9.4 Ecology Survey Report

ECOLOGY SURVEY REPORT
LAGRANGE PRIMARY – OSELIGEE CREEK 230kV TRANSMISSION LINE
TROUP COUNTY, GEORGIA
PROJECT NUMBER: P79418
MAY 13, 2024

Prepared by:

sligh environmental consultants, inc.

31 Park of Commerce Way Suite, 200B

Savannah, Georgia 31405

(912) 232-0451

Brandon W. Wall

Senior Project Biologist

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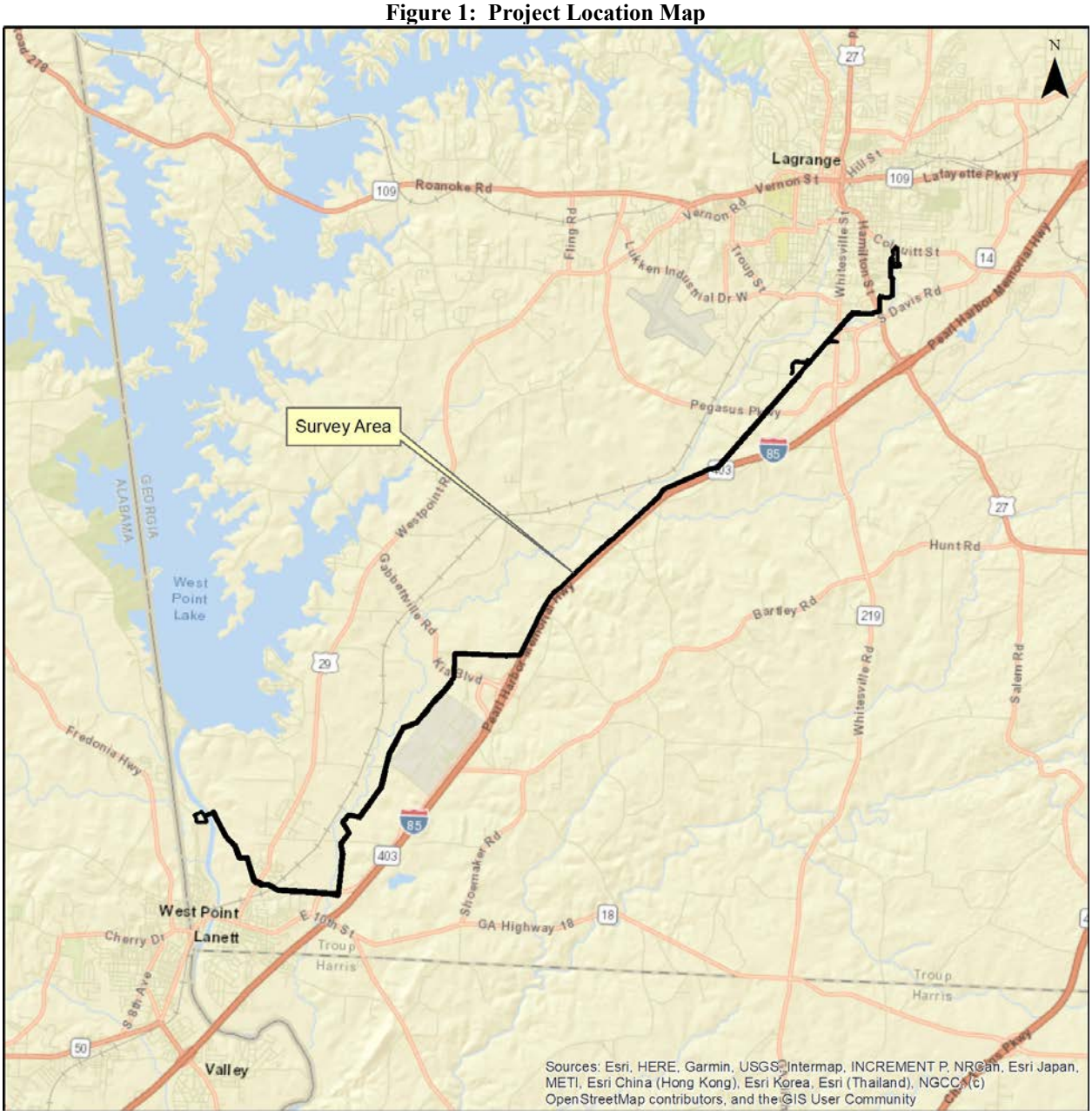
I. PROJECT DESCRIPTION

To mitigate a number of identified contingencies and thermal limitations relating to changes in energy flow patterns caused by the displacement of fossil fuel resources, Georgia Transmission Corporation (GTC) is proposing to construct two new electric transmission facilities in Troup County, Georgia – the Oseligee Creek 230/25kV Substation and the associated LaGrange Primary – Oseligee Creek 230kV Transmission Line. The project extends from the LaGrange Primary Substation located south of Colquitt Street, west of South Ogletree Street in LaGrange (33.02363° N, -85.01585° W) to the proposed Oseligee Creek Substation located east of South State Line Road north of West Point (32.89855° N, -85.18421° W) (Figure 1). The project site is entirely located within the Middle Chattahoochee – Lake Harding Watershed (Hydrologic Unit Code 03130002).

Figure 1: Project Location Map



The survey area includes the proposed transmission line corridor, existing parallel transmission lines, off-right-of-way (R/W) access roads, the LaGrange Primary substation, and the proposed Oseligee Creek substation. The project details are below:

1. LaGrange Primary – Oseligee Creek 230kV Proposed Transmission Line
   Length: ~16.5 miles
   Width: 30-feet (roadside) / 100-feet (cross-country)

2. Existing Parallel Transmission Lines
   Length: +/- 9.4-miles
   Width: +/- 55 feet outside of proposed transmission line corridor but varies

3. Off ROW Access Roads
   Length: +/- 0.65-mile
   Width: 30-feet

4. Proposed Oseligee Creek Substation Site, +/- 11-acres

5. Existing LaGrange Primary Substation (land south of substation yard for transmission line access/not for substation expansion), +/- 10-acres

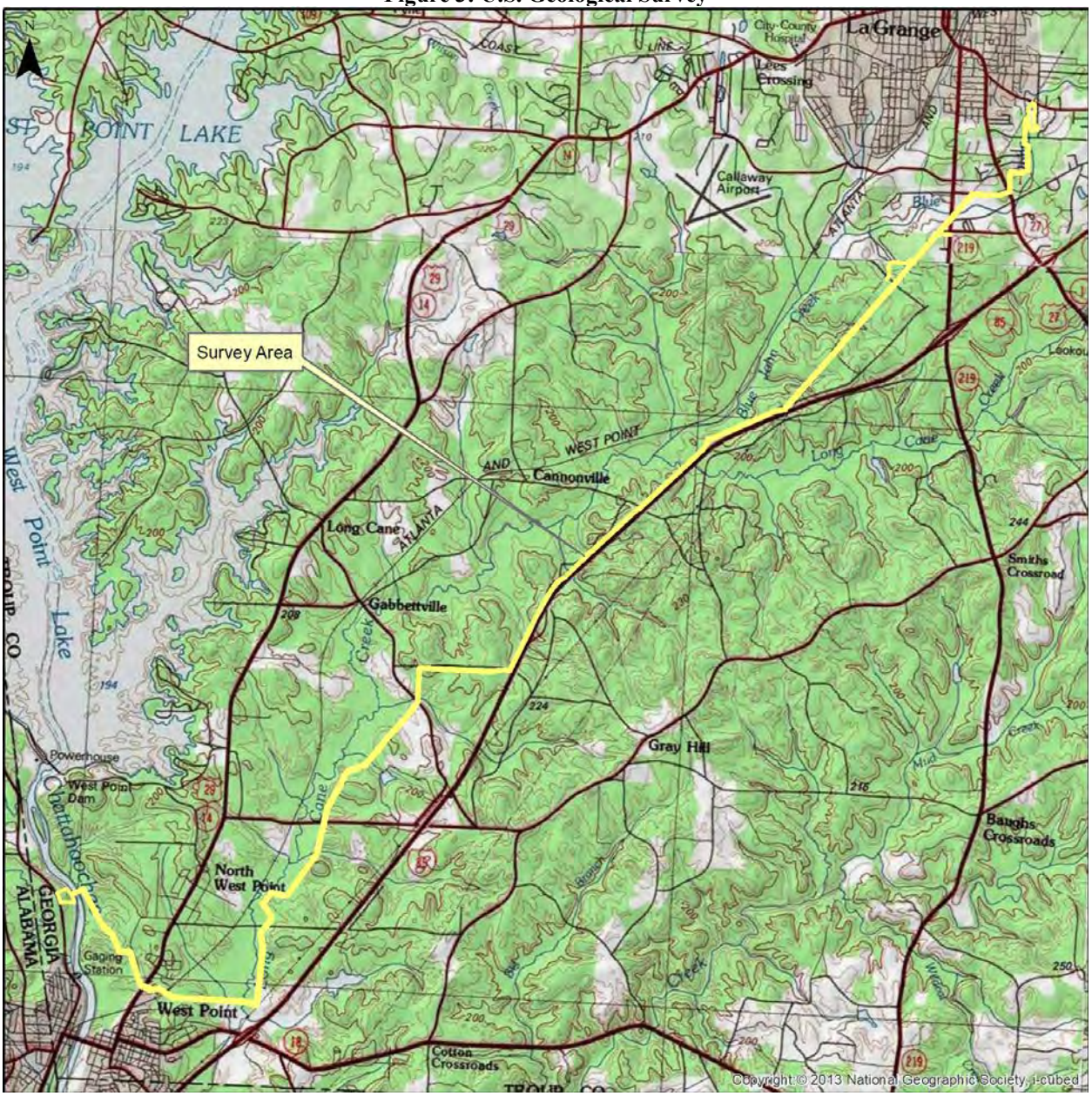
II. SURVEY METHODOLOGY AND SUMMARY

The ecology field survey of the project area was conducted by Sligh Environmental Consultants, Inc. (SECI) from February 28 – March 20, 2024. The site conditions at the time of the field survey were normal for the time of year. The survey was based on the project area shapefiles provided by GTC, but minor modifications to the final survey area were warranted based on field observations and project impacts. The final survey acreage is approximately 289.48 acres. The majority of the survey area was accessible by motorized vehicles from either the existing R/W, public roads, and identified access corridors. Information was collected on vegetative communities and habitats, threatened and endangered species occurrences, habitats of concern, wetlands and open waters, streams and other waters of the United States, non-jurisdictional gullies and erosional features, potential alternative access roads, access issues and other items of note in the survey area, and existing wetland/stream road crossings. During the field investigations, the following resources were identified:

- 50 wetlands
- 1 ponds
- 56 streams
- 1 river
- 31 non-jurisdictional gullies, ditches, erosional features
- No protected species occurrences
- 26 access issues
- 37 existing road crossings
- 1 potential alternative access road
- 9 vegetative communities

Figure 2: 2022 Aerial Photograph

Figure 3: U.S. Geological Survey



III. VEGETATIVE COMMUNITIES

The survey area consists of various urban and natural environments including maintained R/W, forest lands, wetlands, and aquatic habitats. The vegetative survey of the site was conducted through on-site observations and aerial photography interpretation to create a GIS layer for the communities with approximate age and classification noted. Below is a description of each habitat type on-site.

Upland Habitats

Maintained R/W – 136.795 Acres:
Nearly half (47%) of the project corridor consists of existing maintained transmission line R/W adjacent to the proposed LaGrange Primary transmission line. The entire width of existing parallel transmission line R/W was surveyed in conjunction with the project. Vegetation is mowed, sprayed, or otherwise maintained as part of the routine transmission line maintenance schedule. Species include broomsedge (*Andropogon virginicus*), panic grass (*Panicum virgatum*), fescue (*Festuca arundinacea*), witchgrass (*Dichanthelium acuminatum*), bahia grass (*Paspalum notatum*), blackberry (*Rubus betulifolius*), and various other common herbs and forbs.

Pine Plantation – 51.706 Acres:
The pine plantation habitat ranges from approximately 10 year old replant to areas over 45 years old, but the majority of this habitat appears to be within the 25 year old range. This habitat has been intensively managed for pine timber production, primarily on short rotations. The overstory is dominated by planted loblolly pine (*Pinus taeda*). Understory species consist of sweetgum (*Liquidambar styraciflua*), water oak (*Quercus nigra*), loblolly pine, American holly (*Ilex opaca*), eastern red cedar (*Juniperus virginiana*), wax myrtle (*Myrica cerifera*), greenbrier (*Smilax rotundifolia*), blackberry (*Rubus betulifolius*), and bracken fern (*Pteridium aquilinum*).

Mixed Pine/Hardwood Forest – 40.961 Acres:
The mixed pine/hardwood habitat is a natural forested community found on upland slopes and hilltops throughout the project corridor. This habitat ranges from young early successional regeneration to mature habitats over 75 years of age. Vegetation also varies depending on successional stage. Primarily the overstory is comprised of loblolly pine, water oak, and sweetgum. American beech (*Fugus grandifolia*), magnolia (*Magnolia grandiflora*), and mockernut hickory (*Carya tomentosa*) are also present. Understory species consist of wax myrtle, ironwood (*Carpinus caroliniana*), privet (*Ligustrum sinense*), and partridgeberry (*Mitchella repens*).

Existing Development/Roads – 20.169 Acres:
The project crosses multiple public roadways including state and county roads, both paved and dirt. Additionally, the project incorporates small portions of existing developed area. Therefore, this habitat is void of vegetation other than existing road shoulders which may have bahia grass, fescue, broomsedge, and other maintained emergent upland species.

Mixed Hardwood Forest – 16.894 Acres:
The mixed hardwood habitat is primarily found on slopes and lower flats and stream terraces. This habitat is mid successional to mature and ranges in age from 30 to over 70 years. Vegetation consists primarily of water oak, American beech, river birch (*Betula nigra*), magnolia, poplar (*Liriodendron tulipifera*), sweetgum, white oak (*Quercus alba*), magnolia, willow oak (*Quercus phellos*), wax myrtle, and privet.
A variation of this habitat, the mixed hardwood floodplain habitat, was also noted during the survey. This is a mature habitat located within larger stream/river floodplains. These areas are high quality and generally 60 – 80 years of age. Vegetation includes poplar, water oak, willow oak, white oak, mockernut hickory, river birch, red maple (*Acer rubrum*), privet, and spikegrass (*Chasmanthium spp.*). Though this habitat may flood during peak flow or wet periods, it is not hydric and therefore not wetland.

Scrub/Shrub Upland – 1.617 Acres:
Two small areas of early successional scrub/shrub upland approximately 5 years of age were identified. This habitat contains a mix of emergent upland species such as bahia grass, broomsedge, and blackberry as well as shrubs such as wax myrtle, privet, and false willow (*Baccharis halimifolia*) and saplings such as sweetgum, loblolly pine, and water oak.

Wetland Habitats

Emergent Wetland – 10.241 Acres:
The most common wetland encountered throughout the project corridor is the emergent wetland. Primarily, this habitat is found within the existing maintained transmission line R/W. As such, these wetlands are maintained periodically by R/W mowing activities. Vegetation consists of soft rush (*Juncus effusus*), plumegrass (*Erianthus giganteus*), blackberry, woolgrass (*Scirpus cyperinus*), sedges (*Carex spp.*), bushy bluestem (*Andropogon glomeratus*), smartweed (*Polygonum hydropiperoides*), witchgrass, giant cane (*Arundinaria gigantea*), and panic grass.

Forested Wetland – 8.077 Acres:
This habitat ranges from approximately 15 years of age to over 70 years. Trees vary in size, but species consist of red maple, sweetgum, water oak, red bay (*Persea borbonia*), and willow oak (*Quercus phellos*). The understory consists of privet, giant cane, Virginia chainfern (*Woodwardia virginica*), netted chainfern (*Woodwardia aereolata*), and spikegrass (*Chasmanthium laxum*).

Stream/River/Open Water – 1.617 acres:
This habitat includes several of the large streams found throughout the project area in addition to the Chattahoochee River and an open water pond. Smaller creeks, streams, and drainages were not included in this habitat type.

IV. WETLANDS AND OPEN WATERS

Jurisdictional Waters of the U.S. are defined by 33 CRF Part 328.3 (b) and are protected by Section 404 of the Clean Water Act (33 U.S.C. 1344), which is administered and enforced by the United States Army Corps of Engineers (USACE). The approximate limits of jurisdictional and possible non-jurisdictional wetlands and open waters including borrow areas were determined using the *1987 Corps of Engineers Wetlands Delineation Manual* along with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region.* This multi-parameter approach requires positive evidence of three criteria:

1) hydrophytic vegetation
2) hydric soils
3) wetland hydrology

The preliminary wetland locations were determined by compiling available topography, National Wetlands Inventory (NWI) data, and aerial photography of the subject corridor. The entire corridor was inspected thoroughly for the presence of wetlands or other jurisdictional waters, but areas having wetland signatures on the aerial photographs, mapped as a low area or drainage feature on the US Geological Survey or available Lidar data, or classified as wetland on the NWI were ground truthed and delineated if necessary. Areas were considered wetland if they exhibited evidence of all three of the above wetland parameters. Upland areas typically illustrated soils and vegetation characteristic of upland areas and showed a lack of positive wetland hydrology.

A total of 50 wetlands were identified throughout the survey corridor totaling 18.141 acres and ranging in size from 9 square feet within the project area to 1.3 acres. The average wetland size is 0.363 acres. All wetland areas exhibit all three of the above-described wetland parameters. The vegetation is hydrophytic meaning that it is well adapted to life in saturated conditions. The soils exhibit positive hydric soil indicators such as color, texture, organic streaking, gleying, and oxidation. Wetland hydrology varies and includes inundation, drainage patterns, oxidation of root channels, water-stained leaves, and soil saturation within twelve inches of the surface. Many wetlands contain forested (undeveloped) portions and emergent areas within the existing transmission line R/W. Most wetlands abut a perennial or intermittent stream, and only two appear to be isolated from other jurisdictional areas. All wetlands except three extend beyond the project boundary. In general, wetlands do not vary greatly in regards to hydrology, soils, or vegetative characteristics. With the exception of two isolated wetlands, all wetlands are directly or indirectly associated with Blue John Creek, Long Cane Creek, or the Chattahoochee River.

Table 1: Wetland Data

Wetland	Acreage	Association	Flood Zone	Adjacent to Impaired Water	Road in Wetland	Extends Beyond Project Boundary	Direction	Jurisdictional Status
Jwet 1	0.8615	Abutting	Yes	Yes	No	Yes	East	Yes
Jwet 2	1.3016	Abutting	Yes	Yes	No	Yes	East-West	Yes
Jwet 4	0.0161	Abutting	Yes	Yes	No	Yes	East	Yes
Jwet 5	0.3612	Adjacent	No	No	No	Yes	East	Yes
Jwet 6	1.2566	Abutting	Yes	Yes	No	Yes	East-West	Yes
Jwet 7	0.4522	Abutting	Yes	Yes	No	Yes	West	Yes
Jwet 8	0.366	Abutting	No	No	No	Yes	West	Yes
Jwet 9	0.3255	Abutting	No	No	No	Yes	East-West	Yes
Jwet 10	0.0012	Abutting	No	No	No	Yes	West	Yes
Jwet 11	0.0034	Adjacent	No	No	No	Yes	West	Yes
Jwet 12	0.0515	Abutting	No	No	No	Yes	South	Yes
Jwet 13	0.4505	Abutting	No	No	No	Yes	South	Yes
Jwet 14	0.1649	Abutting	Yes	Yes	No	Yes	South	Yes
Jwet 15	0.6266	Abutting	Yes	Yes	No	Yes	North-South	Yes
Jwet 16	0.1533	Adjacent	No	No	No	Yes	North-South	Yes
Jwet 17	0.6613	Abutting	No	No	No	Yes	East-West	Yes
Jwet 18	0.1814	Adjacent	No	No	No	Yes	East-West	Yes
Jwet 19	0.5173	Abutting	No	No	No	Yes	East-West	Yes
Jwet 20	0.1188	Adjacent	Yes	No	No	Yes	East-West	Yes
Jwet 21	0.8165	Abutting	Yes	No	No	Yes	East-West	Yes
Jwet 22	0.2259	Adjacent	No	No	No	Yes	West	Yes
Jwet 23	1.0648	Abutting	Yes	No	No	Yes	West	Yes
Jwet 24	0.0511	Abutting	Yes	No	No	Yes	West	Yes
Jwet 26	0.1262	Adjacent	Yes	No	Yes	Yes	East	Yes
Jwet 27	0.4147	Adjacent	Yes	No	Yes	No	N/A	Yes
Jwet 28	0.5686	Abutting	Yes	Yes	Yes	Yes	East-West	Yes
Jwet 29	0.5333	Abutting	Yes	Yes	Yes	Yes	East-West	Yes
Jwet 30	0.3811	Adjacent	Yes	Yes	No	Yes	North	Yes
Jwet 31	0.4149	Adjacent	Yes	Yes	Yes	Yes	East-West	Yes
Jwet 32	0.0947	Abutting	Yes	Yes	No	Yes	West	Yes
Jwet 33	0.0002	Isolated	Yes	No	No	No	N/A	No
Jwet 34	0.088	Abutting	Yes	Yes	No	Yes	West	Yes
Jwet 35	0.493	Abutting	Yes	Yes	Yes	Yes	East-West	Yes
Jwet 36	0.1197	Abutting	Yes	Yes	No	Yes	West	Yes
Jwet 37	0.2739	Adjacent	Yes	No	No	Yes	East	Yes
Jwet 38	1.2886	Abutting	Yes	Yes	No	Yes	North-South	Yes

Jwet 39	0.9115	Abutting	Yes	Yes	No	Yes	North-South	Yes
Jwet 40	0.3156	Abutting	No	No	No	No	N/A	Yes
Jwet 41	0.1617	Isolated	No	No	No	Yes	South	No
Jwet 42	0.1086	Abutting	No	No	No	Yes	South	Yes
Jwet 43	0.1948	Abutting	No	No	Yes	Yes	East	Yes
Jwet 44	0.0526	Abutting	No	No	Yes	Yes	East	Yes
Jwet 45	0.0443	Adjacent	No	No	No	Yes	West	Yes
Jwet 46	0.0816	Abutting	Yes	No	Yes	Yes	East-West	Yes
Jwet 47	0.1186	Adjacent	Partial	No	Yes	Yes	East-West	Yes
Jwet 48	0.2604	Abutting	Yes	No	Yes	Yes	West	Yes
Jwet 49	0.1323	Adjacent	Yes	No	Yes	Yes	East	Yes
Jwet 50	0.1609	Abutting	Yes	No	No	Yes	East	Yes
Jwet 3	0.6401	Abutting	Yes	Yes	No	Yes	South	Yes
Jwet 9	0.1317	Abutting	No	No	No	Yes	East-West	Yes

V. STREAMS

As with the wetlands, preliminary stream locations were determined by examining topographic information, available aerial photography, and NWI data. Streams were delineated and classified based on the following:

1) Perennial Stream – A well defined channel that contains water all year during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water, but may be supplemented by stormwater.
2) Intermittent Stream – A well-defined channel that contains water for part of the year (typically during the winter and spring). Groundwater is the source of water during these times of year, but it may be supplemented by stormwater. These streams lack the biological and hydrological characteristics associated with continuous conveyance of water observed in perennial streams.
3) Ephemeral Stream – A feature that carries only stormwater in direct response to precipitation with water flowing only during and shortly after large precipitation events. They may or may not have a well defined channel and the stream bed is always above the water table. Stormwater runoff is the primary source of water. Ephemeral streams are excluded from jurisdiction under the NWPR.

During the ecology survey, 58 streams and open waters were identified. Nine features are ephemeral streams, 22 are intermittent streams, 25 are perennial streams, one is a stormwater pond, and one is the Chattahoochee River. Ephemeral streams exhibit no evidence of continuous or intermittent groundwater base flow and should therefore be considered non-jurisdictional and non-buffered state waters. Most intermittent streams contained some flow during the survey. All perennial streams contained continuously flowing water. The identified pond is located within an existing industrial development and was likely permitted as a stormwater management facility under the National Pollutant Discharge Elimination System (NPDES). Therefore, this feature should be non-jurisdictional under Section 404 of the Clean Water Act (CWA). The Chattahoochee River is a large open water navigable river and would be considered jurisdictional under Section 404 and Section 10 of the CWA.

Table 2: Stream Data

Stream ID	Type	Width	Substrate	Acres	Extends Beyond Project Boundary	Direction	Jurisdictional	Depth	Wrested Vegetation
Jwat 1	Perennial	25'	Sand/Pebbles	0.8212	Yes	North-South	Yes	10'	Yes
Jwat 2	Intermittent	3'	Sand/Silt	0.0144	No	N/A	Yes	3'	Yes
Jwat 3	Ephemeral	2'	Clay	0.0135	No	N/A	No	1'	No
Jwat 4	Intermittent	3' - 10'	Sand/Silt	0.0058	Yes	West	Yes	5'	Yes
Jwat 6	Intermittent	6'	Silt/Clay	0.037	Yes	East-West	Yes	6'	Yes
Jwat 7	Intermittent	10'	Sand	0.0167	Yes	South	Yes	4'	Yes
Jwat 8	Ephemeral	2'	Clay	0.0034	Yes	South	No	1'	No
Jwat 9	Perennial	10'	Sand/Pebbles	0.0333	Yes	South	Yes	8'	Yes
Jwat 10	Perennial	22'	Sand/Pebbles	0.1486	Yes	East-West	Yes	12'	Yes
Jwat 11	Perennial	5'	Sand/Pebbles	0.0159	No	N/A	Yes	5'	Yes
Jwat 12	Intermittent	5'	Sand	0.0294	No	N/A	Yes	3'	Yes
Jwat 13	Perennial	4'	Sand/Pebbles	0.0145	Yes	East-West	Yes	5'	Yes
Jwat 15	Perennial	9'	Sand	0.0214	Yes	East-West	Yes	8'	Yes
Jwat 17	Intermittent	6'	Sand/Silt	0.0053	Yes	East	Yes	1'	Yes
Jwat 18	Perennial	23'	Sand/Pebbles	0.1434	Yes	East-West	Yes	12'	Yes
Jwat 14	Perennial	4'	Sand/Silt	0.0017	Yes	North-South	Yes	5'	Yes
Jwat 19	Perennial	8'	Sand	0.0618	Yes	East-West	Yes	4'	Yes
Jwat 20	Perennial	12'	Sand/Pebbles	0.0754	Yes	East-West	Yes	8'	Yes
Jwat 21	Intermittent	5'	Sand/Clay	0.017	Yes	East	Yes	2'	Yes
Jwat 22	Intermittent	5'	Sand/Clay	0.0078	Yes	South	Yes	1'	Yes
Jwat 23	Ephemeral	6'	Sand/Clay	0.0067	No	N/A	No	2'	No
Jwat 24	Intermittent	5'	Sand	0.0075	Yes	South	Yes	1'	Yes
Jwat 25	Ephemeral	9'	Sand/Clay	0.0115	Yes	South	No	2'	No
Jwat 26	Perennial	50' - 70'	Sand/Pebbles	0.3795	Yes	East-West	Yes	10'	Yes
Jwat 27	Intermittent	7'	Sand	0.0331	Yes	West	Yes	5'	Yes
Jwat 28	Perennial	14'	Sand/Pebbles	0.0541	Yes	East-West	Yes	6'	Yes
Jwat 29	Perennial	30'	Sand/Pebbles	0.0682	Yes	East-West	Yes	5'	Yes
Jwat 30	Perennial	18'	Sand/Pebbles /Rocks	0.0372	Yes	East-West	Yes	6'	Yes
Jwat 32	Intermittent	5'	Sand/Silt	0.0074	Yes	West	Yes	1'	Yes
Jwat 33	Ephemeral	5'	Clay	0.0082	Yes	West	No	5'	No
Jwat 34a	Intermittent	5'	Clay/Sand	0.0081	Yes	South	Yes	6'	Yes
Jwat 34b	Ephemeral	5'	Clay	0.0016	Yes	North	No	4'	No
Jwat 35	Perennial	30'	Sand/Rocks/ Boulders	0.0913	Yes	East-West	Yes	7'	Yes
Jwat 36	Intermittent	6'	Clay	0.0203	Yes	East-West	Yes	3'	Yes
Jwat 38	Pond	200'	Mud	0.6121	Yes	West	No-NPDES?	Unk	Maintained
Jwat 39	Intermittent	12'	Mud/Clay	0.0527	Yes	West	Yes	4'	Yes
Jwat 40	Perennial	13'	Clay/Rip-Rap	0.0789	Yes	North	Yes	6'	Yes
Jwat 41	Ephemeral	3'	Clay	0.0043	Yes	West	No	4'	No
Jwat 43	Perennial	10'	Sand/Silt	0.0159	Yes	West	Yes	1'	Yes
Jwat 44	Perennial	20'	Sand/Pebbles /Rocks	0.0895	Yes	East-West	Yes	6'	Yes
Jwat 45	Perennial	7'	Silt	0.0198	Yes	East-West	Yes	1'	Yes
Jwat 46	Intermittent	5'	Silt	0.0164	Yes	West	Yes	1'	Yes
Jwat 48	Intermittent	4'	Sand	0.0158	Yes	East-West	Yes	1'	Yes
Jwat 49	Intermittent	4'	Sand	0.0009	Yes	West	Yes	1'	Yes
Jwat 50	Ephemeral	5'	Clay	0.0296	Yes	West	No	2'	No
Jwat 51	Perennial	8'	Sand/Rock	0.0162	Yes	East-West	Yes	5'	Yes
Jwat 52	Intermittent	7'	Sand/Clay	0.0042	Yes	East	Yes	1'	Yes
Jwat 53	Perennial	65'	Sand/Pebbles /Rock	0.2465	Yes	North-South	Yes	15'	Yes
Jwat 54	Intermittent	5'	Silt	0.0292	Yes	North-South	Yes	2'	Yes
Jwat 55	Intermittent	4'	Silt/Mud	0.0079	Yes	West	Yes	2'	Yes

Jwat 56a	Perennial	9'	Sand/Pebbles	0.0496	Yes	East-West	Yes	3'	Yes
Jwat 56b	Ephemeral	3'	Clay	0.003	No	N/A	No	1'	No
Jwat 57	Intermittent	4'	Sand/Silt	0.0106	Yes	West	Yes	1'	Yes
Jwat 58	Perennial	15'	Sand/Pebbles	0.0359	Yes	West	Yes	3'	Yes
Jwat 59	Perennial	9'	Sand/Pebbles	0.0414	Yes	East-West	Yes	3'	Yes
Jwat 61	River	340'	Silt/Mud	0.787	Yes	North-South	Yes	Unk	Yes
Jwat 60	Intermittent	9'	Clay/Silt	0.0404	Yes	East-West	Yes	6'	Yes
Jwat 31	Perennial	20'	Sand/Clay/Pebbles	0.0592	Yes	East-West	Yes	7'	Yes

VI. GULLIES/EROSIONAL FEATURES

SECI identified 31 non-jurisdictional drainage features within the project site. These features include shallow, poorly defined swales, natural erosional gullies, man-made excavation features, and roadside ditches. All should be considered non-jurisdictional features and non-buffered state waters since the do not appear to contain a groundwater baseflow component and/or would not qualify as wetlands based on the three-parameter approach. Nearly all of the features showed no signs of positive hydrology. No signs of flowing water or wrested vegetation were present in any feature.

Table 3. Gullies/Erosional Features Data

G/EF ID	Width	Depth
GEF 2	9'	6'
GEF 3	4'	3'
GEF 1	4'	4'
GEF 4	4'	4'
GEF 5	5'	7'
GEF 6	12'	4'
GEF 7	8'	2'
GEF 8	6'	1'
GEF 9	10'	4'
GEF 10	4'	3'
GEF 11	8'	5'
GEF 12	5'	5'
GEF 13	16'	4'
GEF 14	9'	3'
GEF 15	10'	2'
GEF 16	6'	2'
GEF 17	3'	1'
GEF 18	10'	6'
GEF 19	5'	3'
GEF 20	8'	5'
GEF 21	8'	3'
GEF 22	15'	4'
GEF 23	12'	5'

GEF 24	13'	4'
GEF 25	5'	3'
GEF 26	6'	3'
GEF 27	6'	3'
GEF 28	5'	3'
GEF 29	5'	4'
GEF 30	4'	2'
GEF 31	7'	2'

VII. EXISTING CROSSINGS

The survey for existing crossings was conducted to identify road crossings associated with a wetland, stream, or gully/erosional feature. SECI identified 37 existing road crossings within or immediately adjacent to the project corridor. Nine consist of public roads, 21 consist of raised road crossing with a culvert, pipe, or pond outfall structure, one is a raised road with no pipe, and six are low water crossings. The majority of existing roads within the survey corridor are in good shape, and culverts (where present) range from 12" plastic pipes to 48" concrete culverts. Two large drainage structures – a 72" culvert and a 6' x 12' box culvert were also identified.

Table 4. Existing Crossings Data

Crossing ID	Type	End	Width	Length	Pipe Length	Pipe Size	Water Feature	Material	In ROW
Pipe 1	Culvert	Downstream	12'	10'	20'	24"	Jwat 4	CMP	No
Public Road 5	Headwall	Upstream	35'	20'	30'	6'x12' Box	Jwat 10	Concrete	No
Pipe 7	Culvert	Downstream	12'	5'	30'	24"	Jwat 13	Concrete	Yes
Public Road 10	Culvert	Upstream	+/- 24'	75'	+/-80'	48"	Jwat 22/Jwet 12	Concrete	Yes
Public Road 12	Culvert	Upstream	+/- 24'	10'	+/- 65'	36"	Jwat 25	Concrete	Yes
Rock 13	Low Water	Center	15'	15'	N/A	N/A	Jwat 28	Rock	Yes
Public Road 14	Culvert	Downstream	+/- 24'	5'	+/- 55'	24"	Jwat 34b	CMP	Yes
Rock 16	Low Water	Center	15'	25'	N/A	N/A	Jwat 44	Rock	Yes
Pipe 17	Culvert	Downstream	10'	10'	Unk.	24"	Jwat 27	Concrete	Yes
Pipe 15	Culvert	Upstream	10'	5'	30'	48"	GEF 15	Concrete	Yes
Pipe 18	Culvert	Downstream	12'	170'	25'	(2) 36"	Jwat 45/Jwet 28	CMP	Yes
Pipe 19	Culvert	Downstream	12'	120'	28'	36"	Jwat 46/Jwet 29	CMP	Yes
Pipe 20	Culvert	Downstream	12'	125'	18'	36"	Jwet 31	CMP	Yes
Rock 21	Low Water	Center	12'	5'	N/A	N/A	Jwat 48	Rock	Yes
Pipe 22	Culvert	Upstream	12'	5'	32'	36"	Jwat 50	CMP	Yes
Pipe 24	Culvert	Upstream	12'	10'	45'	48"	Jwat 51	CMP	Yes
Public Road 26	Culvert	Downstream	+/- 24'	25'	160'	48"	Jwat 54	Concrete	Yes
Pipe 28	Culvert	Upstream	15'	10'	24'	24"	Jwat 57/Jwet 43	CMP	Yes
Pipe 31	Culvert	Downstream	12'	8'	18'	Unk	Jwet 47	Unk	Yes

Pipe 32	Culvert	Upstream	15'	7'	18'	48"	Jwat 59	CMP	Yes
Pipe 33	Culvert	Upstream	15'	120'	20'	12"	Jwet 49	Plastic	Yes
Pipe 34	Culvert	Upstream	12'	10'	26'	36"	Jwat 60	CMP	Yes
Pipe 35	Culvert	Upstream	15'	10'	Unk	Unk	Jwat 60	Unk	Yes
Rock 30	Low Water	Center	12'	10'	N/A	N/A	Jwet 46	Rock	Yes
Raised Road 29	Rocked Road	Center	12'	25'	N/A	N/A	Jwet 44	Rock	Yes
At-Grade 25	Low Water	Center	12'	120'	N/A	N/A	Jwet 35	Sand/Clay	Yes
Pipe 23	Culvert	Upstream	12'	5'	32'	36"	GEF 18	CMP	Yes
Public Road 2	Culvert	Downstream	20'	5'	30'	36"	Jwat 7	Plastic	Yes
Public Road 3	Culvert	Downstream	20'	5'	30'	12"	Jwat 8	Plastic	Yes
Public Road 4	Culvert	Downstream	20'	5'	30'	36"	Jwat 9	Plastic	Yes
Pipe 6	Culvert	Upstream	15'	5'	35'	24"	GEF 3	CMP	Yes
Pipe 8	Culvert	Downstream	10'	5'	16'	24"	Jwat 14	Concrete	No
Rock 9	Low Water	Center	10'	8'	N/A	N/A	Jwat 19	Rock	Yes
Public Road 11	Culvert	Upstream	+/- 24'	365'	+/- 65'	48"	Jwat 24/Jwet 13	Concrete	Yes
Pipe 27	Culvert	Downstream	15'	10'	32'	36"	Jwat 56a	CMP	Yes
Pipe 8.1	Culvert	Upstream	25'	25'	Unk	Unk	Jwat 15	Concrete	No
Outfall 14.1	Pond Outfall	Downstream	20'	50'	+/- 100'	72"	Jwat 40	Concrete	No

CMP = Corrugated Metal Pipe; RCP = Reinforce Concrete Pipe; Unk = Unknown (structure not observable or accessible)

VIII. ACCESS ISSUES

The survey for access issues was conducted to identify any objects or areas that may pose a potential threat, hindrance, inconvenience, or aid to access. Additionally, the access issues shapefile was used to note any particular features that were noticed during the ecology survey such as small depressions that would not be considered wetland, discontinuous fence sections, etc. A total of 26 potential access issues or areas of interest were identified. Some could pose a hindrance to on-R/W access while others were noted as areas to avoid. Access issues range from deep streams with no crossings, to rubble piles, existing buildings, deep erosion, fences, steep slopes/berms, and potential wetland mitigation/conservation area within the KIA property.

Table 5: Access Issues Data

ID	Access Type	Comment
0	Erosion	Eroded hole by culvert. 30'x30'x5'
1	Erosion	Hill erosion and borrow pit area
2	Steep Bank	10' Vertical bank up from road
3	Spillway	Concrete lined spillway. 55'x12'
4	Outfall	Rip-Rap lined stormwater outfall
5	Railroad	Steep rail berm across R/W
6	Substation	Substation with 12' vertical gabion walls
7	Rip-Rap	Rap-rap in edge of the woods
8	Railroad	Railroad bed across R/W

9	Steep bank	Steep river bluff (+/- 40-50' high)
10	Gate	Fence across and along west side of R/W
11	Building Corner	Building partially within R/W
12	Gate	Chain link fence across R/W
13	Depression	Wet depression in R/W. 10'x12'. Not wetland
14	Stream	Deep stream with steep bank on southwest side
15	Stream	Deep, wide stream with no access across
16	Fence	Chain link fence around old weigh station
17	Rubble	Asphalt rubble pile in R/W
18	Outfall	Large storm outfall from Kia plant
19	Swale	Wet swale adjacent to R/W
20	Gate	Fence across R/W
21	Gate (not GTC lock)	Fence across and along R/W
22	Mitigation Area	All Kia wetlands/streams potentially preserved
23	Fence Corner	Fence around WWTP
24	Mitigation Area	All Kia wetlands/streams potentially preserved
25	Mitigation Area	All Kia wetlands/streams potentially preserved

IX. HABITATS OF CONCERN

No federally listed habitats of concern were identified during the ecology survey. Habitats within the project area are very common for the region. No high quality habitats suitable to sustain protected species on a permanent basis were observed. However, as noted above, property in the vicinity of the KIA plant is posted with "Mitigation Area" signs, so this property could potentially be under a conservation easement or restrictive covenant recorded as part of the property permitting.

X. THREATENED AND ENDANGERED SPECIES

The survey for state and federally protected species and habitats was conducted to identify any potential impacts associated with the project. The U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) System was consulted to determine which federally protected species are listed for the project site. The Georgia Rare Natural Elements (GRNE) list was consulted to determine which state protected species were listed as threatened, endangered, rare, or unusual in Troup County. A request for known species occurrences in the vicinity of the project area was submitted through the Georgia Natural Archeological Historical GIS (GNAHRGIS) Ecology Review and Survey Module. The IPaC Record, the GRNE list, and the draft GNAHRGIS letter are attached to this report. The Rare Species Profiles on the Georgia Department of Natural Resources (GDNR) website (http://www.georgiawildlife.com/node/2721) were then consulted to determine suitable habitats for federally or state protected species within Troup County. Pursuant to the Endangered Species Act of 1973, the Georgia Endangered Wildlife Act, and Georgia's Wildflower Preservation Act of 1973, a pedestrian survey was conducted to identify protected individuals and/or potential habitat for protected individuals within the project area. Species listed on the IPaC or GRNE list comprise the species for which the survey was conducted:

Table 6: State and Federally Listed Species

Scientific Name	Common Name	Federal Status	State Status	Effects Determination
AQUATICS				
Cambarus harti	Piedmont Blue Burrower	N	E	MANLAA
Cambarus howardi	Chattahoochee Crayfish	N	T	MANLAA
Cyprinella callitaenia	Bluestripe Shiner	N	R	MANLAA
Notropsis hypsilepis	Highscale Shiner	N	T	MANLAA
MAMMAL				
Myotis septentrionalis	Northern Long-eared Bat	E	E	MANLAA
Perimyotis subflavus	Tricolored Bat	PE	N	MANLAA
Puma concolor coryi	Florida Panther	E	E	NE
BIRDS				
Grus americana	Whooping Crane	EPNE	N	NE
Haliaeetus leucocephalus	Bald Eagle	BGEPA	T	NE
Laterallus jamaicensis spp. *jamaicensis*	Eastern Black Rail	T	T	NE
INSECTS				
Danus plexippus	Monarch Butterfly	C	N	NLJ
REPTILES				
Macrocheelys temminckii	Alligator Snapping Turtle	PT	T	NE
PLANTS				
Schisandra glabra	Bay Star-vine	N	T	NE
Arabis georgiana	Georgia Rockcress	T	T	NE

E = Endangered; PE = Proposed Endangered; T = Threatened; PT = Proposed Threatened; R = Rare; U = Unusual; C = Candidate; N = No Listing; EPNE = Experimental Population, Non-Essential; BGEPA = Bald & Golden Eagle Protection Act; NLJ = Not Likely to Jeopardize

Piedmont Blue Burrower

This crayfish is deep blue in color with robust claws and reaches a maximum total body length of about three inches. It is found in creek systems that drain into the Flint and Chattahoochee rivers in Coweta, Fayette, Meriwether, Pike, and Troup counties in west-central Georgia. It was also discovered in a tributary to South Creek in Dekalb County within the Ocmulgee River system in 2005 and has subsequently been found in Henry, Monroe, and Newton counties. It inhabits complex burrows adjacent to streams and seepage areas or in low areas where the water table is near the surface of the ground. The project site crosses suitable habitat for this species included bottomland floodplain wetlands adjacent to Long Cane Creek, Blue John Creek, and the Chattahoochee River. However, project related impacts to these wetlands which may include forested wetland clearing adjacent to existing transmission line R/W should be relatively minor and not result in a long-term loss or adverse impact to the overall ecosystem. Additionally, other suitable habitat is available outside the area of disturbance and throughout the region. Therefore, this project may affect but is not likely to adversely affect this species.

Chattahoochee Crayfish

The Chattahoochee Crayfish has been found in clear, free-flowing waters, often in riffle habitat and has been collected in a range of stream sizes, from smaller tributary streams to the mainstem Chattahoochee River. It is widespread in the Chattahoochee River system from Columbus to its headwaters in Lumpkin and Habersham Counties. Recent collections have revealed native populations in the upper and

middle Oconee River system in Barrow, Jackson, and Newton Counties and in the upper Flint system in Coweta County. This stream-dwelling species usually shelters under rocks during the day and comes out to feed at night. It grows to about three inches in length and is bronze to bluish-green on the claws, carapace, and abdomen. The project site crosses Long Cane Creek, Blue John Creek, and other perennial tributaries with riffles and rocky substrate which may support the Chattahoochee Crayfish. While clearing adjacent to these creeks could affect water temperature and water quality within the immediate area, it is unlikely that these localized impacts would adversely affect the overall population of this species. Construction of any road crossings could have the potential to affect this species as well, but impacts would likely be minor and localized. Additionally, other suitable habitat is available outside the area of disturbance and throughout the region. Therefore, this project may affect but is not likely to adversely affect this species.

Bluestripe Shiner

The bluestripe shiner is a small (3.5 in) fish with a blue lateral stripe running from the gills to the base of the caudal fin. It is found in mainstem reaches of rivers and large streams in riffles and runs with rubble or sand substrate and are most often collected in areas with swift current velocities. It has also been found in the lower reaches of several small impounded tributaries to the Chattahoochee River where the backwaters of the reservoir mimic large stream habitat. Specifically, in the middle section of the Chattahoochee River it can be found in several small, western tributaries whose lower reaches have been inundated by mainstem reservoirs. In Georgia, this species has been collected from the Chattahoochee and Flint River systems. The project site crosses Long Cane Creek, Blue John Creek, and the Chattahoochee River which may support the bluestripe shiner. While clearing adjacent to these creeks could affect water temperature and water quality within the immediate area, it is unlikely that these localized impacts would adversely affect this species. Construction of any road crossings could have the potential to affect this species as well, but impacts would be minor and localized. Additionally, other suitable habitat is available outside the area of disturbance and throughout the region. Therefore, this project may affect but is not likely to adversely affect this species.

Highscale Shiner

The highscale shiner is slender minnow up to 2.5 inches in length with large eyes set high on the head and a blount snout. It primarily occurs in the Chattahoochee and Flint River systems of Georgia and Alabama, from the headwaters of these systems to just below the Fall Line. The majority of records are within the Piedmont portion of the Chattahoochee River system, downstream from Lake Lanier. Highscale shiners are primarily found in tributary streams, often near stream confluences with larger rivers where they inhabit runs and pools over sand and bedrock substrates. As mentioned above, the project site crosses Long Cane Creek, Blue John Creek, and the Chattahoochee River which may support the highscale shiner. While clearing adjacent to these creeks could affect water temperature and water quality within the immediate area, it is unlikely that these localized impacts would adversely affect this species. Construction of any road crossings could have the potential to affect this species as well, but impacts would be minor and localized. Additionally, other suitable habitat is available outside the area of disturbance and throughout the region. Therefore, this project may affect but is not likely to adversely affect this species.

Northern Long Eared Bat:

The northern long eared bat averages 3.5 inches in length with females being slightly larger than males. The bat is easily distinguishable from other bats by the length of its ears and tail. The bat is found in 37 states. Northern long eared bats roost in trees and artificial structures during the spring and summer, and switch roost sites every other day. They migrate to caves in the fall to hibernate. Due to their echolocation abilities, they are suited to forage in forested areas. They forage under the forest canopy or along forest edges within two hours of sunset. Their diet consists of mainly moths, but will feed on beetles, flies, and other insects. They will feed by gleaning or plucking their prey rather than catching them in flight. The major threat to the northern long eared bat is white nose syndrome which has killed approximately 99% of the northern population. No caves, rock crevices, culverts, or bridges are present on the project site. Though clearing of forested area is required for the proposed project, there is an abundant amount of similar habitat adjacent to the site and throughout the region which could provide alternative habitat. It was

therefore determined that the proposed project may affect but is not likely to adversely affect northern long eared bat.

Tricolored Bat

The tricolored bat is widely distributed throughout the eastern United States and Canada and ranges west to Kansas. It is one of the smallest bats in eastern North America. This bat species is susceptible to white-nose syndrome, which is a devastating disease to hibernating bats in North American caves. Winter roosts are composed of caves, mines, cavelike tunnels, trees, or roadway culverts. Summer roosts are mainly in dead or live tree foliage, but they may also be in caves, mines, rock crevices, bridges, and culverts. They emerge from hibernation in the spring to forage in nearby riparian and forested habitats. Because tricolored bats may use any forested area as habitat, suitable habitat is present within the project corridor and will be affected by clearing associated with project development. However, there is an abundant amount of similar forested habitat in the area which could provide alternative habitat for any bats that may be disturbed by construction. It was therefore determined that the project "may affect, but is not likely to adversely affect" tricolored bat. This species is currently proposed for listing in the Federal Register. GTC will coordinate with USFWS on any species with a probability of occurrence, such as the tricolored bat (*Perimyotis subflavus*), which is currently not listed under the ESA but may be added prior to the start of construction.

Florida Panther

Florida panthers require large, contiguous areas of suitable habitat. They prefer dense understory vegetation to aid in hunting and denning. They are thought to have once ranged from eastern Texas and Arkansas through Mississippi, Alabama, Georgia, and Florida. This panther subspecies was likely once found over almost the entire state of Georgia. Today, however, the Florida panther is restricted to less than 5% of its historic range with the Okefenokee Swamp as the last stronghold for this species in Georgia, where it was encountered fairly regularly until about 1920. The current population is restricted to about 3.1 million acres in the Big Cypress and Everglades regions of southern Florida. Though the project crosses large blocks of woods, it is not known to exist in middle-western Georgia. Therefore, it is unlikely that this species would occur within the project area, and the project would have no effect on the Florida panther.

Whooping Crane

The whooping crane is the tallest bird in North America at nearly five feet in height. Its long neck, wings, and legs complement its slender body, which widens to a bustle of feathers at the tail. Neck, cheeks, body, and wings of adults are bright white, with black wingtips and dark gray to black legs. The bill is long, grayish, and dagger-like. A broad, red to black stripe extends from the front of the eye downward to the side of throat, and a red crown stretches from the base of the bill to the top of the head and a black stripe extends from the terminus of the red crown to the nape. Whooping cranes regularly travel through Georgia during migration and a small number of individuals have been documented wintering in the southern portion of the state. Nesting occurs in shallow herbaceous wetlands within prairies, grasslands, or poorly drained areas. During migration this species uses shallow river flats but can also be found in agricultural fields. Preferred wintering sites include Gulf Coastal brackish marshes and estuaries, herbaceous freshwater wetlands, and agricultural landscapes with adequate food resources. The proposed project would not impact suitable nesting or wintering habitat for this species, and the impacts to any wetland or floodplain habitat would not affect migrating whooping cranes. Therefore, the proposed project would have no effect on the whooping crane.

Bald Eagle

The bald eagle is a riparian species whose general habitat consists of the coasts, rivers, and lakes near their nesting sites. Although tree selection and nesting sites vary, these birds typically nest in the tallest tree to allow for an open and clear viewing point and within 0.8 kilometers (0.5 miles) from the water body used for feeding. These birds are opportunistic feeders and will take a variety of prey, both living and dead, fish being the prey of choice. On June 9, 2007, the Federal Register announced the USFWS removal of the bald eagle from the federal list of endangered and threatened wildlife, which became effective August 8, 2007. The species, however, is still protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. During the pedestrian survey, no bald eagle nest sites were identified within or

adjacent to the project area, and the closest known location as listed in the attached letter from GDNR is 0.99 mile west of the project corridor. Because the project area crosses open water habitat associated with the Chattahoochee River, the project corridor may contain foraging habitat suitable for the bald eagle; however, given the lack of evidence of existing eagle nest sites adjacent to the project corridor, it was determined that the project would not result in "take", as defined under the Bald and Golden Eagle Protection Act. Therefore, the proposed project should have no effect on the bald eagle.

Eastern Black Rail

The eastern black rail is the smallest rail in North America. Adults are pale to blackish gray in color with a chestnut brown patch on the nape and upper back and scattered white spots. It inhabits high marsh areas that are infrequently inundated by tides as well as shallowly flooded freshwater marshes, wet meadows, and flooded grassy fields. Suitable saltmarsh habitat is typically dominated by cordgrass (*Spartina patens*, *S. alterinflora*, *S. bakeri*), saltgrass (*Distichlis spicata*), black needle rush (*Juncus roemerianus*), and occasionally glasswort (*Salicornia virginica*). Freshwater sites are dominated by grasses, rushes, and sedges. Ideal habitat is usually areas of moist soils with scattered small pools. The species is found throughout the Gulf Coast, inland areas, and the Atlantic Coast from Connecticut to Florida with resident populations found from North Carolina to south Florida. There are known concentrations in New Jersey; Chesapeake Bay; Cedar Island, North Carolina; Bear Island WMA, South Carolina; and the St. Johns River, Florida. The project site contains emergent wetlands, but they are not typical of a freshwater marsh habitat. Since the project corridor does not contain habitat suitable to support this species, the project will have no effect on the eastern black rail.

Monarch Butterfly

The monarch butterfly may be the most recognizable butterfly in North America with its easily-recognizable black, orange, and white pattern on the wings. The eastern North American population is notable for its annual late-summer/autumn migration from the northern and central United States and to Florida and Mexico which cover thousands of miles. In the Americas, the monarch can be found nearly anywhere from southern Canada through northern South America, and has been found on various islands throughout the Caribbean, Atlantic and Pacific Oceans. Overwintering populations are found in Mexico, California, along the Gulf Coast of the United States, year-round in Florida, and in Arizona where the habitat has the specific conditions necessary for their survival. Wintering habitat typically provides access to streams, plenty of sunlight, and appropriate roosting vegetation including various hardwood species. Breeding habitat includes agricultural fields, pasture, prairie, residential areas, gardens, trees, and roadsides. The species is threatened by extreme weather events, agricultural practices that control milkweeds, and climate change. Available habitat is present for this species throughout the region, but any land disturbance associated with the project would not affect wintering habitat. Therefore, the project would have no effect on this species.

Alligator Snapping Turtle

Among the largest freshwater turtle species in the world, alligator snapping turtles may weigh over 220 lbs and reach lengths up to 31 inches. The carapace is broad and bears three jagged ridges along its length. The carapace is dark-brown to reddish-brown and patternless. The enormous head is triangular and has an elongated snout with strongly hooked jaws. The long tail has three dorsal rows of tubercles. Alligator snapping turtles are found in Gulf of Mexico drainages from southeastern Georgia to Texas and north along the Mississippi River to southeastern Iowa. This turtle is primarily confined to the Coastal Plain, although a significant population was recently discovered in the Piedmont portions of the Flint River and its tributaries. They inhabit large streams and rivers and associated impoundments. They prefer portions of streams with undercut banks, log jams, and deep holes. While this species could occur within the Chattahoochee River, no adverse effects to the river would occur as part of this project. Therefore, the proposed project would have no effect on the alligator snapping turtle.

Bay Star-Vine:

The bay star-vine is scattered throughout the Southeastern U.S. from Louisiana to northeastern North Carolina, and has been recorded from 16 counties in Georgia. This deciduous, woody vine has stems to

three centimeters thick, twining up to the crowns of trees or trailing along the ground. Sometimes large clumps of leaves form a ground cover, resembling a sprawling Virginia creeper (*Parthenocissus quinquefolia*). The best time to search for the plant is from late spring to middle summer, since leaves tend to fall early. This vine is found twining over understory trees and shrubs in rich, forested bottomlands and adjacent lower slopes; sometimes older vines occur on trunks of overstory trees, or sprawl along the ground forming patches rooted in the litter, especially near mountain laurel (*Kalmia latifolia*) thickets. At most, this species will tolerate only hand thinning of trees in its immediate vicinity, and only if done carefully. Due to the significant clearing associated with the existing transmission line, existing development, and existing pine plantation, suitable habitat for this species is not located within the majority of the project site. Additionally, no specimens were observed during the pedestrian survey within existing forested habitats, and no individuals or populations are known to occur within three miles of the project area. For these reasons, it is our opinion that no bay star-vine is located within or immediately adjacent to the project corridor, and any land disturbing activities associated with the existing transmission line should have no effect on this species.

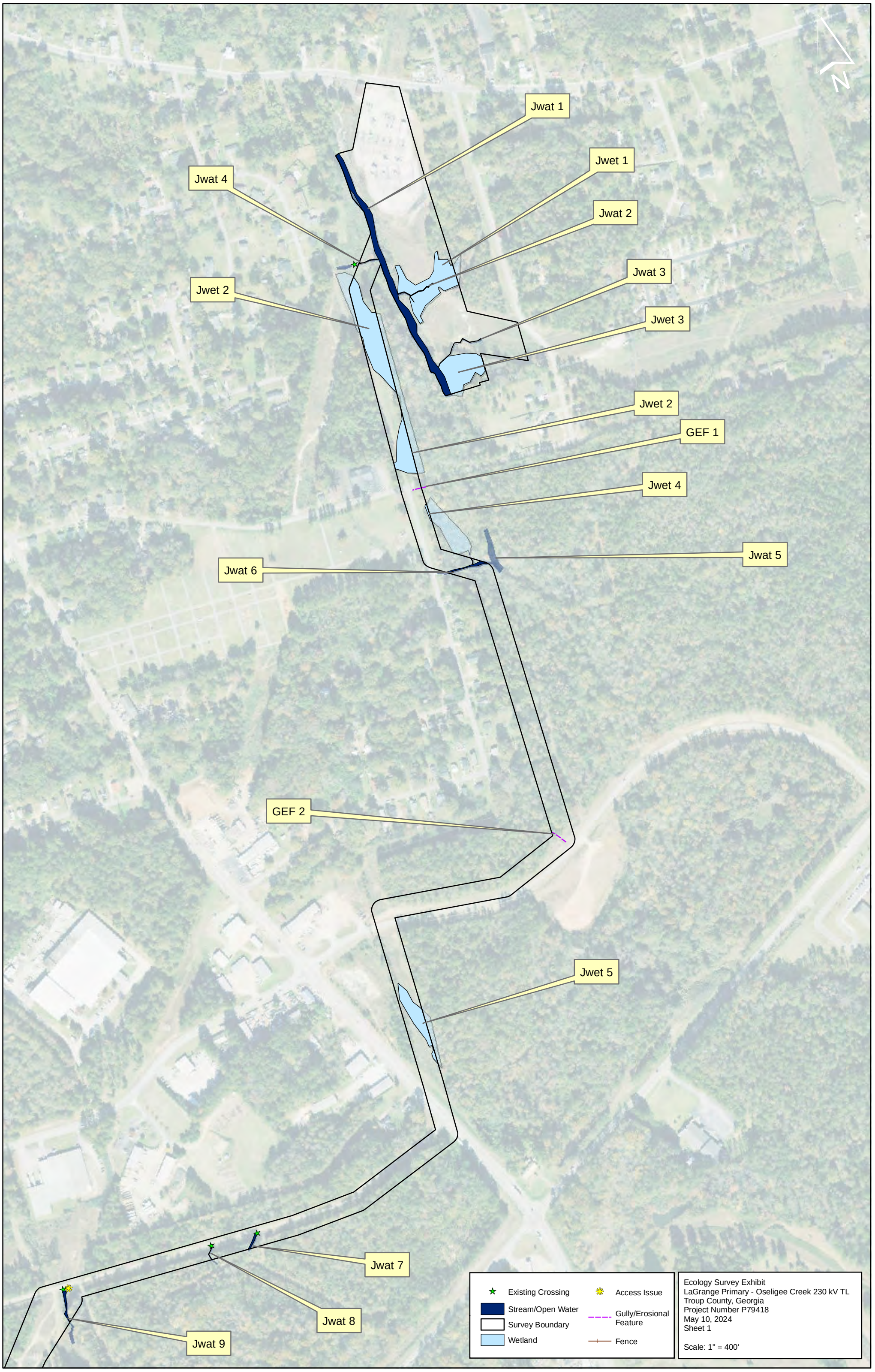
Georgia Rockcress:

The Georgia rockcress is a perennial herb with unbranched stems up to 3 feet. It is found in shallow, basic or circumneutral soils on rocky slopes and bluffs above streams, sandy loam along eroding riverbanks, and thin woods on limestone or granite bluffs. Although it is occasionally found in adjacent moist forests or woodlands, it will not persist in heavily shaded conditions. It requires high to moderate light conditions, and occurs on soils that have a circumneutral to slightly basic pH. It often occurs with eastern red cedar, black oak (*Quercus velutina*), sugar maple (*Acer saccharum*), chestnut oak (*Quercus prinus*), and oakleaf hydrangea (*Hydrangea quercifolia*). No rocky slopes, terraces, or bluffs are present within the project corridor. The majority of other forested habitats consists of fully shaded environments. No Georgia rockcress was observed during the ecology survey, and none are listed by the GDNR as occurring in close proximity to the project. It was therefore determined that the proposed project would have no effect on this species.

XI. CONCLUSION

An ecology field survey of the Oseligee Creek 230/25kV Substation and the associated LaGrange Primary – Oseligee Creek 230kV Transmission Line project was conducted by SECI from February 28 – March 20, 2024. Information was collected on vegetative communities and habitats, threatened and endangered species occurrences, habitats of concern, wetlands and open waters, streams and other waters of the United States, non-jurisdictional gullies and erosional features, potential alternative access roads, access issues, and existing wetland/stream road crossings. The survey area included the proposed transmission line corridor, existing parallel transmission lines, off-right-of-way (R/W) access roads, the LaGrange Primary substation, and the proposed Oseligee Creek substation. All wetlands and stream identified are common for the piedmont region of Georgia and are associated with Blue John Creek, Long Cane Creek, or the Chattahoochee River. A variety of potential access issues were identified and data was collected on 37 existing road crossings within or immediately adjacent to the survey corridor. The survey for protected state and federal species did not identify any individual occurrences, and no species are known to occur on the site by GDNR. The site contains suitable habitat for several aquatic species and bats; however, abundant similar habitat is available in the area and any individuals that may be present during construction would be expected to relocate to nearby habitats. It was therefore determined that the proposed project should not adversely affect any protected plant or animal species.

Appendix 1. Ecology Survey Exhibit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GEF 1
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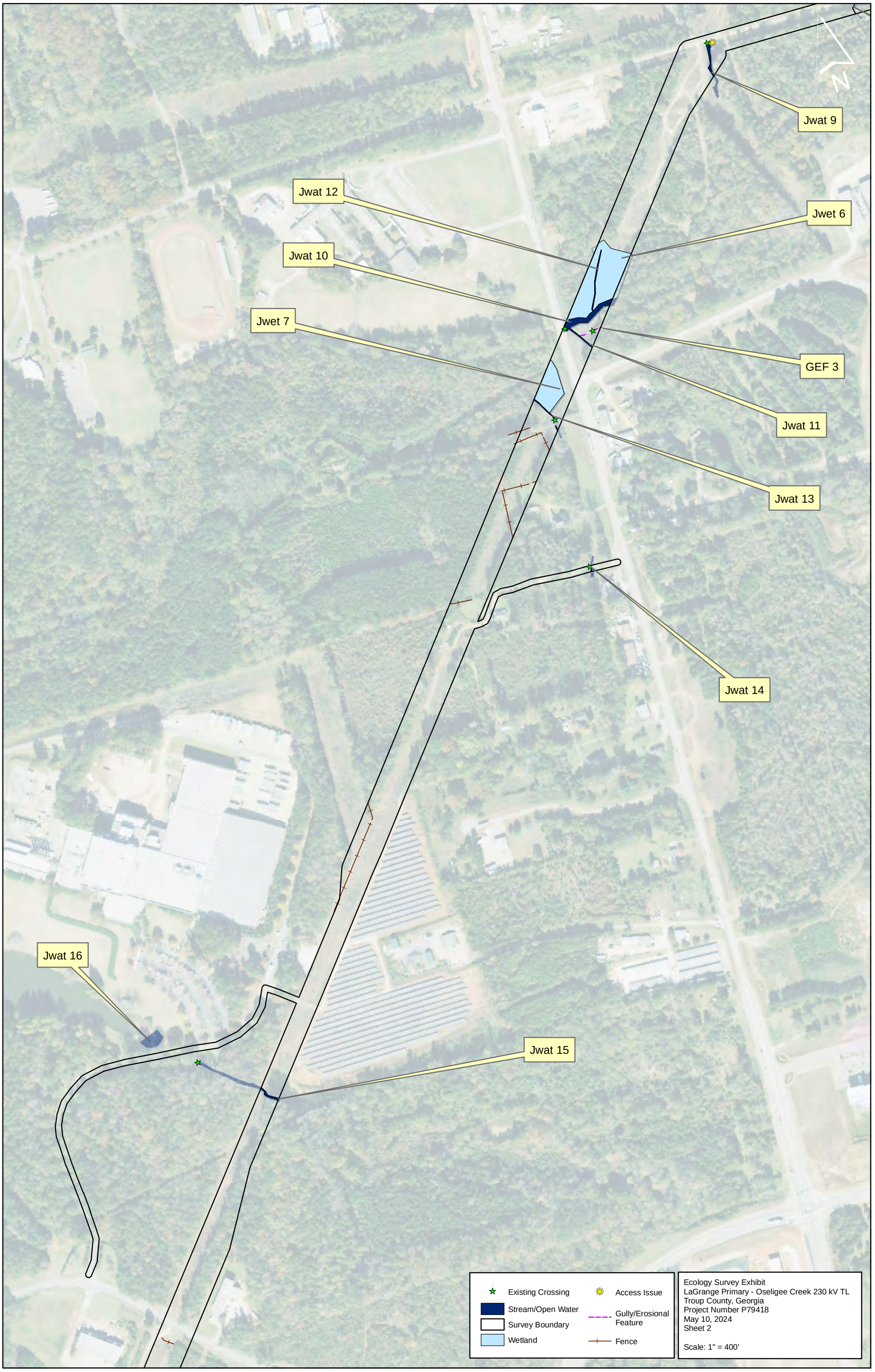
Jwat 5
Jwat 6
GEF 2
Jwet 5
Jwat 7
Jwat 8
Jwat 9
Existing Crossing
Access Issue
Stream/Open Water
Gully/Erosional Feature
Survey Boundary
Wetland
Fence
Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 1
Scale: 1" = 400'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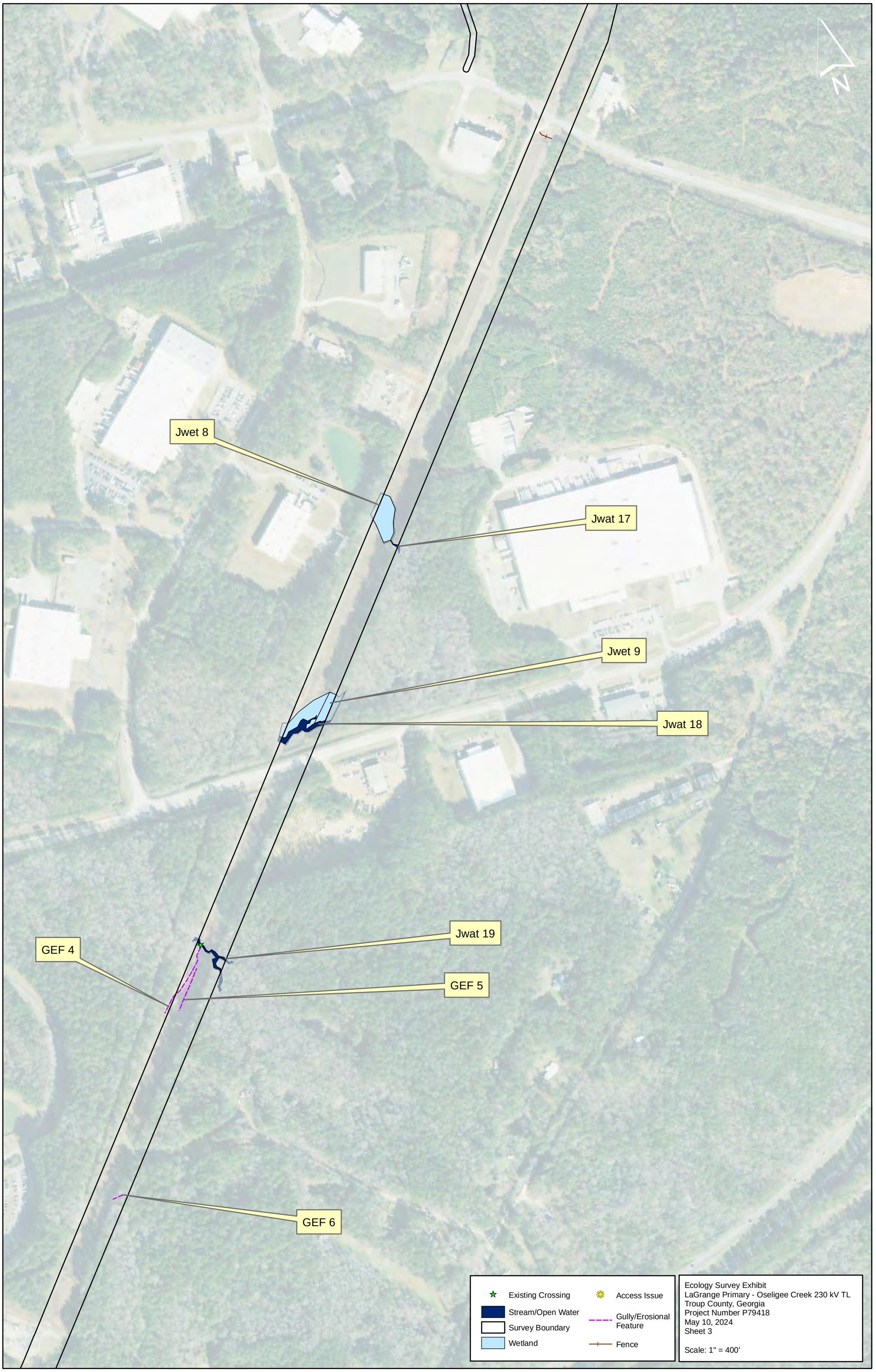
Existing Crossing
Access Issue
Stream/Open Water
Gully/Erosional Feature
Survey Boundary
Wetland
Fence
Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 2
Scale: 1" = 400'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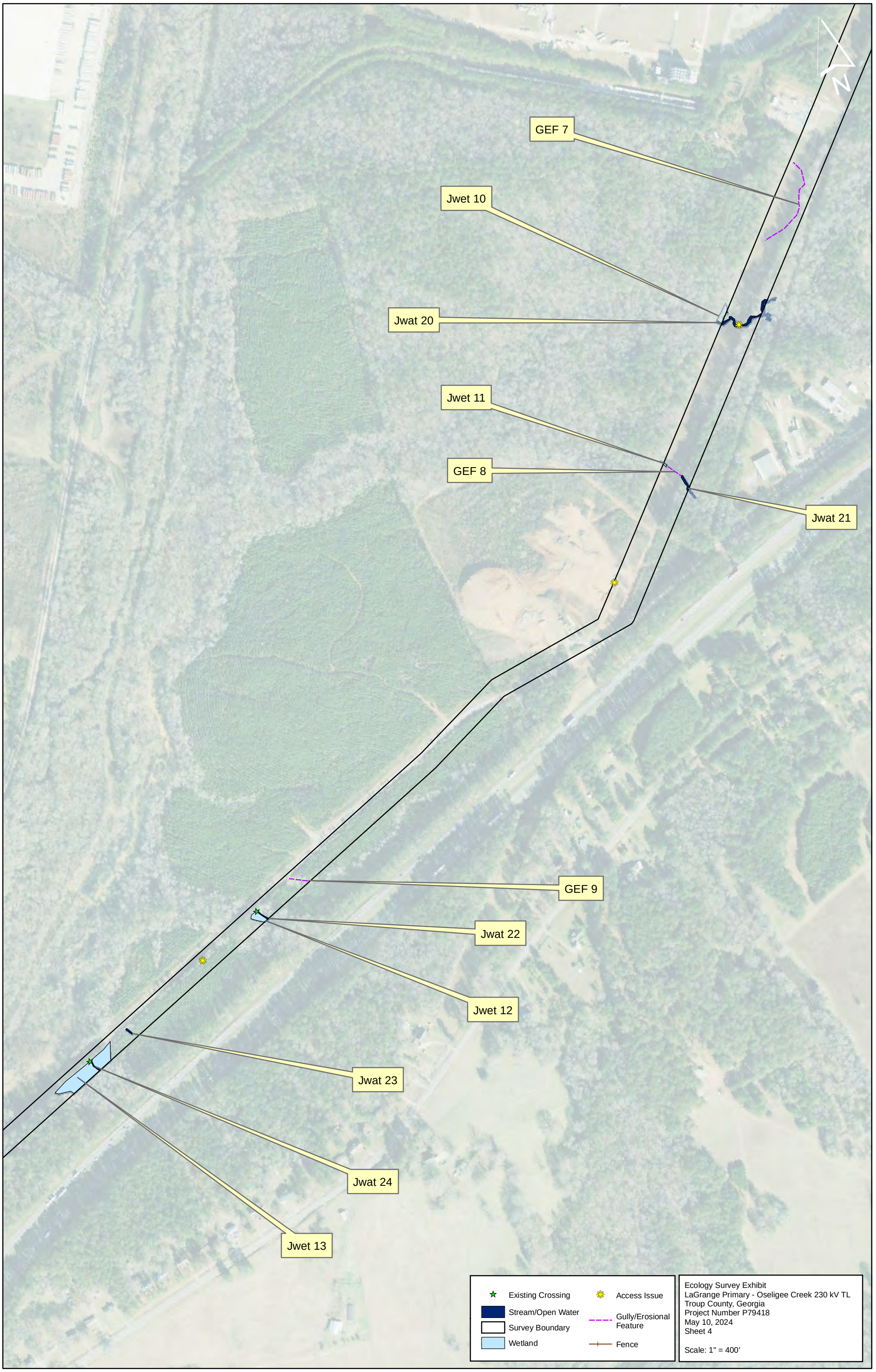
Jwet 9
Jwat 18
Jwat 19
GEF 4
GEF 5
GEF 6
Existing Crossing
Access Issue
Stream/Open Water
Gully/Erosional Feature
Survey Boundary
Fence
Wetland
Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 3
Scale: 1" = 400'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Jwet 13
Existing Crossing
Access Issue
Stream/Open Water
Gully/Erosional Feature
Survey Boundary
Fence
Wetland
Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 4
Scale: 1" = 400'


N
Jwat 24
Jwet 13
Jwat 25
Jwet 14
Jwat 26
Jwet 16
Jwat 27
Existing Crossing
Stream/Open Water
Survey Boundary
Wetland
Access Issue
Gully/Erosional Feature
Fence
Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 5
Scale: 1" = 400'

N

Jwat 28

Jwet 17

Jwet 18

Jwat 29

Existing Crossing
Access Issue
Stream/Open Water
Gully/Erosional Feature
Survey Boundary
Wetland
Fence

Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 6

Scale: 1" = 400'


N
Jwat 30
Jwat 31
Jwat 32
Jwet 19
Jwat 33
Existing Crossing
Stream/Open Water
Survey Boundary
Wetland
Access Issue
Gully/Erosional Feature
Fence
Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 7
Scale: 1" = 400'

Jwat 34b

Jwat 34a

Jwet 20

Jwat 35

Jwat 36

Jwet 21

Jwat 37

GEF 10

Jwat 38

GEF 11

GEF 12

Jwet 22

N

Existing Crossing

Access Issue

Stream/Open Water

Gully/Erosional Feature

Survey Boundary

Fence

Wetland

Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 8

Scale: 1" = 400'

Jwet 23
Jwat 39
GEF 13
Jwat 40
Jwat 41
Jwat 42
GEF 14
Jwat 43
Jwet 24
Jwet 25
GEF 15
Jwet 26
Jwat 44
Jwet 27

N

Existing Crossing
Access Issue
Stream/Open Water
Gully/Erosional Feature
Survey Boundary
Fence
Wetland

Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 9

Scale: 1" = 400'

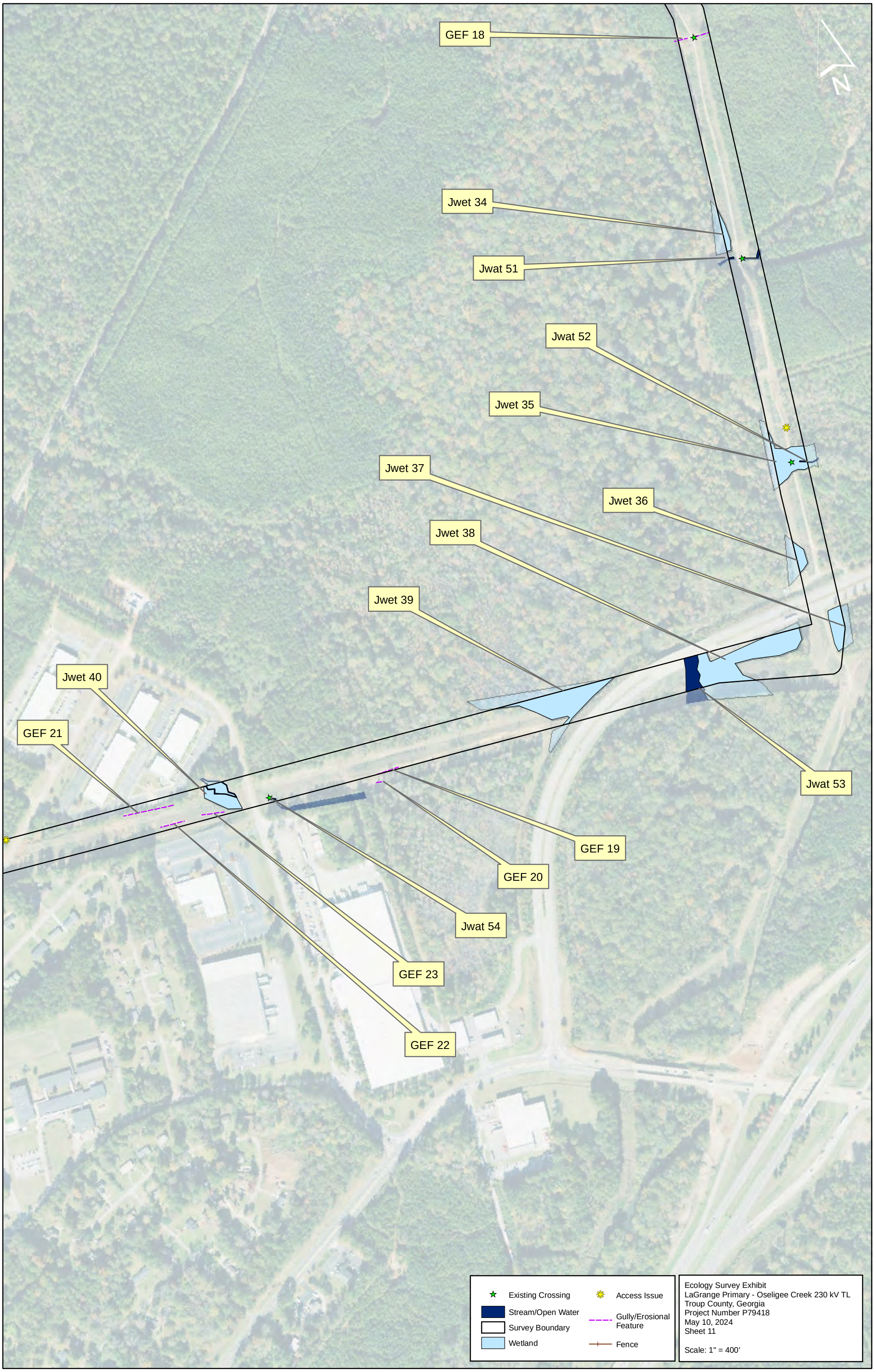
Jwat 44
Jwet 26
Jwet 27
GEF 16
Jwet 28
Jwat 45
Jwet 28
Jwat 46
Jwet 28
Jwat 29
GEF 17
Jwat 29
Jwat 30
Jwet 31
Jwat 47
Jwet 32
Jwet 33
Jwat 48
Jwat 49
Jwat 50
GEF 18

N

Existing Crossing
Access Issue
Stream/Open Water
Gully/Erosional Feature
Survey Boundary
Fence
Wetland

Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 10

Scale: 1" = 400'


GEF 18
Jwet 34
Jwat 51
Jwat 52
Jwet 35
Jwet 37
Jwet 36
Jwet 38
Jwet 39
Jwet 40
GEF 21
Jwat 53
GEF 19
GEF 20
Jwat 54
GEF 23
GEF 22
N
Existing Crossing
Access Issue
Stream/Open Water
Gully/Erosional Feature
Survey Boundary
Wetland
Fence
Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 11
Scale: 1" = 400'

N

Jwet 43

Jwet 42

Jwat 57

Jwat 56a/56b

Jwat 55

GEF 27

GEF 26

GEF 29

GEF 24/25

GEF 28

Jwet 41

Existing Crossing

Access Issue

Stream/Open Water

Gully/Erosional Feature

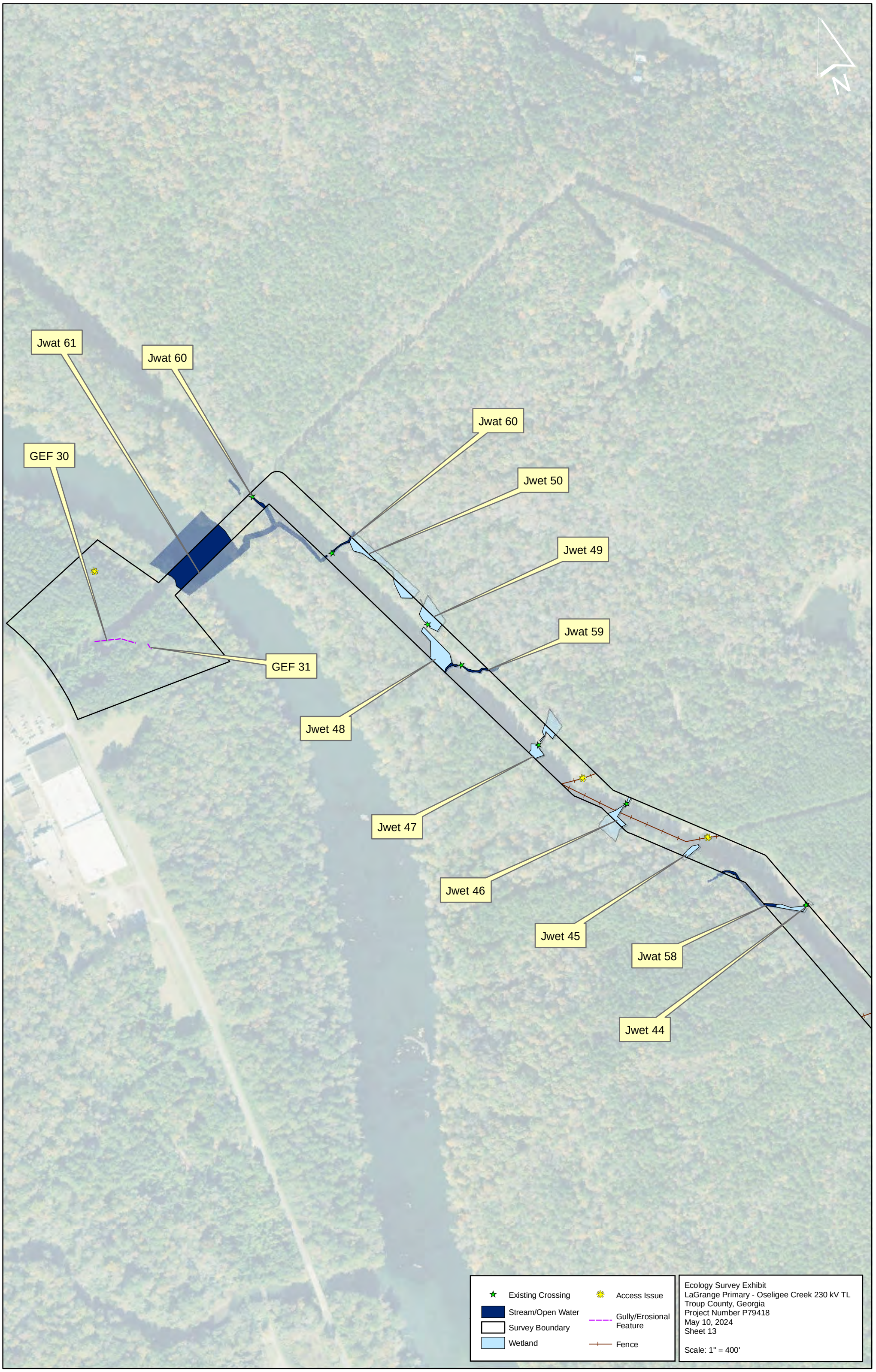
Survey Boundary

Fence

Wetland

Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 12

Scale: 1" = 400'


N
Jwat 61
Jwat 60
Jwat 60
GEF 30
Jwet 50
Jwet 49
Jwat 59
GEF 31
Jwet 48
Jwet 47
Jwet 46
Jwet 45
Jwat 58
Jwet 44
Existing Crossing
Stream/Open Water
Survey Boundary
Wetland
Access Issue
Gully/Erosional Feature
Fence
Ecology Survey Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 13
Scale: 1" = 400'

Appendix 2. Habitat Exhibit

N

Emergent Wetland
Existing Development/Roads
Forested Wetland
Maintained R/W
Mixed Hardwood Forest
Mixed Pine/Hardwood Forest
Pine Plantation
Scrub/Shrub Upland
Stream/River/Open Water

Habitat Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
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Sheet 1

Scale: 1" = 400'

N

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Troup County, Georgia
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N

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Stream/River/Open Water

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Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 3
Scale: 1" = 400'

N

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Habitat Exhibit
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Troup County, Georgia
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May 10, 2024
Sheet 4
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N

Emergent Wetland
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Stream/River/Open Water

Habitat Exhibit
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Troup County, Georgia
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May 10, 2024
Sheet 5
Scale: 1" = 400'

N

Emergent Wetland
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Stream/River/Open Water

Habitat Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 6
Scale: 1" = 400'

N

Emergent Wetland
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Habitat Exhibit
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Troup County, Georgia
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May 10, 2024
Sheet 7
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N

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Habitat Exhibit
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Troup County, Georgia
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N

Emergent Wetland
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Stream/River/Open Water

Habitat Exhibit
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Troup County, Georgia
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N

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Habitat Exhibit
LaGrange Primary - Oseligee Creek 230 kV TL
Troup County, Georgia
Project Number P79418
May 10, 2024
Sheet 13
Scale: 1" = 400'

Appendix 3. IPaC List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Georgia Ecological Services Field Office
355 East Hancock Avenue
Room 320
Athens, GA 30601-2523
Phone: (706) 460-7161 Fax: (706) 613-6059

In Reply Refer To: 04/11/2024 14:44:20 UTC
Project Code: 2024-0075761
Project Name: LaGrange Primary - Oseligee Creek

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 requesting 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 as amended (16 USC 701-715), Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Bald and Golden Eagle Protection Act as amended (16 USC 668-668c). We provide the following guidance for determining which federally imperiled species may occur within your project area and to recommend conservation measures to consider for your project if you determine those species or designated critical habitats may be affected by the project activities.

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, their designated non-Federal representative, or a project proponent 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 need additional guidance to inform your effect determination, please contact the Service.

If you determine that your proposed action may affect federally listed species, please consult with the Service. Through the consultation (for projects seeking Federal funding or permitting) or technical assistance (for non-Federal projects) process, we will work with you to evaluate information contained in a biological assessment or equivalent documents 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 "take" of federally listed threatened or endangered fish or wildlife species when it cannot be avoided. For more information regarding formal consultation and HCPs, please see the Service's Section 7 Consultation Library and Habitat Conservation Plans Library.

Action Area. The scope of ESA compliance includes direct and 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 or impacts 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. Please note that a lead federal agency may consider an action area that excludes portions of the project footprint. In these cases, further coordination with our office may be required to ensure compliance with the ESA. It is the responsibility of the project proponent to coordinate with the lead federal agency to understand the action and action area being reviewed as part of ESA Section 7 consultation.

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 you need more assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. An updated list may be requested through IPaC.

HOW TO SUBMIT A PROJECT REVIEW PACKAGE

IF YOUR ACTION MAY AFFECT ANY FEDERALLY LISTED SPECIES AND YOU WOULD LIKE TECHNICAL ASSISTANCE FROM OUR OFFICE, PLEASE SEND US A COMPLETE PROJECT REVIEW PACKAGE. A STEP-BY-STEP GUIDE IS AVAILABLE BELOW AND SUPPLEMENTAL GUIDANCE IS AVAILABLE AT THE GEORGIA ECOLOGICAL SERVICES PROJECT PLANNING AND REVIEW PAGE (HTTPS://WWW.FWS.GOV/OFFICE/GEORGIA-ECOLOGICAL-SERVICES/PROJECT-PLANNING-REVIEW).

REQUESTS FOR THREATENED AND ENDANGERED SPECIES PROJECT REVIEWS MUST BE SUBMITTED TO OUR OFFICE USING THE PROCESS DESCRIBED BELOW. ALL STEPS MUST BE COMPLETED TO ENSURE YOUR

PROJECT IS REVIEWED BY A BIOLOGIST IN OUR OFFICE AND YOU RECEIVE A TIMELY RESPONSE.

STEP 1. REQUEST AN OFFICIAL SPECIES LIST FOR YOUR PROJECT THROUGH IPAC. YOU HAVE JUST COMPLETED THIS STEP.

STEP 2. COMPLETE APPLICABLE DETERMINATION KEYS (DKEY'S, FOR SHORT)

STEP 3. SEND YOUR COMPLETE PROJECT PROJECT REVIEW PACKAGE TO GAES_ASSISTANCE@FWS.GOV FOR REVIEW IF NO DKEY IS APPLICABLE OR CERTAIN PROJECT COMPONENTS HAVE NOT BEEN ADDRESSED (I.E. A SPECIES RETURNED BY IPAC DOES NOT HAVE A DKEY). A COMPLETE PROJECT REVIEW PACKAGE SHOULD INCLUDE:

1. **A DESCRIPTION OF THE PROPOSED ACTION, INCLUDING ANY MEASURES INTENDED TO AVOID, MINIMIZE, OR OFFSET EFFECTS OF THE ACTION. THE DESCRIPTION SHALL PROVIDE SUFFICIENT DETAIL TO ASSESS THE EFFECTS OF THE ACTION ON LISTED SPECIES AND CRITICAL HABITAT, SUCH AS THE PURPOSE OF THE ACTION; DURATION AND TIMING OF THE ACTION; LOCATION (LATITUDE AND LONGITUDE); SPECIFIC ACTIVITIES INVOLVING DISTURBANCE TO LAND, WATER, AND AIR, AND HOW THEY WILL BE CARRIED OUT; CURRENT DESCRIPTION OF AREAS TO BE AFFECTED DIRECTLY OR INDIRECTLY BY THE ACTION; AND MAPS, DRAWINGS, OR SIMILAR SCHEMATICS OF THE ACTION. PLEASE SUBMIT ALL AREAS OF A PROJECT AS ONE SINGLE SUBMISSION AND DO NOT SEPARATE INTO SMALLER COMPONENTS/SUBMISSIONS.**

2. **AN UPDATED OFFICIAL SPECIES LIST AND DETERMINATION KEY RESULTS**

3. **BIOLOGICAL ASSESSMENTS (MAY INCLUDE HABITAT ASSESSMENTS AND INFORMATION ON THE PRESENCE OF LISTED SPECIES IN THE ACTION AREA);**

4. **DESCRIPTION OF EFFECTS OF THE ACTION ON SPECIES IN THE ACTION AREA AND, IF RELEVANT, EFFECT DETERMINATIONS FOR SPECIES AND CRITICAL HABITAT;**

5. **CONSERVATION MEASURES AND ANY OTHER AVAILABLE INFORMATION RELATED TO THE NATURE AND SCOPE OF THE PROPOSED ACTION RELEVANT TO ITS EFFECTS ON LISTED SPECIES OR DESIGNATED CRITICAL HABITAT (E.G., MANAGEMENT PLANS RELATED TO STORMWATER, VEGETATION, EROSION AND SEDIMENT PLANS). VISIT THE GEORGIA CONSERVATION PLANNING TOOLBOX (HTTPS://WWW.FWS.GOV/STORY/CONSERVATION-TOOLS-GEORGIA) FOR INFORMATION ABOUT CONSERVATION MEASURES.**

6. **IN THE EMAIL SUBJECT LINE, USE THE FOLLOWING FORMAT TO INCLUDE THE PROJECT CODE FROM YOUR IPAC SPECIES LIST AND THE COUNTY IN WHICH THE PROJECT IS LOCATED (EXAMPLE: PROJECT CODE: 2023-0049730 GWINNETT CO.). FOR GEORGIA DEPARTMENT OF TRANSPORTATION RELATED PROJECTS, PLEASE WORK WITH THE OFFICE OF ENVIRONMENTAL SERVICES ECOLOGIST TO DETERMINE THE APPROPRIATE USFWS TRANSPORTATION LIAISON.**

THE GEORGIA ECOLOGICAL SERVICES FIELD OFFICE WILL SEND A RESPONSE EMAIL WITHIN APPROXIMATELY 30 DAYS OF RECEIPT WITH TECHNICAL ASSISTANCE OR FURTHER RECOMMENDATIONS FOR SPECIFIC SPECIES.

WETLANDS AND FLOODPLAINS

UNDER EXECUTIVE ORDERS 11988 AND 11990, FEDERAL AGENCIES ARE REQUIRED TO MINIMIZE THE DESTRUCTION, LOSS, OR DEGRADATION OF WETLANDS AND FLOODPLAINS, AND PRESERVE AND ENHANCE THEIR NATURAL AND BENEFICIAL VALUES. THESE HABITATS SHOULD BE CONSERVED THROUGH AVOIDANCE, OR MITIGATED TO ENSURE THAT THERE WOULD BE NO NET LOSS OF WETLANDS FUNCTION AND VALUE. WE ENCOURAGE YOU TO USE THE NATIONAL WETLAND INVENTORY (NWI) MAPS IN CONJUNCTION WITH GROUND-TRUTHING TO IDENTIFY WETLANDS OCCURRING IN YOUR PROJECT AREA. THE SERVICE'S NWI PROGRAM WEBSITE (HTTPS://WWW.FWS.GOV/PROGRAM/NATIONAL-WETLANDS-INVENTORY) INTEGRATES DIGITAL MAP DATA WITH OTHER RESOURCE INFORMATION. WE ALSO RECOMMEND YOU CONTACT THE U.S. ARMY CORPS OF ENGINEERS FOR PERMITTING REQUIREMENTS UNDER SECTION 404 OF THE CLEAN WATER ACT IF YOUR PROPOSED ACTION COULD IMPACT FLOODPLAINS OR WETLANDS.

MIGRATORY BIRDS

THE MBTA PROHIBITS THE TAKING OF MIGRATORY BIRDS, NESTS, AND EGGS, EXCEPT AS PERMITTED BY THE SERVICE'S MIGRATORY BIRDS PROGRAM (HTTPS://FWS.GOV/PROGRAM/MIGRATORY-BIRDS). TO MINIMIZE THE LIKELIHOOD OF ADVERSE IMPACTS TO MIGRATORY BIRDS, WE RECOMMEND CONSTRUCTION ACTIVITIES OCCUR OUTSIDE THE GENERAL BIRD NESTING SEASON FROM MARCH THROUGH AUGUST, OR THAT AREAS PROPOSED FOR CONSTRUCTION DURING THE NESTING SEASON BE SURVEYED, AND WHEN OCCUPIED, AVOIDED UNTIL THE YOUNG HAVE FLEDGED.

WE RECOMMEND REVIEW OF BIRDS OF CONSERVATION CONCERN TO FULLY EVALUATE THE EFFECTS TO THE BIRDS AT YOUR SITE. THIS LIST IDENTIFIES BIRDS THAT ARE POTENTIALLY THREATENED BY DISTURBANCE AND CONSTRUCTION. IT CAN BE FOUND AT THE SERVICE'S MIGRATORY BIRDS

CONSERVATION LIBRARY COLLECTION (HTTPS://FWS.GOV/LIBRARY/COLLECTIONS/MIGRATORY-BIRD-CONSERVATION-DOCUMENTS).

INFORMATION RELATED TO BEST PRACTICES AND MIGRATORY BIRDS CAN BE FOUND AT THE SERVICE'S AVOIDING AND MINIMIZING INCIDENTAL TAKE OF MIGRATORY BIRDS LIBRARY COLLECTION (HTTPS://FWS.GOV/LIBRARY/COLLECTIONS/AVOIDING-AND-MINIMIZING-INCIDENTAL-TAKE-MIGRATORY-BIRDS).

BALD AND GOLDEN EAGLES

THE BALD EAGLE (*HALIAEETUS LEUCOCEPHALUS*) WAS DELISTED UNDER THE ESA ON AUGUST 9, 2007. BOTH THE BALD EAGLE AND GOLDEN EAGLE (*AQUILA CHRYSAETOS*) ARE STILL PROTECTED UNDER THE MIGRATORY BIRD TREATY ACT (MBTA) AND BALD AND GOLDEN EAGLE PROTECTION ACT (BGEPA). THE BGEPA AFFORDS BOTH EAGLES PROTECTION IN ADDITION TO THAT PROVIDED BY THE MBTA, IN PARTICULAR, BY MAKING IT UNLAWFUL TO "DISTURB" EAGLES. UNDER THE BGEPA, THE SERVICE MAY ISSUE LIMITED PERMITS TO INCIDENTALLY "TAKE" EAGLES (E.G., INJURY, INTERFERING WITH NORMAL BREEDING, FEEDING, OR SHELTERING BEHAVIOR NEST ABANDONMENT). FOR INFORMATION ON BALD AND GOLDEN EAGLE MANAGEMENT GUIDELINES, WE RECOMMEND YOU REVIEW INFORMATION PROVIDED AT THE SERVICE'S BALD AND GOLDEN EAGLE MANAGEMENT LIBRARY COLLECTION.

NATIVE BATS

IF YOUR SPECIES LIST INCLUDES INDIANA BAT (*MYOTIS SODALIS*), NORTHERN LONG-EARED BAT (*M. SEPTENTRIONALIS*), OR TRICOLORED BAT (*PERIMYOTIS SUBFLAVUS*) AND THE PROJECT IS EXPECTED TO IMPACT FORESTED HABITAT, TREE CLEARING SHOULD OCCUR OUTSIDE OF THE PERIODS WHEN BATS MAY BE PRESENT AND MOST VULNERABLE. FEDERALLY LISTED BATS COULD BE ACTIVELY PRESENT IN FORESTED LANDSCAPES FROM SPRING THROUGH FALL OF ANY YEAR. IN MUCH OF GEORGIA, OUR WINTERS ARE MILD ENOUGH THAT TRICOLORED BATS ARE LIKELY ACTIVE ON THE LANDSCAPE TO SOME EXTENT YEAR-ROUND. PUPS ARE INCAPABLE OF FLIGHT AND VULNERABLE TO DISTURBANCE FROM THE SPRING TO SUMMER. OUR RECOMMENDED SEASONAL CLEARING RESTRICTION WINDOWS DEPEND ON SPECIES AND REGION IN GEORGIA. PLEASE REACH OUT TO US FOR GUIDANCE.

INDIANA, NORTHERN LONG-EARED, TRICOLORED, AND GRAY (*M. GRISESCENS*) BATS ARE ALL KNOWN TO UTILIZE BRIDGES AND CULVERTS IN GEORGIA. IF YOUR PROJECT INCLUDES MAINTENANCE, CONSTRUCTION, OR ANY OTHER MODIFICATION OR DEMOLITION TO TRANSPORTATION STRUCTURES, A QUALIFIED INDIVIDUAL SHOULD COMPLETE A SURVEY OF THESE STRUCTURES FOR BATS AND SUBMIT YOUR FINDINGS VIA THE

“GADNR BATS IN BRIDGES” FORM IN THE SURVEY123 APP, FREE ON APPLE AND ANDROID DEVICES. PLEASE INCLUDE THESE FINDINGS IN ANY BIOLOGICAL ASSESSMENT(S) OR OTHER DOCUMENTATION THAT IS SUBMITTED TO OUR OFFICE FOR TECHNICAL ASSISTANCE OR CONSULTATION.

ADDITIONAL INFORMATION CAN BE FOUND AT GEORGIA ECOLOGICAL SERVICES' CONSERVATION PLANNING TOOLBOX AND BAT CONSERVATION IN GEORGIA PAGES.

MONARCH BUTTERFLY

ON DECEMBER 20, 2020, THE SERVICE DETERMINED THAT LISTING THE MONARCH BUTTERFLY (*DANAUS PLEXIPPUS*) UNDER THE ENDANGERED SPECIES ACT IS WARRANTED BUT PRECLUDED AT THIS TIME BY HIGHER PRIORITY LISTING ACTIONS. WITH THIS FINDING, THE MONARCH BUTTERFLY BECOMES A CANDIDATE FOR LISTING. THE SERVICE WILL REVIEW ITS STATUS EACH YEAR UNTIL WE ARE ABLE TO BEGIN DEVELOPING A PROPOSAL TO LIST THE MONARCH.

AS IT IS A CANDIDATE FOR LISTING, THE SERVICE WELCOMES CONSERVATION MEASURES FOR THIS SPECIES. RECOMMENDED, AND VOLUNTARY, CONSERVATION MEASURES FOR PROJECTS IN GEORGIA CAN BE FOUND AT THE MONARCH CONSERVATION IN GEORGIA PAGE.

EASTERN INDIGO SNAKE

OUR OFFICE HAS PUBLISHED GUIDANCE DOCUMENTS TO ASSIST PROJECT PROPONENTS IN AVOIDING AND MINIMIZING POTENTIAL IMPACT TO THE EASTERN INDIGO SNAKE. THE VISUAL ENCOUNTER SURVEY PROTOCOL FOR THE EASTERN INDIGO SNAKE (*DRYMARCHON COUPERI*) IN GEORGIA IS RECOMMENDED FOR PROJECT PROPONENTS OR THEIR DESIGNEES TO EVALUATE THE POSSIBLE PRESENCE OF THE EASTERN INDIGO SNAKE AT A PROPOSED PROJECT SITE. THE STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE (*DRYMARCHON COUPERI*) INCLUDE EDUCATIONAL MATERIALS AND TRAINING THAT CAN HELP PROTECT THE SPECIES BY MAKING STAFF WORKING ON A PROJECT SITE AWARE OF THEIR PRESENCE AND TRAITS. IN GEORGIA, INDIGO SNAKES ARE CLOSELY ASSOCIATED WITH THE STATE-LISTED GOPHER TORTOISE (*GOPHERUS POLYPHEMUS*), A REPTILE THAT EXCAVATES EXTENSIVE UNDERGROUND BURROWS THAT PROVIDE THE SNAKE SHELTER FROM WINTER COLD AND SUMMER DESICCATION.

SOLAR ENERGY DEVELOPMENT

THE RECOMMENDED PRACTICES FOR THE RESPONSIBLE SITING AND DESIGN OF SOLAR DEVELOPMENT IN GEORGIA (PUBLISHED IN SEPTEMBER 2023) ARE

INTENDED TO PROVIDE VOLUNTARY GUIDANCE TO SUPPORT CONSIDERATION OF NATURAL RESOURCES DURING THE DEVELOPMENT OF PHOTOVOLTAIC SOLAR IN GEORGIA. FURTHERMORE, THE GEORGIA LOW IMPACT SOLAR SITING TOOL (LISST) IS ALSO AVAILABLE AS A MAP LAYER IN IPAC (FIND IT IN THE "LAYERS" BOX > "ENVIRONMENTAL DATA") TO PROVIDE PROJECT MANAGERS WITH THE DATA TO IDENTIFY AREAS THAT MAY BE PREFERRED FOR LOW-IMPACT DEVELOPMENT. THE TOOL SEEKS TO SUPPORT THE ACCELERATION OF LARGE-SCALE SOLAR DEVELOPMENT IN AREAS WITH LESS IMPACT TO THE ENVIRONMENT.

STATE AGENCY COORDINATION

ADDITIONAL INFORMATION THAT ADDRESSES AT-RISK OR HIGH PRIORITY NATURAL RESOURCES CAN BE FOUND IN THE STATE WILDLIFE ACTION PLAN (HTTPS://GEORGIAWILDLIFE.COM/WILDLIFEACTIONPLAN), AT GEORGIA DEPARTMENT OF NATURAL RESOURCES, WILDLIFE RESOURCES DIVISION BIODIVERSITY PORTAL (HTTPS://GEORGIAWILDLIFE.COM/CONSERVATION/SPECIES-OF-CONCERN), GEORGIA'S NATURAL, ARCHAEOLOGICAL, AND HISTORIC RESOURCES GIS PORTAL (HTTPS://WWW.GNAHRGIS.ORG/GNAHRGIS/INDEX.DO) PAGES.

THANK YOU FOR YOUR CONCERN FOR ENDANGERED AND THREATENED SPECIES. WE APPRECIATE YOUR EFFORTS TO IDENTIFY AND AVOID IMPACTS TO LISTED AND SENSITIVE SPECIES IN YOUR PROJECT AREA. FOR FURTHER CONSULTATION ON YOUR PROPOSED ACTIVITY, PLEASE EMAIL GAES_ASSISTANCE@FWS.GOV AND REFERENCE THE PROJECT COUNTY AND YOUR SERVICE PROJECT TRACKING NUMBER.

THIS LETTER CONSTITUTES GEORGIA ECOLOGICAL SERVICES' GENERAL COMMENTS UNDER THE AUTHORITY OF THE ENDANGERED SPECIES ACT.
Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

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".

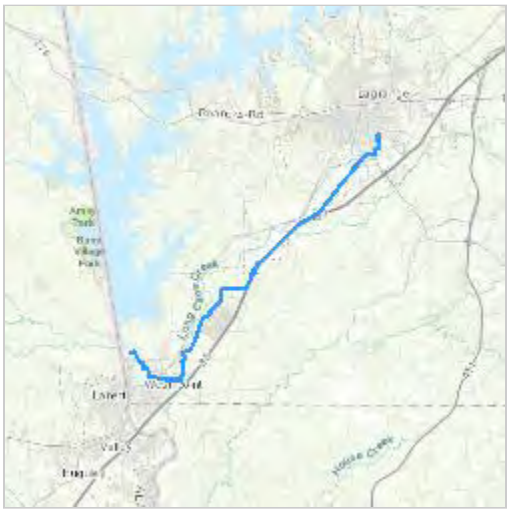
This species list is provided by:

Georgia Ecological Services Field Office
355 East Hancock Avenue
Room 320
Athens, GA 30601-2523
(706) 460-7161

PROJECT SUMMARY

Project Code: 2024-0075761
Project Name: LaGrange Primary - Oseligee Creek
Project Type: Transmission Line - New Constr - Above Ground
Project Description: New transmission line and substation construction
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@32.9535796,-85.09274654395956,14z



Counties: Troup County, Georgia

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 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. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], 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.

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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.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

REPTILES

NAME	STATUS
Alligator Snapping Turtle *Macrochelys temminckii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

INSECTS

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

FLOWERING PLANTS

NAME	STATUS
Georgia Rockcress *Arabis georgiana* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4535	Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

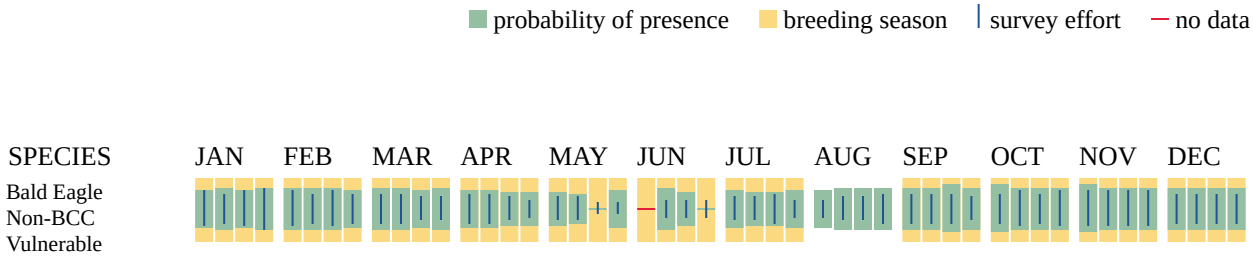
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Migratory Birds Treaty Act of 1918.

2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Chuck-will's-widow *Antrostomus carolinensis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9604	Breeds May 10 to Jul 10
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

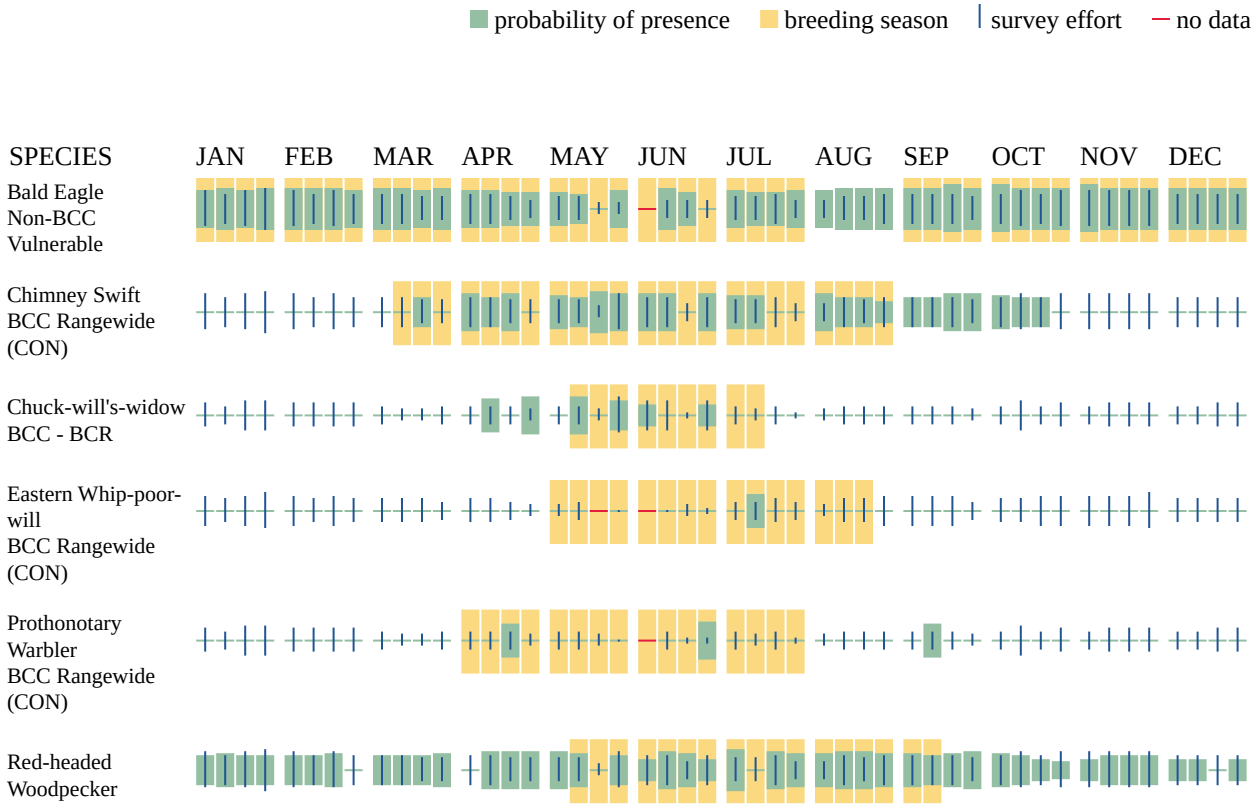
Probability of Presence (■)

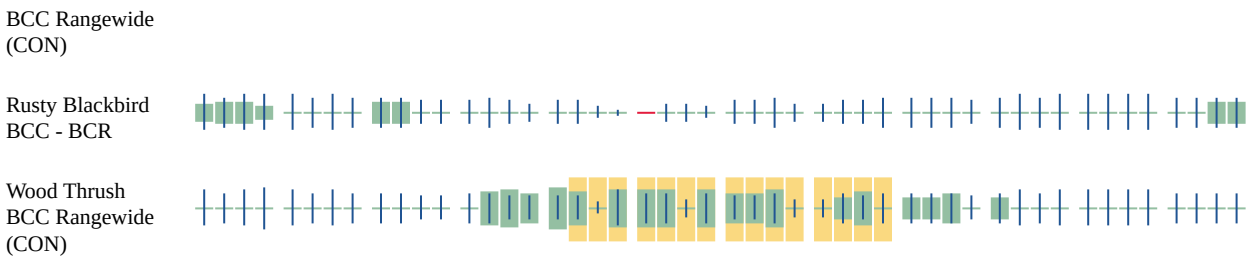
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1C
- PFO1C
- PSS1A
- PFO1A
- PFO1Cx

FRESHWATER EMERGENT WETLAND

- PEM1A
- PEM1C
- PEM1Fb

RIVERINE

- R4SBC
- R5UBH
- R2UBH

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Brandon Wall
Address: 31 Park of Commerce Way
Address Line 2: Suite 200B
City: Savannah
State: GA
Zip: 31405
Email b_wall@slighec.com
Phone: 9122320451

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Rural Utilities Service

Appendix 4. GDNR Letter of Known Occurrences

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE RESOURCES DIVISION

WALTER RABON
COMMISSIONER

TED WILL
DIRECTOR

June 11, 2025

Brandon Wall
SECI
31 Park of Commerce Way
St 200B
Savannah, GA 31405

Subject: Known occurrences of natural communities, plants and animals of highest priority conservation status on or near LaGrange Primary in Troup County, GA.

Dear Brandon Wall:

This is in response to your request of May 28, 2025. 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:

LaGrange Primary Point 1 (Site Center: -85.180873, 32.899337, WGS84)

GA *Alburnops hypsilepis* (Highscale Shiner) 10.2 mi NE of site in Blue John Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 1.7 mi E of site in Long Cane Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 12.3 mi NE of site in Panther Creek, Tributary to Long Cane Creek
Cyclonaias infucata **(Sculptured Pigtoe) [HISTORIC] on site in Chattahoochee River**
GA *Cyprinella callitaenia* (Bluestripe Shiner) 5.8 mi S of site in Chattahoochee River
GA *Cyprinella callitaenia* (Bluestripe Shiner) [HISTORIC] 1 mi NW of site in Chattahoochee River
Elimia boykiniana (Flaxen Elimia) [HISTORIC] 0.2 mi S of site in Chattahoochee River
Elimia boykiniana (Flaxen Elimia) [HISTORIC] 0.4 mi W of site in Oseligee Ck
GA *Elliptio arctata* (Delicate Spike) 7.5 mi S of site in Chattahoochee River
Lampsilis binominata (Lined Pocketbook) [HISTORIC] 1.7 mi S of site in Chattahoochee River
Micropterus cataractae (Shoal Bass) 7 mi S of site in Chattahoochee River
Micropterus cataractae (Shoal Bass) 5.8 mi S of site in Chattahoochee River
Moxostoma sp. 1 (Apalachicola Redhorse) 7 mi S of site in Chattahoochee River
Moxostoma sp. 1 **(Apalachicola Redhorse) on site in Chattahoochee River**
GA *Haliaeetus leucocephalus* (Bald Eagle) 0.5 mi NW of site
6th Avenue Park 1 mi S of site
Downtown River Park 1.6 mi S of site

East Side Boat Launch 1.5 mi S of site
Fort Tyler 1.2 mi S of site
Georgia-Alabama Land Trust Easement 2.7 mi NE of site
Georgia-Alabama Land Trust Easement 2 mi NE of site
JSL Park 1.6 mi S of site
River Park 0.2 mi S of site
West Point Lake 0.8 mi N of site
West Point Recreation 1.2 mi S of site
West River Park 0.1 mi SW of site

LaGrange Primary Point 2 (Site Center: -85.178840, 32.896412, WGS84)

GA *Alburnops hypsilepis* (Highscale Shiner) 10.2 mi NE of site in Blue John Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 10.2 mi NE of site in Blue John Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 1.5 mi E of site in Long Cane Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 12.4 mi NE of site in Panther Creek, Tributary to Long Cane Creek
Cyclonaias infucata (Sculptured Pigtoe) [HISTORIC] 0.1 mi W of site in Chattahoochee River
GA *Cyprinella callitaenia* (Bluestripe Shiner) 5.5 mi S of site in Chattahoochee River
GA *Cyprinella callitaenia* (Bluestripe Shiner) [HISTORIC] 1.1 mi NW of site in Chattahoochee River
Elimia boykiniana (Flaxen Elimia) [HISTORIC] 0.1 mi SW of site in Chattahoochee River
Elimia boykiniana (Flaxen Elimia) [HISTORIC] 0.5 mi W of site in Oseligee Creek
GA *Elliptio arctata* (Delicate Spike) 7.2 mi S of site in Chattahoochee River
Lampsilis binominata (Lined Pocketbook) [HISTORIC] 1.4 mi S of site in Chattahoochee River
Micropterus cataractae (Shoal Bass) 6.6 mi S of site in Chattahoochee River
Micropterus cataractae (Shoal Bass) 5.5 mi S of site in Chattahoochee River
Moxostoma sp. 1 (Apalachicola Redhorse) 6.6 mi S of site in Chattahoochee River
Moxostoma sp. 1 (Apalachicola Redhorse) 0.1 mi SW of site in Chattahoochee River
GA *Haliaeetus leucocephalus* (Bald Eagle) 0.6 mi NW of site
Perimyotis subflavus (Tricolored Bat) 3 mi E of site
6th Avenue Park 0.8 mi SW of site
Downtown River Park 1.3 mi S of site
East Side Boat Launch 1.2 mi S of site
Fort Tyler 1 mi SW of site
Georgia-Alabama Land Trust Easement 2.7 mi NE of site
Georgia-Alabama Land Trust Easement 2 mi NE of site
JSL Park 1.3 mi S of site
River Park, on site
West Point Lake 0.9 mi N of site
West Point Recreation 0.9 mi S of site
West River Park 0.1 mi W of site

LaGrange Primary Point 3 (Site Center: -85.182793, 32.899168, WGS84)

GA *Alburnops hypsilepis* (Highscale Shiner) 0.7 mi NW of site in Blue John Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 0.1 mi NW of site in Long Cane Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 1.8 mi E of site in Long Cane Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 12.4 mi NE of site in Panther Creek, Tributary to Long Cane Creek
***Cyclonaias infucata* (Sculptured Pigtoe) [HISTORIC] on site in Chattahoochee River**
GA *Cyprinella callitaenia* (Bluestripe Shiner) 5.8 mi S of site in Chattahoochee River
GA *Cyprinella callitaenia* (Bluestripe Shiner) [HISTORIC] 1 mi NW of site in Chattahoochee River
Elimia boykiniana (Flaxen Elimia) [HISTORIC] 0.2 mi SE of site in Chattahoochee River
Elimia boykiniana (Flaxen Elimia) [HISTORIC] 0.3 mi W of site in Oseligee Creek
GA *Elliptio arctata* (Delicate Spike) 7.6 mi S of site in Chattahoochee River
Lampsilis binominata (Lined Pocketbook) [HISTORIC] 1.7 mi S of site in Chattahoochee River
Micropterus cataractae (Shoal Bass) 7 mi S of site in Chattahoochee River
Micropterus cataractae (Shoal Bass) 5.9 mi S of site in Chattahoochee River
Moxostoma sp. 1 (Apalachicola Redhorse) 7 mi S of site in Chattahoochee River
***Moxostoma sp. 1* (Apalachicola Redhorse) on site in Chattahoochee River**
GA *Haliaeetus leucocephalus* (Bald Eagle) 0.4 mi NW of site
6th Avenue Park 1 mi S of site
Downtown River Park 1.6 mi S of site
East Side Boat Launch 1.5 mi S of site
Fort Tyler 1.1 mi S of site
Georgia-Alabama Land Trust Easement 2.7 mi NE of site
Georgia-Alabama Land Trust Easement 2 mi NE of site
JSL Park 1.5 mi S of site
River Park 0.3 mi SE of site
West Point Lake 0.8 mi N of site
West Point Recreation 1.3 mi S of site
West River Park, on site

LaGrange Primary Point 4 (Site Center: -85.096494, 32.947233, WGS84)

GA *Alburnops hypsilepis* (Highscale Shiner) 1.6 mi SE of site in Panther Creek, Tributary to Long Cane Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 0.7 mi W of site in Long Cane Creek
GA *Alburnops hypsilepis* (Highscale Shiner) 0.1 mi E of site in Long Cane Creek
GA *Alburnops hypsilepis* (Highscale Shiner) on site Long Cane Creek
Cyclonaias infucata (Sculptured Pigtoe) [HISTORIC] 0.2 mi W of site in Chattahoochee River
GA *Cyprinella callitaenia* (Bluestripe Shiner) 4.7 mi S of site in Chattahoochee River
GA *Cyprinella callitaenia* (Bluestripe Shiner) [HISTORIC] 1.4 mi NW of site in Chattahoochee River
Elimia boykiniana (Flaxen Elimia) [HISTORIC] 0.2 mi W of site in Chattahoochee River

Elimia boykiniana (Flaxen Elimia) [HISTORIC] 0.7 mi W of site in Oseligee Creek
GA *Elliptio arctata* (Delicate Spike) 6.2 mi S of site in Chattahoochee River
Lampsilis binominata (Lined Pocketbook) [HISTORIC] 1 mi SW of site in Chattahoochee River
Micropterus cataractae (Shoal Bass) 5.7 mi S of site in Chattahoochee River
Micropterus cataractae (Shoal Bass) 4.7 mi S of site in Chattahoochee River
Moxostoma sp. 1 (Apalachicola Redhorse) 5.7 mi S of site in Chattahoochee River
Moxostoma sp. 1 (Apalachicola Redhorse) 0.2 mi W of site in Chattahoochee River
Bombus pensylvanicus (American Bumble Bee) [HISTORIC] 1.4 mi NW of site
GA *Haliaeetus leucocephalus* (Bald Eagle) 0.9 mi NW of site
GA *Haliaeetus leucocephalus* (Bald Eagle) 2.5 mi S of site
Iris brevicaulis (Lamance Iris) 0.2 mi SE of site
Perimyotis subflavus (Tricolored Bat) 0.8 mi E of site
Perimyotis subflavus (Tricolored Bat) 1 mi SE of site
***Perimyotis subflavus* (Tricolored Bat) on site**
6th Avenue Park 0.8 mi SW of site
Athens Land Trust Easement 2 mi SE of site
Callaway Memorial Park 0.9 mi NW of site
Callaway Park 1.5 mi NW of site
Callaway Stadium 1.4 mi NW of site
Downtown River Park 1 mi SW of site
East Side Boat Launch 0.8 mi SW of site
Flat Shoal Creek - Johnson 2.7 mi SE of site
Fort Tyler 0.9 mi SW of site
George Harris Complex 0.9 mi NE of site
Georgia-Alabama Land Trust Easement 0.1 mi NW of site
Georgia-Alabama Land Trust Easement 1.9 mi SE of site
Georgia-Alabama Land Trust Easement 2.3 mi SE of site
Georgia-Alabama Land Trust Easement 0.3 mi W of site
Granger Park 1.9 mi NW of site
JSL Park 1 mi SW of site
Lafayette Square 1.4 mi NW of site
Ogletree Park 0.2 mi N of site
Pepperell Park 1.9 mi N of site
River Park, on site
Shuford Fields 0.7 mi NE of site
Troup County Soccer Complex 0.3 mi NW of site
West Point Lake 1.2 mi NW of site
West Point Recreation 0.3 mi S of site
West River Park 0.3 mi W of site

Recommendations:

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.

The following biologists can provide additional recommendations and assistance regarding the following groups:

Plants: Lisa Kruse (Lisa.Kruse@dnr.ga.gov)
Fishes: Bryant Bowen (Bryant.Bowen@dnr.ga.gov)
Crayfish & Mussels: Matt Rowe (Matthew.Rowe@dnr.ga.gov)
Reptiles & Amphibians: Daniel Sollenberger (Daniel.Sollenberger@dnr.ga.gov)
Mammals: Trina Morris (Katrina.Morris@dnr.ga.gov)
Birds: Nathan Klaus (Nathan.Klaus@dnr.ga.gov) or Tim Keyes (Tim.Keyes@dnr.ga.gov)
Terrestrial Invertebrates: Anna Yellin (Anna.Yellin@dnr.ga.gov)

There is a record of a nesting bald eagle (*Haliaeetus leucocephalus*) within three miles of the proposed project site. Although bald eagles are no longer listed as federally endangered, this species is still protected by the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and the Georgia Endangered Species Act. This legislation continues to protect bald eagles from potentially harmful human activities. For more information on how to prevent impacts to bald eagles, please review the National Bald Eagle Management Guidelines and other information located at: https://www.fws.gov/birds/management/managed-species/eagle-management.php.

Please note that the tricolored bat (*Perimyotis subflavus*) was proposed for listing under the Endangered Species Act (ESA) on September 14, 2022, by the United States Fish and Wildlife Service. A final listing determination is anticipated soon. We recommend consultation with the United States Fish and Wildlife Service for this species in anticipation of the species being listed as endangered under the ESA.

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 have the following recommendations for the applicant to consider. Development should occur at least 100 feet away from sensitive environmental resources, such as streams and wetlands, when possible. To protect aquatic habitats and water quality, we recommend that all machinery be kept out of streams and wetlands during substation construction. Further, we strongly advocate leaving vegetation intact within 100 feet of streams. We recommend that stringent erosion control practices be used during construction activities and that vegetation is re-established on disturbed areas as quickly as possible. Silt fences and other erosion control devices should be inspected and maintained until soil is stabilized by vegetation. Please be aware that the type of erosion control and/or soil stabilization material used during construction can impact wildlife. We strongly recommend using natural, biodegradable materials such as 'jute' or 'coir'. Mesh strands should be movable, as opposed to fixed. Use of plastic netting or fencing frequently leads to wildlife entrapment and death. Please use natural vegetation and grading techniques (e.g. vegetated swales, turn-offs, vegetated buffer strips) that will ensure that the project area does not serve as a conduit

for stormwater or pollutants into the watershed during or after construction. These measures will help protect water quality near the project as well as in downstream areas.

The Avian Power Line Interaction Committee (APLIC) has developed guidelines for the construction and maintenance of power lines and substations. For all new power line construction, we suggest creating a voluntary Avian Protection Plan (APP). Previously constructed substations and power lines can be retrofitted with bird mortality prevention in mind. These measures can include increasing line visibility, insulating wires to cover exposed connections, and increasing the distance between wires to reduce the chance of electrocution. For more information, see the APLIC website at http://www.aplic.org/.

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,

Sara K. O'Shields

Katie O'Shields, Wildlife Biologist
katie.oshields@dnr.ga.gov, 912-223-8968

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: https://www.georgiabiodiversity.org/portal/additional_data_resources

Appendix 5. Georgia Rare Natural Elements List

Georgia State Protected Species by County - Troup County

Scientific Name	Common Name	GA Prot	US Prot
Alburnops hypsilepis	Highscale Shiner	R	
Cambarus harti	Piedmont Blue Burrower	E	
Cambarus howardi	Chattahoochee Crayfish	T	
Cyprinella callitaenia	Bluestripe Shiner	R	
Haliaeetus leucocephalus	Bald Eagle	T	
Puma concolor coryi	Florida Panther	E	E
Schisandra glabra	Bay Star-vine	T	

Source: Georgia Biodiversity Portal

R = Rare; E = Endangered; T = Threatened