estimating that 60% of the property will be covered by impervious surfaces. This is well above the average cover of other PUD developments proposed in and around nearby Pembroke, which is 47.6% coverage.<sup>6</sup> 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, Statesboro should require further reduction of impervious surface cover at the development.

Finally, stormwater and flooding threatens to further impair Little Lotts Creek's water quality. As noted above, Little Lotts Creek is impaired for biota and bacteria. Pollution-laden stormwater can contribute to further impairment of both parameters if increased stormwater demand and pressure are not addressed. Ensuring that all stormwater is properly managed to prevent further impairment underlines the importance of forward-looking planning that goes beyond minimum standards and considers increasing storm intensity and frequency. ORK urges the City of Statesboro to consider potential stormwater impacts to Little Lotts Creek when considering its decision.

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<sup>3</sup> NOAA Atlas 14 Point Precipitation Frequency Estimates. Available at: [https://hdsc.nws.noaa.gov/pfds/pfds\\_map\\_cont.html?bkmrk=ga](https://hdsc.nws.noaa.gov/pfds/pfds_map_cont.html?bkmrk=ga).

<sup>4</sup> 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/>).

<sup>5</sup> 125% of a 8.9 inch storm is 11.125 inches.

<sup>6</sup> Compare to Warnell-GSL Cattle (DRI #4204) 53% impervious surface cover ; Warnell Farms (#4118) 50% ; Wyndham (#4099) 45% ; Highway 119 (#4212) 40% ; and Lucky Joe (#4207) 50%.

In summary, ORK asks that:

- The City of Statesboro ensures resilient construction of stormwater management structures able to process increasing storm intensity and frequency,
- Artificial stormwater management structure be built to process either 125% of the 100-year storm or 100% of the 500-year storm,
- The developers reduce impervious surface cover on the property to more closely match estimates from other PUDs in the area and reduce flooding potential, and
- Stormwater is sufficiently managed to ensure no further impairment of Little Lotts Creek.

### 3. 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 both residential and industrial growth coming to both Bulloch County and the wider region, the City of Statesboro 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 and the potential for expanded withdrawal restrictions.

Any new water withdrawal demand should be carefully considered. The Georgia Department of Natural Resources' Coastal Georgia Water & Wastewater Permitting Plan for Managing Salt Water Intrusion (2006 Plan) establishes the regime for groundwater withdrawals in the region.<sup>7</sup> While the City of Statesboro and Bulloch County currently fall in the "Green Zone" management area, continued withdrawals and aquifer utilization could change the county's designation. The 2006 Plan establishes withdrawal restrictions for "Yellow Zone" areas that include conservation and reuse considerations as well as a justification of need. Importantly, the 2006 Plan also limits all total permitted withdrawals in the Yellow Zone to approximately 20.3 million gallons per day (MGD). At a recent meeting, the Georgia Environmental Protection Division (GA EPD) noted that in 2022, the average annual permitted withdrawals for the Yellow Zone were 30.114 MGD, with a 2025 scheduled limit of 29.092 MGD. Continued overutilization of the Floridan Aquifer threatens to increase the rate of saltwater intrusion, endangering the region's main drinking water supply, and expanding the Yellow Zone's withdrawal restrictions.

Recent groundwater withdrawal applications highlight the concern of growth's pressure of the Floridan Aquifer and drinking water resources. Four proposed groundwater wells mainly meant to supply water to the Bryan County Mega-Site and its associated industrial users has drawn lots of attention and push-back from Bulloch County residents and the agricultural community, especially those within the expected impact zone. Likewise, the City of Pembroke's recent request to expand its Bulloch County-located water supply well highlights growing pressure on the county's groundwater supply. ORK urges the City of Statesboro as well as local, 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

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<sup>7</sup> 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](https://www1.gadnr.org/cws/Documents/saltwater_management_plan_june2006.pdf)

quickly pursuing alternative, non-groundwater sources of water to offset industrial water demands to preserve groundwater for drinking water and agricultural needs. Likewise, Statesboro must place this and all proposed housing development in context with each water-demanding project to determine if and how all will be able to have its water supply demand met in the near and long term.

Wastewater treatment must also be considered in the context of the quickly growing area where the Blue Fern Village development is proposed. Ultimately, the City of Statesboro should strongly consider and begin pursuing a regional solution to its growing wastewater treatment needs. In its application, the Blue Fern Village PUD will require treatment capacity for ~0.72 MGD of wastewater. The applicant states that there is sufficient treatment capacity to treat these 720,000 gallons per day (GPD), however it does not specify where that capacity is or who will treat it. ORK asks that the City of Statesboro clarify with the applicant where this wastewater will be treated and to disallow any on-site treatment options.

As development continues and available land becomes more scarce, it will be more difficult to site and rely on a scattering of on-site treatment systems to address wastewater treatment capacity needs. The construction and operation of the North Bryan Water Reclamation Facility presents an opportunity to address long-term wastewater treatment capacity needs. Further, on-site septic, land application systems, and “package” treatment plants<sup>8</sup> all present expensive and long-term maintenance concerns for relatively small amounts of treatment. Likewise, these options also create potential long-term water quality and pollution concerns. With such a high percentage of the land being within floodplains, septic systems are especially not a good option. Likewise, with Little Lotts Creek’s impaired status, the on-site treatment options threaten to further impair water quality and undo ongoing efforts to restore the stream. ORK urges the City of Statesboro, along with other city, municipal, county, and state decision makers to take a regional view and approach to addressing growing treatment demands ahead of anticipated growth. Further, ORK urges the City of Statesboro to avoid any reliance on septic systems or package plants to meet treatment demand in order to avoid future remediation for failing or aged-out systems.

In summary, ORK asks that:

- The City of Statesboro carefully considers its ability and capacity to meet increased water demand for this project as well as future growth,
- The City of Statesboro confirms with developers what its specific plans are for wastewater treatment of the 720,000 GPD of expected new demand, and
- Septic, land application systems, and “package” plants and other on-site wastewater treatment be avoided wherever possible and that regionalization of wastewater treatment be pursued to increase capacity.

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<sup>8</sup> EPA. “Wastewater Technology Fact Sheet - Package Plants.” Sept. 2000. Available at: [https://www3.epa.gov/npdes/pubs/package\\_plant.pdf](https://www3.epa.gov/npdes/pubs/package_plant.pdf)

#### 4. Thoughtfully Choices in Housing Types and Construction Phasing

In developing Blue Fern Village, the City of Statesboro should ensure that there are a wide variety of housing types and that the construction phases begin and continue in less environmentally sensitive areas first. This will ensure that the communities housing needs are met while also preventing potentially unnecessary environmental harm.

Providing a variety of housing types ensures the viability of the project while also meeting the citizens of Statesboro's actual housing needs. Housing is an essential component of healthy communities, ensuring that all citizens have affordable and attractive options. A recent study found that the US does not have a housing shortage, but an affordable housing shortage.<sup>9</sup> A diversity of housing types and options helps to meet the needs of more people. This also has the twin benefit of ensuring that as many of the housing units are actually occupied and do not sit vacant due to speculative or hopeful construction of larger housing. ORK urges careful consideration of the kinds of housing being proposed and to prefer a variety of housing options available for all residents of Statesboro.

Additionally, the proposed construction phases should prioritize development in less environmentally sensitive areas before more sensitive areas. Should housing demand cool, additional phases may become unnecessary to build. As such, the early construction phases should be located in less environmentally sensitive areas to ensure that more sensitive areas are not irreparably harmed for unnecessary construction. As currently proposed, Phases 4 and 6 appear to be the most sensitive areas, with Phase 4 appearing to have the largest footprint in "Areas of Natural Resources," according to the ARSA map. As such, ORK urges the City of Statesboro to reconsider the proposed construction phasing, with Phase 5 preceding Phase 6, and Phase 4 being the last to develop. Should the City see differences in environmentally sensitive areas, ORK generally urges delaying construction in environmentally sensitive areas until the demand and need is shown.

In summary, ORK asks that:

- The developers provide a variety of housing types to meet the needs of Statesboro's citizens, and
- Construction phases are built in less environmentally sensitive areas prior to phases in more sensitive areas.

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

[ben@ogeecheeriverkeeper.org](mailto:ben@ogeecheeriverkeeper.org).

Ben Kirsch, Legal Director  
Ogeechee Riverkeeper

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<sup>9</sup> University of Kansas. "Study finds US does not have housing shortage, but shortage of affordable housing." June 17, 2024. Available at: <https://news.ku.edu/news/article/study-finds-us-does-not-have-housing-shortage-but-shortage-of-affordable-housing>