

Wetlands Wonderland: Natural Infrastructure as an Economic Incentive for Redevelopment

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City of Johns Creek, Creekside Park

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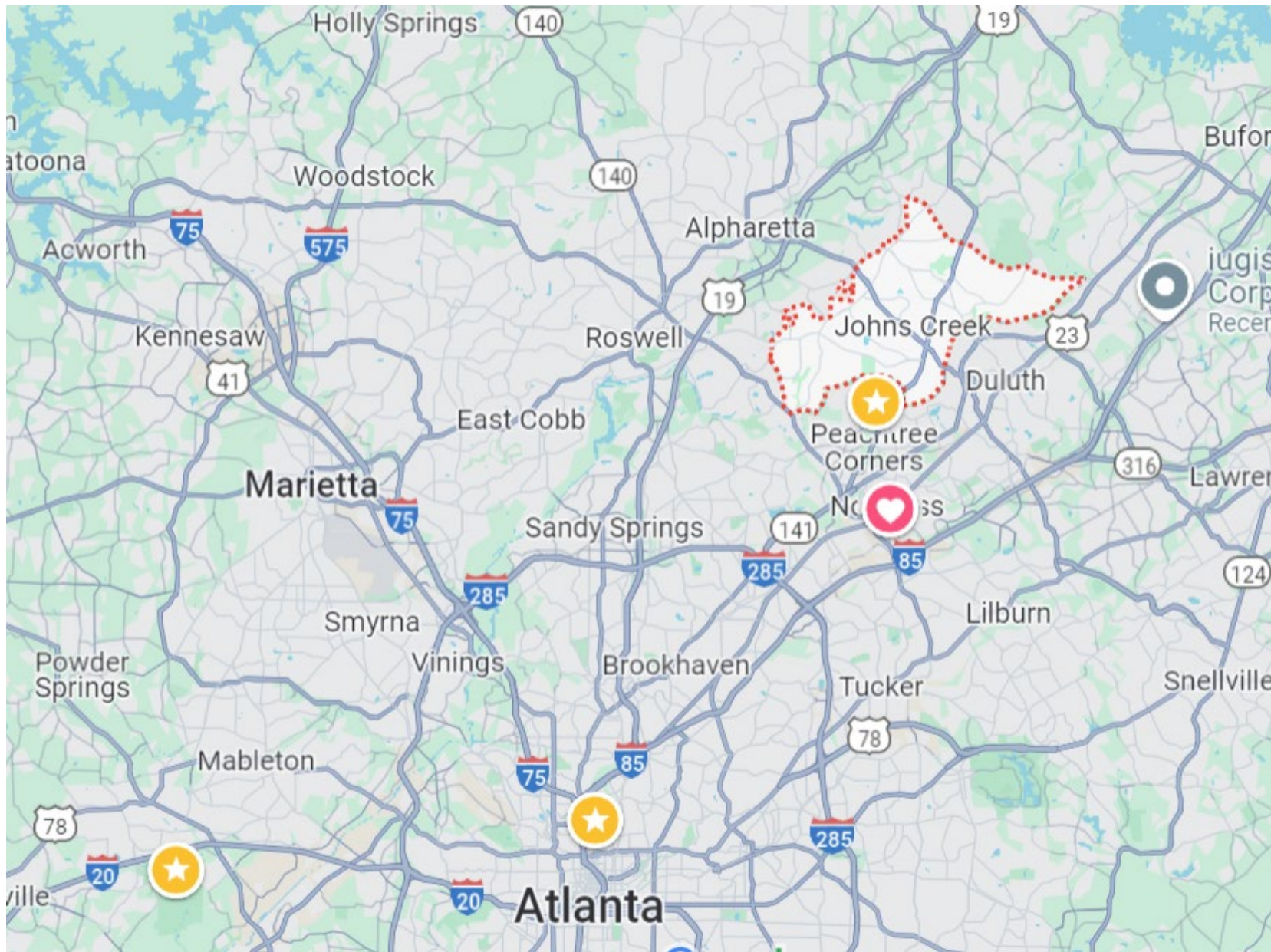


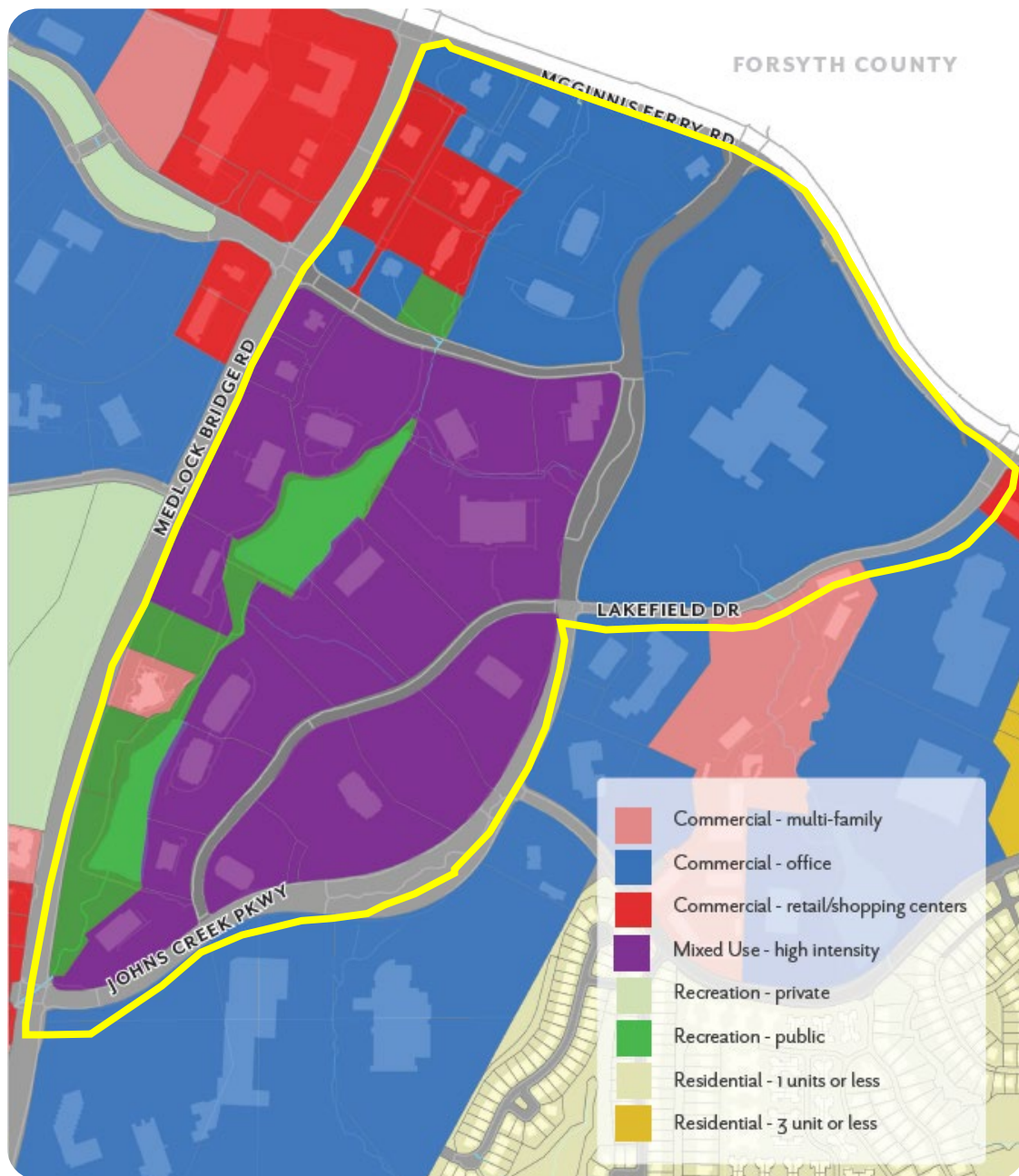
Cory Rayburn

Jacobs

Stormwater Utility Manager







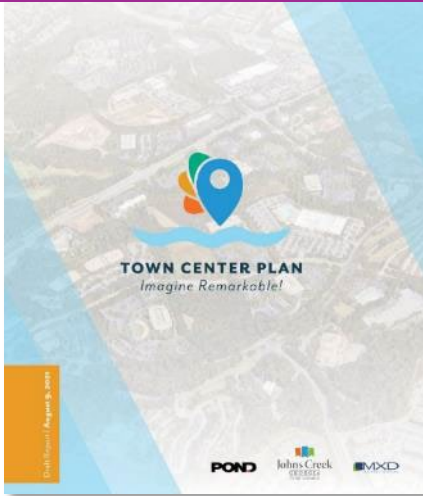
2018 Comprehensive Plan



Identified location of the Town Center in the Tech Park Area & initiated the master plan process



Development & Adoption of the Town Center Plan



Planning process began in **November 2020** and lasted through **September 2021**

Next Steps (1-5 Years)

- Implement & execute Tier 1 Prioritization & Action Plan
- Amending the 2018 Comprehensive Plan to align both planning documents together (**Completed 1/24/2022**)
- Codify the Town Center Plan to its own Zoning District (**Adopted 8/29/2022**)

Project Implementation

- Creekside Park
- Boston Scientific
- Medley
- Pedestrian Tunnel



Open Space Zones



TIER 1			
ACTION	COST ESTIMATE	INITIATION	PLAN REFERENCE & NOTES
Creekside - North Pond Redevelopment	\$6,000,000*	FY 2022	<p>The Creekside North Pond is one of two ponds forming a water-feature "spine" through Technology Park. Redevelopment of the Creekside North Pond could serve to catalyze the desired investment and redevelopment within the Town Center. The Creekside North Pond is a major distinguishing factor that will differentiate Johns Creek's Town Center from other town centers/downtowns found in the greater North Fulton and surrounding region.</p> <ul style="list-style-type: none"> Trail & Open Space as found on pages 158 and 159. Catalyst Site 1 as found on pages 185-187. Pop-up Quick Hit 1 (Amphitheater & Performing Arts Space) as shown on pages 195-196. <p>With Parks Bond dollars earmarked for implementation, the first step would be for Council to authorize staff to begin engineering construction documents and pursuing environmental permits (such as Georgia Environmental Protection Division and possibly U.S. Army Corps of Engineers) to implement the new vision for the lake.</p>
Creekside - Pond Trail Connection	\$3,000,000*	FY 2022	<p>A multi-use trail around the Creekside ponds (North and South) could provide the initial improvement within the Town Center. Redeveloping a continuous multi-use trail around and connecting both ponds to the surrounding parcels would provide interesting and safe routes for pedestrians and cyclists alike and provide a starting point to extend various trails and connect to existing and future tunnels (crossing underneath Medlock Bridge Road) in the Town Center area. This project could spur redevelopment of adjacent parcels surrounding the Creekside ponds.</p> <ul style="list-style-type: none"> For more information, please review pages 148-151 and 158-160. <p>The first step would be for Council to authorize staff to begin engineering construction documents and pursuing environmental permits (such as Georgia Environmental Protection Division and possibly U.S. Army Corps of Engineers) to implement a creekside multi-use trail connection around the lakes.</p>
Johns Creek Parkway at Lakefield Drive Traffic Circle	\$2,500,000*	FY 2024	<p>A traffic circle at the intersection of Lakefield Drive and Johns Creek Parkway could anchor the future linear park (eastern portion of Johns Creek Parkway) and the new main street - Lakefield Drive - and serve as a critical gateway. The purpose of the traffic circle is for traffic calming and to reorient the intersection to be more pedestrian focused.</p> <ul style="list-style-type: none"> For more information, please review pages 140-141 and 154-157. <p>The first step would be Council authorization for staff to begin a traffic study of the intersection and surrounding area and engineering plans for the roadway improvement.</p>

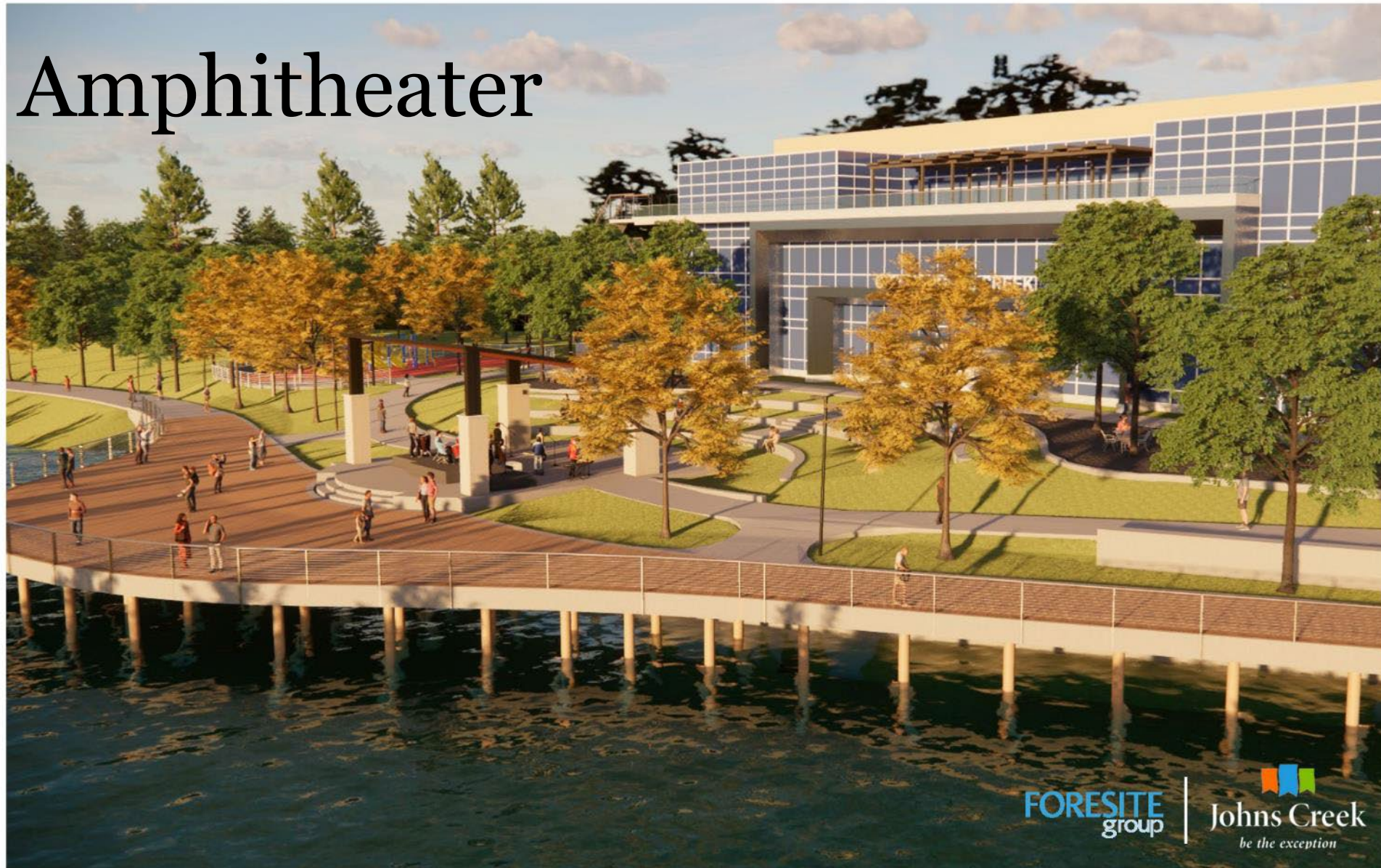
*Investment can be phased or completed over time



Creekside Master Plan



Amphitheater

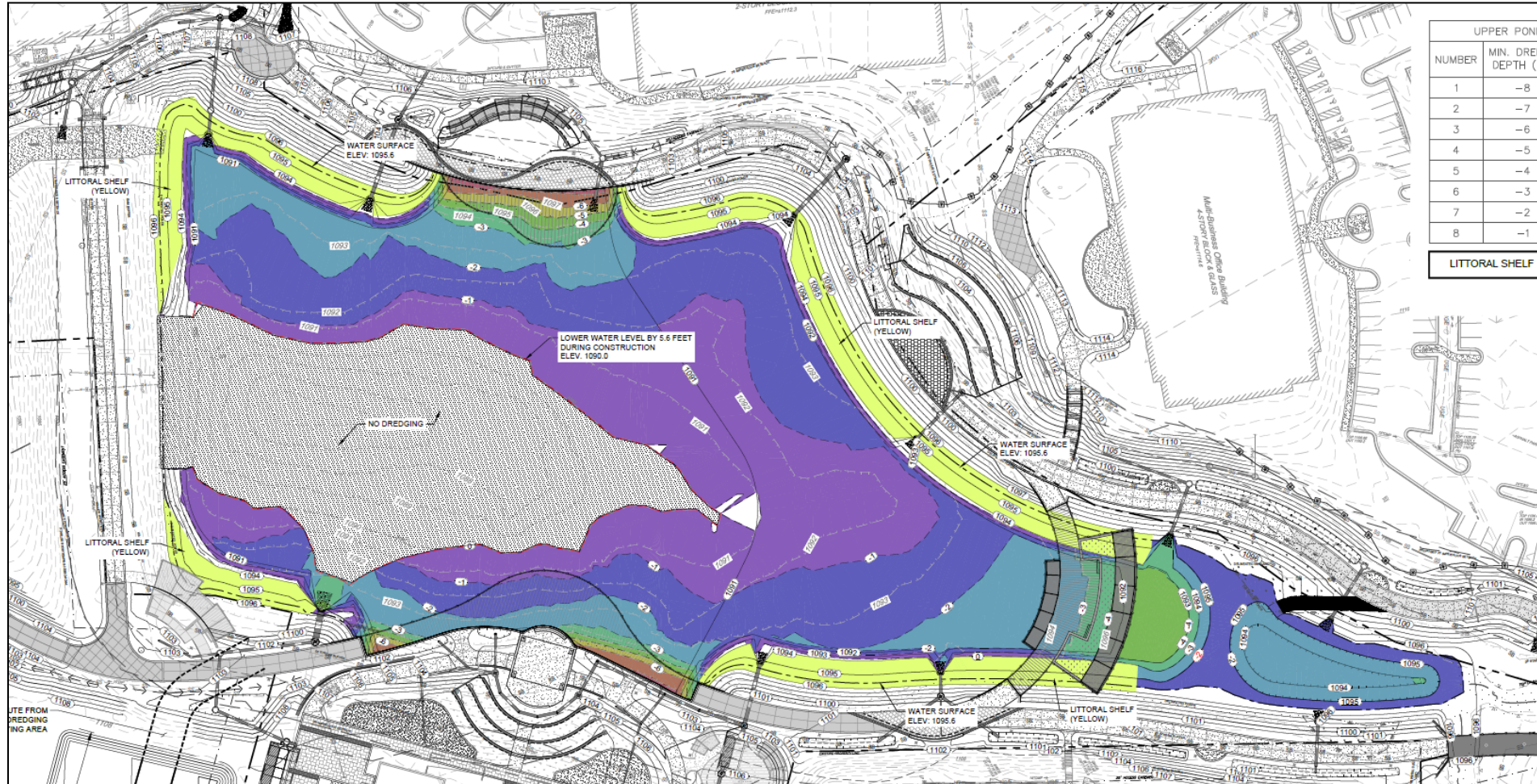


FORESITE
group

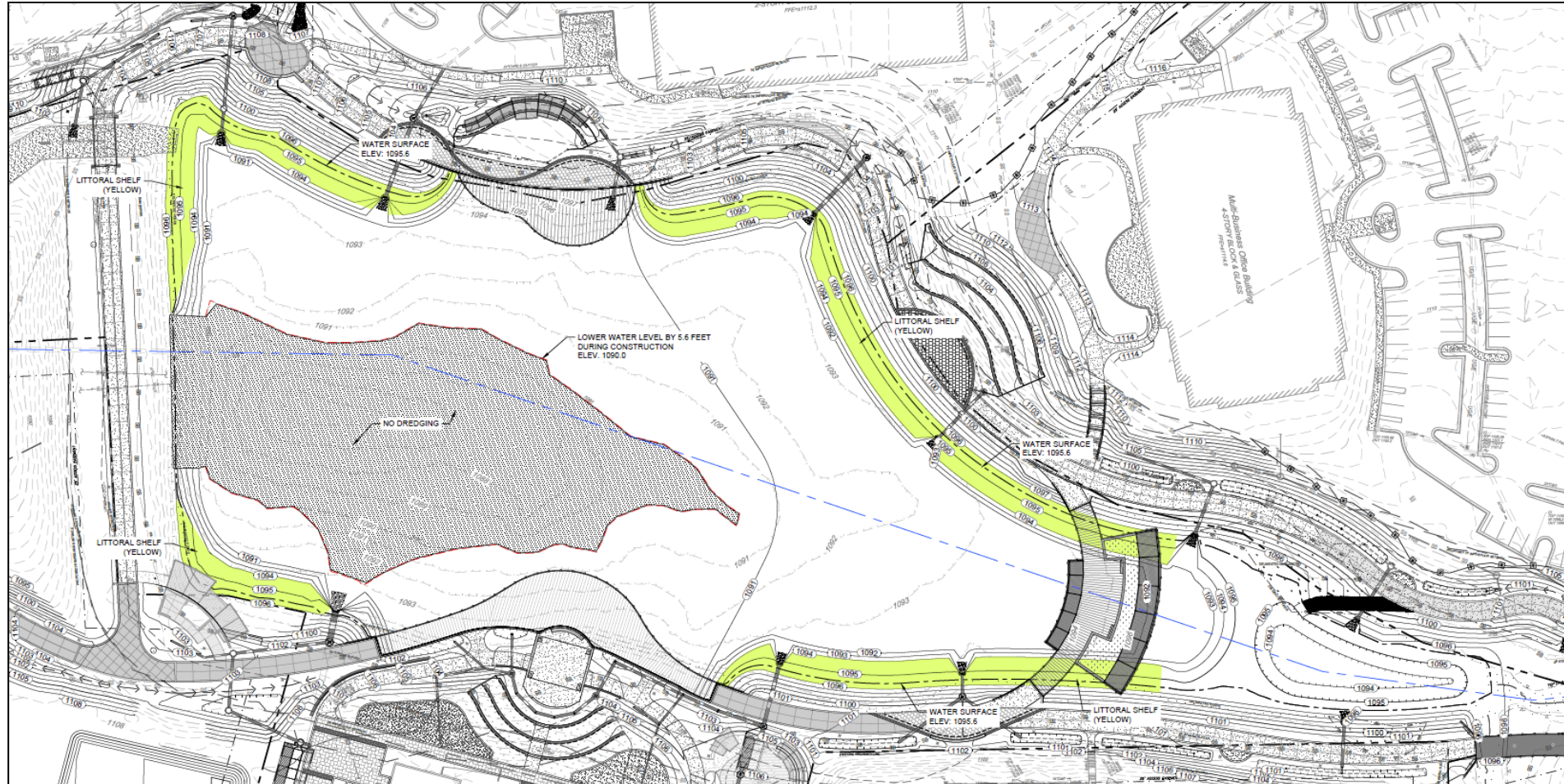
 Johns Creek
be the exception



Upper Pond Stormwater Improvements



Upper Pond Stormwater Improvements



Creekside Park Stormwater Improvements

- Forebay
- Littoral Shelf
- 15 Bioretention Areas
- Permeable Pavement
- Underground Detention
 - Stormtech Chambers under Bioretention
 - Treats existing impervious surface to offset hard to manage area
- Regional Constructed Wetlands

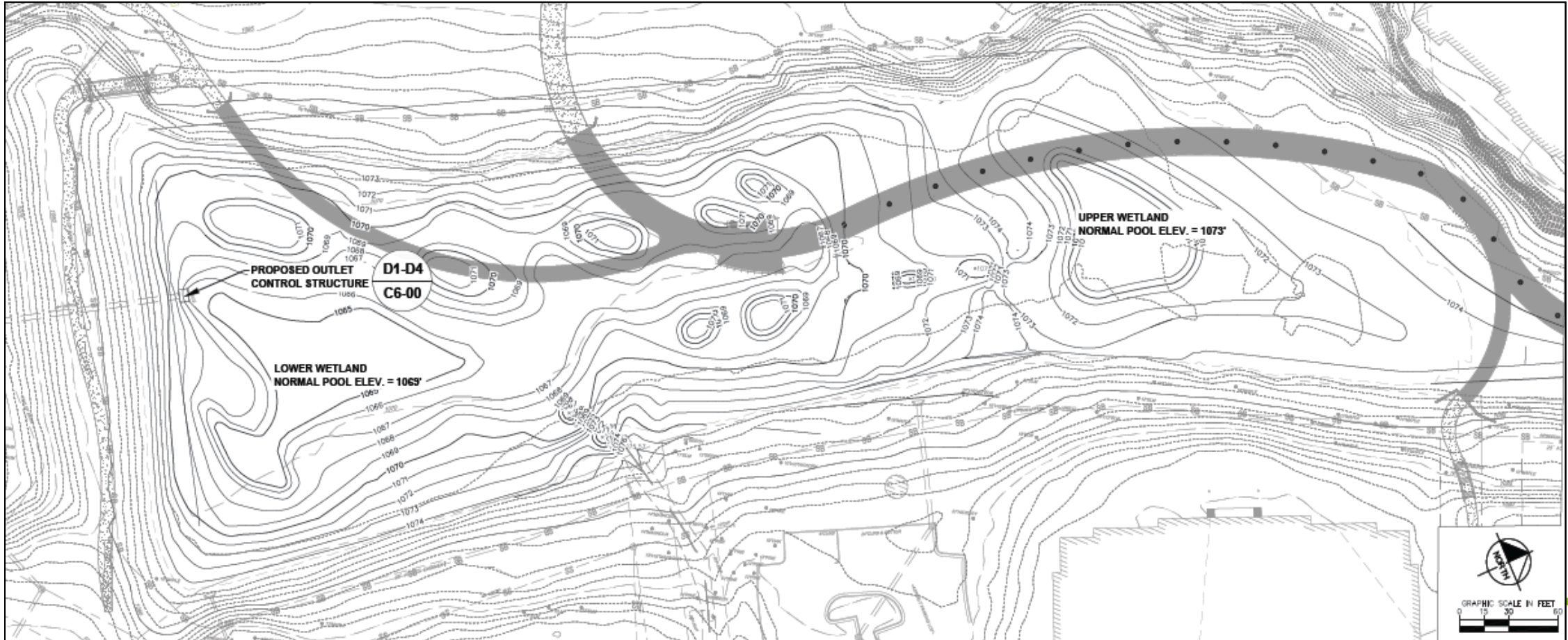


Downstream Pond

- Lower surface water elevation by 5'
 - Takes pressure off existing dam
- Regrade into a constructed wetlands
 - series of shallow and deep wetland pools
- Adds 4.3 MG of detention volume



Constructed Wetlands







Regional SW Approach

- Dubbed the “Wetlands Wonderland”
- Enough capacity to manage Creekside Park, all proposed redevelopment, PLUS an extra 0.9MG
 - Additional volume provided to meet future climate change modeling (NOAA 15)



Regional SW Approach

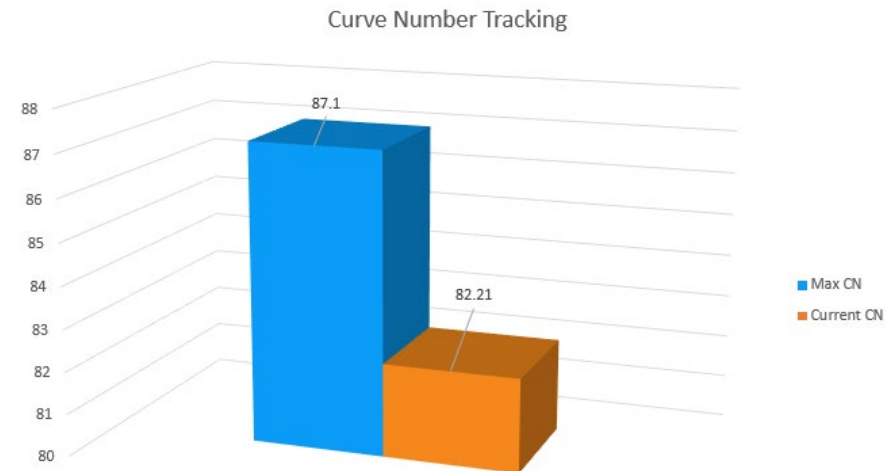
- Economic incentive for redevelopment
- Constructed Wetlands providing detention at no cost to future developers
 - Channel Protection
 - Overbank Flood
 - Extreme Flood
- Future developments must install Green Infrastructure on their individual sites (RR_v)
 - No falling back to WQ practices



Site Development Tool

- Used to track the remaining capacity of the regional detention system
- Easy to use
- Based on changes in pre- and post-development Curve Numbers (CN)

Data to pull from developer's site information spreadsheet and input into green cells in Tracking Tool	
Site Development Name	The Terraces
Site Development Date	10/1/2024
Development Area	7.5
Development Existing CN	68
Development Adjusted CN	75



Upstream Conditions

- Developed watershed
- Little to no existing stormwater detention infrastructure
- Heavily incised streambank
- Source of sedimentation to downstream neighborhoods
- Approximately 1,900 lf of impacted stream



Stream Restoration

- Priority 3 Stream Restoration
- Riffle-Step Pool Structures
- Imbricated Boulder Revetments
- Vegetated Banks and Soil Lifts
- Regenerative Stormwater Conveyance Structures (RSC)



Environmental Permitting

- Between the two projects:
 - 7 Nationwide Permits (Army Corps)
 - 4 Stream Buffer Variances (State and City)
 - \$225K of wetland impact credits
 - ~18-month long process
- \$800K of 319(h) grant funds for construction



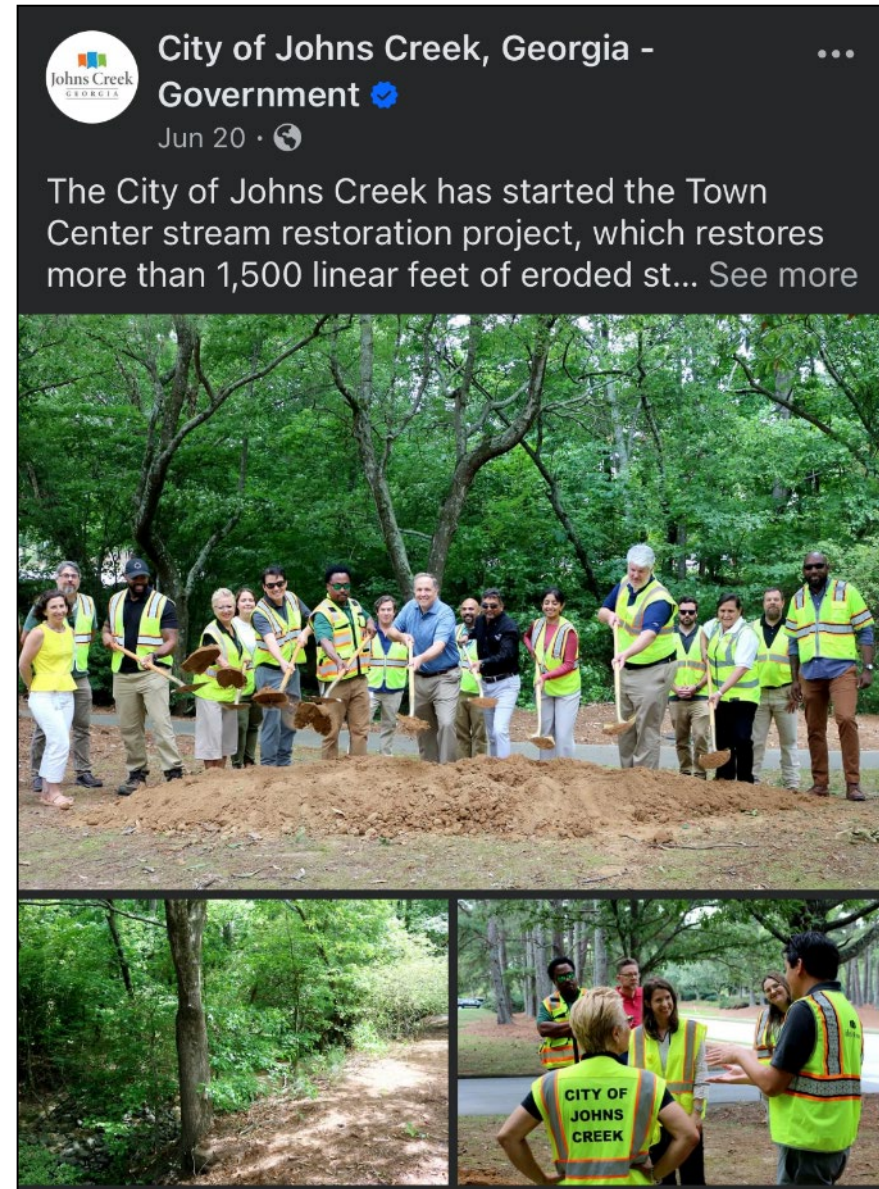
Invasive Plant Species

- Both Stream Restoration and Creekside Park include a requirement to remove all invasive species within site footprint



Projects Underway

- Groundbreakings!
 - Stream Restoration - June 2024
 - Creekside Park - August 2024



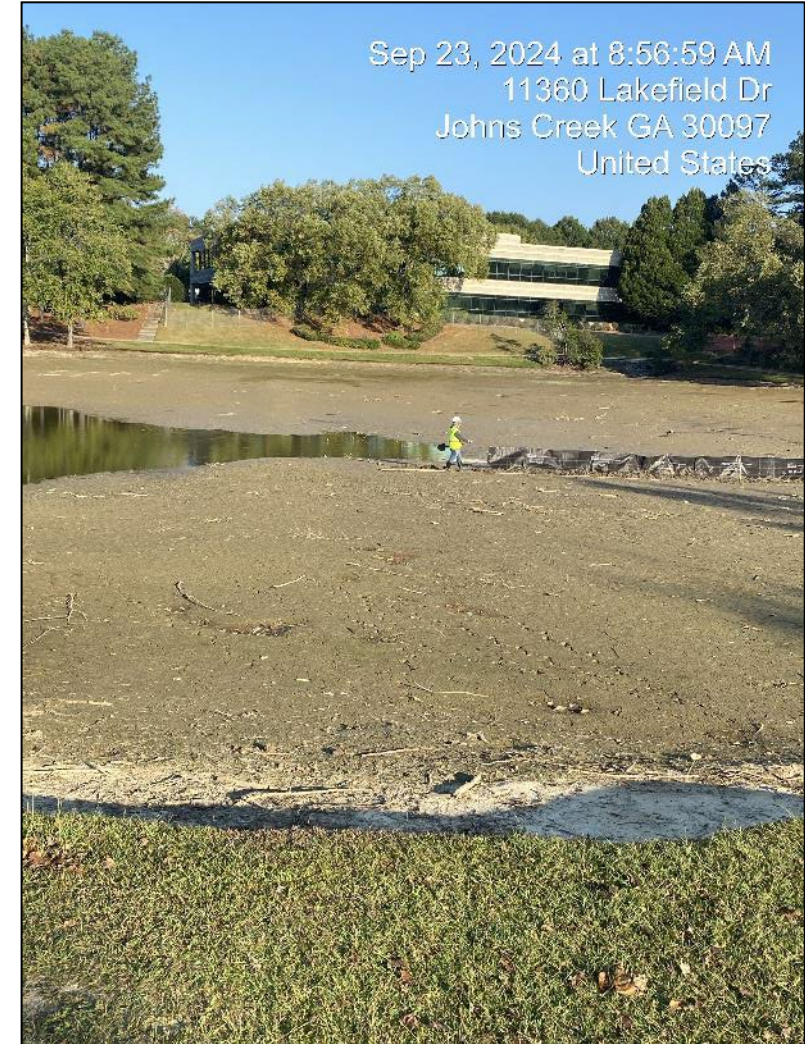
Prior to Dredging

- Fish shocked and relocated
 - ~3,100 total



Under Construction

- Pond dredging commenced
- Riffle-Step pool installation



Questions?



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