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April 14, 2022

Acting Georgia Field Supervisor
U.S. Fish & Wildlife Service, Georgia Ecological Services
RG Stephens Jr. Federal Building
355 East Hancock Avenue, Room 320
Athens, GA 30601
ATTN: Meg Hedeem

Daniel T. Hinton, Acting Georgia Division Administrator
Federal Highway Administration
Atlanta Federal Center
61 Forsyth Street, S.W., Suite 17T100
Atlanta, Georgia 30303-3104
ATTN: Chetna Dixon-Thomas

Re: Action Request: Technical Assistance
GDOT Project PI# 0009395, Fulton County

Dear Acting Georgia Field Supervisor and Mr. Hinton,

Please find attached the Ecology Resource Survey Report for the above referenced project. The proposed project is a multi-use trail project (Segment 3 of the Atlanta BeltLine NE) located within the City Limits of Atlanta, Georgia. As the Federal Highway Administration's designated non-federal representative, the Department provides the attached report containing details on findings related to ecological resources.

This report is being provided for your information and files. If applicable, please provide technical assistance regarding the defined action area and project-specific recommendations for any species that may be affected by the project. Please copy the Lead Federal Agency, GDOT Ecologist, and GDOT Environmental Analyst assigned to the project on your response or any other correspondence. If you have any questions or need additional information, please contact GDOT Ecologist Kelly Burdette at 404-631-1699 (kburdette@dot.ga.gov) or GDOT Senior Ecology Team Leader Jaime Collazo at 404-631-1740 (jcollazo@dot.ga.gov).

Sincerely,

A handwritten signature in blue ink that reads "Eric Duff". The signature is written in a cursive, flowing style.

Eric Duff
State Environmental Administrator

PI# 0009395, Fulton County
April 14, 2022

ED/JMC/scs

Enclosure

cc: GDOT Project Manager, Porshia Renee Hayden
GDOT Environmental Analyst, Jessica Kern (jkern@dot.ga.gov)
GDOT ECB (Daryl Williams)
GDOT Mitigation (Lisa Westberry)
EPD-GDOT Inbox (epd.gdot@dnr.ga.gov)
DNR, WRD Maggie Hunt
EPA (Eric Somerville)
GDOT IOEQ Inbox (IOEQsubmittals@dot.ga.gov)
EPEI Consultant, Sara Carey Smith (Scareysmith@edwards-pitman.com)



Ecology Resource Survey Report:

**Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive**

Fulton County

PI No. 0009395

April 2022

Prepared by: Edwards-Pitman Environmental, Inc.

Under Contract With: Heath & Lineback Engineers, Inc.

Prepared for: Georgia Department of Transportation

Report Author:

Sara Carey Smith, Project Ecologist

Charlotte Estes, Senior Ecologist

GDOT Reviewer:

Kelly Burdette, GDOT Ecologist

Ecology Resource Survey Overview
PI No. 0009395, Fulton County

Jurisdictional Waters			
Resource Type	# Within Survey Area	Length of Impact (ft.)	Area of Impact (ac.)
Perennial Streams	4	TBD	TBD
Intermittent Streams	3	TBD	TBD
Ephemeral Channel(s)	0	N/A	N/A
TOTAL	7	TBD	TBD
Wetlands	4	TBD	TBD
Open Water(s)	0	N/A	N/A
TOTAL	4	TBD	TBD

Key: To Be Determined (TBD), Not Applicable (N/A)

Project Info	
Funding Type	Federal
Project Delivery Type	Design-Bid-Build

Present in the Study Area	
Invasive Species	Yes
Eagle Habitat	No
Eagle Nest	No
Critical Habitat	No
Essential Fish Habitat	No
Bat Roosting Habitat	Yes
Migratory Bird Habitat	Yes

Agency Coordination	
Coordination under the Fish and Wildlife Coordination Act	TBD
Consultation under Section 7 of the Endangered Species Act (ESA)	TBD
Special Provision(s)	TBD
Section 7 ESA Consultation for Designated Critical Habitat	TBD
Consultation under Magnuson-Stevens Fisheries Conservation Act (MSFCA) for Essential Fish Habitat	TBD
Expected Clean Water Act Section 404 Permit(s)	TBD
Expected Clean Water Act Section 404 Permit Mitigation	TBD
Georgia Stream Buffer Variance	TBD
Georgia Stream Buffer Mitigation Credits	TBD

Key: To Be Determined (TBD)

Ecology Resource Survey Overview, continued
PI No. 0009395, Fulton County

Federal and State Protected Species							
Common Name	Scientific Name	Federal Rank	State Rank	Habitat Present	Species Present	Special Provision	Effect Determination
Bay star-vine	<i>Schisandra glabra</i>	---	T	Yes	TBD	TBD	TBD
Chattahoochee crayfish	<i>Cambarus howardi</i>	---	T	Yes	Yes*	TBD	TBD
Bluestripe shiner	<i>Cyprinella callitaenia</i>	---	R	Yes	Yes*	TBD	TBD
Peregrine falcon	<i>Falco peregrinus</i>	---	R	No	N/A	TBD	TBD
Monarch butterfly	<i>Danaus plexippus</i>	C	---	Not Assessed	Not Assessed	TBD	TBD

Key: Candidate (C), Rare (R), Threatened (T), Not Applicable (N/A), To Be Determined (TBD), Presence Assumed (*)

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I. DOCUMENT VERSION SUMMARY

Date	Description of Changes
4/2022	Ecology Resource Survey Report (ERSR)

II. PROJECT OVERVIEW

A. Project Description

Georgia Department of Transportation (GDOT) Project, PI No. 0009395, is a multi-use trail project located within the City Limits of Atlanta, Georgia (Figure 1, Appendix II). This project is considered Segment 3 of the proposed mainline Atlanta BeltLine Northeast (NE) Trail and proposes a 14-foot wide concrete shared-use path approximately 2.70 miles in length. The project includes approximately 2.10 miles of spur trail, 12-feet in width. The project also includes several walls and bridges. Segment 3 of the proposed Atlanta BeltLine NE Trail begins at the end of the existing tunnel under Interstate (I)-85. At the end of the tunnel the trail would cross under the existing Metropolitan Atlanta Rapid Transit Authority (MARTA) bridge, which spans over Mayson Street. The trail then transitions to the Norfolk Southern and MARTA maintenance road before paralleling the MARTA and Norfolk Southern railway tracks and transitioning to a proposed bridge over the active Norfolk Southern railway tracks and yard. After crossing the Norfolk Southern railway tracks, the trail will continue on the bridge over Armour Drive adjacent to the existing industrial plants and over CSX Transportation railroad and Peachtree Creek. The trail will remain on structure until connecting to Kinsey Court. This point is where the future connection to the Atlanta BeltLine Northwest (NW) Trail is proposed. This point ends the mainline trail. There are also four spur alignments off the mainline trail.

The first spur continues from the mainline trail at the proposed connection point to the future NW BeltLine Trail at Kinsey Court East on structure over a Peachtree Creek tributary and then at grade parallel to Peachtree Creek, under the Norfolk Southern Railway and MARTA tracks. From there the spur trail continues behind Passion City Church along Peachtree Creek before bridging up to Garson Drive.

The second spur would serve as a connection to the MARTA Lindbergh Station. The spur trail will continue at grade along Garson Drive crossing the existing MARTA overpass. This will require a road diet to make room for the proposed spur trail with the oversized lanes on Garson Drive reduced from existing 12 to 18-foot lanes to 11-foot lanes, allowing room for a curb and gutter section and a 5-foot buffer. The spur trail then continues adjacent to Garson Drive and crosses the Lindbergh Drive intersection at grade before tying into the Lindbergh MARTA station plaza.

The third spur alignment would serve as a connection to the existing PATH 400 (PATH Foundation) Trail by spurring off the MARTA Lindbergh Station trail to the east of Passion City Church, following Peachtree Creek, passing under the Piedmont Road overpass and running along the 2:1 slopes on structure until tying into PATH 400 near Parkland Drive.

The fourth spur alignment would serve as a connection to the Armour-Ottley business district by bridging off the mainline trail to follow along Armour Drive as a side path ending at the Ottley Drive and Clayton Road intersection.

The existing right-of-way (ROW) is 50 feet on Armour Drive and varies from 50-85 feet on Garson Drive. Additional ROW would be required for the proposed project.

B. Project Location

Nearest City or Other Defining Feature:	Within City limits of Atlanta
County:	Fulton
Project Midpoint:	33.812710°, -84.377960°
Level IV Ecoregion:	Southern Outer Piedmont (45b)
HUC (Hydrologic Unit Code)10 Watershed Name:	Peachtree Creek HUC 0313000112

C. Need and Purpose

The Atlanta BeltLine is a transformative project shaping the way the City of Atlanta will mature as a city, by creating parks, trails, transit, and new development along a 22-mile loop of rail segments that encircle the City's urban core. The Atlanta BeltLine – by attracting and organizing a portion of the region's future growth around parks, transit, and trails located in the inner core of Atlanta – will lead to a vibrant and livable Atlanta with an enhanced quality of life for all City residents. The revival of this historically industrial landscape will become the uniquely Atlanta solution and an exemplary model for effectively managing growth by providing:

- Trails and pedestrian-friendly streets to link neighborhoods previously severed by freight rail and industry;
- A 22-mile streetcar/light rail transit loop providing an alternative to auto trips among jobs, residences, and cultural attractions;
- Compact mixed-used development that supports transit, parks and trails, as well as businesses;
- A connected network of beautiful parks and greenspaces;
- Affordable workforce housing;
- Preservation of historical buildings and structures; and
- Environmental remediation of underutilized brownfield areas.

The project seeks to connect the existing Northside Trail to the MARTA Lindbergh Station with a connection to the existing PATH400 Trail via independent alignment through private property and existing City and State ROW.

D. Survey Methodology

Background research of relevant published and online information sources was conducted prior to field surveys to identify potential ecological resources within the study area. Sources included U.S. Geological Survey (USGS) topographic maps, National Wetland Inventory (NWI) maps, and U.S. Department of Agriculture – Natural Resources Consultation Service (USDA-NRCS) soil survey maps of the county. Prior to visiting the proposed project site, ecologists reviewed the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website, USFWS Georgia Ecological Services Field Office – Southeast Region HUC 10 Watershed Reports, and the Georgia Natural Archaeological Historical Resources GIS (GNAHRGIS) Ecology Review and Surveys Module to identify protected species that could potentially occur within the HUC 10 watershed and county (Appendix III and V). Species descriptions were prepared using the GADNR Wildlife Resource Division (WRD) website, NatureServe Explorer, and USDA-NRCS Plants database.

Field surveys to assess and document the presence of ecological resources such as habitat/land use within the project boundaries, and presence and location of jurisdictional and state waters, protected species and their habitats, and other ecological resources were conducted using approved methodologies (Appendix III and V). Jurisdictional wetland determinations were performed using the three-parameter approach (hydrophytic vegetation, hydric soils, and hydrology) as described in the 1987 U.S. Army Corps of Engineers (USACE) *Wetland Delineation Manual* and utilized the 2012 *Eastern Mountains and Piedmont Regional Supplement* as

guidance. Stream classifications were performed using the North Carolina Division of Water Quality (NC DWQ) *Methodology for Identification of Intermittent and Perennial Streams and Their Origins*, Version 4.11. State waters were delineated using the Georgia Environmental Protection Division (EPD) *2017 Field Guide for Determining the Presence of State Waters that Require a Buffer*. Surveys for protected species or their habitats were conducted using approved survey methodologies and/or appropriate resource agency recommendations to assess habitat suitability and species presence as appropriate.

E. Survey Summary

Survey History

Survey Type	Date of Survey	Recommended Survey Season	Surveyor Name, Affiliation	Survey Duration	Surveyed Area
Resource Survey – pedestrian survey along side roads, including assessment of waters and species habitat	6/8/2020; 6/11/2020	Year Round	Kayla Theilig and Evan Seal, Edwards-Pitman Environmental Inc. (EPEI)	2 days, 8 hours each day	3 miles, 154.1 acres
Additional Survey Area – pedestrian survey, along side roads, including assessment of waters and species habitat	1/16/2022	Year Round	Jackson Peyton and Sara Carey Smith, EPEI	2 hours	0.6 mile, 15.2 acres

Weather Conditions

Weather conditions during surveys are presented below. Weather data is included in Section VIII: Supporting Documentation.

Date Of Survey:	6/8/2020	6/11/2020
Average Temperature:	78° Fahrenheit (F)	72°F
Weather Conditions:	Sunny	Sunny
Date of Most Recent Precipitation Event:	6/5/2020	6/10/2020*
Amount of Most Recent Precipitation Event:	0.54 inch	0.85 inch
Cumulative Precipitation for Previous 30 Days:	2.57 inches	4.38 inches
10-Year Average Precipitation for Previous 30 Days:	3.67 inches (Atlanta, GA)	3.67 inches (Atlanta, GA)

Date Of Survey:	1/16/2022
Average Temperature:	78° F
Weather Conditions:	Overcast
Date of Most Recent Precipitation Event:	1/9/2022
Amount of Most Recent Precipitation Event:	0.22 inch
Cumulative Precipitation for Previous 30 Days:	5.47 inches
10-Year Average Precipitation for Previous 30 Days:	3.90 inches (Atlanta, GA)

*Precipitation from previous days did not negatively influence the Ecology Survey

On the day of the 1/16/2022 survey, Atlanta, GA recorded 0.87 inch of rain. However, this precipitation fell after the additional field survey and did not impact the survey.

Habitat and Land Use Types Summary

Habitat and land use types within the survey area along with their absolute and relative coverages within the survey area are presented below.

Habitat and Land Use Type	Acreage within survey area	Approx. % of survey area	Brief description (include dominant species present and approximate age of trees if forested)	Suitable for protected species?
Commercial	61.4	36.3	This land use consists of local business and their parking lots. Vegetation consisted of planted landscaping shrubbery.	No
Existing ROW	54.7	32.3	This land use consists of existing roadway, parking lots, railways, and associated ROW. Vegetation consists of various turfgrasses.	No
Riparian Corridor	30.9	18.2	This land use consists of Perennial Stream (PS) 9/Peachtree Creek and its buffer. Vegetation consists of water oak (<i>Quercus nigra</i>), silver maple (<i>Acer saccharinum</i>), box elder (<i>Acer negundo</i>), sweetgum (<i>Liquidambar styraciflua</i>), tulip poplar (<i>Liriodendron tulipifera</i>), red maple (<i>Acer rubrum</i>), sycamore (<i>Platanus occidentalis</i>), mockernut hickory (<i>Carya tomentosa</i>), mimosa (<i>Albizia julibrissin</i>), Chinese privet (<i>Ligustrum sinense</i>), kudzu (<i>Pueraria montana</i>), Virginia creeper (<i>Parthenocissus quinquefolia</i>), muscadine (<i>Vitis rotundifolia</i>), Chinese wisteria (<i>Wisteria sinensis</i>), English ivy (<i>Hedera helix</i>), poison ivy (<i>Toxicodendron radicans</i>), Japanese stiltgrass (<i>Microstegium vimineum</i>), spotted touch-me-not (<i>Impatiens capensis</i>), sensitive fern (<i>Onoclea sensibilis</i>), and Asiatic dayflower (<i>Commelina communis</i>). Trees are 10 – 50 years old.	Yes, bluestripe shiner (<i>Cyprinella callitaenia</i>) and Chattahoochee crayfish (<i>Cambarus howardi</i>)
Mixed Hardwood-Pine Forest	17.3	10.2	Vegetation includes black walnut (<i>Juglans nigra</i>), tulip poplar, red maple, loblolly pine (<i>Pinus taeda</i>), Japanese honeysuckle (<i>Lonicera japonica</i>), English ivy, Chinese privet. Trees are 10 – 30 years old.	Yes, bay star-vine (<i>Schisandra glabra</i>)
Parkland	5.0	3.0	The land use consists of the of the Ansley Golf Club and its border of the ROW. Vegetation consists of various turf grasses, ornamental shrubs, and a wooded border of loblolly pine and various hardwoods (primarily mixed oak, maple, and walnut). Trees are 10 – 20 years old.	No

III. FEDERALLY PROTECTED RESOURCES

A. Action Area

Action area is defined in 50 CFR 402.02 as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. The action area for the proposed project extends approximately one mile beyond the environmental survey boundary (ESB) (Figure 3 in Appendix II). The action area is based on the anticipated extent of potential impacts (e.g., water quality and sedimentation, noise and lighting) resulting from project actions.

B. Federally Threatened, Endangered, Candidate and Proposed Species

In compliance with the Endangered Species Act (ESA), the lead federal agency must identify the presence of proposed (P) or listed threatened (T) and endangered (E) species and proposed or designated Critical Habitat, as well as evaluate impacts to these resources. Species that are candidates (C) for listing under the ESA are also considered in the report. The following sources were used to compile a list of protected species potentially occurring within the project vicinity: IPaC website, USFWS HUC 10 Watershed Reports, and the GNAHRGIS Ecology module (Appendix III and V). The federal candidate monarch butterfly (*Danaus plexippus*) was listed on the IPaC generated from the ESB shapefile.

Although the rusty-patched bumblebee (*Bombus affinis*) has an extirpated element occurrence record documented in the GNAHRGIS Ecology Module, it is outside of the USFWS consultation range, and no further analysis is required.

Common Name, Scientific Name	Status	Predicted within project area?	Species Description (including range)	Description of preferred habitat	Habitat or Species Present?	Effect Determination
Monarch butterfly, <i>Danaus plexippus</i>	C	Not assessed	Butterfly with orange and black markings and wingspan of 7-10 cm; breeding and migration throughout GA; range is statewide	Open habitats that contain milkweed plants or other nectar-producing plants	Habitat: Not assessed EO within action area: N/A Species: Not assessed	TBD

Key: Candidate (C), Element Occurrence (EO) as reported on GNAHRGIS, Not Applicable (N/A), To Be Determined (TBD)

Habitat Assessment/Effect Analysis

Potentially suitable monarch butterfly habitat occurs statewide and may be present within existing and proposed GDOT rights-of-way.

Avoidance and Minimization Measures:

To be determined.

C. Proposed or Designated Critical Habitat

Critical Habitat is designated under the Endangered Species Act for the protection and recovery of listed species.

Critical Habitat Summary

Is Critical Habitat present within survey area?	No
If so, list species here:	N/A
Effect Determination:	TBD

Key: Not Applicable (N/A), To Be Determined (TBD)

Habitat Assessment/Effect Analysis:

Critical Habitat is not designated within the ESB.

Avoidance and Minimization Measures:

To be determined.

D. Bald and Golden Eagles

The Bald and Golden Eagle Protection Act (BGEPA) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds. Under the BGEPA, a “take” of an eagle is defined as to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb.” Golden eagles occur in very low densities in Georgia and are present only during the winter months. Reintroduction efforts have not been successful and there are no known breeding pairs in Georgia. Additionally, given their reclusive nature, it is unlikely that active GDOT projects would impact golden eagles. Therefore, a habitat assessment and effect analysis was conducted only for bald eagles.

Bald and Golden Eagles Summary

Survey Date:	6/8/2020; 6/11/2020; 1/16/2022
Known eagle nest location within 3 miles?	No
Is eagle foraging/nesting habitat present within survey area?	No
Would this project result in “take” of bald eagles?	TBD
Protective measures:	TBD

Key: To Be Determined (TBD)

Habitat Assessment/Effect Analysis:

No known eagle nests are located within three miles of the ESB.

Avoidance and Minimization Measures:

To be determined.

E. Migratory Birds

The Migratory Bird Treaty Act (16 U.S.C. 703-711) requires the protection of migratory birds by prohibiting take of birds, feathers, eggs, and nests. Actions must be taken to avoid or minimize impacts to migratory birds and to prevent or abate the detrimental alteration of the environment for the benefit of migratory birds, as practicable. See Appendix V B- Bats in Bridges Data form for survey notes.

Migratory Birds Summary

Survey Date:	6/8/2020; 6/11/2020; 1/16/2022
Was evidence of nesting migratory birds observed on structures?	No Structure ID 121-0111-0 Structure ID 121-0670-0
Nesting species (if known):	N/A
Approximate number of nests observed:	N/A
Protective measures:	TBD

Key: To Be Determined (TBD), Not Applicable (N/A)

Avoidance and Minimization Measures:

To be determined.

F. Essential Fish Habitat

Essential Fish Habitat (EFH) is protected under the Magnuson-Stevens Fishery Conservation and Management Act, (MSFCMA) as amended in 1996. EFH refers to habitat that supports breeding, spawning, nursery, feeding, and protection functions for marine species. As such, it includes rivers and estuaries that are used for spawning by anadromous species. In compliance with the MSFCMA, GDOT must identify unavoidable adverse impacts to EFH.

Essential Fish Habitat Summary

Is EFH present within the survey area?	No
Will EFH be impacted as a result of this project?	No
Recommended Effect Determination:	TBD

Key: To Be Determined (TBD)

Habitat Assessment/Effect Analysis:

EFH is not present within the ESB.

Avoidance and Minimization Measures:

To be determined.

G. Invasive Species

In accordance with Executive Order (E.O.) 13112 (Invasive Species, Feb. 3, 1999) and E.O. 13751 (Safeguarding the Nation from the Impacts of Invasive Species, Dec. 5, 2016), a survey for populations of invasive species that may be spread during construction was conducted for this project. The spread of invasive species will be minimized by the Contractor's adherence to Standard Specifications, Section 201, Clearing and Grubbing of Right-of-Way.

Invasive Species Summary

Common Name	Scientific Name	EDDMapS Record ID	Description of Infestation	Station Numbers (for large infestations)
Kudzu	<i>Pueraria montana var. lobata</i>	8546759	Large infestation	TBD
English ivy	<i>Hedera helix</i>	8546757	Scatted dense patches	N/A
Chinese privet	<i>Ligustrum sinense</i>	8546760	Scattered individuals	N/A
Japanese honeysuckle	<i>Lonicera japonica</i>	8546758	Scattered individuals	N/A
Chinese wisteria	<i>Wisteria sinensis</i>	10421310	Scattered individuals	N/A
Japanese stiltgrass	<i>Microstegium vimineum</i>	10421311	Large infestation	TBD
Mimosa	<i>Albizia julibrissin</i>	8546756	Scattered individuals	N/A

Key: Not Applicable (N/A), To be determined (TBD)

H. Jurisdictional Waters of the U.S.

Jurisdictional Waters of the U.S. are defined by 33 CFR Part 328.3(b) and are protected by Section 404 of the Clean Water Act (33 USC 1344). A summary of the Jurisdictional Waters of the U.S. is included below, with additional information on individual resources included in subsequent pages.

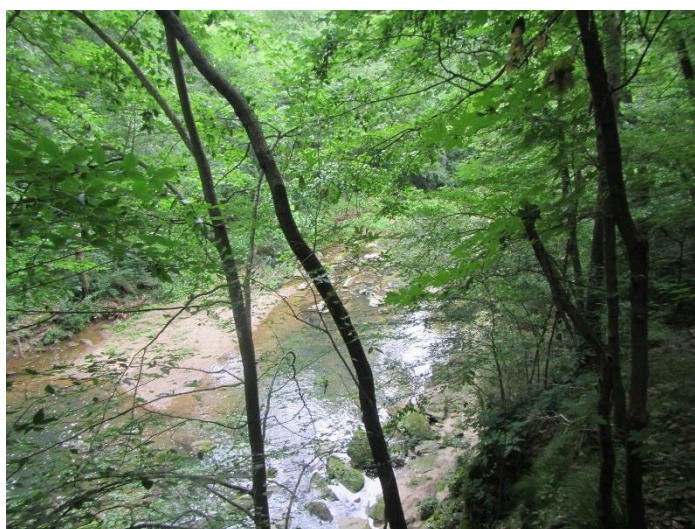
A total of eleven (11) jurisdictional waters were identified within the survey area including four (4) wetlands (WL), four (4) PS, and three (3) intermittent streams (IS).

Resource Name:	PS 1 (Clear Creek)	NCDWQ Score:	41.5	Trout Water?	No
Latitude/Longitude:	33.807944°, -84.385958°			HUC 10:	0313000112
Location:	Flowing north/northeast toward Peachtree Creek from the intersection of Clayton Road NE and Armour Dr. NE			Buffered?	Yes
Bankfull Dimensions:	40 feet x 10 feet	Wetted Dimensions:		15 feet x 3 feet	
Substrate Composition:	Sand, Gravel, Silt, Cobble, and Boulders	Flow Condition:		Normal	
In-Channel Structure:	Riffles and runs present with occasional deep pools. Several depositional bars in channel from excessive sedimentation				
Ordinary High Water Mark Indicator(s)	Natural line impressed on the bank, scour, bed and banks, presence of litter and debris				
Current Water Quality:	Clear water with no apparent smell; significant amounts of sediment in channel				
Existing Structures:	None				
Existing Aquatic Connectivity Barriers:	None				
Impact Activity:	TBD				
Impact/Length (Area)/Duration:	TBD				
Length of Resource within Survey Area:	Approximately 395 linear feet				
FWCA Required?	TBD				
Does resource provide habitat for protected species?		Yes, Chattahoochee crayfish and bluestripe shiner			

Key: To Be Determined (TBD)

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of PS 1, facing downstream (northeast) (6/8/2020)

NC DWQ Stream Identification Form Version 4.11

Date: 6/8/2020	Project/Site: PI No. 0009395	Latitude: 33.807944°
Evaluator: Kayla Theilig and Evan Seal	County: Fulton	Longitude: -84.385958°
Total Points: <i>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*</i>	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal 21)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

^a artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 7.5)	Absent	Weak	Moderate	Strong
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 13)	Absent	Weak	Moderate	Strong
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

Resource Name:	IS 2	NCDWQ Score:	26.5	Trout Water?	No
Latitude/Longitude:	33.810316°, -84.382671°			HUC 10:	0313000112
Location:	Flowing north toward Clear Creek from Armour Dr. NE			Buffered?	Yes
Bankfull Dimensions:	3 feet x 3 feet	Wetted Dimensions:	1-foot x 0.5 inch		
Substrate Composition:	Sand, Silt, and Clay	Flow Condition:	Normal		
In-Channel Structure:	Scattered stagnant pools, short runs				
Ordinary High Water Mark Indicator(s)	Scour, bed and banks, water/mud staining on vegetation				
Current Water Quality:	Muddy water with no apparent smell; channel bed is almost exclusively sand and clay deposition				
Existing Structures:	None				
Existing Aquatic Connectivity Barriers:	Intermittent flow regime				
Impact Activity:	TBD				
Impact/Length (Area)/Duration:	TBD				
Length of Resource within Survey Area:	Approximately 57 linear feet				
FWCA Required?	TBD				
Does resource provide habitat for protected species?	No				

Key: *To Be Determined (TBD)*

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of IS 2, facing downstream (north) (6/8/2020)



Photograph of IS 2, facing downstream (north) (6/8/2020)

NC DWQ Stream Identification Form Version 4.11

Date: 6/8/2020	Project/Site: PI No. 0009395	Latitude: 33.810316°
Evaluator: Kayla Theilig and Evan Seal	County: Fulton	Longitude: -84.382671°
Total Points: <i>Stream is at least intermittent 26.5</i> <i>if ≥ 19 or perennial if ≥ 30*</i>	Stream Determination (circle one) Ephemeral <u>Intermittent</u> Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 13.5)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	1	<u>2</u>	3
2. Sinuosity of channel along thalweg	0	1	<u>2</u>	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	<u>1</u>	2	3
4. Particle size of stream substrate	0	<u>1</u>	2	3
5. Active/relict floodplain	0	1	<u>2</u>	3
6. Depositional bars or benches	0	<u>1</u>	2	3
7. Recent alluvial deposits	0	1	2	<u>3</u>
8. Headcuts	<u>0</u>	1	2	3
9. Grade control	<u>0</u>	0.5	1	1.5
10. Natural valley	0	<u>0.5</u>	1	1.5
11. Second or greater order channel	<u>No = 0</u>		Yes = 3	

^a artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 10)	Absent	Weak	Moderate	Strong
12. Presence of Baseflow	0	1	2	<u>3</u>
13. Iron oxidizing bacteria	<u>0</u>	1	2	3
14. Leaf litter	1.5	<u>1</u>	0.5	0
15. Sediment on plants or debris	0	0.5	1	<u>1.5</u>
16. Organic debris lines or piles	0	0.5	1	<u>1.5</u>
17. Soil-based evidence of high water table?	No = 0		<u>Yes = 3</u>	

C. Biology (Subtotal = 3)	Absent	Weak	Moderate	Strong
18. Fibrous roots in streambed	3	2	<u>1</u>	0
19. Rooted upland plants in streambed	3	2	<u>1</u>	0
20. Macrobenthos (note diversity and abundance)	0	<u>1</u>	2	3
21. Aquatic Mollusks	<u>0</u>	1	2	3
22. Fish	<u>0</u>	0.5	1	1.5
23. Crayfish	<u>0</u>	0.5	1	1.5
24. Amphibians	<u>0</u>	0.5	1	1.5
25. Algae	<u>0</u>	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 <u>Other = 0</u>			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

Resource Name:	WL 3	Wetland Type:	Riverine
Latitude/Longitude:	33.810927°, -84.381932°	HUC 10:	0313000112
Location:	North of Armour Drive, adjacent to IS 4		
Current Quality:	Forested wetland with standing water, hydrologic patterns, and hydrologic connection to IS 4		
Existing Structures:	None		
Impact Activity:	TBD		
Impact/Area/Duration:	TBD		
Area of Resource:	Approximately 0.5 acre	Area of Resource within Survey Area:	Approximately 0.15 acres
FWCA Required	TBD		
Does resource provide habitat for protected species?	No		

Key: To Be Determined (TBD)

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of WL 3 hydric soil
(6/8/2020)



Photograph of WL 3, facing north
(6/8/2020)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Beltline NE City/Co.: Fulton Sampling Date: 6/8/2020
 Applicant/Owner: GDOT State: GA Sampling Point: WL 3 Wetland
 Investigator(s): Kayla Theilig & Evan Seal Section, Township, Range: _____
 Landform: (hillslope, terrace, etc.) toeslope Local Relief: concave Slope (%): 2
 Subregion(LRR/MLRA) P/136 Lat: 33.8109 Long: -84.3819 Datum: NAD83
 Soil Map Unit Name: Congaree sandy loam NWI Classification: None
 Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks					

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply):					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Much Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			

Field Observations:				Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches):		
Water Table Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches):	<u>5</u>	
Saturation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches):	<u>surface</u>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydrology indicators were observed.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: WL 3 Wetland

Tree Stratum (Plot size: 30ft radius)			Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Acer negundo</u>		25	Y	FAC
2.	<u>Liquidambar styraciflua</u>		25	Y	FAC
3.	<u>Carya tomentosa</u>		20	Y	FACU
4.	<u>Betula nigra</u>		15		FACW
5.	<u>Platanus occidentalis</u>		15		FACW
6.	_____				
7.	_____				
8.	_____				
			100 = Total Cover		
50% of total cover: 50			20% of total cover: 20		

Sapling/Shrub Stratum (Plot size: 30ft radius)			Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Impatiens capensis</u>		60	Y	FACW
2.	<u>Ligustrum sinense</u>		10		FACU
3.	<u>Acer negundo</u>		5		FAC
4.	_____				
5.	_____				
6.	_____				
7.	_____				
8.	_____				
9.	_____				
10.	_____				
			75 = Total Cover		
50% of total cover: 37.5			20% of total cover: 15		

Herb Stratum (Plot size: 30ft radius)			Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Murdannia keisak</u>		20	Y	OBL
2.	<u>Juncus effusus</u>		5	Y	FACW
3.	_____				
4.	_____				
5.	_____				
6.	_____				
7.	_____				
8.	_____				
9.	_____				
10.	_____				
11.	_____				
12.	_____				
			25 = Total Cover		
50% of total cover: 12.5			20% of total cover: 5		

Woody Vine Stratum (Plot size: 30ft radius)			Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Toxicodendron radicans</u>		10	Y	FAC
2.	<u>Parthenocissus quinquefolia</u>		5	Y	FACU
3.	<u>Vitis rotundifolia</u>		5	Y	FAC
4.	_____				
5.	_____				
6.	_____				
			10 = Total Cover		
50% of total cover: 5			20% of total cover: 2		

Remarks: (Include photo numbers here or on a separate sheet.)
 Hydrophytic vegetation was observed.

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 78% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply
OBL species	<u>20</u>	x 1 = <u>20</u>
FACW species	<u>95</u>	x 2 = <u>190</u>
FAC species	<u>70</u>	x 3 = <u>210</u>
FACU species	<u>30</u>	x 4 = <u>120</u>
UPL species	<u>0</u>	x 5 = <u>0</u>
Column Totals:	<u>215</u> (A)	<u>540</u> (B)
Prevalence Index = B/A = <u>2.5</u>		

Hydrophytic Vegetation Indicators:

☐ Rapid Test for Hydrophytic Vegetation

☒ Dominance Test is > 50%

☐ Prevalence Index is ≤ 3.0¹

☐ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes ☒ No ☐

SOIL

Sampling Point: WL 3 Wetland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-2	2.5Y 3/1	100					Sandy clay	
2-16+	2.5Y 4/2	80	10YR 4/4	20	C	PL	Sandy clay	

¹Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains²Location: PL = Pore Lining, M = Matrix**Hydric Soil Indicators:**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Material (S1) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| (LRR N, MLRA 147, 148) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Sandy Redox (S4) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |
| <input type="checkbox"/> Stripped Matrix (S5) | |

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (MLRA 147)
- ☐ Coastal Prairie Redox (A16) (MLRA 147, 148)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Hydric soils were observed.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Beltline NE City/Co.: Fulton Sampling Date: 6/8/2020
 Applicant/Owner: GDOT State: GA Sampling Point: WL 3 Upland
 Investigator(s): Kayla Theilig & Evan Seal Section, Township, Range: _____
 Landform: (hillslope, terrace, etc.) toeslope Local Relief: concave Slope (%): 2
 Subregion(LRR/MLRA) P/136 Lat: 33.811 Long: -84.3818 Datum: NAD83
 Soil Map Unit Name: Congaree sandy loam NWI Classification: None
 Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks					

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply):					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			

Field Observations:					
Surface Water Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth (inches):		
Water Table Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth (inches):		
Saturation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Depth (inches):		
(includes capillary fringe)				Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydrology indicators were not observed.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: WL 3 Upland

			Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
Tree Stratum (Plot size: 30ft radius)						Number of Dominant Species	
1.	Pinus taeda		25	Y	FAC	That Are OBL, FACW, or FAC:	3 (A)
2.	Juglans nigra		20	Y	FACU	Total Number of Dominant	
3.	Liriodendron tulipifera		20	Y	FAC	Species Across All Strata:	6 (B)
4.	Acer rubrum		15		FAC	Percent of Dominant Species	
5.						That Are OBL, FACW, or FAC:	50% (A/B)
6.							
7.							
8.							
			80	= Total Cover			
50% of total cover:			40	20% of total cover:		16	
Sapling/Shrub Stratum (Plot size: 30ft radius)						Prevalence Index worksheet:	
1.	Ligustrum sinense		60	Y	FACU	Total % Cover of:	Multiply
2.						OBL species	0 x 1 = 0
3.						FACW species	0 x 2 = 0
4.						FAC species	75 x 3 = 225
5.						FACU species	80 x 4 = 320
6.						UPL species	0 x 5 = 0
7.						Column Totals:	155 (A) 545 (B)
8.						Prevalence Index = B/A = 3.5	
9.							
10.							
			60	= Total Cover			
50% of total cover:			30	20% of total cover:		12	
Herb Stratum (Plot size: 30ft radius)						Hydrophytic Vegetation Indicators:	
1.						<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation	
2.						<input type="checkbox"/> Dominance Test is > 50%	
3.						<input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹	
4.						<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5.						<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6.						¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
7.							
8.							
9.							
10.							
11.							
12.							
			0	= Total Cover			
50% of total cover:			0	20% of total cover:		0	
Woody Vine Stratum (Plot size: 30ft radius)						Definitions of Four Vegetation Strata:	
1.	Lonicera japonica		15	Y	FAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
2.	Hedera helix		5	Y	FACU	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
3.						Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
4.						Woody Vines - All woody vines greater than 3.28 ft in height.	
5.							
6.							
			15	= Total Cover			
50% of total cover:			7.5	20% of total cover:		3	
						Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation was not observed.							

SOIL

Sampling Point: WL 3 Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-2	2.5Y 5/3	100					Sandy clay	
2-16+	2.5Y 4/4	80					Sandy clay	

¹Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains²Location: PL = Pore Lining, M = Matrix**Hydric Soil Indicators:**

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Material (S1) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| (LRR N, MLRA 147, 148) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Sandy Redox (S4) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |
| <input type="checkbox"/> Stripped Matrix (S5) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Coastal Prairie Redox (A16) |
| (MLRA 147, 148) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| (MLRA 136, 147) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks: Hydric soil indicators were not observed.

Resource Name:	IS 4	NCDWQ Score:	19	Trout Water?	No
Latitude/Longitude:	33.810856°, -84.381665°			HUC 10:	0313000112
Location:	Flowing west toward Clear Creek from Armour Dr. NE			Buffered?	Yes
Bankfull Dimensions:	3 feet x 1-foot	Wetted Dimensions:	1 – 3 feet x 0.5 inch		
Substrate Composition:	Sand, Silt, and Clay	Flow Condition:	Normal		
In-Channel Structure:	Scattered stagnant pools, short runs				
Ordinary High Water Mark Indicator(s)	Scour, bed and banks, water/mud staining on vegetation				
Current Water Quality:	Muddy water with no apparent smell; channel bed is almost exclusively sand and clay deposition				
Existing Structures:	None				
Existing Aquatic Connectivity Barriers:	Intermittent flow regime				
Impact Activity:	TBD				
Impact/Length (Area)/Duration:	TBD				
Length of Resource within Survey Area:	Approximately 155 linear feet				
FWCA Required?	TBD				
Does resource provide habitat for protected species?		No			

Key: *To Be Determined (TBD)*

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of IS 4, facing upstream (south) (6/8/2020)



Photograph of IS 4, facing downstream (north) (6/8/2020)

NC DWQ Stream Identification Form Version 4.11

Date: 6/8/2020	Project/Site: PI No. 0009395	Latitude: 33.810856°
Evaluator: Kayla Theilig and Evan Seal	County: Fulton	Longitude: -84.381665°
Total Points: <i>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*</i>	Stream Determination (circle one) Ephemeral <u>Intermittent</u> Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal <u>10</u>)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	<u>1</u>	2	3
2. Sinuosity of channel along thalweg	0	<u>1</u>	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	<u>1</u>	2	3
4. Particle size of stream substrate	0	<u>1</u>	2	3
5. Active/relict floodplain	0	1	2	<u>3</u>
6. Depositional bars or benches	0	<u>1</u>	2	3
7. Recent alluvial deposits	0	<u>1</u>	2	3
8. Headcuts	<u>0</u>	1	2	3
9. Grade control	<u>0</u>	0.5	1	1.5
10. Natural valley	0	<u>0.5</u>	1	1.5
11. Second or greater order channel	<u>No = 0</u>		Yes = 3	

^a artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = <u>8</u>)	Absent	Weak	Moderate	Strong
12. Presence of Baseflow	0	1	<u>2</u>	3
13. Iron oxidizing bacteria	<u>0</u>	1	2	3
14. Leaf litter	<u>1.5</u>	1	0.5	0
15. Sediment on plants or debris	0	<u>0.5</u>	1	1.5
16. Organic debris lines or piles	0	0.5	<u>1</u>	1.5
17. Soil-based evidence of high water table?	No = 0		<u>Yes = 3</u>	

C. Biology (Subtotal = <u>1</u>)	Absent	Weak	Moderate	Strong
18. Fibrous roots in streambed	3	2	1	<u>0</u>
19. Rooted upland plants in streambed	3	2	1	<u>0</u>
20. Macroinvertebrates (note diversity and abundance)	0	<u>1</u>	2	3
21. Aquatic Mollusks	<u>0</u>	1	2	3
22. Fish	<u>0</u>	0.5	1	1.5
23. Crayfish	<u>0</u>	0.5	1	1.5
24. Amphibians	<u>0</u>	0.5	1	1.5
25. Algae	<u>0</u>	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 <u>Other = 0</u>			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

Resource Name:	IS 5	NCDWQ Score:	26.5	Trout Water?	No
Latitude/Longitude:	33.811266°, -84.380972°			HUC 10:	0313000112
Location:	Flowing north toward Clear Creek from Armour Dr. NE			Buffered?	Yes
Bankfull Dimensions:	2 feet x 1-foot	Wetted Dimensions:		1-foot x 0.5 inch	
Substrate Composition:	Sand, and silt	Flow Condition:		Normal	
In-Channel Structure:	Riffles and runs				
Ordinary High Water Mark Indicator(s)	Bed and banks, presence of litter and debris, deposition				
Current Water Quality:	Clear water with no apparent smell; channel bed is comprised of gravel in a variety of sizes.				
Existing Structures:	None				
Existing Aquatic Connectivity Barriers:	Intermittent flow regime				
Impact Activity:	TBD				
Impact/Length (Area)/Duration:	TBD				
Length of Resource within Survey Area:	Approximately 271 linear feet				
FWCA Required?	TBD				
Does resource provide habitat for protected species?		No			

Key: *To Be Determined (TBD)*

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of IS 5, facing downstream (northeast) (6/8/2020)



Photograph of IS 5, facing upstream (south) (6/8/2020)

NC DWQ Stream Identification Form Version 4.11

Date: 6/8/2020	Project/Site: PI No. 0009395	Latitude: 33.811266°
Evaluator: Kayla Theilig and Evan Seal	County: Fulton	Longitude: -84.380972°
Total Points: <i>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*</i>	Stream Determination (circle one) Ephemeral <u>Intermittent</u> Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal 11)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	<u>1</u>	2	3
2. Sinuosity of channel along thalweg	0	<u>1</u>	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	<u>1</u>	2	3
4. Particle size of stream substrate	0	1	<u>2</u>	3
5. Active/relict floodplain	0	1	2	<u>3</u>
6. Depositional bars or benches	0	1	<u>2</u>	3
7. Recent alluvial deposits	<u>0</u>	1	2	3
8. Headcuts	<u>0</u>	1	2	3
9. Grade control	<u>0</u>	0.5	1	1.5
10. Natural valley	0	0.5	<u>1</u>	1.5
11. Second or greater order channel	<u>No = 0</u>		Yes = 3	

^a artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 7.5)	Absent	Weak	Moderate	Strong
12. Presence of Baseflow	0	1	2	<u>3</u>
13. Iron oxidizing bacteria	<u>0</u>	1	2	3
14. Leaf litter	1.5	<u>1</u>	0.5	0
15. Sediment on plants or debris	<u>0</u>	0.5	1	1.5
16. Organic debris lines or piles	0	<u>0.5</u>	1	1.5
17. Soil-based evidence of high water table?	No = 0		<u>Yes = 3</u>	

C. Biology (Subtotal = 8)	Absent	Weak	Moderate	Strong
18. Fibrous roots in streambed	<u>3</u>	2	1	0
19. Rooted upland plants in streambed	<u>3</u>	2	1	0
20. Macroinvertebrates (note diversity and abundance)	0	<u>1</u>	2	3
21. Aquatic Mollusks	<u>0</u>	1	2	3
22. Fish	<u>0</u>	0.5	1	1.5
23. Crayfish	<u>0</u>	0.5	1	1.5
24. Amphibians	0	0.5	<u>1</u>	1.5
25. Algae	<u>0</u>	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 <u>Other = 0</u>			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

Resource Name:	WL 6	Wetland Type:	Riverine
Latitude/Longitude:	33.811595°, -84.380534°	HUC 10:	0313000112
Location:	Northeast of Armour Dr. NE, bordered on the west by IS 5		
Current Quality:	Forested wetland along eastern edge of IS 5, impacted by roadway litter		
Existing Structures:	None		
Impact Activity:	TBD		
Impact/Area/Duration:	TBD		
Area of Resource:	0.08 acre	Area of Resource within Survey Area:	0.08 acre
FWCA Required	TBD		
Does resource provide habitat for protected species?	No		

Key: To Be Determined (TBD)

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of WL 6, east of IS 5
(6/8/2020)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Beltline NE City/Co.: Fulton Sampling Date: 6/8/2020
 Applicant/Owner: GDOT State: GA Sampling Point: WL 6 Wetland
 Investigator(s): Kayla Theilig & Evan Seal Section, Township, Range: _____
 Landform: (hillslope, terrace, etc.) toeslope Local Relief: concave Slope (%): 2
 Subregion(LRR/MLRA) P/136 Lat: 33.811598 Long: -84.380581 Datum: NAD83
 Soil Map Unit Name: Congaree sandy loam NWI Classification: None
 Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply):					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Much Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:					
Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches):	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Water Table Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches): <u>4</u>			
Saturation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches): <u>surface</u>			
(includes capillary fringe)					

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydrology indicators were observed.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: WL 6 Wetland

Tree Stratum (Plot size: 30ft radius)				Dominance Test Worksheet:	
		Absolute % Cover	Dominant Species?	Indicator Status	
1.	Liquidambar styraciflua	25	Y	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)
2.	Acer negundo	25	Y	FAC	Total Number of Dominant Species Across All Strata: <u>11</u> (B)
3.	Carya tomentosa	20	Y	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>64%</u> (A/B)
4.	Liriodendron tulipifera	15		FACU	
5.	Platanus occidentalis	15		FACW	
6.					
7.					
8.					
		<u>100</u> = Total Cover			
50% of total cover: <u>50</u>		20% of total cover: <u>20</u>			
Sapling/Shrub Stratum (Plot size: 30ft radius)				Prevalence Index worksheet:	
1.	Impatiens capensis	40	Y	FACW	Total % Cover of: Multiply
2.	Ligustrum sinense	10	Y	FACU	OBL species <u>20</u> x 1 = <u>20</u>
3.	Carya tomentosa	10	Y	FACU	FACW species <u>70</u> x 2 = <u>140</u>
4.	Acer negundo	5		FAC	FAC species <u>70</u> x 3 = <u>210</u>
5.					FACU species <u>55</u> x 4 = <u>220</u>
6.					UPL species <u>0</u> x 5 = <u>0</u>
7.					Column Totals: <u>215</u> (A) <u>590</u> (B)
8.					Prevalence Index = B/A = <u>2.7</u>
9.					
10.					
		<u>65</u> = Total Cover			
50% of total cover: <u>32.5</u>		20% of total cover: <u>13</u>			
Herb Stratum (Plot size: 30ft radius)				Hydrophytic Vegetation Indicators:	
1.	Murdannia keisak	20	Y	OBL	<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation
2.	Woodwardia areolata	15	Y	FACW	<input checked="" type="checkbox"/> Dominance Test is > 50%
3.					<input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹
4.					<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5.					<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6.					
7.					
8.					
9.					
10.					
11.					
12.					
		<u>35</u> = Total Cover			
50% of total cover: <u>17.5</u>		20% of total cover: <u>7</u>			
Woody Vine Stratum (Plot size: 30ft radius)				Definitions of Four Vegetation Strata:	
1.	Toxicodendron radicans	10	Y	FAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
2.	Parthenocissus quinquefolia	10	Y	FACU	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
3.	Vitis rotundifolia	5	Y	FAC	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
4.					Woody Vines - All woody vines greater than 3.28 ft in height.
5.					
6.					
		<u>25</u> = Total Cover			
50% of total cover: <u>12.5</u>		20% of total cover: <u>5</u>			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation was observed.					

SOIL

Sampling Point: WL 6 Wetland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-5	5YR 3/3	100					Sandy clay	
5-16+	5YR 3/2	80	5YR 4/6	20	C	PL	Sandy clay	

¹Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains²Location: PL = Pore Lining, M = Matrix**Hydric Soil Indicators:**

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Material (S1) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| (LRR N, MLRA 147, 148) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Sandy Redox (S4) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |
| <input type="checkbox"/> Stripped Matrix (S5) | |

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) **(MLRA 147)**
- ☐ Coastal Prairie Redox (A16) **(MLRA 147, 148)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks: Hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Beltline NE City/Co.: Fulton Sampling Date: 6/8/2020
 Applicant/Owner: GDOT State: GA Sampling Point: WL 6 Upland
 Investigator(s): Kayla Theilig & Evan Seal Section, Township, Range: _____
 Landform: (hillslope, terrace, etc.) toeslope Local Relief: concave Slope (%): 2
 Subregion(LRR/MLRA) P/136 Lat: 33.811619 Long: -84.380456 Datum: NAD83
 Soil Map Unit Name: Congaree sandy loam NWI Classification: None
 Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply):					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Much Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
Field Observations:					
Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches): _____	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches): _____			
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches): _____			
(includes capillary fringe)					

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydrology indicators were not observed.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: WL 6 Upland

Tree Stratum (Plot size: 30ft radius)				Dominance Test Worksheet:	
		Absolute % Cover	Dominant Species?	Indicator Status	
1.	Liquidambar styraciflua	30	Y	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)
2.	Juglans nigra	30	Y	FACU	Total Number of Dominant Species Across All Strata: <u>10</u> (B)
3.	Carya tomentosa	20	Y	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
4.	Liriodendron tulipifera	15		FACU	
5.					
6.					
7.					
8.					
		<u>95</u> = Total Cover			
50% of total cover:		<u>47.5</u>	20% of total cover:		<u>19</u>
Sapling/Shrub Stratum (Plot size: 30ft radius)				Prevalence Index worksheet:	
1.	Quercus nigra	30	Y	FAC	Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u>
2.	Ligustrum sinense	25	Y	FACU	FACW species <u>0</u> x 2 = <u>0</u>
3.	Carya tomentosa	10		FACU	FAC species <u>140</u> x 3 = <u>420</u>
4.	Acer negundo	5		FAC	FACU species <u>100</u> x 4 = <u>400</u>
5.					UPL species <u>0</u> x 5 = <u>0</u>
6.					Column Totals: <u>240</u> (A) <u>820</u> (B)
7.					Prevalence Index = B/A = <u>3.4</u>
8.					
9.					
10.					
		<u>70</u> = Total Cover			
50% of total cover:		<u>35</u>	20% of total cover:		<u>14</u>
Herb Stratum (Plot size: 30ft radius)				Hydrophytic Vegetation Indicators:	
1.	Microstegium vimineum	40	Y	FAC	<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation
2.	Commelina communis	20	Y	FAC	<input checked="" type="checkbox"/> Dominance Test is > 50%
3.					<input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹
4.					<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5.					<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6.					
7.					
8.					
9.					
10.					
11.					
12.					
		<u>60</u> = Total Cover			
50% of total cover:		<u>30</u>	20% of total cover:		<u>12</u>
Woody Vine Stratum (Plot size: 30ft radius)				Definitions of Four Vegetation Strata:	
1.	Toxicodendron radicans	10	Y	FAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
2.	Parthenocissus quinquefolia	10	Y	FACU	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
3.	Vitis rotundifolia	5	Y	FAC	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
4.					Woody Vines - All woody vines greater than 3.28 ft in height.
5.					
6.					
		<u>25</u> = Total Cover			
50% of total cover:		<u>12.5</u>	20% of total cover:		<u>5</u>
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation was observed.					

SOIL

Sampling Point: WL 6 Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth	Matrix			Redox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	5YR 4/4	100					Sandy clay	
5-16+	5YR 5/6	70					Sandy clay	

¹Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains²Location: PL = Pore Lining, M = Matrix**Hydric Soil Indicators:**

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Material (S1) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| (LRR N, MLRA 147, 148) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Sandy Redox (S4) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |
| <input type="checkbox"/> Stripped Matrix (S5) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Coastal Prairie Redox (A16) |
| (MLRA 147, 148) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| (MLRA 136, 147) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____
Hydric Soil Present? Yes ☐ No ☒**Remarks:**

Hydric soil indicators were not observed.

Resource Name:	PS 7	NCDWQ Score:	30	Trout Water?		No
Latitude/Longitude:	33.812341°, -84.379454°			HUC 10:	0313000112	
Location:	Flowing north toward Clear Creek from Armour Dr. NE			Buffered?		Yes
Bankfull Dimensions:	4 feet x 3 feet	Wetted Dimensions:		2 feet x 1-foot		
Substrate Composition:	Sand, Silt, and Clay	Flow Condition:		Normal		
In-Channel Structure:	Riffles, runs and pools					
Ordinary High Water Mark Indicator(s)	Bed and banks, presence of litter and debris, deposition, change in plant community					
Current Water Quality:	Clear water with no apparent smell; channel bed is sandy, with large gravel					
Existing Structures:	None					
Existing Aquatic Connectivity Barriers:	Low flow regime					
Impact Activity:	TBD					
Impact/Length (Area)/Duration:	TBD					
Length of Resource within Survey Area:	Approximately 173 linear feet					
FWCA Required?	TBD					
Does resource provide habitat for protected species?		Yes, Chattahoochee crayfish and bluestripe shiner				

Key: To Be Determined (TBD)

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of PS 7, facing downstream (north) (6/8/2020)



Photograph of PS 7, facing upstream (south) (6/8/2020)

NC DWQ Stream Identification Form Version 4.11

Date: 6/8/2020	Project/Site: PI No. 0009395	Latitude: 33.812341°
Evaluator: Kayla Theilig and Evan Seal	County: Fulton	Longitude: -84.379545°
Total Points: <i>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*</i>	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal 14)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	

^a artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 8)	Absent	Weak	Moderate	Strong
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 8)	Absent	Weak	Moderate	Strong
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:

Resource Name:	WL 8	Wetland Type:	Riverine
Latitude/Longitude:	33.813381°, -84.379303°	HUC 10:	0313000112
Location:	North of Armour Dr. and adjacent to the east of the Ready-Mix concrete facility		
Current Quality:	Large, forested wetland, east of IS 7, impacted by invasive species		
Existing Structures:	None		
Impact Activity:	TBD		
Impact/Area/Duration:	TBD		
Area of Resource:	Approximately 4 acres	Area of Resource within Survey Area:	2.03 acres
FWCA Required	TBD		
Does resource provide habitat for protected species?	No		

Key: To Be Determined (TBD)

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of WL 8, facing north
(6/8/2020)



Photograph of WL 8, facing east
(6/8/2020)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Beltline NE City/Co.: Fulton Sampling Date: 6/8/2020
 Applicant/Owner: GDOT State: GA Sampling Point: WL 8 Wetland
 Investigator(s): Kayla Theilig & Evan Seal Section, Township, Range: _____
 Landform: (hillslope, terrace, etc.) toeslope Local Relief: concave Slope (%): 1
 Subregion(LRR/MLRA) P/136 Lat: 33.812965 Long: -84.378784 Datum: NAD83
 Soil Map Unit Name: Udorthents NWI Classification: None
 Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks					

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply):					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Much Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			

Field Observations:				Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches):		
Water Table Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches):	<u>4</u>	
Saturation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches):	<u>surface</u>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydrology indicators were observed.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: WL 8 Wetland

Tree Stratum (Plot size: 30ft radius)			Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
1.	<u>Quercus nigra</u>		<u>25</u>	<u>Y</u>	<u>FAC</u>	
2.	<u>Liquidambar styraciflua</u>		<u>20</u>	<u>Y</u>	<u>FAC</u>	
3.	<u>Liriodendron tulipifera</u>		<u>20</u>	<u>Y</u>	<u>FACU</u>	
4.	<u>Platanus occidentalis</u>		<u>10</u>		<u>FACW</u>	
5.	<u>Carya tomentosa</u>		<u>10</u>		<u>FACU</u>	
6.						
7.						
8.						
			<u>85</u> = Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>75</u> x 3 = <u>225</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>135</u> (A) <u>445</u> (B) Prevalence Index = B/A = <u>3.3</u>
50% of total cover: <u>42.5</u>			20% of total cover: <u>17</u>			
Sapling/Shrub Stratum (Plot size: 30ft radius)						Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	<u>Ligustrum sinense</u>		<u>20</u>	<u>Y</u>	<u>FACU</u>	
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
			<u>20</u> = Total Cover			
50% of total cover: <u>10</u>			20% of total cover: <u>4</u>			
Herb Stratum (Plot size: 30ft radius)						Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vines - All woody vines greater than 3.28 ft in height.
1.	<u>Commelina communis</u>		<u>20</u>	<u>Y</u>	<u>FAC</u>	
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
			<u>20</u> = Total Cover			
50% of total cover: <u>10</u>			20% of total cover: <u>4</u>			
Woody Vine Stratum (Plot size: 30ft radius)						Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1.	<u>Lonicera japonica</u>		<u>10</u>	<u>Y</u>	<u>FAC</u>	
2.						
3.						
4.						
5.						
6.						
			<u>10</u> = Total Cover			
50% of total cover: <u>5</u>			20% of total cover: <u>2</u>			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation was observed.						

SOIL

Sampling Point: WL 8 Wetland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-4	5YR 3/3	100					Sandy clay	
4-16+	5YR 3/2	80	5YR 4/6	20	C	PL	Sandy clay	

¹Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains²Location: PL = Pore Lining, M = Matrix**Hydric Soil Indicators:**

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Material (S1) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| (LRR N, MLRA 147, 148) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Sandy Redox (S4) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |
| <input type="checkbox"/> Stripped Matrix (S5) | |

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (MLRA 147)
- ☐ Coastal Prairie Redox (A16) (MLRA 147, 148)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Beltline NE City/Co.: Fulton Sampling Date: 6/8/2020
 Applicant/Owner: GDOT State: GA Sampling Point: WL 8 Upland
 Investigator(s): Kayla Theilig & Evan Seal Section, Township, Range: _____
 Landform: (hillslope, terrace, etc.) toeslope Local Relief: concave Slope (%): 1
 Subregion(LRR/MLRA) P/136 Lat: 33.812828 Long: -84.378817 Datum: NAD83
 Soil Map Unit Name: Udorthents NWI Classification: None
 Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks					

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)

- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches): _____	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches): _____	
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches): _____	
(includes capillary fringe)			

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: WL 8 Upland

Tree Stratum (Plot size: 30ft radius)				Dominance Test Worksheet:	
		Absolute % Cover	Dominant Species?	Indicator Status	
1.	<u>Liriodendron tulipifera</u>	35	Y	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)
2.	<u>Acer rubrum</u>	20	Y	FAC	Total Number of Dominant Species Across All Strata: <u>9</u> (B)
3.	<u>Acer negundo</u>	20	Y	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
4.	<u>Carya tomentosa</u>	15		FACU	
5.					
6.					
7.					
8.					
				90 = Total Cover	
		50% of total cover: <u>45</u>	20% of total cover: <u>18</u>		
Sapling/Shrub Stratum (Plot size: 30ft radius)				Prevalence Index worksheet:	
1.	<u>Acer rubrum</u>	15	Y	FAC	Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u>
2.	<u>Ligustrum sinense</u>	10	Y	FACU	FACW species <u>0</u> x 2 = <u>0</u>
3.	<u>Acer negundo</u>	5	Y	FAC	FAC species <u>95</u> x 3 = <u>285</u>
4.					FACU species <u>60</u> x 4 = <u>240</u>
5.					UPL species <u>0</u> x 5 = <u>0</u>
6.					Column Totals: <u>155</u> (A) <u>525</u> (B)
7.					Prevalence Index = B/A = <u>3.4</u>
8.					
9.					
10.					
				30 = Total Cover	
		50% of total cover: <u>15</u>	20% of total cover: <u>6</u>		
Herb Stratum (Plot size: 30ft radius)				Hydrophytic Vegetation Indicators:	
1.	<u>Toxicodendron radicans</u>	20	Y	FAC	<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation
2.					<input checked="" type="checkbox"/> Dominance Test is > 50%
3.					<input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹
4.					<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5.					<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
6.					
7.					
8.					
9.					
10.					
11.					
12.					
				20 = Total Cover	
		50% of total cover: <u>10</u>	20% of total cover: <u>4</u>		
Woody Vine Stratum (Plot size: 30ft radius)				Definitions of Four Vegetation Strata:	
1.	<u>Vitis rotundifolia</u>	15	Y	FAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
2.	<u>Parthenocissus quinquefolia</u>	5	Y	FACU	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
3.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
4.					Woody Vines - All woody vines greater than 3.28 ft in height.
5.					
6.					
				20 = Total Cover	
		50% of total cover: <u>10</u>	20% of total cover: <u>4</u>		
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present?	
Hydrophytic vegetation was observed.				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

SOIL

Sampling Point: WL 8 Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-4	5YR 4/6	100					Sandy clay	
4-16+	5YR 5/4	80					Sandy clay	

¹Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains²Location: PL = Pore Lining, M = Matrix**Hydric Soil Indicators:**

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Material (S1) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| (LRR N, MLRA 147, 148) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Sandy Redox (S4) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |
| <input type="checkbox"/> Stripped Matrix (S5) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Coastal Prairie Redox (A16) |
| (MLRA 147, 148) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| (MLRA 136, 147) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Hydric soil indicators were not observed.

Resource Name:	PS 9 (Peachtree Creek)	NCDWQ Score:	*	Trout Water?	No
Latitude/Longitude:	33.812341°, -84.379454°			HUC 10:	0313000112
Location:	Flowing east to west, parallel to CSX Transportation Line, perpendicular to Piedmont Road NE			Buffered?	Yes
Bankfull Dimensions:	50 feet x 10 feet	Wetted Dimensions:		15 feet x 8 feet	
Substrate Composition:	Sand, Silt, Clay	Flow Condition:		Normal	
In-Channel Structure:	Runs and pools				
Ordinary High Water Mark Indicator(s)	Bed and banks, deposition, shelving, leaf litter disturbed or washed away				
Current Water Quality:	Water was muddy with no smell; impacted by roadway run-off from Piedmont Road NE				
Existing Structures:	Structure ID 121-0111-0 (Piedmont Road NE), Cast in place bridge, triple bent, with steel underdecking; Bent 3 is within stream channel				
Existing Aquatic Connectivity Barriers:	None				
Impact Activity:	TBD				
Impact/Length (Area)/Duration:	TBD				
Length of Resource within Survey Area:	Approximately 5,263 linear feet, meanders in and out of the ESB				
FWCA Required?	TBD				
Does resource provide habitat for protected species?		Yes, Chattahoochee crayfish and bluestripe shiner			

Key: To Be Determined (TBD), *NCDWQ Stream ID worksheet not required on perennial streams named on USGS topographic map

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of PS 9 facing upstream (east) (6/11/2020)

Resource Name:	WL 10	Wetland Type:	Riverine
Latitude/Longitude:	33.817306°, -84.369178°	HUC 10:	0313000112
Location:	South of Garson Drive and east of Passion City Church		
Current Quality:	Forested wetland, no smell or organic sheen, impacted by roadway debris and runoff		
Existing Structures:	None		
Impact Activity:	TBD		
Impact/Area/Duration:	TBD		
Area of Resource:	0.09 acre	Area of Resource within Survey Area:	0.09 acre
FWCA Required	TBD		
Does resource provide habitat for protected species?	No		

Key: To Be Determined (TBD)

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of WL 10, facing west
(6/11/2020)



Photograph of WL 10, facing south
(6/11/2020)

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Beltline NE City/Co.: Fulton Sampling Date: 6/11/2020
 Applicant/Owner: GDOT State: GA Sampling Point: WL 10 Wetland
 Investigator(s): Kayla Theilig & Evan Seal Section, Township, Range: _____
 Landform: (hillslope, terrace, etc.) toeslope Local Relief: concave Slope (%): 1
 Subregion(LRR/MLRA) P/136 Lat: 33.817412 Long: -84.369368 Datum: NAD83
 Soil Map Unit Name: Udorthents NWI Classification: None
 Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks					

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply):					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Much Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			

Field Observations:				Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches):		
Water Table Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches):	<u>2</u>	
Saturation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth (inches):	<u>surface</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydrology indicators were observed.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: WL 10 Wetland

Tree Stratum (Plot size: 30ft radius)			Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species: _____ That Are OBL, FACW, or FAC: _____ 6 (A) Total Number of Dominant Species Across All Strata: _____ 8 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ 75% (A/B)
1.	Pinus taeda		15	Y	FAC	
2.	Betula nigra		15	Y	FACW	
3.	Liriodendron tulipifera		15	Y	FAC	
4.	Platanus occidentalis		10		FACW	
5.	Acer saccharinum		5		FACW	
6.	Acer negundo		5		FAC	
7.						
8.						
			65 = Total Cover			Prevalence Index worksheet: Total % Cover of: _____ Multiply OBL species 0 x 1 = 0 FACW species 45 x 2 = 90 FAC species 45 x 3 = 135 FACU species 10 x 4 = 40 UPL species 15 x 5 = 75 Column Totals: 115 (A) 340 (B) Prevalence Index = B/A = 3.0
50% of total cover: 32.5			20% of total cover: 13			
Sapling/Shrub Stratum (Plot size: 30ft radius)						Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1.	Betula nigra		15	Y	FACW	
2.	Ligustrum sinense		10	Y	FACU	
3.	Albizia julibrissin		5		UPL	
4.						
5.						
6.						
7.						
8.						
9.						
10.						
			30 = Total Cover			
50% of total cover: 15			20% of total cover: 6			
Herb Stratum (Plot size: 30ft radius)						Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody Vines - All woody vines greater than 3.28 ft in height.
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
			0 = Total Cover			
50% of total cover: 0			20% of total cover: 0			
Woody Vine Stratum (Plot size: 30ft radius)						Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1.	Pueraria montana		10	Y	UPL	
2.	Toxicodendron radicans		5	Y	FAC	
3.	Smilax rotundifolia		5	Y	FAC	
4.						
5.						
6.						
			20 = Total Cover			
50% of total cover: 10			20% of total cover: 4			
Remarks: (Include photo numbers here or on a separate sheet.) Hydrophytic vegetation was observed.						

SOIL

Sampling Point: WL 10 Wetland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth (inches)	Matrix Color (moist)	%	Color (moist)	Redox Features %	Type ¹	Loc ²	Texture	Remarks
0-5	5YR 3/3	100					Sandy clay	
5-16	5YR 4/2	80	5 YR 5/6	20	C	PL	Sandy clay	

¹Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains²Location: PL = Pore Lining, M = Matrix**Hydric Soil Indicators:**

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Material (S1) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| (LRR N, MLRA 147, 148) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Sandy Redox (S4) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |
| <input type="checkbox"/> Stripped Matrix (S5) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Coastal Prairie Redox (A16) |
| (MLRA 147, 148) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| (MLRA 136, 147) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐
Remarks: Hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: Beltline NE City/Co.: Fulton Sampling Date: 6/8/2020
 Applicant/Owner: GDOT State: GA Sampling Point: WL 10 Upland
 Investigator(s): Kayla Theilig & Evan Seal Section, Township, Range: _____
 Landform: (hillslope, terrace, etc.) toeslope Local Relief: concave Slope (%): 1
 Subregion(LRR/MLRA) P/136 Lat: 33.817478 Long: -84.369428 Datum: NAD83
 Soil Map Unit Name: Udorthents NWI Classification: None
 Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in Remarks.)
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? ☒ Yes ☐ No
 Are Vegetation ☐ , Soil ☐ , or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks					

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply):					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Much Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			

Field Observations:					
Surface Water Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches):		Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Water Table Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches):			
Saturation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth (inches):			
(includes capillary fringe)					

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydrology indicators were not observed.

VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: WL 10 Upland

Tree Stratum (Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Carya tomentosa</u>	35	Y	FACU	Number of Dominant Species: _____
2. <u>Quercus nigra</u>	20	Y	FAC	That Are OBL, FACW, or FAC: _____ 5 (A)
3. <u>Pinus taeda</u>	15		FAC	Total Number of Dominant Species Across All Strata: _____ 8 (B)
4. <u>Juglans nigra</u>	15		FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ 63% (A/B)
5. _____				
6. _____				
7. _____				
8. _____				
85 = Total Cover				
50% of total cover: 42.5				20% of total cover: 17
Sapling/Shrub Stratum (Plot size: 30ft radius)				Prevalence Index worksheet:
1. <u>Acer rubrum</u>	15	Y	FAC	Total % Cover of: _____ Multiply
2. <u>Ligustrum sinense</u>	10	Y	FACU	OBL species 0 x 1 = 0
3. <u>Acer negundo</u>	5		FAC	FACW species 0 x 2 = 0
4. <u>Quercus nigra</u>	5		FAC	FAC species 100 x 3 = 300
5. _____				FACU species 60 x 4 = 240
6. _____				UPL species 0 x 5 = 0
7. _____				Column Totals: 160 (A) 540 (B)
8. _____				Prevalence Index = B/A = 3.4
9. _____				
10. _____				
35 = Total Cover				Hydrophytic Vegetation Indicators:
50% of total cover: 17.5				<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
20% of total cover: 7				
Herb Stratum (Plot size: 30ft radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1. <u>Microstegium vimineum</u>	20	Y	FAC	
2. <u>Toxicodendron radicans</u>	5	Y	FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
25 = Total Cover				Definitions of Four Vegetation Strata:
50% of total cover: 12.5				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
20% of total cover: 5				Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
Woody Vine Stratum (Plot size: 30ft radius)				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
1. <u>Vitis rotundifolia</u>	15	Y	FAC	Woody Vines - All woody vines greater than 3.28 ft in height.
2. <u>Parthenocissus quinquefolia</u>	10	Y	FACU	
3. <u>Hedera helix</u>	5		FACU	
4. _____				
5. _____				
6. _____				
30 = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
50% of total cover: 15				
20% of total cover: 6				
Remarks: (Include photo numbers here or on a separate sheet.)				
Hydrophytic vegetation was observed.				

SOIL

Sampling Point: WL 10 Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators).

Depth (inches)	Matrix Color (moist)	%	Color (moist)	%	Redox Features Type ¹	Loc ²	Texture	Remarks
0-5	5YR 4/6	100					Sandy clay	
5-16	5YR 5/4	80					Sandy clay	

¹Type C = Concentration, D = depletion, RM = Reduced Matrix, MS = Masked Sand Grains²Location: PL = Pore Lining, M = Matrix**Hydric Soil Indicators:**

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Mucky Material (S1) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| (LRR N, MLRA 147, 148) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) |
| <input type="checkbox"/> Sandy Redox (S4) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) |
| <input type="checkbox"/> Stripped Matrix (S5) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Coastal Prairie Redox (A16) |
| (MLRA 147, 148) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| (MLRA 136, 147) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Hydric soil indicators were not observed.

Resource Name:	PS 11 (South Fork Peachtree Creek)	NCDWQ Score:	*	Trout Water?	No
Latitude/Longitude:	33.817187°, -84.364101°			HUC 10:	0313000112
Location:	East of Lakeshore Dr. NE			Buffered?	Yes
Bankfull Dimensions:	50 feet x 10 feet	Wetted Dimensions:	15 feet x 4 feet		
Substrate Composition:	Sand, Silt and Clay	Flow Condition:	Normal		
In-Channel Structure:	Pools and runs				
Ordinary High Water Mark Indicator(s)	Bed and banks, deposition, shelving, leaf litter disturbed or washed away				
Current Water Quality:	Water was muddy with no smell; impacted by roadway run-off				
Existing Structures:	None				
Existing Aquatic Connectivity Barriers:	None				
Impact Activity:	TBD				
Impact/Length (Area)/Duration:	TBD				
Length of Resource within Survey Area:	Approximately 63 linear feet				
FWCA Required?	TBD				
Does resource provide habitat for protected species?		Yes, Chattahoochee crayfish and bluestripe shiner			

Key: To Be Determined (TBD), *NCDWQ Stream ID worksheet not required on perennial streams named on USGS topographic map

Impact Discussion/Avoidance and Minimization:

To be determined.



Photograph of PS 11, south of PS 9, facing downstream (south) (6/11/2020)

IV. PERMIT AND MITIGATION

Any discharge of dredge or fill material into a Water of the U.S. must comply with Section 404 of the Clean Water Act. All impacts will require mitigation if stream impacts exceed 100 linear feet or wetland impacts exceed 0.10 acre, per the USACE, Savannah District's 2018 *Standard Operating Procedure for Compensatory Mitigation*. Any needed mitigation credits would be purchased from an appropriate USACE approved mitigation bank. Permit and mitigation requirements for this project will be included in the Assessment of Effects Report.

Jurisdictional Stream Impact Summary

Resource Name	HUC	Lat	Long	Begins at Station #	Ends at Station #	FWCA?	Impact Type	Impact Length (ft.)	Impact Area (acre)	Loss Length (ft.)	Loss Area (ac.)
PS 1	0313000112	33.807944°	-84.385958°	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
IS 2	0313000112	33.810316°	-84.382671°	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
IS 4	0313000112	33.810856°	-84.381665°	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
IS 5	0313000112	33.811266°	-84.380972°	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
IS 7	0313000112	33.812341°	-84.379454°	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
PS 9	0313000112	33.812341°	-84.379454°	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
PS 11	0313000112	33.817187°	-84.364101°	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Total Temporary Impacts								TBD	TBD		
Total Permanent Loss Impacts										TBD	TBD
Total Permitted Impacts								TBD	TBD		

Key: To Be Determined (TBD)

Jurisdictional Wetland, Open Water, Ditch, and Canal Impact Summary

Resource Name	HUC	Lat	Long	Begins at Station #	Ends at Station #	FWCA?	Impact Type	Temporary Impact Area (acre)	Permanent Impact Area (acre)
WL 3	0313000112	33.810927°	-84.381932°	TBD	TBD	TBD	TBD	TBD	TBD
WL 6	0313000112	33.811595°	-84.380534°	TBD	TBD	TBD	TBD	TBD	TBD
WL 8	0313000112	33.813381°	-84.379303°	TBD	TBD	TBD	TBD	TBD	TBD
WL 10	0313000112	33.817306°	-84.369178°	TBD	TBD	TBD	TBD	TBD	TBD
Total Impacts								TBD	TBD

Key: To Be Determined (TBD)

Permit and Mitigation Summary

Expected Clean Water Act Section 404 Permit:	TBD
Expected Stream Mitigation Credits (2018):	TBD
Expected Stream Mitigation Credits (Grandfathered):	TBD
Expected Wetland Mitigation Credits (2018):	TBD
Expected Wetland Mitigation Credits (Grandfathered):	TBD

Key: To Be Determined (TBD)

V. STATE PROTECTED RESOURCES

A. State Threatened, Endangered, Rare and Unusual Species

The Georgia Endangered Wildlife Act prohibits the capture, killing, or selling of protected species and protects the habitat of these species on public lands. Georgia's Wildflower Preservation Act of 1973 provides for designation of and protection of plant species that are rare, unusual, or in danger of extinction. State protected species that have known occurrences within 3 miles of the project area or within the HUC 10 watershed(s) are considered in the report. The following sources were used to compile a list of protected species potentially occurring within the survey area: GNAHRGIS Ecology module (Appendix V). The following state protected species were listed in the GNAHRGIS letter from GADNR: bay-star vine, bluestripe shiner, Chattahoochee crayfish, and peregrine falcon (*Falco peregrinus*).

Common Name, Scientific Name	Status	Predicted Within Project Area?	Species Description (including range)	Description of Preferred Habitat	Habitat or Species Present?	Effect Determination
Bay star-vine, <i>Schisandra glabra</i>	T	Yes, multiple historic occurrences including one on-site record, See Appendix V.A.	Woody vine with gray and bumpy bark that twines up trees and forms low thickets on the ground; flowers are rounded with red and green petals and sepals; Found primarily in the Piedmont	Moist, deciduous hardwood forests, often with beech (<i>Fagus grandifolia</i>), usually on lower slopes, stream terraces, and floodplains	Habitat: Yes EO within action area: Yes Species: TBD	TBD

Key: Threatened (T), Element Occurrence (EO) as reported in GNAHRGIS, To Be Determined (TBD)

Habitat Assessment/Effect Analysis:

The moist deciduous hardwood forests along the floodplains of PS 1, PS 7, PS 9, and PS 11 would provide suitable habitat for bay star-vine. A plant survey will be conducted during the recommended survey months to look for individuals; survey results and effect determination for bay star-vine will be discussed in the upcoming Assessment of Effects Report. There is a record of bay star-vine on site.

Avoidance and Minimization Measures:

To be determined.



Photo of suitable bay star-vine habitat in floodplain of Peachtree Creek (6/8/2020)

Common Name, Scientific Name	Status	Predicted Within Project Area?	Species Description (including range)	Description of Preferred Habitat	Habitat or Species Present?	Effect Determination
Bluestripe shiner, <i>Cyprinella callitaenia</i>	R	Yes, 3.8 miles W of site in Nancy Creek	Small fish with seven to eight anal fin rays and a dusky olive back color with silvery sides; Found in Apalachicola River drainage	Mainstream reaches of rivers and large streams in riffles and runs with rubble or sand substrates	Habitat: Yes EO within action area: No Species: Yes*	TBD

Key: Rare (R), Element Occurrence (EO) as reported in GNAHRGIS, To Be Determined (TBD), Presence Assumed (*)

Habitat Assessment/Effect Analysis:

PS 7, PS 9 and PS 11 are large streams with riffles and runs with rubble or sand substrates. These streams would provide suitable habitat for bluestripe shiner. An aquatic species survey will not be conducted for the bluestripe shiner; presence of this species will be assumed. Effect determination for bluestripe shiner will be discussed in the upcoming Assessment of Effects Report.

Avoidance and Minimization Measures:

To be determined.



Photo of suitable bluestripe shiner habitat in PS 9 (6/11/2020)

Common Name, Scientific Name	Status	Predicted Within Project Area?	Species Description (including range)	Description of Preferred Habitat	Habitat or Species Present?	Effect Determination
Chattahoochee crayfish, <i>Cambarus howardi</i>	T	Yes, 1.9 miles SE of site in Peachtree Creek and Tributaries in HUC 8 - 03130001	Crayfish with a bronze dorsal surface and bluish-green coloration on its claws, carapace, and abdomen; Found in the Chattahoochee River system	Clear, free-flowing waters, often in riffles in a range of stream sizes including tributary streams to mainstem rivers	Habitat: Yes EO within action area: No Species: Yes*	TBD

Key: Threatened (T), Element Occurrence (EO) as reported in GNAHRGIS, To Be Determined (TBD), Presence assumed (*)

Habitat Assessment/Effect Analysis:

PS 1, PS 7, PS 9, and PS 11 are clear, free-flowing waters. These streams would provide suitable habitat for Chattahoochee crayfish. GADNR occurrence records for Chattahoochee crayfish within the HUC 10 are less than five years old; therefore, presence of Chattahoochee crayfish has been assumed based upon the GDOT Aquatic Survey decision tree. Presence of the Chattahoochee crayfish, and effect determination, will be discussed in the upcoming Assessment of Effects Report.

Avoidance and Minimization Measures:

To be determined.



Photo of suitable Chattahoochee crayfish habitat in PS 9 (6/11/2020)

Common Name, Scientific Name	Status	Predicted Within Project Area?	Species Description (including range)	Description of Preferred Habitat	Habitat or Species Present?	Effect Determination
Peregrine falcon, <i>Falco peregrinus</i>	R	Yes, 2.8 miles S of site	Medium sized bird with long pointed wings, tail is long and narrow with alternating light and dark bands; Found in North Georgia/Atlanta	Nest on inaccessible cliff edges or buildings	Habitat: No EO within action area: No Species: No	TBD

Key: Rare (R), Element Occurrence (EO) as reported in GNAHRGIS, To Be Determined (TBD)

Habitat Assessment/Effect Analysis:

The survey consists of existing ROW, riparian corridor, mixed deciduous forest, parkland and commercial habitat. Within the commercial habitat, buildings are not higher than two stories. There are no inaccessible cliff edges or tall buildings within the survey area. Therefore, there is no suitable habitat for the peregrine falcon within the survey area.

Avoidance and Minimization Measures:

To be determined.

B. Bats

All bats are protected under Georgia state law (Official Code of Georgia § 27-1-28), and some species have additional protections under the federal Endangered Species Act of 1973. Bridges and culverts are often potential bat roosting locations and forested areas can serve as roosting and foraging habitats for bat species. Signs of bat roosts include visual, audible and olfactory identification, presence of guano, or staining from guano or body oils. A survey for potential roosting and foraging habitat was conducted throughout the project corridor.

State Protected Bats Summary

Survey date/bridge inspection date (if different):	6/8/2020; 6/11/2020; 1/16/2022
Are roosting structures present within survey area?	Yes Structure ID 121-0111-0 Structure ID 121-0670-0
Was suitable roosting or foraging habitat identified within survey area?	Roosting: Yes Foraging: Yes
Was evidence of bat roosting identified within survey area?	No
If "yes", describe location of bat roost(s):	N/A
Were bats identified within the survey area?	No
Protective measures:	TBD

Key: *To Be Determined (TBD), Not Applicable (N/A)*

During the initial survey (6/8/2020 and 6/11/2020) railroad bridges were not surveyed (Structure IDs 121-5135-0, 121-5396-0, 121-5211-0, 121-0487-0), as construction will not impact these bridges. During the Additional Area Survey (1/16/2022) Structure ID 121-0488-0 was not surveyed. This bridge crosses over I-85 and the underdeck and bents were inaccessible and unsafe to survey.

*Reference Appendix V B for Bats in Bridges Data forms.

Habitat Assessment:

No visible sign of bats, guano, or other indicators that may suggest the presence of bats were observed on the bridge (Structure IDs 121-0111-0 and 121-0670-0). The mixed hardwood-pine forest habitat type would provide foraging and roosting habitat for state protected bats. However, no bats were observed during these surveys.

Avoidance and Minimization Measures:

To be determined.



View underneath Structure ID 121-0111-0, over Peachtree Creek (6/11/2020)



View underneath Structure ID 121-0670-0, under I-85 along Atlanta BeltLine (1/16/2022)

C. State Waters

State Waters are defined by the Official Code of Georgia § 12-7-1 and protected by the Georgia Erosion and Sedimentation Control Act of 1975. All Jurisdictional Waters of the U.S. are also state waters and are discussed in Section III.H. Additional state waters are described below. A site visit with a representative from the Georgia EPD was conducted on 9/13/2021, to determine the buffered status of selected features within the survey area. A State Water Determination letter was received from EPD on 9/14/2021 (Appendix V.C).

State Waters Summary

Resource Name:	Location:	Description:
Non-buffered State Water (NBSW) A	North of PS 9, and south of Peachtree Hills Avenue NE; adjacent to parking lot	Stormwater erosional gulley

See Appendix II G for Figures 6 and 7: Federal and State Waters Map(s) (Topo and Aerial)

D. State Mandated Buffers

In compliance with the National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act, any encroachment within the designated 25-foot or 50-foot buffer of a state water will be described, and the need for a variance will be indicated.

State Mandated Buffers Summary

Resource Name	EPD-Regulated Buffer Size	Buffer Dimensions	Dominant Species	Buffer Impact	Exempt Impacts	Non-Exempt Impacts	BV Required
PS 1 (Clear Creek) Buffer	25 ft.	>25 ft. on both banks	Loblolly pine, black walnut, tulip poplar, red maple, Japanese honeysuckle, English ivy, and Chinese privet. Trees are 10 – 30 years old.	TBD	TBD	TBD	TBD
IS 2 Buffer	25 ft.	>25 ft. on both banks	Loblolly pine, black walnut, tulip poplar, red maple, Japanese honeysuckle, English ivy, and Chinese privet. Trees are 10 – 30 years old.	TBD	TBD	TBD	TBD
IS 4 Buffer	25 ft.	>25 ft. on both banks	Loblolly pine, black walnut, tulip poplar, red maple, Japanese honeysuckle, English ivy, and Chinese privet. Trees are 10 – 30 years old.	TBD	TBD	TBD	TBD
IS 5 Buffer	25 ft.	>25 ft. on both banks	Loblolly pine, black walnut, tulip poplar, red maple, Japanese honeysuckle, English ivy, and Chinese privet. Trees are 10 – 30 years old.	TBD	TBD	TBD	TBD
IS 7 Buffer	25 ft.	>25 ft. on both banks	Loblolly pine, black walnut, tulip poplar, red maple, Japanese honeysuckle, English ivy, and Chinese privet. Trees are 10 – 30 years old.	TBD	TBD	TBD	TBD

Resource Name	EPD-Regulated Buffer Size	Buffer Dimensions	Dominant Species	Buffer Impact	Exempt Impacts	Non-Exempt Impacts	BV Required
PS 9 (Peachtree Creek) Buffer	25 ft.	>25 ft. on both banks	Water oak, silver maple, box elder, sweetgum, tulip poplar, red maple, American sycamore, mockernut hickory, mimosa, Chinese privet, kudzu, Virginia creeper, muscadine, Chinese wisteria, English ivy, poison ivy, Japanese stiltgrass, spotted touch-me-not, sensitive fern, and Asiatic dayflower. Trees are 10 – 50 years old.	TBD	TBD	TBD	TBD
PS 11 (South Fork Peachtree Creek) Buffer	25 ft.	>25 ft. on both banks	Water oak, silver maple, box elder, sweetgum, tulip poplar, red maple, American sycamore, mockernut hickory, mimosa, Chinese privet, kudzu, Virginia creeper, muscadine, Chinese wisteria, English ivy, poison ivy, Japanese stiltgrass, spotted touch-me-not, sensitive fern, and Asiatic dayflower. Trees are 10 – 50 years old.	TBD	TBD	TBD	TBD

Key: To be determined (TBD)

Effect Analysis:

To be determined.

Avoidance and Minimization Measures:

To be determined.

VI. Appendices

Appendix II: Project Overview

GDOT PI No. 0009395
Fulton County

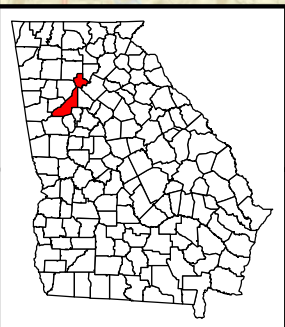
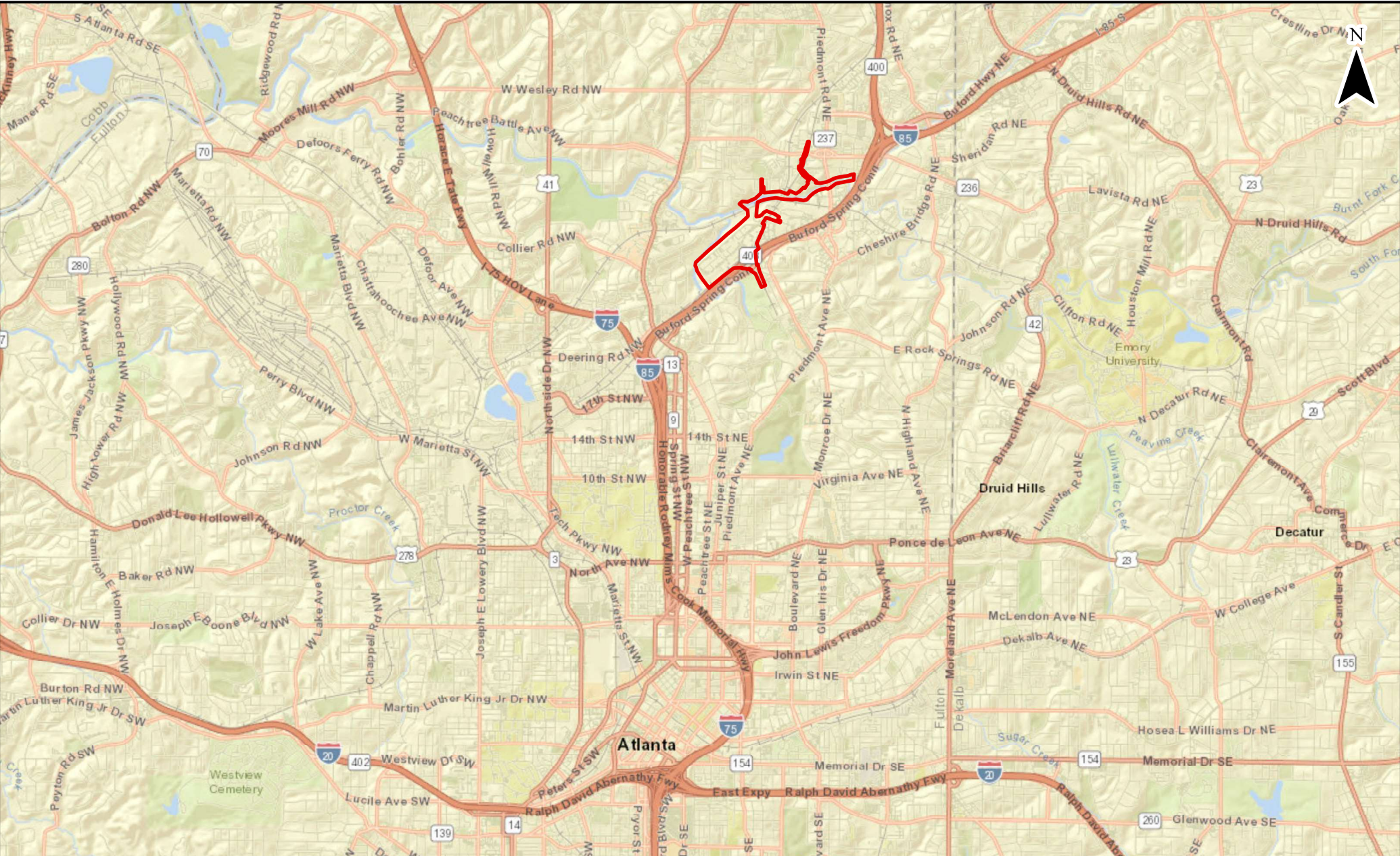
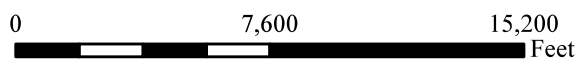



Figure 1. Project Vicinity Map

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County



Source: World Street Map

Legend

 Environmental Survey Boundary



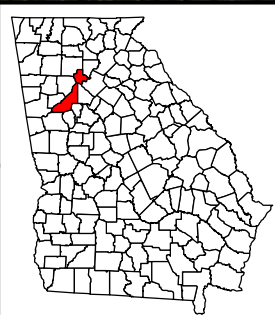
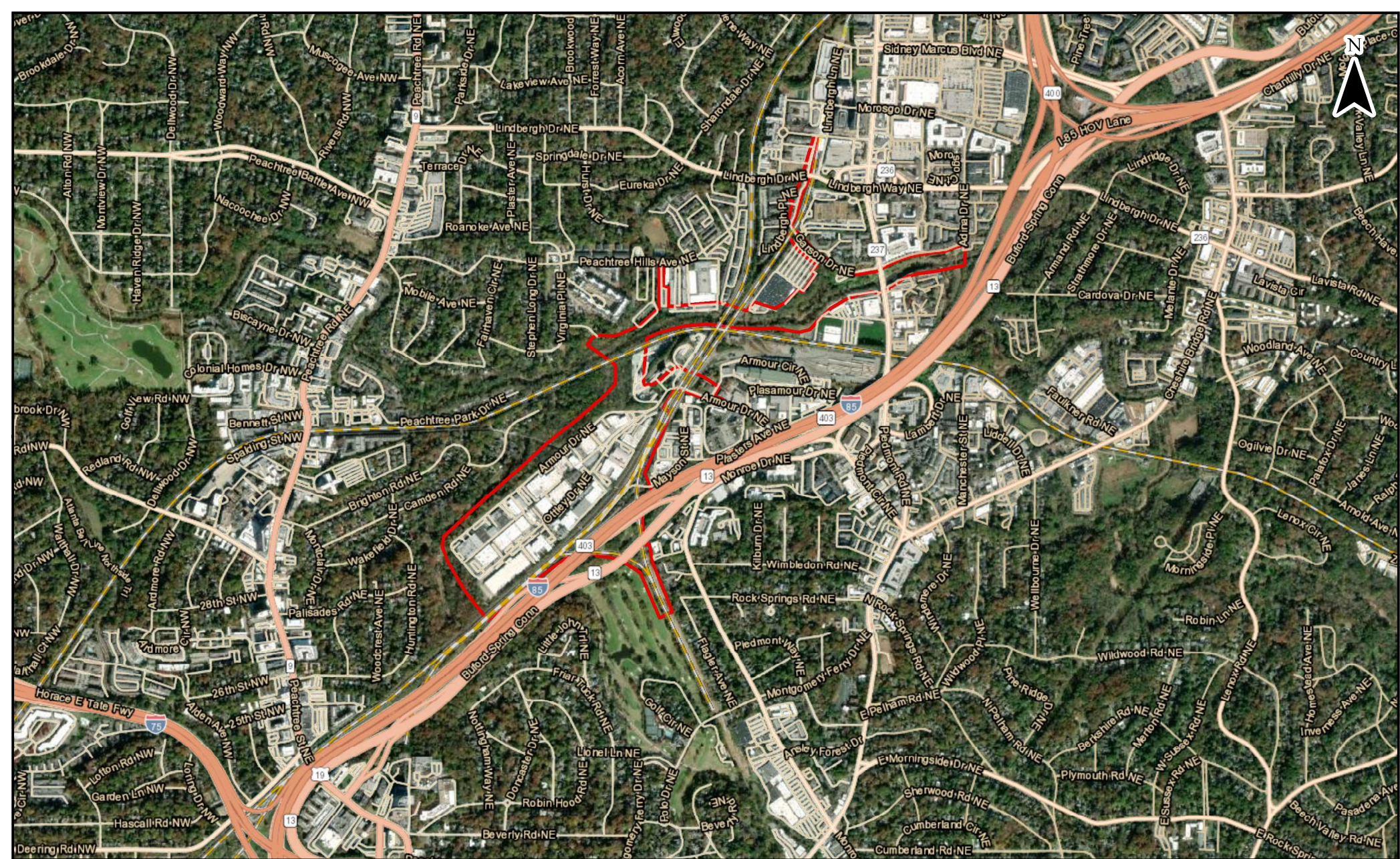



Figure 2. Survey Area Map

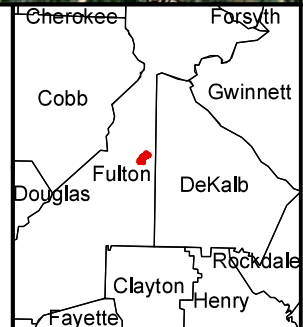
Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 2,300 4,600
Feet

Source: Esri Aerial Imagery

Legend

 Environmental Survey Boundary



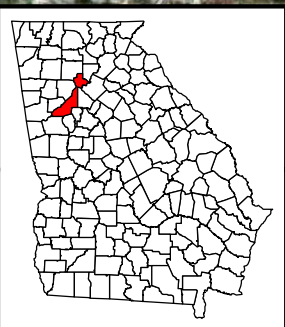
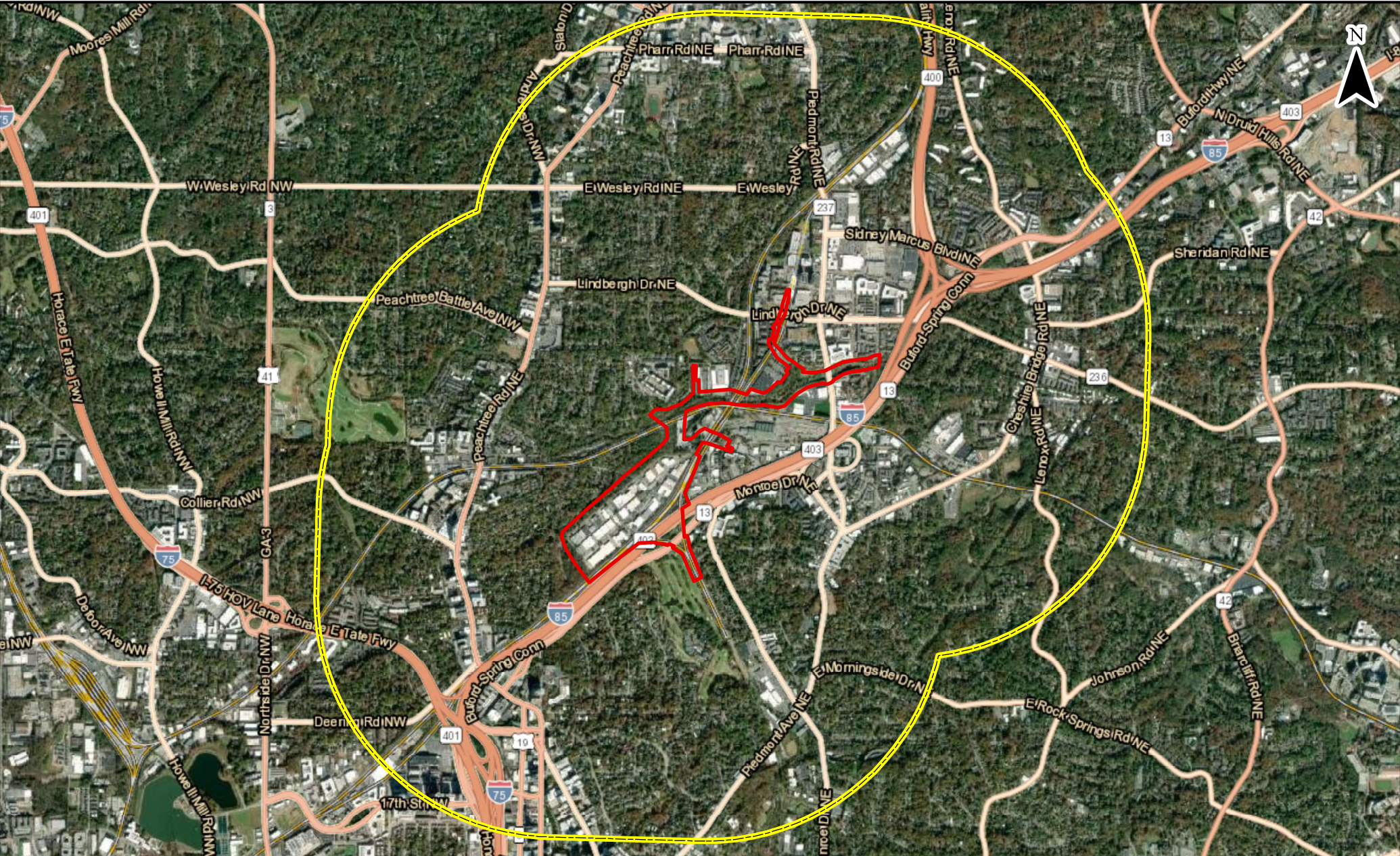




Figure 3. Action Area Map

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 3,800 7,600 Feet

Source: Esri Aerial Imagery

Legend

-  Environmental Survey Boundary
-  Action Area



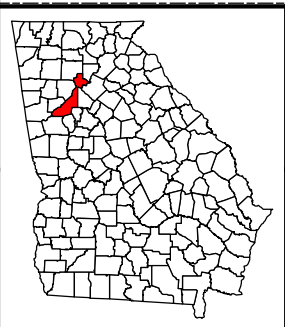
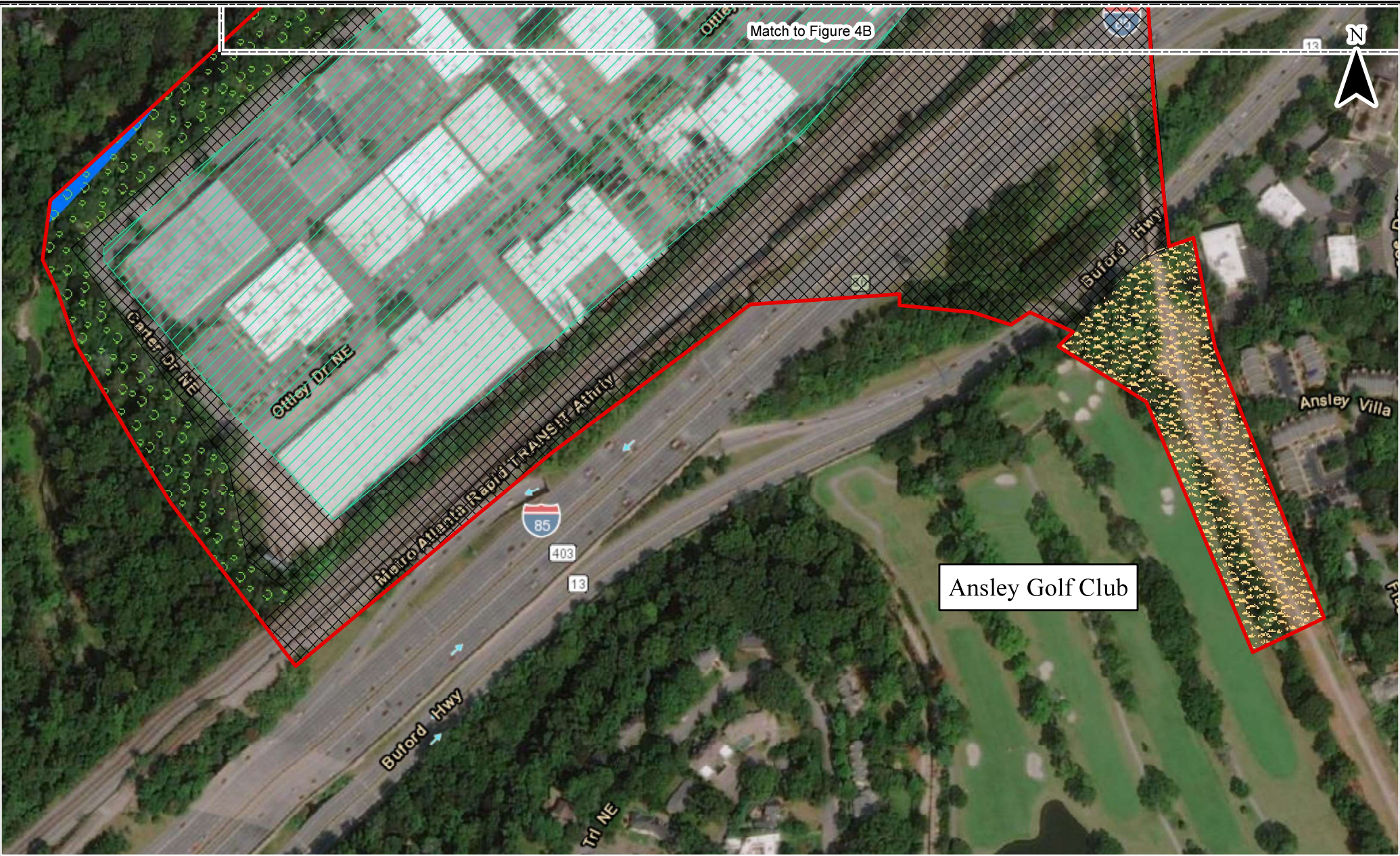
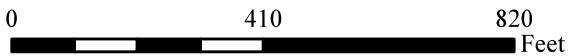


Figure 4A. Habitat Map

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County



Source: Esri Aerial Imagery

Legend

- Environmental Survey Boundary
- Perennial Stream
- Commercial
- Existing ROW
- Mixed Hardwood- Pine Forest
- Parkland
- Riparian Corridor



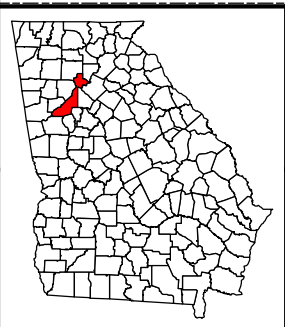
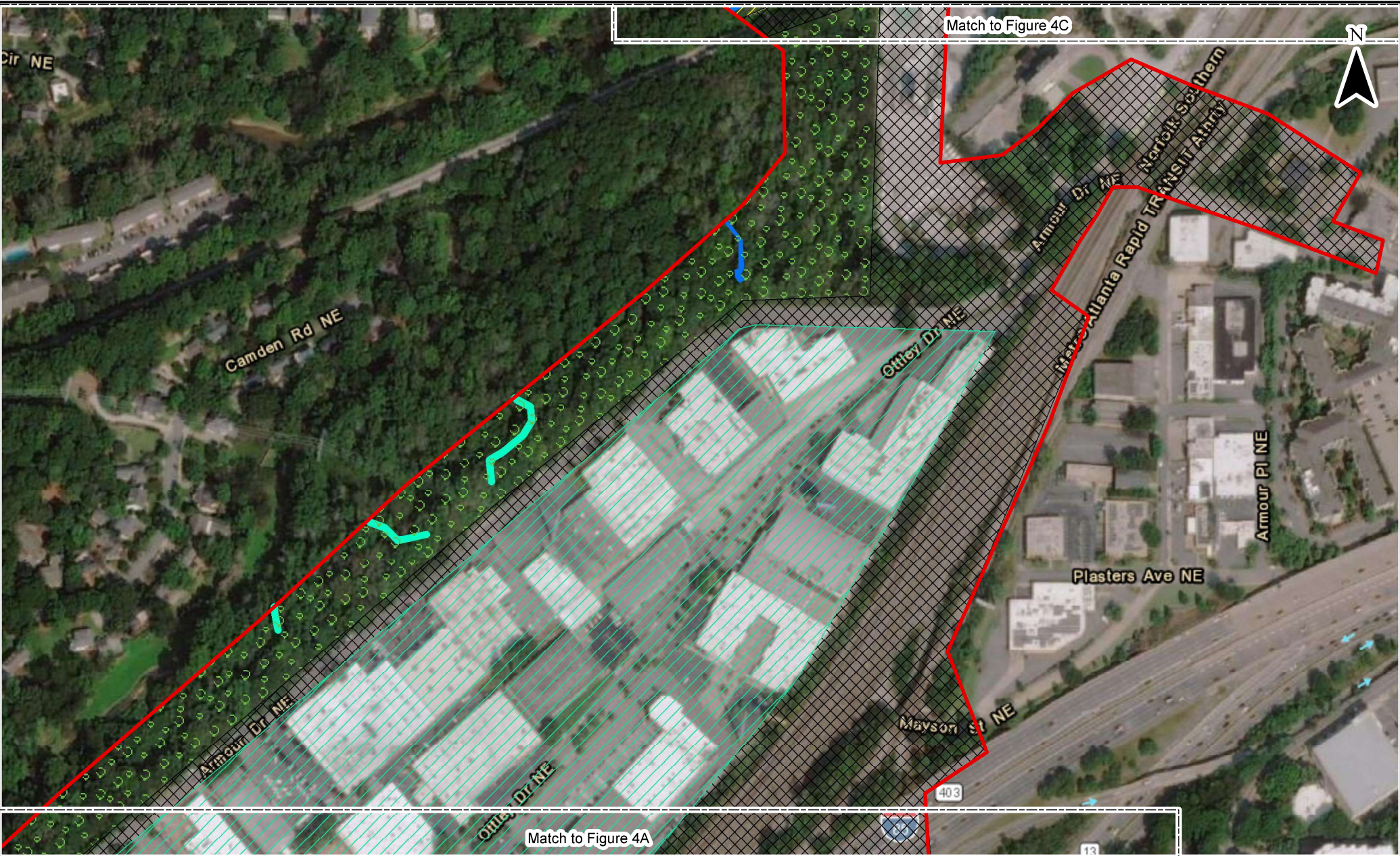


Figure 4B. Habitat Map
 Beltline Corridor from Lindbergh Center to
 10th Street/Monroe Drive
 PI No. 0009395, Fulton County

0 410 820
 Feet

Source: Esri Aerial Imagery

- Legend**
- | | |
|-------------------------------|---------------------|
| Environmental Survey Boundary | Perennial Stream |
| Commercial | Intermittent Stream |
| Existing ROW | |
| Mixed Hardwood- Pine Forest | |
| Parkland | |
| Riparian Corridor | |



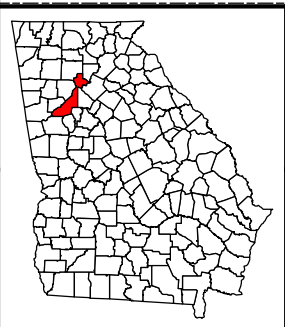
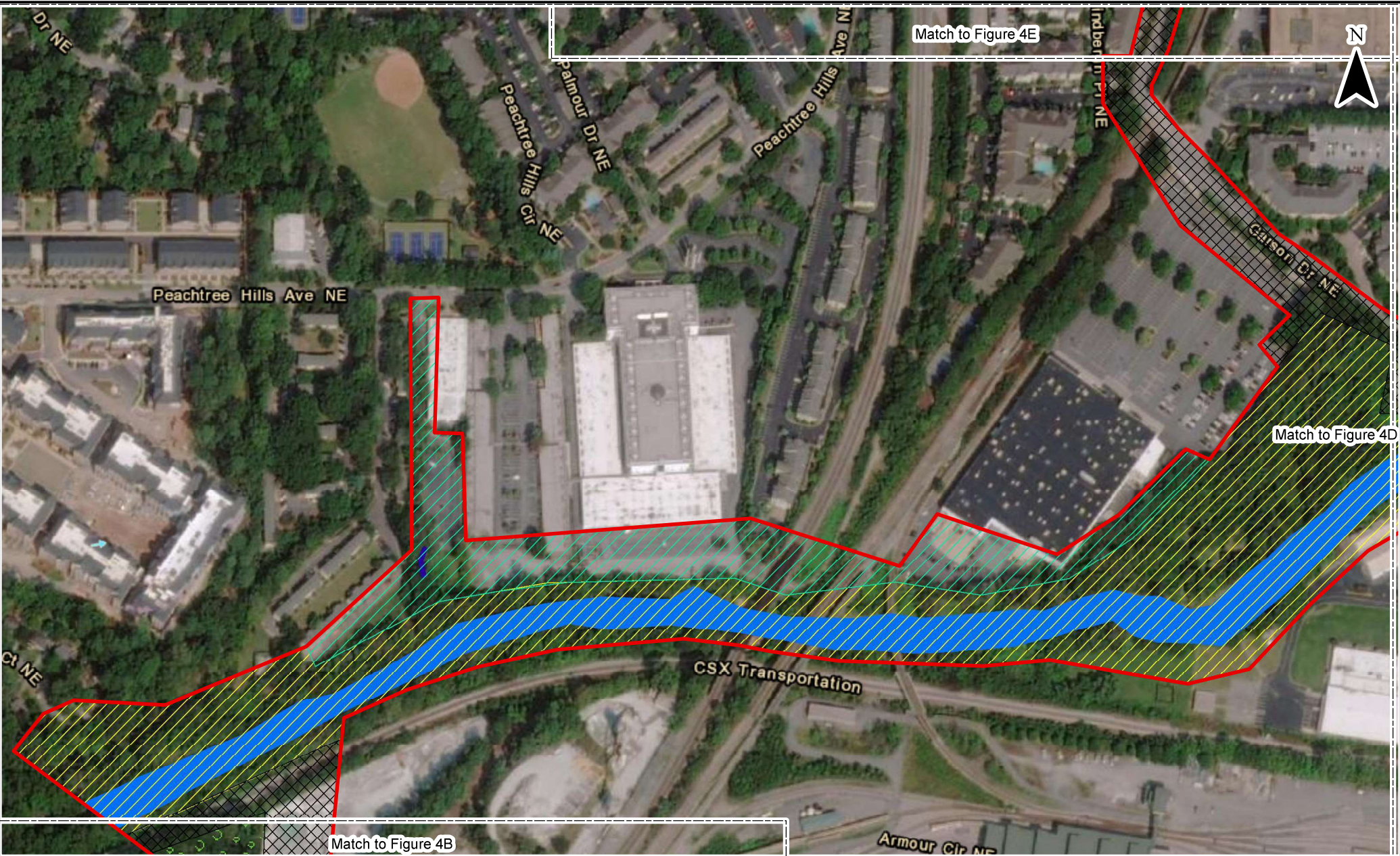


Figure 4C. Habitat Map
 Beltline Corridor from Lindbergh Center to
 10th Street/Monroe Drive
 PI No. 0009395, Fulton County

0 410 820 Feet

Source: Esri Aerial Imagery

- Legend**
- Environmental Survey Boundary
 - Commercial
 - Existing ROW
 - Mixed Hardwood- Pine Forest
 - Parkland
 - Riparian Corridor
 - Perennial Stream
 - Non Buffered State Water



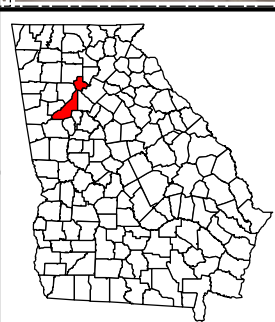
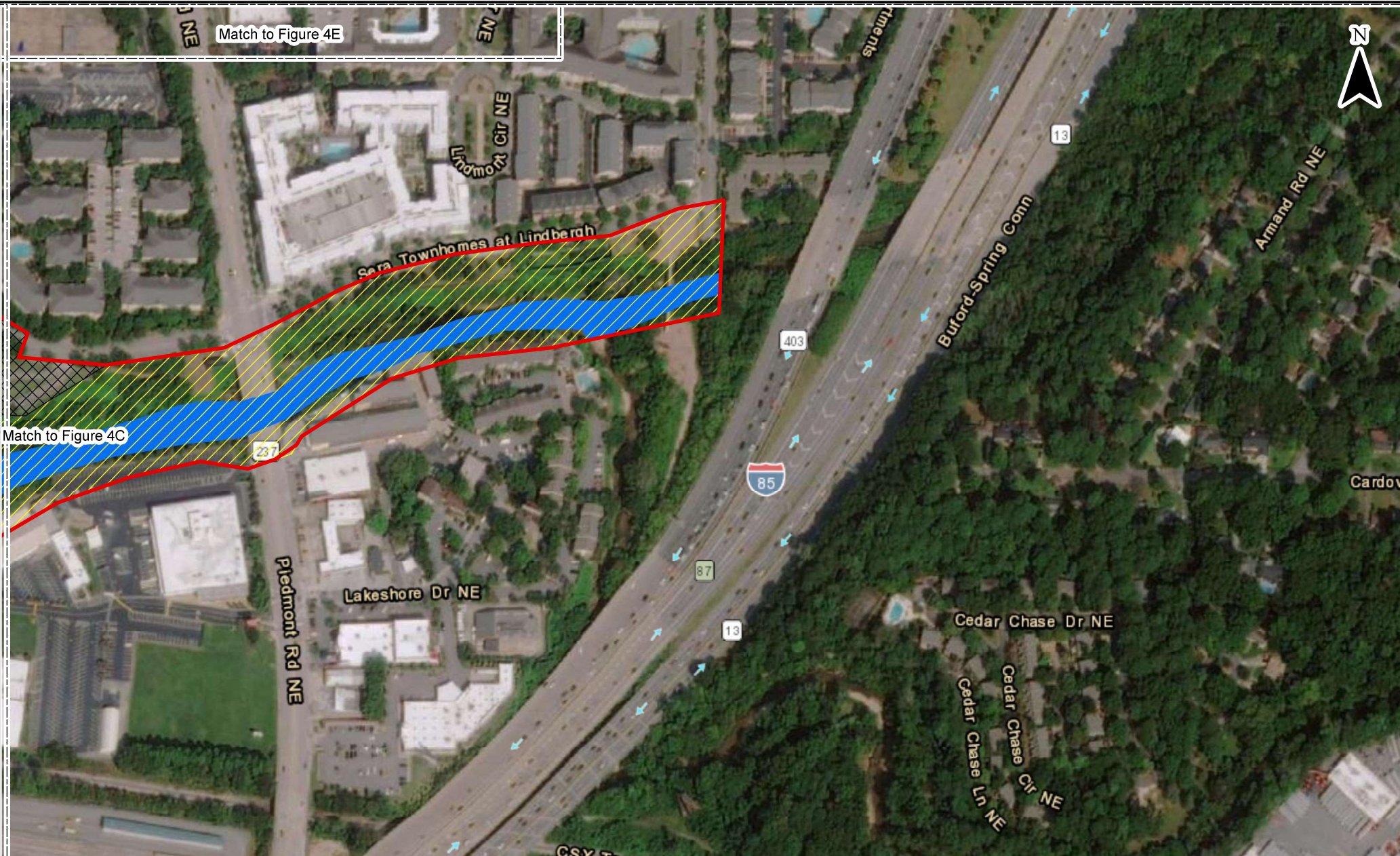


Figure 4D. Habitat Map

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 410 820
Feet

Source: Esri Aerial Imagery

Legend

- | | | | |
|--|-------------------------------|--|------------------|
| | Environmental Survey Boundary | | Perennial Stream |
| | Commercial | | |
| | Existing ROW | | |
| | Mixed Hardwood- Pine Forest | | |
| | Parkland | | |
| | Riparian Corridor | | |



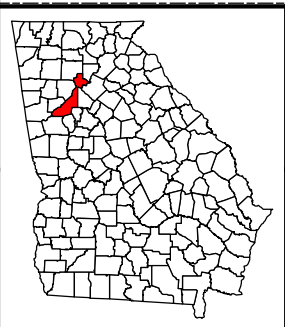
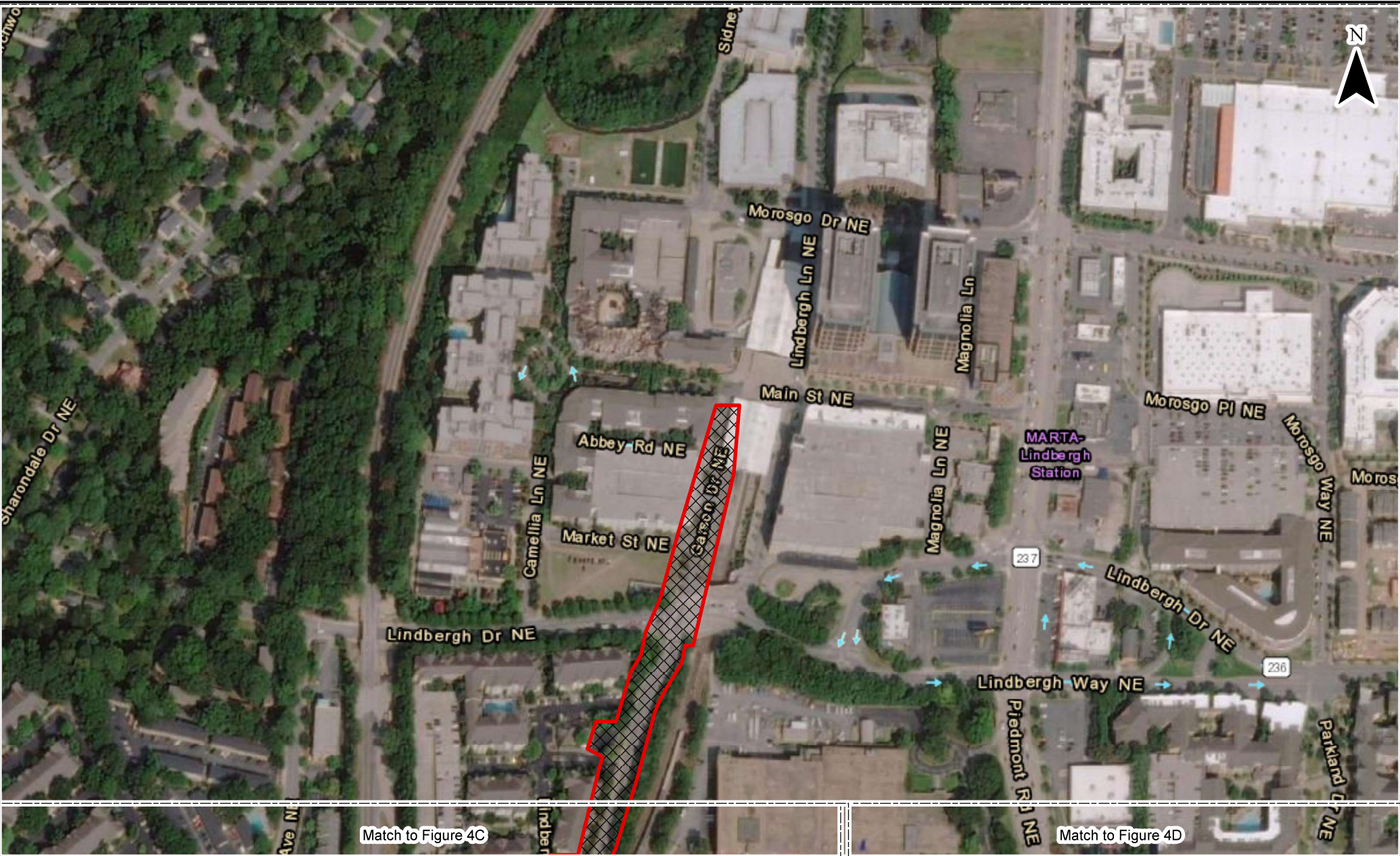


Figure 4E. Habitat Map
Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 410 820 Feet

Source: Esri Aerial Imagery

Legend

- Environmental Survey Boundary
- Commercial
- Existing ROW
- Mixed Hardwood- Pine Forest
- Parkland
- Riparian Corridor



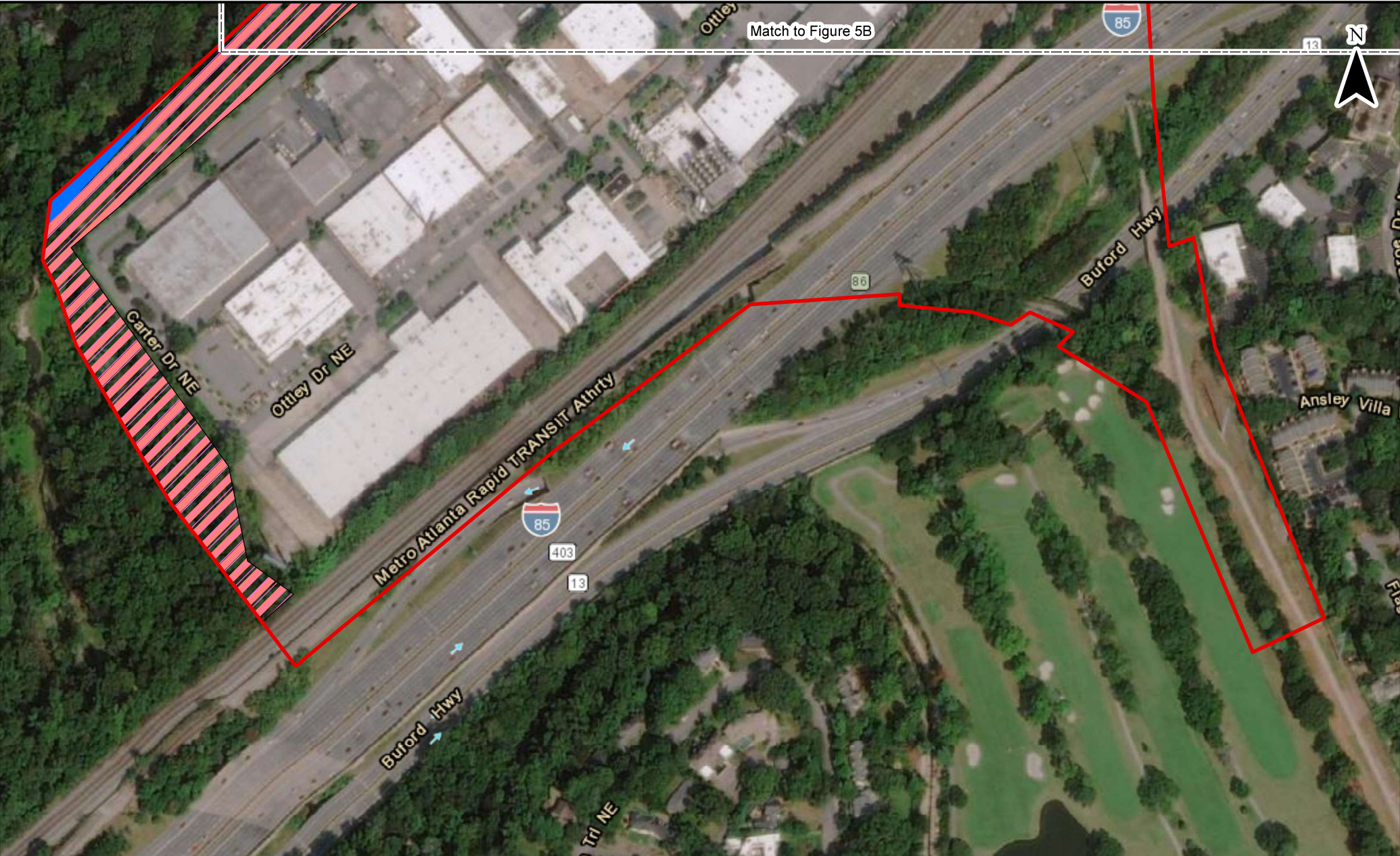
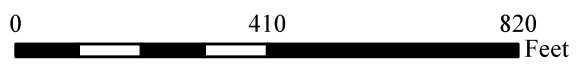


Figure 5A. Protected Species Habitat Map

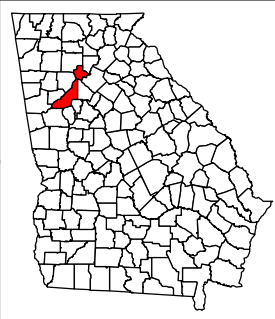
Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County



Source: Esri Aerial Imagery

Legend

- Environmental Survey Boundary
- Bluestripe shiner and Chattahoochee crayfish habitat
- Bay star-vine Habitat



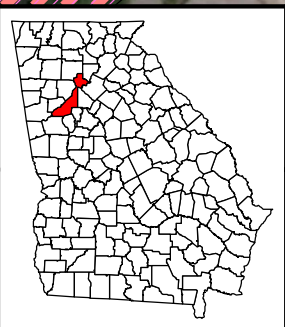
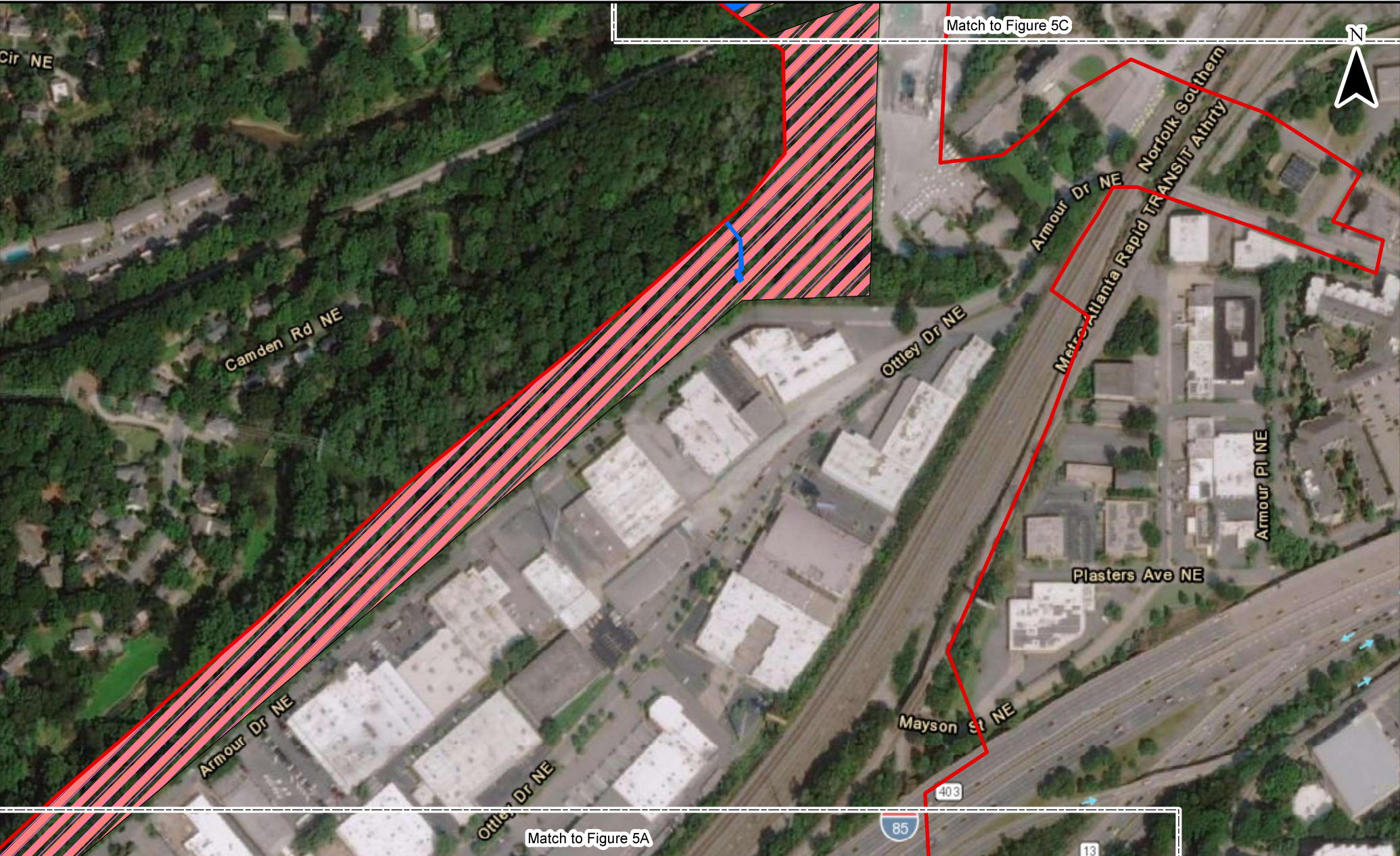
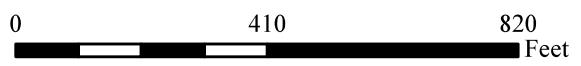


Figure 5B. Protected Species Habitat Map

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County



Source: Esri Aerial Imagery

Legend

- Environmental Survey Boundary
- Bluestripe shiner and Chattahoochee crayfish habitat
- Bay star-vine Habitat



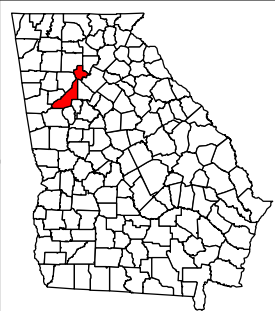
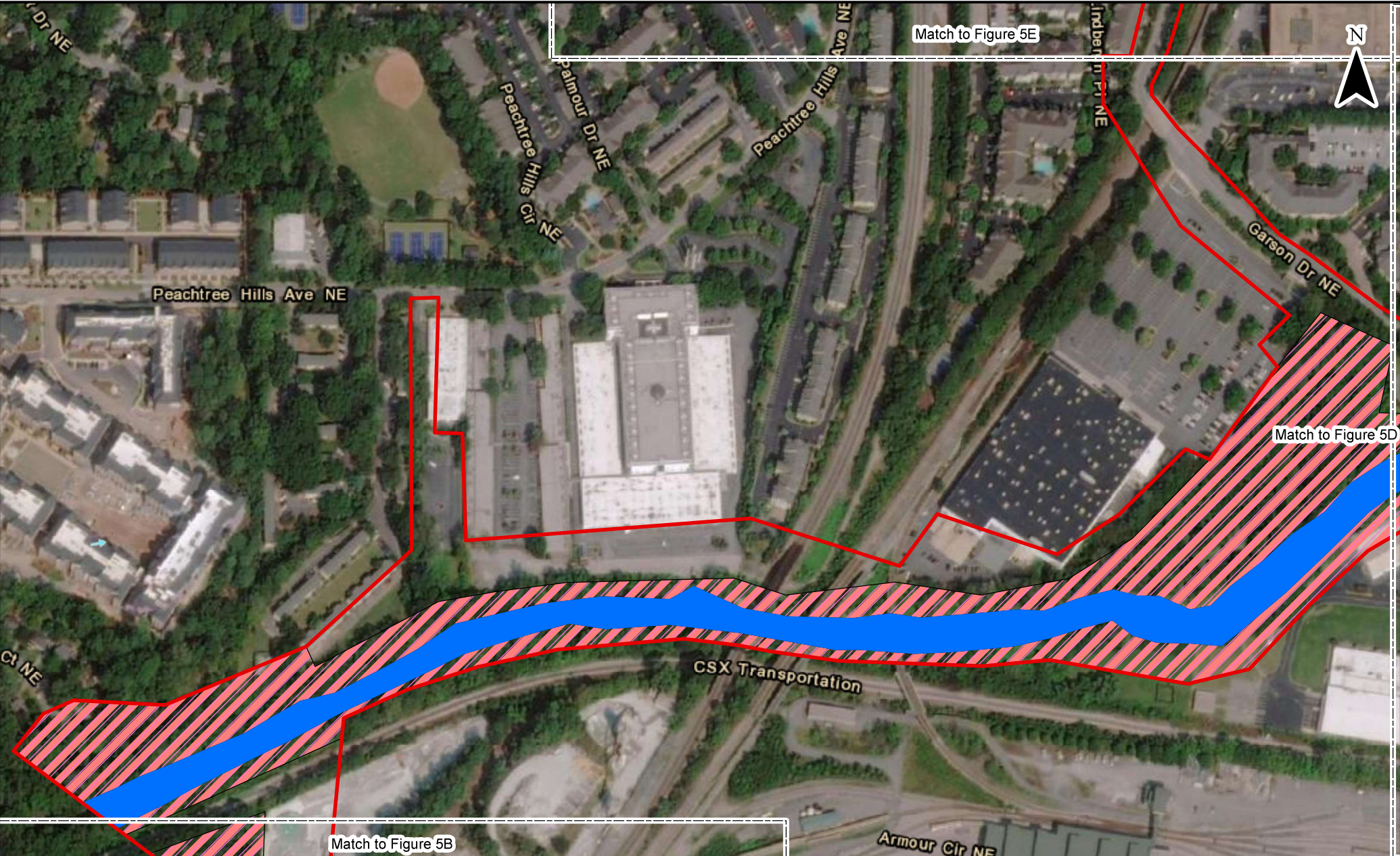
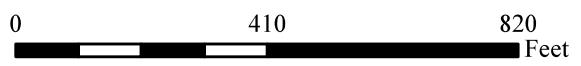


Figure 5C. Protected Species Habitat Map

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County



Source: Esri Aerial Imagery

Legend

- Environmental Survey Boundary
- Blueshripe shiner and Chattahoochee crayfish habitat
- Bay star-vine Habitat



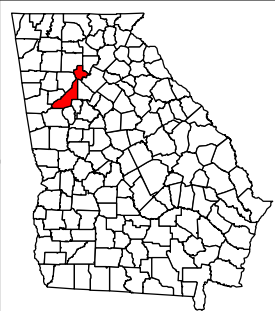
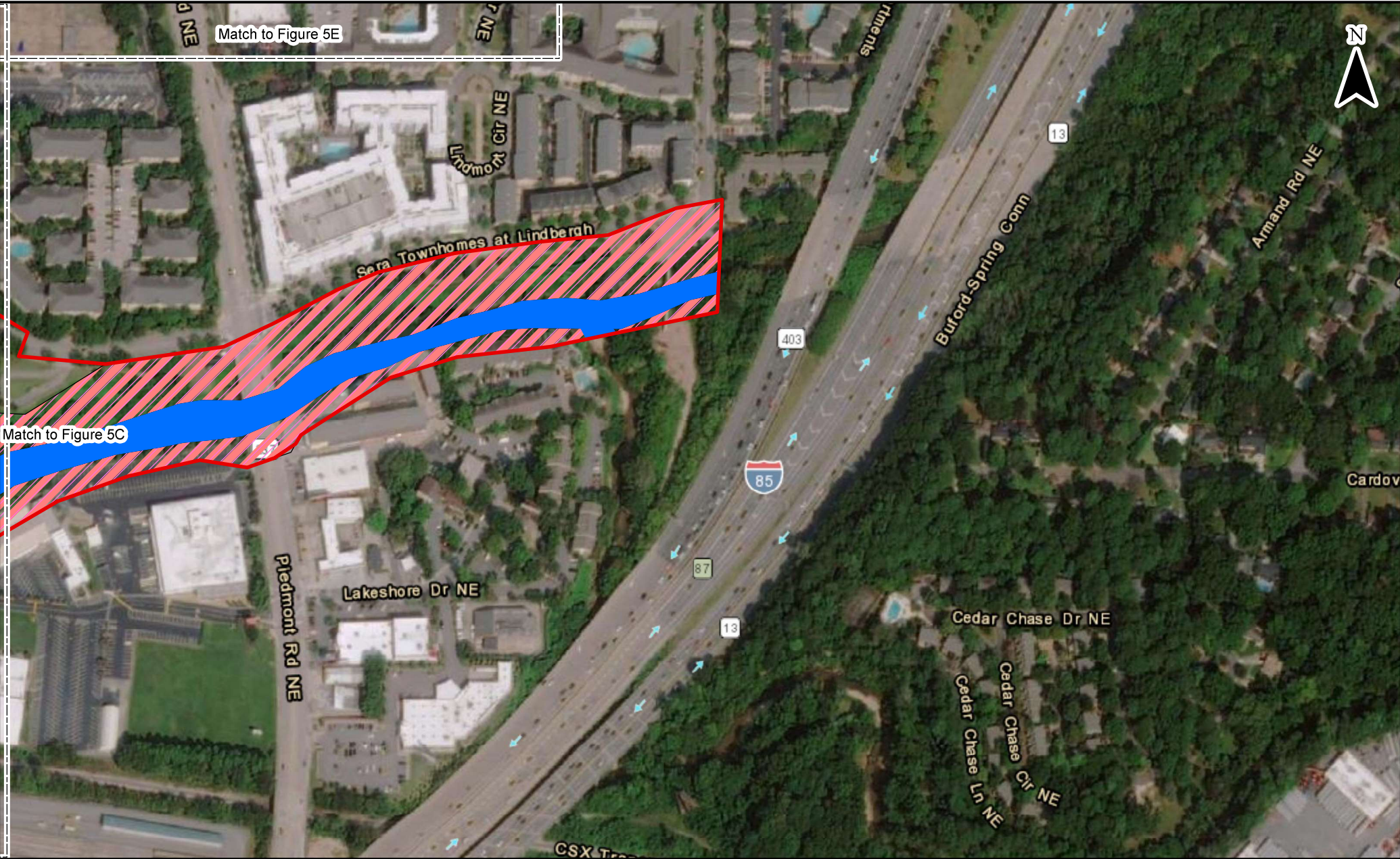
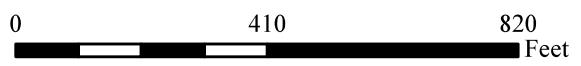


Figure 5D. Protected Species Habitat Map

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County



Source: Esri Aerial Imagery

Legend

- Environmental Survey Boundary
- Bluestripe shiner and Chattahoochee crayfish habitat
- Bay star-vine Habitat



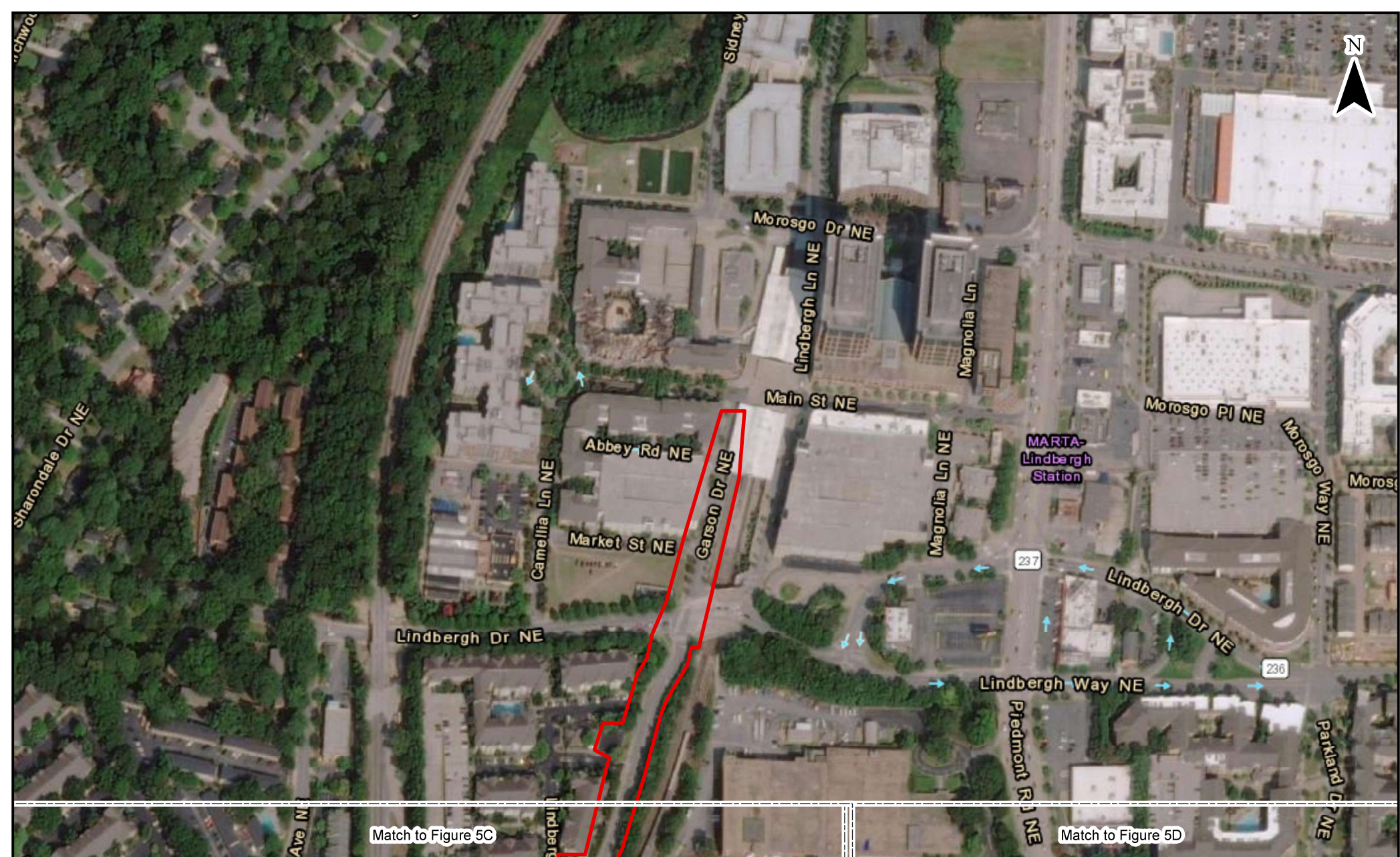



Figure 5E. Protected Species Habitat Map

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 410 820
Feet

Source: Esri Aerial Imagery

Legend

 Environmental Survey Boundary



Match to Figure 6B

N

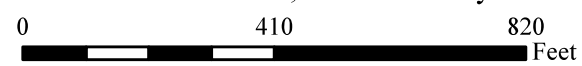


PS 1 (Clear Creek)

GOLF



Figure 6A. State and Federal Waters Map (Topographic)

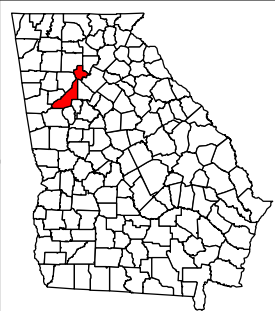
Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

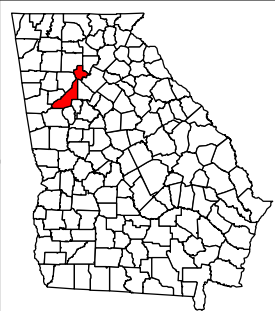
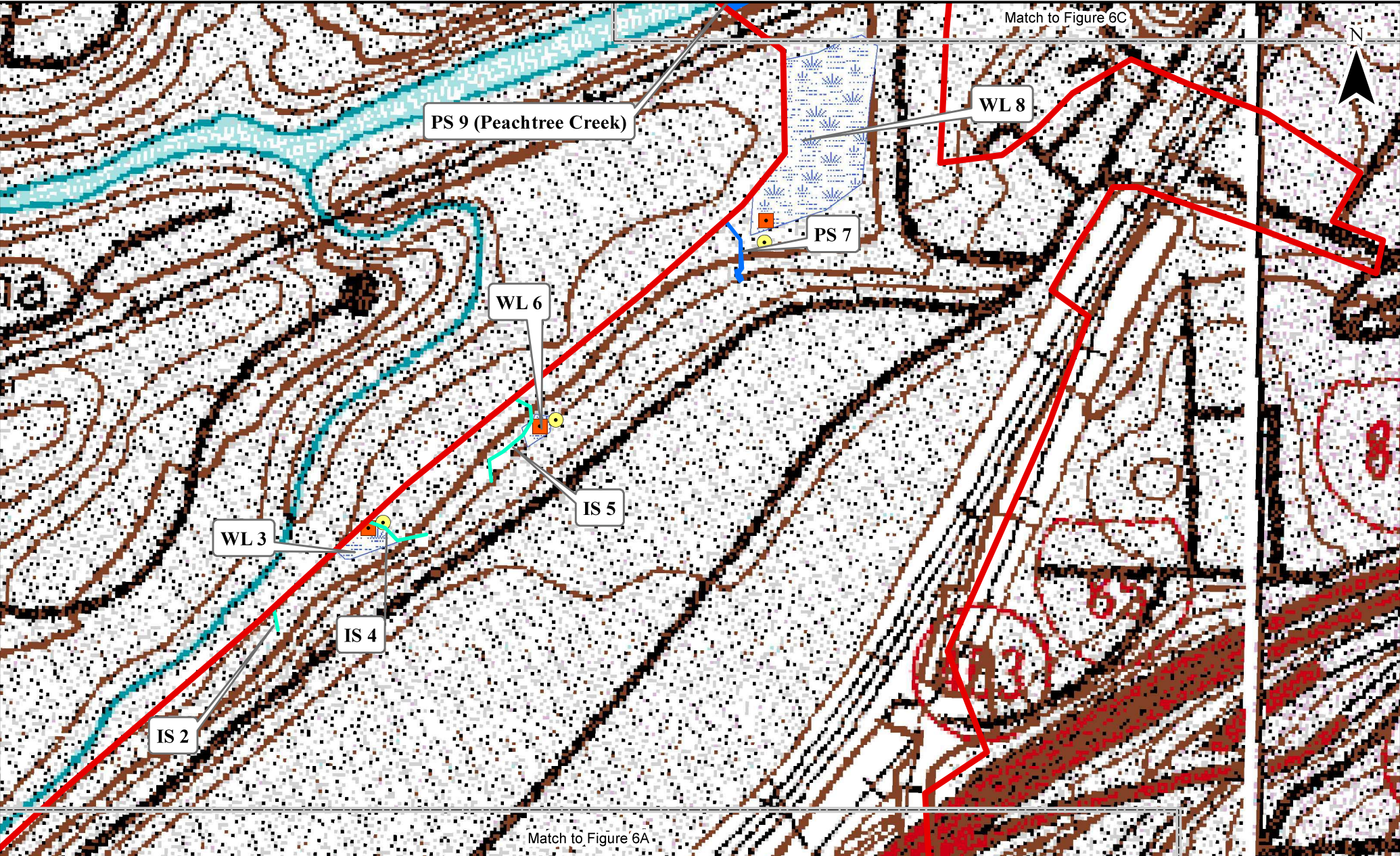


Source: Northwest and Northeast Atlanta 7.5' Quad USGS Topographic Maps

Legend

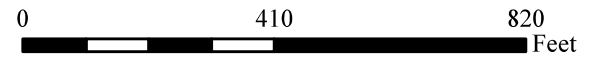
-  Environmental Survey Boundary
-  Perennial Stream





**Figure 6B. State and Federal Waters Map
(Topographic)**

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County



Source: Northwest and Northeast Atlanta 7.5' Quad USGS Topographic Maps

Legend

- Environmental Survey Boundary
- Perennial Stream
- Intermittent Stream
- Upland DP
- Wetland DP
- Wetland



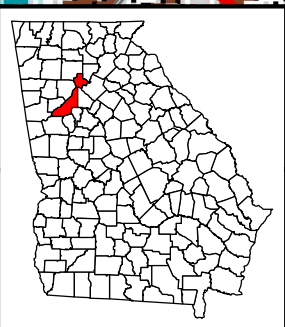
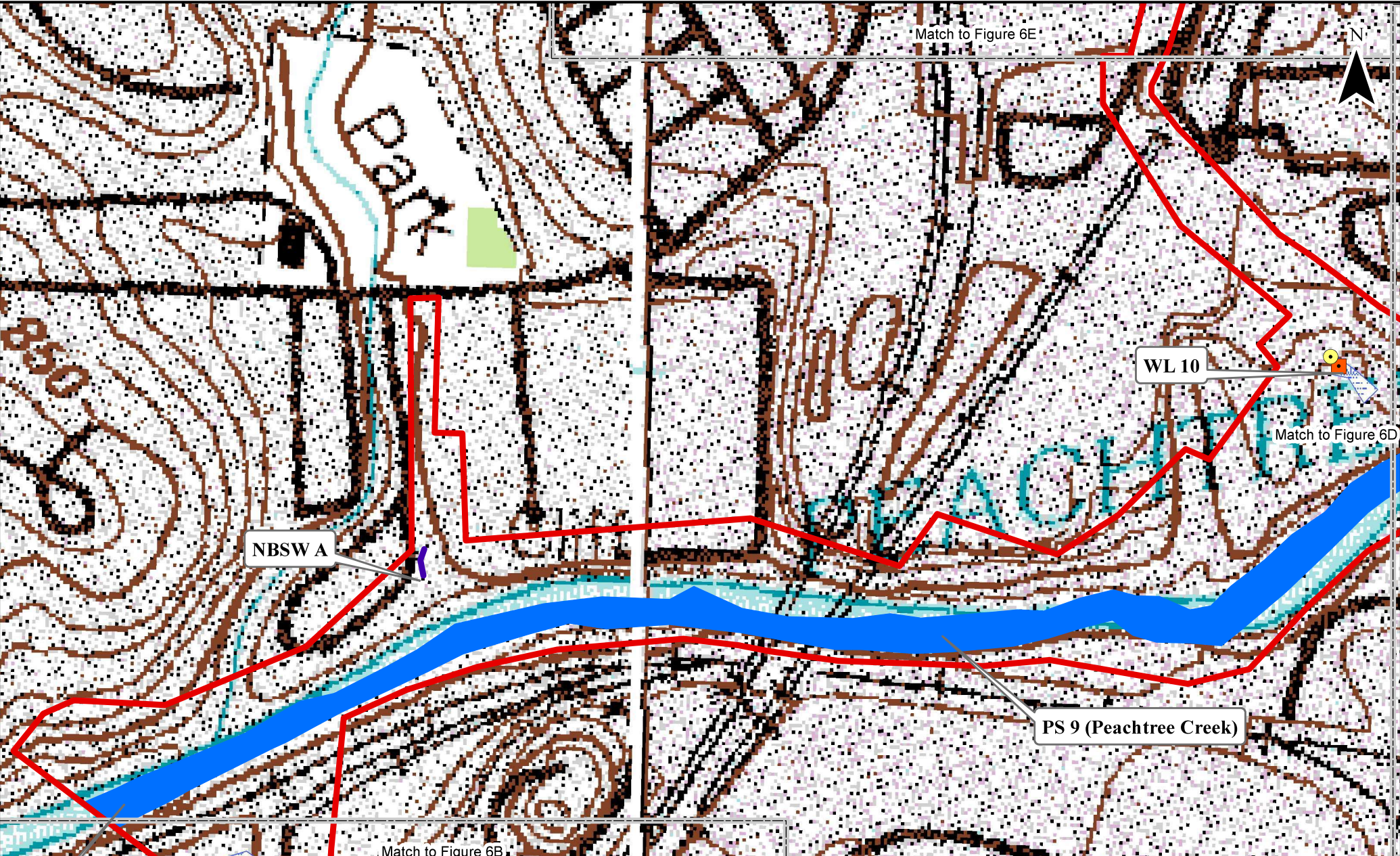
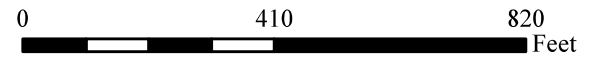


Figure 6C. State and Federal Waters Map (Topographic)

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

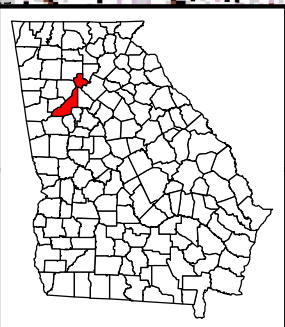
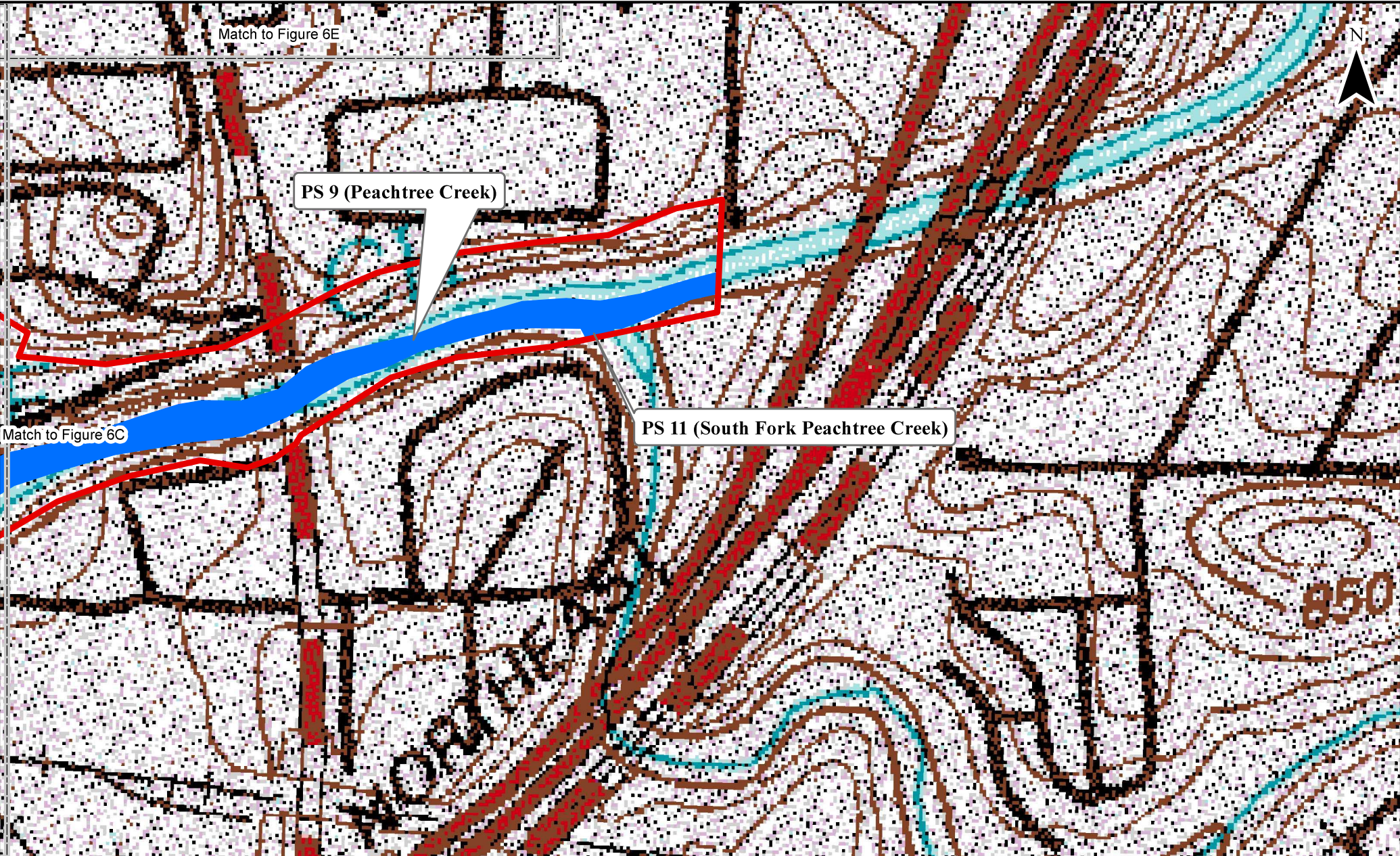


Source: Northwest and Northeast Atlanta 7.5' Quad USGS Topographic Maps

Legend

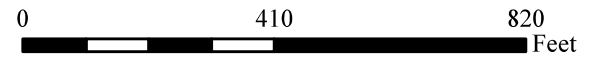
- Environmental Survey Boundary
- Perennial Stream
- Non Buffered State Water
- Upland DP
- Wetland DP
- Wetland







**Figure 6D. State and Federal Waters Map
(Topographic)**

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

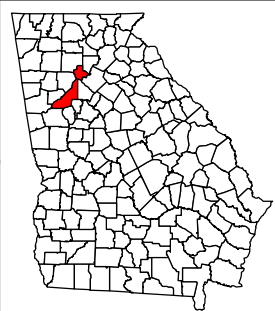


Source: Northwest and Northeast Atlanta 7.5' Quad USGS Topographic Maps

Legend

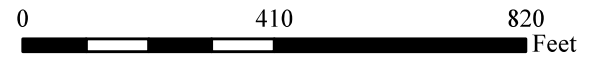
-  Environmental Survey Boundary
-  Perennial Stream






**Figure 6E. State and Federal Waters Map
(Topographic)**

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County



Source: Northwest and Northeast Atlanta 7.5' Quad USGS Topographic Maps

Legend

 Environmental Survey Boundary



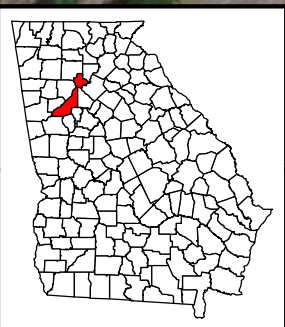
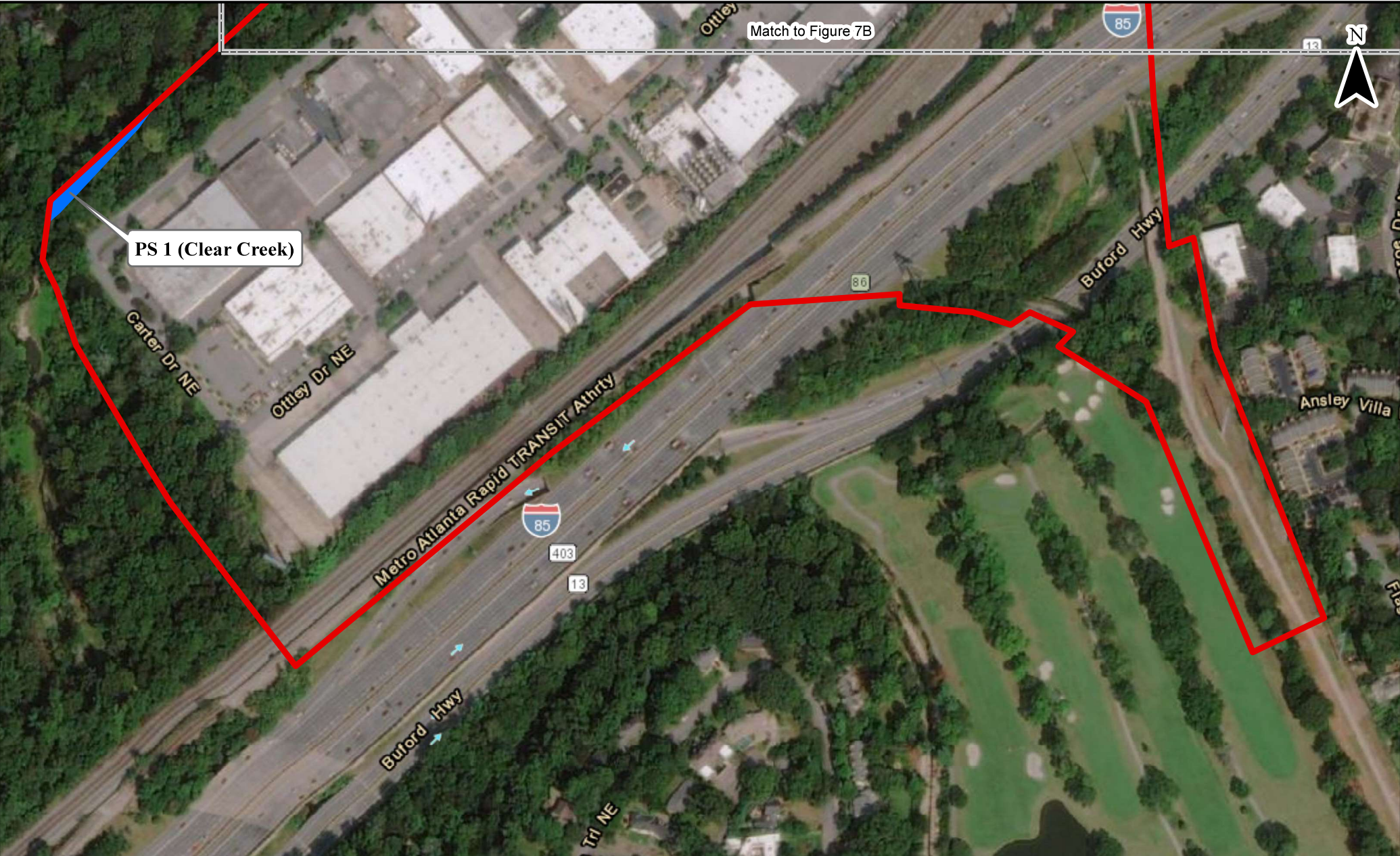




Figure 7A. State and Federal Waters Map (Aerial)

Beltline Corridor from Lindbergh Center to 10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 410 820 Feet

Source: Esri Aerial Imagery

Legend

-  Environmental Survey Boundary
-  Perennial Stream



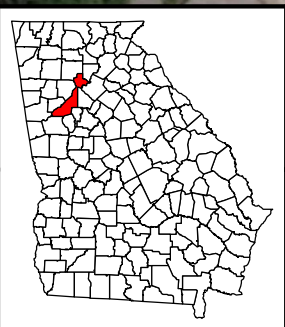
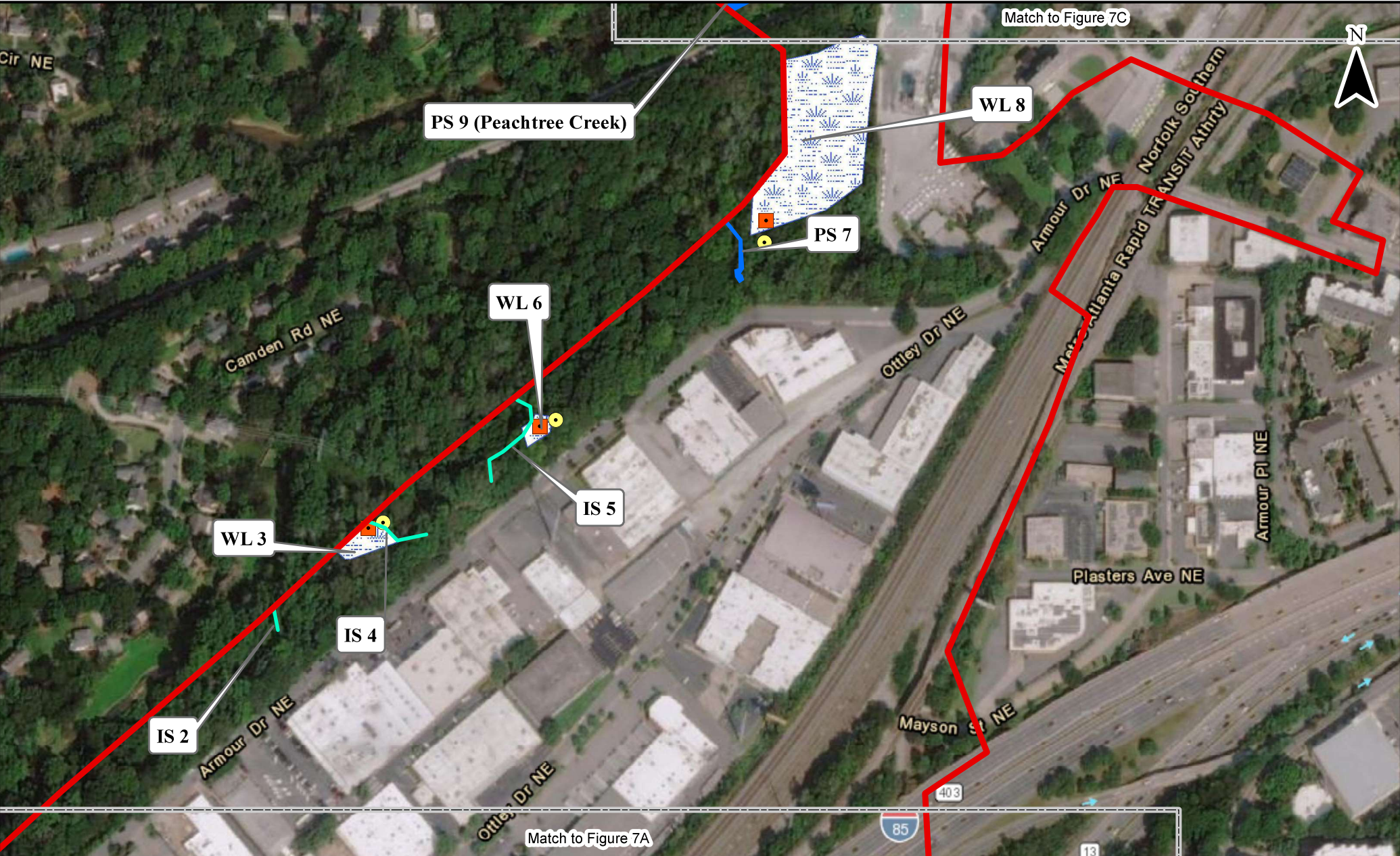
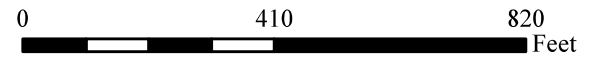


Figure 7B. State and Federal Waters Map (Aerial)

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

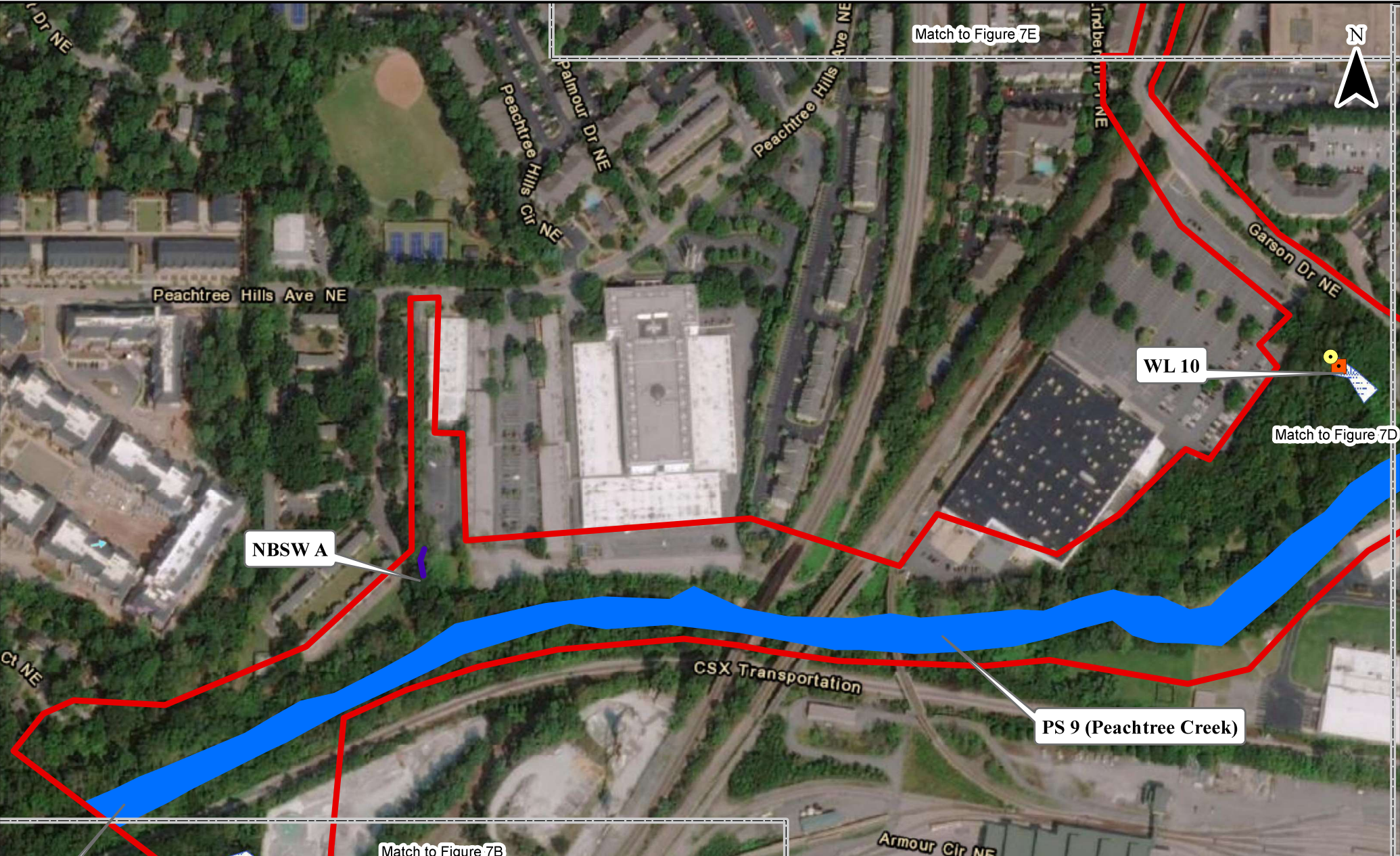


Source: Esri Aerial Imagery

Legend

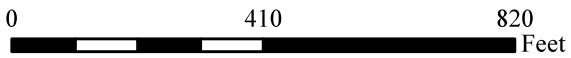
- Environmental Survey Boundary
- Perennial Stream
- Intermittent Stream
- Upland DP
- Wetland DP
- Wetland





**Figure 7C. State and Federal Waters Map
(Aerial)**

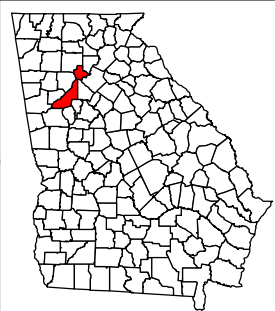
Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County



Source: Esri Aerial Imagery

Legend

- Environmental Survey Boundary
- Perennial Stream
- Non Buffered State Water
- Upland DP
- Wetland DP
- Wetland



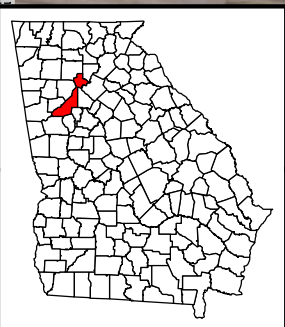
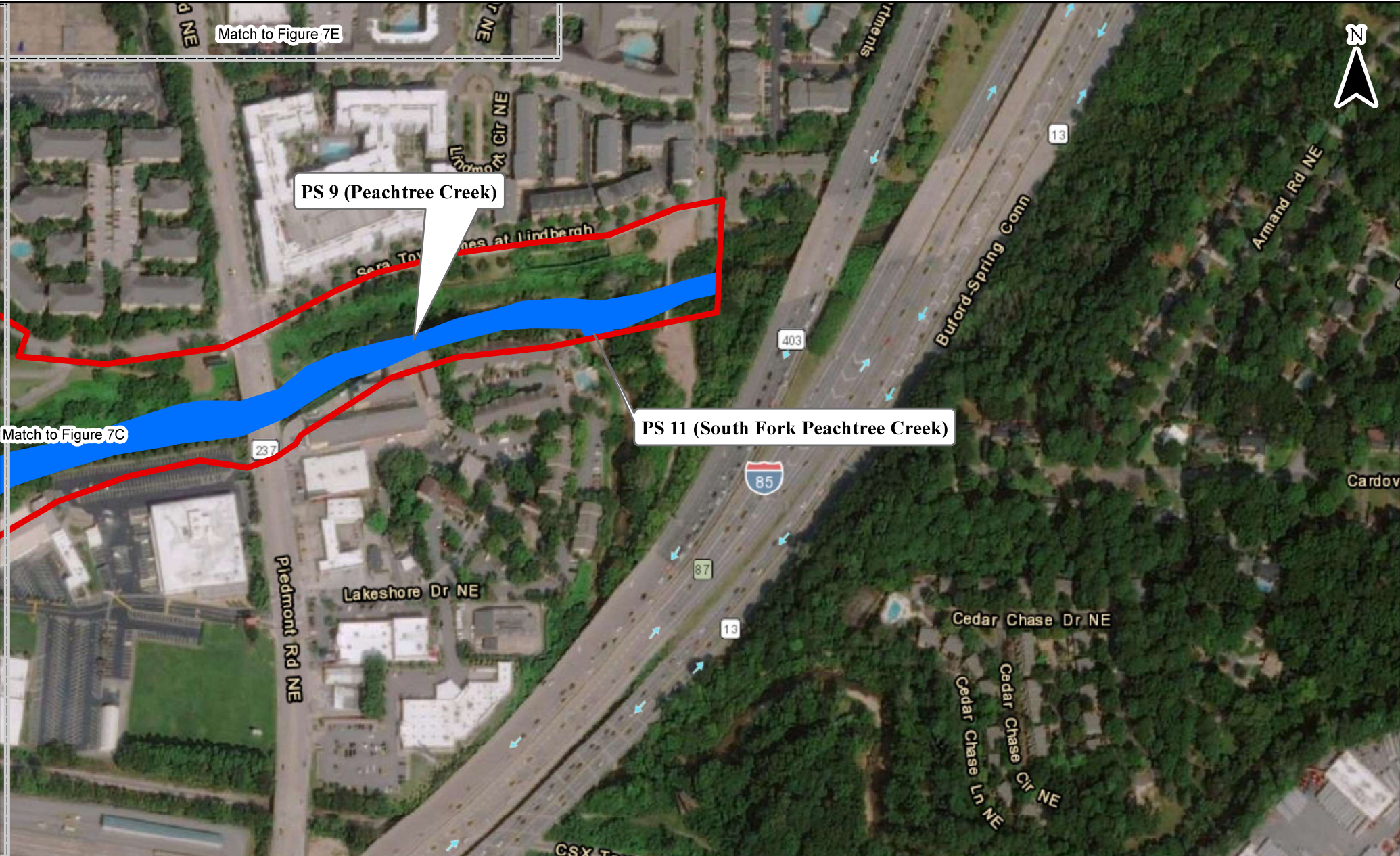
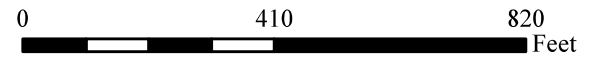


Figure 7D. State and Federal Waters Map (Aerial)

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

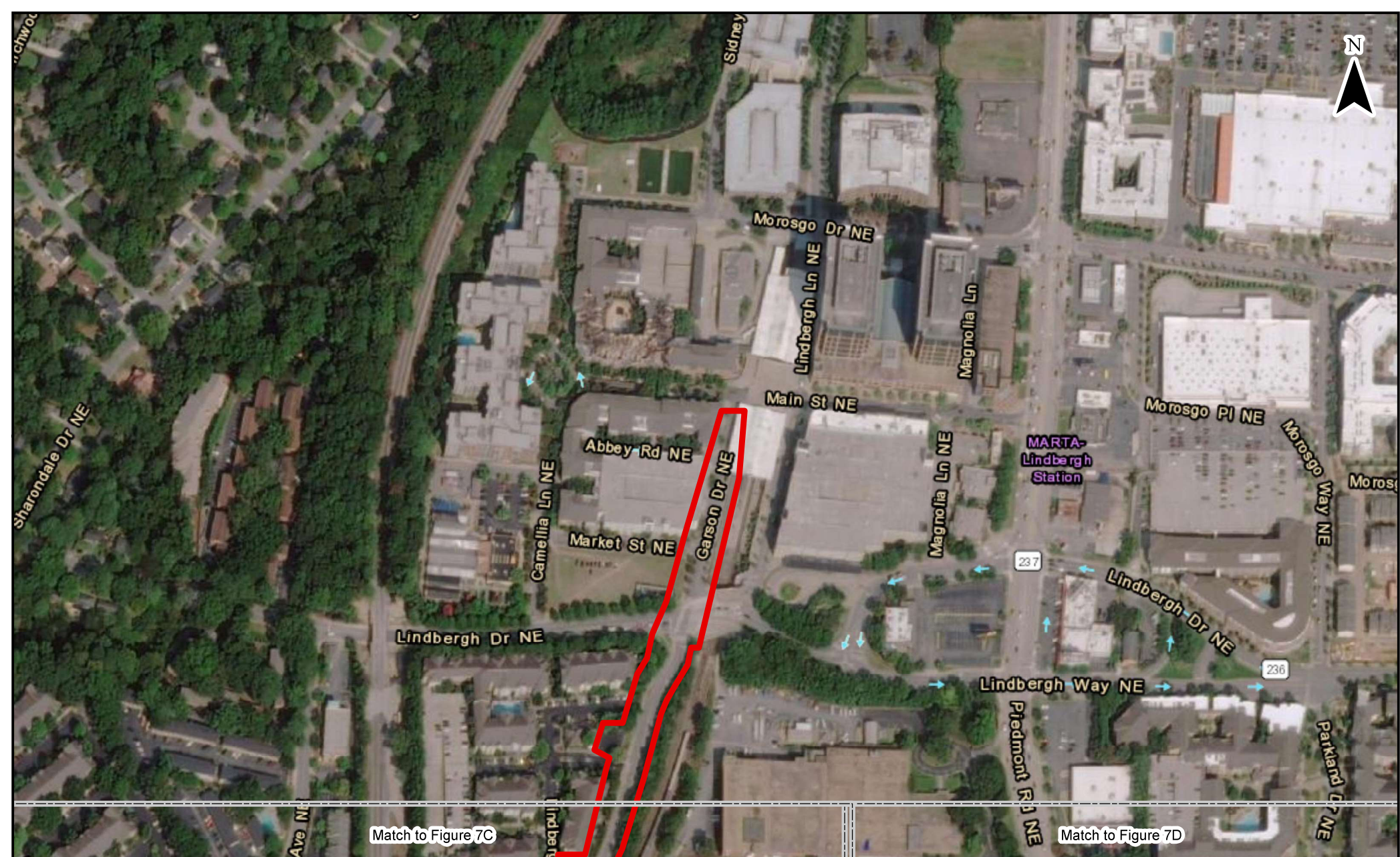


Source: Esri Aerial Imagery

Legend

- Environmental Survey Boundary
- Perennial Stream





**Figure 7E. State and Federal Waters Map
(Aerial)**

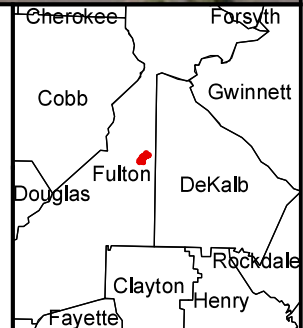
Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 410 820
Feet

Source: Esri Aerial Imagery

Legend

 Environmental Survey Boundary



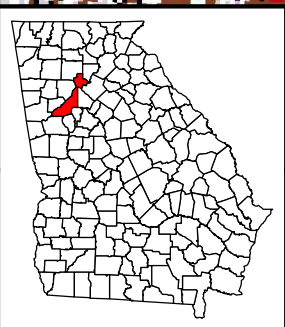
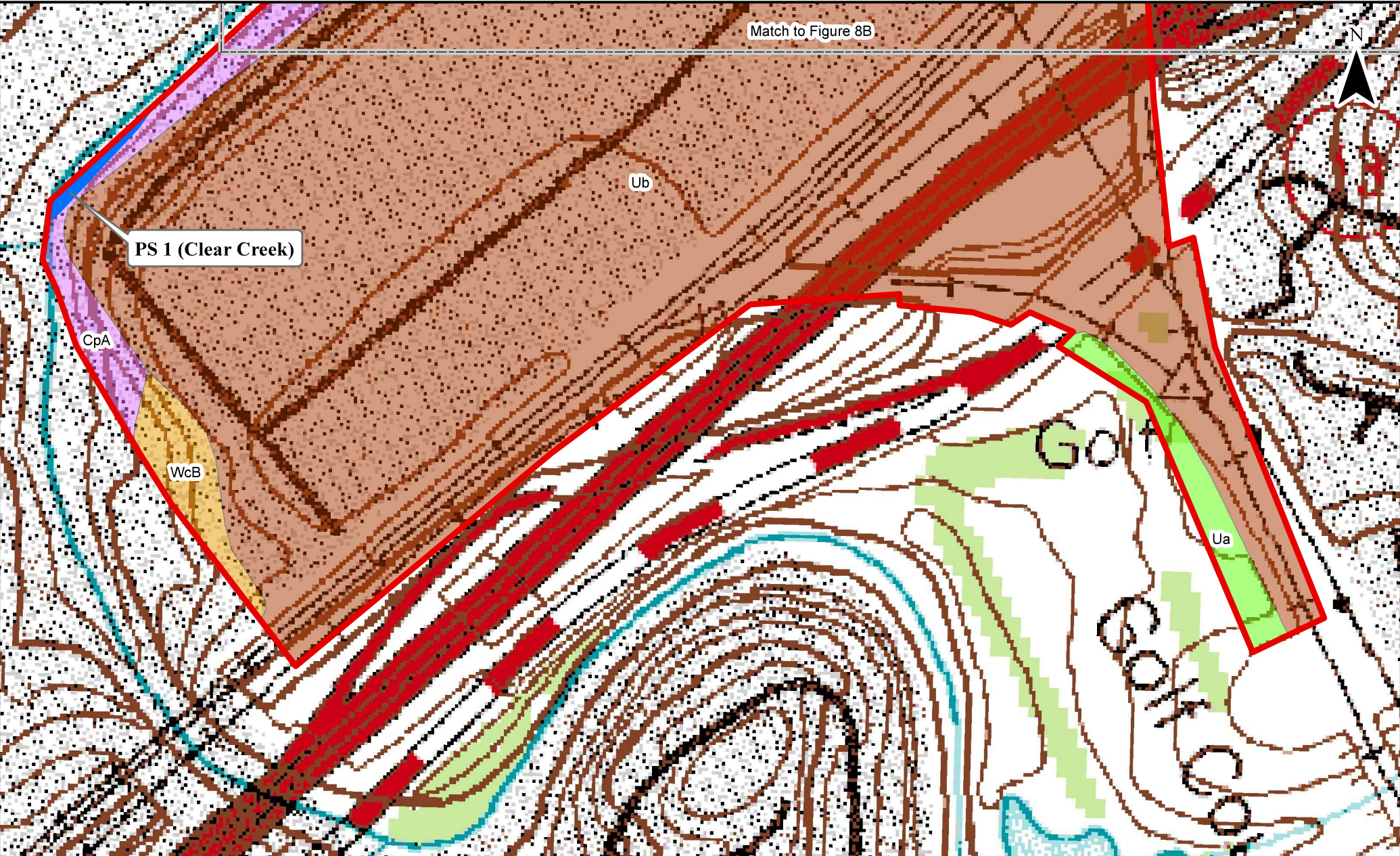


Figure 8A. Soil Map

Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 410 820 Feet

Source: Northwest and Northeast Atlanta 7.5' Quad USGS Topographic Maps with NRCS Soil Overlay

- Legend**
- Environmental Survey Boundary
 - Perennial Stream
- NRCS Soils**
- CpA - Congaree sandy loam, occasionally flooded
 - Ua - Udorthents
 - Ub - Urban land
 - WcB - Wickam sandy loam



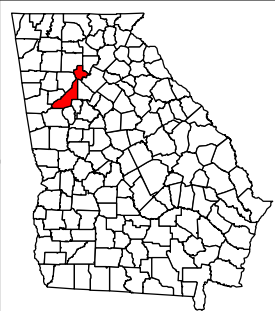
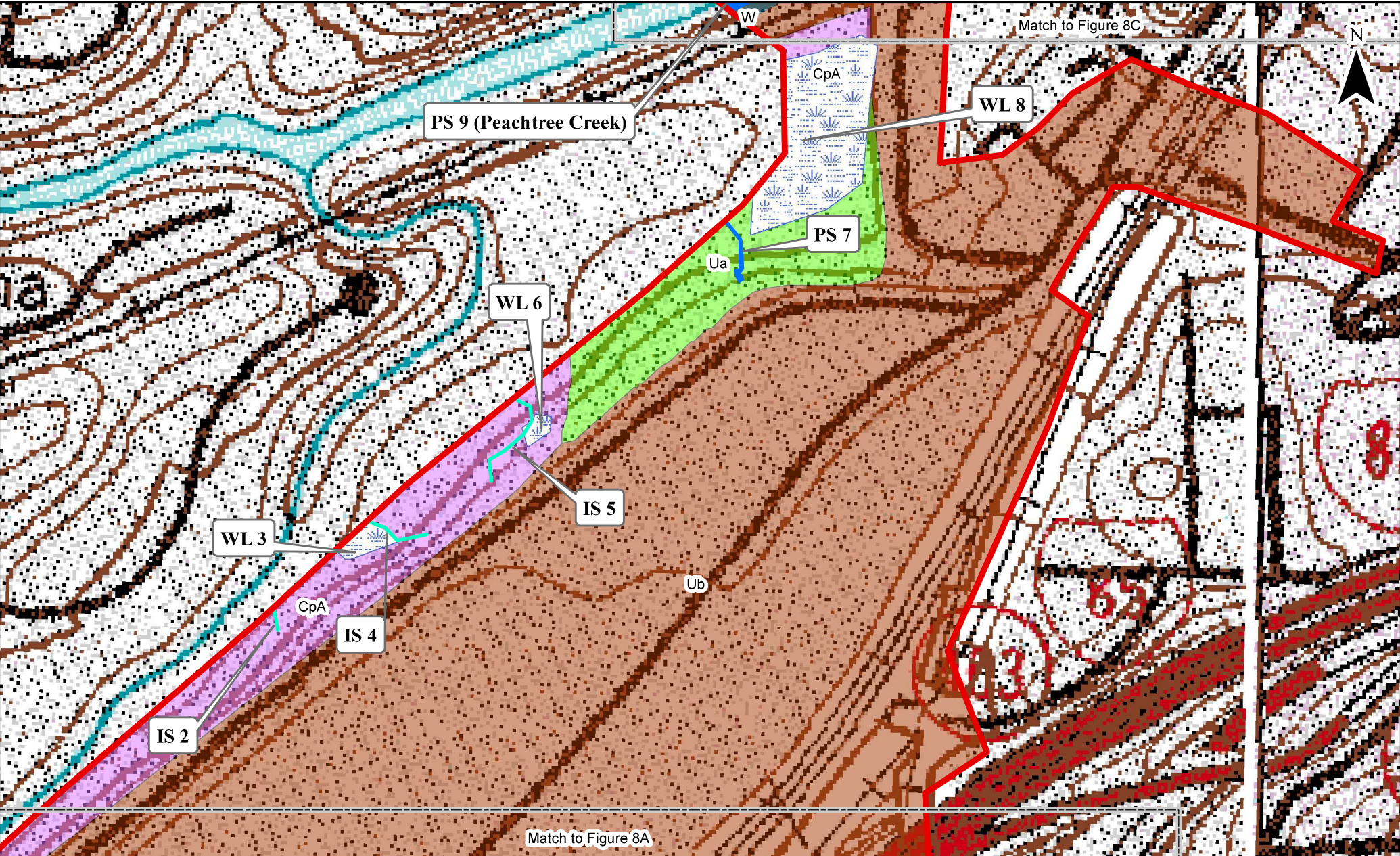


Figure 8B. Soil Map
Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 410 820 Feet

Source: Northwest and Northeast Atlanta 7.5' Quad USGS Topographic Maps with NRCS Soil Overlay

Legend

- Environmental Survey Boundary
- Perennial Stream
- Intermittent Stream
- Wetland

NRCS Soils

- CpA - Congaree sandy loam, occasionally flooded
- Ua - Udorthents
- Ub - Urban land
- W - Water



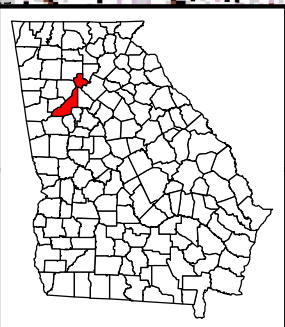
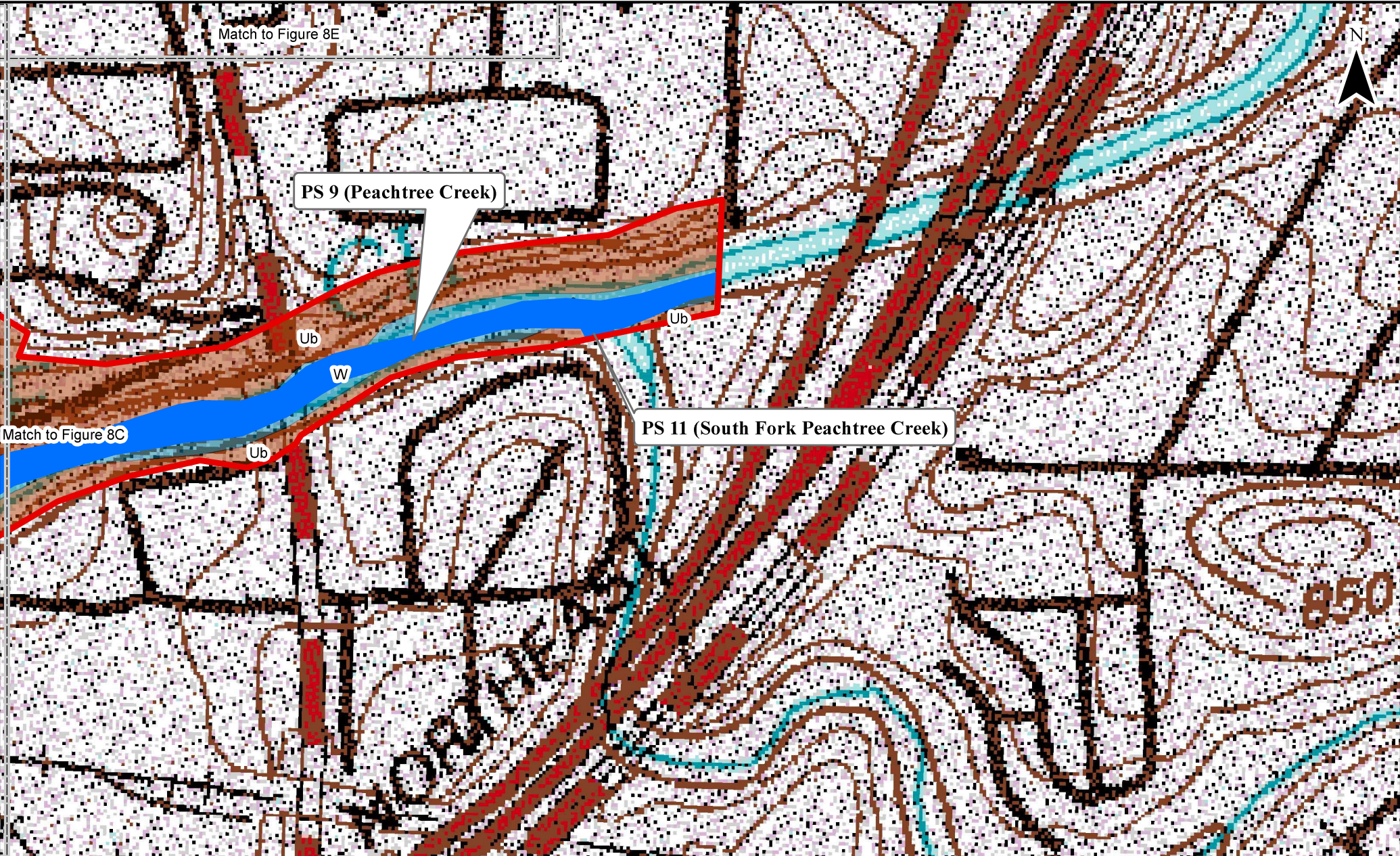




Figure 8D. Soil Map
Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County

0 410 820 Feet


Source: Northwest and Northeast Atlanta 7.5' Quad USGS Topographic Maps with NRCS Soil Overlay


Legend

 Environmental Survey Boundary

 Perennial Stream

NRCS Soils

 Ub - Urban land

 W - Water



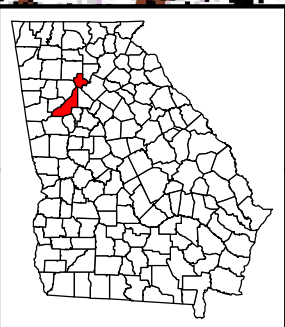



Figure 8E. Soil Map
Beltline Corridor from Lindbergh Center to
10th Street/Monroe Drive
PI No. 0009395, Fulton County


0 410 820 Feet

Source: Northwest and Northeast Atlanta 7.5' Quad USGS Topographic Maps with
NRCS Soil Overlay

Legend

 Environmental Survey Boundary

NRCS Soils

 Ub - Urban land



Habitat Use Photographs



Photograph 1. Commercial Habitat, facing west on Ottley Drive NE (1/16/2022)



Photograph 2. Existing ROW Habitat, facing west on Peachtree Hills Avenue NE (1/16/2022)



Photograph 3. Riparian Corridor Habitat, facing west, north of PS 9 (1/16/2022)



Photograph 4. Mixed Hardwood-Pine Habitat, facing east, south of PS 9 (1/16/2022)



Photograph 4. Parkland Habitat, along border (1/16/2022)

Appendix III: Federally Protected Resources

GDOT PI No. 0009395
Fulton County

Appendix III B: Federally Threatened, Endangered, Candidate, and Proposed Species

GDOT PI No. 0009395
Fulton County



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Georgia Ecological Services Field Office
355 East Hancock Avenue
Room 320
Athens, GA 30601
Phone: (706) 613-9493 Fax: (706) 613-6059



In Reply Refer To:
Project Code: 2022-0000751
Project Name: 0016606

January 31, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act (MBTA) as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act (BGEPA) as amended (16 USC 668-668c). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area and to recommend some conservation measures that can be included in your project design if you determine those species or designated critical habitat may be affected by your proposed project.

FEDERALLY-LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Attached is a list of endangered, threatened, and proposed species that may occur in your project area. Your project area may not necessarily include all or any of these species. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

If you determine that your proposed action may affect federally listed species, please consult with the Service. Through the consultation process, we will analyze information contained in a

biological assessment or equivalent document that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a Habitat Conservation Plan) may be necessary to exempt harm or harass federally listed threatened or endangered fish or wildlife species. For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at www.fws.gov/endangered/esa-library/index.html#consultations.

Action Area. The scope of federally listed species compliance not only includes direct effects, but also any indirect effects of project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations). The action area is the spatial extent of an action's direct and indirect modifications to the land, water, or air (50 CFR 402.02). Large projects may have effects to land, water, or air outside the immediate footprint of the project, and these areas should be included as part of the action area. Effects to land, water, or air outside of a project footprint could include things like lighting, dust, smoke, and noise. To obtain a complete list of species, the action area should be uploaded or drawn in IPaC rather than just the project footprint.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if

Attachment(s):

- Official Species List
- Migratory Birds

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Georgia Ecological Services Field Office

355 East Hancock Avenue

Room 320

Athens, GA 30601

(706) 613-9493

Project Summary

Project Code: 2022-0000751

Event Code: None

Project Name: 0016606

Project Type: Recreation - New Construction

Project Description: Atlanta BeltLine corridor from Lindbergh to 10th St.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@33.81349905,-84.37560931016412,14z>



Counties: Fulton County, Georgia

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Georgia Ecological Services U.S. Fish & Wildlife Service

HUC 10 Watershed Report



0313000112 Peachtree Creek

HUC 8 Watershed: Upper Chattahoochee

Counties:

Dekalb, Fulton, Gwinnett

Major Waterbodies (in GA):

Nancy Creek, South Fork Peachtree Creek,
North Fork Peachtree Creek, Peachtree
Creek, Burnt Fork Creek

Federal Listed Species:

(historic, known occurrence, or likely to occur
in the watershed)

E - Endangered, T - Threatened, C - Candidate, CCA - Candidate Conservation species, PE - Proposed Endangered,
PT - Proposed Threatened, Pet - Petitioned, R - Rare, U - Uncommon, SC - Species of Concern.

American Burying Beetle (*Nicrophorus americanus*) US: E

Historical Occurrence; No habitat assessment is required, this species is currently considered extirpated from Georgia.

Rusty Patched Bumblebee (*Bombus affinis*) US: E; GA: E

Historical; No habitat assessment is required, this species is currently considered extirpated from Georgia.

Dwarf (Michaux's) Sumac (*Rhus michauxii*) US: E; GA: E

Potential Range (county); Please consult with GDNR for survey efforts.

Federal Candidate, Candidate Conservation, or Petitioned Species:

(likely or known to occur in the watershed)

Georgia Aster (*Symphyotrichum georgianum*) US: CCA; GA: T

Occurrence; Survey period: flowering early Sep - early Nov. Use of a nearby reference site to more accurately determine local flowering period is recommended.

State Listed or Other At-risk Species:

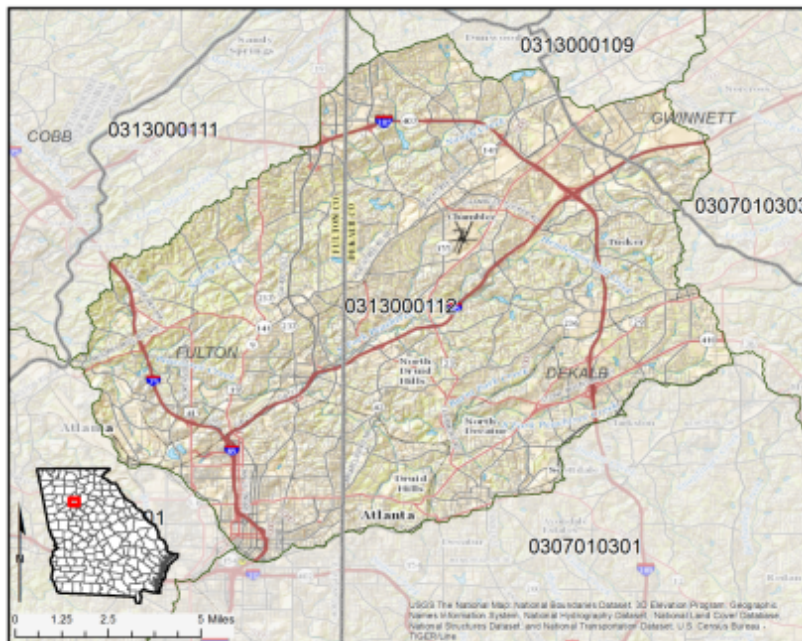
(likely or known to occur in the watershed)

Chattahoochee Crayfish (*Cambarus howardi*) GA: T

Occurrence; Please consult with GDNR for survey efforts.

Bluestripe Shiner (*Cyprinella callitaenia*) GA: R

Occurrence; Please consult with GDNR for survey efforts.



Georgia Ecological Services U.S. Fish & Wildlife Service

HUC 10 Watershed Report



Peregrine Falcon (*Falco peregrinus*) GA: R

Occurrence; Please consult with GDNR for survey efforts.

Bay Star-vine (*Schisandra glabra*) GA: T

Occurrence; Please consult with GDNR for survey efforts.

Any of the above species may occur in suitable habitat in this HUC 10 watershed. Survey dates are provided for reference only. Please coordinate with your lead federal agency, Georgia Department of Natural Resources, or USFWS to determine if surveys will help assess project impacts to species of concern.

Watershed Specific Concerns:

There are federally listed terrestrial species, but no federally listed aquatic/wetland species that occur or could occur in this watershed. If the project contains suitable habitat for listed species, please contact your lead federal agency to determine the appropriate next step for those species to inform their NEPA and ESA decisions. Coordination with Georgia Department of Natural Resources may also be helpful in those decisions.

Dwarf Sumac: Dwarf Sumac commonly occurs on rocky ridges or river bluffs in open forest patches over mafic bedrock with high levels of calcium, magnesium, or iron. Flowering occurs from June through August and fruiting occurs from August through October. This species can be identified year-round, through its low-growing nature and hairy leaves and stems. If populations are found that are under threat of destruction, please contact our office to organize translocation efforts.

Georgia Aster: There are occurrence records of candidate conservation species Georgia Aster in this watershed. Georgia Aster can be found in open forests or forest edges and right-of-ways. Use of prescribed fire or mowing in winter or early spring to create or maintain sunny openings, avoiding the use of herbicides, and avoiding clear-cutting and soil disturbance can help protect areas where this species occurs.

Species and Habitat Concerns

Bridges / Culverts / Structures: Bridges, culverts, and structures (barns, buildings, etc.) can be used by migratory bird species for nesting and roosting and by federally listed and sensitive bat species for roosting. To comply with the national programmatic agreement between FHWA, FRA, and FWS and to assess risk and potential impacts to species protected under the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 et seq.), or state protected bat species, inspections of all bridges, culverts, and structures will help determine if there is evidence of roosting bats. If an inspection is conducted, please fill out the "Georgia Bats in Bridges" datasheet and submit the data online to GA DNR (a website address is provided on the datasheet) and a scanned copy with any report to the lead federal agency. Please note that there is an updated version of the datasheet and new link to the website (<https://ee.kobotoolbox.org/x/#YVhJ>). Please follow any previous coordination with the Service and/or Georgia Department of Natural Resources related to activities impacting roosting bats or nesting migratory birds.

Erosion Control Netting: Monofilament or plastic mesh commonly used for slope stabilization can ensnare snakes and other wildlife, including listed species. The use of alternative natural fibers (e.g., coir, jute, or wood fiber) and moveable mesh strands can reduce impacts to wildlife.

Fish and Wildlife Coordination Act and additional Endangered Species Act Considerations

The Fish and Wildlife Coordination Act (FWCA) requires federal agencies to consider the effects of their water-related actions (that modify or control natural streams or waterbodies) on fish and wildlife resources. Many of the following recommendations are also specific to endangered or threatened aquatic species protected under the Endangered Species Act. The following may be applicable to proposed project actions.

Riparian Buffer, Streambank, and Stream Channel Protection

Minimize disturbance to stream banks and riparian areas during project work. Do not operate equipment in the stream channel or ford the channel during work. Service recommendations for riparian buffer protection are consistent with those of the Metropolitan North Georgia Water Planning District requiring maintenance of a 50 ft. undisturbed buffer and an additional 25 ft. impervious setback on all streams. Any staging areas, the storage of materials and equipment, borrow pits, or waste sites should not occur in buffer areas or other environmentally



sensitive areas. Additionally, when impacts to streambanks and/or stream channel occur, the Service recommends a biotechnical approach to streambank and channel stabilization and restoration where feasible. The use of hard armoring of streambanks or channels should be minimized except where necessary for safety or the protection of structures or property.

Wetland Protection

Wetland losses diminish important wetland values including: the provision of habitat which wetland and terrestrial fauna need for reproduction and/or survival, the storage of storm and flood waters with resultant moderation of flow extremes to receiving waters, and the natural filtration processes that enhance water quality. Wetlands along riparian corridors can provide important connectivity for wildlife movement at the landscape-level. Bridge or culvert construction associated with wetland impacts can alter stream hydrology, degrade water quality, create fish passage barriers, and result in the loss of stream bottom habitat. Measures to avoid and reduce impacts to wetlands and wetland hydrology should be considered during project design.

Water Quality Protection

The Service recommends use of erosion control practices, post construction stormwater management, and other best management practices to protect water quality. The Service's recommendations can be found below.

Erosion and Sedimentation Sedimentation from construction sites is regulated through Georgia's Erosion and Sedimentation Act, which in most cases is administered by local jurisdictions that have been delegated enforcement authority. We recommend all projects ensure compliance with the Georgia Erosion and Sedimentation Act and encourage consistent communication with the local issuing authority or Georgia Environmental Protection Division both in the design phase and during construction.

Stormwater Post construction stormwater management recommendations are consistent with performance standards for Water Quality protection (WQv) and Channel Protection (CPv) found in the Georgia Stormwater Management Manual, otherwise known as the Blue Book (<https://atlantaregional.org/georgia-stormwater-management-manual/>). The Service recommends both the Water Quality and Channel Protection performance standards be met on all projects when applicable under the Blue Book, to minimize impacts to water quality associated with stormwater runoff. For projects that drain to streams or wetlands with federally protected species, we would recommend that additional water quality protection be provided through implementation of the Runoff Reduction performance standard, also found in the Blue Book.

Other Protections For all project types, the Service recommends equipment storage, equipment maintenance, supply storage, and use of pesticides, herbicides, and/or other chemicals not occur within the 100-year floodplain or 200 feet from the stream banks or wetland edge, whichever is greater. All storage and maintenance areas should be protected with secondary containment. Material utilized in, or adjacent to aquatic resources for temporary fill, permanent fill, or bank protection shall consist of suitable material, free from toxic contaminants in other than trace quantities. Materials that contain toxic contaminants, such as used asphalt, pressure treated lumber, and uncured concrete, should not be used because it can alter water quality causing mortality in aquatic organisms and can be harmful to public health. For projects authorized by the U.S. Army Corps of Engineers, please ensure that all permit conditions are followed.

Road Stream Crossings (Bridges, Culverts)

Many road stream crossings, especially where pipe culverts are used, limit aquatic organism passage upstream and downstream, leading to fragmentation of aquatic populations. The construction, repair, and replacement of stream crossings can also increase turbidity and sedimentation downstream of road crossings leading to degradation of aquatic habitat. The Service recommends designs that provide habitat continuity through the crossing by maintaining or recreating natural stream reach geomorphic elements including slope, channel width, bed material, and bedform.

Bridges and arch spans are the preferred option for stream crossings from an aquatic habitat continuity perspective. However, when spanning the stream is prohibitively expensive, use of culverts at stream crossings must be designed and implemented in a way that ensures the structures do not become barriers to aquatic organism passage. Making culverts suitable for aquatic organism passage requires preventing excessive water velocities in culverts at base flow conditions, preventing drops resulting from scour in and around the culvert, and providing adequate depth in the culvert at base flows.

The Service recommends following the U.S. Army Corps of Engineers, Savannah District Regional Conditions for Nationwide Permits when designing culverts. The Regional Conditions contain specific guidelines for designing and constructing culverts to promote the safe passage of fish and other aquatic organisms.

Additional information about regional conditions can be found at the following web address:

Georgia Ecological Services U.S. Fish & Wildlife Service

HUC 10 Watershed Report



<http://www.sas.usace.army.mil/Missions/Regulatory/Permitting/General-Permits/Regional-General-Permits/>

For culvert replacements or extensions involving less than 100 feet of all stream impacts in total, FWCA coordination is not required where no federally listed aquatic species occur. When modifying the design of a culvert that was previously consulted on under FWCA (but excluding those previously exempt from past coordination), new consultation would not be required unless stream impacts have been increased by more than 10% or 50 feet (whichever is less), or the change results in modifications to the morphology or flow of the waterbody.

When bridges or arch spans are the chosen construction method, the Service recommends minimizing the number of in-stream piles or structures and aligning them with the natural stream flow. Additionally, the use of bridge scuppers that directly discharge stormwater to streams should be minimized, except where necessary for safety. For bridge construction activities that require the use of temporary in-stream construction access (e.g., jetties, work bridges, barges, etc.), the Service recommends performing all work in a manner that does not inhibit aquatic organism passage, including minimizing river constriction. For situations where river constriction is greater than 25% of the cross sectional area of the critical flow, we would recommend a flow analysis to evaluate water velocity alterations and development of a contingency plan in the event channel scour, bank erosion, or undesirable conditions occur. Upon completion of activities, temporary fills should be entirely removed and the site restored to pre-existing elevation. Equipment should not be stored on any in-stream structure to reduce equipment loss if flows exceed the height of the in-stream structure and reduce contamination from pollutant leakage during off-use times.

Direct all stormwater runoff from road approaches toward floodplains, letting the runoff discharge as sheet flow across the floodplain or into stormwater management structures. When road approaches are composed of unpaved surfaces, consider paving the road approaches to improve the water quality of stormwater runoff around stream crossing locations. If spread footers, containment structures, or other structures require the use of dry or poured concrete, flowable fill, or similar materials and are elected for use in the construction within any waterway, such methods shall be constructed using cofferdams or similar containment structures. If uncured, dry or wet concrete will be used, the water used for curing shall not be allowed into the waterways. The use of uncured concrete in a waterway can raise the pH of the surrounding water causing mortality in aquatic organisms and potential public health concerns.

The Service also recommends incorporating measures to provide connectivity and reduce mortality to terrestrial wildlife species during project design. Opportunities for terrestrial species to cross under road crossings at stream crossing locations exist both within the banks of the stream along constructed benches, as well as, in the floodplain when additional structures are used to pass flood flows.

Utility Stream Crossings Construction, relocation, and maintenance of powerlines and other utilities can disturb aquatic systems and affect fish and other populations. To minimize impacts from these activities, use best management practices to control stormwater runoff from the project area during construction. Direct runoff via sheetflow to vegetated areas or stormwater treatment basins and utilize rolling dips or water bars to divert water from the utility right-of-way (ROW) into vegetated areas on slopes to minimize erosion.

Underground Utilities Directional boring is preferred when a utility line must be installed across a perennial stream that supports federally protected aquatic species. Bore pits should be located as far away from the stream channel as possible.

Dry open trench pipe installation using isolation crossing diversions, such as coffer dams, are preferred for all other perennial stream crossings. The diversions should not dewater downstream reaches or create excessive water velocity that could scour downstream reaches. Wet open trench construction should be avoided in all perennial streams unless no other method is feasible, or if it can be shown that alternative methods would cause greater sedimentation and environmental harm. For both wet and dry open trench installation, stream banks and channels should be restored to their original contours and the banks stabilized with native vegetation (except in areas where permanent road crossings are to be maintained). In-channel stream restoration techniques should be considered to stabilize the channel elevation and protect buried utility lines. In-channel restoration techniques can also effectively prevent downstream scour or upstream head cutting which can result from open trenching.

Wet open trench installation should not be conducted during the sensitive reproductive periods of federally-listed aquatic species, when eggs and newly-hatched larvae are most likely to be buried or harmed by increased turbidity and sedimentation. Only directional boring or isolation crossing methods should be used during these times of year. Please consult the Service for timing of sensitive reproductive periods for aquatic species in this watershed.

Aerial Utilities Maintain a 100-foot undisturbed riparian buffer within the powerline's ROW on both sides of all streams with endangered or threatened aquatic species. No crossings, either temporary or permanent, via culverts, fords, or other methods should be constructed and all access roads should end at the buffer's edge farthest from the

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streambank. The buffer, where possible, should be retained in or planted with native vegetation of at least shrub size.

Within the powerline's ROW, maintain a 50-foot riparian buffer on both sides of other perennial and intermittent streams that will be crossed. Some vegetation within these buffer zones may be temporarily disturbed if culverts, fords, or other stream crossings are necessary, but streambanks should be restored to normal contours and stabilized after the crossing is removed.

Impoundments/Farm Ponds

For proposed impoundments, the Service recommends excavated ponds be constructed where feasible. Though the volume of material requiring excavation is greater to construct an excavated pond, they have fewer problems than dammed ponds, which can be plagued with muddy water, rapid filling with silt, flow rate fluctuations, aquatic weeds, temperature fluctuations, and wild fish invasions.

The Service recommends consulting the county Natural Resources Conservation Service office (<https://www.nrcs.usda.gov/wps/portal/nrcs/site/ga/home/>) or the Georgia Department of Natural Resources for advice regarding pond construction and avoiding or minimizing downstream impacts from sediment and toxicant input into aquatic systems.

Stream Gage Replacement

If a U.S. Geological Survey (USGS) stream gage will potentially be impacted by a proposed project, the Service recommends assessing what coordination or compensation may need to occur with the USGS related to the disturbance, moving, and recalibration of the gage structure prior to project implementation.

Conservation Lands in Georgia and within the Watershed:

Adair Park

Alexander Park

Ansley Park

Ardmore Park

Ashford Park

Atlanta Audubon Society (Johns Sanctuary)

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Atlanta Memorial Park

Auten

Autumn Park

Avery-East Park Lane Triangle

Barclay Median

Bass Recreation Center

Beaverbrook Park

Beckham

Beech Valley Triangle

Benton Place Park

Best Friend Park

Beverly-Avery Circle, Avery Triangle, Montgomery Ferry Triangle, Polo Triangle

Bianchi

Birchwood-Arlene Triangle

Blackburn Park

Bobby Jones Golf Course

Boulevard-Angier Park

Brentwood-Atwood Triangle

Briarwood Recreation Center

Broadland And West Conway Park

Brook Park; Brook Run Park

Brookhaven Park

Bryan Barnes

Burke-Darlington Circle

Callanwolde Park

Candler Park

Castlewood Triangle

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Centennial Olympic Park

Central Park

Channing Valley Park

Charles Allen Median

Charlie Loudermilk Park

Chastain Memorial Park

City of Atlanta - Woodward Way Park, Yonah Park, 25th Street Beauty Spot, Zimmer Drive Circle

City Park - 17th Street Park

Clairmont Park

Club Drive-Davidson Triangle

Conifer Circle

Cornish

Coronet Way Park

Daniel Johnson Nature Preserve

Darlington Circle Park

Davidson And Lakehaven Park

Decatur Cemetery

Deepdene/Dellwood Park

DeKalb County - Zonolite Park, Greenspace

Dellwood Park

Delta Park

Dobbs Park

Dresden Park

Easement - Georgia Land Trust (2009078)

Easement / Mitigation - U.S. Army Corps of Engineers (Brookhaven Place)

East Andrews and Roswell Park

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East Brookhaven and Lakehaven Park

East Club And Lakehaven Park

East Rock Springs Triangle

Ebster Park

Ellsworth Park

Emma Lane Greenspace

Emory Grove Park

English Oak Park

Eubanks Park

Fernbank Forest

Fernbank School

Fernwood Park

Findley Plaza

Fischer

Fisher Trail Park

Flowers Park

Folk Art Park (Courtland St), Peidmont Ave

Frankie Allen Park

Freedom Park

Friendship Forest

Gabrielsen

Gandy

Garden Hills Park

Georgian Hills Park

Glenlake Park

Glenn

Goldsboro Park

Georgia Ecological Services U.S. Fish & Wildlife Service

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Graves Road Park

Greenwood-Charles Allen Triangle

Halpern Bernard Park

Hardy Ivy Park

Haynes Manor Park

Heaton

Helen Drive Park

Henderson Mill School and Park

Henley

Hidden Cove Park

Hillpine Park

Hillside At Northside Dr. Park

Home Park

Homestead Park

Honeysuckle Park

Howell Mill at Beaverbrook Park

Howell Mill-Glenbrook Triangle

Hughes

Hummingbird Park

Huntley Hills Park

Hurt Park

Inman Circle at 17th Street Park

Inman Park and Trolley Barn

Inverness Park

Iverson Park

J. Allen Couch Park

J. D. Sims Recreation Center

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John Calhoun Park

John Howell Memorial Park

Johns Sanctuary

Karp

Kate Saks

Kathryn Avenue

Keller

Keswick Park

Kittredge Park

Lafayette-15th Street Triangle

Lake Claire Park

Lakeview-Demorest Triangle

Lanier Boulevard Parkway

Lavista Park

Lazarus

Lenox and Johnson Road Park

Lenox Beauty Spot

Lenox Wildwood Park

Loring Heights Park

Lynwood Recreation Center

Maddox-Avery Triangle

Mantissa St. Park

Margaret Mitchell Square

Mark Clark

Mark Harris

Martin Luther King Jr. National Historic Site

Mason Mill Park

Georgia Ecological Services U.S. Fish & Wildlife Service

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Mayor's Park #1

Mayson Park; Mayson Ravine Greenspace

McClatchey Park

McDaniel School

McKinley-Wilson Triangle

Medlock Park

Merritt

Montgomery Ferry-Golf Circle Triangle

Montreal Park

Moore's Mill-northside Parkway Triangle I and II

Morgan-Boulevard Park

Morningside Nature Preserve

Morningside Park

Mornington Circle

Mottley

Mt. Paran and Northside Park

Mt. Paran-Cave Road Triangle

Murphey Candler Park

Needham Park

Noble Park

North Buckhead Park

North Highland Terrace Park

Northcliffe and Brookview Park

Oak Grove Park

Old Fourth Ward Park

Orme Park

Orme Triangle

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Parkside Circle, Parkside Park

Parkway-Angier Park, Merritts Park, Wabash Park

Peachtree at 15th St. Triangle

Peachtree Battle Parkway/Median

Peachtree Circle at 15th St Triangle

Peachtree Heights Park

Peachtree Hills Park

Peachtree Park

Pelham Road Park

Pershing Point Park

Peters Park

Pharr Circle Park

Piedmont Heights Park

Piedmont Park

Piedmont Road Triangle

Piedmont-Avery Triangle

Pine Tree and Brentwood Park

Pleasantdale

Potts

Prado at Inman Circle Park

Prado-17th Street Triangle, Maddox Triangle, Peachtree Circle Triangle

Prado-Piedmont Beauty Spot, South Prado Circle, Westminster Triangle

Princeton Park

Ranier Circle

Ray Kluka Memorial Park

Rehoboth School

Georgia Ecological Services U.S. Fish & Wildlife Service

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Reid

Renaissance Park

Ridgemore Road Pr

Ridgeview Park

Robert W. Woodruff Park

Robin Lane Park

Robin Wilson

Ruby Oxford

Rumson and Pinetree Park

Rumson Road Circle

Scott Park

Selena S. Butler Park

Shady Side Park

Shady Valley Park

Shallowford Park

Sibley Park

Sidney Marcus Park

Skyland Park

Smith Park

Spring Valley Jewish Corner

Spring Valley Park

Springdale Park

Standing Peachtree Park

Sunken Garden Park

Sunny Brook

Tanyard Creek Park

Tedoff

Georgia Ecological Services U.S. Fish & Wildlife Service

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Tennyson Circle

The King Center

Todd Street Triangle

Tucker Recreation Center

Tully

Underwood Hills Park

VA Highlands Project

Valley Road-Habersham Triangle

Van Leer

Vanderlyn School

Vedado-Greenwood Triangle

Vermont Road Park

Vernon Springs Park

Villa Park

Village Park

Virgilee Park

Virginia Avenue Circle

Virginia-Highland Triangle

Vodopich

Vroon

W. D. Thompson Park

Waddell Nature Park

Walton Spring Park

Washington Park

West Wesley Park

Westchester Drive

Westminster at Park Lane Circle

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Westover Plantation

Wildwood Gardens Park

Wildwood Place

Wilson Park Triangle

Windwood Hollow Park

Winn Park

If your project crosses watershed boundaries, please use the appropriate guidance document for each portion of the project area.

Your agency or lead federal agency may have coordination procedures in place or determination keys for urban areas or activities with classified as having "no effect" on listed species. Please use those guidelines to help determine impacts to federally listed species.

If you have questions relating to this guidance, please contact our office at gaes_assistance@fws.gov or 706-613-9493.

Data provided in this document is for guidance only and applies to portions of the watershed within the Georgia State Boundary. Please contact the appropriate FWS Field Office for coordination outside of the state. This document does not replace any requirements for consultation under the Endangered Species Act.

As written in 50 CFR § 402.16 of the Endangered Species Act, obligations under the Act must be reconsidered if a new species is listed or critical habitat is determined that may be affected by the project, or new information indicates that the project may affect listed species or critical habitat in a manner not previously considered. We will continue to update these documents to help project proponents meet their obligations under the Endangered Species Act.

Appendix V: State Protected Resources

GDOT PI No. 0009395
Fulton County

Appendix V A: State Threatened, Endangered, Rare and Unusual Species

GDOT PI No. 0009395

Fulton County



MARK WILLIAMS
COMMISSIONER

TED WILL
DIRECTOR

February 17, 2022

Collin Lane
Ecology Group Manager
Edwards-Pitman Environmental
2700 Cumberland Pkwy SE
Suite 300
Atlanta, GA 30339

Subject: Known occurrences of natural communities, plants, and animals of highest priority conservation status on or near GDOT P.I. No. 0009395, Beltline Corridor NE Trail, in Fulton County, GA

Dear Collin Lane:

This is in response to your request on January 31, 2022. The following Georgia natural heritage database element occurrences (EOs) were selected for the current site using the local Hydrologic Unit Code (HUC) 10 watershed for elements whose range distribution is limited by aquatic systems and within 3 miles for all other EOs:

Beltline Corridor NE Trail Point 1 (Site Center: -84.378069, 33.811281, WGS84)

- GA *Cambarus howardi* (Chattahoochee Crayfish) 1.9 miles SE of site in Peachtree Creek and tributaries
- GA *Cyprinella callitaenia* (Bluestripe Shiner) 3.8 miles W of site in Nancy Creek
- Micropterus cataractae* (Shoal Bass) 1.4 miles NW of site in Peachtree Creek
- Micropterus cataractae* (Shoal Bass) 3.6 miles NW of site in Nancy Creek
- Amblyscirtes alternata* (Dusky Roadside-Skipper) [HISTORIC?] 2.6 miles S of site
- Amblyscirtes belli* (Bell's Roadside-Skipper) [HISTORIC] 1.1 miles S of site
- Autochton cellus* (Golden-banded Skipper) [HISTORIC] 1.9 miles S of site
- US *Bombus affinis* (Rusty-patched bumblebee) [EXTIRPATED?] 2.7 miles S of site
- Caecidotea hobbsi* (Hobb's Cave Isopod) [HISTORIC] 1.9 miles SE of site
- Erynnis martialis* (Mottled Duskywing) [HISTORIC] 1.2 miles S of site
- GA *Falco peregrinus* (Peregrine Falcon) 2.8 miles S of site
- Isoetes valida* (Mountain Bog Quillwort) [HISTORIC] 1.7 miles SE of site
- Lampropeltis rhombomaculata* (Mole Kingsnake) [HISTORIC] 1.9 miles SE of site
- Nicrophorus americanus* (American Burying Beetle) [HISTORIC] 1.1 miles S of site
- Panax quinquefolius* (American Ginseng) 2.3 miles SE of site
- Perimyotis subflavus* (Tri-colored Bat) [HISTORIC] 1.7 miles S of site
- Satyrium edwardsii* (Edwards' Hairstreak) [HISTORIC] 0.5 miles SW of site

Satyrium kingi (King's Hairstreak) [HISTORIC] 2 miles SE of site
GA *Schisandra glabra* (Bay Star-vine) [HISTORIC] on site
 GA *Schisandra glabra* (Bay Star-vine) [HISTORIC] 2.7 miles W of site
 GA *Schisandra glabra* (Bay Star-vine) [HISTORIC] 2.3 miles SE of site
Symphyotrichum novi-belgii var. *elodes* (Seashore New York Aster) [HISTORIC] 1.3 miles W of site
 17th Street Park 0.7 miles S of site
 25th Street Beauty Spot 0.7 miles SW of site
 Alexander Park 0.4 miles NW of site
 Ansley Park 0.6 miles S of site
 Ardmore Park 0.7 miles W of site
 Atlanta Memorial Park 1.5 miles NW of site
 Avery-East Park Lane Triangle 0.6 miles S of site
 Barclay Median 1.4 miles E of site
 Beaverbrook Park 2 miles W of site
 Beech Valley Triangle 1.8 miles SE of site
 Beverly-Avery Circle 0.5 miles S of site
 Beverly-Avery Triangle 0.5 miles S of site
 Beverly-Montgomery Ferry Triangle 0.5 miles S of site
 Beverly-Polo Triangle 0.5 miles S of site
 Birchwood-Arlene Triangle 0.4 miles NW of site
 Bobby Jones Golf Course 0.7 miles NW of site
 Boulevard-Angier Park 2.7 miles S of site
 Brentwood-Atwood Triangle 0.6 miles N of site
 Briarwood Recreation Center 2.8 miles NE of site
 Burke-Darlington Circle 0.9 miles N of site
 Callanwolde Park 2.3 miles SE of site
 Castlewood Triangle 2.2 miles NW of site
 Centennial Olympic Park 3 miles S of site
 Central Park 2.4 miles S of site
 Channing Valley Park 1.3 miles W of site
 Charles Allen Median 1.8 miles S of site
 Charlie Loudermilk Park 1.3 miles NW of site
 Chastain Memorial Park 3 miles N of site
 Conifer Circle 2.4 miles N of site
 Cornish 1 miles SE of site
 Daniel Johnson Nature Preserve 1.7 miles SE of site
 Darlington Circle Park 0.7 miles N of site
 East Andrews and Roswell Park 1.6 miles N of site
 East Rock Springs Triangle 1.1 miles SE of site
 Ellsworth Park 1.5 miles W of site
 Emma Lane Greenspace 2.8 miles N of site
 Eubanks Park 0.8 miles S of site
 Fernwood Park 2.9 miles NE of site
 Folk Art Park (Courtland St) 2.7 miles S of site
 Folk Art Park (Piedmont Ave) 2.9 miles S of site

Frankie Allen Park 0.7 miles N of site
Freedom Park 2.3 miles SE of site
Freedom Park 2.8 miles SE of site
Gandy 0.8 miles NW of site
Garden Hills Park 0.6 miles NW of site
Goldsboro Park 3 miles SE of site
Greenwood-Charles Allen Triangle 1.9 miles S of site
Hardy Ivy Park 2.9 miles S of site
Haynes Manor Park 1.5 miles NW of site
Helen Drive Park 1.8 miles SE of site
Hillpine Park 0.9 miles SE of site
Home Park 1.7 miles SW of site
Homestead Park 1.4 miles SE of site
Howell Mill at Beaverbrook Park 1.8 miles W of site
Howell Mill-Glenbrook Triangle 1.8 miles W of site
Inman Circle at 17th Street Park 0.8 miles S of site
Inverness Park 1.5 miles SE of site
J. Allen Couch Park 2 miles SW of site
J. D. Sims Recreation Center 2.6 miles S of site
John Howell Memorial Park 1.8 miles SE of site
Johns Sanctuary 2 miles E of site
Kittredge Park 2 miles E of site
Knight Park 2.8 miles SW of site
Lafayette-15th Street Triangle 1.1 miles S of site
Lakeview-Demorest Triangle 0.6 miles NW of site
Lanier Boulevard Parkway 1.7 miles SE of site
Lavista Park 1.2 miles E of site
Lenox and Johnson Road Park 1.6 miles SE of site
Lenox Beauty Spot 2.1 miles NE of site
Lenox Wildwood Park 1.3 miles E of site
Lenox-Wildwood Park 1.2 miles SE of site
Loring Heights Park 0.9 miles SW of site
Maddox-Avery Triangle 0.6 miles S of site
Mantissa St. Park 1.9 miles W of site
Mayor's Park #1 2.7 miles S of site
McClatchey Park 0.6 miles S of site
McKinley-Wilson Triangle 1.4 miles W of site
Montgomery Ferry-Golf Circle Triangle 0.3 miles S of site
Moores Mill-northside Parkway Triangle I 2.7 miles NW of site
Moores Mill-northside Parkway Triangle II 2.7 miles NW of site
Morgan-Boulevard Park 2.5 miles S of site
Morningside Nature Preserve 0.7 miles SE of site
Morningside Park 1.4 miles SE of site
Mornington Circle 2.3 miles NW of site
Noble Park 1.5 miles SE of site
North Buckhead Park 2.3 miles N of site

North Highland Terrace Park 1.5 miles SE of site
Northcliffe and Brookview Park 2 miles W of site
Oak Grove Park 2.9 miles SE of site
Old Fourth Ward Park 2.6 miles S of site
Orme Park 1.5 miles SE of site
Orme Triangle 1.4 miles SE of site
Parkway-Angier Park 2.6 miles S of site
Parkway-Merritts Park 2.5 miles S of site
Parkway-Wabash Park 2.7 miles S of site
Peachtree at 15th St. Triangle 1.1 miles S of site
Peachtree Battle Parkway/Median 0.7 miles NW of site
Peachtree Circle at 15th St Triangle 1.1 miles S of site
Peachtree Heights Park 0.6 miles NW of site
Peachtree Hills Park 0 miles N of site
Pelham Road Park 0.6 miles SE of site
Pershing Point Park 0.7 miles S of site
Pharr Circle Park 1.4 miles NW of site
Piedmont Heights Park 0.4 miles SE of site
Piedmont Park 0.8 miles S of site
Piedmont Road Triangle 0.8 miles N of site
Piedmont-Avery Triangle 0.8 miles S of site
Pine Tree and Brentwood Park 0.6 miles NW of site
Pine Tree and Brentwood Park 1.9 miles NW of site
Pine Tree-Brentwood Triangle 0.6 miles NW of site
Prado at Inman Circle Park 0.7 miles S of site
Prado-17th Street Triangle 0.8 miles S of site
Prado-Maddox Triangle 0.7 miles S of site
Prado-Peachtree Circle Triangle 0.7 miles S of site
Prado-Piedmont Beauty Spot 0.9 miles S of site
Prado-South Prado Circle 0.9 miles S of site
Prado-Westminster Triangle 0.9 miles S of site
Ray Kluka Memorial Park 1.9 miles S of site
Reid 0.8 miles NW of site
Renaissance Park 2.5 miles S of site
Robin Lane Park 1 miles SE of site
Ruby Oxford 0 miles NW of site
Rumson and Pinetree Park 0.7 miles NW of site
Rumson Road Circle 1 miles NW of site
Shady Valley Park 0.9 miles NE of site
Sibley Park 1.2 miles NW of site
Sidney Marcus Park 1 miles SE of site
Smith Park 0.7 miles SE of site
Spring Valley Jewish Corner 1.7 miles SE of site
Spring Valley Park 1.1 miles W of site
Springdale Park 2.7 miles SE of site
Springlake Park 1.3 miles W of site

Sunken Garden Park 1.3 miles E of site
Sunny Brook 0.6 miles NW of site
Tanyard Creek Park 0.8 miles W of site
Tedoff 1.1 miles SE of site
Tennyson Circle 2.2 miles W of site
Todd Street Triangle 2 miles SE of site
Underwood Hills Park 1.7 miles W of site
VA Highlands Project 2.4 miles SE of site
Valley Road-Habersham Triangle 2.1 miles NW of site
Vedado-Greenwood Triangle 1.9 miles S of site
Vermont Road Park 2.6 miles N of site
Villa Park 2.1 miles SE of site
Virgilee Park 2.8 miles SE of site
Virginia Avenue Circle 2.2 miles SE of site
Virginia-Highland Triangle 2 miles SE of site
Vodopich 0.9 miles NW of site
Vroon 0 miles NW of site
W. D. Thompson Park 2.7 miles E of site
West Wesley Park 1 miles NW of site
Westminster at Park Lane Circle 0.8 miles S of site
Wildwood Gardens Park 0.7 miles E of site
Wildwood Place 0.7 miles S of site
Wilson Park Triangle 0.9 miles SE of site
Winn Park 0.9 miles S of site
Woodward Way Park 1.2 miles NW of site
Yonah Park 1 mile S of site
Zimmer Drive Circle 2 miles SE of site
Zonolite Park 1.2 miles SE of site

Recommendations:

Federally listed species have been documented within three miles or within the watershed(s) of the proposed project. To minimize potential impacts to federally listed species, we recommend consultation with the United States Fish and Wildlife Service. Please refer to the Districts and Agency Contacts map available on the GDOT Ecology webpage to determine the appropriate contact. The contacts include: Meg Hedeem (meghan_hedeem@fws.gov), Eric Prowell (Eric_Prowell@fws.gov), Laci Pattavina (Laci_Pattavina@fws.gov), or Chris Coppola (Christopher_Coppola@fws.gov).

Please be aware that state protected species have been documented near the proposed project. For information about these species, including survey recommendations, please visit our webpage at <http://georgiawildlife.com/conservation/species-of-concern#rare-locations>. Please refer to the State of Georgia Protected Species Habitat & Presence/Absence Survey Methodologies Manual available on the GDOT Ecology webpage for further survey guidance. Surveys for species of conservation concern should be conducted prior to commencement of construction.

Species listed above that have no “GA” or “US” status are considered Georgia species of concern. Locations of these species are tracked until enough information is gathered to determine if they should be added to the state list or if their populations do not warrant tracking. It is important to consider these species when planning projects. Please let us know if you have any questions regarding Georgia species of concern.

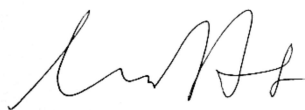
We are glad to see multi-use path construction, which will provide additional recreation opportunities for the surrounding communities. We have the following recommendations for the applicant to consider. We are concerned about streams and other sensitive habitats that could be impacted by the proposed project. Please keep erosion to a minimum during construction and leave as much vegetation intact as possible. In seepage or wetland areas please use boardwalks, when possible, to prevent degradation and destruction of these sensitive habitats. If the path is paved, we strongly recommend using a porous pavement that provides some degree of infiltration to mitigate stormwater runoff. Please plan the path carefully and provide for adequate parking and access areas. These measures will help protect water quality, protect sensitive habitats and native species, and provide for a more enjoyable recreational experience for the users.

Disclaimer:

Please keep in mind the limitations of our database. The data collected by the Wildlife Conservation Section comes from a variety of sources, including museum and herbarium records, literature, and reports from individuals and organizations, as well as field surveys by our staff biologists. In most cases the information is not the result of a recent on-site survey by our staff. Many areas of Georgia have never been surveyed thoroughly. Therefore, the Wildlife Conservation Section can only occasionally provide definitive information on the presence or absence of rare species on a given site. Our files are updated constantly as new information is received. **Thus, information provided by our program represents the existing data in our files at the time of the request and should not be considered a final statement on the species or area under consideration.**

If you know of populations of highest priority species that are not in our database, please fill out the appropriate data collection form and send it to our office. Forms can be obtained through our website (<http://georgiawildlife.com/conservation/species-of-concern#rare-locations>) or by contacting our office. If we can be of further assistance, please let us know.

Sincerely,

A handwritten signature in black ink, appearing to read 'Maggie Aduddell Hunt'.

Maggie Aduddell Hunt, Wildlife Biologist
maggie.hunt@dnr.ga.gov, (706) 557-3228

Data Available on the Wildlife Conservation Section Website

- Georgia protected plant and animal species profiles are available on our website. These profiles cover basics such as species physical descriptions, preferred habitat, and life history, as well as threats, management recommendations, and conservation status. To view these profiles, visit: <http://georgiawildlife.com/conservation/species-of-concern#rare-locations>
- Rare species and natural community information can be viewed by Quarter Quad, County, and HUC 8 Watershed. To access this information, please visit our GA Rare Species and Natural Community Information page at: <http://georgiabiodiversity.org/>
- Downloadable files of rare species and natural community data by Quarter Quad and County are also available. These can be downloaded at: <http://georgiabiodiversity.org/natels/natural-element-locations.html>

Appendix V B: Bats in Bridges Data Form

GDOT PI No. 0009395

Fulton County

GEORGIA BATS IN BRIDGES DATASHEET

Investigator Name(s): Kayla Theilig and Evan Seal

Phone: _____

Email: _____

Date: 6/11/2020

County: Fulton

Lat: 33.812710°

Long: -84.377960°

Bridge Location: Piedmont Road NE over Peachtree Creek

GDOT Structure ID # 121-0111-0

GDOT PI. No 0009395

Bridge Type: (check one)

☐ Parallel Box Beam



☐ Steel I-beam



☐ Pre-stressed Girder



☐ Flat Slab / Box



☒ Cast in Place



☐ Trapezoidal Box



☐ Culvert – Box

☐ Culvert – Pipe/Round

☐ Other: _____

Underdeck Material:

☐ Concrete

☐ Corrugated Steel

☒ Other: _____

Road Type: (check one)

☐ Interstate

☐ U.S. Highway

☐ State Road

☒ County Road

Surrounding Habitat: (check all that apply)

☐ Residential ☐ Agriculture ☒ Commercial ☐ Woodland ☐ Grassland ☐ Ranching ☒ Riparian ☐ Mixed ☐ Wetland

Conditions Under Bridge: (check all that apply)

☒ Bare ground /sediment

☐ Concrete

☐ Rip rap

☒ Flowing water

☐ Standing water

☐ Open vegetation (not obstructing flight path)

☐ Closed vegetation (may obstruct flight path)

☐ Two lane road

☐ Four (or more) lane highway

☐ Dirt road

☐ Railroad

Bat indicators: (check all that apply) ☐ Visual ☐ Smell ☐ Sound ☐ Staining ☐ Guano

Bats Present: ☐ YES ☒ NO

Species Present

_____ Myotis septentrionalis (Northern long-eared)
 _____ Myotis sodalis (Indiana)
 _____ Myotis leibii (Eastern small-footed)
 _____ Myotis lucifugus (Little brown)
 _____ Myotis grisescens (Gray)
 _____ Myotis austroriparius (Southeastern)
 _____ Lasiurus borealis (Eastern red)
 _____ Lasiurus seminolus (Seminole)
 _____ Lasiurus intermedius (Northern yellow)

_____ Lasiurus cinereus (Hoary)
 _____ Lasiurus noctivagans (Silver-haired)
 _____ Perimyotis subflavus (Tri-colored)
 _____ Eptesicus fuscus (Big brown)
 _____ Nycticeius humeralis (Evening)
 _____ Tadarida brasiliensis (Braz. free-tailed)
 _____ Corynorhinus rafinesquii (Rafinesque's)
 _____ UNKNOWN

Roost description (If known, check all that apply): ☐ Day Roost ☐ Nursery Roost ☐ Night Roost ☐ Unknown

Number of roosts 0

Roost design: (check all that apply)

- ☐ Crack/crevice/expansion joint: underside of bridge ☐ Crack/crevice/expansion joint: top side of bridge
☐ Plugged drain ☐ Under/along the main bridge structure ☐ Rail ☐ Other: _____

Human disturbance or traffic under bridge or at structure? ☐ High ☒ Low ☐ None

Evidence of bats using bird nests? ☐ Yes ☒ No (if yes, please describe and photograph nest location)

Areas Inspected: (check all that apply)

- ☒ Vertical surfaces on I-beams ☒ Vertical surfaces between concrete end walls and bridge deck
☐ Expansion joints ☒ Rough surfaces ☐ Guardrails ☐ Crevices ☐ Other: _____

Areas NOT Inspected because of safety or inaccessibility:

Additional Comments / Sketch:

Is there evidence of migratory birds using the structure? ☐ Yes ☒ No

If yes, what species (excluding pigeons) are present, what evidence is there, and locations (check all that apply)?

nests

- ___ **Barn Swallow** ☐ Old Nest ☐ Adults ☐ Building ☐ Complete Nest ☐ Eggs ☐ Young ☐ Unkn Stage
☐ concrete beam ☐ steel beam ☐ cap ☐ pile/bent ☐ rails ☐ under deck, exterior sides ☐ under deck, interior
- ___ **Cliff Swallow** ☐ Old Nest ☐ Adults ☐ Building ☐ Complete Nest ☐ Eggs ☐ Young ☐ Unkn Stage
☐ concrete beam ☐ steel beam ☐ cap ☐ pile/bent ☐ rails ☐ under deck, exterior sides ☐ under deck, interior
- ___ **Eastern Phoebe** ☐ Old Nest ☐ Adults ☐ Building ☐ Complete Nest ☐ Eggs ☐ Young ☐ Unkn Stage
☐ concrete beam ☐ steel beam ☐ cap ☐ pile/bent ☐ rails ☐ under deck, exterior sides ☐ under deck, interior
- ___ **Other:** _____ ☐ Old Nest ☐ Adults ☐ Building ☐ Complete Nest ☐ Eggs ☐ Young ☐ Unkn Stage
☐ concrete beam ☐ steel beam ☐ cap ☐ pile/bent ☐ rails ☐ under deck, exterior sides ☐ under deck, interior

GEORGIA BATS IN BRIDGES DATASHEET

Investigator Name(s): Sara Carey Smith and Jackson Peyton

Phone: 678-932-2246

Email: Scareysmith@edwards-pitman.com and Jpeyton@edwards-pitman.com

Date: 1/16/2022

County: Fulton

Lat: 33.812710°

Long: -84.377960°


Bridge Location: At I-85 Northeast Expressway

GDOT Structure ID # 121-0670-0

GDOT PI. No 0009395


Bridge Type: (check one)

☐ Parallel Box Beam 

☐ Steel I-beam 

☐ Pre-stressed Girder 

☒ Flat Slab / Box 

☐ Cast in Place 

☐ Trapezoidal Box 

☐ Culvert – Box

☐ Culvert – Pipe/Round ☐ Other: _____

Underdeck Material:

☐ Concrete

☐ Corrugated Steel

☐ Other: _____

Road Type: (check one) ☒ Interstate ☐ U.S. Highway ☐ State Road ☐ County Road

Surrounding Habitat: (check all that apply)

☐ Residential ☐ Agriculture ☒ Commercial ☒ Woodland ☐ Grassland ☐ Ranching ☒ Riparian ☐ Mixed ☐ Wetland

Conditions Under Bridge: (check all that apply)

☒ Bare ground /sediment ☐ Concrete ☐ Rip rap ☐ Flowing water ☐ Standing water

☐ Open vegetation (not obstructing flight path) ☐ Closed vegetation (may obstruct flight path)

☐ Two lane road ☐ Four (or more) lane highway ☐ Dirt road ☐ Railroad

Bat indicators: (check all that apply) ☐ Visual ☐ Smell ☐ Sound ☐ Staining ☐ Guano

Bats Present: ☐ YES ☒ NO

Species Present

_____ Myotis septentrionalis (Northern long-eared)
_____ Myotis sodalis (Indiana)
_____ Myotis leibii (Eastern small-footed)
_____ Myotis lucifugus (Little brown)
_____ Myotis grisescens (Gray)
_____ Myotis austroriparius (Southeastern)
_____ Lasiurus borealis (Eastern red)
_____ Lasiurus seminolus (Seminole)
_____ Lasiurus intermedius (Northern yellow)

_____ Lasiurus cinereus (Hoary)
_____ Lasiurus noctivagans (Silver-haired)
_____ Perimyotis subflavus (Tri-colored)
_____ Eptesicus fuscus (Big brown)
_____ Nycticeius humeralis (Evening)
_____ Tadarida brasiliensis (Braz. free-tailed)
_____ Corynorhinus rafinesquii (Rafinesque's)
_____ UNKNOWN

Roost description (If known, check all that apply): ☐ Day Roost ☐ Nursery Roost ☐ Night Roost ☐ Unknown

Number of roosts 0

Roost design: (check all that apply)

- ☐ Crack/crevice/expansion joint: underside of bridge ☐ Crack/crevice/expansion joint: top side of bridge
☐ Plugged drain ☐ Under/along the main bridge structure ☐ Rail ☐ Other: _____

Human disturbance or traffic under bridge or at structure? ☒ High ☐ Low ☐ None

Evidence of bats using bird nests? ☐ Yes ☒ No (if yes, please describe and photograph nest location)

Areas Inspected: (check all that apply)

- ☐ Vertical surfaces on I-beams ☐ Vertical surfaces between concrete end walls and bridge deck
☐ Expansion joints ☒ Rough surfaces ☐ Guardrails ☐ Crevices ☐ Other: _____

Areas NOT Inspected because of safety or inaccessibility:

This bridge is under I-85; areas along I-85 were not inspected due to safety.

Additional Comments / Sketch:

Is there evidence of migratory birds using the structure? ☐ Yes ☒ No

If yes, what species (excluding pigeons) are present, what evidence is there, and locations (check all that apply)?

nests

- ___ **Barn Swallow** ☐ Old Nest ☐ Adults ☐ Building ☐ Complete Nest ☐ Eggs ☐ Young ☐ Unkn Stage
☐ concrete beam ☐ steel beam ☐ cap ☐ pile/bent ☐ rails ☐ under deck, exterior sides ☐ under deck, interior
- ___ **Cliff Swallow** ☐ Old Nest ☐ Adults ☐ Building ☐ Complete Nest ☐ Eggs ☐ Young ☐ Unkn Stage
☐ concrete beam ☐ steel beam ☐ cap ☐ pile/bent ☐ rails ☐ under deck, exterior sides ☐ under deck, interior
- ___ **Eastern Phoebe** ☐ Old Nest ☐ Adults ☐ Building ☐ Complete Nest ☐ Eggs ☐ Young ☐ Unkn Stage
☐ concrete beam ☐ steel beam ☐ cap ☐ pile/bent ☐ rails ☐ under deck, exterior sides ☐ under deck, interior
- ___ **Other:** _____ ☐ Old Nest ☐ Adults ☐ Building ☐ Complete Nest ☐ Eggs ☐ Young ☐ Unkn Stage
☐ concrete beam ☐ steel beam ☐ cap ☐ pile/bent ☐ rails ☐ under deck, exterior sides ☐ under deck, interior

VII. CONSTRUCTION PLANS

Construction plans will be included in the Assessment of Effects Report

VIII. SUPPORTING DOCUMENTATION

Qualification Statements

Collin Lane is the Ecology Group Manager with EPEI. Mr. Lane has 13 years of experience in conducting Georgia Department of Transportation ecological surveys, protected species surveys, reporting, and environmental permitting and coordination. He has over 19 years of professional experience in the environmental field. Mr. Lane has a Bachelor of Science in General Biology from Presbyterian College and a Master of Science in Soil and Water Science from the University of Florida.

Charlotte Estes is a Senior Ecologist with Edwards-Pitman Environmental, Inc. Ms. Estes has approximately 20 years of experience working in the ecological and environmental sciences. She has conducted surveys for state and federal waters, state and federal protected plants, animals, and aquatic surveys. Ms. Estes has a Bachelor of Science and Master of Science in Biology from Tennessee Technological University.

Jackson Peyton is an Ecologist with EPEI. Mr. Peyton is in his first year working with EPEI and has experience conducting wetland delineations, protected species surveys, and the completion of ecological reports. Mr. Peyton has an Associate of Science in Environmental Resources and a Bachelor of Science in Biology, both from Gordon State College.

Sara Carey Smith is an Ecologist with EPEI. Ms. Carey Smith is in her first year working with EPEI and has 1 year of experience in environmental consulting, conducting protected plant species surveys, and the completion of ecological reports. Ms. Carey Smith has a Bachelor of Science in Biology from the University of North Georgia and a Master of Science in Biology from Georgia College and State University.

At the time of the survey, Evan Seal was an Ecologist with EPEI. Mr. Seal was an ecologist with Edwards-Pitman Environmental, Inc. Mr. Seal has 4 year of experience in conducting wetland and stream delineations and preparing and writing ecological reports. Mr. Seal has a Bachelor of Science in Wildlife and Fisheries Science (2015) from Tennessee Technological University.

At the time of the survey, Kayla Theilig was an Ecologist with EPEI. Ms. Theilig has over five years of experience in conducting wetland and stream delineations, conducting protected species surveys, and preparing and writing ecological reports. Ms. Theilig has a Bachelor of Science in Environmental Science from Emory University.

HNL ~~201~~ P11

P&1 large blue line
BW 40ft WW 10-20ft
BD 10ft WD 1-5ft

IS2 BW 3ft WW 6m-1ft
BD 3ft WD <6m

WL3 0-2 3/1 2.5Y

2-6ft 4/2 2.5Y w/ 4/4 10 YR redox
trees: lob, birch, SG, boxelder,
hickory, sycamore, TP
shrub: prinet, jewelweed, dayflower
vine: P.I., muscadine, V, EI

IS4 BW ~~10ft~~ WW ~~10ft~~ 1-3ft
BD ~~10ft~~ WD ~~10ft~~ <6m

WL6 similar to WL3

0-5 5YR 3/3

5-6ft 5YR 3/2 w/ 5YR 4/6 redox
trees: sycamore, SG, TP, princess,
S. mad, hickory
S: prinet, dayflower, jewel
vine: JH, P.I., E.I.

IS7: BW 4ft WW 1-4ft
BD 2-3ft WD 6m-1ft

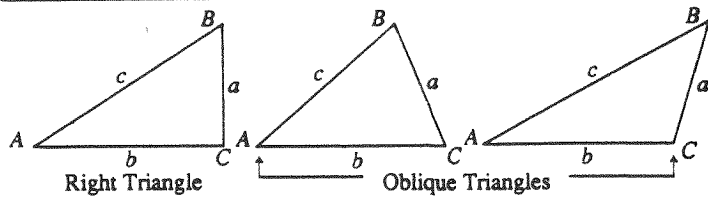
WLP: 0-4
4-16+
tree: Ash oak, SC, Sycamore,
hickory,
shrub: privet, dayflower
vine: JH

PS 9: Peachtree creek
BW 750ft WW 10-20ft
BD 10ft WD 5-10ft

WLC10 0-5
5-16+
tree: Lob, Birch, TP, Sycamore,
silver maple, mimosa, boxelder
shrub: privet, maple, birch
vine: Kudzu, P. I., smilax

PS 11 BW 750ft WW 10-20ft
BD 10ft WD 1-5ft

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\csc = \frac{c}{a}$

Given	Required	
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B$, $c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B$, $b = \sqrt{(c+a)(c-a)} = c \sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90^\circ - A$, $b = a \cot A$, $c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A$, $a = b \tan A$, $c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A$, $a = c \sin A$, $b = c \cos A$

Solution of Oblique Triangles

Given	Required	
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180^\circ - C$, $\tan \frac{1}{2}(A - B) = \frac{(a-b) \tan \frac{1}{2}(A+B)}{a+b}$ $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a+b+c}{2}$, $\sin \frac{1}{2}A = \sqrt{\frac{(s-b)(s-c)}{bc}}$, $\sin \frac{1}{2}B = \sqrt{\frac{(s-a)(s-c)}{ac}}$, $C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a+b+c}{2}$, $\text{area} = \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	$\text{area} = \frac{bc \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

MADE IN CHINA

1/10/2022 9:45

Jackson Payton
Sara Carey Smith

① Holland McPae
- planted Crepe myrtles &
Eastern Red Cedar, American
Holly
Magnolia grandiflora
~~Red~~ Industrial habitat
@ Cuvert - Chinese privet

② West side of the stream
American Sycamore
Chinese privet
Tulip poplar
Avenis/Geum
Japanese climbing fern
Gallium sp.
Gelsimium
Water oak
packera
Smilax smallii


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[Site Information \(?variable=SI&site=DUNWOODY\)](#)

Weather Stations

Select a station from drop down list below

Select a Station ▼

Station Status

Cherokee Town and Country Club

Dunwoody, Fulton County, Georgia

Historical Data

From: May ▼ 9 ▼ 2020 ▼

To: June ▼ 8 ▼ 2020 ▼

Submit

(Tmin,Tmax and Precipitation amount)

Date	Max Temperature [°F]	Min Temperature [°F]	Rain (in)
May 09	60	41.5	0
May 10	69.5	36.9	0
May 11	63.9	46.2	0
May 12	68.8	41.3	0

May 13	72.3	50.8	0
May 14	78	58.9	0
May 15	78	59.3	0
May 16	81.8	58	0
May 17	83.6	61.6	0.12
May 18	76.9	64.7	0.78
May 19	71.2	60.5	0.1
May 20	60.5	53.6	0.05
May 21	72.2	53.3	0.01
May 22	80.7	59.5	0.01
May 23	83.1	63.1	0.02
May 24	85.6	65.4	0.05
May 25	81.7	66.4	0.23
May 26	73.9	67.1	0
May 27	71.5	64	0.59
May 28	81.4	64.5	0.02
May 29	82.2	66.3	0.05
May 30	81.9	62.8	0
May 31	83.7	57.3	0
Jun 01	79.2	60.7	0
Jun 02	83.4	62	0
Jun 03	85.9	64.4	0
Jun 04	86.5	66.7	0
Jun 05	79.4	68.8	0.54
Jun 06	86.5	65.4	0
Jun 07	87	68.3	0
Jun 08	82.9	72.8	0

[UGA \(http://www.uga.edu\)](http://www.uga.edu) | **[CAES \(http://www.caes.uga.edu/\)](http://www.caes.uga.edu/) | **[Site map \(mindex.php?content=sitemap&title=Site%20Map\)](mindex.php?content=sitemap&title=Site%20Map)** | **[Privacy Policy \(mindex.php?content=policy&title=Privacy%20Policy\)](mindex.php?content=policy&title=Privacy%20Policy)****

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(Page updated on 09/17/2020)


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Weather Stations

Select a station from drop down list below

Select a Station ▼

Station Status

Cherokee Town and Country Club

Dunwoody, Fulton County, Georgia

Historical Data

From: May ▼ 12 ▼ 2020 ▼

To: June ▼ 11 ▼ 2020 ▼

Submit

(Tmin,Tmax and Precipitation amount)

Date	Max Temperature [°F]	Min Temperature [°F]	Rain (in)
May 12	68.8	41.3	0
May 13	72.3	50.8	0
May 14	78	58.9	0
May 15	78	59.3	0

May 16	81.8	58	0
May 17	83.6	61.6	0.12
May 18	76.9	64.7	0.78
May 19	71.2	60.5	0.1
May 20	60.5	53.6	0.05
May 21	72.2	53.3	0.01
May 22	80.7	59.5	0.01
May 23	83.1	63.1	0.02
May 24	85.6	65.4	0.05
May 25	81.7	66.4	0.23
May 26	73.9	67.1	0
May 27	71.5	64	0.59
May 28	81.4	64.5	0.02
May 29	82.2	66.3	0.05
May 30	81.9	62.8	0
May 31	83.7	57.3	0
Jun 01	79.2	60.7	0
Jun 02	83.4	62	0
Jun 03	85.9	64.4	0
Jun 04	86.5	66.7	0
Jun 05	79.4	68.8	0.54
Jun 06	86.5	65.4	0
Jun 07	87	68.3	0
Jun 08	82.9	72.8	0
Jun 09	85.2	71.3	0.96
Jun 10	82.6	71.6	0.85
Jun 11	79.1	64.7	0.1



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Weather Stations

Select a station from drop down list below

Select a Station ▼

Station Status

Cherokee Town and Country Club

Dunwoody, Fulton County, Georgia

Historical Data

From: December ▼ 17 ▼ 2021 ▼

To: January ▼ 16 ▼ 2022 ▼

Submit

(Tmin,Tmax and Precipitation amount)

Date	Max Temperature [°F]	Min Temperature [°F]	Rain (in)
Dec 17	68	56.6	0
Dec 18	65.7	60.5	0.91
Dec 19	61.1	38.4	0.04
Dec 20	45.6	36.2	0



38.1 0.26
33.6 0
27.6 0

Dec 24	62.3	31.7	0
Dec 25	67.9	52.8	0
Dec 26	73.4	55.7	0
Dec 27	69	57.2	0
Dec 28	69.9	62.3	0
Dec 29	71	61.7	0.79
Dec 30	63.6	59.9	1.69
Dec 31	67.5	56.9	0.01
Jan 01	75.8	66.5	0.01
Jan 02	72	49.2	1.06
Jan 03	49.3	29	0.14
Jan 04	47.8	26.8	0
Jan 05	54.4	37.9	0
Jan 06	57.6	32	0.23
Jan 07	36.2	24	0
Jan 08	49	26	0
Jan 09	58.8	40.2	0.22
Jan 10	47.8	32.8	0
Jan 11	48.1	29.4	0
Jan 12	52.2	26.4	0
Jan 13	55.6	30.9	0
Jan 14	51.7	35.4	0
Jan 15	44.2	35.2	0.11
Jan 16	37.4	30.9	0.87

NORMALS 1981-2010	YRS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
13873,ATHENS, GA	30,	4.05,	4.48,	4.43,	3.15,	3.00,	4.18,	4.47,	3.53,	3.94,	3.55,	3.82,	3.73,	46.33
13874,ATLANTA, GA	30,	4.20,	4.67,	4.81,	3.36,	3.67,	3.95,	5.27,	3.90,	4.47,	3.41,	4.10,	3.90,	49.71
13837,AUGUSTA,GA	30,	4.21,	4.03,	4.31,	2.95,	3.18,	4.29,	5.27,	4.92,	3.37,	3.23,	3.17,	3.62,	46.55
93842,COLUMBUS, GA	30,	3.85,	4.44,	5.46,	3.55,	3.19,	3.72,	4.76,	3.77,	3.06,	2.58,	4.10,	4.27,	46.75
03813,MACON, GA	30,	4.24,	4.36,	4.55,	2.96,	2.72,	4.06,	4.95,	4.10,	3.59,	2.79,	3.32,	4.04,	45.68
03822,SAVANNAH, GA	30,	3.69,	2.79,	3.73,	3.07,	2.98,	5.95,	5.60,	6.56,	4.58,	3.69,	2.37,	2.95,	47.96

<https://www1.ncdc.noaa.gov/pub/data/ccd-data/nrmcp.txt>