

**PROTECTED SPECIES HABITAT ASSESSMENT
FARRS BRIDGE ROAD
GREENVILLE COUNTY, SOUTH CAROLINA
BLUELINE PROJECT NO. 2116**

**PREPARED FOR:
EASTWOOD HOMES**

**PREPARED BY:

BLUELINE ENVIRONMENTAL CONSULTANTS, LLC
710 LOWNDES HILL ROAD
GREENVILLE, SOUTH CAROLINA 29607**

November 2022

No endangered or threatened species were observed on site.

PLEASE NOTE THAT the threatened status of the northern-long eared bat is currently under review and the results of this review process should be known by December 31, 2022. If tree removal and building demolition activities are not completed before this date, the regulations surrounding these activities will likely change, bat surveys may be required, and updated consultation is recommended. If your current project or future project is scheduled to extend beyond this date, please reach out to Blueline Environmental Consultants after December 31, 2022 for further information.

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1.0 INTRODUCTION

Chris Day, of Eastwood Homes, in Greenville, South Carolina, retained Blueline Environmental Consultants, LLC (Blueline) to provide an endangered species habitat assessment for the project area referenced as the Farrs bridge Road site located in Greenville County, South Carolina. The habitat assessment was performed in October 2022 to determine if habitat for protected species was present on the property.

Endangered and threatened species are protected under the Endangered Species Act (ESA) of 1973 (16 USC 1531-1543). Endangered species are defined as those plants and animals whose prospects of survival are in immediate danger. Threatened species are those species that may become endangered if conditions related to their existence continue to deteriorate (e.g., loss of suitable habitat). A third category of concern includes candidate species. Candidate species are those species that may be listed as endangered or threatened in the future (species of concern). Candidate species are not legally protected under the federal or state ESA. They are provided in this report to account for the possibility that they might become protected in the near future.

Blueline's assessment of potential protected species habitat on the target property was conducted in three (3) phases. The first phase consisted of a review of existing records obtained from federal (US Fish and Wildlife Service) agencies and the South Carolina Department of Natural Resources (SCDNR). Both agencies provided listings of potential protected species for Greenville County. Types of habitat for the protected species were found in various keys and field guides, and on US Fish and Wildlife Service (USFWS) web pages. The second phase involved the qualitative and quantitative assessment of general habitat types on the property, as well as actively looking for the endangered and threatened species described in the USFWS threatened species list for the county in question. The third phase of the assessment consisted of comparing the habitats identified in phase 2 with those protected species requirements identified in phase 1. Thus, a determination of critical habitats and the potential for the existence of protected species was conducted.

2.0 PROJECT DESCRIPTION

The project area consists of approximately 22.2+/- acres along the northern side of Farrs Bridge Road in Greenville, South Carolina. The approximate project area center is 34.898785°N, -82.480285°E. The project area consists of four tributaries (one labeled as Coopers Creek), six forested wetlands, and forested uplands resembling mesic-mixed hardwood and oak-hickory forests. This project is a residential development project that will involve tree removal, land clearing, grading, and the construction of roads, sewers, and buildings. The current timeline of the project is unknown. Construction will avoid impacts to identified critical habitat, populations of threatened species, and aquatic resources. Protective measures such as the implementation of silt fences will also be used to avoid the infiltration of silt into streams and wetlands. This is not a federally funded project and will be funded by Eastwood Homes.

3.0 ENVIRONMENTAL BASELINE

3.1 Habitat Assessment

An assessment of the habitat types of the target property was determined by performing on-site surveys in October 2022. Habitat characteristics were based on vegetation communities, location in the landscape, past anthropological disturbances, and hydrology, referencing The Natural Communities of South Carolina, published by John B. Nelson in 1986 and the “Piedmont Ecoregion Terrestrial Habitats” document, published by the South Carolina Department of Natural Resources in 2005.

3.2 Observed Habitat Types

Four (4) major habitat types were identified in the project area: oak-hickory forest, mid-successional forest, piedmont small stream forest, and aquatic resources.

TABLE 1 HABITAT ASSESSMENT SUMMARY FARRS BRIDGE ROAD GREENVILLE COUNTY, SOUTH CAROLINA	
Habitat Type	Approximate Acreage
1. Oak-Hickory Forest	12.88 acres
2. Mid-Successional Forest	7.1 acres
3. Piedmont Small Stream Forest	2.22 acres
4. Aquatic Resources (i.e. streams and wetlands)	3+/- acres (Included within piedmont small stream forest and oak-hickory forest)
Total:	22.2 +/- acres

The oak-hickory forest habitat type was located along the hillslope in the central and northern portions of the project area. This habitat type was dominated by mature hardwood trees such as white oak (*Quercus alba*), mockernut hickory (*Carya tomentosa*), tulip poplar (*Liriodendron tulipifera*), black walnut (*Juglans nigra*), and American beech (*Fagus grandifolia*). The dominant understory species included younger trees and saplings of American holly (*Ilex opaca*), red maple (*Acer rubrum*), American beech (*Fagus grandifolia*), and sweetgum (*Liquidambar styraciflua*). The herbaceous stratum was sparse with the most prevalent species being Christmas fern (*Polystichum acrostichoides*).

The oak-hickory forest habitat type also contained a sanitary sewer line right-of way (SSROW). The SSROW was devoid of trees and other woody species, with Japanese stilt grass (*Microstegium vimineum*) being the most prevalent species.

The mid-successional forest habitat type is located in the southern portion of the project area and occupies the hilltop closest to Farrs Bridge Road. Historical aerial imagery indicates that this portion of the property was cleared of most woody vegetation shortly

before 2005 and has been allowed to re-establish. The dominant tree species include young trees and saplings of tulip poplar (*Liriodendron tulipifera*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), sweetgum (*Liquidambar styraciflua*), American beech (*Fagus grandifolia*), Virginia pine (*Pinus virginiana*), and mockernut hickory (*Carya tomentosa*). The understory and herbaceous layer in this habitat type is sparse and the most prevalent species include Chinese privet (*Ligustrum sinense*) and Christmas fern (*Polystichum acrostichoides*).

The piedmont small stream forest habitat type is located in the northern portion of the project area within the floodplain of Coopers Creek. The majority of this habitat type was a floodplain wetland. The tree stratum and canopy in this habitat was sparse and the most prevalent species included American sycamore (*Platanus occidentalis*), American hornbeam (*American hornbeam*), hazel alder (*Alnus serrulata*), sweetgum (*Liquidambar styraciflua*), American holly (*Ilex opaca*), green ash (*Fraxinus pennsylvanica*), and red maple (*Acer rubrum*). The prevalent herbaceous species include Japanese stilt grass (*Microstegium vimineum*), deer-tongue grass (*Dichanthelium clandestinum*), switch cane (*Arundinaria tecta*), fringed sedge (*Carex crinita*), and rice cutgrass (*Leersia oryzoides*).

The aquatic resources found on site consisted of four tributaries and six wetlands. One wetland was a seepage wetland adjacent to a small spring-fed stream located within the eastern portion of the oak-hickory forest. The remaining streams and wetlands were located within the piedmont small stream forest habitat type in the floodplain of Coopers Creek.

4.0 PROTECTED SPECIES IN QUESTION

4.1 Agency Review

Agency reviews were performed via websites maintained by the federal and state agencies responsible for the protection of threatened and endangered species. Requests for information regarding the occurrence of protected species on or near the project site were directed to the USFWS Information for Planning and Consultation (IPaC) website and the SC DNR Heritage Trust Database.

Protected species habitat requirements, as determined from literature review and agency databases were compared to those habitat types identified on the property. If protected species habitat requirements corresponded to any of those habitats identified on the property, a qualitative assessment of the potential presence of that species was provided.

4.2 Protected Fauna

Lists of protected animal species for Greenville County were provided by the U.S. Fish and Wildlife Service and by the South Carolina Department of Natural Resources. Listed species, status, and on-site potential are summarized in Table 2. The results of this survey indicate that none of the animal species listed for Greenville County were present on the target property.

TABLE 2
PROTECTED FAUNA SUMMARY
GREENVILLE COUNTY, SOUTH CAROLINA

Common Name	Scientific Name	Status	On-Site Potential	Potential Impact
Bog Turtle	<i>Glyptemys muhlenbergii</i>	FT/ST	None	No Effect
Northern long-eared bat	<i>Myotis septentrionalis</i>	FT/ST	Minimal	MANLAA
FE = Federal Endangered, FT = Federal Threatened, SE = State Endangered, ST = State Threatened, CS = Candidate Species MANLAA= May Affect, Not Likely to Adversely Affect, MALAA=May Affect, Likely to Adversely Affect				

A habitat assessment was performed for each protected animal species listed in Table 2. Species requirements were compared to those habitats observed. A summary of habitat requirements and on-site potential for each species is provided below:

Bog Turtle:

Bog Turtles (*Glyptemys muhlenbergii*) are the smallest species of turtle native to North America, with adults “growing only to 4.5 inches in length [and] easily recognized by the orange patch on either side of its head” (The Nature Conservancy, 2020). This species was classified as federally-threatened due to habitat loss and fragmentation relating to increased land development and forest succession. Populations and critical habitat have become fragmented, while populations of natural predators such as raccoons are growing. There are also concerns of reptile collectors poaching populations. (The Nature Conservancy, 2020).

“The bog turtle favors open, groundwater-fed wet meadows and bogs dominated by tussock sedge (*Carex stricta*) and grasses. Bog turtles thrive in mountain bogs, or isolated wetlands with acidic, wet soil, thick moss and deep layers of mud. These deep mucky soils, fed by groundwater, provide protection from predators and other elements. Short clumps of vegetation let in plenty of sunlight for incubating eggs and basking. If any of these conditions change, a bog turtle population can decline and may eventually disappear from the area.” (The Nature Conservancy, 2020).

Observations:

Although multiple wetlands were found on site, none were believed to have been suitable habitat for bog turtles. The wetlands located within the piedmont small stream forest habitat type may have the correct light requirements, but the wetlands receive water from the floodwaters of Cooper Creek and sheet flow from surrounding hillslopes and cannot be considered a bog habitat. The spring-fed wetland found in the oak-hickory forest was small and the canopy above it was too dense to allow enough light for bog turtles to thrive.

No bog turtles were observed on site and there is no potential bog turtle habitat. The actions on site will have no effect on bog turtles.

Northern long-eared bat:

“The northern long-eared bat is a medium-sized bat about 3 to 3.7 inches in length but with a wingspan of 9 to 10 inches. As its name suggests, this bat is distinguished by its long ears...” (U.S. Fish & Wildlife Service).

This species is currently classified as federally-threatened. **The threatened status of the NLEB is currently under review as populations continue to decline due to white-nose syndrome. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. The change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 31, 2022).**

“Although there are many threats to the species, the predominant threat by far is white-nose syndrome. If this disease had not emerged, it is unlikely the northern long-eared bat would be experiencing such a dramatic population decline. White-nose syndrome was the main reason for listing the species as threatened under the Endangered Species Act in 2015. Since symptoms were first observed in New York in 2006, white-nose syndrome has spread rapidly throughout the species' range in the United States. Numbers of northern long-eared bats, gathered from hibernacula counts, have declined by 97% to 100% across the species' range.” (USFWS).

Northern long-eared bat habitat differs between summer and winter months. During the winter, these bats hibernate in caves and mines that typically exhibit constant temperatures, high humidity, minimal air currents, and cracks and crevices where the bats can hide. These areas are referred to as hibernacula (USFWS). During the summer months, northern long-eared bats can also be found roosting in cracks and crevices in living and dead trees such as snags, tree cavities, and underneath bark. “The species has also been found, although less commonly, roosting in structures, such as barns and sheds... [these] bats use forested areas not only for roosting, but also for foraging and commuting between summer and winter habitat” (USFWS).

Observations:

While no large caves or Northern long-eared bats were observed on project area, much of the property was made up of large trees that could be suitable for summer habitat. The potential for take of northern long-eared bats is low and the actions described within the project area may affect, not likely to adversely affect the northern long-eared bat (MANLAA). The SCDNR Heritage Trust database consultation letter indicated that hibernacula were located within the county and provided best management practices to avoid disturbance: “As a conservation measure, it is recommended that any tree clearing activities be conducted during the inactive season for Northern long-eared bat (November 15th through March 31st) to avoid negative impact (SCDNR, 2022).”

The USFWS consistency letter for the project, dated October 20, 2022 states: “*Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat*” (USFWS, 2022). **This 30 day advisory window will end on November 19, 2022.**

4.3 Protected Flora

A list of protected plant species for Greenville County was provided by the U.S. Fish and Wildlife Service. Listed species, status, and on-site potential are summarized in Table 3. The results of this survey indicate that the plant listed for Greenville County was not present on the target property.

TABLE 3 PROTECTED FLORA SUMMARY GREENVILLE COUNTY, SOUTH CAROLINA				
Common Name	Scientific Name	Status	On-Site Potential	Potential Impact
Bunched Arrowhead	<i>Sagittaria fasciculata</i>	FE/ST	None	No Effect
Dwarf-flowered Heartleaf	<i>Hexastylis naniflora</i>	FT/ST	None	No Effect
Mountain Sweet Pitcher-plant	<i>Sarracenia jonesii</i>	FE/SE	None	No Effect
Small Whorled Pogonia	<i>Isotria medeoloides</i>	FT/ST	None	No Effect
Swamp Pink	<i>Helonias bullata</i>	FT/ST	None	No Effect
White Fringeless Orchid	<i>Platanthera integrilabia</i>	FT/ST	None	No Effect
White Irisette	<i>Sisyrinchium dichotomum</i>	FE/SE	None	No Effect
Rock Gnome Lichen	<i>Gymnoderma lineare</i>	FE/SE	None	No Effect
FE = Federal Endangered, FT = Federal Threatened, SE = State Endangered, ST = State Threatened, CS = Species MANLAA= May Affect, Not Likely to Adversely Affect, MALAA=May Affect, Likely to Adversely Affect				

Bunched Arrowhead:

Bunched Arrowhead (*Sagittaria fasciculata*) is a semiaquatic perennial herb that flowers April through July and grows to be about 15 inches tall. “Submerged leaves are long and narrow, round in cross-section. Emerging leaves are flat, broadly ovate or lanceolate” (South Carolina Native Plant Society).

Bunched arrowhead is classified as federally-endangered, primarily due to habitat destruction. “The bunched arrowhead now occurs naturally only within five square miles of Travelers Rest (and Furman.)” (Young, 2004).

All known bunched arrowhead populations are found in springhead seepage forests in the upper piedmont, with the best intact sites found in the vicinity of Travelers Rest, SC. “All known springhead forests in South Carolina are bounded by Pacolet sandy loam soils,” which allow for the proper uptake, storage, and slow release of rainwater as seepage. (Porcher, 2001, pp. 84-85).

Observations:

One forested springhead wetland was found within the eastern portion of the oak-hickory forest habitat type and is described as having Pacolet sandy loam by USDA soil maps. Soils observed within the wetland at the time of the site visit were sandy and the wetland did not have the thick muck layer often associated with bunched arrowhead. No

bunched arrowhead was observed. The actions associated with the project will have no effect on bunched arrowhead and there is no potential for take of bunched arrowhead.

Dwarf-flowered Heartleaf:

Dwarf-flowered heartleaf (*Hexastylis naniflora*) is an evergreen perennial herb with heart-shaped, often variegated leaves. It can be distinguished from other heartleaf species (such as *Hexastylis heterophylla*) by the dimensions of their flowers, which emerge between mid-march and early June.

Dwarf-flowered heartleaf is currently listed by the USFWS as threatened due to habitat destruction (NCSU Herbarium). The threatened status is currently under review as of April 23, 2020 and is proposed to be delisted. This is due to the discovery and protection of more populations since the species listing in 1989 (U.S. Fish & Wildlife Service).

Dwarf-flowered heartleaf is restricted to upper piedmont of South Carolina and North Carolina in acidic sandy soils such as “Pacolet or Madison gravelly sandy loam, or Musella fine sandy loam” (NCSU Herbarium). Populations can be found “along bluffs and north-facing slopes, boggy areas along streams, and adjacent hillsides and ravines with acid, sandy loam soils in deciduous forests. [It is also] usually associated with *Kalmia latifolia* or *Asimina triloba*” (NCSU Herbarium).

Observations:

The hillslope of the oak-hickory forest is described as having Pacolet sandy loam soils by USDA soil maps; however, no dwarf-flowered heartleaf was observed on site at the time of the site visit. There is no potential for take of dwarf-flowered heartleaf and the actions on site will have no effect on dwarf-flowered heartleaf.

Mountain Sweet Pitcher-plant:

Mountain sweet pitcher-plant (*Sarracenia jonesii*) is a perineal carnivorous plant. Modified leaves form hollow tubes that are typically 15 to 30 inches tall and are used to capture insects. Flowers are typically a dark red, smell sweet, and emerge in late spring and early summer (NC State).

Mountain sweet pitcher-plants are classified by the USFWS as federally endangered due to habitat destruction and limited habitat availability.

Mountain sweet pitcher-plant populations can be found in North Carolina and South Carolina, with populations in South Carolina being very rare and restricted to cataract bogs and piedmont seepage bogs (Porcher, 2001, p. 117). Cataract bogs are a type of seepage wetland found in the Blueridge Mountains and are often associated with granitic domes. These communities are fed by seepage where “streams slide over rocky outcrops that have a nearly horizontal component” and “light is abundant” (Porcher, 2001, p. 71). Piedmont seepage bogs are found in the piedmont seepage forest community in the upper piedmont. These communities are characterized by abundant light, constant seepage flow throughout the year, and Pacolet sandy loam soils, which allow the proper uptake, storage, and release of water into the seepage wetland (Porcher, 2001, p. 85).

Observations:

No bog habitat types were observed on site. There is no potential take for mountain sweet pitcher-plant and the actions on site will have no effect on mountain sweet pitcher-plant.

Small Whorled Pogonia:

The small whorled pogonia (*Isotria medeoloides*) is a perennial member of the orchid family. Stems are typically 2 to 14 inches tall with 5 or 6 leaves on top in a circular arrangement. Flowers emerge in late spring and early summer. Dormancy is not fully understood in this species, but estimates as to how long individual plants may remain dormant range from 4 to 20 years (U.S. Fish & Wildlife Service, 2008; U.S. Fish & Wildlife Service, 1992). This makes population monitoring difficult and the discovery of new populations dependent on if individuals emerged at the time of a site visit.

Small whorled pogonia is currently listed as threatened by the USFWS. Population dynamics are not fully understood due to limited research. The primary threat to populations is habitat destruction due to land development. There are also concerns relating to increased herbivory from deer, rabbits, and introduced invertebrate species, but research is limited. (U.S. Fish & Wildlife Service, 2008).

Because limited research has been conducted on the small whorled pogonia, especially in its southern range, understanding of its habitat requirements are limited. Populations of small whorled pogonia have been found in a wide range of soil types, moisture levels, and forest succession levels. Common habitat characteristics seem to be hillslopes with: sparse to moderate ground cover; a relatively open understory canopy; a moderate amount of leaf litter or decaying plant matter; and proximity to semi-permanent breaks in the canopy, such as logging roads, stream beds, or fallen trees which allow light intrusion into the forest floor (U.S. Fish & Wildlife Service, 1992).

Observations:

The oak-hickory forest habitat type could be considered potential habitat for the small whorled pogonia, however; no small-whorled pogonia was observed on site at the time of the site visit and it is believed that the actions on site will have no effect on the small whorled pogonia.

Swamp Pink:

Swamp pink (*Helonias bullata*) is an herbaceous plant with “smooth, oblong, dark green leaves that form an evergreen rosette. In spring, some rosettes produce a flowering stalk that can grow over 3 feet tall. The stalk is topped by a 1 to 3-inch-long cluster of 30 to 50 small, fragrant, pink flowers dotted with pale blue anthers. The evergreen leaves of swamp pink can be seen year round, and flowering occurs between March and May” (U.S. Fish and Wildlife Service).

“*Helonias bullata* is an obligate wetland species occurring along streams and seepage areas in freshwater swamps and other wetland habitats.” The only known population in South Carolina is located in Matthews Creek Bog within the Mountain Bridge Wilderness

and Recreation Area. This is the only known example of a montane bog within South Carolina and has experienced significant succession within the last 50 years (Porcher, 2001, p.410).

Swamp pink is listed as threatened by the USFWS. “The major threat to this species is loss and degradation of its wetland habitat due to encroaching development, sedimentation, pollution, succession, and wetland drainage. In addition, the species exhibits extremely low seedling establishment” (U.S. Fish and Wildlife Service, 1991).

Observations:

No bog habitat types were observed within the project area and there is no potential habitat for swamp pink. The actions on site will have no effect on swamp pink.

White Fringeless Orchid:

White fringeless orchid (*Platanthera integrilabia*) is a perennial herb with multiple white flowers.

“This plant is typically found in partially shaded, flat, boggy areas at the head of streams or seepage slopes. The species is often found in association with *Sphagnum* species and *Osmunda cinnamomea*, *Woodwardia areolata*, and *Thelypteris novaboracensis*, in acidic muck or sand” (Pistrang).

Known populations in South Carolina are restricted to cataract bogs that are both fragile and dangerous to visit (Porcher, 2001, p. 118). Cataract bogs are a type of seepage wetland found in the Blueridge Mountains and are often associated with granitic domes. These communities are fed by seepage where “streams slide over rocky outcrops that have a nearly horizontal component” and “light is abundant” (Porcher, 2001, p. 71).

The white fringeless orchid is listed as threatened by the USFWS due to limited habitat availability. “Threats to this species include alteration of the habitat primarily through alteration of hydrology” (Pistrang).

Observations:

No bogs or cataract bogs were found on site. There is no potential for take of white fringeless orchid and the actions on site will have no effect on white fringeless orchid.

White Irisette:

White irisette [(*Sisyrinchium dichotomum*)] is a perennial herb with branching stems and small white flowers. Flowers emerge from May – July. (NCSU Herbarium).

White irisette has historically be found in the northern, more mountainous portion of Greenville County, with Greenville being the only county in South Carolina with documented populations.

White irisette is associated with areas that experience moderate levels of disturbance that exhibit thin, slightly eroded, and/or disturbed soils, a fairly open canopy, and less

accumulated leaf litter. Examples include powerline rights-of-way roadsides, and areas subject to fire (both natural and prescribed) (U.S. Fish & Wildlife Service, 2010).

The white irisette is listed as endangered by the USFWS. Threats to populations and habitat include land development, suppression of disturbances such as fire, and competition from invasive exotic plants.

Observations:

No white irisette was observed on site and no habitat types on site experience the moderate levels of disturbance required by the white irisette. There is no potential for take of white irisette and the actions on site will have no effect on white irisette.

Rock Gnome Lichen:

Rock gnome lichen (*Gymnoderma lineare*) is a blue-gray fruticose lichen that grows in “dense colonies of narrow, strap-like lobes, called squamules. Most populations are only “one square meter or less in size” (NCSU Herbarium).

Rock gnome lichen is found on rock faces that experience high levels of humidity such as elevations above 5,000 feet or in deep river valleys and gorges. These are typically nearly vertical rock faces that are occasionally exposed to seepage and are either north facing or have partial canopy coverage due to the lichen’s sensitivity to solar radiation (NCSU Herbarium).

Rock gnome lichen is listed as endangered due to limited distribution and few populations. Major threats include: habitat disturbance through logging, walking paths, and possibly air pollution. (U.S. Fish & Wildlife Service, 1997; U.S. Forest Service)

Observations:

No rock gnome lichen or potential habitat for rock gnome lichen were observed on site. There is no potential for take of rock gnome lichen and the actions on site will have no effect on rock gnome lichen.

5.0 CONCLUSIONS

The conclusions presented herein are based on field observations and comparisons of habitat requirements of listed protected species of flora and fauna for Greenville County. In regards to the northern long-eared bat and possible land development activities on this site, the attached Consistency Letter from the USFWS states “*This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR 17.40(o).*” In regards to the bog turtle, bunched arrowhead, dwarf-flowered heartleaf, mountain sweet pitcher-plant, small whorled pogonia, swamp pink, white fringeless orchid, white irisette, and rock gnome lichen, the determination in the USFWS consistency letter states “*The IPaC-assisted determination for the northern long-eared bat **does not** apply*” (USFWS, 2022).

Based upon the USFWS IPaC species list and consistency letter, the SCDNR Heritage Trust report, and field observations conducted by Blueline personnel, our conclusion is as follows:

No suitable habitat was found for bog turtles, mountain sweet pitcher-plant, swamp pink, white fringeless orchid, white irisette, or rock gnome lichen was observed on site and none of the species were observed on site. Minimal habitat for dwarf-flowered heartleaf, bunched arrowhead, or small whorled pogonia was observed on site and no individuals were observed.

Minimal long-term habitat for Northern long-eared bat was noted on site. Any potential summer habitat would be under tree bark, snags, or inside tree cavities within the oak-hickory forest habitat type. The Species Best Management Practices section of the attached SCDNR Heritage Trust report recommends “that any tree clearing activities be conducted during the inactive season for northern long-eared bat (November 15th through March 31st) to avoid negative impacts to the species.”

The threatened status of the NLEB is currently under review as populations continue to decline due to white-nose syndrome. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. The change in the species’ status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 31, 2022).

6.0 REFERENCES AND FIELD GUIDES

- NC State. *Sarracenia jonesii*. North Carolina Extension Gardener Plant Toolbox.
<https://plants.ces.ncsu.edu/plants/sarracenia-jonesii/>
- NCSU Herbarium. *Dwarf-flowered heartleaf*. ncsu.edu.
https://projects.ncsu.edu/cals/plantbiology/ncsc/rare/images/Hexastylis_naniflora_NHP.pdf
- NCSU Herbarium. *Rock gnome lichen*. ncsu.edu.
https://projects.ncsu.edu/cals/plantbiology/ncsc/rare/images/Gymnoderma_lineare_NHP.pdf
- NCSU Herbarium. *White irisette*. ncsu.edu.
https://projects.ncsu.edu/cals/plantbiology/ncsc/rare/images/Sisyrinchium_dichotomum_NHP.pdf
- Pistrang, M. *Plant of the Week: White Fringeless Orchid (Platanthera integrilabia (Correll) Luer)*. U.S. Forest Service.
https://www.fs.usda.gov/wildflowers/plant-of-the-week/platanthera_integrilabia.shtml
- Porcher, R.D., & Rayner, D. A. (2001). *A Guide to the Wildflowers of South Carolina*. University of South Carolina Press.
- South Carolina Department of Natural Resources. *Piedmont Ecoregion Terrestrial Habitats*. statelibrary.sc.gov
https://dc.statelibrary.sc.gov/bitstream/handle/10827/11302/DNR_Piedmont_Ecoregion_Terrestrial_Habitats_2005.pdf?sequence=1&isAllowed=y
- South Carolina Native Plant Society. *Bunched Arrowhead (Sagittaria fasciculata)*. scnps.org
<https://scnps.org/about-the-plants/bunched-arrowhead-sagittaria-fasciculata>
- U.S. Fish & Wildlife Service. *Decision on delisting the dwarf-flowered heartleaf, Hexastylis naniflora*. fws.gov.
<https://www.fws.gov/project/decision-delisting-dwarf-flowered-heartleaf-hexastylis-naniflora>
- U.S. Fish & Wildlife Service, New England Field Office. (2008). *Small Whorled Pogonia (Isotria medeoloides) 5- Year Review: Summary and Evaluation*. ecos.fws.gov
https://ecos.fws.gov/docs/tess/species_nonpublish/1302.pdf
- U.S. Fish & Wildlife Service, Southeast Region, Asheville Ecological Services Field Office. (2010). *White irisette (Sisyrinchium dichotomum) 5- Year Review: Summary and Evaluation*. ecos.fws.gov
https://ecos.fws.gov/docs/five_year_review/doc4148.pdf

U.S. Fish and Wildlife Service. *Swamp Pink*. fws.gov
<https://www.fws.gov/species/swamp-pink-helonias-bullata>

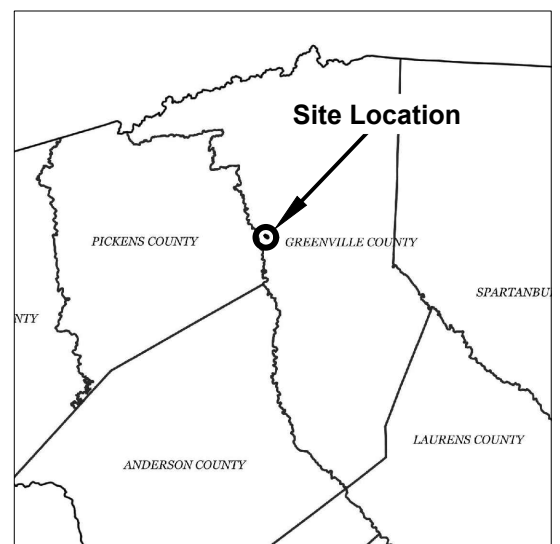
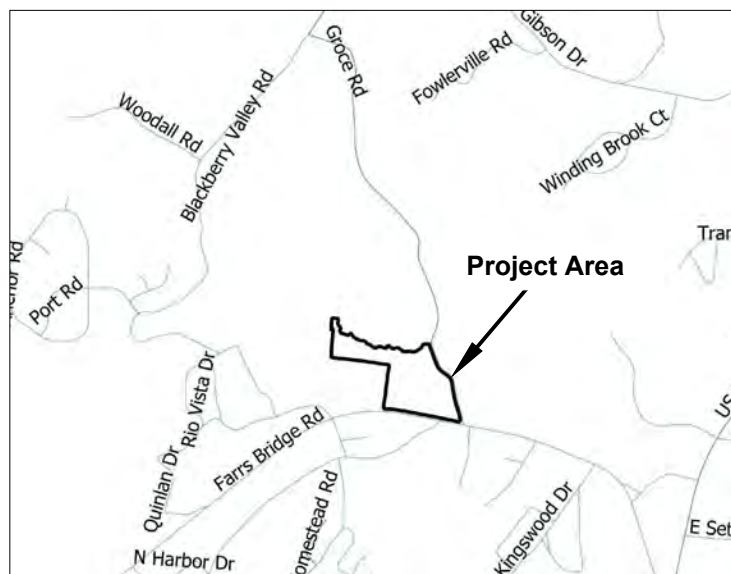
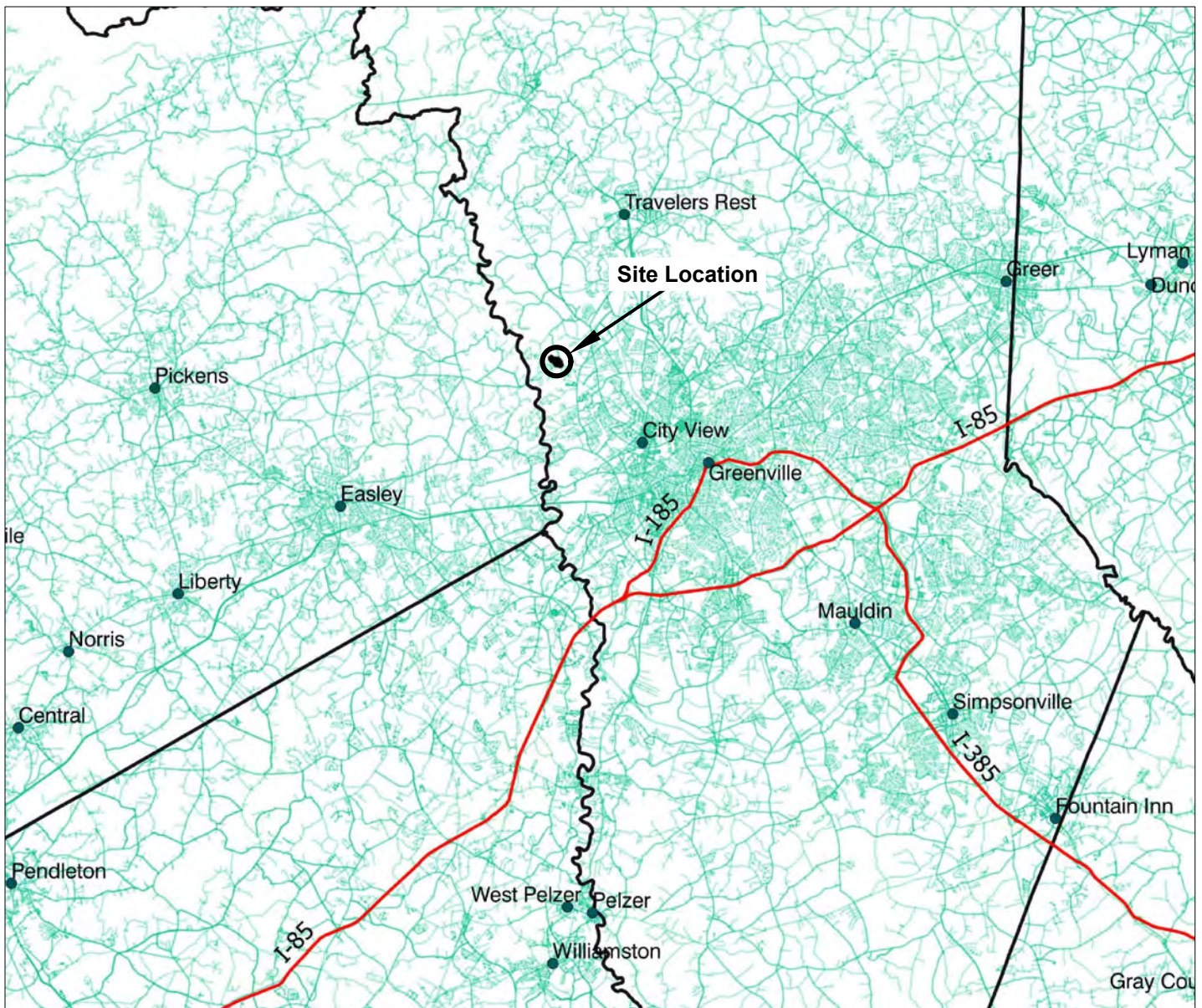
U.S. Fish & Wildlife Service. (1991). *Swamp Pink (Helonias bullata) Recovery Plan*. ecos.fws.gov.
https://ecos.fws.gov/docs/recovery_plan/910930c.pdf

U.S. Fish & Wildlife Service. (1992). *Small Whorled Pogonia (Isotria medeoloides) Recovery plan: First Revision*. ecos.fws.gov.
https://ecos.fws.gov/docs/recovery_plan/921113b.pdf

U.S. Fish & Wildlife Service. (1997). *Recovery Plan for Rock Gnome Lichen (Gymnoderma lineare) (Evans) Yoshimura and Sharp*. ecos.fws.gov
https://ecos.fws.gov/docs/recovery_plans/1997/970930b.pdf

U.S. Forest Service. *Threatened, Endangered, and Proposed (TEP) Plant Profile: Gymnoderma lineare, rock gnome lichen*. fs.usda.gov
https://www.fs.usda.gov/wildflowers/Rare_Plants/profiles/TEP/gymnoderma_lineare/index.shtml

Young, S.H. (2004, October 15). *Bunched Arrowhead – Saggitaria fasciculata*. South Carolina Wildlife Federation.
<https://www.scwf.org/bunched-arrowhead>.



Source: SC DNR GIS and Tiger Streets 2016
Survey Data Provided by: Greenville County GIS

GRAPHIC SCALE

1 inch = NTS feet

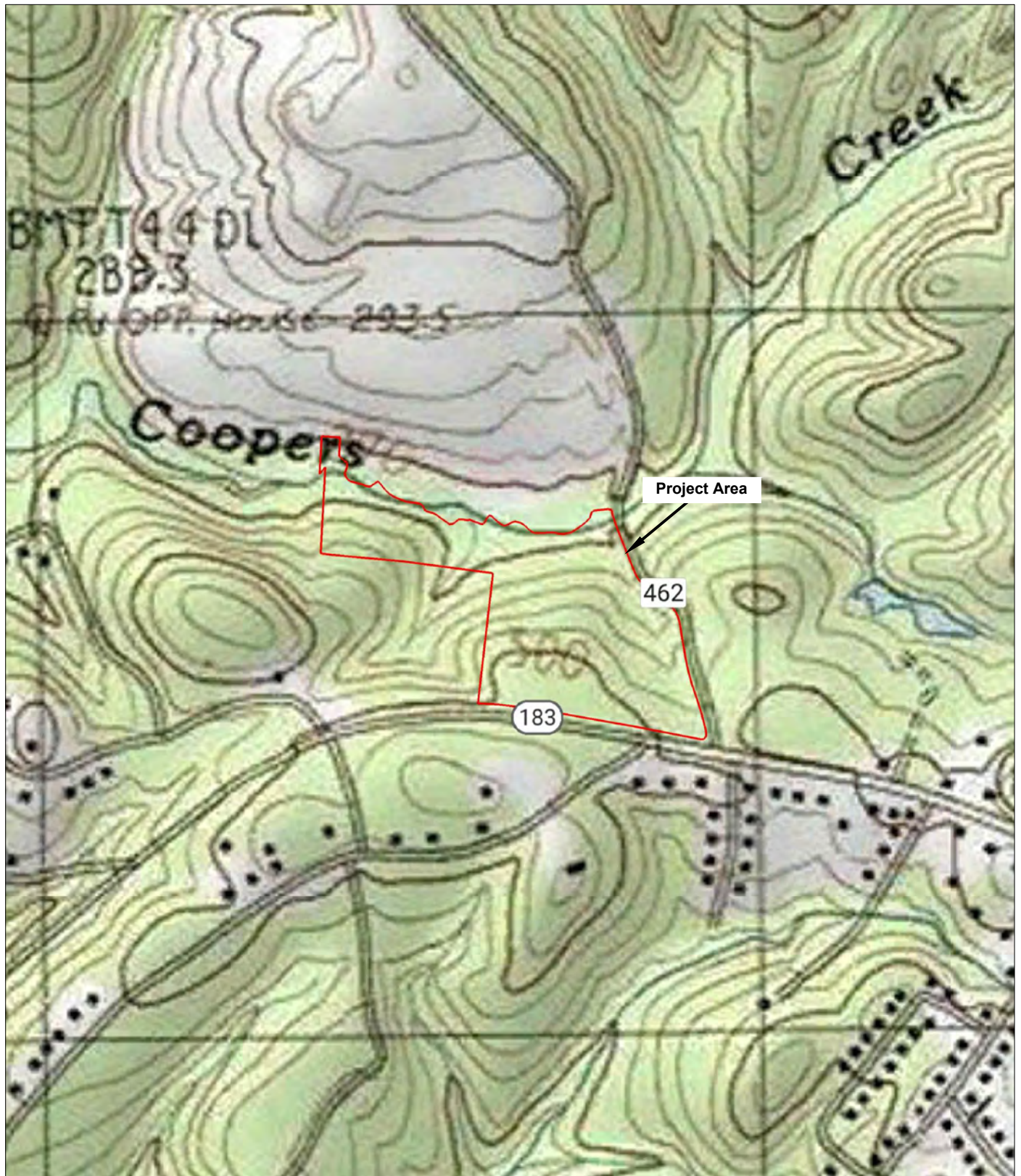
710 Lowndes Hill Road
Greenville, SC 29607
Phone: (803) 603-3479

DRAWN BY:	TCO
DATE:	20221101
BLUELINE PROJECT NO.:	2116

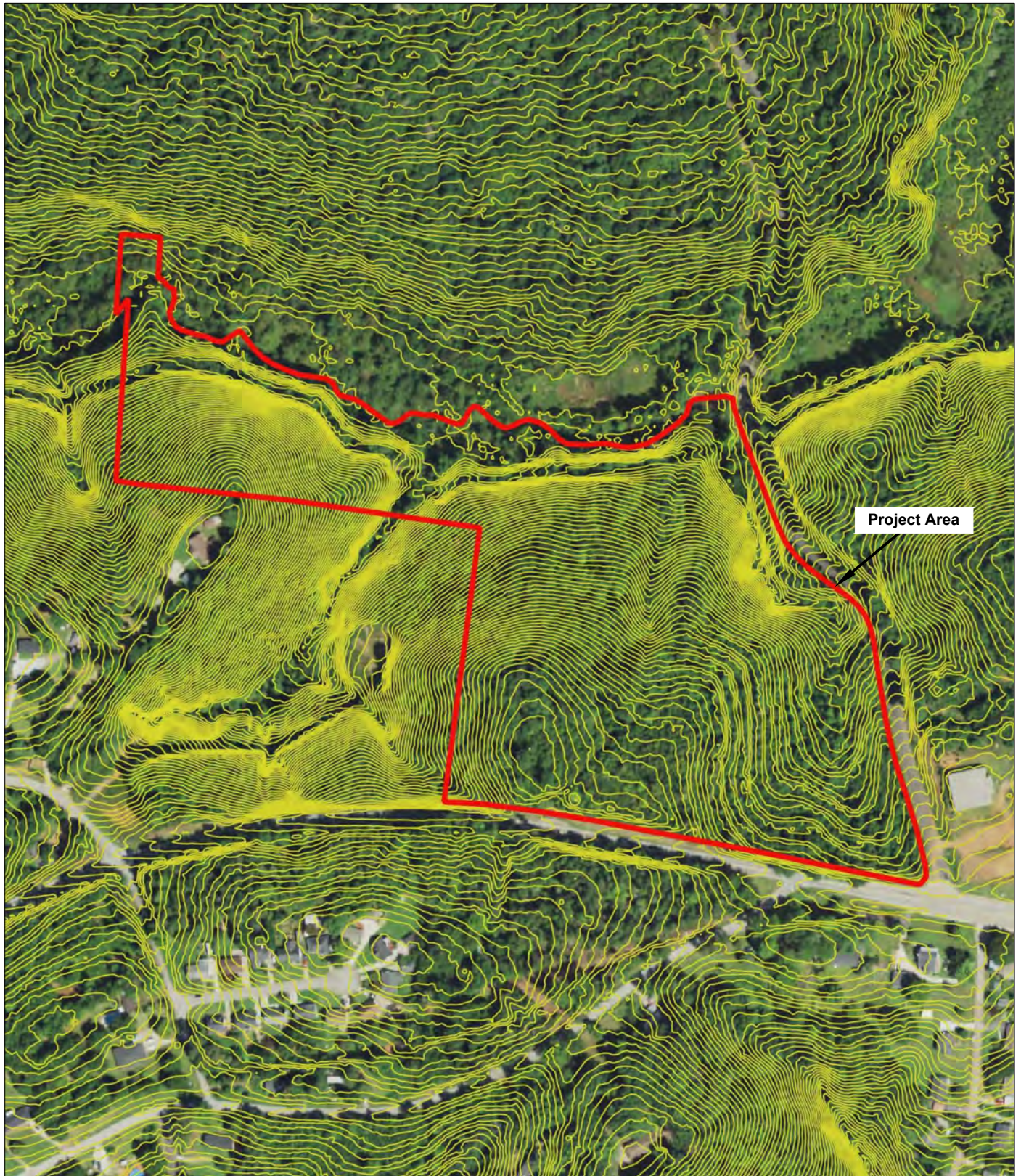
Location Map
Farris Bridge Road
Eastwood Homes
Greenville County, South Carolina

SHEET NO.

1



Source: https://services.arcgisonline.com/ArcGIS/rest/services/USA_Topo_Maps/MapServer via Google Earth
 Survey Data Provided by: Greenville County GIS



Source: <https://datagateway.nrcs.usda.gov/GDGHome.aspx>
 Survey Data Provided by: Greenville County GIS



GRAPHIC SCALE

1 inch = 300 feet

710 Lowndes Hill Road
 Greenville, SC 29607
 Phone: (803) 603-3479

DRAWN BY:	TCO
DATE:	20221101
BLUELINE PROJECT NO.:	2116

LIDAR 2ft Contour
 Farris Bridge Road
 Eastwood Homes
 Greenville County, South Carolina

SHEET NO.

3





Source: Soil Survey Staff. The Gridded Soil Survey Geographic (SSURGO) Database for SC, USDA NRCS
 Available online at <http://datagateway.nrcs.usda.gov/>. Accessed November 1, 2022.
 USFWS National Wetlands Inventory (NWI), last updated December 13, 2021.
 Google Maps - 2021 Aerial
 Survey Data Provided by: Greenville County GIS



GRAPHIC SCALE

1 inch = 300 feet

710 Lowndes Hill Road
 Greenville, SC 29607
 Phone: (803) 603-3479

DRAWN BY:	TCO
DATE:	20221101
BLUELINE PROJECT NO.:	2116

Soil/NWI Features

Farris Bridge Road
 Eastwood Homes
 Greenville County, South Carolina

SHEET NO.

4



Source: Google Maps - 2021 Aerial
 Survey Provided by: Greenville County GIS



GRAPHIC SCALE

1 inch = 300 feet

710 Lowndes Hill Road
 Greenville, SC 29607
 Phone: (803) 603-3479

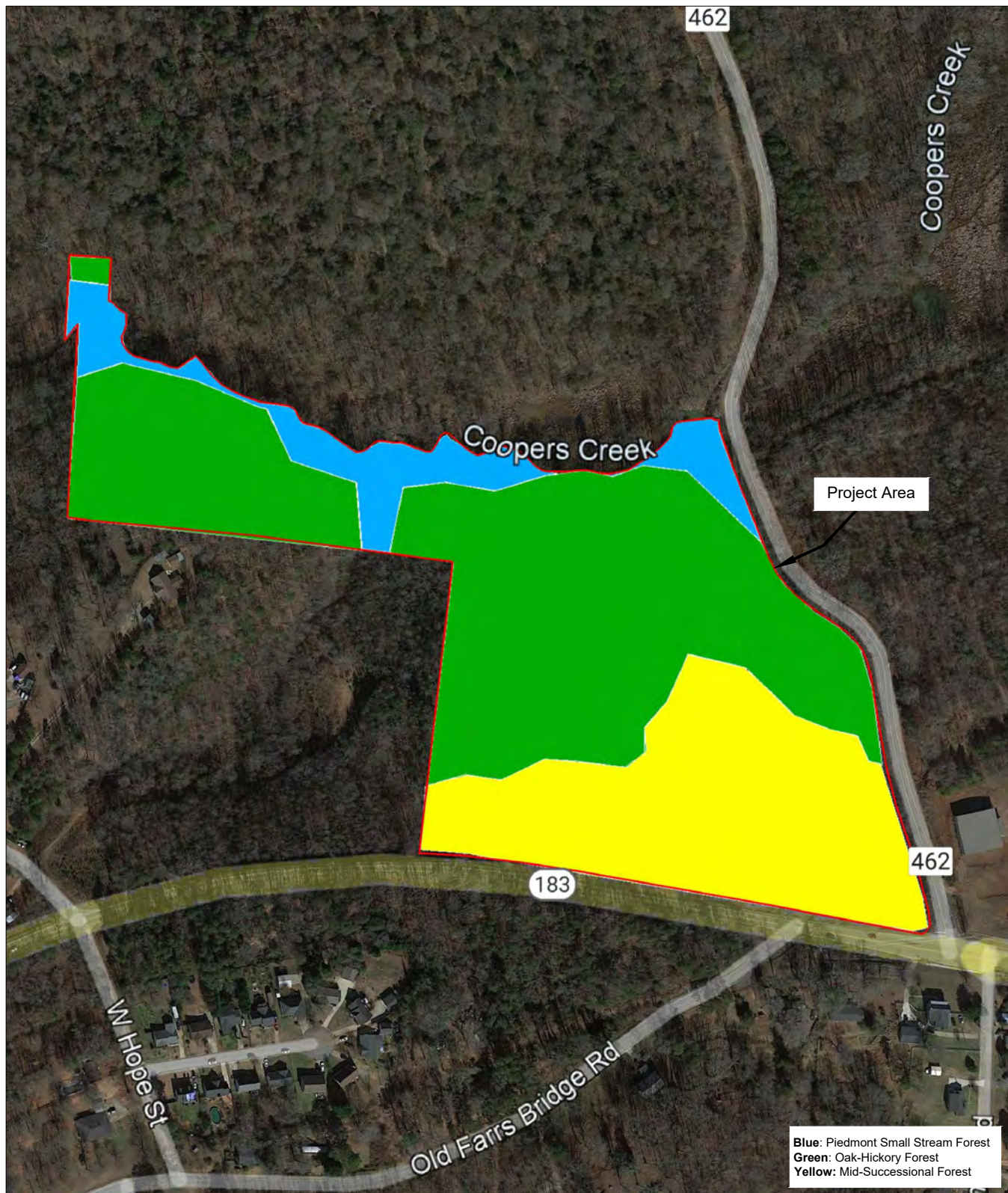
DRAWN BY:	TCO
DATE:	20221101
BLUELINE PROJECT NO.:	2116

Photo Point Locations

Farris Bridge Road
 Eastwood Homes
 Greenville County, South Carolina

SHEET NO.

5



Source: Google Maps - 2021 Aerial
Survey Data Provided by: Greenville County GIS



GRAPHIC SCALE

1 inch = 300 feet

DRAWN BY:	TCO
DATE:	20221101
BLUELINE PROJECT NO.:	2116

Habitat Types
Farris Bridge Road
Eastwood Homes
Greenville County, South Carolina

SHEET NO.

6



Photo 1 Western portion of piedmont small stream forest; looking upslope.



Photo 2 Western portion of piedmont small stream forest; looking downslope.



Photo 3 Central portion of piedmont small stream forest; looking upslope.



Photo 4 Central portion of piedmont small stream forest; looking downslope.



Photo 5 Sanitary sewer right-of-way in oak-hickory forest; looking up-valley.



Photo 6 Sanitary sewer right-of-way in oak-hickory forest; looking down-valley.



Photo 7 Oak-hickory forest; looking north.



Photo 8 Oak-hickory forest; looking east.



Photo 9 Oak-hickory forest; looking south.



Photo 10 Oak-hickory forest; looking west.



Photo 11 Seepage wetland in oak-hickory forest; looking north.



Photo 12 Seepage wetland in oak-hickory forest; looking south.



Photo 13 Seepage wetland in oak-hickory forest; soils.



Photo 14 Mid-successional forest; looking north.



Photo 15 Mid-successional forest; looking east.



Photo 16 Mid-successional forest; looking south.



Photo 17 Eastern portion of mid-successional forest;
looking south.



South Carolina Department of Natural Resources

Robert H. Boyles, Jr.
Director

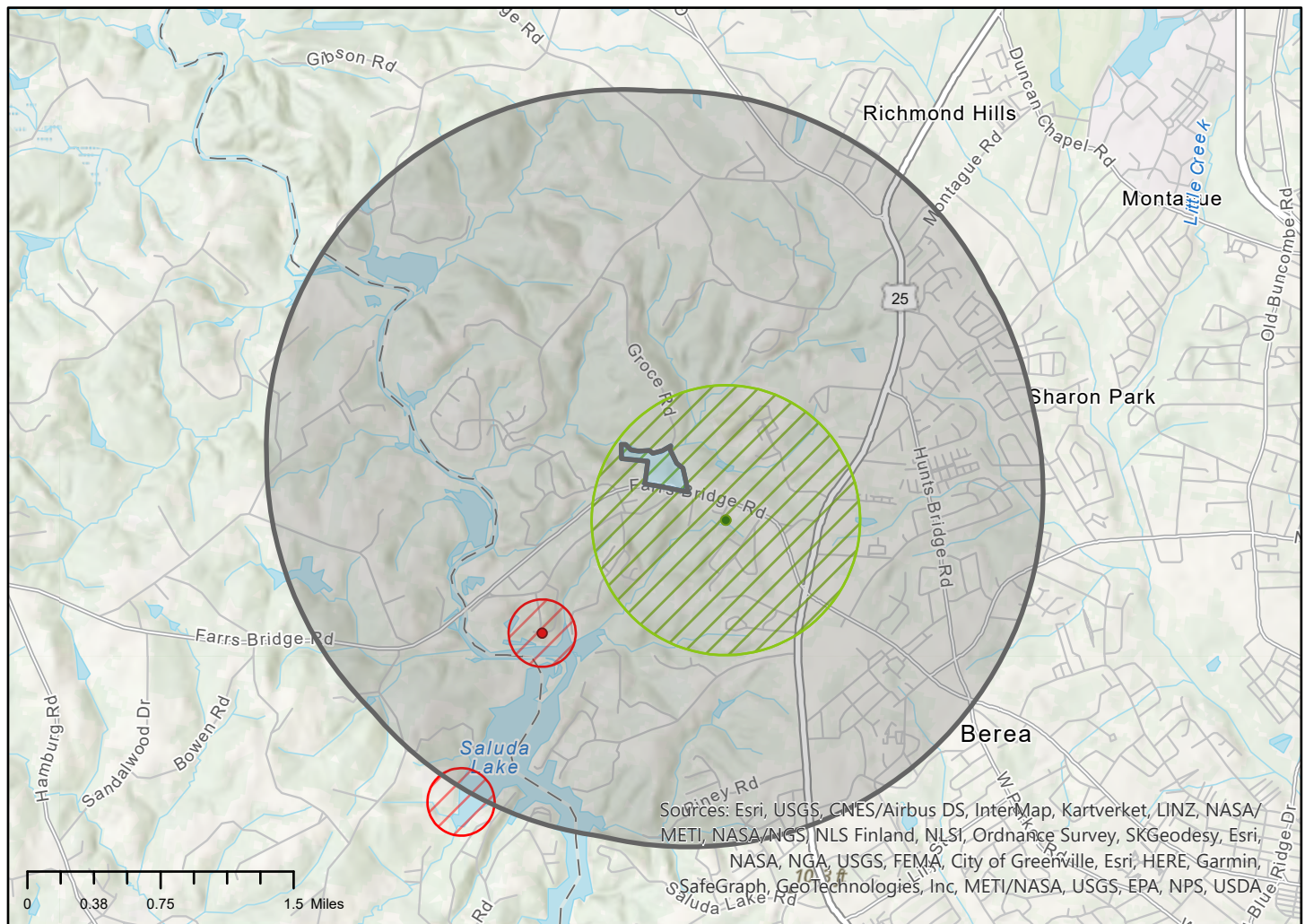
Emily C. Cope
Deputy Director for Wildlife and Freshwater Fisheries

PO Box 167
Columbia, SC 29202
(803) 734-1396
speciesreview@dnr.sc.gov

Requested on Friday, October 21, 2022 by Thomas O'Neal.

Re: Request for Threatened and Endangered Species Consultation
Chris Day/Eastwood Homes - Blueline Project #2116 Farris Bridge Road - Development (Commercial/
Residential) - Greenville County, South Carolina

The South Carolina Department of Natural Resources (SCDNR) has received your request for threatened and endangered species consultation of the above named project in Greenville County, South Carolina. The following map depicts the project area and a 2 mile buffer surrounding:



Live Life Outdoors



www.dnr.sc.gov



1000 Assembly St. P.O. Box 167 Columbia, S.C. 29202



803-734-3886 Equal Opportunity Agency



South Carolina Department of Natural Resources

Robert H. Boyles, Jr.
Director

Emily C. Cope
Deputy Director for Wildlife and Freshwater Fisheries

This report includes the following items:

- A - A report for species which intersect the project area
- B - A report for species which intersect the buffer around the project area
- C - A list of best management practices relevant to species near to or within the project area
- D - A list of best management practices relevant to the project type
- E - Instructions to submit new species observation records to the SC Natural Heritage Program

Please be advised:

The contents of this report, including all tables, maps, recommendations, and various other text, are produced as a direct result of the information a user provides at the time of submission. The SCDNR assumes that all information submitted by the user represents the project scope as proposed, and recommends that additional reports be requested should the scope deviate from how the project was initially represented to the SCDNR.

The technical comments outlined in this report are submitted to speak to the general impacts of the activities as described through inquiry by parties outside the South Carolina Department of Natural Resources. These technical comments are submitted as guidance to be considered and are not submitted as final agency comments that might be related to any unspecified local, state or federal permit, certification or license applications that may be needed by any applicant or their contractors, consultants or agents presently under review or not yet made available for public review. In accordance with its policy 600.01, Comments on Projects Under Department Review, the South Carolina Department of Natural Resources, reserves the right to comment on any permit, certification or license application that may be published by any regulatory agency which may incorporate, directly or by reference, these technical comments.

Interested parties are to understand that SCDNR may provide a final agency position to regulatory agencies if any local, state or federal permit, certification or license applications may be needed by any applicant or their contractors, consultants or agents. For further information regarding comments and input from SCDNR on your project, please contact our Office of Environmental Programs by emailing environmental@dnr.sc.gov or by visiting www.dnr.sc.gov/environmental. Pursuant to Section 7 of the Endangered Species Act, requests for formal letters of concurrence with regards to federally listed species should be directed to the USFWS.

Should you have any questions or need more information, please do not hesitate to contact our office by email at speciesreview@dnr.sc.gov or by phone at 803-734-1396.

Sincerely,

Joseph Lemeris, Jr.
Heritage Trust Program
SC Department of Natural Resources

Live Life Outdoors

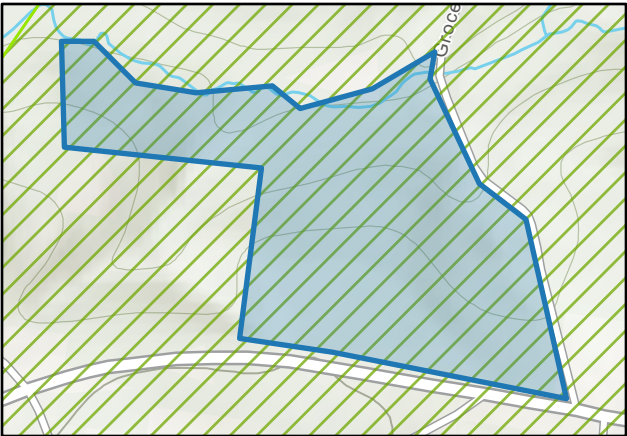


A. Project Area - Species Report

There are 2 tracked species records found within the project foot print. The following table outlines occurrences found within the project footprint (if any), sorted by listing status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting Natureserve's web page. Please note that certain sensitive species found on site may be listed in this table but are not represented on the map. Please contact speciesreview@dnr.sc.gov should you have further questions related to sensitive species found within the project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, City of Greenville, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA,



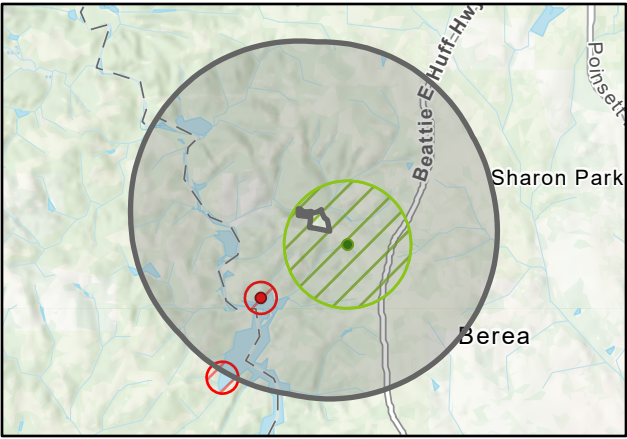
Common Name	Scientific Name	Federal Protection Status	State Protection Status	SWAP Priority	Last Obs. Date
Cumberland Grotto Alumroot	Heuchera parviflora var. parviflora	Not Applicable	Not Applicable	Not Applicable	1973-08-01
Golden-saxifrage, Water-mat,	Chrysosplenium americanum	Not Applicable	Not Applicable	Moderate	No Date

B. Buffer Area - Species Report

The following table outlines rare, threatened or endangered species found within 2 miles of the project footprint, arranged in order of protection status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting Natureserve's web page. Please note that certain sensitive species found within the buffer area may be listed in this table but are not represented on the map.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, NASA, NGA, USGS, City of Greenville, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA



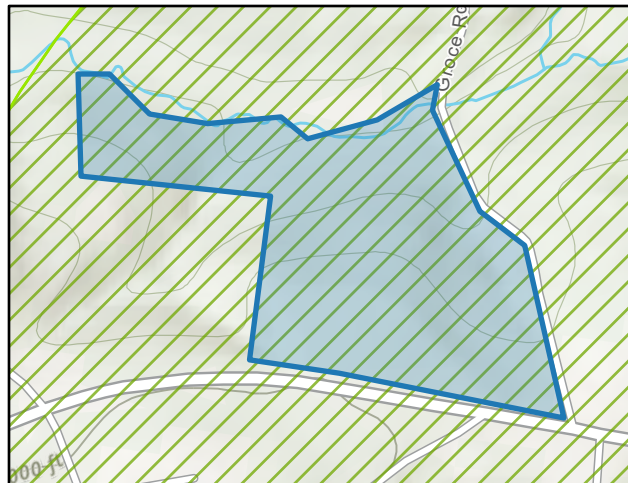
Common Name	Scientific Name	Federal Protection Status	State Protection Status	SWAP Priority	Last Obs. Date
Cumberland Grotto Alumroot	Heuchera parviflora var. parviflora	Not Applicable	Not Applicable	Not Applicable	1973-08-01
Fieryblack Shiner	Cyprinella pyrrhomelas	Not Applicable	Not Applicable	Moderate	No Date
Golden-saxifrage, Water-mat,	Chrysosplenium americanum	Not Applicable	Not Applicable	Moderate	No Date
Highback Chub	Hybopsis hypsinotus	Not Applicable	Not Applicable	Moderate	No Date
Red Burrowing Crayfish	Cambarus carolinus	Not Applicable	Not Applicable	Highest	1952-06-12

C. Species Best Management Practices (1 of 1)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to species of concern which may be found on or near to the project area. Please contact speciesreview@dnr.sc.gov should you have further questions with regard to survey methods, consultation, or other species-related concerns.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, NASA, NGA, USGS, FEMA, Esri Community Maps
Contributors, City of Greenville, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA,



Cavity- and tree-roosting bat species including the federally threatened northern long-eared bat (*Myotis septentrionalis*), state-endangered Rafinesque's big-eared bat (*Corynorhinus rafinesquii*), and the federally at-risk tricolored bat (*Perimyotis subflavus*) have been known to occur in the county of the proposed site. As a conservation measure, it is recommended that any tree clearing activities be conducted during the inactive season for Northern long-eared bat (November 15th through March 31st) to avoid negative impacts to the species. If any of the above species are found on-site, please contact the USFWS and SCDNR.

In the interest of preserving plant diversity, the South Carolina Plant Conservation Alliance performs native plant rescues in order to protect and preserve our diversity of native plants. If you are interested in assisting with this important endeavor please contact Mrs. April Punsalan at (843) 727-4707 ext. 218, or by email: scpca@lists.fws.gov before any development occurs onsite. There may be plants of interest on the project site that the Alliance would like to preserve.

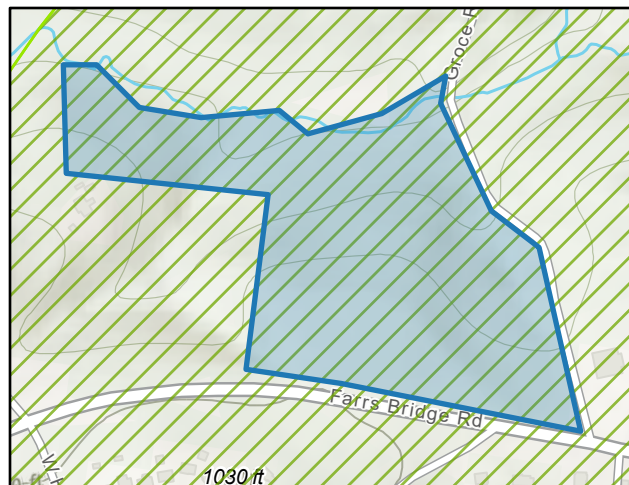
Species in the above table with SWAP priorities of High, Highest or Moderate are designated as having conservation priority under the South Carolina State Wildlife Action Plan (SWAP). SWAP species are those species of greatest conservation need not traditionally covered under any federal funded programs. Species are listed in the SWAP because they are rare or designated as at-risk due to knowledge deficiencies; species common in South Carolina but listed rare or declining elsewhere; or species that serve as indicators of detrimental environmental conditions. SCDNR recommends that appropriate measures should be taken to minimize or avoid impacts to the aforementioned species of concern.

D. Project Best Management Practices (1 of 3)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, City of Greenville, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies,



If this project is associated with the Federal Government and the project area is or once was used as farmland, we recommend that consultation occur with the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) per the Farmland Protection Policy Act; areas of the site are classified as prime farmland or farmland of statewide importance.

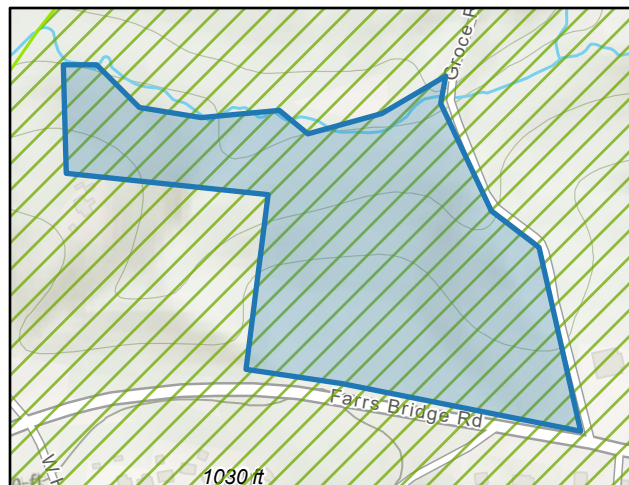
- All necessary measures must be taken to prevent oil, tar, trash and other pollutants from entering the adjacent offsite areas/wetlands/ water.
 - Once the project is initiated, it must be carried to completion in an expeditious manner to minimize the period of disturbance to the environment.
 - Upon project completion, all disturbed areas must be permanently stabilized with vegetative cover (preferable), riprap or other erosion control methods as appropriate.
 - The project must be in compliance with any applicable floodplain, stormwater, land disturbance, shoreline management guidance or riparian buffer ordinances.
 - Prior to beginning any land disturbing activity, appropriate erosion and siltation control measures (e.g. silt fences or barriers) must be in place and maintained in a functioning capacity until the area is permanently stabilized.
 - Materials used for erosion control (e.g., hay bales or straw mulch) will be certified as weed free by the supplier.
 - Inspecting and ensuring the maintenance of temporary erosion control measures at least:
 - a. on a daily basis in areas of active construction or equipment operation;
 - b. on a weekly basis in areas with no construction or equipment operation; and
 - c. within 24 hours of each 0.5 inch of rainfall.
 - Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts.
 - Land disturbing activities must avoid encroachment into any wetland areas (outside the permitted impact area). Wetlands that are unavoidably impacted must be appropriately mitigated.
 - Your project may require a Stormwater Permit from the SC Department of Health & Environmental Control, please visit <https://www.scdhec.gov/environment/water-quality/stormwater>
-
- If clearing must occur, riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain bank stability and reduce erosion.
 - Construction activities must avoid and minimize, to the greatest extent practicable, disturbance of woody shoreline vegetation within the project area. Removal of vegetation should be limited to only what is necessary for construction of the proposed structures.
 - Where necessary to remove vegetation, supplemental plantings should be installed following completion of the project. These plantings should consist of appropriate native species for this ecoregion and exclude plant species found on the exotic pest plant council list: https://www.se-eppc.org/southcarolina/SCEPPC_LIST2014finalOct.pdf.

D. Project Best Management Practices (2 of 3)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, NASA, NGA, USGS, FEMA, Esri Community Maps
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- Review of available data, National Hydrography Dataset, indicates that streams or waters of the United States are present within your project area. These areas may require a permit from the U.S. Army Corps of Engineers (USACE), as well as a compensatory mitigation plan. SCDNR advises that you consult with the USACE Regulatory to determine if jurisdictional waters are present and if a permit and mitigation is required for any activities impacting these areas. For more information, please visit their website at www.sac.usace.army.mil/Missions/Regulatory. Additionally, a 401 Water Quality Certification or a State Navigable Waters permit may also be required from the SC Department of Health & Environmental Control. For more information, please visit the following websites:
 - <https://www.scdhec.gov/environment/water-quality/water-quality-certification-section-401-clean-water-act>
 - <https://www.scdhec.gov/environment/water-quality/navigable-waters>
- Excavation/Construction activities must not occur during fish spawning season from March through June due to its negative impacts on eggs and reproduction activities.
- If clearing must occur, riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain bank stability and reduce erosion.
- Construction activities must avoid and minimize, to the greatest extent practicable, disturbance of woody shoreline vegetation within the project area. Removal of vegetation should be limited to only what is necessary for construction of the proposed structures.
- Where necessary to remove vegetation, supplemental plantings should be installed following completion of the project. These plantings should consist of appropriate native species for this ecoregion.

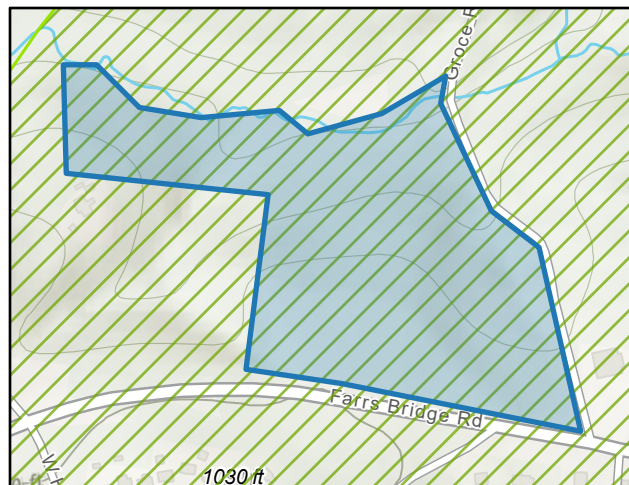
Your project area includes a FEMA special flood hazard area and may require a permit from the County National Floodplain Insurance Program Manager before impacts occur to aquatic resources and the associated floodplains on site. Please refer to <https://www.dnr.sc.gov/water/flood/documents/nfipadmindirectory.pdf> to find your appropriate contact information.

D. Project Best Management Practices (3 of 3)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, NASA, NGA, USGS, FEMA, Esri Community Maps
Contributors, City of Greenville, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies,

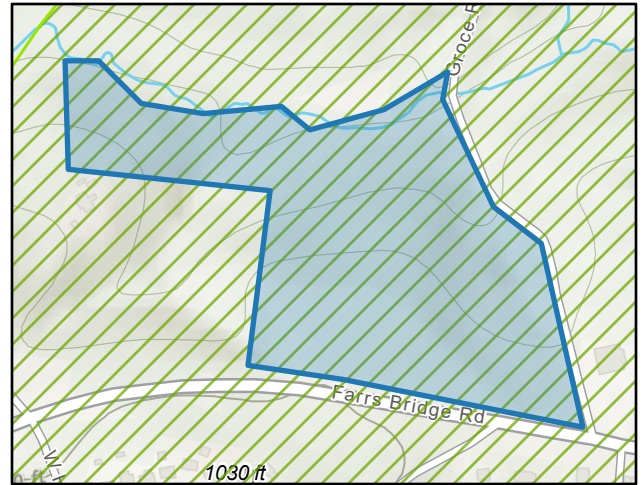


- Residential and commercial development has grown exponentially in recent years. Activities associated with these developments can have detrimental impacts on wildlife and aquatic resources such as habitat fragmentation, loss of available habitats and pollution, especially stormwater pollution. The result of these impacts causes the displacement of species and increases wildlife and human interactions. However, properly planned and sited development activities may allow for economic expansion with minimal negative impacts.
- Where appropriate, particularly adjacent to wetlands and water bodies, drainage plans and construction measures for residential and commercial development should be designed to control erosion and sedimentation, water quality degradation and other negative impacts on adjacent water and wetlands utilizing the best available design research. Developers proposing development activities should contact and work closely with local community development planning entities.
- Developments should be planned where growth is most compatible with natural resources utilizing residential and commercial cluster development methods, maximizing green spaces which can both be beneficial to protect natural resources and provide recreational opportunities for outdoor enthusiasts.
- Developments should be designed and constructed to avoid impact to wetland and stream areas whenever possible and to minimize unavoidable wetland and stream impacts to the maximum extent possible. Aquatic habitats and other sensitive natural areas should be identified in the initial planning stages of the project and incorporated in their natural state into the overall development plan.
- Developments should be designed to maintain the integrity and contiguity of wetland and stream systems and their associated riparian corridors, including the establishment of protective upland buffers around and between undisturbed aquatic systems whenever possible. Projects should be designed to minimize habitat fragmentation, including the construction of a limited number of road and utility crossings through streams and wetlands.
- The SCDNR recommends that the applicant incorporate vegetated bioswales, catch basins and/or bioretention cells/rain gardens into development plans beyond the regulatory requirements of the Stormwater Permitting requirements to add additional features to aid in capturing and filtering runoff from hardened surfaces. These structures can protect water quality and prevent oil, gas and other pollutants from directly entering nearby waterways. In addition, the SCDNR strongly recommends the use of permeable or porous pavement surfaces when possible. Permeable surfaces allow for rainfall to filter through the soil which aids in flood control and improves water quality.
- The following resources are available from Clemson Extension to assist:
 - <https://hgic.clemson.edu/factsheet/an-introduction-to-bioswales/>
 - <https://hgic.clemson.edu/factsheet/rain-garden-plants-introduction/>
 - <https://hgic.clemson.edu/factsheet/bioretention-cells-a-guide-for-your-residents/>
 - <https://hgic.clemson.edu/factsheet/an-introduction-to-porous-pavement/>
 - <https://hgic.clemson.edu/factsheet/trees-for-stormwater-management/>

E. Instructions for Submitting Species Observations

The SC Natural Heritage Dataset relies on continuous monitoring and surveying for species of concern throughout the state. Any records of species of concern found within this project area would greatly benefit the quality and comprehensiveness of the statewide dataset for rare, threatened and endangered species. Below are instructions for how to download the SC Natural Heritage Occurrence Reporting Form through the Survey123 App.

Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, City of Greenville, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies,



Conservation Ranks & SWAP Priority Status

The SC Natural Heritage Program assigns S Ranks for species tracked within the state of South Carolina based on ranking methodology developed by NatureServe and its state program network. For information conservation rank definitions, please visit <https://explorer.natureserve.org/AboutTheData/Statuses>

The SCDNR maintains and updates its State Wildlife Action Plan (SWAP) every 10 years. This plan categorizes species of concern by Moderate, High, and Highest Priority. Please visit <https://www.dnr.sc.gov/swap/index.html> for more information about the SC SWAP.

Instructions for accessing the SC Natural Heritage Occurrence Reporting Form

For use in a browser (on your desktop/PC):

- 1) Follow <https://bit.ly/scht-reporting-form>
- 2) Select 'Open in browser'
- 3) The form will open and you can begin entering data!

This method of access will also work on a browser on a mobile device, but only when connected to the internet. To use the form in the field without relying on data/internet access, follow the steps below.

For use on a smartphone or tablet using the field app:

- 1) Download the Survey123 App from the Google Play store or the Apple Store. This app is free to download. Allow the app to use your location.
- 2) No need to sign in. However, you will need to provide the app with our Heritage Trust GIS portal web address. You will only need to do this once: (this is a known bug with ESRI's software, and future releases of the form should not require the below steps. Bear with us in the meantime!).
 - a. Tap 'Sign in'
 - b. Tap the settings (gear symbol) in the upper right corner
 - c. Tap 'Add Portal'
 - d. After the 'https://', type schtportal.dnr.sc.gov/portal
 - e. Tap 'Add Portal'
 - f. Tap the back-arrow icon (upper left corner) twice to return to the main sign in page.
- 3) Use the camera app (or other QR Reader app) to scan the QR code on this page from your smartphone or tablet. Click on the 'Open in the Survey123 field app'. This will prompt a window to allow Survey123 to download the SC Natural Heritage Occurrence Reporting Form. Select 'Open.'
- 4) The form will automatically open in Survey123, and you can begin entering data! This form will stay loaded in the app on your device until you manually delete it, and you can submit as many records as you like.





United States Department of the Interior

FISH AND WILDLIFE SERVICE

South Carolina Ecological Services
176 Croghan Spur Road, Suite 200
Charleston, SC 29407-7558
Phone: (843) 727-4707 Fax: (843) 727-4218



In Reply Refer To:

October 20, 2022

Project Code: 2023-0006960

Project Name: Blueline Project #2116 Farris Bridge Road

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:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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 current information or 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. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Northern Long-eared Bat: Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to be addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and

recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
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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:

South Carolina Ecological Services

176 Croghan Spur Road, Suite 200

Charleston, SC 29407-7558

(843) 727-4707

Project Summary

Project Code: 2023-0006960

Project Name: Blueline Project #2116 Farris Bridge Road

Project Type: Residential Construction

Project Description: This is a residential development project located in Greenville, SC near the town of Berea. The project area is approximately 22 acres. This project has an unknown start date and will include land clearing, tree removal, grading, road construction, and home construction. This project is designed to minimize or avoid all impacts to wetlands and streams within the project area.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.8984358,-82.4800588,1001049,14z>



Counties: Greenville County, South Carolina

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

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

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

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

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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 <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Reptiles

NAME	STATUS
Bog Turtle <i>Glyptemys muhlenbergii</i> Population: U.S.A. (GA, NC, SC, TN, VA) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6962	Similarity of Appearance (Threatened)

Insects

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

Flowering Plants

NAME	STATUS
Bunched Arrowhead <i>Sagittaria fasciculata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1720	Endangered
Dwarf-flowered Heartleaf <i>Hexastylis naniflora</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2458	Threatened
Mountain Sweet Pitcher-plant <i>Sarracenia rubra ssp. jonesii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4283	Endangered
Small Whorled Pogonia <i>Isotria medeoloides</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1890	Threatened
Swamp Pink <i>Helonias bullata</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4333	Threatened
White Fringeless Orchid <i>Platanthera integrilabia</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1889	Threatened

Lichens

NAME	STATUS
Rock Gnome Lichen <i>Gymnoderma lineare</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3933	Endangered

Critical habitats

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

USFWS National Wildlife Refuge Lands And Fish Hatcheries

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.

REFUGE INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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](#).

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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)

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
Bald Eagle <i>Haliaeetus leucocephalus</i> 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.	Breeds Sep 1 to Jul 31
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20

NAME	BREEDING SEASON
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> 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 <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> 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 $0.05/0.25 = 0.2$.

BCC Rangewide
(CON)

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- 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>

Migratory Birds FAQ

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 list of migratory birds that potentially occur 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 [Rapid Avian Information Locator \(RAIL\) 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 or migrating in my 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 query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. 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.

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 EMERGENT WETLAND

- [Palustrine](#)

RIVERINE

- [Riverine](#)
-

IPaC User Contact Information

Agency: Blueline Environmental Consultants, LLC

Name: Thomas O'Neal

Address: 710 Lowndes Hill Road

City: Greenville

State: SC

Zip: 29607

Email: thomas@enviropemrit.com

Phone: 8036033479



United States Department of the Interior

FISH AND WILDLIFE SERVICE

South Carolina Ecological Services
176 Croghan Spur Road, Suite 200
Charleston, SC 29407-7558
Phone: (843) 727-4707 Fax: (843) 727-4218



In Reply Refer To:

October 20, 2022

Project code: 2023-0006960

Project Name: Blueline Project #2116 Farris Bridge Road

Subject: Consistency letter for the 'Blueline Project #2116 Farris Bridge Road' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Thomas O'Neal:

The U.S. Fish and Wildlife Service (Service) received on October 20, 2022 your effects determination for the 'Blueline Project #2116 Farris Bridge Road' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause “take”^[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action’s effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Bog Turtle *Glyptemys muhlenbergii* Similarity of Appearance (Threatened)

- Bunched Arrowhead *Sagittaria fasciculata* Endangered
- Dwarf-flowered Heartleaf *Hexastylis naniflora* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Mountain Sweet Pitcher-plant *Sarracenia rubra* ssp. *jonesii* Endangered
- Rock Gnome Lichen *Gymnoderma lineare* Endangered
- Small Whorled Pogonia *Isotria medeoloides* Threatened
- Swamp Pink *Helonias bullata* Threatened
- White Fringeless Orchid *Platanthera integrilabia* Threatened

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Blueline Project #2116 Farris Bridge Road

2. Description

The following description was provided for the project 'Blueline Project #2116 Farris Bridge Road':

This is a residential development project located in Greenville, SC near the town of Berea. The project area is approximately 22 acres. This project has an unknown start date and will include land clearing, tree removal, grading, road construction, and home construction. This project is designed to minimize or avoid all impacts to wetlands and streams within the project area.

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@34.8984358,-82.4800588,1001049,14z>

**Determination Key Result**

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

No

2. Will your activity purposefully **Take** northern long-eared bats?

No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

Automatically answered

No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.

Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

No

6. Will the action involve Tree Removal?

Yes

7. Will the action only remove hazardous trees for the protection of human life or property?

No

8. Will the action remove trees within 0.25 miles of a known northern long-eared bat hibernaculum at any time of year?

No

9. Will the action remove a known occupied northern long-eared bat maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31?

No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

20

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

20

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

Agency: Blueline Environmental Consultants, LLC

Name: Thomas O'Neal

Address: 710 Lowndes Hill Road

City: Greenville

State: SC

Zip: 29607

Email: thomas@enviropermit.com

Phone: 8036033479
