



September 21, 2004

Kershaw County Economic Development Office
Post Office Box 763
Camden, South Carolina 29020

Attention: Mr. Nelson Lindsay

Reference: **Preliminary Protected Species Survey**
Exit 87 Office Park
Near Elgin, Kershaw County, South Carolina
S&ME Job No. 1614-04-448

Dear Mr. Lindsay:

S&ME, Inc. is pleased to submit a Preliminary Protected Species Survey for the above-referenced site. This report addresses our findings concerning potential habitat for the state and federally listed species within Kershaw County.

The subject site is located north of Whiting Way approximately three miles south of Elgin in Kershaw County, South Carolina. The subject site is located within the Sand Hills Physiographic Province. The approximate 61.55-acre site is bound by Haig Creek to the east. The Outpost Food Mart (BP) is located west of the site. Woodland and residential parcels are located north, south and east of the site.

Literature Review Search

S&ME performed a literature review in order to verify the presence of documented occurrences or potential habitat for protected species within the limits of the subject site. This assessment included a review of the South Carolina Department of Natural Resources (SCDNR) Rare, Threatened and Endangered Species Inventory and the U.S. Fish & Wildlife Service (USFWS) Endangered Species websites. These websites were consulted regarding current state and federally listed threatened and endangered species within Kershaw County and specifically the Elgin and Lugoff USGS Quadrangles. These two sources identified the following state and federally listed species in the regional area of the site:

THREATENED & ENDANGERED FLORA & FAUNA SUMMARY KERSHAW COUNTY EXIT 87 OFFICE PARK SITE			
Species	State Status	Federal Status	Brief Habitat Description
Bald Eagle <i>Haliaeetus leucocephalus</i>	E	T	Mature forests or cliffs near larger bodies of water
Red-Cockaded Woodpecker <i>Picoides borealis</i>	E	E	Open pine stands with minimum age of 60 years; Nests in live pines with red-heart disease
Carolina Heelsplitter <i>Lasmigona decorata</i>	E	E	Mud, muddy sand or muddy gravel substrates of river & creek beds
Pine Barrens Treefrog <i>Hyla andersonii</i>	T	---	Brushy areas near small hillside seep springs, swamps, peat bogs & shrub bogs (pocosins)
Rafinesque's Big-eared Bat <i>Corynorhinus rafinesquii</i>	E	---	Roosts in old buildings, caves, & mines, usually near water
Carolina Pygmy Sunfish <i>Elassoma boelkei</i>	T	FSC	Swamps, streams, small pond roadside ditches: Shallow, vegetated areas providing refuge from predators

E – Endangered
T – Threatened
FSC – Federal Species of Concern

The literature review did not identify any known occurrences of the listed species listed within the site boundaries. In addition, no state or federally listed protected species were identified on the Elgin and Lugoff USGS Quadrangles. Several non-protected species were listed on the quadrangle maps. Copies of the SCDNR Rare, Threatened and Endangered Species Inventory map are included as Figures 1 and 2 following this report.

Onsite Habitat Descriptions

Three primary habitats are present on the site:

Pine-Oak Woodlands

A majority of the upland portions of site consists of a pine-oak woodland community. Dominant canopy species observed were loblolly pine (*Pinus taeda*), longleaf pine (*Pinus palustris*), blackjack oak (*Quercus marilandica*), post oak (*Q. stellata*), southern red oak (*Q. falcata*), and several species of hickory (*Carya spp.*). The subcanopy/shrub layer consisted of saplings of the canopy dominants plus turkey oak (*Q. laevis*), sassafras (*Sassafras albidum*) and blueberry (*Vaccinium spp.*). Vine and herbaceous species observed were muscadine (*Vitis rotundifolia*), poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), bracken fern (*Pteridium aquilinum*) and ground lichen.

Pond

An approximate 2.2-acre pond is located on the northern portion of the site. Herbaceous species observed within and immediately surrounding the pond include spatterdock (*Nuphar luteum*), several species of algae, soft rush (*Juncus effusus*), sedge (*Carex spp.*) and sphagnum moss (*Sphagnum spp.*)

Mixed Hardwood Wetlands

Mixed hardwood wetlands are located along the eastern portion of the property adjacent to Haig Creek. Wetlands are also present just west of the pond and east of the pond's outfall. Hardwood species consisted primarily of sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), blackgum (*Nyssa sylvatica*) and tulip poplar (*Liriodendron tulipifera*). The subcanopy/shrub layer consisted of saplings of the canopy dominants plus Chinese privet (*Ligustrum sinense*), red bay (*Persea borbonia*), tag alder (*Alnus serrulata*) and fetterbush (*Lyonia lucida*). Vine and herbaceous species observed in the wetland areas were Virginia creeper, muscadine, greenbriar (*Smilax rotundifolia*), laurel-leaf greenbriar (*Smilax laurifolia*), Virginia chainfern (*Woodwardia virginica*), netted chainfern (*Woodwardia areolata*), switchcane (*Arundinaria gigantea*) and sweet pepperbush (*Clethra alnifolia*).

Potential Protected Species Habitat

The site does not contain suitable habitat for the bald eagle. There are no large open waters on or adjacent to the site. The onsite pond is not large enough to support the bald eagle. The site does not contain suitable habitat for the red cockaded woodpecker (RCW). Most of the pines on the site were not of sufficient age or size to provide suitable nesting habitat for the RCW. Also, the understory surrounding most of older, larger pines was too dense to support RCW. The site does not contain suitable habitat for the Carolina heelsplitter. Haig Creek does not possess adequate depth or breadth to support this species. The site does not contain suitable habitat for Rafinesque's big-eared bat.

Potential habitat for the pine barrens treefrog may be present within the wetland areas along the eastern portion of the property. Potential habitat for the Carolina pygmy sunfish may be present within the wetland areas surrounding Haig Creek and the small pond. Both the pine barrens treefrog and the Carolina pygmy sunfish are not federally listed or protected species, but do have state-protected status.

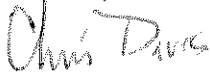
Since no formal protected species investigation has occurred within the site boundaries, protected species may be present. Generally, projects receiving federal funds or projects seeking federal permits (i.e. US Army Corps of Engineers wetland permits) will likely require a more formal investigation. It is recommended that a more detailed survey (active sampling) be completed prior to site development.

Closing

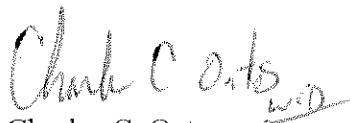
S&ME, Inc. appreciates this opportunity to work with the Kershaw County Economic Development Office. If we can provide any additional information, please do not hesitate to contact us.

Sincerely,

S&ME, Inc.



Chris Daves
Biologist

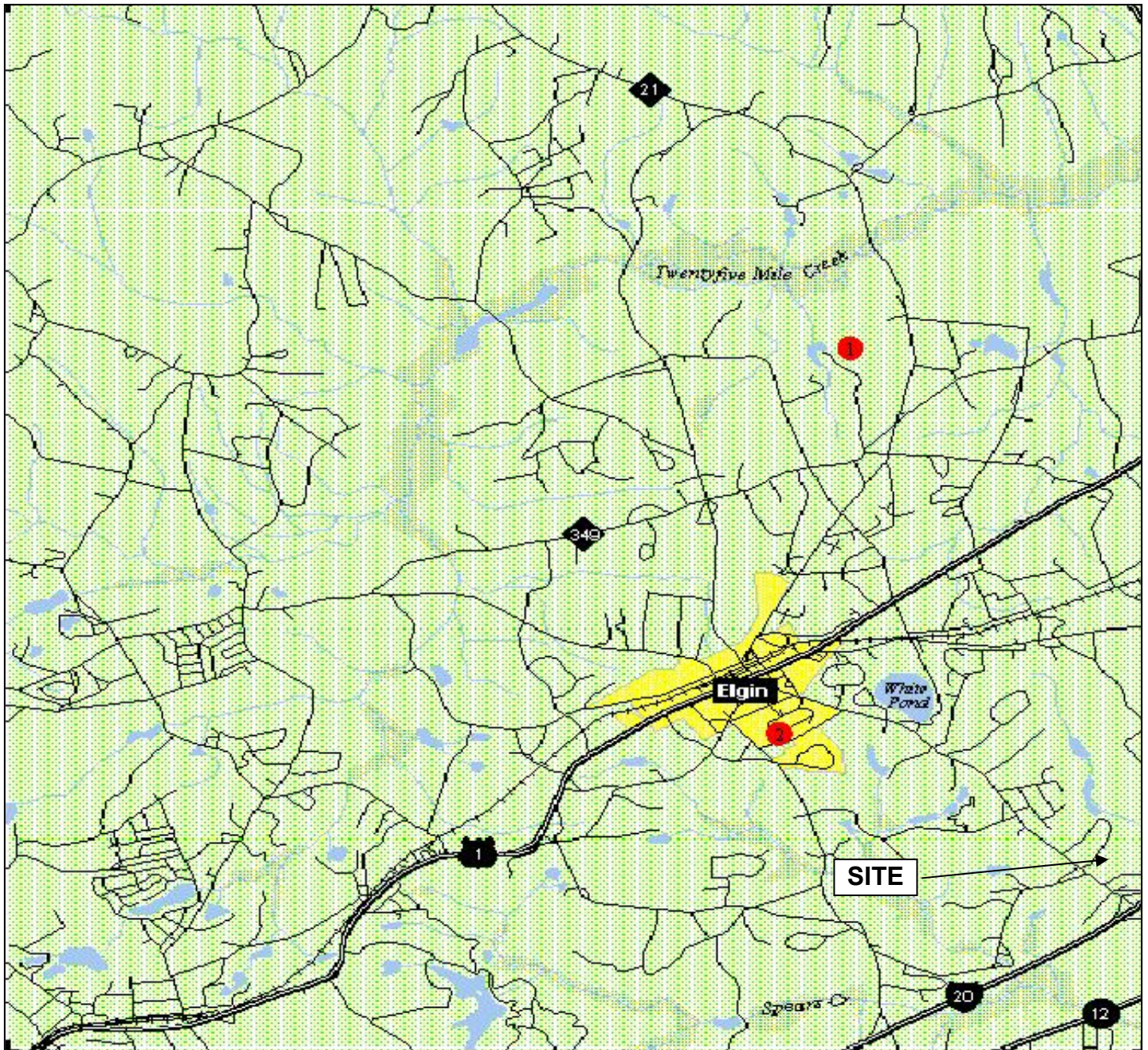


Charles C. Oates
Natural Resource Project Manager



John Whitehead, P.G.
Environmental Department Manager

s:environ/1614-04jobs/1614-04-448/protected species



- 1 - *SEMOTILUS LUMBEE* (SANDHILLS CHUB)
 2 - *SPOROBOLUS TERETIFOLIUS* (WIRE-LEAVED DROPSEED)

SOURCE: SCDNR HERITAGE TRUST - RARE, THREATENED & ENDANGERED SPECIES INVENTORY
 ELGIN QUADRANGLE

SCALE: NTS
 CHECKED BY: JWW
 DRAWN BY: WCD
 DATE: 9/7/2004

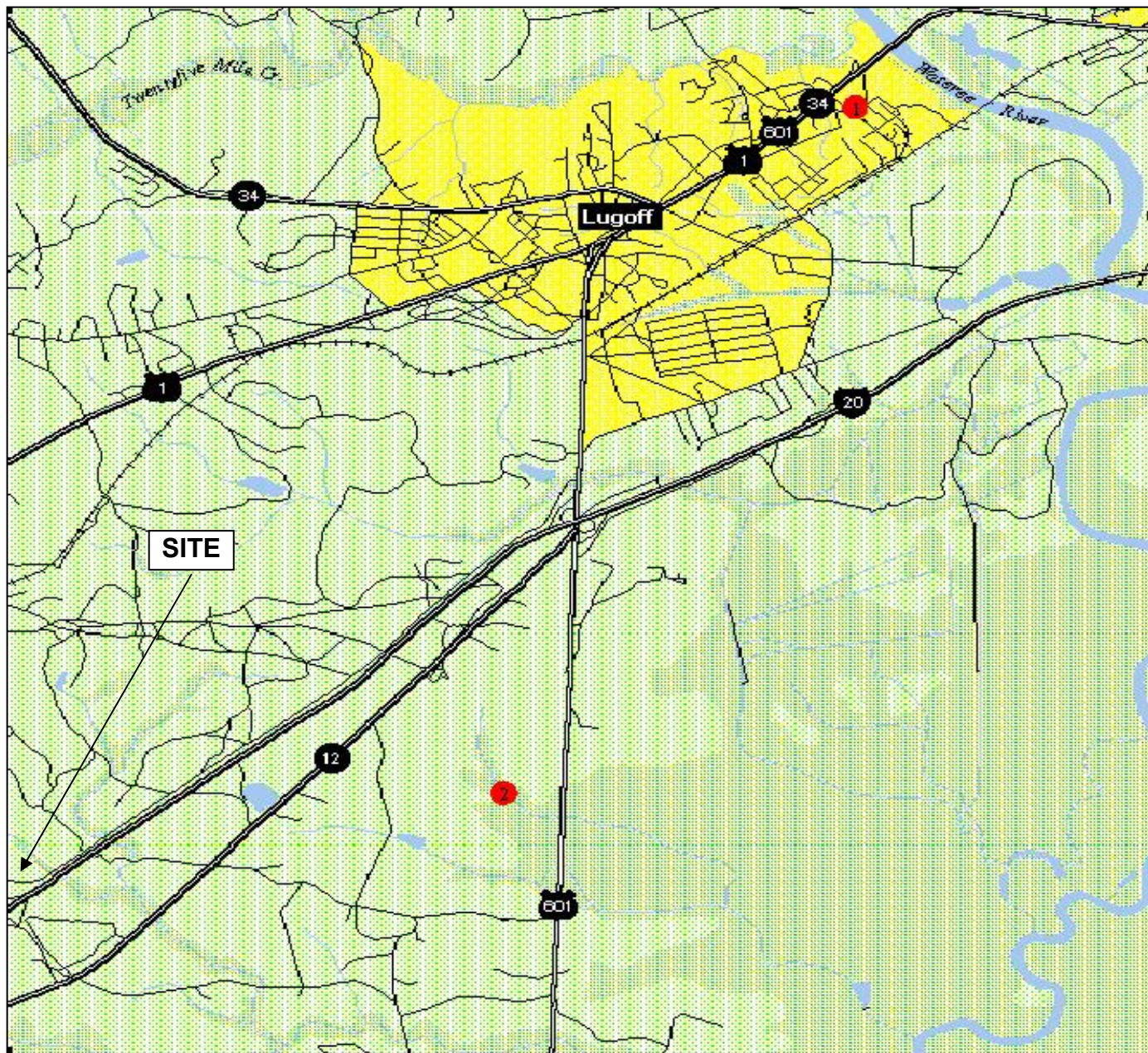


THREATENED & ENDANGERED SPECIES MAP
 KERSHAW COUNTY EXIT 87 OFFICE PARK
 ELGIN, SOUTH CAROLINA

JOB NO. 1614-04-448

FIGURE NO.

1



- 1 - *MYOTIS AUSTRORIPARIUS* (SOUTHEASTERN MYOTIS)
 2 - *HYLA ANDERSONII* (PINE BARRENS TREEFROG)

SOURCE: SCDNR HERITAGE TRUST - RARE, THREATENED & ENDANGERED SPECIES INVENTORY
 LUGOFF QUADRANGLE

SCALE: NTS
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THREATENED & ENDANGERED SPECIES MAP
 KERSHAW COUNTY EXIT 87 OFFICE PARK
 ELGIN, SOUTH CAROLINA

JOB NO. 1614-04-448

FIGURE NO.

2

South Carolina Rare, Threatened & Endangered Species Inventory

Species Found In Kershaw County

Data Last Updated June 9th, 2003.

SCIENTIFIC NAME	COMMON NAME	GLOBAL RANK	STATE RANK	LEGAL STATUS
ANEMONE BERLANDIERI	SOUTHERN THIMBLE-WEED	G4?	S?	SC
CAROLINA BAY		G?	S?	SC
COLONIAL WATERBIRD		G?	S?	SC
CORYNORHINUS RAFINESQUII	RAFINESQUE'S BIG-EARED BAT	G3G4	S2?	SE ✓✓
DRABA APRICA	OPEN-GROUND WHITLOW-GRASS	G3	S1	NC
ELASSOMA BOEHLKEI	CAROLINA PYGMY SUNFISH	G2	S1	ST ✓✓
ETHEOSTOMA FLABELLARE	FANTAIL DARTER	G5	S1	SC
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	G4	S2	FT/SE ✓✓
HYLA ANDERSONII	PINE BARRENS TREEFROG	G4	S2S3	ST ✓✓
ISOETES PIEDMONTANA	PIEDMONT QUILLWORT	G3	S2	SC
KALMIA CUNEATA	WHITE-WICKY	G3	S1	NC
LITSEA AESTIVALIS	PONDSPICE	G3	S3	SC
MINUARTIA UNIFLORA	ONE-FLOWER STITCHWORT	G4	S?	SC
MYOTIS AUSTRORIPARIUS	SOUTHEASTERN MYOTIS	G3G4	S1	SC
MYRIOPHYLLUM LAXUM	PIEDMONT WATER-MILFOIL	G3	S2	RC
NESTRONIA UMBELLULA	NESTRONIA	G4	S2	SC
NOLINA GEORGIANA	GEORGIA BEARGRASS	G3G5	S?	SC
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	G3	S2	FE/SE ✓✓
PORTULACA UMBRATICOLA	WING-PODDED PURSLANE	G5	S1	SC

SCIRPUS ETUBERCULATUS	CANBY BULRUSH	G3G4	S?	SC
SCIURUS NIGER	EASTERN FOX SQUIRREL	G5	S4	SC
SEDUM PUSILLUM	GRANITE ROCK STONECROP	G3	S2	NC
SEMOTILUS LUMBEE	SANDHILLS CHUB	G3	S2	SC
SPOROBOLUS TERETIFOLIUS	WIRE-LEAVED DROPSEED	G2?	S1	NC
SYNGONANTHUS FLAVIDULUS	YELLOW PIPEWORT	G5	S1	RC
TOFIELDIA GLABRA	WHITE FALSE- ASPHODEL	G3	S?	SC
TRILLIUM LANCIFOLIUM	NARROW-LEAVED TRILLIUM	G3	S1	NC
VIOLA PUBESCENS VAR LEIOCARPON	YELLOW VIOLET	G5T5	S?	SC

For detailed location information about rare & endangered species, please contact [Julie Holling](#) .

[[County Selection Map](#) | [Heritage Trust Home Page](#) | [SCDNR Home Page](#)]