

# **STEVENS CREEK HYDROELECTRIC PROJECT**

**FERC No. 2535**

## **RARE, THREATENED AND ENDANGERED SPECIES WHITEPAPER**

*Prepared for:*

**Dominion Energy South Carolina, Inc.  
Cayce, South Carolina**

*Prepared by:*

**Kleinschmidt**

Lexington, South Carolina  
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May 2020

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**STEVENS CREEK HYDROELECTRIC PROJECT  
FERC No. 2535**

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## **1.0 INTRODUCTION**

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Dominion Energy South Carolina, Inc. (DESC) is the licensee of the Stevens Creek Hydroelectric Project (FERC No. 2535) (Project). The Project, which has an installed capacity of 17.28 megawatts (MW), is located in Edgefield and McCormick counties, South Carolina and Columbia County, Georgia, at the confluence of Stevens Creek and the Savannah River. The Project's dam is located approximately one mile upstream of the Augusta Diversion Dam, and approximately 13 miles downstream of the J. Strom Thurmond Dam. The Project occupies approximately 104 acres of federal lands within the Sumter National Forest. A project location map is included in Figure 3-1.

On November 22, 1995, FERC issued a 30-year license for the Project which is scheduled to expire on October 31, 2025. DESC intends to file an application for a new license with FERC on or before October 31, 2023. The Project is currently undergoing a relicensing process which involves cooperation and collaboration between DESC, as licensee, and a variety of stakeholders including state and federal resource agencies, state and local government, non-governmental organizations (NGO), and interested individuals. During early stakeholder meetings, DESC and stakeholders identified the need for a Rare, Threatened and Endangered (RTE) Species Whitepaper to provide baseline information on federal and state-listed RTE species within the FERC project boundary<sup>1</sup> and the area of potential Project influence (project area)<sup>2</sup>. The information included in this whitepaper will be used during the development of the Draft License Application (DLA) and Final License Application (FLA) and identify potential Project effects on RTE species within the project area.

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<sup>1</sup> The FERC-delineated boundary surrounding those lands and waters necessary for operation of a federally-licensed hydroelectric project.

<sup>2</sup> For the purposes of this whitepaper the "project area" is considered those lands and waters in the vicinity of the Project that may be influenced by operation and maintenance of the Project. The Project area may include lands and water adjacent to, but outside of, the FERC Project boundary.

## **2.0 CONSULTATION HISTORY**

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When developing the Pre-Application Document (PAD), DESC reached out to the Georgia Department of Natural Resources (GDNR), South Carolina Department of Natural Resources (SCDNR), United States Forest Service (Forest Service), and the United States Fish and Wildlife Service (USFWS) to compile a comprehensive list of federal and state-listed RTE species and Forest Service species of conservation concern. Consultation records are included in Appendix A.

### **3.0 METHODOLOGY**

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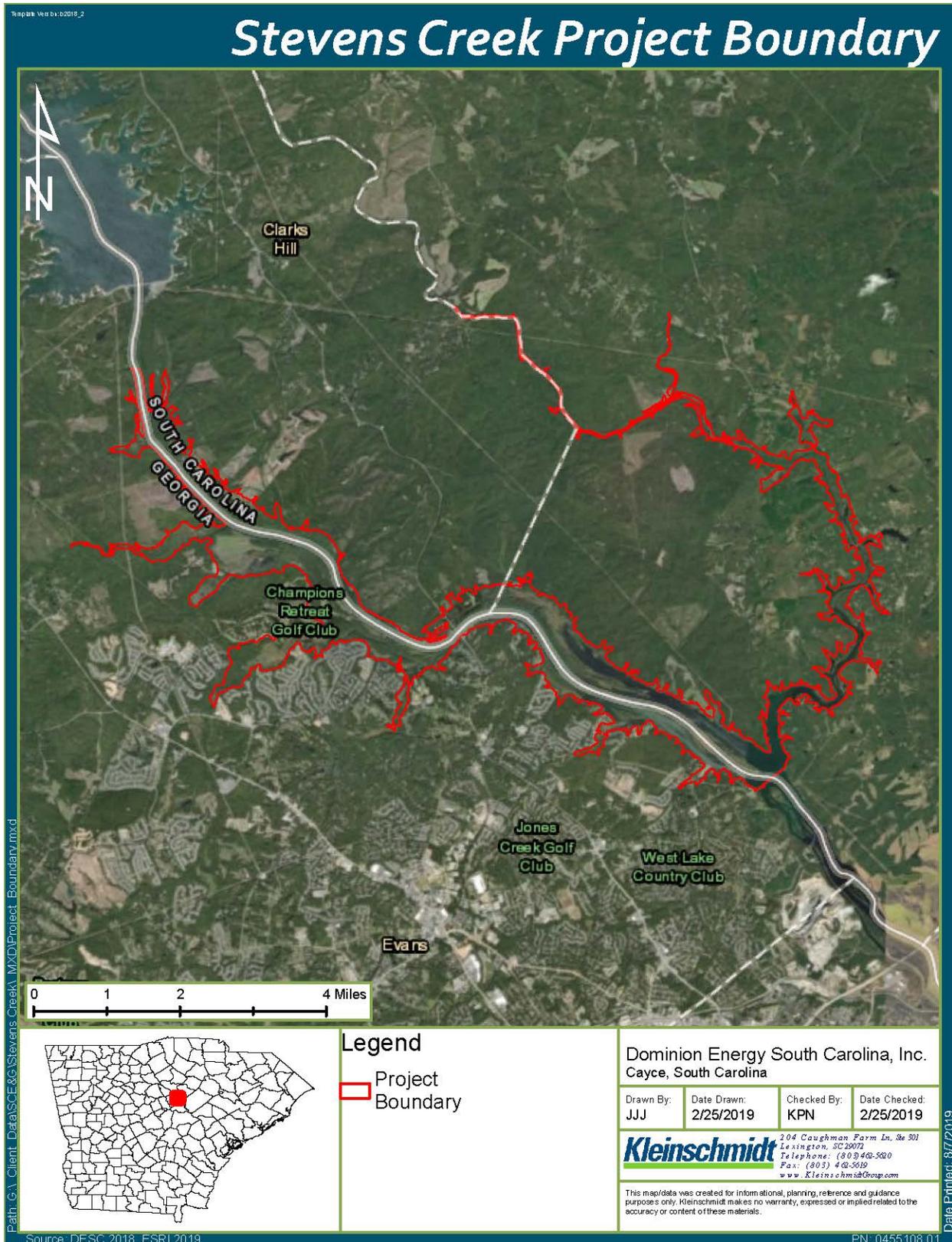
The Project area for the purpose of this study includes the main stem of the Savannah River from the Thurmond Dam downstream to the Stevens Creek Dam (approximately 13 River Miles [RMs]), the main stem of Stevens Creek, from the Stevens Creek Dam upstream to the top of the Project boundary (approximately 12 RMs), and associated shoreline habitats (Figure 3-1).

As an initial step, a comprehensive list was developed that includes federal-protected and Forest Service Threatened, Endangered and Sensitive (TES) species that may occur in the Project boundary (Table 3-1). In order to identify federal-protected species in the Project area, the USFWS's Information for Planning and Consultation (IPaC) online system was reviewed. Results from the IPaC review are included in Table 3-1 and Appendix A. Forest Service TES species that may occur in the Project area were also identified. The Forest Service provided a list of their Threatened, Endangered and Sensitive (TES) Species for the Long Cane Ranger District of the Sumter National Forest on January 15, 2020. These species are also in Table 3-1 and Appendix A.

After identification of federal-protected and Forest Service TES species, habitat requirements for each species were reviewed to determine the likelihood of each species to occur within the Project boundary. Species that were deemed likely to occur within the Project boundary were then analyzed to determine if continued Project operations would have any adverse effect on the species.

In addition to USFWS and Forest Service protected species, the National Marine Fisheries Service (NMFS) is responsible for the protection of threatened and endangered anadromous and marine fish species. Atlantic Sturgeon and Shortnose Sturgeon, two species that inhabit freshwater seasonally, are listed under the Endangered Species Act (ESA) as threatened and endangered, respectively. These species are not known to occur in the Project area at this time, however there is potential for the species to occur in the future, following the implementation of fish passage downstream of Stevens Creek dam. These species are discussed further in Section 4.0.

FIGURE 3-1 STEVENS CREEK RARE, THREATENED, AND ENDANGERED SPECIES STUDY AREA



**TABLE 3-1 FEDERAL-PROTECTED AND FOREST SERVICE TES SPECIES IN THE STEVENS CREEK PROJECT AREA**

COMMON NAME	SCIENTIFIC NAME	FEDERAL PROTECTION	FOREST SERVICE TES SPECIES - SNF
<b>ANIMALS</b>			
Atlantic Spike	<i>Elliptio producta</i>		Sensitive
Bachman's Sparrow	<i>Peucaea aestivalis</i>		Sensitive
Bald Eagle	<i>Haliaeetus leucocephalus</i>	*	
Bartam's Bass	<i>Micropterus coosae</i>		Sensitive
Brook Floater	<i>Alasmidonta varicosa</i>		Sensitive
Carolina Heelsplitter	<i>Lasmigona decorata</i>	Endangered	Endangered
Monarch Butterfly	<i>Danaus plexippus</i>		Sensitive
Piedmont Prairie Burrowing Crayfish	<i>Distocambarus crockeri</i>		Sensitive
Red-Cockaded Woodpecker	<i>Dryobates borealis</i>	Endangered	Endangered
Roanoke Slabshell	<i>Elliptio roanokensis</i>		Sensitive
Robust Redhorse	<i>Moxostoma robustum</i>		Sensitive
Tricolored Bat	<i>Perimyotis subflavus</i>		Sensitive
Webster's Salamander	<i>Plethodon websteri</i>		Sensitive
Wood Stork	<i>Mycteria americana</i>	Threatened	Endangered
Yellow Lampmussel	<i>Lampsilis cariosa</i>		Sensitive
<b>PLANTS</b>			
Faded Trillium	<i>Trillium discolor</i>		Sensitive
Georgia Aster	<i>Symphyotrichum georgianus</i>		Sensitive
Lanceleaf Trillium	<i>Trillium lancifolium</i>		Sensitive
Miccosukee Gooseberry	<i>Ribes echinellum</i>	Threatened	Threatened
Oglethorpe Oak	<i>Quercus oglethorpensis</i>		Sensitive
Relict Trillium	<i>Trillium reliquum</i>	Endangered	Endangered
Shoals Spider Lily	<i>Hymenocallis coronaria</i>		Sensitive
Sweet Pinesap	<i>Monotropsis odorata</i>		Sensitive

\* This species is protected under the Bald and Golden Eagle Protection Act of 1940.

In addition to federal-protected and Forest Service TES species, this report identifies state-protected species that may occur in the Project area. On February 4, 2019, the Georgia Department of Natural Resources (Georgia DNR) provided a letter summarizing plant and animal species of the highest priority conservation status near the Stevens Creek Project in Columbia County, GA. On March 27, 2020, the South Carolina Department of Natural Resources (South Carolina DNR) provided information on the South Carolina State Wildlife Action Plan (SWAP) priority species and other “tracked species” that may occur in the Project area. Tracked species are those within

the state's natural heritage database that are deemed vulnerable or imperiled within the state but may be more secure in other parts of the species' range. These species are also included in Table 3-2 and Appendix A.

Although these species were not analyzed for likelihood of existence within the Project boundary and potential Project operations effects, they are included in this report for informational purposes.

**TABLE 3-2 GEORGIA AND SOUTH CAROLINA STATE-PROTECTED SPECIES IN THE PROJECT AREA**

COMMON NAME	GEORGIA PROTECTED SPECIES <sup>1</sup>	SOUTH CAROLINA PROTECTED SPECIES <sup>2</sup>
<b>ANIMALS</b>		
American Eel		highest
Atlantic Pigtoe	high	
Atlantic Spike		high
Atlantic Sturgeon	high	
Bald Eagle		high
Baltimore Oriole		high
Bartram's Bass		highest
Brother Spike	high	
Carolina Slabshell	*	
Christmas Darter		highest
Delicate Spike	high	
Dwarf Waterdog	high	
Eastern Creekshell		moderate
Eastern Elliptio		moderate
Flat Bullhead		moderate
Florida Pondhorn		*
Highfin Shiner		moderate
Ironcolor Shiner	*	
Notchlip Redhorse		moderate
Roanoke Slabshell	*	
Rosyface Chub		moderate
Robust Redhorse	high	highest
Savannah Elimia	*	
Savannah Lilliput	high	
Shortnose Sturgeon	high	
Snail Bullhead		moderate
Spotted Turtle	high	
Tiger Salamander		highest
Turquoise Darter		high
Webster's Salamander		highest

COMMON NAME	GEORGIA PROTECTED SPECIES <sup>1</sup>	SOUTH CAROLINA PROTECTED SPECIES <sup>2</sup>
Yellow Lampmussel	high	highest
<b>PLANTS</b>		
Aethusa-like Trepocarpus		moderate
American Barberry	high	
American Ginseng		high
Carolina Larkspur		moderate
Carolina Trefoil	high	
Curly-Heads	*	
Dixie Mountain Breadroot	high	
Dutchman's Breeches		moderate
Eared Goldenrod		moderate
Faded Trillium		*
False-Rue Anemone	*	moderate
Georgia Aster		highest
Georgia Plume	high	
James' Sedge		moderate
Lanceleaf Wakerobin (Narrow-leaved Trillium)		high
Log Fern	*	
Lowland Bladderfern		*
Miccosukee Gooseberry		highest
Ocmulgee Skullcap	high	*
One-Flowered Broomrape		*
Pale Yellow Trillium	*	
Pineland Barbara Buttons	*	
Relict Trillium	high	highest
Shoals Spider Lily	high	high
Side-Oats Grama	*	
Slender Sedge		moderate
Smooth Indigobush		*
Southern Nodding Trillium		high
Streambank Mock Orange		*
Tall Bellflower		moderate
Tuberous Gromwell		moderate
Virginia Spiderwort		moderate
Weak Nettle		*
Whiteleaf Sunflower		moderate

<b>COMMON NAME</b>	<b>GEORGIA PROTECTED SPECIES<sup>1</sup></b>	<b>SOUTH CAROLINA PROTECTED SPECIES<sup>2</sup></b>
Wingpod Purslane	high	
Yellow Nailwort	high	

<sup>1</sup> GA SWAP species with state protection are indicated with an asterisk (\*); species identified as “high” are state protected species with high priority status.

<sup>2</sup> Listed species categorized in the SC SWAP are noted as having moderate, high or highest priority status; species identified with an asterisk (\*) are state “tracked” species.

## 4.0 PROPOSED ACTION, SPECIES DESCRIPTIONS AND ANALYSIS

### 4.1 PROPOSED ACTION

For the purpose of this analysis, we have assumed that the Project will continue operating as a re-regulating facility for flows released from the upstream U.S. Army Corps of Engineers' J. Strom Thurmond Dam. Stevens Creek reservoir fluctuations and downstream releases are anticipated to continue under the new license in the same form and capacity as they have over the past 30 years. Moreover, much of the land in the Project area is easement/Forest Service lands, not owned by DESC. Therefore, DESC does not actively manage or maintain these lands, and they are generally left in a natural state. If the proposed action changes prior to submittal of the Final License Application, species discussions will be updated accordingly.

### 4.2 FEDERAL-PROTECTED SPECIES

Table 4-1 lists the federal-protected species that may occur in the Project area. Habitat descriptions of each species along with an analysis of likelihood to exist in the Project boundary and potential for adverse effects from continued Project operations are included below. As mentioned, Atlantic Sturgeon and Shortnose Sturgeon do not occur in the Project area, however they have the potential to occur in the future following the implementation of fish passage downstream of Stevens Creek dam. These species are not listed in Table 4-1 however they are discussed further in the following sections.

**TABLE 4-1 FEDERAL-PROTECTED SPECIES IN THE PROJECT AREA**

COMMON NAME	SCIENTIFIC NAME	FEDERAL PROTECTION STATUS
Bald Eagle	<i>Haliaeetus leucocephalus</i>	*
Carolina Heelsplitter	<i>Lasmigona decorata</i>	Endangered
Miccosukee Gooseberry	<i>Ribes echinellum</i>	Threatened
Red-Cockaded Woodpecker	<i>Dryobates borealis</i>	Endangered
Relict Trillium	<i>Trillium reliquum</i>	Endangered
Wood Stork	<i>Mycteria americana</i>	Threatened

\* This species is protected under the Bald and Golden Eagle Protection Act of 1940.

#### **4.2.1 BALD EAGLE**

The bald eagle was removed from the federal list of threatened species in 2007 (USFWS 2007) but remains protected under the Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act (16 U.S.C. 668-668d) (72 FR 37345-37372). Bald eagles are found throughout North American, typically around water bodies, where they feed on fish and carrion. Studies have shown that foraging bald eagles are particularly attracted to reservoirs associated with hydroelectric facilities (Brown 1996). Bald eagles nest in large trees near water and typically use the same nest for several years (Degraaf and Rudis 1986).

##### ***Status in the Project Boundary and Effects of Continued Project Operations***

The USACE monitors eagles on an annual basis on Lake Thurmond and in the immediate tailrace. During the 2020 survey, approximately 37 bald eagles were documented. In addition, SCDNR tracks bald eagle nests around the state. One nest is documented very close to the Project, however outside the Project boundary. It is likely that bald eagles reside and forage within the Project boundary, although no nests have been documented. Since much of the land surrounding the Project reservoir is maintained in a natural state, continued operation of the Project is not likely to result in negative effects on eagle foraging or nesting.

#### **4.2.2 CAROLINA HEELSPLITTER**

The Carolina heelsplitter is found in cool, well-oxygenated reaches of rivers and streams. The current range of this species is limited as compared to its historic range. These declines and loss of populations are associated with factors including pollutants from municipal and industrial wastewater releases. The species is sensitive to silt and is generally found in silt-free areas with banks that are stabilized and shaded by trees and shrubs (USFWS 2011). One of the eight surviving populations of Carolina heelsplitter is found in Turkey Creek and its tributaries. These creeks are part of the Savannah River drainage, located in Edgefield County, SC (NRC 2020).

##### ***Status in the Project Boundary and Effects of Continued Project Operations***

As mentioned, the Carolina heelsplitter is known to occur in the Savannah River drainage in Edgefield County, SC. DESC is conducting a mussel study as part of the relicensing process, with special focus on identification of this species. Effects of continued Project operations will be

determined as part of that study in the event this species is found within the project area of influence.

#### **4.2.3 MICCOSUKEE GOOSEBERRY**

The Miccosukee gooseberry is a bushy shrub that flowers in late February to early April and produces spiny green berries. The Miccosukee gooseberry is associated with a deciduous, mixed hardwood forest with an overstory canopy dominated by oak and hickory trees. Specifically, the species is known to occur in three locations, including the shores of Lake Miccosukee in Jefferson County, Florida; and along Stevens Creek and a site on the Sumter National Forest in McCormick and Edgefield counties, South Carolina (NatureServe 2019).

##### ***Status in the Project Boundary and Effects of Continued Project Operations***

This species is known to occur on north-facing hardwood slopes in the Stevens Creek drainage and at a site in the Long Cane Ranger District of the Sumter National Forest in McCormick and Edgefield counties. It is likely a portion of this population occurs within the Project boundary. Continued Project effects are unlikely to adversely affect this species, as the population in the Sumter National Forest appears stable and no modifications to Project operations are proposed.

#### **4.2.4 RED-COCKADED WOODPECKER**

The red-cockaded woodpecker is found in open, mature, and old growth pine ecosystems in the southeastern portion of the United States (USFWS 2003). Suitable nesting habitat includes open pine forests and savannahs with large, older pines and minimal hardwood midstory or overstory. Older living trees that are easily excavated due to susceptibility to red-heart disease are preferred nesting trees for the species. Suitable foraging habitat includes open-canopy, mature pine forests with low densities of small pines, little midstory vegetation, limited hardwood overstory, and abundance bunchgrass and forb groundcover (USFWS 2003).

##### ***Status in the Project Boundary and Effects of Continued Project Operations***

Although the species is known to occur in Edgefield County (Forest Service 2020), it is unlikely the species occurs in the Project boundary, since there is limited suitable woodland habitat within the Project boundary. The potential of Project effects to this species are minimal and would likely only occur during any development activities involving logging that may be proposed through the

new license. Consideration of the potential occurrence of this species should take place prior to the development or expansion of recreation facilities proposed under the new license.

#### **4.2.5 RELICT TRILLIUM**

Relict trillium is typically found in mesic hardwood forests that can be on slopes or on bottomlands and floodplains. Soils and subsoils include rocky clays to alluvial sands all with high organic matter content. The largest populations are found in the drainages of the Savannah and Chattahoochee Rivers. The species is not indicated to occur in areas that have ever been disturbed by fire. The species is known to occur in Aiken County in proximity to the Sumter National Forest (Forest Service 2020).

#### ***Status in the Project Boundary and Effects of Continued Project Operations***

This species is known to occur in Edgefield County and likely occurs within the Project boundary. This species is most often threatened by residential and urban development. The potential of Project effects to this species are minimal and would likely only occur during any development activities that may be proposed through the new license. Consideration of the potential occurrence of this species should take place prior to the development or expansion of recreation facilities proposed under the new license.

#### **4.2.6 WOOD STORK**

The wood stork, a large colonial wading bird, is the only stork species that breeds in the United States (USFWS 1996). The wood stork uses a variety of wetlands for nesting, feeding, and roosting. Wood storks require periods of flooding, during which fish populations increase, alternating with dryer periods, during which receding water levels trap fish, leaving higher densities for easier foraging (USFWS 2020b). Nesting habitat includes primarily cypress swamps with nests located in the upper branches of large black gum or cypress trees. Nesting in the United States is currently thought to be limited to the coastal plain of South Carolina, North Carolina, Georgia and Florida (Murphy and Hand 2013).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

Although the wood stork is not likely to nest within the Project boundary, it may forage periodically in the freshwater wetlands associated with the Stevens Creek reservoir. Project operations are expected to result in no adverse effects on wood storks or their foraging habitat.

#### **4.2.7 ATLANTIC STURGEON**

The Atlantic Sturgeon is a large anadromous fish found in rivers and coastal waters along the Atlantic coast, from Canada to Florida (NOAA Fisheries 2020). After hatching in freshwater rivers, juveniles leave their birthplace for ocean waters only to return to their birthplace as adults to spawn. Atlantic sturgeon populations have largely declined due to overfishing and habitat loss. All five US Atlantic sturgeon distinct population segments are listed as endangered or threatened under the ESA (NOAA Fisheries 2020).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

Historically, Atlantic Sturgeon migrated through the Savannah River to reach spawning or rearing grounds at the Augusta Shoals. Today there are six dams along the Savannah River with only one, the New Savannah Bluff Lock and Dam, having an upstream fish passage system. The Augusta Diversion Dam, located one mile downstream of Stevens Creek dam, does not have fish passage at this time. For these reasons, the Atlantic Sturgeon is not located within the Project area, although there is potential for the species to occur in the future, following fish passage implementation at August Diversion Dam.

#### **4.2.8 SHORTNOSE STURGEON**

The Shortnose Sturgeon is an anadromous fish found in rivers and coastal waters along the Atlantic coast, from Canada to Florida (NOAA Fisheries 2020b). Shortnose Sturgeon hatch in freshwater rivers and spend a majority of their lifetime in the estuaries of these rivers. They spend relatively little time in the ocean. Adults travel far upstream in rivers to spawn and then move back downstream to the estuaries to feed and rest. The Shortnose Sturgeon is listed as endangered under the ESA (NOAA Fisheries 2020b).

### *Status in the Project Boundary and Effects of Continued Project Operations*

Similar to the Atlantic Sturgeon, Shortnose Sturgeon historically migrated through the Savannah River to reach spawning or rearing grounds at the Augusta Shoals. Access in Savannah River beyond the New Savannah Bluff Lock and Dam is impeded by dams. The Augusta Diversion Dam, located one mile downstream of Stevens Creek dam, does not have fish passage at this time. For these reasons, the Shortnose Sturgeon is not located within the Project area, although there is potential for the species to occur in the future, following fish passage implementation at August Diversion Dam.

#### **4.3 U.S. FOREST SERVICE THREATENED, ENDANGERED AND SENSITIVE SPECIES**

Table 4-2 lists the Forest Service TES species that may occur in the Project area. Habitat descriptions of each species along with an analysis of likelihood to exist in the Project boundary and potential for adverse effects from continued Project operations are included below. See Section 4.1 for the habitat descriptions and analysis of species that are also federal-protected species, as indicated in Table 4-2 with an asterisk (\*).

**TABLE 4-2 FOREST SERVICE TES SPECIES FOR THE LONG CANE DISTRICT OF SUMTER NATIONAL FOREST**

COMMON NAME	SCIENTIFIC NAME	FOREST SERVICE TES SPECIES
<b>ANIMALS</b>		
Atlantic Spike	<i>Elliptio producta</i>	Sensitive
Bachman's Sparrow	<i>Peucaea aestivalis</i>	Sensitive
Bartam's Bass	<i>Micropterus coosae</i>	Sensitive
Brook Floater	<i>Alasmidonta varicosa</i>	Sensitive
Carolina Heelsplitter*	<i>Lasmigona decorata</i>	Endangered
Monarch Butterfly	<i>Danaus plexippus</i>	Sensitive
Piedmont Prairie Burrowing Crayfish	<i>Distocambarus crockeri</i>	Sensitive
Red-Cockaded Woodpecker*	<i>Dryobates borealis</i>	Endangered
Roanoke Slabshell	<i>Elliptio roanokensis</i>	Sensitive
Robust Redhorse	<i>Moxostoma robustum</i>	Sensitive
Tricolored Bat	<i>Perimyotis subflavus</i>	Sensitive
Webster's Salamander	<i>Plethodon websteri</i>	Sensitive
Wood Stork*	<i>Mycteria americana</i>	Endangered
Yellow Lampmussel	<i>Lampsilis cariosa</i>	Sensitive
<b>PLANTS</b>		
Faded Trillium	<i>Trillium discolor</i>	Sensitive
Georgia Aster	<i>Symphyotrichum georgianus</i>	Sensitive

COMMON NAME	SCIENTIFIC NAME	FOREST SERVICE TES SPECIES
Lanceleaf Trillium	<i>Trillium lancifolium</i>	Sensitive
Miccosukee Gooseberry*	<i>Ribes echinellum</i>	Threatened
Oglethorpe Oak	<i>Quercus oglethorpensis</i>	Sensitive
Relict Trillium*	<i>Trillium reliquum</i>	Endangered
Shoals Spider Lily	<i>Hymenocallis coronaria</i>	Sensitive
Sweet Pinesap	<i>Monotropsis odorata</i>	Sensitive

#### 4.3.1 ATLANTIC SPIKE

The Atlantic spike is found throughout South Carolina (Bogan and Alderman 2008) and prefers streams or rivers with sandy, rocky, and/or muddy bottoms in sections where the current is not too rapid (Forest Service 2020). This species is found throughout Maryland, Pennsylvania, North Carolina, Virginia, and South Carolina, although it has been extirpated from some reaches where it was previously found, possibly due to environmental factors including decreased water quality associated with sedimentation and pollution. The host fish for this species is not known (NatureServe 2020a).

This species is found throughout the Savannah River Basin (NatureServe 2020a) and is found in the Long Cane Ranger District of the Sumter National Forest (Forest Service 2020).

#### *Status in the Project Boundary and Effects of Continued Project Operations*

As mentioned, this mussel is found throughout the Savannah River Basin and may occur within the Project boundary. DESC is conducting a mussel survey as part of the relicensing process and will document any individuals found during the survey. Effects of continued Project operations on the species will be assessed as part of that survey, if the species is found.

#### 4.3.2 BACHMAN'S SPARROW

Bachman's sparrow, known by its "buffy" brownish-gray under plumage tinged with reddish streaks, typically yields two broods each breeding season (USFWS 2015). The female sparrow builds nests of grasses at or just above ground level. The species historically preferred mature pine forests, however since most of these areas have been logged, today the sparrow is typically found in pine forests with a more open understory and herbaceous understories. The sparrow is known to span the Coastal Plains and Piedmont regions of the southeastern United States.

### ***Status in the Project Boundary and Effects of Continued Project Operations***

Bachman's sparrow is found in the Piedmont region of the southeastern United States and within the Long Cane Ranger District of the Sumter National Forest. This species is unlikely to occur in the Project boundary area as it has not been documented in the counties in which the Project is located. Continued Project operations are not expected to affect this species.

#### **4.3.3 BARTRAM'S BASS**

The Bartram's Bass is a small to medium sized black bass species that occurs in the Savannah River drainage above the fall line and has been introduced in the Saluda River drainage (Forest Service 2020). This species utilizes shoal habitats in small to moderate size upland streams, particularly upland reaches with cool water temperatures. Specifically, it is generally found in areas with boulders, submerged logs, and undercut banks with vegetation such as water willow (Forest Service 2020). It can also be found in some lentic habitats over rocky substrates. The diet consists of terrestrial insects, crayfish, small fish, salamanders, and aquatic insects. Threats to the species include hybridization with Spotted Bass and Smallmouth Bass. Spotted Bass have spread throughout the upper Savannah River system, and hybridization between the two species has eliminated Bartram's Bass from several reaches. Additional threats include increased water temperatures and increased turbidity from loss of riparian vegetation along stream banks (SCDNR 2020).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

Bartram's Bass have been collected from the mainstem of the Savannah River and in upstream reaches of Stevens Creek well upstream of the Project Boundary (SCDNR 2020, Freeman et al. 2015). Bartram's Bass inhabiting reaches of Stevens Creek upstream of the Project Boundary would not be affected by Project operations. Bartram's Bass inhabiting the Savannah River downstream of the Project would likely benefit from flow reregulation resulting habitat stability in the Augusta Shoals.

#### **4.3.4 BROOK FLOATER**

The brook floater is a freshwater mussel species that is usually found in high gradient, consistently flowing reaches of rivers and streams. Preferred substrates are characterized by sand and gravel, often with adjacent boulders (PNHP 2020; USFWS 2019). This species is sensitive to habitat

degradation, including excessive silt and nutrient inputs, and is also sensitive to hypoxia (PNHP 2020; USFWS 2019). Potential host fish include blacknose dace, longnose dace, golden shiner, pumpkinseed, slimy sculpin, yellow perch, and margined madtom (PNHP 2020). This species is known to occur in Edgefield and McCormick counties in SC. Specifically, it has been documented in several streams in the Steven's Creek basin (USFWS 2019).

#### ***Status in the Project Boundary and Effects of Continued Project Operations***

The brook floater is known to occur in the Upper Stevens Creek watershed on the Long Cane Ranger District in the Sumter National Forest. DESC is conducting a mussel survey as part of the relicensing process and will document any individuals found during the survey. Effects of continued Project operations on the species will be assessed as part of that survey, if the species is found.

#### **4.3.5 MONARCH BUTTERFLY**

The monarch butterfly is a migratory insect that passes through South Carolina and Georgia on a seasonal basis. The species has declined 80 percent during the last 20 years, in large part due to habitat loss at overwintering sites in Mexico and breeding sites in the American Midwest. The monarch butterfly population in Eastern North America overwinters in central Mexico, with northern migrations to the United States and Canada occurring during March, and southward migrations occurring between August and September. Adult female monarch butterflies lay their eggs on milkweed plants and utilize a variety of other plant species as nectar sources throughout their migrations (USFWS 2020). Summer breeding habitat includes woodlands, roadsides, or utility rights-of-way containing nectaring plants (Forest Service 2020).

#### ***Status in the Project Boundary and Effects of Continued Project Operations***

As mentioned, the monarch butterfly passes through South Carolina and Georgia on a seasonal basis. Summer breeding may occur within the Project boundary in woodlands, roadsides, or utility rights-of-way. Continued Project operations are not expected to affect the species as significant disturbance of these potential breeding areas is not expected to occur as a result of Project operation or maintenance activities.

#### **4.3.6 PIEDMONT PRAIRIE BURROWING CRAYFISH**

The Piedmont prairie burrowing crayfish is a semi-terrestrial species that utilizes the eastern watershed of the South Carolina Piedmont. Habitats can include intermittently flooded low lying areas and agricultural land. Specifically, it is found in terrestrial habitats around intermittent streams and colluvial valleys with treeless, prairie-like characteristics. Non-hydric well drained soils with seasonally perched water tables are necessary for the species' life history needs, as compared to species that require more aquatic and semi-aquatic habitats (Eversole and Welch 2013; NatureServe 2020b). Piedmont prairie burrowing crayfish spend much of the year in burrows, often below layers of leaf litter and organic matter, and are most likely to venture from burrows during wet periods in search of food or breeding opportunity. (Eversole and Welch 2013).

##### ***Status in the Project Boundary and Effects of Continued Project Operations***

This species is present in Thurmond Lake – Savannah River, Upper Stevens Creek, Kiokee Creek – Savannah River, Turkey Creek – Stevens Creek, Bush River – Saluda River, and Little River – Savannah River watersheds that contain Forest Service land on the Long Cane Ranger District (Forest Service 2020). It is not likely that this species occurs within the Project boundary as it is most often found on a perched water table along ridge tops and not in aquatic habitats (Forest Service 2020). Continued Project operations are not expected to affect this species.

#### **4.3.7 ROANOKE SLABSHELL**

The Roanoke slabshell is typically found in large rivers and occasionally in small creeks. The mussel tolerates large variations in flow levels and higher water temperatures, making it able to survive in some locations near dams and hydroelectric plants (Price 2006). In South Carolina, the mussel is found in the Pee Dee River and the Catawba, Congaree and Savannah River basins. Although it has the potential to be found in watersheds on the Long Cane Ranger District in the Savannah River basin, no known records in the Sumter National Forest exist (Forest Service 2020).

##### ***Status in the Project Boundary and Effects of Continued Project Operations***

In 2006, the Catena Group inventoried freshwater mussels in the Savannah River from the Augusta Shoals area (near RM 203) downstream to RM 23. The Roanoke slabshell was identified during this inventory. DESC is conducting a mussel survey as part of the relicensing process and will

document any individuals found during the survey. Effects of continued Project operations on the species will be assessed as part of that survey, if the species is found.

#### **4.3.8 ROBUST REDHORSE**

Once presumed extinct, the Robust Redhorse, a large, heavy-bodied sucker, was rediscovered in the Oconee River below Georgia Power's Sinclair Hydroelectric Project (FERC No. 1951) in the early 1990s. This rediscovery sparked the formation of the Robust Redhorse Conservation Committee (RRCC) in 1995 to guide recovery efforts for the species. While little is still known about habitat preferences of juvenile Robust Redhorse, adults typically inhabit areas of the river where the current is moderately swift. Preferred habitat includes riffle areas or in/near outside bends, where depths are greater, and accumulations of logs and other woody debris are present (Evans 1997). Spawning occurs between April and June over gravel substrate in deep and shallow waters (Hendricks 1998). In South Carolina, it is found in the Savannah River and Pee Dee River basins (Forest Service 2020).

#### ***Status in the Project Boundary and Effects of Continued Project Operations***

The Robust Redhorse is known to occur in the Savannah River and the Georgia DNR documented the species in the shoals below the Augusta Diversion Dam in 2005. Within the last five years, Robust Redhorse has been documented as occurring in the Savannah River immediately downstream of the Stevens Creek dam (RRCC 2020). Continued Project operations are not expected to adversely affect the species since the Project reregulates large pulses from Thurmond Dam, providing increased flow and associated habitat stability in the Augusta Shoals and further downstream.

#### **4.3.9 TRICOLORED BAT**

The tricolored bat is a small bat weighing 0.2 to 0.3 ounces, that roosts in trees in the summertime and hibernates in caves, mines and rock crevices during the winter (USFWS 2019b). The species is found statewide in South Carolina, but populations have declined recently due to the white-nose-syndrome (USFWS 2019b).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

The tricolored bat may roost in trees around the Project reservoir in the summertime but is unlikely to hibernate in the area due to a lack of hibernacula. Continued Project operations are unlikely to have any effect on the species as DESC does not plan to significantly change the Project shoreline or remove trees used for roosting.

#### **4.3.10 WEBSTER'S SALAMANDER**

The Webster's salamander is a woodland species that is often found on hardwood-forested hillsides underneath cover including rocks, logs, and leaf litter. The species breeds in early winter and lays eggs during the summer months. With the exception of June and July breeding activity, adults are mostly active between October and May, likely to avoid the high heat of the summer months. Unlike some other salamander species, there is no aquatic larval lifestage, and hatchlings emerge during August and September. The range of the species is fragmented, with isolated populations occurring across Louisiana, Mississippi, Alabama, Georgia, and South Carolina (Rogers 2020). In South Carolina, it has been documented in both Edgefield and McCormick counties (NatureServe 2020c).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

This species may occur in the forested habitat surrounding the Project boundary. Nevertheless, much of the land surrounding the Project has been left in its natural state, and there are no Project-related disturbance activities proposed under the new license. Therefore, continued Project operations are unlikely to affect populations occurring in the Project boundary.

#### **4.3.11 YELLOW LAMPUSSEL**

The yellow lampmussel is a freshwater mussel species found primarily in medium to large rivers and streams with a variety of substrates including silt or sand, gravel bars and bedrock cracks (Price 2006b). Distribution in South Carolina spans the Savannah, Broad, Wateree, Congaree, and Pee Dee River basins. The species is found in the Long Cane Ranger District in the Lower Stevens Creek and Turkey Creek-Stevens Creek watersheds with the potential to also occur in the Upper Stevens Creek watershed (Forest Service 2020).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

The yellow lampmussel may occur within the Project boundary, as it is found throughout the Savannah River basin, including Stevens Creek watersheds. DESC is conducting a mussel survey as part of the relicensing process and will document any individuals found during the survey. Effects of continued Project operations on the species will be assessed as part of that survey, if the species is found.

#### **4.3.12 FADED TRILLIUM**

The faded trillium (or pale-yellow trillium) is a perennial herb characterized by three whorled leaves and a pale yellow or cream-colored flower. The faded trillium sends up leaves and flowers in early spring before the forest canopy has fully leafed out. The above ground plant is not present during the fall and winter, persisting as an underground rhizome. Mature faded trillium are long lived, as the rhizomes continue to persist and produce shoots as other portions decay (Chafin 2007). Habitat types for the species include wooded slopes, rich cove forests, oak-pine woods, and cane breaks. They are often found in areas that are sheltered with dense forest canopies (NatureServe 2020d).

This species is only found in the Savannah River Basin across Georgia, North Carolina, and South Carolina (Chafin 2007), and has been documented in Columbia County, GA and Edgefield and McCormick counties, SC (NatureServe 2020d).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

Although the faded trillium has not been documented within the Project boundary, it may occur in wooded areas around the shoreline. As no changes to Project operation or maintenance activities are proposed, continued Project operations are unlikely to affect this species.

#### **4.3.13 GEORGIA ASTER**

Georgia aster is a flowering plant that prefers a habitat of open woodlands, savannas and prairies, including open woodlands associated with utility and roadside rights-of-way (Forest Service 2020). It is thought to be a relict species of the post oak-savannah communities that existed in the southeast prior to fire suppression.

### ***Status in the Project Boundary and Effects of Continued Project Operations***

Georgia aster is known to occur in the Long Cane Ranger District of the Sumter National Forest and in McCormick and Edgefield counties, SC. Habitat for Georgia aster may exist within the Project boundary, however potential occurrences would be limited to terrestrial sites, which should not be affected by continued operation of the Project.

#### **4.3.14 LANCELEAF TRILLIUM**

The lanceleaf trillium occurs in a variety of habitat types, including floodplains, rocky upland woodlands, brushy thickets, canebrakes, and shaded or open woods. It is most commonly associated with alluvial soils. This regional endemic species is relatively small compared to other southeastern trilliums, with narrow leaves, a flower comprised of 3 maroon petals, and an ovoid pulpy fruit that contains several seeds (NatureServe 2020i).

Known populations of this species exist in Edgefield and McCormick Counties, SC (NatureServe 2020i).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

Lanceleaf trillium is known to occur in the Long Cane Ranger District of the Sumter National Forest and in McCormick and Edgefield counties, SC. Habitat for this species may exist within the Project boundary, however potential occurrences would be limited to terrestrial sites, which should not be affected by continued operation of the Project.

#### **4.3.15 OGLETHORPE OAK**

The Oglethorpe oak is a “white oak” species that is associated with wet clay soils and is found in disjunct populations throughout Georgia, Alabama, Mississippi, Louisiana, and South Carolina. The species can grow up to 80 ft. tall and is characterized by reddish-gray bark that covers the tree in loose plates. It is generally found in seepage swamps, stream edges, and moist areas of hardwood forests adjacent to these types of habitats. Like other oak species, the Oglethorpe oak is wind-pollinated, and must be cross pollinated in order to produce acorns. Habitat fragmentation can isolate individuals, decreasing pollination and associated acorn production (Chafin 2008).

Oglethorpe oak has been documented in McCormick and Edgefield counties in SC (NatureServe 2020f).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

The Oglethorpe oak is known to occur in the Long Cane Ranger District of the Sumter National Forest and in McCormick and Edgefield counties, SC. Habitat for this species within the Long Cane Ranger District is limited to streamside forests and depressional wetlands in the Carolina Slate belt, located north and outside of the Project boundary (Forest Service 2020). It is unlikely this species exists within the Project boundary and therefore, continued Project operations should have no effect on this species.

#### **4.3.16 SHOALS SPIDER LILY**

The shoals spider lily occurs mostly above the fall line in Alabama, Georgia, and South Carolina. This flowering plant is often found in bedrock outcroppings or in large cobble and boulder substrates where the plants' roots and bulbs can anchor into the substrate. Habitat requirements for the species include direct sunlight, constantly flowing water, and low sediment loads (Kleinschmidt 2015).

### ***Status in the Project Boundary and Effects of Continued Project Operations***

Shoals spider lilies are currently found at multiple locations in Edgefield and McCormick counties, SC and Columbia County, GA, with populations known in Stevens Creek (NatureServe 2020h). This population is located outside of the Project boundary, east of Plum Branch, South Carolina, approximately 52 km upstream of Stevens Creek Dam (Gordon and Wear 2011). Due to this species' distance from the Project, and since no changes to Project operations are proposed, no adverse effects to this species are expected.

#### **4.3.17 SWEET PINESAP**

The sweet pinesap is an herbaceous perennial wildflower characterized by a fleshy stalk, scale-like leaves, and pink or yellowish flowers that produce a strong odor of violets. The flowers are present in mid to late spring. The sweet pinesap is generally found in mature, moist hardwood forests under areas that are well shaded by the canopy (Forest Service 2020b). Specifically, the species is known to occur in shortleaf pine-oak heaths in the Southern Appalachians and Piedmont (Forest Service 2020).

## *Status in the Project Boundary and Effects of Continued Project Operations*

The sweet pinesap is not expected to occur within the Project boundary due to a lack of habitat. Continued Project operations should not have any effect on this species.

### **4.4 STATE-PROTECTED SPECIES**

On February 4, 2019, the Georgia DNR provided a list of Natural Heritage Database occurrences within 3 miles of the Project site for terrestrial species and within the local HUC10 watershed for aquatic species. These species are listed below in Table 4-3. For more information on the locations of these species, see Appendix A.

**TABLE 4-3 GEORGIA STATE-PROTECTED SPECIES WITHIN 3 MILES OF THE PROJECT AREA**

<b>COMMON NAME</b>	<b>SCIENTIFIC NAME</b>
American Barberry	<i>Ververis canadensis</i>
Atlantic Pigtoe	<i>Fusconaia masoni</i>
Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>
Brother Spike	<i>Elliptio fraterna</i>
Carolina Slabshell	<i>Elliptio congaraea</i>
Carolina Trefoil	<i>Acmispon helleri</i>
Curly-Heads	<i>Clematis ochroleuca</i>
Delicate Spike	<i>Elliptio arctata</i>
Dixie Mountain Breadroot	<i>Pedimelum piedmontanum</i>
Dwarf Waterdog	<i>Necturus punctatus</i>
False-Rue Anemone	<i>Enemion biternatum</i>
Georgia Plume	<i>Elliottia racemosa</i>
Ironcolor Shiner	<i>Notropis chalybaeus</i>
Log Fern	<i>Dryopteris celsa</i>
Ocmulgee Skullcap	<i>Scutellaria ocmulgee</i>
Pale Yellow Trillium	<i>Trillium discolor</i>
Pineland Barbra Buttons	<i>Marshallia ramosa</i>
Relict Trillium	<i>Trillium reliquum</i>
Roanoke Slabshell	<i>Elliptio roanokensis</i>
Robust Redhorse	<i>Moxostoma robustum</i>
Savannah Elimia	<i>Elimia caelatura</i>
Savannah Lilliput	<i>Toxolasma pullus</i>
Shoals Spiderlily	<i>Hymenocallis coronaria</i>
Shortnose Sturgeon	<i>Acipenser vrevirostrum</i>
Spotted Turtle	<i>Clemmys guttata</i>
Wingpod Purslane	<i>Portulaca umbraticola ssp.coronata</i>
Yellow Lampmussel	<i>Lampsilis cariosa</i>
Yellow Nailwort	<i>Paronychia virginica</i>

Source: GDNR, Letter dated February 4, 2019

On March 27, 2020, the South Carolina DNR provided a list of species having conservation priority through the South Carolina State Wildlife Action Plan (SWAP) and other state tracked species that are located within the Project boundary and within 3 miles of the Project boundary. These species are listed below in Table 4-4. Additional details on these species are included in Appendix A.

**TABLE 4-4 SOUTH CAROLINA STATE-PROTECTED SPECIES IN THE PROJECT AREA**

COMMON NAME	SCIENTIFIC NAME
Aethusa-like Trepocarpus	<i>Trepocarpus aethusae</i>
American Eel	<i>Anguilla rostrate</i>
American Ginseng	<i>Panax quinquefolius</i>
Atlantic Spike	<i>Elliptio producta</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Baltimore Oriole	<i>Icterus galbula</i>
Bartram's Bass	<i>Micropterus</i>
Carolina Larkspur	<i>Delphinium carolinianum</i>
Christmas Darter	<i>Etheostoma hopkinsi</i>
Dutchman's Breeches	<i>Dicentra cucullaria</i>
Eared Goldenrod	<i>Solidago auriculate</i>
Eastern Creekshell	<i>Villosa delumbis</i>
Eastern Elliptio	<i>Elliptio complanate</i>
Faded Trillium	<i>Trillium discolor</i>
False-Rue Anemone	<i>Enemion biternatum</i>
Flat Bullhead	<i>Ameiurus platycephalus</i>
Florida Pondhorn	<i>Uniomerus caroliniana</i>
Georgia Aster	<i>Symphyotrichum georgianum</i>
Highfin Shiner	<i>Notropis altipinnis</i>
James' Sedge	<i>Carex jamesii</i>
Lanceleaf Wakerobin	<i>Trillium lancifolium</i>
Lowland Bladderfern	<i>Cystopteris protrusa</i>
Miccosukee Gooseberry	<i>Ribes echinellum</i>
Notchlip Redhorse	<i>Moxostoma collapsum</i>
Ocmulgee Skullcap	<i>Scutellaria ocmulgee</i>
One-Flowered Broomrape	<i>Orobanche uniflora</i>
Relict Trillium	<i>Trillium reliquum</i>
Robust Redhorse	<i>Moxostoma robustum</i>
Rosyface Chub	<i>Hybopsis rubrifrons</i>
Shoals Spider Lily	<i>Hymenocallis coronaria</i>

COMMON NAME	SCIENTIFIC NAME
Slender Sedge	<i>Carex gracilescens</i>
Smooth Indigobush	<i>Amorpha glabra</i>
Snail Bullhead	<i>Ameiurus brunneus</i>
Southern Nodding Trillium	<i>Trillium rugelii</i>
Streambank Mock Orange	<i>Philadelphus hirsutus</i>
Tall Bellflower	<i>Campanulastrum americanum</i>
Tiger Salamander	<i>Ambystoma tigrinum</i>
Tuberous Gromwell	<i>Lithospermum tuberosum</i>
Turquoise Darter	<i>Etheostoma inscriptum</i>
Virginia Spiderwort	<i>Tradescantia virginiana</i>
Weak Nettle	<i>Urtica chamaedryoides</i>
Webster's Salamander	<i>Plethodon webster</i>
Whiteleaf Sunflower	<i>Helianthus glaucophyllus</i>
Yellow Lampmussel	<i>Lampsilis cariosa</i>

## 5.0 SUMMARY

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There are several federal-protected and Forest Service TES species that have either been documented within the Project boundary or have potential to occur within the Project boundary due to availability of suitable habitat. These species are listed below.

- Atlantic Spike
- Bald Eagle
- Bartram's Bass
- Brook Floater
- Carolina Heelsplitter
- Faded Trillium
- Miccosukee Gooseberry
- Monarch Butterfly
- Relict Trillium
- Roanoke Slabshell
- Robust Redhorse
- Shoals Spider Lily
- Tricolored Bat
- Webster's Salamander
- Wood Stork
- Yellow Lampmussel

Although these species occur or have the potential to occur within the Project boundary, continued Project operations are not expected to have any adverse effect on these species. DESC is not proposing any changes to Project operations and does not have any plans for significant logging or shoreline changes within the Project boundary. If the need arises for tree removal, construction, or other shoreline modifications in the future, DESC will consult with the USFWS, Forest Service, and the Georgia DNR and/or South Carolina DNR (as appropriate) prior to the commencement of these activities.

In addition, DESC is conducting a mussel survey within the Project boundary with methodology developed in consultation with federal and state agencies. The results of this study will determine the presence of any mussel species listed in this report within the Project boundary and will identify the potential for Project effects on these species. The results of this study will be included in the Project's Final License Application.

## 6.0 LITERATURE CITED

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- Bogan, A.E., J. Alderman, and J. Price. 2008. Field Guide to the Freshwater Mussels of South Carolina. SCDNR, Columbia. 43 pp.
- Brown, R.D. 1996. Attraction of bald eagles to habitats just below dams in Piedmont North and South Carolina. P. 299-306 In: Raptors in Human Landscapes. Bird, D.M., D.E. Varland, J.J. Negro (eds). Academic Press. San Diego, California.
- Chafin, L. 2007. Pale Yellow Trillium Info Sheet. [Online] URL [https://georgiawildlife.com/sites/default/files/wrd/pdf/factsheets/pale\\_yellow\\_trillium\\_2010.pdf](https://georgiawildlife.com/sites/default/files/wrd/pdf/factsheets/pale_yellow_trillium_2010.pdf) Accessed February 4, 2020.
- Chafin, L. 2008. Oglethorpe Oak Info Sheet. [Online] URL [https://georgiawildlife.com/sites/default/files/wrd/pdf/factsheets/oglethorpe\\_oak\\_2010.pdf](https://georgiawildlife.com/sites/default/files/wrd/pdf/factsheets/oglethorpe_oak_2010.pdf). Accessed February 4, 2020.
- Chafin, L. 2009. Relict Trillium Info Sheet. [Online] URL [https://georgiawildlife.com/sites/default/files/wrd/pdf/factsheets/relict\\_trillium\\_2010.pdf](https://georgiawildlife.com/sites/default/files/wrd/pdf/factsheets/relict_trillium_2010.pdf). Accessed February 4, 2020.
- Degraaf, R.M. and D.D. Rudis. 1986. New England Wildlife: Habitat, Natural History, and Distribution. General Technical Report NE-108. US Department of Agriculture, US Forest Service (USFS). Northeastern Forest Experiment Station, Broomall, PA. 491 pp.
- Evans, J.W. 1997. Developing stakeholder partnerships for the management of imperiled species: a case study. Waterpower '97, Proceeding of the International Conference on Hydropower. p. 490-499.
- Eversole, A.G., and S.M. Welch. 2013. Ecology of the Primary Burrowing Crayfish *Distocambarus Crockeri*. Journal of Crustacean Biology 33(5), 660-666.
- Gordon, Judith E. and Donna J. Wear. 2011. Parameters Affecting the Success of Protected Shoals Spider Lily, *Hymenocallis coronaria*, in the Savannah River Basin, Georgia. Natural Areas Journal, 31(1):34-42.
- Hendricks, A.S. 1998. The conservation and restoration of the robust redhorse (*Moxostoma robustum*) Volume 1. Georgia Power Company, Environmental Laboratory, Smyrna, Georgia. 44 pp.
- Kleinschmidt. 2015. Rocky Shoals Spider Lily Report. 15 pp. [Online] URL [http://parrfairfieldrelicense.com/documents/STUDY\\_REPORTS/15\\_11\\_04\\_Final\\_RSSL\\_Report.pdf](http://parrfairfieldrelicense.com/documents/STUDY_REPORTS/15_11_04_Final_RSSL_Report.pdf) Accessed February 4, 2020.
- Murphy, T.M. and Hand, C.E. 2013. Wood Stork (*Mycteria Americana*). Supplemental Volume: Species of Conservation Concern, Draft – November 2013. South Carolina Department of Natural Resources. [http://www.dnr.sc.gov/cwcs/pdf/Woodstork.pdf] Accessed February 3, 2020.
- NatureServe. 2019. NatureServe Explorer: An online encyclopedia of life [Ribes echinellum] Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. (accessed February 3, 2020).

- NatureServe. 2020a. Atlantic Spike *Elliptio producta*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Elliptio+producta> accessed February 3, 2020
- Natureserve. 2020b. Piedmont Prairie Burrowing Crayfish *Distocambarus crockeri*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Distocambarus+crockeri> accessed February 3, 2020
- NatureServe. 2020c. Webster's Salamander *Plethodon websteri*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Plethodon+websteri> accessed February 3, 2020
- NatureServe. 2020d. Faded Trillium *discolor*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Trillium+discolor> accessed February 3, 2020
- NatureServe. 2020e. Miccosukee gooseberry *Ribes echinellum*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Ribes+echinellum> accessed February 3, 2020
- NatureServe. 2020f. Oglethorpe Oak *Quercus oglethorpensis*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Quercus%20oglethorpensis> accessed February 3, 2020
- NatureServe. 2020g. Relict Trillium *reliquum*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Trillium+reliquum> accessed February 3, 2020
- NatureServe. 2020h. Shoals Spider Lily *Hymenocallis coronaria*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Hymenocallis%20coronaria> accessed February 3, 2020
- NatureServe. 2020i. Lance-leaved Trillium *lancifolium*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Trillium+lancifolium> accessed February 3, 2020
- NatureServe. 2020j. Sweet Pinesap *Monotropis odorata*. [Online] URL <http://explorer.natureserve.org/servlet/NatureServe?searchName=Monotropis+odorata> accessed February 3, 2020
- NOAA Fisheries. 2020. Atlantic Sturgeon. [Online] URL: <https://www.fisheries.noaa.gov/species/atlantic-sturgeon>. Accessed April 29, 2020.
- NOAA Fisheries. 2020b. Shortnose Sturgeon. [Online] URL: <https://www.fisheries.noaa.gov/species/shortnose-sturgeon>. Accessed April 29, 2020.
- Pennsylvania Natural Heritage Program. 2020. Brook Floater Info Sheet. [Online] URL <http://www.naturalheritage.state.pa.us/factsheets/12195.pdf> accessed February 3, 2020
- Price, J. 2006. Roanoke slabshell (*Elliptio roanokensis*). South Carolina Department of Natural Resources. <http://www.dnr.sc.gov/cwcs/pdf/RoanokeSlabshell.pdf>. Retrieved August 12, 2014.
- Price, J., Eads, C., and Raley, J. 2009. Fish Passage on the Broad River: an assessment of the benefits to freshwater mussels. Completion Report to the Broad River Mitigation Fund.

- Price, J. 2006b. Yellow Lampmussel (*Lampsilis cariosa*). South Carolina Department of Natural Resources. <http://www.dnr.sc.gov/cwcs/pdf/YellowLampmussel.pdf>.> Retrieved August 12, 2014.
- Robust Redhorse Conservation Committee (RRCC). 2020. Conservation Status Assessment Map Robust Redhorse (*Moxostoma robustum*). Available online: <http://www.robustredhorse.com/h/rangemaps.html>. Accessed April 28, 2020.
- Rogers, E. 2020. Webster's Salamander Info Sheet. [Online] URL <https://srelherp.uga.edu/salamanders/pleweb.htm> accessed February 3, 2020
- SCDNR. 2020. Redeye Bass Species Profile. [Online] URL <http://www.eregulations.com/wp-content/uploads/2019/08/Species-Profile-Redeye-Bass.pdf> accessed February 3, 2020
- United States Fish and Wildlife Service (USFWS). 1996. Revised Recovery Plan for the U.S. Breeding Population of the Wood Stork. U.S. Fish and Wildlife Service, Atlanta, Georgia. 41 pp.
- USFWS. 2003. Recovery plan for the red-cockaded woodpecker (*Picoides borealis*): second revision. U.S. Fish and Wildlife Service, Atlanta, Georgia.
- USFWS. 2007. Endangered and Threatened Wildlife and Plants: Removing the Bald Eagle in the Lower 48 States from the List of Endangered and Threatened Wildlife, Final Rule, Federal Register, Volume 72, No. 130, Washington, D.C., July 9, 2007.
- USFWS. 2015. Environmental Conservation Online System: Bachman's sparrow. [Online] URL: <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=B07F>.
- USFWS. 2019. Conserving South Carolina's At-Risk Species: Species Facing Threats to Their Survival. [Online] URL <https://www.fws.gov/southeast/pdf/fact-sheet/brook-floater.pdf>
- USFWS. 2019b. Conserving South Carolina's At-Risk Species: Species facing threats to their survival. Tricolored Bat. [Online] URL: <https://www.fws.gov/southeast/pdf/fact-sheet/tricolored-bat.pdf>. Accessed February 3, 2020.
- USFWS. 2020. Pollinators Fact Sheet: Monarch Butterfly. [Online] URL [https://www.fws.gov/pollinators/Features/Monarch\\_Butterfly.html](https://www.fws.gov/pollinators/Features/Monarch_Butterfly.html)
- USFWS. 2020b. Environmental Conservation Online System: Wood Stork (*Mycteria americana*). [Online] URL: <https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=8477>. Accessed February 3, 2020.
- US Forest Service (Forest Service). 2020. Threatened, Endangered, and Sensitive (TES) Species, Sumter National Forest.
- US Forest Service (Forest Service). 2020b. Sweet Pinesap Info Sheet. [Online] URL [https://www.fs.fed.us/wildflowers/beauty/mycotrophic/monotropis\\_odorata.shtml](https://www.fs.fed.us/wildflowers/beauty/mycotrophic/monotropis_odorata.shtml)

**APPENDIX A**  
**CONSULTATION RECORD**

## Threatened, Endangered, and Sensitive (TES) Species Sumter National Forest

Species	Species Group	Status	Habitat Description	District	Habitat Group <sup>1</sup>
<b>CAROLINA HEELSPLITTER</b> <i>Lasmigona decorata</i>	Mussel	Federally Endangered	Known historically from Catawba, Pee Dee, and Savannah River basins in North Carolina and South Carolina with a possibility that they were historically found in the Saluda River basin in South Carolina; it is found in the Upper Stevens Creek, Bush River – Saluda River, and Turkey Creek –Stevens Creek watersheds on or adjacent to the Forest; on the Forest it has been found in the Beaverdam Creek – Turkey Creek and Lower Turkey Creek – Stevens Creek subwatersheds	LC	1
<b>FLORIDA (MICCOSUKEE) GOOSEBERRY</b> <i>Ribes echinellum</i>	Plant	Federally Threatened	Known from the Stevens Creek drainage on north-facing hardwood slopes in association with basic soils	LC	8
<b>NORTHERN LONG-EARED BAT</b> <i>Myotis septentrionalis</i>	Mammal	Federally Threatened	Winters in caves and cave-like structures (e.g., mines, railroad tunnels); summer roosts include cavities, underneath bark, crevices, or hollows of both live and dead trees	AP	3,4,5,6,7
<b>PERSISTENT TRILLIUM</b> <i>Trillium persistens</i>	Plant	Federally Endangered	Known from one site in South Carolina in proximity to the Sumter National Forest; occurs in mixed mesic forest in the Tugaloo River Composite watershed	AP	7
<b>RED-COCKADED WOODPECKER</b> <i>Dryobates borealis</i>	Bird	Federally Endangered	Known from Edgefield County; historically known from Laurens County; nests in live large pines and forages in open pine woodlands	LC	4,5
<b>RELICT TRILLIUM</b> <i>Trillium reliquum</i>	Plant	Federally Endangered	Occurs in basic mesic forests in Savannah and Chattahoochee drainages; known from Aiken County in proximity to the Sumter National Forest	LC	8
<b>SMALL WHORLED POGONIA</b> <i>Isotria medeoloides</i>	Plant	Federally Threatened	Occurs in mixed mesic forests at moderate elevations (>1,000 feet)	AP	7
<b>SMOOTH CONEFLOWER</b> <i>Echinacea laevigata</i>	Plant	Federally Endangered	Occurs along the Brevard Geologic Belt in open woodlands, including select roadsides and utility rights-of-ways	AP	4,10
<b>WOOD STORK</b> <i>Mycteria americana</i>	Bird	Federally Endangered	Known to forage in freshwater wetlands on both Enoree and Long Cane Ranger Districts	EN, LC	1,3
<b>ASHLEAF GOLDENBANNER</b> <i>Thermopsis mollis</i>	Plant	Sensitive	Occurs on dry slopes and ridges; documented from one location on the Sumter National Forest	AP	4,5
<b>ATLANTIC SPIKE</b> <i>Elliptio producta</i>	Mussel	Sensitive	Widespread in South Carolina, the species is found in streams or rivers with sandy, rocky, and/or muddy bottoms in sections where the current is not too rapid; on the Forest it is known from the Long Cane and Andrew Pickens Ranger Districts	AP, LC	1
<b>BACHMAN'S SPARROW</b> <i>Peucaea aestivalis</i>	Bird	Sensitive	Inhabits forest stands with open canopies and herbaceous understories	EN, LC	4
<b>BARTRAM'S REDEYE BASS</b> <i>Micropterus coosae</i>	Fish	Sensitive	In South Carolina this species occurs in the Savannah River drainage and has been introduced in the Saluda River drainage; it inhabits small upland streams and rivers with undercut banks and vegetation such as water willow, as well as boulders and submerged logs; it is found on the Andrew Pickens and Long Cane Ranger Districts	AP, LC	1
<b>BROOK FLOATER</b> <i>Alasmidonta varicosa</i>	Mussel	Sensitive	Small streams and rivers with gravel bottoms; known from Chattooga, Turkey, and Upper Stevens Creek watersheds on the Andrew Pickens and Long Cane Ranger Districts	AP, LC	1
<b>BUTTERNUT</b> <i>Juglans cinerea</i>	Plant	Sensitive	Basic mesic forests along the Brevard Geologic Belt	AP	3,8

<b>CAROLINA PLAGIOMNIUM</b> <i>Plagiomnium carolinianum</i>	Plant	Sensitive	Damp, shaded, vertical rock faces along streams in mountain gorges; known from Long Creek, Opossum Creek, and Fishtrap Creek at their junction with the Chattooga River	AP	2
<b>CHAUGA CRAYFISH</b> <i>Cambarus chaugaensis</i>	Crustacean	Sensitive	Fast-moving, rocky 3 <sup>rd</sup> and 4 <sup>th</sup> order streams and tributaries of the Savannah and Saluda River basins in South Carolina; on the Forest known from all the watersheds on the Andrew Pickens Ranger District	AP	1
<b>EASTERN SMALL-FOOTED BAT</b> <i>Myotis leibii</i>	Mammal	Sensitive	At southern terminus of range on Andrew Pickens Ranger District; known from Moody Creek near Lake Cherokee; may commonly roost in hemlock trees near streams in summer	AP	3,4,5
<b>EDMUND'S SNAKETAIL</b> <i>Ophiogomphus edmundo</i>	Insect	Sensitive	Clear moderately flowing mountain streams and rivers with sand or gravel riffles; known to occur in the Chattooga River	AP	1
<b>FADED TRILLIUM</b> <i>Trillium discolor</i>	Plant	Sensitive	Basic mesic hardwood forests restricted to the Savannah River drainage system	AP, LC	4
<b>FORT MOUNTAIN SEDGE</b> <i>Carex communis</i> var. <i>amplisquama</i>	Plant	Sensitive	Found in rich coves and basic mesic forests, at Tamassee Knob, East Fork of the Chattooga, and White Rock Cove on the Andrew Pickens Ranger District	AP	8
<b>FRASER'S LOOSESTRIFE</b> <i>Lysimachia fraseri</i>	Plant	Sensitive	Found at several locations ranging from woodlands, riparian disturbance zones, roadsides, and utility rights-of-way – including Highway 28, Highway 107, and the Chattooga River corridor	AP	3,4
<b>GEORGIA ASTER</b> <i>Symphotrichum georgianus</i>	Plant	Sensitive	Known from select open woodlands, including those associated with utility and roadside rights-of-way	All	4
<b>GREEN SALAMANDER</b> <i>Aneides aeneus</i>	Amphibian	Sensitive	Overwintering in cliff faces and damp rock crevices, moving under bark and logs (preferably hardwoods) in spring and summer; known from the Chattooga Wild and Scenic River Corridor	AP	2,7
<b>JEWELED TRILLIUM</b> <i>Trillium simile</i>	Plant	Sensitive	Basic mesic hardwood forests of the Southern Blue Ridge mountains	AP	8
<b>LANCELEAF TRILLIUM</b> <i>Trillium lancifolium</i>	Plant	Sensitive	Basic mesic hardwood and floodplain forests	LC, EN	3,8
<b>LIVERWORT</b> <i>Cheilolejeunea evansii</i>	Plant	Sensitive	Bark of trees in moist escarpment gorges or gorge-like habitats	AP	2
<b>LIVERWORT</b> <i>Plagiochila caduciloba</i>	Plant	Sensitive	Found on damp, shaded, vertical rock faces along streams in mountain gorges; Southern Appalachian endemic	AP	2
<b>LIVERWORT</b> <i>Radula sullivantii</i>	Plant	Sensitive	Wet shaded rocks and crevices; known from Whetstone Falls, downstream of Sandy Ford, and approximately 0.75 of Whetstone's confluence with the Chattooga River, and King Creek Falls	AP	2
<b>MAY WHITE AZALEA</b> <i>Rhododendron eastmanii</i>	Plant	Sensitive	Mesic hardwood forests, known from several locations on the Enoree Ranger District	EN	7
<b>MONARCH BUTTERFLY</b> <i>Danaus plexippus</i>	Insect	Sensitive	Summer breeding habitat includes woodlands, roadsides, or utility rights-of-way containing nectaring plants throughout summer for the adults and abundant, healthy, larval plants (milkweeds)	All	3,4,5,7,8
<b>MOUNTAIN WITCH ALDER</b> <i>Fothergilla major</i>	Plant	Sensitive	Occurs in oak-hickory forests; may occur on monadnocks or north-facing slopes in piedmont	AP	5
<b>OGLETHORPE OAK</b> <i>Quercus oglethorpensis</i>	Plant	Sensitive	Streamside forests and depressional wetlands in the Carolina Slate belt	LC	3,5,9
<b>PIEDMONT PRAIRIE BURROWING CRAYFISH</b> <i>Distocambarus crockeri</i>	Crustacean	Sensitive	This species is most abundant on a perched water table along ridge tops and negatively associated with aquatic habitats; found in forest canopy openings like roadside ditches usually with sedges present; it is present in Thurmond Lake – Savannah River, Upper Stevens Creek, Kiokee Creek – Savannah River, Turkey Creek – Stevens Creek, Bush River – Saluda River, and Little River – Savannah River watersheds that contain Forest Service land on the Long Cane Ranger District; on the Forest it has only been found in the Mountain Creek – Turkey Creek subwatershed	LC	4,9

<b>PIEDMONT STRAWBERRY</b> <i>Waldsteinia lobata</i>	Plant	Sensitive	Occurs in mixed mesic hardwood forests in the lower elevations of the Southern Blue Ridge mountains	AP	8
<b>RADFORD'S SEDGE</b> <i>Carex radfordii</i>	Plant	Sensitive	Occurs in basic mesic and mixed mesic hardwood forests in the Southern Appalachians	AP	7,8
<b>RAFINESQUE'S BIG-EARED BAT</b> <i>Corynorhinus rafinesquii</i>	Mammal	Sensitive	Restricted to the mountains, sandhills, and coastal plain Physiographic regions; may be found in hollow trees or behind loose bark near streams, caves, mines, or human-made structures	AP	2,3,4,5,6
<b>ROANOKE SLABSHELL</b> <i>Elliptio roanokensis</i>	Mussel	Sensitive	In South Carolina, it is found in the Pee Dee River and in the Catawba, Congaree, and Savannah River basins, typically in large rivers but can occasionally be found in small creeks; It has the potential to be found in watersheds on the Long Cane Ranger District that are in the Savannah River basin but no known records on the Forest exist	LC	1
<b>ROBUST REDHORSE</b> <i>Moxostoma robustum</i>	Fish	Sensitive	In South Carolina it is found in the Savannah River and Pee Dee River basins; it was extirpated from the Santee River basin but recent stocking has been completed in the Broad and Wateree River systems to reestablish a population in the Santee River basin; on the Forest it has the potential to be found on the Enoree Ranger District within the Broad River and lower parts of the Enoree Tyger, and Sandy River	LC, EN	1
<b>SHOAL'S SPIDER LILY</b> <i>Hymenocallis coronaria</i>	Plant	Sensitive	Rocky river shoals; known from Stevens Creek and historically from the Broad River	LC, EN	2
<b>SOUTHERN OCONEE BELLS</b> <i>Shortia galacifolia</i>	Plant	Sensitive	Large colonies in mixed mesic forests near Lake Jocassee	AP	7
<b>SUN-FACING CONEFLOWER</b> <i>Rudbeckia heliopsidis</i>	Plant	Sensitive	Known from open woodlands, roadsides, and nearby riparian areas in the vicinity of Lake Cherokee	AP	3,4,5
<b>SWEET PINESAP</b> <i>Monotropsis odorata</i>	Plant	Sensitive	Shortleaf pine-oak heaths in the Southern Appalachians and piedmont	All	5
<b>TRI-COLORED BAT</b> <i>Perimyotis subflavus</i>	Mammal	Sensitive	Found in mines and caves in winter	All	2,3,4,5,6
<b>WEBSTER'S SALAMANDER</b> <i>Plethodon websteri</i>	Amphibian	Sensitive	Mesic hardwood slopes with rocky outcrops	LC	7
<b>WHORLED HORSEBALM</b> <i>Collinsonia verticillata</i>	Plant	Sensitive	Found in basic mesic forests along the Brevard Geologic Belt in South Carolina	AP	8
<b>YELLOW LAMPMUSSEL</b> <i>Lampsilis cariosa</i>	Mussel	Sensitive	In South Carolina it is found in the Savannah, Wateree, Cogaree, and Pee Dee River Basins; on the Forest it is found on the Long Cane Ranger District in the Lower Stephens Creek and Turkey Creek – Stevens Creek watersheds; it also has the potential to occur in the Upper Stevens Creek watershed	LC	1
<b>YOUNG'S CRAYFISH</b> <i>Distocambarus youngineri</i>	Crustacean	Sensitive	In South Carolina it is found in the Saluda and Broad River basins only in Newberry County; it is found in moist, terrestrial areas with leaf litter and a mixed-hardwood overstory usually near stream headwaters or intermittent streams (Eversole 1995); it is found in areas with a perched water table and is not found very close to streambanks and does not appear to be directly associated with the streams themselves; on the Forest it is found only on the Enoree Ranger District within the Indian Creek watershed; it has also been found in the Cannos Creek-Broad River watershed outside the Forest Service boundary	EN	3

<sup>1</sup>Habitat Group: 1 = Aquatic habitats; 2 = Rock outcrops associated with streams; 3 = Riparian forests and native canebrakes; 4 = Woodlands, savannas, prairies, and openings; 5 = Upland oak and pine forests; 6 = Mines and caves; 7 = Mesic forests; 8=Basic mesic forests and rich coves; 9 = Upland depression ponds, bogs, and seepage areas; 10 = Glades and mafic woodlands

**From:** [Magniez, Jeff -FS](#)  
**To:** [Kelly Kirven](#)  
**Cc:** [Miller, Derrick L -FS](#)  
**Subject:** RE: Stevens Creek - Forest Service Species of Conservation Concern  
**Date:** Wednesday, January 15, 2020 1:17:23 PM  
**Attachments:** [image002.png](#)  
[Sumter NF TES List\\_011520.docx](#)

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Attached please find the Sumter National Forest list of threatened, endangered, and Forest Service sensitive species.

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**From:** Miller, Derrick L -FS <derrick.miller@usda.gov>  
**Sent:** Wednesday, January 15, 2020 12:52 PM  
**To:** Magniez, Jeff -FS <jeff.magniez@usda.gov>  
**Cc:** Kelly Kirven <Kelly.Kirven@KleinschmidtGroup.com>  
**Subject:** FW: Stevens Creek - Forest Service Species of Conservation Concern

Jeff

Can you respond to Kelly for me.



**Derrick L. Miller, Forester**  
**Special Uses Program Manager**  
**President NFFE, Local 466**  
**National Federation of Federal Employees**  
**Francis Marion & Sumter National Forest**

**p: 803-561-4056**  
**f: 803-561-4004**  
[derrick.miller@usda.gov](mailto:derrick.miller@usda.gov)

4931 Broad River Road  
Columbia, SC 29212  
<http://www.nffe-fsc.org>

---

**From:** Kelly Kirven [<mailto:Kelly.Kirven@KleinschmidtGroup.com>]  
**Sent:** Wednesday, January 15, 2020 12:43 PM  
**To:** Miller, Derrick L -FS <[derrick.miller@usda.gov](mailto:derrick.miller@usda.gov)>  
**Subject:** Stevens Creek - Forest Service Species of Conservation Concern

Hi Derrick,

I hope you are doing well and had a great Christmas and New Year's! I wanted to reach out to you to see if you could provide a list of the Forest Service Species of Conservation Concern that may exist on Forest Service lands within the Stevens Creek project area. We are beginning to pull together our Rare, Threatened, and Endangered Species Whitepaper and would like to list the species that are important to the Forest Service.

Thanks so much!

Kelly

**Kelly Kirven**

**Project Licensing Coordinator**

***Kleinschmidt***

**Office: 803.462.5633**

**Cell: 423.747.2660**

**[www.KleinschmidtGroup.com](http://www.KleinschmidtGroup.com)**

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# United States Department of the Interior



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

In Reply Refer To:

February 03, 2020

Consultation Code: 04EG1000-2020-SLI-1041

Event Code: 04EG1000-2020-E-01928

Project Name: Stevens Creek Hydroelectric Project Relicensing P-2535

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

To Whom It May Concern:

This list identifies threatened, endangered, proposed and candidate species, as well as critical habitat, that may be affected by your proposed project. This list may change before your project is completed. Under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation.

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*). Projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)).

Wind energy projects should follow the wind energy guidelines <http://www.fws.gov/windenergy/> for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts of communication towers on migratory birds can be found under the "Bird Hazards" tab at: [www.fws.gov/migratorybirds](http://www.fws.gov/migratorybirds).

Attachment(s):

- Official Species List

# Official Species List

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

This species list is provided by:

## **Georgia Ecological Services Field Office**

355 East Hancock Avenue

Room 320

Athens, GA 30601

(706) 613-9493

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

## **South Carolina Ecological Services**

176 Croghan Spur Road, Suite 200

Charleston, SC 29407-7558

(843) 727-4707

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## Project Summary

Consultation Code: 04EG1000-2020-SLI-1041

Event Code: 04EG1000-2020-E-01928

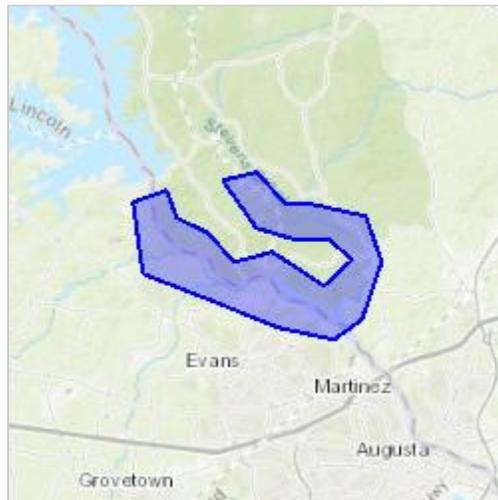
Project Name: Stevens Creek Hydroelectric Project Relicensing P-2535

Project Type: DAM

Project Description: FERC Relicensing for the Stevens Creek Hydroelectric Project

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/33.610026431497204N82.17446483698222W>



Counties: Columbia, GA | Edgefield, SC | McCormick, SC

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## Endangered Species Act Species

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

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

## Flowering Plants

NAME	STATUS
Relict Trillium <i>Trillium reliquum</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8489">https://ecos.fws.gov/ecp/species/8489</a>	Endangered

## Critical habitats

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

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# 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  
<http://www.fws.gov/charleston/>

In Reply Refer To:

February 03, 2020

Consultation Code: 04ES1000-2020-SLI-0371

Event Code: 04ES1000-2020-E-00735

Project Name: Stevens Creek Hydroelectric Project Relicensing P-2535

Subject: List of threatened and endangered species that may occur in your proposed project location, and/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>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

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 Tracking Number 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
-

# 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

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

## **Georgia Ecological Services Field Office**

355 East Hancock Avenue

Room 320

Athens, GA 30601

(706) 613-9493

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## Project Summary

Consultation Code: 04ES1000-2020-SLI-0371

Event Code: 04ES1000-2020-E-00735

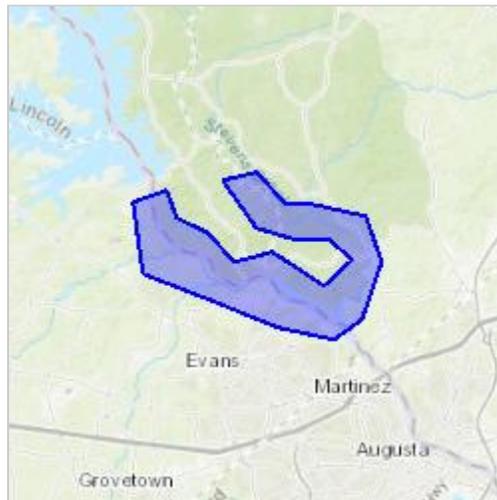
Project Name: Stevens Creek Hydroelectric Project Relicensing P-2535

Project Type: DAM

Project Description: FERC Relicensing for the Stevens Creek Hydroelectric Project

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/33.610026431497204N82.17446483698222W>



Counties: Columbia, GA | Edgefield, SC | McCormick, SC

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## Endangered Species Act Species

There is a total of 5 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 Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

### Birds

NAME	STATUS
Red-cockaded Woodpecker <i>Picoides borealis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7614">https://ecos.fws.gov/ecp/species/7614</a>	Endangered
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8477">https://ecos.fws.gov/ecp/species/8477</a>	Threatened

### Clams

NAME	STATUS
Carolina Heelsplitter <i>Lasmigona decorata</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3534">https://ecos.fws.gov/ecp/species/3534</a>	Endangered

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## Flowering Plants

NAME	STATUS
Miccosukee Gooseberry <i>Ribes echinellum</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3580">https://ecos.fws.gov/ecp/species/3580</a>	Threatened
Relict Trillium <i>Trillium reliquum</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8489">https://ecos.fws.gov/ecp/species/8489</a>	Endangered

## Critical habitats

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

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# 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.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

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
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 1 to Aug 31
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. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Sep 1 to Jul 31

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NAME	BREEDING SEASON
<b>Blue-winged Warbler <i>Vermivora pinus</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30
<b>Kentucky Warbler <i>Oporornis formosus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
<b>Prairie Warbler <i>Dendroica discolor</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
<b>Prothonotary Warbler <i>Protonotaria citrea</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
<b>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
<b>Red-throated Loon <i>Gavia stellata</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
<b>Rusty Blackbird <i>Euphagus carolinus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
<b>Short-billed Dowitcher <i>Limnodromus griseus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a>	Breeds elsewhere
<b>Wood Thrush <i>Hylocichla mustelina</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

## Probability Of Presence Summary

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

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

### **Breeding Season (■)**

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

### **Survey Effort (|)**

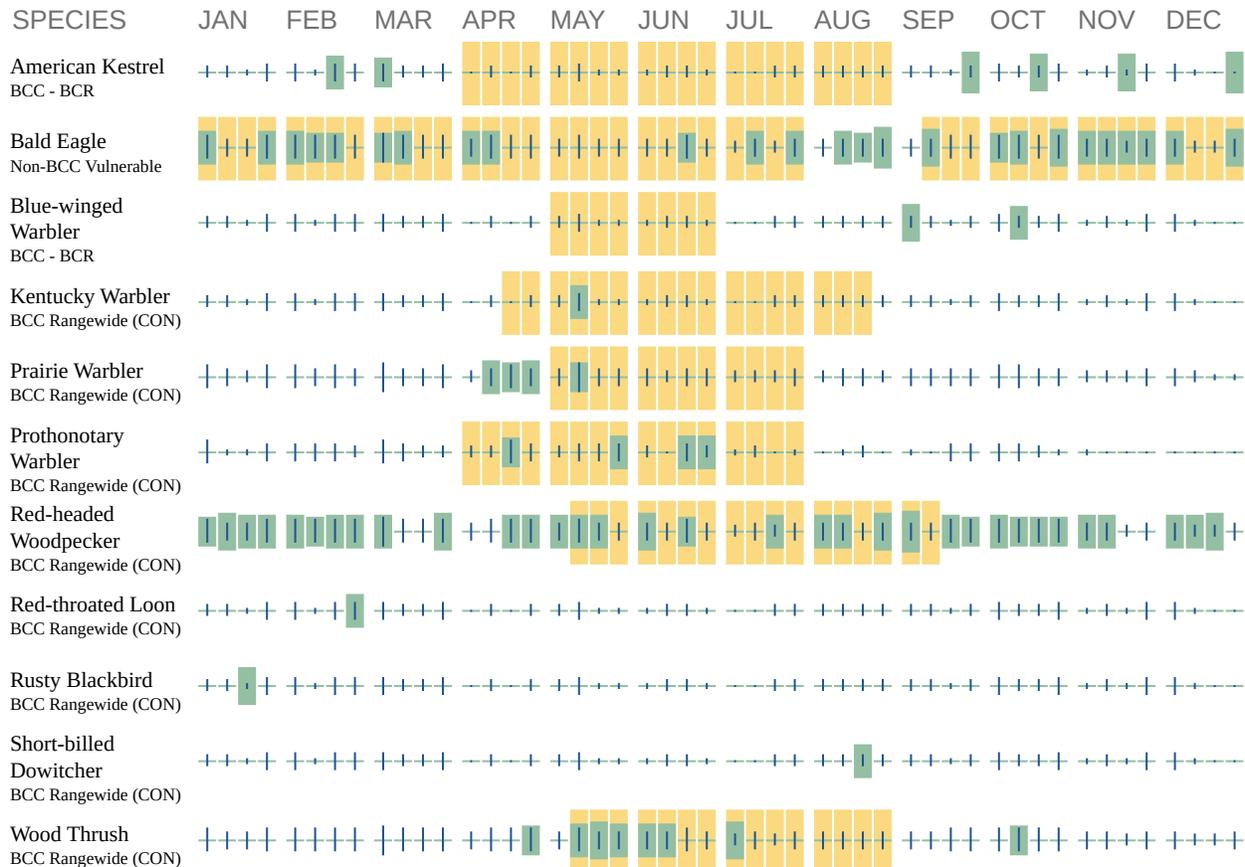
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

### **No Data (—)**

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

### **Survey Timeframe**

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



Additional information can be found using the following links:

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

## 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](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

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

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

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

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

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

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

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

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

### **What are the levels of concern for migratory birds?**

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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

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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.

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MARK WILLIAMS  
COMMISSIONER

RUSTY GARRISON  
DIRECTOR

February 04, 2019

Caleb Gaston  
Sr. Environmental Specialist  
SCANA  
CALEB.GASTON@scana.com

**Subject: Known occurrences of natural communities, plants and animals of highest priority conservation status on or near Stevens Creek Project, Columbia County, Georgia**

Dear Mr. Gaston:

This is in response to your request of January 10, 2019. According to our records, within 3 miles of the project site for terrestrial elements (TR) and within the local HUC10 watershed for aquatic elements (AQ), there are the following Natural Heritage Database occurrences:

**Savannah River Middle 3 (0306010605) - Upstream from Dam**

- GA *Acmispon helleri* (Carolina Trefoil) [EXTIRPATED] (TR), approx. 2.3 mi NW of site
- Bouteloua curtipendula var. curtipendula* (Side-oats Grama) (TR), in an uncertain location near the project site
- Clematis ochroleuca* (Curly-heads) (TR), approx. 0.4 mi W of site
- Clematis ochroleuca* (Curly-heads) (TR), in an uncertain location near the project site
- Dryopteris celsa* (Log Fern) (TR), approx. 0.9 mi SE of site
- GA *Elliottia racemosa* (Georgia Plume) (TR), approx. 1.4 mi NW of site
- Enemion biternatum* (False Rue-anemone) (TR), approx. 0.8 mi SE of site
- GA *Hymenocallis coronaria* (Shoals Spiderlily) (TR), approx. 1.6 mi SE of site
- GA *Hymenocallis coronaria* (Shoals Spiderlily) (TR), approx. 0.9 mi SE of site
- GA *Marshallia ramosa* (Pineland Barbara Buttons) (TR), on site
- GA *Marshallia ramosa* (Pineland Barbara Buttons) (TR), approx. 0.4 mi NW of site
- GA *Paronychia virginica* (Yellow Nailwort) (TR), on site
- GA *Pedimelum piedmontanum* (Dixie Mountain Breadroot) (TR), approx. 0.6 mi NW of site
- GA *Pedimelum piedmontanum* (Dixie Mountain Breadroot) (TR), in an uncertain location near the project site
- Portulaca umbraticola ssp. coronata* (Wingpod Purslane) [HISTORIC?] (TR), on site
- GA *Scutellaria ocmulgee* (Ocmulgee Skullcap) (TR), approx. 0.9 mi SE of site
- GA *Scutellaria ocmulgee* (Ocmulgee Skullcap) (TR), approx. 2.6 mi SE of site
- Trillium discolor* (Pale Yellow Trillium) (TR), approx. 0.2 mi N of site
- US *Trillium reliquum* (Relict Trillium) (TR), approx. 0.8 mi SE of site
- US *Trillium reliquum* (Relict Trillium) (TR), in an uncertain location near the project site
- US *Trillium reliquum* (Relict Trillium) (TR), approx. 0.5 mi SE of site

- US *Trillium reliquum* (Relict Trillium) (TR), on site  
 2009009 [Georgia Land Trust] (TR), on site  
 2010058 [Central Savannah River Land Trust] (TR), on site  
 Savannah River Lakes [U.S. Army Corps of Engineers] (TR), approx. 0.1 mi N of site  
 Greenspace program acquisition (TR), approx. 1.1 mi S of site  
 Greenspace program acquisition (TR), approx. 1.2 mi S of site  
 Greenspace program acquisition (TR), approx. 1.3 mi S of site  
 Greenspace program acquisition (TR), approx. 1.4 mi S of site  
 Greenspace program acquisition (TR), approx. 1.7 mi S of site  
 Greenspace program acquisition (TR), approx. 1.8 mi S of site  
 Greenspace program acquisition (TR), approx. 1.9 mi S of site  
 Greenspace program acquisition (TR), approx. 2.1 mi S of site  
 Greenspace program acquisition (TR), approx. 2.1 mi SW of site  
 Greenspace program acquisition (TR), approx. 2.2 mi S of site  
 Greenspace program acquisition (TR), approx. 2.9 mi S of site  
 Greenspace program acquisition (TR), on site  
 Savannah River Upper 1, Clark Hill (0306010310) [SWAP High Priority Watershed]  
 (TR), approx. 0.8 mi N of site  
 Little River 1, Little R, Clark Hill (0306010504) [SWAP High Priority Watershed] (TR),  
 approx. 1.9 mi NW of site  
 Savannah River Middle 4 (0306010603) [SWAP High Priority Watershed] (TR), on site  
 Savannah River Middle 3 (0306010605) [SWAP High Priority Watershed] (TR), on site

**Savannah River Middle 4 (0306010603) - Downstream from Dam**

- US *Acipenser brevirostrum* (Shortnose Sturgeon) (AQ) approx. 18.5 mi SE of site in the  
 Savannah River  
 US *Acipenser oxyrinchus oxyrinchus* (Atlantic Sturgeon) (AQ), approx. 19.2 mi SE of site in  
 the Savannah River  
 GA *Berberis canadensis* (American Barberry) [HISTORIC] (TR), approx. 2.9 mi S of site  
 GA *Clemmys guttata* (Spotted Turtle) [HISTORIC] (AQ), approx. 20.8 mi S of site  
*Dryopteris celsa* (Log Fern) (TR), in an uncertain location near the project site  
*Elimia caelatura* (Savannah Elimia) [HISTORIC] (AQ), approx. 0.4 mi SE of site in the  
 Savannah River  
 GA *Elliptio arctata* (Delicate Spike) (AQ), approx. 1.3 mi SE of site in the Savannah River  
*Elliptio congaraea* (Carolina Slabshell) (AQ), approx. 1.3 mi SE of site in the Savannah  
 River  
*Elliptio fraternus* (Brother Spike) (AQ), approx. 3.4 mi SE of site in the Savannah River  
*Elliptio roanokensis* (Roanoke Slabshell) (AQ), approx. 1.4 mi SE of site in the Savannah  
 River  
*Elliptio roanokensis* (Roanoke Slabshell) (AQ), approx. 21.9 mi S of site in the Savannah  
 River  
*Enemion biternatum* (False Rue-anemone) (TR), in an uncertain location near the project  
 site  
 GA *Fusconaia masoni* (Atlantic Pigtoe) [HISTORIC] (AQ), on site in the Savannah River

- GA *Hymenocallis coronaria* (Shoals Spiderlily) (TR), approx. 1.8 mi SE of site
- GA *Hymenocallis coronaria* (Shoals Spiderlily) (TR), in an uncertain location near the project site
- GA *Hymenocallis coronaria* (Shoals Spiderlily) (TR), in an uncertain location near the project site
- Lampsilis cariosa* (Yellow Lampmussel) (AQ), approx. 21.9 mi S of site in McBean Creek
- Lampsilis cariosa* (Yellow Lampmussel) (AQ), approx. 1.3 mi SE of site in the Savannah River
- GA *Moxostoma robustum* (Robust Redhorse) (AQ), on site in the Savannah River
- GA *Moxostoma robustum* (Robust Redhorse) (AQ), approx. 13.0 mi SE of site in the Savannah River
- Necturus punctatus* (Dwarf Waterdog) (AQ), approx. 21.2 mi S of site in McBean Creek
- Notropis chalybaeus* (Ironcolor Shiner) (AQ), approx. 9.5 mi S of site in Butler Creek
- Notropis chalybaeus* (Ironcolor Shiner) [HISTORIC?] (AQ), approx. 21.6 mi SE of site in the Savannah River
- Portulaca umbraticola ssp. coronata* (Wingpod Purslane) [HISTORIC?] (TR), approx. 1.5 mi W of site
- GA *Scutellaria ocmulgee* (Ocmulgee Skullcap) (TR), on site
- GA *Scutellaria ocmulgee* (Ocmulgee Skullcap) (TR), approx. 1.1 mi S of site
- GA *Toxolasma pullus* (Savannah Lilliput) (AQ), approx. 15.7 mi SE of site in the Savannah River
- US *Trillium reliquum* (Relict Trillium) in an uncertain location near the project site
- US *Trillium reliquum* (Relict Trillium) in an uncertain location near the project site
- US *Trillium reliquum* (Relict Trillium) (TR), approx. 1.8 mi NW of site
- 2010058 [Central Savannah River Land Trust] (TR), approx. 2.2 mi NW of site
- Greenspace program acquisition (TR), approx. 0.7 mi SW of site
- Greenspace program acquisition (TR), approx. 2.3 mi SW of site
- Greenspace program acquisition (TR), approx. 2.4 mi SW of site
- Greenspace program acquisition (TR), approx. 2.8 mi W of site
- Greenspace program acquisition (TR), approx. 3.0 mi SW of site
- Savannah River Middle 4 (0306010603) [SWAP High Priority Watershed] (TR), approx. 0.5 mi NW of site
- Savannah River Middle 3 (0306010605) [SWAP High Priority Watershed] (TR), on site

### Recommendations:

Federally listed species have been documented within three miles of the proposed project. To minimize potential impacts to federally listed species, we recommend consultation with the United States Fish and Wildlife Service. Please contact the following: In North Georgia, email Robin Goodloe at GAES\_Assistance@fws.gov. In Southeast Georgia, call the Coastal Georgia Office at 912-832-8739. In Southwest Georgia, please contact John Doresky at 706-544-6030 or John\_Doresky@fws.gov.

Please be aware that state protected species have been documented within three miles of the proposed project. For information about these species, including survey recommendations, please visit our webpage at <http://georgiawildlife.com/conservation/species-of-concern#rare-locations>. Surveys for species of federal or state conservation concern should be conducted prior to commencement of construction.

This project occurs within a high priority watershed. As part of Georgia's State Wildlife Action Plan, high priority watersheds were identified to protect the best-known populations of high priority aquatic species, important coastal habitats, and migratory corridors for anadromous species. Please refer to Appendix F of Georgia's State Wildlife Action Plan to find out more specific information about this high priority watershed (<https://georgiawildlife.com/wildlifeactionplan>).

**Disclaimer:**

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

If you know of populations of highest priority species that are not in our database, please fill out the appropriate data collection form and send it to our office. Forms can be obtained through our web site <https://georgiawildlife.com/conservation/species-of-concern#providing> or by contacting our office.

If I can be of further assistance, please let me know.

Sincerely,



Anna Yellin  
Wildlife Biologist II

**Data Available on the Wildlife Conservation Section Website**

- Georgia protected plant and animal profiles are available on our website. These accounts cover basics like descriptions and life history, as well as threats, management recommendations and conservation status. Visit <http://georgiabiodiversity.org/natels/general-info.html>.
- Rare species and natural community information can be viewed by Quarter Quad, County and HUC8 Watershed. To access this information, please visit our GA Rare Species and Natural Community Data Portal at: <http://georgiabiodiversity.org/>
- Downloadable files of rare species and natural community data by Quarter Quad and County are also available. Please visit: <http://georgiabiodiversity.org/natels/natural-element-locations.html>

# South Carolina Department of Natural Resources



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Robert H. Boyles, Jr  
**Interim Director**  
Emily C. Cope  
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March 27, 2020

Kelly Kirven  
Project Licensing Coordinator  
Kleinschmidt  
204 Caughman Farm Lane Suite 301  
Lexington, SC 29072

## *Electronic submission*

Re: Request for Threatened and Endangered Species Review  
Stevens Creek Hydro Project - Edgefield, SC

Dear Ms. Kirven,

The South Carolina Department of Natural Resources has received your request for threatened and endangered species consultation for the Stevens Creek Hydro Project area in Edgefield County (approximately 33.65° N, -82.192° E). The project consists of a hydroelectric dam and surrounding facilities and impact areas. A detailed project description was not provided. Aerial images indicate the existing project site and surrounding area consists of wetlands, waterways and wooded areas.

According to SCDNR data, there are no records of listed threatened and endangered species or designated critical habitat within the project footprint. However, there are several species of concern within 3-miles of the site, including the federally endangered relict trillium (*Trillium reliquum*), federally threatened Miccosukee gooseberry (*Ribes echinellum*), the state endangered Webster's salamander (*Plethodon websteri*), and the state threatened bald eagle (*Haliaeetus leucocephalus*). 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.

Table 1: Species documented within the boundary

Bald eagle ( <i>Haliaeetus leucocephalus</i> )	State Threatened, Bald & Golden Eagle Protection Act
Aethusa-like trepocarpus ( <i>Trepocarpus aethusae</i> )	SWAP
Atlantic spike ( <i>Elliptio producta</i> )	SWAP
Baltimore oriole ( <i>Icterus galbula</i> )	SWAP
Bartram's bass ( <i>Micropterus</i> )	SWAP
Carolina larkspur ( <i>Delphinium carolinianum</i> )	SWAP
Christmas darter ( <i>Etheostoma hopkinsi</i> )	SWAP
Highfin shiner ( <i>Notropis altipinnis</i> )	SWAP
Lanceleaf wakerobin ( <i>Trillium lancifolium</i> )	SWAP
Rosyface chub ( <i>Hybopsis rubrifrons</i> )	SWAP
Shoals spider-lily ( <i>Hymenocallis coronaria</i> )	SWAP

Snail bullhead ( <i>Ameiurus brunneus</i> )	SWAP
Turquoise darter ( <i>Etheostoma inscriptum</i> )	SWAP
Faded trillium ( <i>Trillium discolor</i> )	Tracked Species
Smooth indigobush ( <i>Amorpha glabra</i> )	Tracked Species

Table 2: Species documented within 3 miles of the boundary

Relict Trillium - <i>Trillium reliquum</i>	Federally Endangered
Relict Trillium - <i>Trillium reliquum</i>	Federally Endangered
Miccosukee Gooseberry - <i>Ribes echinellum</i>	Federally Threatened
Georgia Aster - <i>Symphyotrichum georgianum</i>	Federal Candidate
Webster's Salamander - <i>Plethodon webster</i>	State Endangered
Bald Eagle - <i>Haliaeetus leucocephalus</i>	State Threatened, Bald & Golden Eagle Protection Act
Robust Redhorse - <i>Moxostoma robustum</i>	Federal At-Risk Species
Ocmulgee Skullcap - <i>Scutellaria ocmulgee</i>	Federal At-Risk Species
Aethusa-like Trepocarpus - <i>Trepocarpus aethusae</i>	SWAP
American Eel - <i>Anguilla rostrata</i>	SWAP
American Ginseng - <i>Panax quinquefolius</i>	SWAP
American Ginseng - <i>Panax quinquefolius</i>	SWAP
Atlantic Spike - <i>Elliptio producta</i>	SWAP
Baltimore Oriole - <i>Icterus galbula</i>	SWAP
Bartram's Bass - <i>Micropterus</i>	SWAP
Carolina Larkspur - <i>Delphinium carolinianum</i>	SWAP
Christmas Darter - <i>Etheostoma hopkinsi</i>	SWAP
Dutchman's Breeches - <i>Dicentra cucullaria</i>	SWAP
Eared Goldenrod - <i>Solidago auriculata</i>	SWAP
Eastern Creekshell - <i>Villosa delumbis</i>	SWAP
Eastern Elliptio - <i>Elliptio complanata</i>	SWAP
False Rue-anemone - <i>Enemion biternatum</i>	SWAP
Flat Bullhead - <i>Ameiurus platycephalus</i>	SWAP
Highfin Shiner - <i>Notropis altipinnis</i>	SWAP
James' Sedge - <i>Carex jamesii</i>	SWAP
Lanceleaf Wakerobin - <i>Trillium lancifolium</i>	SWAP
Miccosukee Gooseberry - <i>Ribes echinellum</i>	SWAP
Notchlip Redhorse - <i>Moxostoma collapsum</i>	SWAP
Rosyface Chub - <i>Hybopsis rubrifrons</i>	SWAP
Rosyface Chub - <i>Hybopsis rubrifrons</i>	SWAP
Shoals Spider-lily - <i>Hymenocallis coronaria</i>	SWAP
Slender Sedge - <i>Carex gracilescens</i>	SWAP
Snail Bullhead - <i>Ameiurus brunneus</i>	SWAP
Southern Nodding Trillium - <i>Trillium rugelii</i>	SWAP

Tall Bellflower - <i>Campanulastrum americanum</i>	SWAP
Tiger Salamander - <i>Ambystoma tigrinum</i>	SWAP
Tuberous Gromwell - <i>Lithospermum tuberosum</i>	SWAP
Turquoise Darter - <i>Etheostoma inscriptum</i>	SWAP
Virginia Spiderwort - <i>Tradescantia virginiana</i>	SWAP
Virginia Spiderwort - <i>Tradescantia virginiana</i>	SWAP
Whiteleaf Sunflower - <i>Helianthus glaucophyllus</i>	SWAP
Yellow Lampmussel - <i>Lampsilis cariosa</i>	SWAP
Florida Pondhorn - <i>Uniomerus caroliniana</i>	Tracked Species
Faded Trillium - <i>Trillium discolor</i>	Tracked Species
Lowland Bladderfern - <i>Cystopteris protrusa</i>	Tracked Species
Lowland Bladderfern - <i>Cystopteris protrusa</i>	Tracked Species
One-flowered Broomrape - <i>Orobanche uniflora</i>	Tracked Species
Smooth Indigobush - <i>Amorpha glabra</i>	Tracked Species
Streambank Mock Orange - <i>Philadelphus hirsutus</i>	Tracked Species
Weak Nettle - <i>Urtica chamaedryoides</i>	Tracked Species

Active bald eagle nests are known to occur within or near to your project area. Surveys to rule out nests in the project area are advised to avoid negative impacts to bald eagle. bald eagles are a state listed threatened species and are federally protected under the Bald and Golden Eagle Protection Act. If bald eagle nests are found to be within the project area, please consult with the U.S. Fish and Wildlife Service before proceeding with any construction activities.

Webster's salamander is known to occur within 3 miles of the project area. This species prefers hardwood forested hillsides and is usually found under rocks, logs or leaf litter. Surveys to identify Webster's salamander in the project area should be done in August/September (for hatchlings) or October through May (adults). This species is state listed as endangered; therefore, no individuals shall be removed without first obtaining a permit through SCDNR.

Georgia aster, relict trillium and Miccosukee gooseberry are both federally listed plant species found within 3 miles of the project area. Should either of these species be found within the project area, please contact SCDNR and the US Fish & Wildlife Service.

The aforementioned species are designated as having conservation priority as designated through 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.

Review of National Wetlands Inventory (NWI) indicate that wetlands and/or hydric soils are present within your project area. SCDNR advises that you consult with the U.S. Army Corps of Engineers ([www.sac.usace.army.mil/Missions/Regulatory](http://www.sac.usace.army.mil/Missions/Regulatory)) to determine if jurisdictional wetlands are present and if a permit and mitigation is required for any activities impacting these areas. If jurisdiction features are present, SCDNR recommends that developed project plans avoid or minimize impacts where practicable. Additionally, a 401 Water Quality Certification may also be required from the SC Department of Health & Environmental Control. For more information, please visit their website at <https://www.scdhec.gov/environment/water-quality/water-quality-certification-section-401-clean-water-act>.

SCDNR offers the following comments and Best Management Practices (BMPs) regarding this project's potential impacts to natural resources:

- 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.
- 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.
- 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.

These technical comments 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](mailto:environmental@dnr.sc.gov) or visiting [www.dnr.sc.gov/environmental](http://www.dnr.sc.gov/environmental).

Thank you for the opportunity to review this project and provide comments. Please feel free to contact Joseph Lemeris via email at [LemerisJ@dnr.sc.gov](mailto:LemerisJ@dnr.sc.gov) or via phone at 803-734-1396 regarding needs for additional information.

Sincerely,



James Hagerty  
Heritage Trust Program



**From:** [Joe Lemeris](#)  
**To:** [Kelly Kirven](#)  
**Subject:** RE: Revised species review, Stevens Creek Hydro Project  
**Date:** Friday, March 27, 2020 1:03:21 PM  
**Attachments:** [image003.png](#)  
[image001.png](#)

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Unfortunately right now it does not, since it was not reviewed/tracked at the time of the 2015 SWAP. It will almost certainly be included in the upcoming revision of the SWAP, in which I'd imagine it will receive a high or highest status, but as it stands it is not on our list. It is definitely one of our tracked species for sure!

Cheers,  
Joe

[Joseph Lemeris, Jr.](#)

GIS/Data Manager, Natural Heritage Program | o: 803-734-1396 | m: 843-729-0679 | e: [LemerisJ@dnr.sc.gov](mailto:LemerisJ@dnr.sc.gov)  
South Carolina Dept. of Natural Resources | 1000 Assembly St, Columbia, SC 29201 | [www.dnr.sc.gov](http://www.dnr.sc.gov)



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**From:** Kelly Kirven <[Kelly.Kirven@KleinschmidtGroup.com](mailto:Kelly.Kirven@KleinschmidtGroup.com)>  
**Sent:** Friday, March 27, 2020 12:40 PM  
**To:** Joe Lemeris <[LemerisJ@dnr.sc.gov](mailto:LemerisJ@dnr.sc.gov)>  
**Subject:** RE: Revised species review, Stevens Creek Hydro Project

Hi Joe,

One follow-up question. Does the Ocmulgee skullcap have a state priority status (highest, high, or moderate) or is it a tracked species?

Thanks,  
Kelly

**Kelly Kirven**  
**Project Licensing Coordinator**  
**Office: 803.462.5633**  
[www.KleinschmidtGroup.com](http://www.KleinschmidtGroup.com)

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**From:** Joe Lemeris <[LemerisJ@dnr.sc.gov](mailto:LemerisJ@dnr.sc.gov)>  
**Sent:** Friday, March 27, 2020 11:37 AM  
**To:** Kelly Kirven <[Kelly.Kirven@KleinschmidtGroup.com](mailto:Kelly.Kirven@KleinschmidtGroup.com)>  
**Cc:** Elizabeth Miller <[MillerE@dnr.sc.gov](mailto:MillerE@dnr.sc.gov)>; speciesreview <[speciesreview@dnr.sc.gov](mailto:speciesreview@dnr.sc.gov)>  
**Subject:** Revised species review, Stevens Creek Hydro Project

Good morning Ms. Kirven,

I was forwarded your request for more information from Elizabeth Miller about the species list included in our response to the Stevens Creek Hydro Project. Unfortunately one of our previous staff members had made some errors listing the status of several species in this list, therefore please find a revised copy which reflects accurate status. Note that species listed as 'Tracked Species' are species within our natural heritage database deemed to be vulnerable or imperiled within the state, but may be more secure in other parts of its range.

Please let me know if you have any other questions!!!

Cheers,  
Joe

[Joseph Lemeris, Jr.](#)

GIS/Data Manager, Natural Heritage Program | o: 803-734-1396 | m: 843-729-0679 | e: [LemerisJ@dnr.sc.gov](mailto:LemerisJ@dnr.sc.gov)  
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