

Sensitive Environmental Resources Analysis

Phase 1 Mt. Pleasant to Sugg Parkway 115-kV
Transmission Line

Greenville Utilities Commission
Greenville, North Carolina

September 2021

Draft

Prepared By:

Stanley Consultants, LLC
200 Galleria Parkway SE, Suite 220
Atlanta, Georgia 30339



Executive Summary

This report provides a summary of natural resources with the potential to be impacted by the construction of the Greenville Utilities Commission (GUC) Phase 1 Mt Pleasant to Sugg Parkway 115 kV Transmission Line Project (the Project) located between the Mt. Pleasant Substation and the Indigreen Substation in northern Greenville, North Carolina. This report includes findings that the design/build team may need to consider when planning the construction of the Project to avoid or minimize impacts to sensitive resources and the Project schedule and/or budget.

Key Findings

- Sensitive Species
 - Two species listed under the federal Endangered Species Act (ESA) have the potential to occur within the Study Area – American alligator (*Alligator mississippiensis*) and Neuse River waterdog (*Necturus lewisi*).
 - There is potential for Migratory Bird Treaty Act (MBTA) species and Bald and Golden Eagle Act (BEGPA) species to occur.
- Floodplains
 - The Project is located entirely outside of both the 100-year and 500-year floodplains. No floodplain permitting will be required.
- Surface Waters
 - Seven surface water channels intersecting the Study Area are potential waters of the U.S.; Parker Creek, Johnsons Mill Run, and five unnamed drainages.
 - There are three areas with potential wetland features.
 - These features have been delineated as Avoidance Areas (Figures 5a-d).
- Stormwater
 - Construction impacts totaling one acre or more require coverage under the North Carolina Environmental Quality (NCEQ) National Pollutant Discharge Elimination System (NPDES) General Permit NCG01. To receive coverage under this permit, an Erosion and Sediment Control (E&SC) Plan must be prepared, and a Notice of Intent (NOI) and associated permit fee submitted and approved prior to the start of construction.

Based on the findings outlined in this document, it is anticipated that a General Permit will be required for stormwater discharges. If potential waters of the U.S. (including adjacent wetlands) cannot be avoided, a formal wetland and waters of the U.S. delineation will be needed to determine jurisdiction, and Clean Water Act Section 404 permitting may be required.

Table of Contents

1.	Introduction.....	1
2.	Project Background.....	1
2.1	Project Description.....	1
2.2	Project Study Area	2
2.2.1	Land Use	2
2.2.2	Water.....	2
2.2.3	Physical Features	2
2.2.4	Vegetation Community	3
3.	Resource Analysis Methods.....	3
3.1	Desktop Analysis	3
3.2	Species Screening Analysis	3
3.3	Field Survey	4
4.	Resource Analysis Results	5
4.1	Special Status Species	5
4.1.1	ESA-Listed Species	5
4.1.2	Migratory Bird Treaty Act Species	8
4.1.3	Bald and Golden Eagle Protection Act Species	8
4.2	Floodplain	9
4.3	Wetlands and Waters of the U.S.	9
4.4	Stormwater.....	11
5.	Discussion and Recommendations.....	12
5.1	Potential Impacts.....	12
5.2	Conclusions.....	12
6.	References.....	14

TABLES

Table 1.	Special Status Species Screening Analysis.....	6
Table 2.	Potential for Occurrence of BGEPA Species within the Study Area.....	8

FIGURES

Figure 1	– Vicinity Map
Figure 2	– Study Area
Figure 3	– National Wetland Inventory
Figure 4	– FEMA Floodplain
Figure 5	– Overview Map of Avoidance Areas
Figures 5a-d	– Avoidance Areas

APPENDICES

Appendix A – Information for Conservation and Planning Report (IPaC)

Appendix B – NCNHP Environmental Review

Appendix C – Photolog

1. Introduction

Greenville Utilities Commission (GUC) is a municipal utility providing electricity, natural gas, water and sewer services to the town of Greenville and Pit County, North Carolina. For this project, GUC has proposed to design and build a 115 kV transmission line north of Greenville to extend between the Mt. Pleasant Substation and Sugg Parkway (the Project), located adjacent to the Indigreen Substation. This will require the placement of new poles and above-ground conductors across approximately 7.3 miles, extending east/west, north of the Martin Luther King Jr. Highway/NC 11 Bypass (the Study Area; Figure 1).

GUC developed the route for the transmission line that favored use of land adjacent to roadways (Figure 1) and retained Stanley Consultants, LLC (Stanley Consultants) to design the transmission line and conduct environmental analyses for the proposed route. These analyses were conducted to identify potential sensitive natural resources within the vicinity of the Project. Assessing the resources will allow Stanley Consultants to modify the design to avoid impacts or identify Project impacts that would require permits and mitigations, which could have the potential to delay construction based on the current Project design footprint.

Desktop findings were field verified with surveys for sensitive species habitat or resources supporting sensitive species, and other sensitive resources of concern within the vicinity of the Project.

2. Project Background

2.1 Project Description

The Project consists of the design of a single-circuit 115 kV transmission line approximately 7.3 miles in length. The new transmission line is intended to prepare GUC for future energy growth needs. Using 1272 all-aluminum conductors, the transmission line will be connected to the existing 115 kV dead-end structure adjacent to the Indigreen Substation at the intersection of Old Creek Road and Sugg Parkway. From there, the transmission line will extend west and tie into the existing 115 kV substation bus "A" Frame at the Mt. Pleasant Substation.

The new transmission line will be placed within an existing distribution line right-of-way (ROW) and the distribution line will be mounted as an underbuild on the transmission line structures. Easements on either side of the transmission line centerline are expected to be 100 feet (ft) and may need to be widened from the distribution ROW width. Easements that require widening may also require vegetation and tree removal for transmission line placement. Initial Project designs have favored routes along existing roads wherever possible to facilitate easy access and minimize the amount of new disturbance. Ground disturbance is anticipated to be restricted to bucket trucks, foundation and boring machines, cranes, front loaders, skid steers, and other equipment trucks and trailers. Access to the chosen alignment will be done via public roads and access points, and private, commercial, and Pitt County land permissions.

2.2 Project Study Area

The Project is located primarily within the Greenville Extraterritorial Jurisdiction, with a portion of the Study Area crossing into the city limits of Greenville, North Carolina unincorporated Pitt County, North Carolina (Figure 2). The Project extends for a total of 7.3 miles and a Study Area was developed for this analysis by delineating a 50-ft buffer on either side of the Project centerline, as well as around any pole locations proposed outside of the centerline, for a total of approximately 97 acres. The Project runs along the northern side of Greenville from the intersection of Old Creek Road and Sugg Parkway, west to the Mt. Pleasant Substation located between Belvoir School Road and Martin Luther King Jr. Highway/NC Highway 11 Bypass (Figure 2). The proposed route parallels existing roads for the entirety of the route.

2.2.1 Land Use

Land use in the vicinity of the Study Area predominantly consists of agricultural, residential, and commercial uses, vehicle use of rural and highway roads, and minor ranching activities. Existing railway and utility corridors are also located within the Study Area. Agricultural activities appear to primarily consist of cotton and corn production.

2.2.2 Water

The main hydrological features in the Study Area include the perennial Johnsons Mills Run, Parker Creek, and multiple unnamed channels (Figure 3). Flows from all channels within the Study Area discharge directly or indirectly into the Tar River, a tributary of the Pamlico River in Beaufort County, North Carolina. From there, the Pamlico River flows east toward the Pamlico Sound and the Atlantic Ocean. The primary hydrology input in the Study Area is perennial flows from the creeks with additional inputs from agriculture irrigation runoff and surface runoff from adjacent properties and roads.

Stormwater and/or irrigation channels are located adjacent to most portions of the road within the Study Area. Most of the channels did not have standing water observed within them during the field review, and management of the channels appeared to range from regular mowing to unmanaged vegetation growth.

2.2.3 Physical Features

The Study Area is located at an elevation between 22 and 52 feet above mean sea level (AMSL). The topography within the Study Area is relatively flat, with little topographic variation outside of channels within the Study Area.

The United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) soil survey mapped the area as containing multiple types of soil within the Study Area comprised almost entirely of loams, sandy loams, and silt loams (Soil Survey Staff 2021). These soils are predominantly somewhat poorly drained to very poorly drained and consist of a mixture of hydric and non-hydric soils.

Within the Study Area, roadways, railways, buildings, and stormwater/irrigation channels are the dominant constructed features, while natural features consist of surface water drainages and their associated riverine habitats.

2.2.4 Vegetation Community

The Study Area is located entirely within the Mid-Atlantic Flatwoods ecoregion of the Middle Atlantic Coastal Plain. Vegetation associated with this ecoregion consists of oak-hickory-pine forest on upland sites, dominated by hickory, shortleaf pine, loblolly pine, white oak, and post oak, and southern flood plain forest on bottomlands along major rivers, dominated by green ash, sugarberry, water oak, American sycamore, sweetgum, and American elm (McNab et al 2007).

Although these species were the dominant plant species observed along channels, the majority of the Study Area is located within disturbed and paved suburban to rural areas. Vegetation within these areas primarily consists of mowed lawns and agricultural fields dominated by cotton and corn crops that are not anticipated to provide suitable habitat for special status species.

3. Resource Analysis Methods

3.1 Desktop Analysis

A desktop analysis was conducted to identify potential resources of concern and collect information respective of the Study Area from available publications and online resources. The desktop analysis also assessed Project location and associated land management to determine applicable environmental regulations to be considered.

The desktop analysis was conducted by gathering data from a variety of sources including the following:

- National Wetland Inventory (NWI) mapping
- North Carolina Natural Heritage Program (NCNHP)
- Federal Emergency Management Agency (FEMA) floodplain mapping
- U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC)
- USFWS critical habitat mapper
- USDA's National Resources Conservation Service (NRCS) soil mapping
- U.S. Geological Survey (USGS) StreamStats
- U.S. Environmental Protection Agency (USEPA)'s waters mapping
- Aerial photography
- Other publicly available documents on species reviews and rulings

3.2 Species Screening Analysis

Special status species analyzed in this report include species listed under the Endangered Species Act (ESA) and that have been identified through the USFWS IPaC online query (Appendix A), species protected under the Migratory Bird Treaty Act (MBTA), and species listed under the Bald and Golden Eagle Protection Act (BGEPA).

Screening analysis methods for determining species lists and habitat information includes the review of the resources mentioned above (e.g., IPaC), as well as North Carolina Wildlife Resources Commission (NCWRC) databases and publications related to state-listed threatened or endangered species occurring within Pitt County. Other species-specific resource information reviewed

included USFWS literature and fact sheets, U.S. Forest Service literature and fact sheets, and published white literature. The NCNHP database was also queried for records of state-listed threatened and endangered species within 1 mile of the Study Area (Appendix B).

Based on the special status species lists generated from the above sources, a screening analysis was performed to evaluate the potential for special status species, designated critical habitat, or proposed critical habitat to occur within the Study Area. Criteria used to determine the potential of occurrence for each species included in this screening analysis are defined as follows:

Present: The species has been observed to occur in the Study Area based on known records, the Study Area is within the known range of the species, *and* habitat characteristics required by the species are known to be present.

Possible: The species has not been observed in the Study Area based on known records, but the known, current distribution of the species includes the Study Area, *and* the required habitat characteristics of the species appear to be present in the Study Area.

Unlikely: The known, current distribution of the species does not include the Study Area, but the distribution of the species is close enough such that the Study Area may be within the dispersal or foraging distance of the species. The habitat characteristics required by the species may be present in the Study Area.

None: The Study Area is outside of the known distribution of the species, *and/or* the habitat characteristics required by the species are not present.

The screening analysis also assessed the potential for impacts to sensitive species. Impacts to ESA-listed species were assessed per the criteria outlined in the Endangered Species Consultation Handbook (USFWS 1998, Section 3.5, pg 3-12):

- **No effect:** No impacts, positive or negative, to listed or proposed resources. Generally, this means no listed resources will be exposed to action and its environmental consequences.
- **May affect, but not likely to adversely affect:** All effects are beneficial, insignificant, or discountable. Insignificant effects relate to the size of the impact and include those effects that are undetectable, not measurable, or cannot be evaluated. Discountable effects are those extremely unlikely to occur.
- **May affect and is likely to adversely affect:** Listed resources are likely to be exposed to the action or its environmental consequences and will respond in a negative manner to the exposure.

3.3 Field Survey

On August 31, 2021, a Stanley Consultants biologist conducted a pedestrian survey of the 97-acre Study Area. The pedestrian survey included observations of potential wetlands or other waters of the U.S. (WOTUS), and characterization of the surrounding vegetation and wildlife habitat that could be potentially impacted by construction activities. General site observations, such as topography, land use, land condition within and adjacent to the Study Area, and wildlife, were recorded. Photographs taken during the field survey are presented in Appendix C.

4. Resource Analysis Results

4.1 Special Status Species

4.1.1 ESA-Listed Species

Results from the IPaC query (Appendix A) identified a total of six (6) ESA-listed species for assessment. Of the six special status species assessed, two (2) were determined to have some potential to occur within the Study Area: the American alligator (*Alligator mississippiensis*) and the Neuse River waterdog (*Necturus lewisi*). Table 1 provides a summary of the screening analysis findings prepared for each species.

None of the six federally-listed species evaluated have proposed or designated critical habitat mapped within or near the Study Area (Appendix A; USFWS 2021). The Project is not anticipated to have an impact on critical habitat.

Table 1. Special Status Species Screening Analysis

Species and Status	Habitat and Range	Potential to Occur	Potential Effects
Mammals			
<p>West Indian Manatee (<i>Trichechus manatus</i>)</p> <p>Threatened</p>	<p>Range: Occurs the coast of North Carolina, mainly along the southern third of the coast (Carteret County southward). Species has been recorded along the entire North Carolina coast.</p> <p>Habitat: Found in brackish waters of estuaries, bays, and large river mouths; probably does much migration up and down the Intracoastal Waterway. Less frequently seen in the inshore ocean. Seldom or never seen up-river farther than the embayed partions, such as New Bern.</p>	<p>Potential to Occur: None.</p> <p>The Study Area is outside the species known range and does not contain suitable habitat (estuaries, bays, or large river mouths). Although there is a record of the species occurring within one mile of the Study Area, the record has not recently been verified and is considered uncertain with low accuracy (Appendix B).</p>	<p>No Effect.</p> <p>Species does not have any potential to occur and would not be impacted by the Project.</p> <p>Mitigation: None needed.</p>
Reptiles			
<p>American Alligator (<i>Alligator mississippiensis</i>)</p> <p>Similarity of Appearance - Threatened</p>	<p>Range: From coastal North Carolina to southern Florida west to central Texas. In North Carolina, found mostly east of Robeson County northward to Gates County, with the largest populations in the coastal counties of Brunswick, New Hanover, Craven, Columbus, Onslow and Pender (Friday 2018).</p> <p>Habitat: Inhabits freshwater swamps, marshes, ponds, lakes and the backwaters of large rivers. They have also been observed in brackish water and even on beaches. (Friday 2018).</p>	<p>Potential to Occur: Unlikely.</p> <p>The Study Area is located on the outside edge of the species’ common distribution. Channels within the Study Area are primarily small, densely vegetated drainages that would not support adult alligators, although they may provide suitable habitat for juveniles. There are no records of the species occurring within 1 mile of the Study Area (Appendix B).</p>	<p>No Effect.</p> <p>No Project activities will take place within the channels and Project activities will have no effect on individuals or the species’ habitat.</p> <p>Mitigation. None needed.</p>
Amphibians			
<p>Neuse River Waterdog (<i>Necturus lewisi</i>)</p> <p>Threatened</p>	<p>Range: Occurs only in the Neuse and Tar river systems in North Carolina (Beane 2020).</p> <p>Habitat: Inhabits rivers and larger streams, where they prefer leaf beds in quiet waters (Beane 2020). Species is fully aquatic, never leaving the water.</p>	<p>Potential to Occur: Unlikely.</p> <p>The Study Area cross channels that drain to the Tar River. Although the channels have relatively still waters, these channels are relatively small, and therefore unlikely to provide suitable habitat. There are no records of the species occurring within 1 mile of the Study Area (Appendix B).</p>	<p>No Effect.</p> <p>No Project activities will take place within the channels and will have no effect on individuals or the species’ habitat.</p> <p>Mitigation. None needed.</p>

Species and Status	Habitat and Range	Potential to Occur	Potential Effects
Clams			
Atlantic Pigtoe (<i>Fusconaia masoni</i>) Proposed threatened	<p>Range: From the Ogeechee River Basin in Georgia north to the James River Basin in Virginia. Historically occurred in every Atlantic drainage in North Carolina except the Cooper-Santee and Waccamaw river basins; recently extirpated from the Deep River in Moore County, Cape Fear River in Harnett and Cumberland counties, Black River in Sampson, Bladen, and Pender counties (NCWRC 2021).</p> <p>Habitat: Inhabits mostly medium to large streams. Prefers clean, swift waters with stable gravel, or sand and gravel substrate. Often is found at the downstream edge of riffle areas (NCWRC 2021).</p>	<p>Potential to Occur: None. The Study Area is outside the species known occupied range and does not contain suitable habitat (medium to large streams with clean, swift waters). There are no records of the species occurring within 1 mile of the Study Area (Appendix B).</p>	<p>No Effect. No potential for species to occur within the Study Area and the Project will not affect individuals of the species. Project activities will not affect channels within the Study Area, so Project activities also have no potential to affect suitable habitat.</p> <p>Mitigation: None needed.</p>
Dwarf Wedgemussel (<i>Alasmidonta heterodon</i>) Endangered	<p>Range: Historic range extends from New Brunswick, Canada to North Carolina. In North Carolina, occurs in select subbasins in Orange, Wake, Johnston, Wilson, Nash, Person, Granville, Vance, Franklin, Warren, and Halifax counties (NCWRC 2021).</p> <p>Habitat: Large rivers and small streams, often burrowed into clay banks among the root systems of trees. They may also be found associated with mixed substrates of cobble, gravel, and sand. Occasionally they may be found in very soft silt substrates (NCWRC 2021).</p>	<p>Potential to Occur: None. Although the Study Area contains potentially suitable habitat (small streams), the Study Area is located outside of the species known occupied range. There are no records of the species occurring within 1 mile of the Study Area (Appendix B).</p>	<p>No Effect. No potential for species to occur within the Study Area and the Project will not affect individuals of the species. Project activities will not affect channels within the Study Area, so Project activities also have no potential to affect suitable habitat.</p> <p>Mitigation: None needed.</p>
Tar River Spiny mussel (<i>Elliptio steinstansana</i>) Endangered	<p>Range: Neuse River Basin: Johnston Co. (Little River Subbasin); Tar River Basin: Franklin Co. (Shocco and Sandy creek subbasins), Nash Co. (Swift Cr. Subbasin and Tar River), Halifax Co. (Little Fishing Cr. Subbasin), Edgecombe Co. (Swift Cr. Subbasin, Tar River) (NCWRC 2021).</p> <p>Habitat: Associated with unconsolidated beds of coarse sand and gravel in relatively fast flowing water. Stream banks are stable with extensive root systems holding soils in place. The associated landscape is largely wooded, especially near streams. Trees near the stream are relatively mature and tend to form a closed canopy over smaller streams, creeks, and headwater river habitats. Water quality is good to excellent (NCWRC 2021).</p>	<p>Potential to Occur: None Although the Study Area contains potentially suitable habitat (stream surrounded by wooded landscapes) and is located within the Tar River Basin, streams within the Study Area are not relatively fast flowing and the species has not been recorded within Pitt County. There are no records of the species occurring within 1 mile of the Study Area (Appendix B).</p>	<p>No Effect. No potential for species to occur within the Study Area and the Project will not affect individuals of the species. Project activities will not affect channels within the Study Area, so Project activities also have no potential to affect suitable habitat.</p> <p>Mitigation: None needed.</p>

4.1.2 Migratory Bird Treaty Act Species

Based on the proximity of forested areas and shrubbery within the Study Area, species protected under the MBTA have the potential to be nesting in the area surrounding the Project. To ensure compliance with the MBTA, it is recommended vegetation removal be conducted outside of the migratory bird breeding season (April 1 – August 31). If vegetation removal activities must be conducted during the breeding season, or if Project activities are anticipated to disturb potential nesting habitat during the breeding season, it is recommended that sites selected for pole and equipment placement be surveyed prior to construction to promote protection of migratory birds and nests. If active nests for protected birds are located during the site survey, construction may be delayed or modified to protect migratory birds.

4.1.3 Bald and Golden Eagle Protection Act Species

The screening analysis determined that one species protected under the BGEPA, the bald eagle (*Haliaeetus leucocephalus*), has the potential to occur within the Study Area. The basis of determination of each species' potential to occur within the Study Area is provided in Table 2.

Table 2. Potential for Occurrence of BGEPA Species within the Study Area

Species	Known Habitat Preferences	Distribution and Occurrence Records	Potential to Occur in the Study Area
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Inhabits coastal areas, estuaries, and inland waters with unimpeded horizontal and vertical aspects for catching prey. Found in habitats with open canopy and easy-to-access mature, large trees for perching and nesting (Hudson 2018). The species typically prefers trees within 1 mile of open water with fish (Hudson 2018).	Restricted to North America, mainly in Canada and the U.S. In Colorado, bald eagles are found throughout much of the state during both the summer and winter. The species is found across North Carolina, mainly near large bodies of water (Hudson 2018).	Possible. The Study Area is within the species' geographic range, there is suitable foraging habitat for the species (perennial streams with fish populations) crossing portions of the Study Area. However, although the species has been observed near the Study Area (eBird 2021), there are no records of the species breeding within 1 mile of the Study Area (Appendix B).
Golden Eagle (<i>Aquila chrysaetos</i>)	Occupies a wide variety of plant communities, including tundra, alpine meadows, coniferous forests, high- and mid-elevation pine forest, piñon-juniper woodlands, sagebrush and other shrub habitats, grassland, and agricultural habitats (Tesky 1994). Species is known to construct its nest in areas with little to no human activity, in tall trees, cliffs, canyons, or rock ledges, near open areas where they forage for prey (Kelly and Tomcho 2017). Golden eagles are known to forage within 4.4 miles of the nest (Tesky 1994), generally in open habitats where prey is available (Kochert and Steenhof 2002).	In North America, the species is found from Canada south to central Mexico (Tesky 1994). Within North Carolina, golden eagles can primarily be found wintering in the Appalachian Mountains on the western side of the state (Kelly and Tomcho 2017).	None. The Study Area is outside of the species' geographic range and does not contain suitable breeding habitat. No sightings have been recorded within several miles of the Study Area (eBird 2021), and the species has no potential to occur within the Study Area.

Because there is potentially suitable habitat for bald eagles within the vicinity of the Study Area, tree removal activities could **adversely affect** the species. To avoid direct impacts to the species, it is recommended that tree removal activities occur outside of the species breeding season (December 1 through July 15) (USFWS 2017). During the breeding season, per USFWS guidance, if a Project action area is within 660 feet of a bald eagle nest, the Project proponent must determine whether the proposed action may disturb the nesting eagle. For projects that have blasting or other loud noise components, the buffer distance around eagle nests is 2,640 feet or up to 5,280 feet in open areas (USFWS 2017).

No bald eagle nests are recorded within one mile of the Study Area (Appendix B). Because the Project is not located within range of known nesting individuals, the Project is **unlikely to disturb nesting bald eagles**. No additional avoidance measures or permitting are anticipated. However, if a nesting bald eagle is observed during construction, it is recommended to contact the Stanley Consultant biologist to ensure compliance with the BGEPA.

4.2 Floodplain

The FEMA Flood Map Service Center is a public source of flood hazard information produced in support of the National Flood Insurance Program (NFIP). This mapping tool provides information to determine if a proposed project is located within a floodplain or a floodway, of which both will have permitting implications.

The FEMA Flood Insurance Rate Map (FIRM) has mapped the Study Area as occurring entirely outside of the 1% annual chance flood hazard zone (Zone A, or the 100-year flood hazard zone; see Figure 4). No regulatory or special flood hazard areas will be impacted by project activities. Floodplain permitting requirements are not anticipated for the Project.

4.3 Wetlands and Waters of the U.S.

Surface water features evaluated in this report included potential wetlands and non-wetland waters of the U.S., both of which are mapped within the Study Area (Figure 3). The field survey included observations of potential wetlands based on visible features such as type of vegetation and hydrology that could indicate the presence of a jurisdictional wetland. These areas were identified as Avoidance Areas (Figure 5). A formal delineation would be required for a Clean Water Act (CWA) permit should impacts to the Avoidance Areas be unavoidable.

An initial assessment of the NWI mapping tool was used to view USFWS-mapped wetlands and water resources within or near the Study Area (Figure 3). NWI features within the Study Area were predominantly riverine (7 features totaling 0.66 acres), with freshwater forested/shrub wetlands (3 features totaling 0.34 acres) also identified within the Study Area. The riverine features include the Johnsons Mill Run, Parker Creek, and several unnamed drainages (Figure 3).

A field survey was conducted on August 31, 2021, to evaluate sensitive surface water resources and identify avoidance areas around potential waters of the U.S. A total of ten (10) potentially jurisdictional WOTUS and wetland features were observed within the Study Area (Figure 5). These features are labeled as Avoidance Areas and are identified as WLAA 1-10 on Figures 5a – 5d.

WLAA 1 – This riverine feature is a channel that discharges towards Johnsons Mill Run. The channel was highly vegetated during field survey, obstructing the view of the surface water. Because the channel was located within a private residence, further investigations

were not conducted to confirm the presence of surface water. Based on available information, this feature is assumed to be a potential water of the U.S.

WLAA 2 – This riverine feature is Johnsons Mill Run, which discharges directly to the Tar River. This channel is classified by the North Carolina Department of Water Resources (DWR) as a highly developed water supply with nutrient sensitive waters (WS-IV, NSW). This feature is assumed to be a potential water of the U.S.

WLAA 3 – This riverine feature is an unnamed irrigation or stormwater channel that discharges into a nearby retention basin that discharges to Parker Creek and then to the Tar River. The channel is unclassified by the DWR but is assumed to be a potential water of the U.S.

WLAA 4 – This avoidance area is composed of an unnamed riverine feature and adjacent wetland features. The channel is a stormwater or irrigation drainage that discharges to Parker Creek and then to the Tar River. The wetland features are located within a drainage ditch that discharges to the riverine feature and runs parallel to and periodically overlaps the Study Area. The riverine and wetland features are assumed to be a potential water of the U.S. Although there is not a wetland mapped in the NWI at this location, the features contain wetland vegetation and suitable hydrology, and given their adjacency to a perennial surface water, they are currently assumed to be potentially jurisdictional wetlands.

WLAA 5 – This riverine feature is Parker Creek, which discharges directly to the Tar River. Parker Creek is classified by the DWR as a Class C protected water (for activities such as secondary recreation, fishing, wildlife, fish consumption, aquatic life) with nutrient sensitive waters (C, NSW). This feature is assumed to be a potential water of the U.S.

WLAA 6 – This riverine feature is an unnamed channel that discharges to Parker Creek and then to the Tar River. The channel is unclassified by the DWR but is assumed to be a potential water of the U.S.

WLAA 7 – This avoidance area is mapped by the NWI as a freshwater forested/shrub wetland. Field observations determined a portion of the mapped area is within a mowed field that is not anticipated to support wetland vegetation. Additionally, the only channels adjacent to the mapped wetland are roadside ditches with no standing water present. Without connectivity to a perennial or relatively permanent water, this feature is not likely to be considered jurisdictional. Nevertheless, it should be assumed impacts to this feature would require a CWA permit until a formal wetland delineation is performed to determine jurisdiction.

WLAA 8 – This riverine feature is an unnamed channel that discharges to Parker Creek and then to the Tar River. The channel has standing water and is assumed to be perennial. It is unclassified by the DWR but is assumed to be a potential water of the U.S.

WLAA 9 – This avoidance area is mapped by the NWI as a freshwater forested/shrub wetland. The mapping was likely conducted prior to the development of Sugg Parkway, as portions of the wetland mapped area within the Study Area have been paved over. The road shoulders on the northeast side of the road appear to have been cleared and graded, likely removing potential hydric soils. No wetland vegetation was observed within the avoidance areas within the Study Area, as these areas appear to have been reseeded with non-wetland vegetation and are mowed on a regular basis. It is anticipated that the shoulders of the road

would not be considered jurisdictional, although a formal wetland delineation is recommended to determine jurisdiction prior to impacts within the avoidance areas.

WLAA 10 – This avoidance area is mapped by the NWI as a freshwater forested/shrub wetland. However, this area appears to be a meadow or agricultural field that is mowed or harvested on a regular basis and is not anticipated to support wetland features. Although it is anticipated this would not be a jurisdictional wetland, a formal wetland delineation would be required to determine jurisdiction prior to impacts within the avoidance area.

In addition to the Avoidance Areas discussed here, there are numerous roadside ditches and stormwater conveyances within the Study Area. These features are not mapped within the NWI, and “ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations,” are not considered waters of the U.S. under the Navigable Waters Protection Rule, which currently defines the limits of CWA jurisdiction (USEPA 2020). However, the USEPA and US Army Corps of Engineers (USACE) published an intention to revise the definition of waters of the U.S. on June 9, 2021 (USEPA 2021). Because there is a possibility that ditches, stormwater conveyances, and/or irrigation canals not currently considered to be jurisdictional could become jurisdictional before Project construction begins, it is recommended that construction activities be planned within uplands, and not within or immediately adjacent to these features. The limits of the channels are anticipated to be delineated within the Project’s LIDAR contours.

4.4 Stormwater

Per the provisions of North Carolina General Statute (G.S.) 143-215.1, “[a]ll owners or operators of stormwater point source discharges associated with construction activities including clearing, grading, or excavation activities resulting in the disturbance of land greater than or equal to one acre,” are required to obtain coverage under the North Carolina Department of Environmental Quality (NCDEQ) National Pollutant Discharge Elimination System (NPDES) General Permit No. NCG010000 (referred to as NCG01). The NCDEQ Sediment Pollution Control Act (SPCA) requires that the persons engaged in subject construction activities develop and adhere to an Erosion and Sedimentation Control (E&SC) Plan that adheres to the Stormwater Pollution Prevention Plan requirements of the General Permit. The E&SC Plan must be submitted with the Notice of Intent (NOI) to the NCDEQ, and construction may commence once the General Permit and permit fee have been approved.

Project activities totaling at least one (1) acre of disturbance will require a General Permit. Although the total acreage of disturbances will depend on the final design, it is currently anticipated that Project activities in any of the proposed routes will require a General Permit.

5. Discussion and Recommendations

5.1 Potential Impacts

A summary of the resource impacts and avoidance measures associated with the Project is provided below.

Special Status Species

The three (3) special status species with some potential to occur in the Study Area are the American alligator, the Neuse River waterdog, and the bald eagle. No Project-related impacts to the American alligator and the Neuse River waterdog are anticipated, as no activities are planned within the perennial streams where the species are found.

The bald eagle has the potential to be impacted if tall, mature trees are removed as part of Project construction activities, or if loud construction activities occur within up to a mile of an active bald eagle nest during breeding season (December 1-July 15). No bald eagle nests are recorded within one mile of the Study Area (Appendix B) and no additional permitting or avoidance measures are anticipated to be required for the Project. To minimize the potential for construction delays in the event an eagle was to begin breeding within the Study Area prior to construction, it is recommended that vegetation removal activities occur outside of the breeding season.

There is potential for migratory birds protected under the MBTA to nest within the Study Area. To ensure compliance with the MBTA, it is recommended that vegetation removal be conducted outside of the migratory bird breeding season (April 1 – August 31). If Project activities are anticipated to disturb nesting habitat during the breeding season, it is recommended that sites selected for pole and equipment placement be surveyed prior to construction disturbance. If active nests for protected birds are located during the site survey, construction may be delayed or modified to protect migratory birds.

Wetlands and Waters of the U.S.

The Study Area crosses seven (7) drainages and three (3) areas with wetland features. These areas have been mapped as Avoidance Areas. In the event these areas cannot be avoided, a formal delineation will be needed prior to construction and, depending on the type of impacts, a Clean Water Act Section 404 permit may be required.

Floodplain

The Study Area is located entirely outside of FEMA floodplains and floodways. No floodplain permitting is anticipated for the Project.

Stormwater

If Project construction activities are anticipated to total one acre or more, coverage under General Permit NCG01 is required. To meet permit compliance, an E&SC Plan, NOI, and associated permit fee must be submitted to the NCDEQ and approved prior to the start of construction.

5.2 Conclusions

Final design and construction plans will dictate the Project impacts and the need for permits. It is anticipated that a NCDEQ NPDES General Permit NCG01 for construction activities that are also subject to the North Carolina Sedimentation Pollution Control Act of 1973 will be required. In

addition, if wetlands and/or other waters of the U.S. are impacted, a Section 404 permit from the USACE, and well as consultation with USFWS, will be required.

Control measures or Best Management Practices (BMPs) should be implemented to ensure no discharge of fill or runoff into the Avoidance Areas occurs during construction.

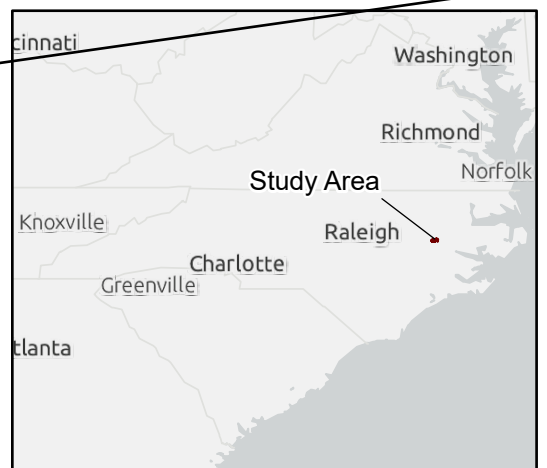
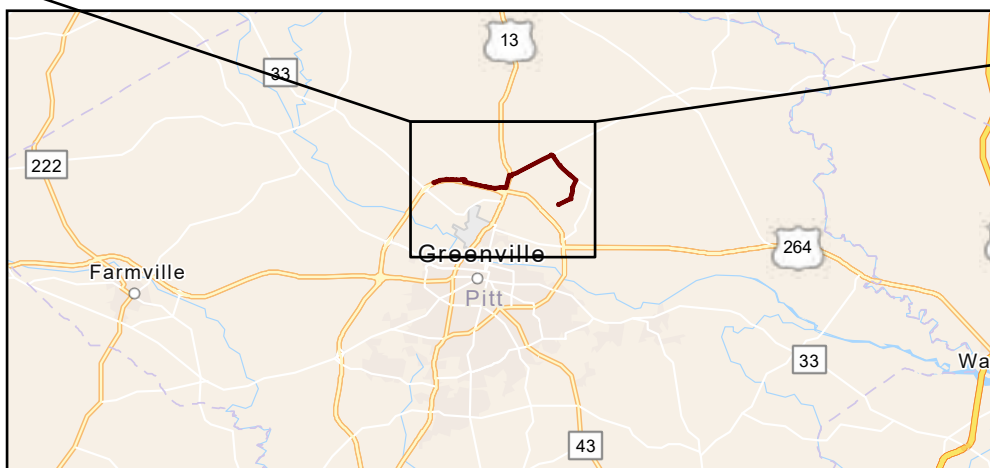
If the Project design is rerouted outside of the Survey Area, an environmental resource review of those areas will be needed as the presence of sensitive resources outside the Study Area has not been verified.

6. References

- Beane, Jeff. 2020. *Neuse River Waterdog: North Carolina Wildlife Profile*. North Carolina Wildlife Resources Commission. Updated by Jeff Hall, NCWRC, in 2020.
- eBird. 2021. *eBird: An Online Database of Bird Distribution and Abundance [Web Application]*. eBird. Ithaca, New York: Cornell Lab of Ornithology. www.ebird.org.
- Friday, Sarah. 2018. *American Alligator: North Carolina Wildlife Profiles*. North Carolina Wildlife Resources Commission. Updated by Mike Campbell, Kim Burge, Jeff Hall, Alicia Davis, in 2018.
- Hudson, Marjorie. 2018. *Bald Eagle: North Carolina Wildlife Profiles*. North Carolina Wildlife Resources Commission. Updated by David Allen in 2018.
- Kelly, Christine and Joseph Tomcho, Jr. 2017. A Camera-trap Survey Documents Widespread Distribution of Over-wintering Golden Eagles in Western North Carolina. *The Chat*, 81:3, p 60-79.
- Kochert, Michael N. and Karen Steenhof. 2002. Golden eagles in the U.S. and Canada: Status, trends, and conservation challenges. *Journal of Raptor Research*, 36, p. 32-40.
- McNab, W.H.; Cleland, D.T.; Freeouf, J.A.; Keys, Jr., J.E.; Nowacki, G.J.; Carpenter, C.A., comps. 2007. Description of ecological subregions: sections of the conterminous United States Gen. Tech. Report WO-76B. Washington, DC: U.S. Department of Agriculture, Forest Service. 80 p.
- North Carolina Natural Heritage Program [NCNHP]. 2021. Natural Heritage Data Explorer [web application]. NCDNCR, Raleigh, NC. Available at www.ncnhp.org. (Accessed: August 18, 2021)
- North Carolina Wildlife Resources Commission [NCWRC]. 2021. Species abstracts. Unpublished abstracts by North Carolina Wildlife Resources Commission. <https://www.ncwildlife.org/Learning/Species>.
- Soil Survey Staff. 2021. Web Soil Survey. Natural Resources Conservation Service, United States Department of Agriculture. Available online. Accessed October 19, 2021.
- Tesky, Julie L. 1994. *Aquila chrysaetos*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer).
- U.S. Environmental Protection Agency [USEPA]. 2020. The Navigable Waters Protection Rule: Definition of “Waters of the United States.” *Federal Register*, 85:77, p. 22250-222342. April 21, 2020.
- _____. 2021. “EPA, Army Announce Intent to Revise Definition of WOTUS.” Press Release June 9, 2021. <https://www.epa.gov/newsreleases/epa-army-announce-intent-revise-definition-wotus>

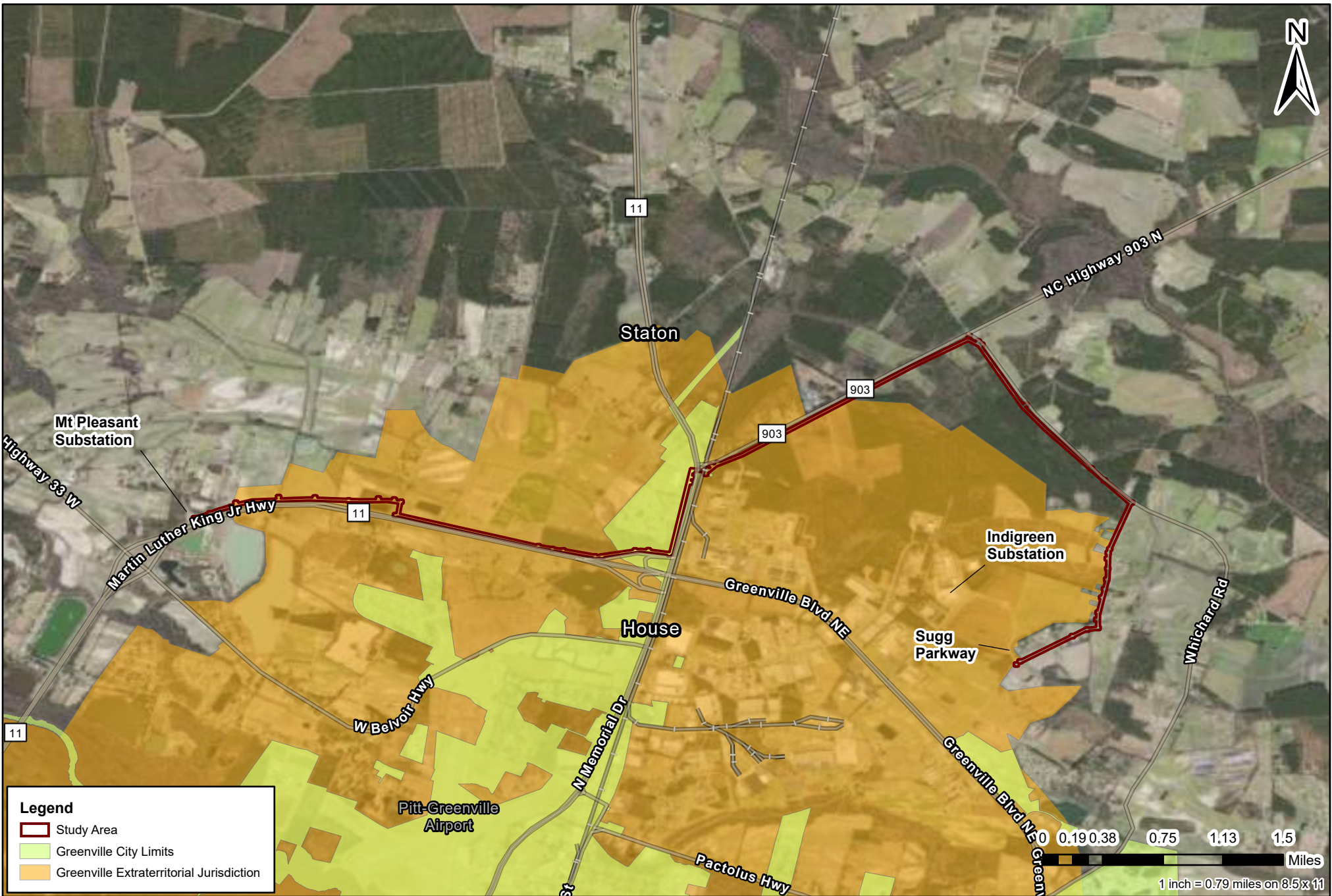
- U.S. Fish and Wildlife Service [USFWS]. 1998. Endangered Species Act Consultation Handbook. Procedures for Conducting Section 7 Consultations and Conferences. U.S. Fish and Wildlife Service and National Marine Fisheries Service. March 1998.
- _____. 2017. Online Project Reviews for the Piedmont and Coastal Plains Regions of North Carolina: Step 6 – Eagle Protection. U.S. Fish and Wildlife Service, Raleigh Ecological Services Field Office. https://www.fws.gov/raleigh/PR_16.html. Last updated April 18, 2017.
- _____. 2021. “Regulations Governing Take of Migratory Birds.” *Federal Register*, 86:4 (1134-1165).

Figures



GREENVILLE UTILITIES COMMISSION
Phase 1 Mt Pleasant to Sugg Parkway 115 kV Transmission Line Project
Sensitive Environmental Resources Analysis

Figure 1
Vicinity Map



Data Source: Stanley Consultants,
GUC, City of Greenville
Image Source: World Imagery Map



Date Exported: 9/8/2021 12:13 AM

GREENVILLE UTILITIES COMMISSION
Phase 1 Mt. Pleasant to Sugg Parkway 115 kV Transmission Line Project
Sensitive Environmental Resources Analysis

Figure 2
Study Area



Data Source: Stanley Consultants, GUC, USFWS
Image Source: World Imagery Map



Date Exported: 9/8/2021 12:16 AM

GREENVILLE UTILITIES COMMISSION
Phase 1 Mt. Pleasant to Sugg Parkway 115 kV Transmission Line Project
Sensitive Environmental Resources Analysis

Figure 3
National Wetland Inventory

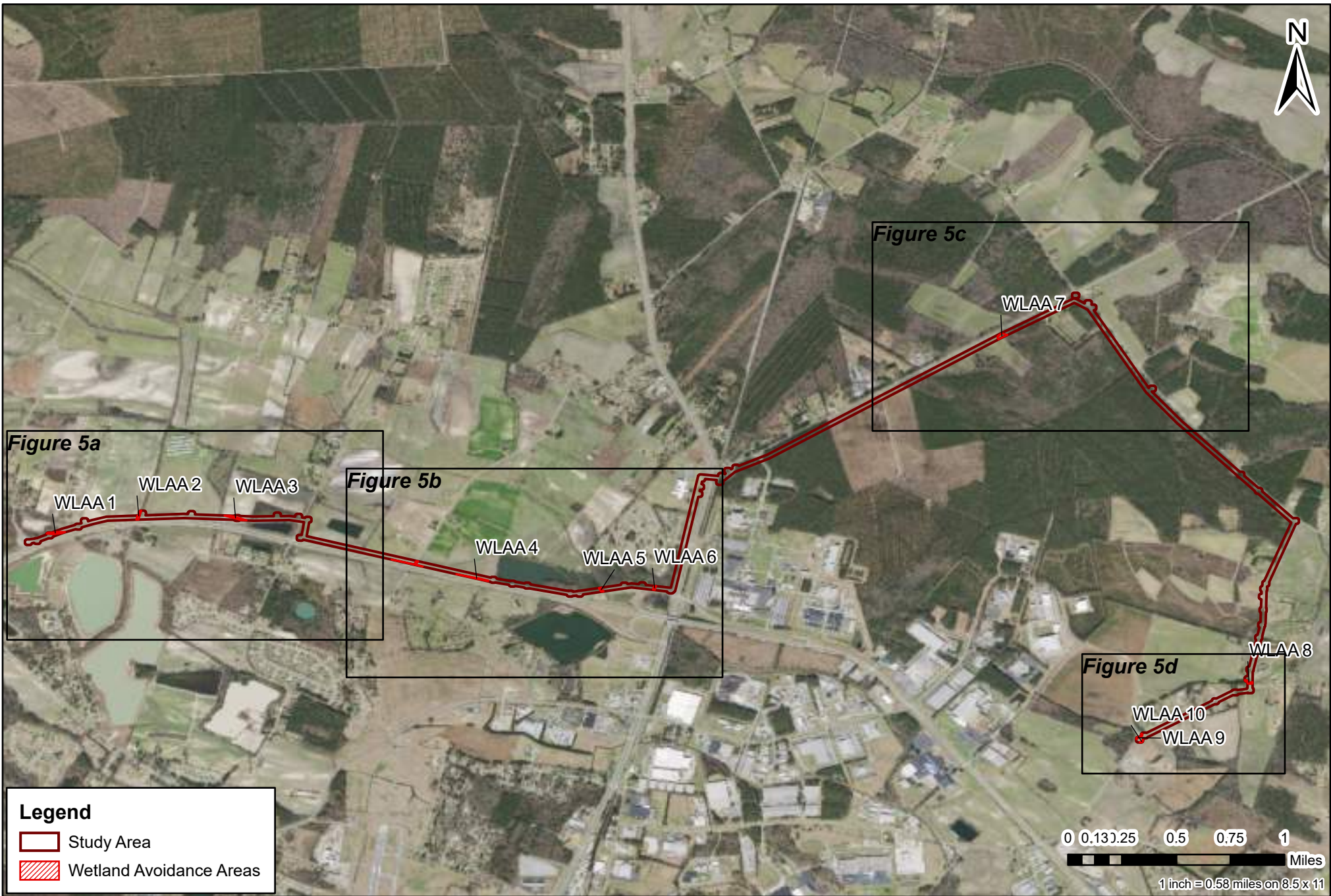


Data Source: Stanley Consultants, GUC, FEMA
Image Source: World Topography Map

GREENVILLE UTILITIES COMMISSION
Phase 1 Mt. Pleasant to Sugg Parkway 115 kV Transmission Line Project
Sensitive Environmental Resources Analysis

Figure 4
FEMA Floodplain





Data Source: Stanley Consultants, GUC, FEMA
 Image Source: World Topography Map

GREENVILLE UTILITIES COMMISSION
 Phase 1 Mt. Pleasant to Sugg Parkway 115 kV Transmission Line Project
 Sensitive Environmental Resources Analysis

Figure 5
 Overview Map
 Avoidance Areas



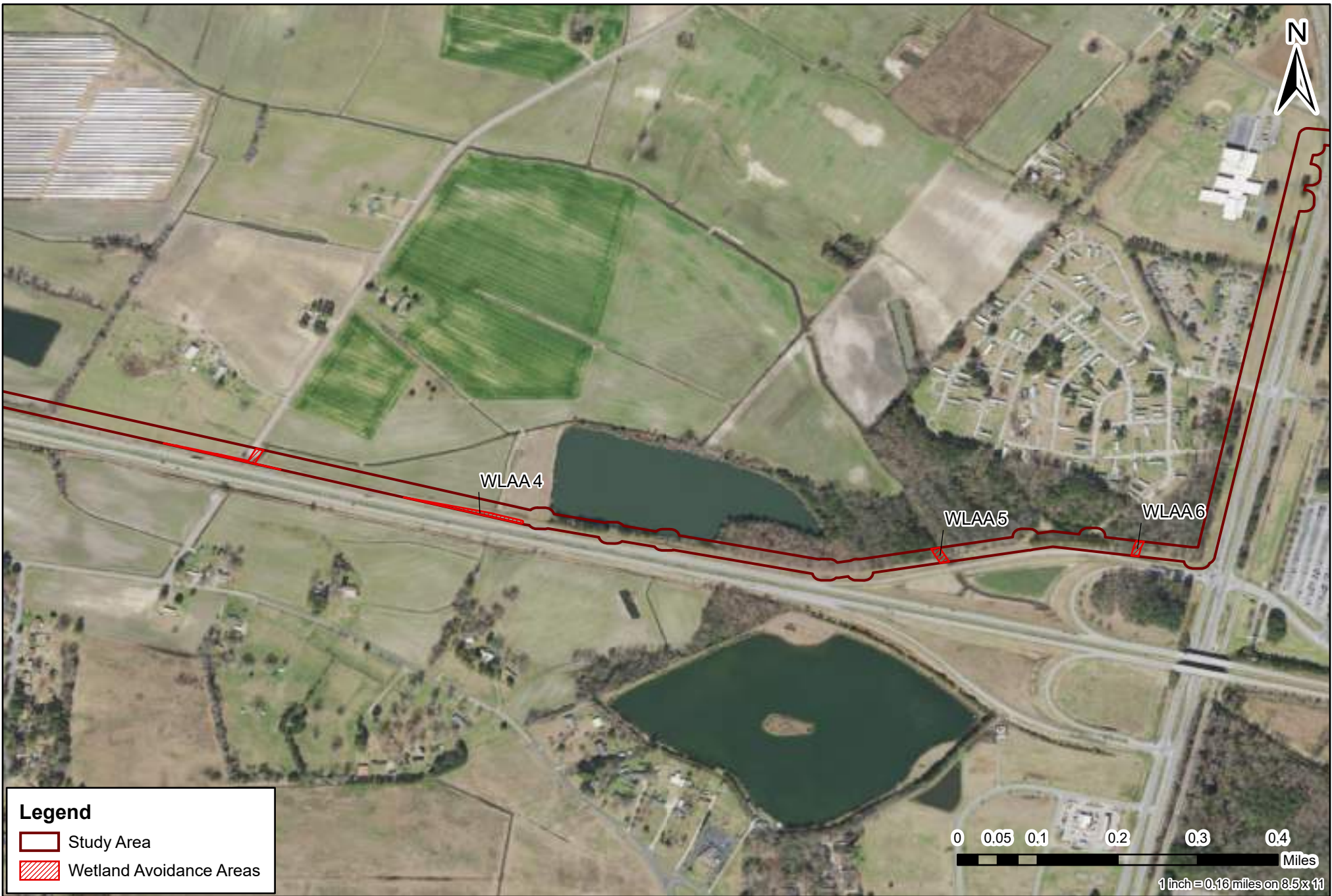


Data Source: Stanley Consultants, GUC, USFWS
 Image Source: ESRI World Imagery Map

GREENVILLE UTILITIES COMMISSION
 Phase 1 Mt. Pleasant to Sugg Parkway 115 kV Transmission Line Project
 Sensitive Environmental Resources Analysis

Figure 5a
 Avoidance Areas





Data Source: Stanley Consultants, GUC, USFWS
 Image Source: ESRI World Imagery Map

GREENVILLE UTILITIES COMMISSION
 Phase 1 Mt. Pleasant to Sugg Parkway 115 kV Transmission Line Project
 Sensitive Environmental Resources Analysis

Figure 5b
 Avoidance Areas





Legend

- Study Area
- Wetland Avoidance Areas

0 0.05 0.1 0.2 0.3 0.4 Miles

1 inch = 0.16 miles on 8.5 x 11

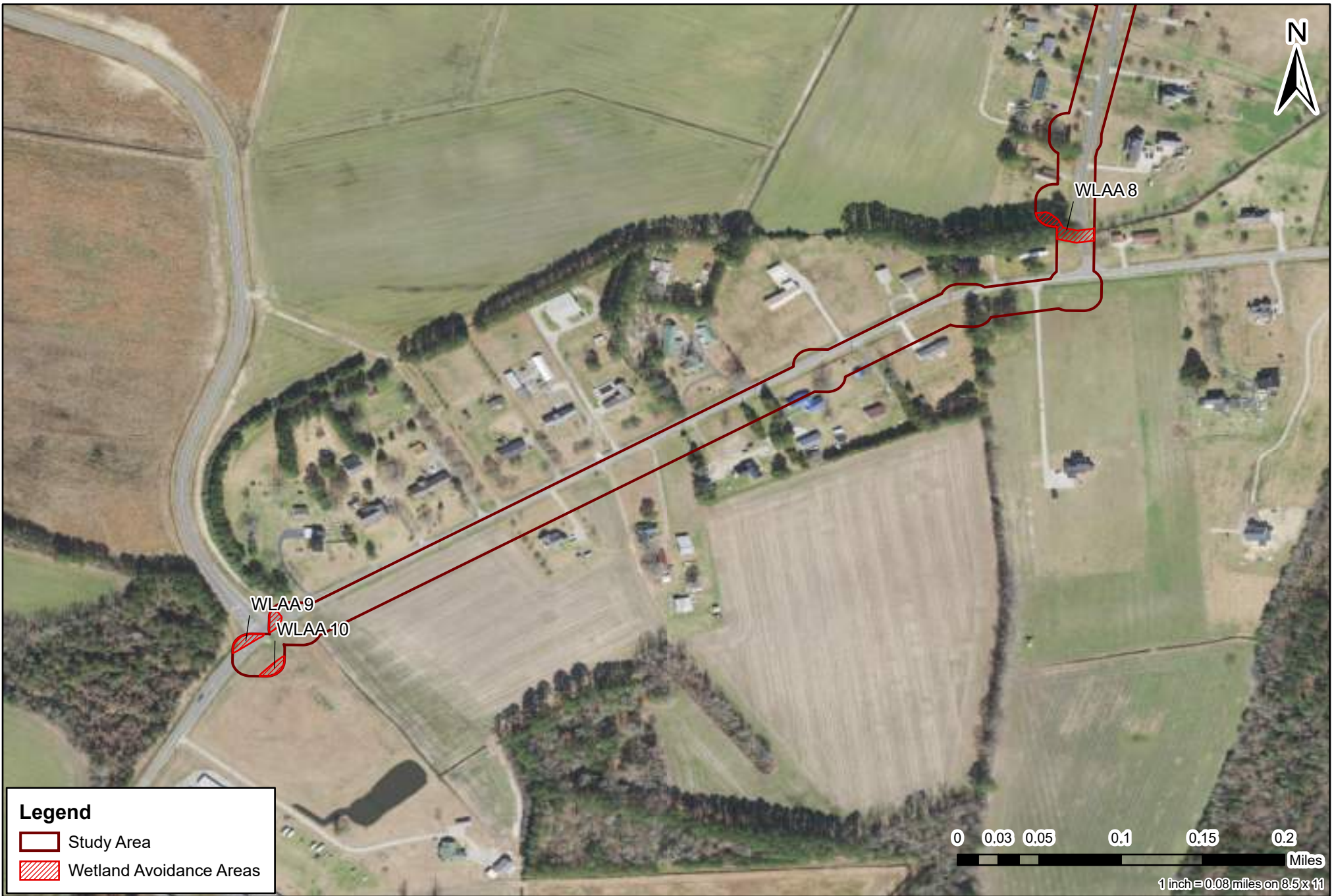
Data Source: Stanley Consultants, GUC, USFWS
 Image Source: ESRI World Imagery Map



Date Exported: 9/8/2021 12:32 AM

GREENVILLE UTILITIES COMMISSION
 Phase 1 Mt. Pleasant to Sugg Parkway 115 kV Transmission Line Project
 Sensitive Environmental Resources Analysis

Figure 5c
 Avoidance Areas



Legend

- Study Area
- Wetland Avoidance Areas

0 0.03 0.05 0.1 0.15 0.2 Miles
 1 inch = 0.08 miles on 8.5 x 11

Data Source: Stanley Consultants, GUC, USFWS
 Image Source: ESRI World Imagery Map



Date Exported: 9/8/2021 12:32 AM

GREENVILLE UTILITIES COMMISSION
 Phase 1 Mt. Pleasant to Sugg Parkway 115 kV Transmission Line Project
 Sensitive Environmental Resources Analysis

Figure 5d
 Avoidance Areas

Appendix A

Information for Conservation and Planning Report (IPaC)

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location


Pitt County, North Carolina



Local office

Raleigh Ecological Services Field Office

☎ (919) 856-4520

 (919) 856-4556

MAILING ADDRESS

Post Office Box 33726
Raleigh, NC 27636-3726

PHYSICAL ADDRESS

551 Pylon Drive, Suite F
Raleigh, NC 27606-1487

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
 2. [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.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
West Indian Manatee <i>Trichechus manatus</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/4469	Threatened Marine mammal

Reptiles

NAME	STATUS
American Alligator <i>Alligator mississippiensis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/776	SAT

Amphibians

NAME	STATUS
Neuse River Waterdog <i>Necturus lewisi</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/6772	Threatened

Clams

NAME	STATUS
Atlantic Pigtoe <i>Fusconaia masoni</i> Wherever found There is proposed critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5164	Proposed Threatened

Dwarf Wedgemussel *Alasmodonta heterodon* Endangered
Wherever found
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/784>

Tar River Spiny mussel *Elliptio steinstansana* Endangered
Wherever found
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/1392>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

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

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

American Kestrel *Falco sparverius paulus*

Breeds Apr 1 to Aug 31

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/9587>

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

Lesser Yellowlegs *Tringa flavipes*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Breeds elsewhere

Prairie Warbler *Dendroica discolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Jul 31

Prothonotary Warbler *Protonotaria citrea*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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.

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

Breeds elsewhere

Wood Thrush *Hylocichla mustelina*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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 and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid

cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
 probability of presence breeding season survey effort no data



BCC - BCR
 (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



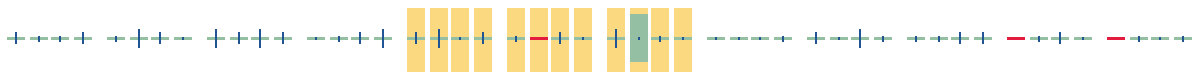
Bald Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Lesser Yellowlegs BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Prairie
Warbler
BCC
Rangewide
(CON) (This is
a Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental
USA and
Alaska.)



Prothonotary
Warbler
BCC
Rangewide
(CON) (This is
a Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental
USA and
Alaska.)



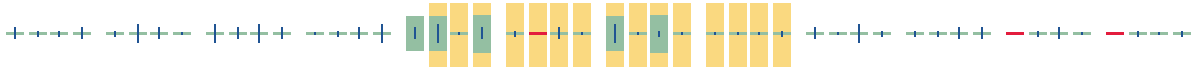
Red-headed
Woodpecker
BCC
Rangewide
(CON) (This is
a Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental
USA and
Alaska.)



Rusty
Blackbird
BCC - BCR
(This is a Bird
of
Conservation
Concern (BCC)
only in
particular Bird
Conservation
Regions
(BCRs) in the
continental
USA)



Wood Thrush
BCC
Rangewide
(CON) (This is
a Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental
USA and
Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the [Probability of Presence Summary](#). [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the [Probability of Presence Summary](#) and then click on the "Tell me about these

graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid

violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Marine mammals

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walrus, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The [Endangered Species Act](#) (ESA) of 1973.
2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. [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.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

West Indian Manatee *Trichechus manatus*

<https://ecos.fws.gov/ecp/species/4469>

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PFO1/4Bd](#)

RIVERINE

[R2UBHx](#)

[R4SBC](#)

[R5UBFx](#)

[R5UBH](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through

image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix B

NCNHP Environmental
Review



Roy Cooper, Governor
D. Reid Wilson, Secretary

Walter Clark
Director, Division of Land and Water Stewardship

NCNHDE-15645

September 7, 2021

Claire Phillips
Stanley Consultants, Inc.
8000 S. Chester St.
Centennial, CO 80112
RE: Mt Pleasant-Simpson Transmission Line Project

Dear Claire Phillips:

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here: <https://www.fws.gov/offices/Directories/ListOffices.cfm?statecode=37>.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact Rodney A. Butler at rodney.butler@ncdcr.gov or 919-707-8603.

Sincerely,
NC Natural Heritage Program

Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area
 Mt Pleasant-Simpson Transmission Line Project
 September 7, 2021
 NCNHDE-15645

Element Occurrences Documented Within a One-mile Radius of the Project Area

Taxonomic Group	EO ID	Scientific Name	Common Name	Last Observation Date	Element Occurrence Rank	Accuracy	Federal Status	State Status	Global Rank	State Rank
Dragonfly or Damselfly	33766	Somatochlora georgiana	Coppery Emerald	2004-Pre	H?	5-Very Low	---	Significantly Rare	G3G4	S1?
Freshwater Bivalve	36530	Elliptio fisheriana	Northern Lance	2018-04-03	E	3-Medium	---	Significantly Rare	G4	S3
Freshwater Bivalve	14068	Elliptio roanokensis	Roanoke Slabshell	2017-08-01	E	3-Medium	---	Special Concern	G3	S3
Freshwater Bivalve	1148	Leptodea ochracea	Tidewater Mucket	2019-10-15	E	3-Medium	---	Threatened	G3G4	S2
Freshwater Fish	38942	Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	2018-04-17	E	4-Low	Endangered	Endangered	G3T3	S2
Mammal	14560	Condylura cristata pop. 1	Star-nosed Mole - Coastal Plain population	2002-06-25	E	2-High	---	Special Concern	G5T2Q	S2
Mammal	5451	Trichechus manatus	West Indian Manatee	1994-09-17	H?	5-Very Low	Threatened	Threatened	G2G3	S1N
Mayfly	14173	Baetisca obesa	a mayfly	1985-11-20	H	3-Medium	---	Significantly Rare	G5	S1
Vascular Plant	39716	Carex crus-corvi	Crowfoot Sedge	2019-09	D	2-High	---	Significantly Rare Peripheral	G5	S1

Natural Areas Documented Within a One-mile Radius of the Project Area

Site Name	Representational Rating	Collective Rating
TAR/Lower Tar River Aquatic Habitat	R1 (Exceptional)	C2 (Very High)

Managed Areas Documented Within a One-mile Radius of the Project Area

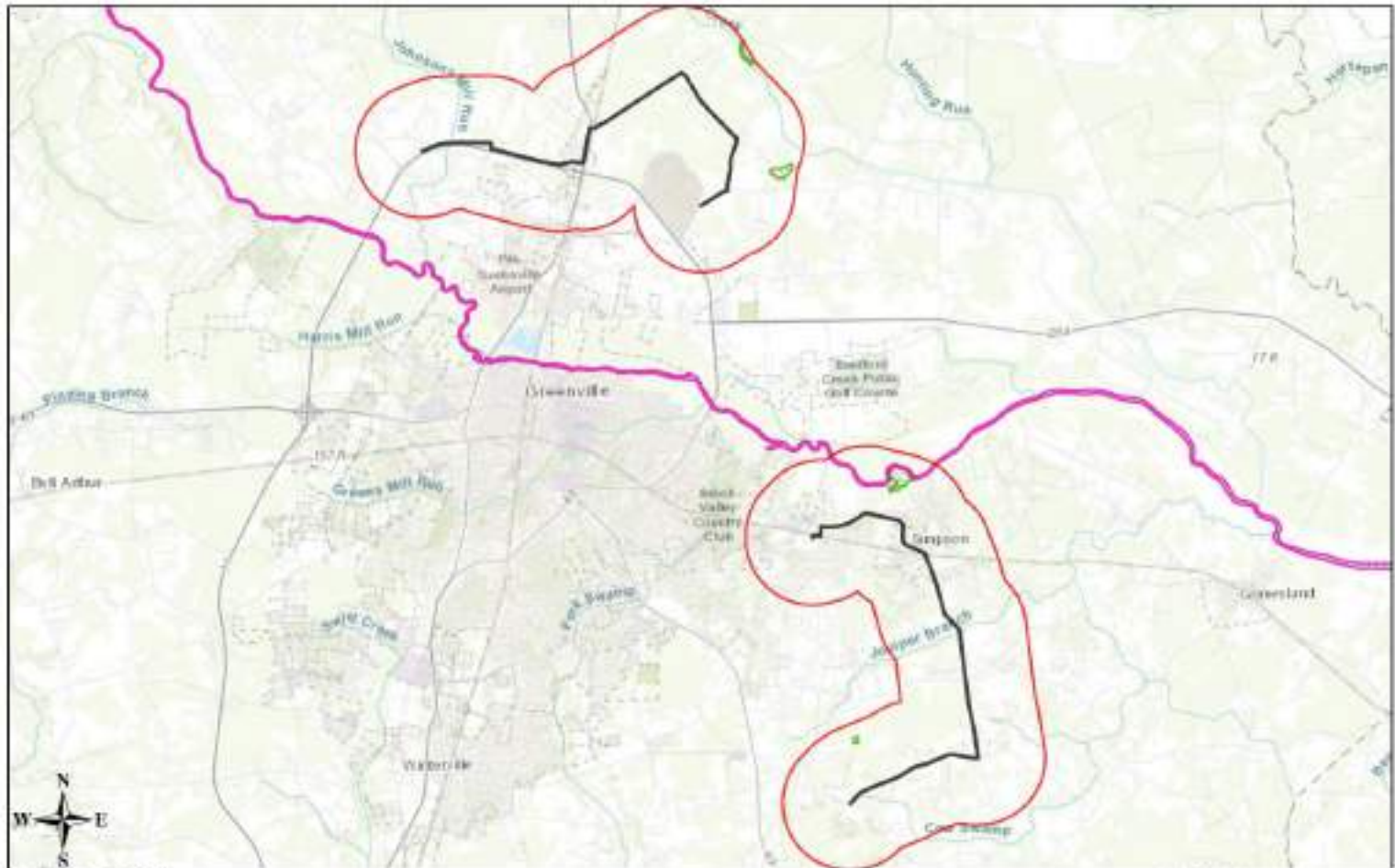
Managed Area Name	Owner	Owner Type
NC Land and Water Fund Project	NC DNCR, NC Land and Water Fund	State
Conservation Reserve Enhancement Program Easement	NC Department of Agriculture, Division of Soil and Water Conservation	State
Conservation Reserve Enhancement Program Easement	NC Department of Agriculture, Division of Soil and Water Conservation	State

Managed Areas Documented Within a One-mile Radius of the Project Area



Managed Area Name	Owner	Owner Type
Conservation Reserve Enhancement Program Easement	NC Department of Agriculture, Division of Soil and Water Conservation	State
North Carolina Coastal Land Trust Easement	North Carolina Coastal Land Trust	Private

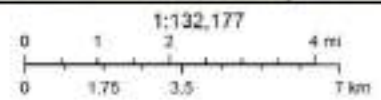
Definitions and an explanation of status designations and codes can be found at <https://ncnhde.natureserve.org/help>. Data query generated on September 7, 2021; source: NCNHP, Q2 July 2021. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

NCNHDE-15645: Mt Pleasant-Simpson Transmission Line Project



September 7, 2021

-  Project Boundary
-  Buffered Project Boundary
-  NHP Natural Area (NHNA)
-  Managed Area (MAREA)



Source: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCo, IGN, Rodasir NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox Contributors, and the GIS User Community

Appendix C

Photolog



Photo 1.

This riverine feature, WLAA 1, is a channel that discharges towards Johnsons Mill Run. The channel was highly vegetated during field survey, obstructing the view of the surface water.



Photo 2.

This riverine feature, WLAA 2, is Johnsons Mill Run, which discharges directly to the Tar River. This channel is classified by the North Carolina Department of Water Resources (DWR) as a highly developed water supply with nutrient sensitive waters (WS-IV, NSW). The water was fairly shallow during field survey (2-4 inches deep), but aerial imagery shows the channel often filled to a higher level.



Photo 3.

This riverine feature, WLAA 3, is an unnamed irrigation or stormwater ditch that discharges into a nearby retention basin that discharges to Parker Creek and then to the Tar River. Although the surface water is not easily visible in photographs due to dense surrounding vegetation, standing water was confirmed during field survey.



Photo 4.

This photo shows the riverine portion of WLAA 4. The channel is a stormwater or irrigation drainage that discharges to Parker Creek and then to the Tar River.



Photo 5.

The wetland features associated with WLAA 4 are located within a drainage ditch that discharges to the riverine feature. Although the wetlands features are not mapped in the NWI, wetland vegetation and suitable hydrology were observed.



Photo 6.

A view of Parker Creek, WLAA 5, facing upstream. This channel discharges directly to the Tar River and runs through a culvert under the road. During field survey the water level was at least 6 ft wide within the Study Area.



Photo 7.
The downstream extent of Parker Creek (WLAA 5), located immediately south of the Study Area.



Photo 8.
This riverine feature (WLAA 6) is an unnamed channel that discharges to Parker Creek and then to the Tar River. Standing water was observed within the channel.



Photo 9.

This avoidance area (WLAA 7) is mapped by the NWI as a freshwater forested/shrub wetland. Field observations determined a portion of the mapped area is within a mowed field that is not anticipated to support wetland vegetation. Additionally, the only channels adjacent to the mapped wetland are roadside ditches with no standing water present.



Photo 10.

This riverine feature (WLAA 8) is an unnamed channel that discharges to Parker Creek and then to the Tar River. The channel has standing water and is assumed to be perennial.



Photo 11.

WLAA 9 is mapped by the NWI as a freshwater forested/shrub wetland, but the portions of the wetland mapped within the Study Area have been paved over or filled in with road material. No wetland vegetation was observed within Study Area.



Photo 12.

WLAA 9 is located on the left side of the photo and appears to consist entirely of roadway and replanted grass/road fill material. WLAA 10 is located on the right side of the photo and is a meadow or agricultural field that is mowed or harvested on a regular basis.



Photo 13.

WLAA 10 is mapped by the NWI as a freshwater forested/shrub wetland. However, this area appears to be a meadow or agricultural field that is mowed or harvested on a regular basis.