

**Site Certification for the  
Williamsburg Cooperative Commerce Centre South  
In Williamsburg County, South Carolina**

**Attachment 22**

**Protected Species Assessment for  
Epps No. 1 Industrial Site**



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

176 Croghan Spur Road, Suite 200  
Charleston, South Carolina 29407



January 12, 2011

Re: Protected Species Assessment  
Epps #1 Industrial Park Site  
Williamsburg County, SC  
S&ME Project No. 1634-10-283  
FWS Log No. 2011-TA-0086

Thank you for your December 7, 2010, correspondence to the U.S. Fish and Wildlife Service (Service) regarding a protected species assessment for the property associated with the above-referenced project located in Williamsburg, South Carolina. Based on our review of the information received, the Service believes that development of a project at the proposed location will not result in "take" as defined under section 9 of the Endangered Species Act (Act).

Please note that obligations under the Act must be reconsidered if: (1) new information reveals impacts of this identified action may affect any listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner which was not considered in this assessment, or (3) a new species is listed or critical habitat is designated that may be affected by the identified action.

Please contact the South Carolina Department of Natural Resources regarding potential impacts to State protected species. If the proposed project will impact wetlands, please contact the U.S. Army Corps of Engineers, Charleston District.

If you have any questions regarding the Service's position in this matter, please contact Mr. Mark Leao at (843)727- 4707, ext. 228 and reference FWS Log No. 2011-TA-0086.

Sincerely,

*Jay B. Herrington*  
for Jay B. Herrington  
Field Supervisor

JBH/MCL



December 7, 2010

**Reference:**                    **Protected Species Assessment**  
Epps #1 Industrial Park Site  
Williamsburg County, South Carolina  
S&ME Project No. 1634-10-283

S&ME, Inc. (S&ME) is pleased to submit this report detailing our Protected Species Assessment for the above-referenced site located in Williamsburg County, South Carolina. This work was performed in accordance with authorized S&ME Proposal No. 1634-0016-10, dated January 18, 2010. This report and the on-site pedestrian survey have been conducted to assess the potential for the presence of protected species at the subject site, in preparation for proposed future industrial development.

The subject property totals approximately 73 acres, and is located west of and adjacent to U.S. Highway 52, in Williamsburg County, South Carolina (see Figure 1). The site is identified on a portion of the USGS 7.5-minute Kingstree, S.C. topographic quadrangle map, dated 1990 (Figure 2).

## **1.0 SITE/HABITAT DESCRIPTIONS**

The site is located in Williamsburg County within the Coastal Plain Physiographic Province of South Carolina. The surrounding properties consist of industrial and commercial properties, as well as agricultural and forestland properties. The subject property is comprised of approximately 15% dense hardwood bottomland wetlands and 85% active agricultural fields (see Figure 3). The wetlands on the subject property have been delineated in the field, and approved by the U.S. Army Corps of Engineers under SAC 2008-02266-4JJ, Dated December 15, 2009.

## 2.0 PROTECTED SPECIES

The U.S. Fish & Wildlife Service (USF&WS) *South Carolina List of Endangered, Threatened and Candidate Species* (dated March 2010) and the South Carolina Department of Natural Resources Heritage Trust Program (SCDNR HTP) *Rare, Threatened & Endangered Species Inventory Species Inventory, Kingstree Quadrangle Map* (updated on January 17, 2006) were consulted regarding current listed federally protected species within Williamsburg County. The information was reviewed prior to conducting the site visit, to determine if known locations of protected species were located on or near the subject property. The USF&WS database has six federally protected species listed for Williamsburg County, South Carolina. These species include:

Common Name	Scientific Name	Status*
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
Red-cockaded woodpecker	<i>Picoides borealis</i>	E
Wood stork	<i>Mycteria Americana</i>	E
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E
American chaffseed	<i>Schwalbea Americana</i>	E
Canby's dropwort	<i>Oxypolis canbyi</i>	E

\*E = Endangered, BGEPA = Bald and Golden Eagle Protection Act

A pedestrian field review was performed for protected species and suitable habitats to support protected species on December 3, 2010, by Mr. Charles Oates, of S&ME. Charles Oates has over ten years of conducting protected species and critical habitat assessments. The results of the pedestrian field review are included in the following sections of this report, as well as a discussion of the above species, where applicable.

### Plants:

### No Effect

American chaffseed typically grows in sandy, acidic, seasonally moist to dry soils. It is generally found in habitats described as open, moist pine flatwoods, pine/wiregrass savannas, and between peaty wetlands and xeric sandy soils. These habitats were historically maintained by wildfires.

Canby's dropwort is typically found in shallow ponds in pinelands, shallow grass and sedge sloughs, and peat-muck swamps.

During the field reconnaissance, suitable habitat to support either of these species was not observed on or adjacent to the subject property.

### Vertebrates:

### No Effect

#### Birds:

Even though the bald eagle (*Haliaeetus leucocephalus*) was recently taken off of the threatened species list, it is still offered protection under the Bald and Golden Eagle



Protection Act (16 U.S.C. 668-668c), enacted in 1940. The bald eagle requires mature trees for nesting that are in close proximity to large bodies of water to feed. There are no large open bodies of water on or directly adjacent to the subject property, and the site does not contain suitable habitat the support this species.

The Red-cockaded woodpecker requires mature longleaf pines (*Pinus palustris*) or loblolly pine (*P. taeda*) with an open understory that does not exceed 15' in height, and evenly spaced trees with an open, park like stand. There was no habitat encountered on, or adjacent to, the subject property sufficient to support Red-cockaded woodpecker nesting or foraging trees.

The wood stork typically requires coastal areas, tidal waters, marshes, swamps, streams and mangroves for nesting and feeding. The wetlands on the subject property are adjacent to the Kingstree Swamp Canal, which has removed the majority of the standing water within the wetlands. Due to the fact that the wetlands on the subject property are rarely inundated, they would not be considered suitable habitat for the wood stork.

#### *Reptiles & Amphibians:*

There are no federally protected species of reptile or amphibians listed in Williamsburg County.

#### *Fish and Marine Species:*

The shortnose sturgeon inhabits river mouths, lakes, estuaries, bays, and some near-shore benthic areas. Individuals less than 5 years of age primarily use estuarine habitats for most of the year. Adults generally utilize separate summer and wintering areas, though greatest abundance occurs in estuaries. Critical habitat areas in river systems in the southern United States are those areas that contain a saltwater/freshwater interface. Foraging habitat includes vegetated backwaters, and shallow river banks where water is less than 6 feet deep. However, in late summer, when water temperatures are elevated, feeding can occur in deeper areas. The subject property does not contain waters that would be considered suitable habitat for the shortnose sturgeon.

#### *Mammals:*

There are no federally protected species of mammals listed for Williamsburg County.

#### **Invertebrate:**

**No Effect**

#### *Freshwater Mussels:*

There are no federally protected species of freshwater mussel listed in Williamsburg County.

### **3.0 METHODOLOGY**

S&ME reviewed the SCDNR HTP and the USF&WS databases for records of federally protected species known to occur within Williamsburg County, S.C. The purpose of the search was to identify current and historic documented occurrences of protected species

located within this county. Additionally, S&ME personnel reviewed available supporting information including the USGS Kingstree, S.C. Topographic Quadrangle and applicable soil survey data. The purpose of reviewing this supporting information was to identify drainage features and soil types in the site area that may be suitable habitat for protected species. During field reconnaissance, S&ME personnel integrated the information obtained from this supporting documentation with field evaluation for the presence of protected species or potential protected species habitat.

#### **4.0 SUMMARY AND CONCLUSIONS**

Based on the literature review, habitat assessment, and pedestrian field review of the site, it is our opinion that development of the subject property will have no effect on federally listed protected species for Williamsburg County.

#### **5.0 CLOSURE**

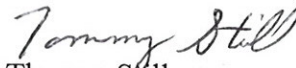
S&ME appreciates the opportunity to be of service to you by performing this Protected Species Assessment for the site. Please contact us at (843) 347-7800, with questions regarding this report, or if you require additional information.

Sincerely,

**S&ME, Inc.**



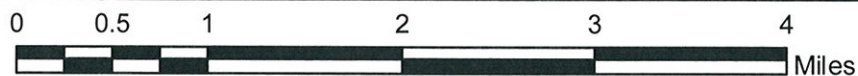
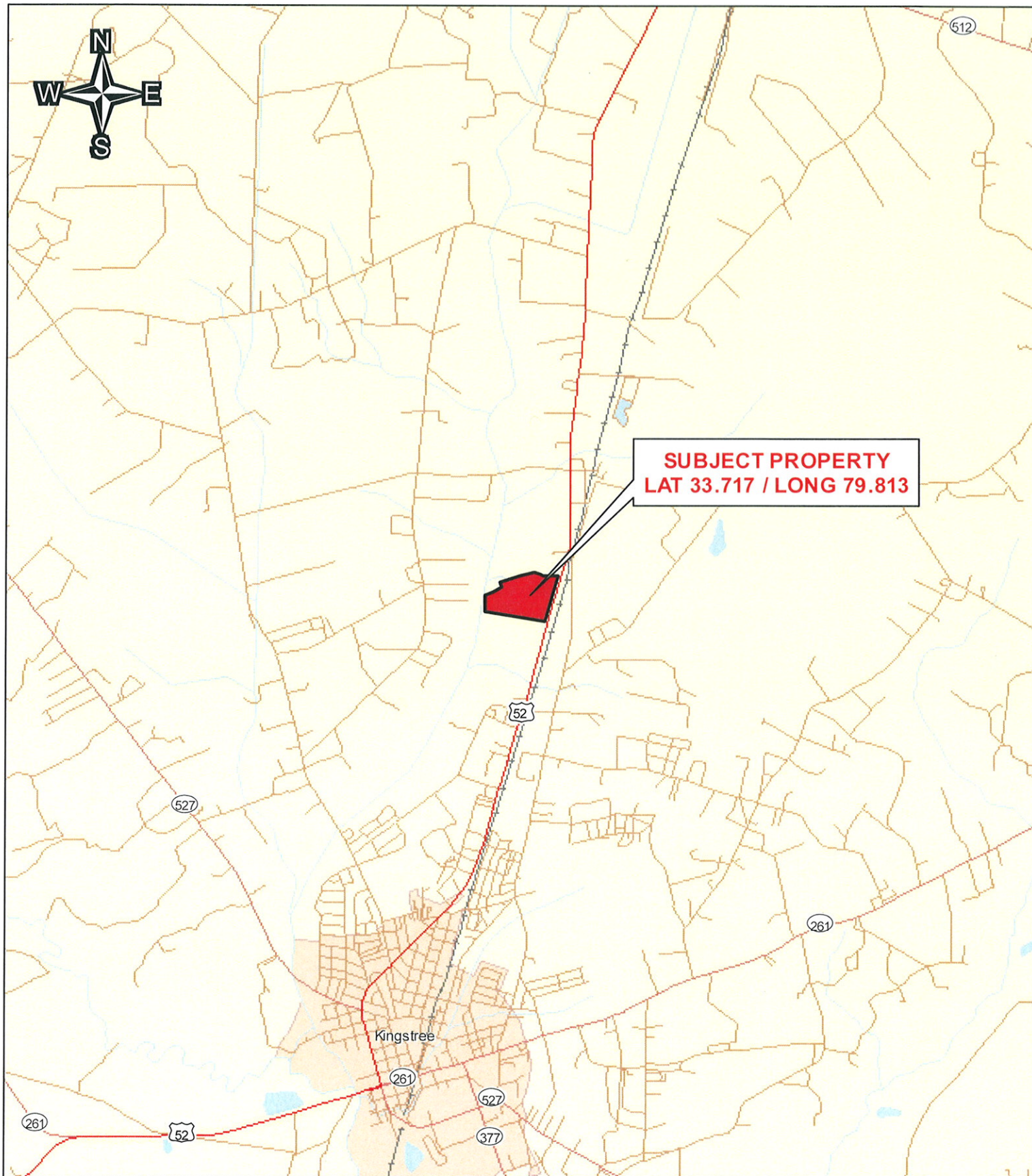
Charles Oates  
Department Manager



Thomas Still Co  
Branch Manager

Attachments: **Figure 1:** Site Vicinity Map.  
**Figure 2:** Site Topographic Map.  
**Figure 3:** Site Aerial Photograph with Approximate Location of the Wetlands Delineated by S&ME.  
**Figure 4:** Site Soils Map.  
*USF&WS South Carolina List of Endangered, Threatened and Candidate Species list, dated March 2010.*





SCALE:	1" = 1 MILE
BACKGROUND SOURCE:	ESRI
SOURCE DATE:	2007
DATE:	DECEMBER 2010

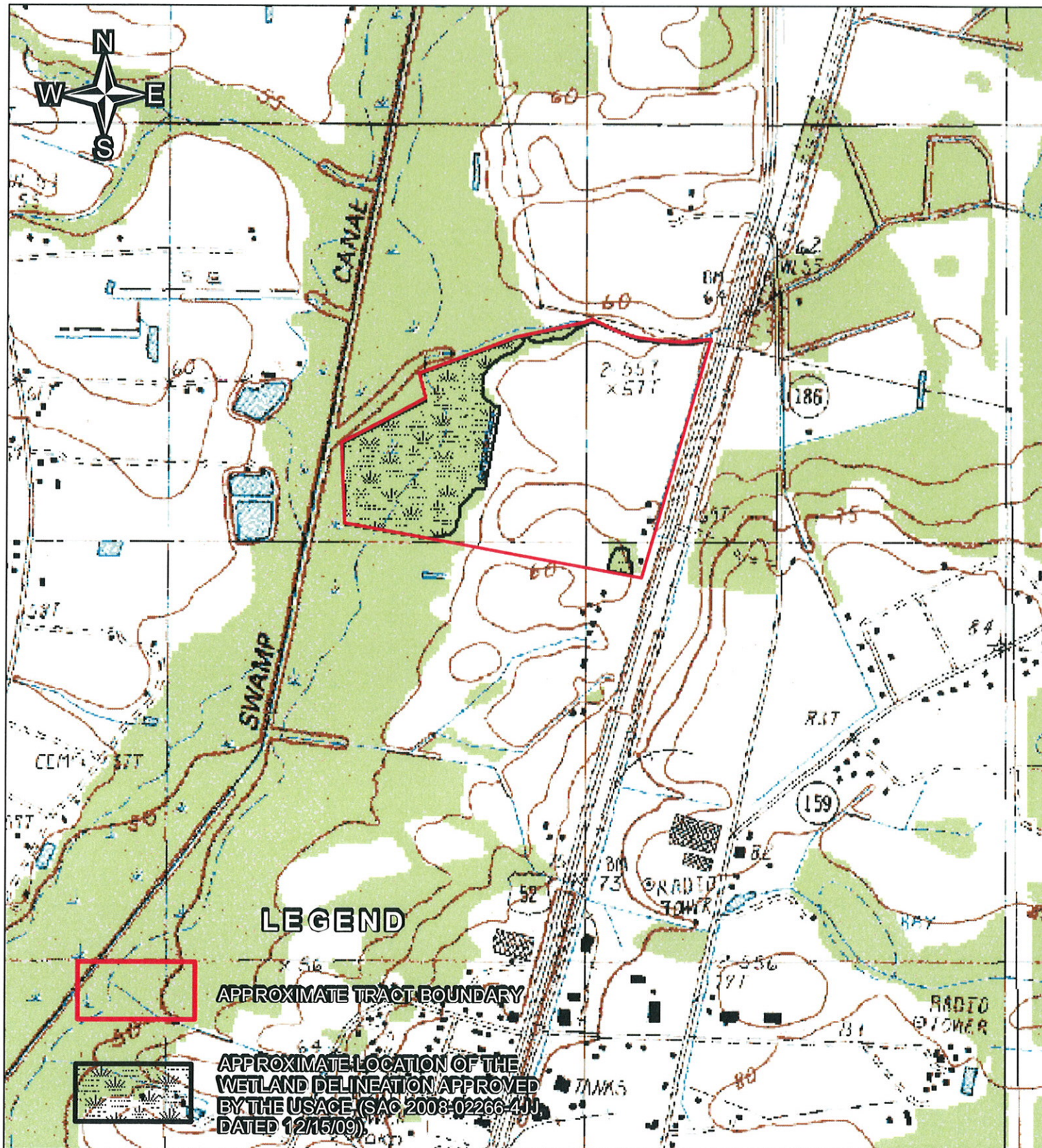


**SITE VICINITY MAP**  
 EPPS NO. 1 INDUSTRIAL SITE  
 WILLIAMSBURG COUNTY, SC  
 S & ME PROJECT # 1634-10-283

FIGURE #

**1**





SCALE:	1" = 1,000'
BACKGROUND SOURCE:	TERRASERVER DATA
SOURCE DATE:	1990
DATE:	DECEMBER 2010



<b>SITE TOPOGRAPHIC MAP</b>
EPPS NO. 1 INDUSTRIAL SITE
WILLIAMSBURG COUNTY, SC
S & ME PROJECT # 1634-10-283

FIGURE #

**2**





EXISTING WILLIAMSBURG  
COUNTY INDUSTRIAL PARK



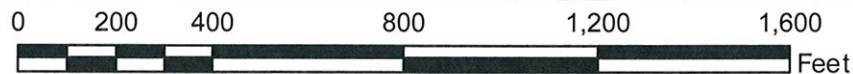
## LEGEND



APPROXIMATE TRACT BOUNDARY



APPROXIMATE LOCATION OF THE  
WETLAND DELINEATION APPROVED  
BY THE USACE (SAC 2008-02266-4 JJ,  
DATED 12/15/09).



SCALE:	1" = 400'
BACKGROUND SOURCE:	SCDNR GIS DEPT.
SOURCE DATE:	2006
DATE:	DECEMBER 2010



WWW.SMEINC.COM

## SITE AERIAL PHOTOGRAPH

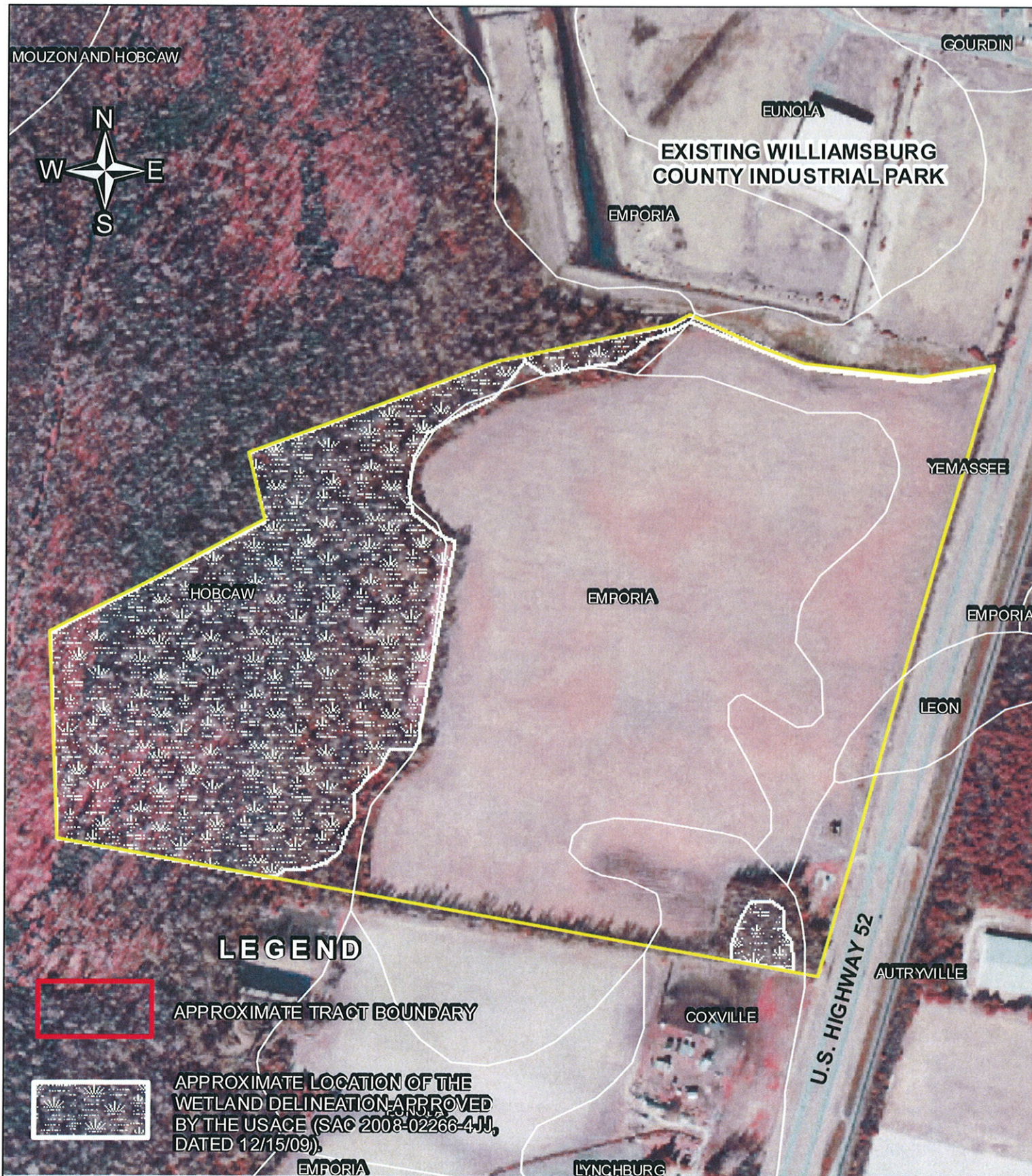
EPPS NO. 1 INDUSTRIAL SITE  
WILLIAMSBURG COUNTY, SC

S & ME PROJECT # 1634-10-283

FIGURE #

3





0 200 400 800 1,200 1,600 Feet

SCALE:	1"= 400'
BACKGROUND SOURCE:	SCDNR GIS DEPT.
SOURCE DATE:	1984 SOILS DATA
DATE:	DECEMBER 2010



<b>SITE SOIL SURVEY</b>
EPPS NO. 1 INDUSTRIAL SITE
WILLIAMSBURG COUNTY, SC
S & ME PROJECT # 1634-10-283

FIGURE #

**4**



**South Carolina List of Endangered, Threatened and Candidate Species  
March 2010**

E	Federally endangered
T	Federally threatened
P	Proposed in the Federal Register
CH	Critical Habitat
C	The U.S. Fish and Wildlife Service or the National Marine Fisheries Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list these species
S/A	Federally protected due to similarity of appearance to a listed species
*	Contact the National Marine Fisheries Service for more information on this species
**	The U.S. Fish and Wildlife Service and the National Marine Fisheries Service share jurisdiction of this species
BGEPA	Federally protected under the Bald and Golden Eagle Protection Act

These lists should be used only as a guideline, not as the final authority. The lists include known occurrences and areas where the species has a high possibility of occurring. Records are updated continually and may be different from the following. For a list of state endangered, threatened, and species of concern go to <http://www.dnr.sc.gov/species/index.html>.

<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
<b>Abbeville</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E
	Georgia aster	<i>Aster georgianus</i>	C
<b>Aiken</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Piedmont bishop-weed	<i>Ptilimnium nodosum</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Relict trillium	<i>Trillium reliquum</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
	Smooth coneflower	<i>Echinacea laevigata</i>	E
	Wood stork	<i>Mycteria americana</i>	E
<b>Allendale</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
	Smooth coneflower	<i>Echinacea laevigata</i>	E
	Wood stork	<i>Mycteria americana</i>	E

<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
Anderson	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Smooth coneflower	<i>Echinacea laevigata</i>	E
Bamberg	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Wood stork	<i>Mycteria americana</i>	E
Barnwell	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Piedmont bishop-weed	<i>Ptilimnium nodosum</i>	E
	Pondberry	<i>Lindera melissifolia</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
	Smooth coneflower	<i>Echinacea laevigata</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Wood stork	<i>Mycteria americana</i>	E
Beaufort	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Finback whale	<i>Balaenoptera physalus*</i>	E
	Frosted flatwoods salamander	<i>Ambystoma cingulatum</i>	T
	Green sea turtle	<i>Chelonia mydas**</i>	E
	Humpback whale	<i>Megaptera novaengliae*</i>	E
	Kemp's ridley sea turtle	<i>Lepidochelys kempii**</i>	E
	Leatherback sea turtle	<i>Dermochelys coriacea**</i>	E
	Loggerhead sea turtle	<i>Caretta caretta**</i>	T
	Piping plover	<i>Charadrius melodus</i>	T, CH
	Pondberry	<i>Lindera melissifolia</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Red knot	<i>Calidris canutus rufa</i>	C
	Right whale	<i>Balaena glacialis*</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
	West Indian manatee	<i>Trichechus manatus</i>	E
	Wood stork	<i>Mycteria americana</i>	E

<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
Berkeley	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Frosted flatwoods salamander	<i>Ambystoma cingulatum</i>	T
	Pondberry	<i>Lindera melissifolia</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
	West Indian manatee	<i>Trichechus manatus</i>	E
	Wood stork	<i>Mycteria americana</i>	E
Calhoun	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
Charleston	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Finback whale	<i>Balaenoptera physalus</i> *	E
	Frosted flatwoods salamander	<i>Ambystoma cingulatum</i>	T
	Green sea turtle	<i>Chelonia mydas</i> **	E
	Humpback whale	<i>Megaptera novaengliae</i> *	E
	Kemp's ridley sea turtle	<i>Lepidochelys kempii</i> **	E
	Leatherback sea turtle	<i>Dermochelys coriacea</i> **	E
	Loggerhead sea turtle	<i>Caretta caretta</i> **	T
	Piping plover	<i>Charadrius melodus</i>	T, CH
	Pondberry	<i>Lindera melissifolia</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Red knot	<i>Calidris canutus rufa</i>	C
	Right whale	<i>Balaena glacialis</i> *	E
	Seabeach amaranth	<i>Amaranthus pumilus</i>	T
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
	West Indian manatee	<i>Trichechus manatus</i>	E
	Wood stork	<i>Mycteria americana</i>	E
Cherokee	Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T
	Georgia aster	<i>Aster georgianus</i>	C



<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
Chester	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E
	Georgia aster	<i>Aster georgianus</i>	C
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
Chesterfield	Carolina heelsplitter	<i>Lasmigona decorata</i>	E, CH
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
Clarendon	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
Colleton	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Finback whale	<i>Balaenoptera physalus*</i>	E
	Frosted flatwoods salamander	<i>Ambystoma cingulatum</i>	T
	Green sea turtle	<i>Chelonia mydas**</i>	E
	Humpback whale	<i>Megaptera novaengliae*</i>	E
	Kemp's ridley sea turtle	<i>Lepidochelys kempi**</i>	E
	Leatherback sea turtle	<i>Dermochelys coriacea**</i>	E
	Loggerhead sea turtle	<i>Caretta caretta**</i>	T
	Piping plover	<i>Charadrius melodus</i>	T, CH
	Pondberry	<i>Lindera melissifolia</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Red knot	<i>Calidris canutus rufa</i>	C
	Right whale	<i>Balaena glacialis*</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
	West Indian manatee	<i>Trichechus manatus</i>	E
	Wood stork	<i>Mycteria americana</i>	E
Darlington	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	E



<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
<b>Darlington</b> <b>Continued</b>	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
<b>Dillon</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
<b>Dorchester</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Bog asphodel	<i>Narthecium americanum</i>	C
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Pondberry	<i>Lindera melissifolia</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
	Wood stork	<i>Mycteria americana</i>	E
<b>Edgefield</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E, CH
	Georgia aster	<i>Aster georgianus</i>	C
	Miccosukee gooseberry	<i>Ribes echinellum</i>	T
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Relict trillium	<i>Trillium reliquum</i>	E
<b>Fairfield</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E
	Georgia aster	<i>Aster georgianus</i>	C
<b>Florence</b>	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
<b>Georgetown</b>	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Finback whale	<i>Balaenoptera physalus</i> *	E
	Green sea turtle**	<i>Chelonia mydas</i> **	T

<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
<b>Georgetown</b> <b>Continued</b>	Humpback whale	<i>Megaptera novaengliae</i> *	E
	Kemp's ridley sea turtle**	<i>Lepidochelys kempii</i> **	E
	Leatherback sea turtle**	<i>Dermochelys coriacea</i> **	E
	Loggerhead sea turtle**	<i>Caretta caretta</i> **	T
	Piping plover	<i>Charadrius melodus</i>	T, CH
	Pondberry	<i>Lindera melissifolia</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Seabeach amaranth	<i>Amaranthus pumilus</i>	T
	Right whale	<i>Balaena glacialis</i> *	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
	West Indian manatee	<i>Trichechus manatus</i>	E
	Wood stork	<i>Mycteria americana</i>	E
<b>Greenville</b>	Bog turtle	<i>Clemmys muhlenbergii</i>	T S/A
	Bunched arrowhead	<i>Sagittaria fasciculata</i>	E
	Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T
	Mountain sweet pitcher-plant	<i>Sarracenia rubra</i> ssp. <i>jonesii</i>	E
	Rock gnome lichen	<i>Gymnoderma lineare</i>	E
	Small whorled pogonia	<i>Isotria medeoloides</i>	T
	Swamp Pink	<i>Helonias bullata</i>	T
	White irisette	<i>Sisyrinchium dichotomum</i>	E
<b>Greenwood</b>	White fringeless orchid	<i>Platanthera integrilabia</i>	C
<b>Hampton</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E, CH
<b>Hampton</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
	Wood stork	<i>Mycteria americana</i>	E
<b>Horry</b>	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Finback whale	<i>Balaenoptera physalus</i> *	E
	Green sea turtle	<i>Chelonia mydas</i> **	E
	Humpback whale	<i>Megaptera novaengliae</i> *	E
	Kemp's ridley sea turtle	<i>Lepidochelys kempii</i> **	E

<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
<b>Horry</b> <b>Continued</b>	Leatherback sea turtle	<i>Dermochelys coriacea</i> **	E
	Loggerhead sea turtle	<i>Caretta caretta</i> **	T
	Piping plover	<i>Charadrius melodus</i>	T, CH
	Pondberry	<i>Lindera melissifolia</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Red knot	<i>Calidris canutus rufa</i>	C
	Right whale	<i>Balaena glacialis</i> *	E
	Seabeach amaranth	<i>Amaranthus pumilus</i>	T
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
	West Indian manatee	<i>Trichechus manatus</i>	E
	Wood stork	<i>Mycteria americana</i>	E
<b>Jasper</b>	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Finback whale	<i>Balaenoptera physalus</i> *	E
	Frosted flatwoods salamander	<i>Ambystoma cingulatum</i>	T
	Green sea turtle	<i>Chelonia mydas</i> **	E
	Humpback whale	<i>Megaptera novaengliae</i> *	E
	Kemp's ridley sea turtle	<i>Lepidochelys kempi</i> **	E
	Leatherback sea turtle	<i>Dermochelys coriacea</i> **	E
	Loggerhead sea turtle	<i>Caretta caretta</i> **	T
	Piping plover	<i>Charadrius melodus</i>	T, CH
	Pondberry	<i>Lindera melissifolia</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Red knot	<i>Calidris canutus rufa</i>	C
	Right whale	<i>Balaena glacialis</i> *	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E
	West Indian manatee	<i>Trichechus manatus</i>	E
	Wood stork	<i>Mycteria americana</i>	E
<b>Kershaw</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E, CH
	Georgia aster	<i>Aster georgianus</i>	C
	Michaux's sumac	<i>Rhus michauxii</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E



<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
Lancaster	Black-spored quillwort	<i>Isoetes melanospora</i>	E
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E, CH
	Little amphianthus	<i>Amphianthus pusillus</i>	T
	Schweinitz's sunflower	<i>Helianthus schweinitzii</i>	E
	Smooth coneflower	<i>Echinacea laevigata</i>	E
Laurens	Carolina heelsplitter	<i>Lasmigona decorata</i>	E
	Georgia aster	<i>Aster georganus</i>	C
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
Lee	American chaffseed	<i>Schwalbea americana</i>	E
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
Lexington	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
	Smooth coneflower	<i>Echinacea laevigata</i>	E
Marion	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyii</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
	Wood stork	<i>Mycteria americana</i>	E
Marlboro	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
McCormick	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E, CH
	Georgia aster	<i>Aster georgianus</i>	C
	Miccosukee gooseberry	<i>Ribes echinellum</i>	T
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Wood stork	<i>Mycteria americana</i>	E
Newberry	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA

<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
<b>Oconee</b>	Georgia aster	<i>Aster georgianus</i>	C
	Persistent trillium	<i>Trillium persistens</i>	E
	Small whorled pogonia	<i>Isotria medeoloides</i>	T
	Smooth coneflower	<i>Echinacea laevigata</i>	E
<b>Pickens</b>	Bog turtle	<i>Clemmys muhlenbergii</i>	T S/A
	Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T
	Georgia aster	<i>Aster georgianus</i>	C
	Mountain sweet pitcher-plant	<i>Sarracenia rubra ssp. jonesii</i>	E
	Smooth coneflower	<i>Echinacea laevigata</i>	E
<b>Richland</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Georgia aster	<i>Aster georgianus</i>	C
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
	Smooth coneflower	<i>Echinacea laevigata</i>	E
	Wood stork	<i>Mycteria americana</i>	E
<b>Saluda</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E
	Little amphianthus	<i>Amphianthus pusillus</i>	T
	Piedmont bishop-weed	<i>Ptilimnium nodosum</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
<b>Spartanburg</b>	Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T
<b>Sumter</b>	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
<b>Union</b>	Georgia aster	<i>Aster georgianus</i>	C
<b>Williamsburg</b>	American chaffseed	<i>Schwalbea americana</i>	E
	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA

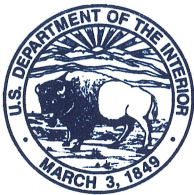


<u>COUNTY</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>STATUS</u>
<b>Williamsburg</b>	Canby's dropwort	<i>Oxypolis canbyi</i>	E
<b>Continued</b>	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E
	Wood stork	<i>Mycteria americana</i>	E
<b>York</b>	Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E
	Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T
	Georgia aster	<i>Aster georgianus</i>	C
	Little amphianthus	<i>Amphianthus pusillus</i>	T
	Schweinitz' sunflower	<i>Helianthus schweinitzii</i>	E

**Site Certification for the  
Williamsburg Cooperative Commerce Centre South  
In Williamsburg County, South Carolina**

**Attachment 22**

**Protected Species Assessment for  
Tracts 8-10 and 13 of the Williamsburg Cooperative  
Commerce Centre**



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

176 Croghan Spur Road, Suite 200

Charleston, South Carolina 29407

March 14, 2011



Mr. Charles Oates  
S&ME, Inc.  
1330 Highway 501 Business  
Conway, SC 29526

Re: Protected Species Assessment  
Epps #1 Industrial Park Additional Land Project  
Williamsburg County, South Carolina  
FWS Log No. 2011-TA-0159

Dear Mr. Oates:

The U.S. Fish and Wildlife Service (Service) has reviewed your submitted plans for the proposed project. Based on the information received and our subsequent review, it is the Service's opinion that the proposed project will not affect resources currently protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)(Act).

Please note that obligations under the Act must be reconsidered if (1) new information reveals impacts of this identified action may affect any listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner which was not considered in this assessment, or (3) a new species is listed or critical habitat is designated that may be affected by the identified action.

Please contact the South Carolina Department of Natural Resources regarding potential impacts to state protected species. If the proposed project will impact wetlands, please contact the U.S. Army Corps of Engineers, Charleston District. If you have any questions, please contact Ms. Morgan Wolf at (843)727-4707, ext. 219 and reference FWS Log No. 2011-TA-0159.

Sincerely,

Jay B. Herrington  
Field Supervisor

JBH/MKW





March 10, 2011

Alliance Consulting Engineers  
Post Office Box 8147  
Columbia, South Carolina 29202-8147

Attention: Mr. Deepal Eliatamby, P.E.

**Reference:** **Protected Species Assessment**  
Epps #1 Industrial Park Additional Land Project  
Williamsburg County, South Carolina  
S&ME Project No. 1634-11-040

Dear Mr. Eliatamby:

S&ME, Inc. (S&ME) is pleased to submit this report detailing our Protected Species Assessment for the above-referenced site located in Williamsburg County, South Carolina. This work was performed in accordance with authorized S&ME Proposal No. 1634-0068-11, dated February 15, 2011. This report and the on-site pedestrian survey have been conducted to assess the potential for the presence of protected species at the subject site, in preparation for proposed future industrial development.

The subject property is comprised of two parcels of land totaling approximately 40 acres, and is located west of and adjacent to U.S. Highway 52, in Williamsburg County, South Carolina (see Figure 1). This property is north of and adjacent to the Epps #1 Industrial Site, for which the U.S. Fish & Wildlife Service concurred that development of the site would not result in a "take" as defined under Section 9 of the Endangered Species Act (FWS Log No. 2011-TA-0086). The site is identified on a portion of the USGS 7.5-minute Kingstree, S.C. topographic quadrangle map, dated 1990 (Figure 2).

## **1.0 SITE/HABITAT DESCRIPTIONS**

The site is located in Williamsburg County within the Coastal Plain Physiographic Province of South Carolina. The surrounding properties consist of industrial and commercial properties, as well as agricultural and forestland properties. The subject property is comprised of cleared land within an existing industrial area.



## 2.0 PROTECTED SPECIES

The U.S. Fish & Wildlife Service (USF&WS) *South Carolina List of Endangered, Threatened and Candidate Species* (dated March 2010) and the South Carolina Department of Natural Resources Heritage Trust Program (SCDNR HTP) *Rare, Threatened & Endangered Species Inventory Species Inventory, Kingstree Quadrangle Map* (updated on January 17, 2006) were consulted regarding currently listed federally protected species within Williamsburg County. The information was reviewed prior to conducting the site visit, to determine if known locations of protected species were located on or near the subject property. The USF&WS database has six federally protected species listed for Williamsburg County, South Carolina. These species include:

Common Name	Scientific Name	Status*
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
Red-cockaded woodpecker	<i>Picoides borealis</i>	E
Wood stork	<i>Mycteria Americana</i>	E
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E
American chaffseed	<i>Schwalbea Americana</i>	E
Canby's dropwort	<i>Oxypolis canbyi</i>	E

\*E = Endangered, BGEPA = Bald and Golden Eagle Protection Act

A pedestrian field review was performed for protected species and suitable habitats to support protected species on February 21, 2011, by Mr. Charles Oates, of S&ME. Charles Oates has over ten years of conducting protected species and critical habitat assessments. The results of the pedestrian field review are included in the following sections of this report, as well as a discussion of the above species, where applicable.

### Plants:

### No Effect

American chaffseed typically grows in sandy, acidic, seasonally moist to dry soils. It is generally found in habitats described as open, moist pine flatwoods, pine/wiregrass savannas, and between peaty wetlands and xeric sandy soils. These habitats were historically maintained by wildfires.

Canby's dropwort is typically found in shallow ponds in pinelands, shallow grass and sedge sloughs, and peat-muck swamps.

During the field reconnaissance, suitable habitat to support either of these species was not observed on or adjacent to the subject property.



**Vertebrates:**

**No Effect**

*Birds:*

Even though the bald eagle (*Haliaeetus leucocephalus*) was recently taken off of the threatened species list, it is still offered protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940. The bald eagle requires mature trees for nesting that are in close proximity to large bodies of water to feed. There are no large open bodies of water on or directly adjacent to the subject property, and the site does not contain suitable habitat the support to species.

The Red-cockaded woodpecker requires mature longleaf pines (*Pinus palustris*) or loblolly pine (*P. taeda*) with an open understory that does not exceed 15' in height, and evenly spaced trees with an open, park like stand. There was no habitat encountered on, or adjacent to, the subject property sufficient to support Red-cockaded woodpecker nesting or foraging trees.

The wood stork typically requires coastal areas, tidal waters, marshes, swamps, streams and mangroves for nesting and feeding. The wetlands on the subject property are adjacent to the Kingstree Swamp Canal, which has removed the majority of the standing water within the wetlands. Due to the fact that the wetlands on the subject property are rarely inundated, they would not be considered suitable habitat for the wood stork.

*Reptiles & Amphibians:*

There are no federally protected species of reptile or amphibians listed in Williamsburg County.

*Fish and Marine Species:*

The shortnose sturgeon inhabits river mouths, lakes, estuaries, bays, and some near-shore benthic areas. Individuals less than 5 years of age primarily use estuarine habitats for most of the year. Adults generally utilize separate summer and wintering areas, though greatest abundance occurs in estuaries. Critical habitat areas in river systems in the southern United States are those areas that contain a saltwater/freshwater interface. Foraging habitat includes vegetated backwaters, and shallow river banks where water is less than 6 feet deep. However, in late summer, when water temperatures are elevated, feeding can occur in deeper areas. The subject property does not contain waters that would be considered suitable habitat for the shortnose sturgeon.

*Mammals:*

There are no federally protected species of mammals listed for Williamsburg County.

**Invertebrate:**

**No Effect**

*Freshwater Mussels:*

There are no federally protected species of freshwater mussel listed in Williamsburg County.

**3.0 METHODOLOGY**

S&ME reviewed the SCDNR HTP and the USF&WS databases for records of federally protected species known to occur within Williamsburg County, S.C. The purpose of the search was to identify current and historic documented occurrences of protected species located within this county. Additionally, S&ME personnel reviewed available supporting information including the USGS Kingstree, S.C. Topographic Quadrangle and applicable soil survey data. The purpose of reviewing this supporting information was to identify drainage features and soil types in the site area that may be suitable habitat for protected species. During field reconnaissance, S&ME personnel integrated the information obtained from this supporting documentation with field evaluation for the presence of protected species or potential protected species habitat.

**4.0 SUMMARY AND CONCLUSIONS**

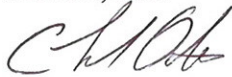
Based on the literature review, habitat assessment, and pedestrian field review of the site, it is our opinion that development of the subject property will have no effect on federally listed protected species for Williamsburg County.

**5.0 CLOSURE**

S&ME appreciates the opportunity to be of service to you by performing this Protected Species Assessment for the site. Please contact us at (843) 347-7800, with questions regarding this report, or if you require additional information.

Sincerely,

**S&ME, Inc.**



Charles Oates  
Department Manager



Thomas Still  
Branch Manager

Attachments: **Figure 1:** Site Vicinity Map.

**Figure 2:** Site Topographic Map.

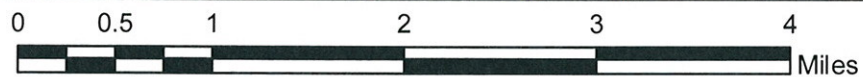
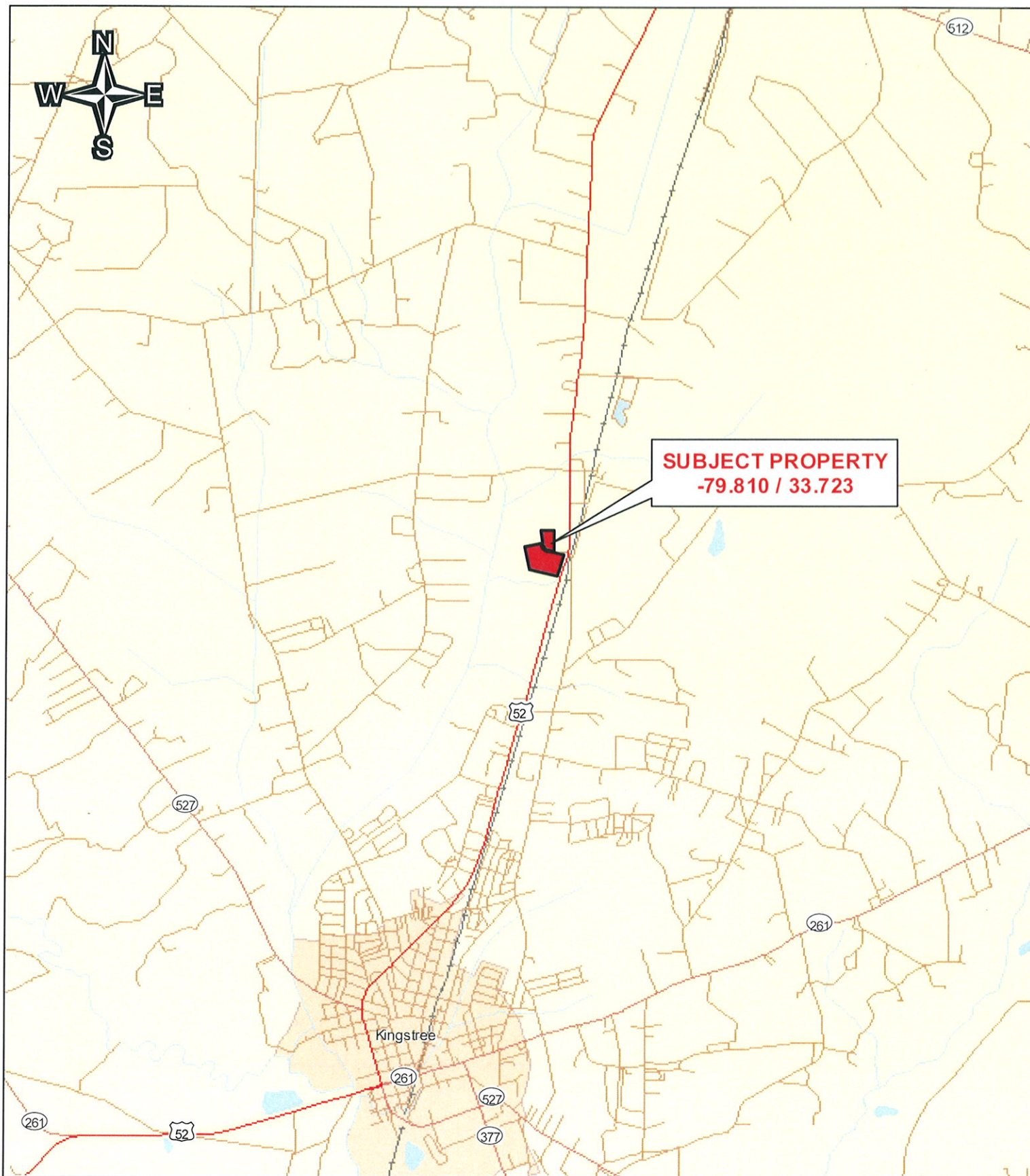
**Figure 3:** Site Aerial Photograph.

**Figure 4:** Site Soil Survey Map.

USF&WS Letter FWS 2011-TA-0086, Dated January 12, 2011 (adjacent property)

USF&WS *South Carolina List of Endangered, Threatened and Candidate Species list*, dated March 2010.





SCALE:	1" = 1 MILE
BACKGROUND SOURCE:	ESRI
SOURCE DATE:	2007
DATE:	MARCH 10, 2011



WWW.SMEINC.COM

**SITE VICINITY MAP**  
**EPPS #1 ADDITIONAL LAND**  
**WILLIAMSBURG CO., SC**

S & ME PROJECT # 1634-11-040

FIGURE #

**1**



2





0 300 600 1,200 1,800 2,400  
Feet

SCALE: 1" = 600'

BACKGROUND SOURCE: SCDNR GIS DEPT.

SOURCE DATE: 2006

DATE: MARCH 10, 2011



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SITE AERIAL PHOTOGRAPH  
EPPS #1 ADDITIONAL LAND  
WILLIAMSBURG CO., SC

S & ME PROJECT # 1634-11-040

FIGURE #

3