



September 20, 2011

URS | BP Barber
Post Office Box 1116
Columbia, South Carolina 29202-1116

Attention: Mr. Brad Sanderson, P.E.

Reference: **Protected Species Assessment**
Powers South Industrial Site
Interstate 385 and Highway 14
Gray Court, Laurens County, South Carolina
S&ME Project No. 1265-11-362

Dear Mr. Sanderson:

S&ME Inc. (S&ME) completed a Protected Species Assessment of the referenced property between September 7 and 8, 2011, relative to the administration of the U.S. Fish and Wildlife Service *Endangered Species Act of 1973* and the *South Carolina Nongame and Endangered Species Conservation Act*. This assessment was conducted concurrently with the Jurisdictional Waters and Wetlands determination for the property within the same dates previously noted.

This report defines the property reviewed; presents the methodology used during the assessment; and, the results of our findings. This work was performed in general accordance with S&ME Proposal No. 11690, executed August 30, 2011.

SITE DESCRIPTION

The property consists of approximately 227 acres (ac.) of undeveloped land located in Laurens County, South Carolina approximately 0.5-mile west of the Town of Owings (Figure 1). Topographic and aerial views representing the review area are shown in Figures 2 and 3. The property lies within the Southern Outer Piedmont Ecoregion of South Carolina.

The property topography is moderate in upland areas to slight within tributaries to Stoddard Creek with approximate site elevations ranging from 814 to 728 feet above mean sea level (ft. msl) (Figure 2). Soil-types present on the property are shown on Figure 4 with the extent of those soil-types derived from the Natural Resources Conservation Service (NRCS) Database (USDA 2011). Appendix A gives a brief description of each Soil Map Unit. The NRCS soils data do not indicate that hydric soils occur on the property. A jurisdictional investigation for wetlands and waters of the U.S.

conducted concurrently with this protected species assessment indicated approximately 0.29 ac. of jurisdictional wetlands and approximately 3,962 linear feet of jurisdictional Relatively Permanent Waters (RPWs). Individual forest communities found on the property can be generally characterized as mid-successional. No old growth forests were noted on the property during the assessment.

Specific habitat types observed within the review area, and typically found in the Southern Outer Piedmont Ecoregion, are briefly described in the following table.

Table A. Typical Habitat Types of the Southern Outer Piedmont Ecoregion

Habitat Type	General Description and Location
Mixed Pine – Hardwood Forest	Loblolly, shortleaf and Virginia pine/hardwood mixtures exist with species varying with position on the slope and soil moisture.
Grassland & Early Successional Habitats	Open-land habitats. Fallow farm land, disturbed land with species varying with position on the slope and soil moisture

METHODOLOGY

This assessment comprised both review of existing, published information and field observations.

Review of Existing, Published Information

Prior to initiation of the field reconnaissance, S&ME obtained available information from the South Carolina Department of Natural Resources (SCDNR) Rare, Threatened and Endangered Species Inventory database (SCDNR 2010) and from the US Fish and Wildlife Service (USFWS) Endangered Species Program database (USFWS 2011). Collection of the available data was performed to identify known occurrences of protected species on the property and to evaluate the reasonable possibility that suitable habitat might exist for those species known to occur in the area. Additional research was conducted to determine the habitat and life history, morphological characteristics and descriptions for each rare, endangered or protected species known to occur in Laurens County. Data were summarized, compiled with photographs of each species, and utilized for field reference purposes.

Field Reconnaissance

The field reconnaissance focused on the habitat determined to be supportive of the listed species found in the review of published information. No systematic, site-wide survey was performed based on the findings from review of published information.

RESULTS

Listed Legally-Protected Species

The SCDNR Heritage Trust (South Carolina Rare, Threatened and Endangered Species Inventory) database listed one federally-protected endangered species known to occur in Laurens County (Appendix B) as the Red-cockaded Woodpecker (*Picoides borealis*). The Georgia Aster (*Aster georgianus*) was also listed in the database as a federally protected candidate species.

The USFWS database also listed the Red-cockaded Woodpecker (*Picoides borealis*) as a federally protected endangered species, in addition to the Wood Stork (*Mycteria Americana*) and the Carolina Heelsplitter (*Lasmigona decorata*).

The global and state rankings; legal status; and, associated habitat for these species are presented below.



Species	<i>Picoides borealis</i>
Common Name	Red-cockaded Woodpecker
Global Ranking	G3 – (Either very rare throughout its range or found locally in a restricted range, or having factors making it vulnerable)
State Ranking	S2 – (Imperiled state-wide because of rarity or factor(s) making it vulnerable)
Legal Federal Status	FE – Federally Endangered

Range – The geographic range for this species was originally in all the southern states but now is restricted primarily to the Deep South on public lands and refuges. States in which the Red-Cockaded woodpecker is know to or is believed to occur include Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Texas, and Virginia.

Habitat – Large old growth trees are required for nesting. Preferred nest colony sites are mature, relatively open pine stands with few or no hardwood trees above 15 feet in height. Longleaf pines are most commonly used, but other species of southern pine are also acceptable. Roosting cavities are excavated in living pines, ranging from 60 plus to 300 plus years. Foraging habitat is provided in pine and hardwood/pine stands 30 years

old or older with foraging preference for pine trees ten inches or larger in diameter. It feeds on insects it finds in and on the bark of trees.

Threats and Factors Leading To Decline – It competes with other woodpeckers for food and with other birds and squirrels for its nesting cavities. It is easily displaced from its own cavities by other animals. Snakes will prey on nestlings in the cavities. The species has experienced a rapid decline in population as their mature pine forest habitat has been altered for a variety of uses, primarily timber harvest, agriculture, and development.



Species	<i>Aster georgianus</i>
Common Name	Georgia Aster
Global Ranking	G2/G3 – (Imperiled globally because of rarity or factor(s) making it vulnerable and/or Either very rare throughout its range or found locally in a restricted range, or having factors making it vulnerable)
State Ranking	SNR – (Regularly occurring in state, but in a migratory, non-breeding form and/or Reported in state, but without good documentation).
Legal Federal Status	C – Federally Protected Candidate

Range – The geographic range for this species is in the Southeast including Alabama, Georgia, North Carolina, and South Carolina. It is currently known to occur or is believed to occur in Union County, South Carolina (adjacent county), but not in Laurens County per the best available information provided within the species profile on the U.S Fish and Wildlife Service website.

Habitat – Georgia Aster can be found in dry oak-pine flatwoods and uplands. Soils vary from sand to heavy clay, with pH values ranging from 4.4 to 6.8. The primary controlling factor appears to be the availability of light. The species is a good competitor with other early successional species, but tends to decline when shaded. The majority of the remaining Georgia Aster populations survive adjacent to roads, along woodland

borders, in dry rocky woods, and within utility rights-of-way and other openings where current land management mimics natural disturbance regimes.

Flowering Season – This species flowers from early-October to mid-November. Because the field survey was performed during the summer and outside the species' flowering season, a supplemental field reconnaissance is recommended during the flowering season in 2011 to affirm the findings for the floral species noted above.

Threats and Factors Leading To Decline – Many existing populations are threatened by woody plant succession due to fire suppression, development, highway expansion and/or improvement, and herbicide applications. Secondary factors associated with development such as erosion and population destruction have also caused declines in their numbers.



Species	<i>Mycteria Americana</i>
Common Name	Wood Stork
Global Ranking	G4 – (Apparently secure, though it may be quite rare in parts of its range, and/or suspected to be declining)
State Ranking	S1/S2 – (Critically imperiled state-wide because of extreme rarity or because of some factor(s) making it especially vulnerable to expirpation and/or Imperiled state-wide because of rarity of factor(s) making it vulnerable).
Legal Federal Status	FE – Federally Endangered

Range – Wood storks nest 60 feet off the ground in cypress trees in wetland areas of Alabama, Florida, Georgia, and South Carolina. This species is known to occur or is believed to occur in Laurens County, South Carolina.

Habitat – Wood storks are birds of freshwater and estuarine wetlands, primarily nesting in cypress or mangrove swamps. They feed in freshwater marshes, narrow tidal creeks, or flooded tidal pools. Particularly attractive feeding sites are depressions in marshes or swamps where fish become concentrated during periods of falling water levels.

Threats and Factors Leading To Decline – The species has experienced a decline in population because of the reduction in food base (primarily small fish) necessary to support breeding colonies. This reduction is attributed to loss of wetland habitat and changes in water hydroperiods from draining wetlands by construction levees, canals and floodgates to alter water flow.



Species	<i>Lasmigona decorata</i>
Common Name	Carolina Heelsplitter
Global Ranking	G1 – (Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction).
State Ranking	S1 – (Critically imperiled state-wide because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation).
Legal Federal Status	FE – Federally Endangered

Range – The geographic range for this species was historically believed to occur in North and South Carolina. In South Carolina limited populations occur in the Lynches River (Pee Dee River system), eight creeks in the Catawba River basin, a single creek in the Saluda River basin, and two creeks in the Savannah River basin.

Habitat – The Carolina Heelsplitter is only known to occur the above referenced small streams and river (none of which are in Laurens County). The preferred habitat is near the center of a stream comprised primarily of a mixture of sand, gravel, cobble, with scattered areas of exposed boulders/bedrock.

Threats and Factors Leading To Decline – The species has experienced a decline in population due to habitat loss through residential road construction, utility right-of-way construction, urbanization, and urban development which leads to a lower water quality and increased silt, sediment, and organic and chemical pollutants. Secondary factors associated with heavy nutrient and pollutant loads from wastewater treatment plants have also caused declines in their numbers.

Field Survey Results for Laurens County-USFWS and SCDNR Listed Species

Field observations for the presence of the above listed species were conducted concurrently with the Jurisdictional Waters Determination between September 7 and 8, 2011.

- Although the project site contained elements of adequate foraging habitat, which include pine and hardwood/pine stands 30 years old or older with foraging preference for pine trees ten inches or larger in diameter, no Red Cockaded woodpeckers or presence of roosting cavities were identified during our observations.
- Although dry oak-pine uplands and adequate soils with pH ranging from 4.0 su to 6.5 su exist within the property site, no Georgia Aster was identified during our observations. Since the majority of the property is densely wooded (which affects the availability of light) and the remaining areas are primarily used for agricultural purposes no adequate habitat appeared to be within the subject property. Because the field survey was performed during the summer and outside the species' flowering season, a supplemental field reconnaissance is recommended during the flowering season in 2011 to affirm the findings for the floral species noted above.
- The wood stork and its associated habitat were not identified due to the absence of cypress swamps and a food base (fish).
- Although six streams were identified across the proposed project area and were identified as jurisdictional relatively permanent waters (RPW), no Carolina heelsplitter habitat was identified. Specimens that have been found in South Carolina have been in variety of substrates without significant silt accumulations and appear to exist in creeks and small rivers near or within the transition from the Piedmont to Coastal Plain/Sandhills physiographic regions. Due to the project site's location well within the Piedmont physiographic region and the moderate sediment accumulation observed with the identified stream features it appears adequate habitat is not present within the project site.

Using the noted indicator criteria of habitat, no occurrences of the above listed species were observed during the field observations.

SUMMARY

Based on our field reconnaissance for potential habitat for the above listed species, no occurrences were observed.

Because the field survey was performed during the summer and outside the Georgia Aster's flowering season, a supplemental field reconnaissance is recommended during the flowering season in 2011 to affirm the findings for the floral species noted above.

This letter report will be submitted to the USFWS/Charleston regional office for informal concurrence of our findings the response from USFWS will then be delivered to URS |

BP Barber. Should the USFWS determine further investigation be conducted, S&ME will present a new proposal to URS | BP Barber which will outline our proposed services and estimated cost for these additional services.

REFERENCES CITED

South Carolina Department of Natural Resources. 2006. South Carolina Heritage Trust, South Carolina Rare, Threatened, & Endangered Species Inventory, Species Found In Laurens County. Current On-Line Edition
https://www.dnr.sc.gov/pls/heritage/county_species.list?pcounty=laurens

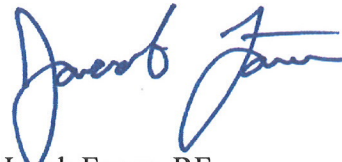
United States Department of Agriculture. 2011. Natural Resources Conservation Service (NRCS), Soils Data Mart Database 2011
<http://soildatamart.nrcs.usda.gov/>

Thank you for allowing us the opportunity to assist you with this project. If you have any questions regarding the information contained in this report, Mr. Vaughn can be reached at (864) 297-9944.

Sincerely,
S&ME, Inc.



Jason Vaughn, PE
Project Professional
jvaughn@smeinc.com

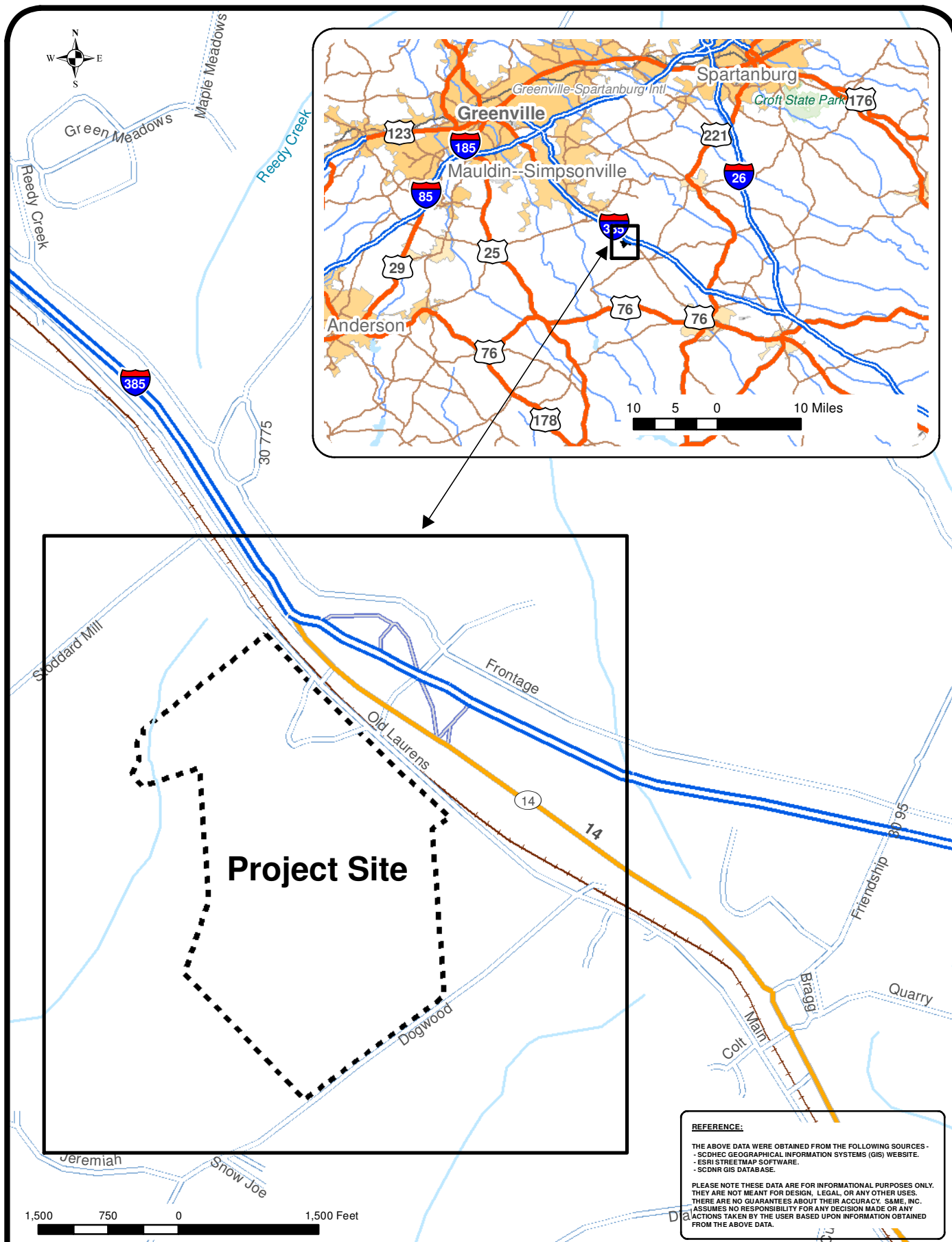


Jacob Foose, RF
Project Professional
jfoose@smeinc.com

Senior Reviewer: Mike Marcus, PhD – Technical Principal

Attachments: Figures 1 – 5
Appendices A and B

FIGURES



SCALE: As Shown

DATE: 9/14/2011

DRAWN BY: K. Farmer, J. Foote

PROJECT NO: 1265-11-362

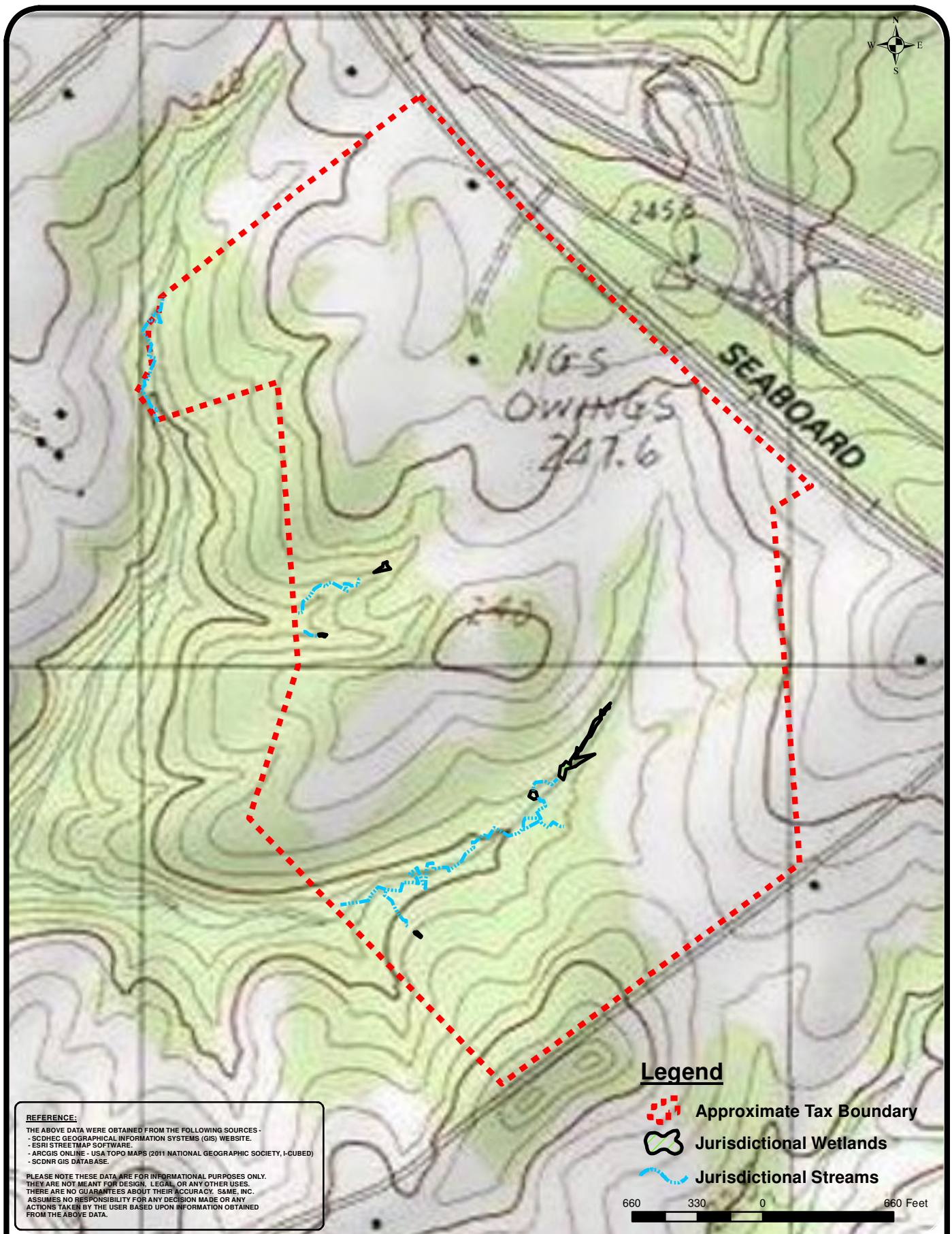


Property Location

Powers South Industrial Site
Gray Court, South Carolina

FIGURE NO.

1



REFERENCE:

THE ABOVE DATA WERE OBTAINED FROM THE FOLLOWING SOURCES -
 - SCDHEC GEOGRAPHICAL INFORMATION SYSTEMS (GIS) WEBSITE.
 - ESRI STREETMAP SOFTWARE
 - ARCGIS ONLINE - USA TOPO MAPS (2011 NATIONAL GEOGRAPHIC SOCIETY, I-CUBED)
 - SCDNR GIS DATABASE.

PLEASE NOTE THESE DATA ARE FOR INFORMATIONAL PURPOSES ONLY.
 THEY ARE NOT MEANT FOR DESIGN, LEGAL OR ANY OTHER USES.
 THERE ARE NO GUARANTEES ABOUT THEIR ACCURACY. S&ME, INC.
 ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY
 ACTIONS TAKEN BY THE USER BASED UPON INFORMATION OBTAINED
 FROM THE ABOVE DATA.

Legend



Approximate Tax Boundary



Jurisdictional Wetlands



Jurisdictional Streams

660 330 0 660 Feet

SCALE: 1" = 660'

DATE: 9/14/2011

DRAWN BY:
K. Farmer, J. Foose

PROJECT NO:
1265-11-362

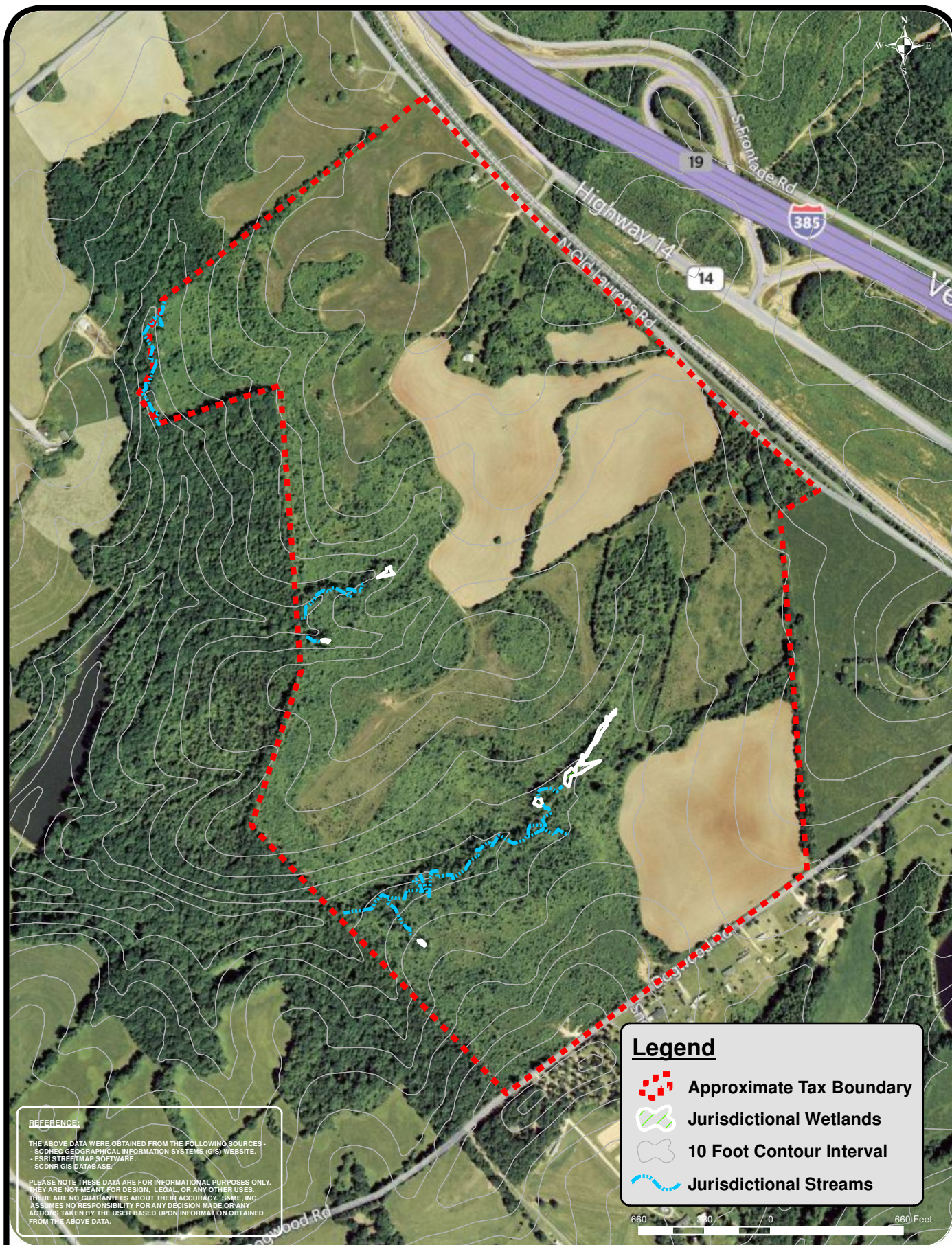


Topographic Overlay

Powers South Industrial Site
Gray Court, South Carolina

FIGURE
NO.

2



SCALE: 1" = 660'

DATE: 9/14/2011

DRAWN BY:
K. Farmer, J. Foose

PROJECT NO:
1265-11-362

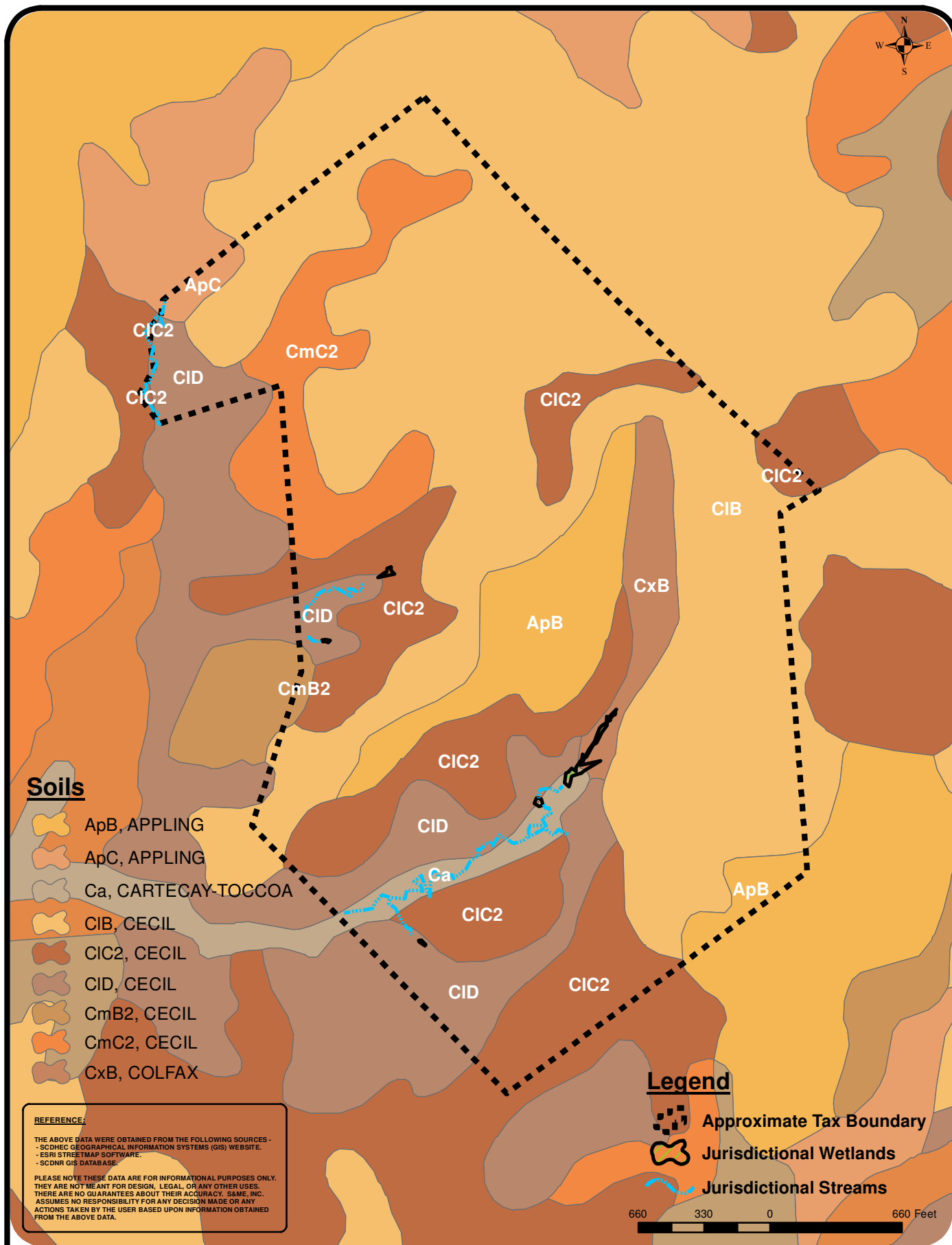


Aerial Photography

Powers South Industrial Site
Gray Court, South Carolina

FIGURE
NO.

3



SCALE: 1" = 660'

DATE: 9/14/2011

DRAWN BY:
K. Farmer, J. Foose

PROJECT NO:
1265-11-362

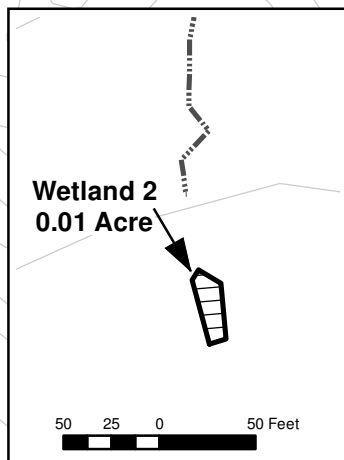
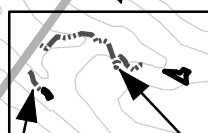
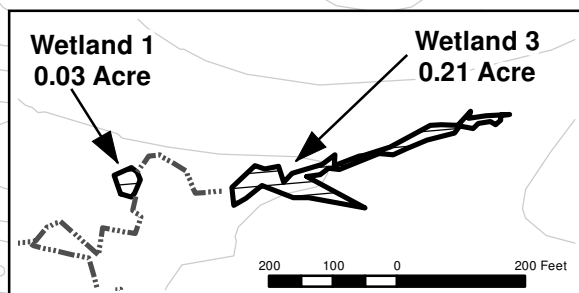
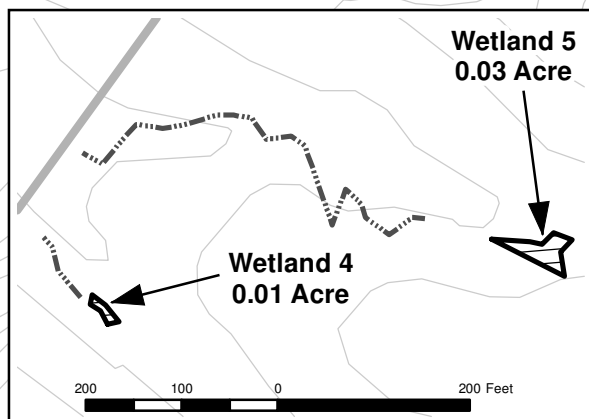


Review Area NRCS Soil Map

Powers South Industrial Site
Gray Court, South Carolina

FIGURE
NO.

4



Legend

- Approximate Tax Boundary
- Jurisdictional Wetlands
- Jurisdictional Streams
- 10 Foot Contour Interval

REFERENCE:

THE ABOVE DATA WERE OBTAINED FROM THE FOLLOWING SOURCES -

- SCDHEC GEOGRAPHICAL INFORMATION SYSTEMS (GIS) WEBSITE.
- ESRI STREETMAP SOFTWARE.
- SCDNR GIS DATABASE.

PLEASE NOTE THESE DATA ARE FOR INFORMATIONAL PURPOSES ONLY. THEY ARE NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT THEIR ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON INFORMATION OBTAINED FROM THE ABOVE DATA.

660 330 0 660 Feet

SCALE: As Shown

DATE: 9/14/2011

DRAWN BY: K. Farmer, J. Foose

PROJECT NO: 1265-11-362



Jurisdictional Features Location Map

Powers South Industrial Site
Gray Court, South Carolina

FIGURE NO.

5

APPENDIX A

Soil Map Unit Descriptions

Map Unit Description (Brief, Generated)

Laurens County, South Carolina

[Minor map unit components are excluded from this report]

Map unit: ApB - Appling loamy sand, 2 to 6 percent slopes

Component: Appling (90%)

The Appling component makes up 90 percent of the map unit. Slopes are 2 to 6 percent. This component is on piedmonts, interfluvies. The parent material consists of clayey residuum weathered from granite, gneiss, and schist. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map unit: ApC - Appling loamy sand, 6 to 10 percent slopes

Component: Appling (90%)

The Appling component makes up 90 percent of the map unit. Slopes are 6 to 10 percent. This component is on interfluvies, piedmonts. The parent material consists of clayey residuum weathered from granite, gneiss, and schist. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map unit: Ca - Cartecay-Toccoa complex

Component: Cartecay (55%)

The Cartecay component makes up 55 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains, piedmonts. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is low. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria.

Component: Toccoa (40%)

The Toccoa component makes up 40 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains, piedmonts. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 45 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Map unit: CIB - Cecil sandy loam, 2 to 6 percent slopes

Component: Cecil (100%)

The Cecil component makes up 100 percent of the map unit. Slopes are 2 to 6 percent. This component is on interfluvies, piedmonts. The parent material consists of clayey residuum weathered from granite, gneiss, and schist. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Laurens County, South Carolina

Map unit: CIC2 - Cecil sandy loam, 6 to 10 percent slopes, eroded

Component: Cecil (100%)

The Cecil component makes up 100 percent of the map unit. Slopes are 6 to 10 percent. This component is on interfluves, piedmonts. The parent material consists of clayey residuum weathered from granite, gneiss, and schist. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map unit: CID - Cecil sandy loam, 10 to 15 percent slopes

Component: Cecil (100%)

The Cecil component makes up 100 percent of the map unit. Slopes are 10 to 15 percent. This component is on interfluves, piedmonts. The parent material consists of clayey residuum weathered from granite, gneiss, and schist. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map unit: CmB2 - Cecil sandy clay loam, 2 to 6 percent slopes, eroded

Component: Cecil (100%)

The Cecil component makes up 100 percent of the map unit. Slopes are 2 to 6 percent. This component is on interfluves, piedmonts. The parent material consists of clayey residuum weathered from granite, gneiss, and schist. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map unit: CmC2 - Cecil sandy clay loam, 6 to 10 percent slopes, eroded

Component: Cecil (100%)

The Cecil component makes up 100 percent of the map unit. Slopes are 6 to 10 percent. This component is on interfluves, piedmonts. The parent material consists of clayey residuum weathered from granite, gneiss, and schist. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map unit: CxB - Colfax loamy sand, 1 to 4 percent slopes

Component: Colfax (90%)

The Colfax component makes up 90 percent of the map unit. Slopes are 1 to 4 percent. This component is on interfluves, piedmonts. The parent material consists of loamy colluvium over clayey residuum weathered from granite, gneiss, and schist. Depth to a root restrictive layer, fragipan, is 16 to 36 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, May, June, November, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria.

Map Unit Description (Brief, Generated)

Laurens County, South Carolina

Map unit: W - Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

APPENDIX B

South Carolina Rare, Threatened, and Endangered Species and USFWS Database Inventories for Laurens County

Rare, Threatened, and Endangered Species and Communities Known to Occur in Laurens County, South Carolina

August 25, 2010

Scientific Name	Common Name	USESA Designation	State Protection	Global Rank	State Rank
<u>Vertebrate Animals</u>					
<i>Microtus pennsylvanicus</i>	Meadow Vole			G5	SNR
<i>Picoides borealis</i>	Red-cockaded Woodpecker	LE: Listed endangered	SE-Endangered	G3	S2
<i>Tyto alba</i>	Barn-owl			G5	S4
<u>Invertebrate Animals</u>					
<i>Elliptio lanceolata</i>	Yellow Lance			G2G3	SNR
<u>Animal Assemblage</u>					
<i>Waterbird Colony</i>				GNR	SNR
<u>Vascular Plants</u>					
<i>Aster georgianus</i>	Georgia Aster	C: Candidate		G2G3	SNR
<i>Cypripedium pubescens</i>	Large Yellow Lady's-slipper			G5	S3
<i>Dirca palustris</i>	Eastern Leatherwood			G4	S2
<i>Frasera caroliniensis</i>	Columbo			G5	S2
<i>Heteranthera reniformis</i>	Kidneyleaf Mud-plantain			G5	S1
<i>Lonicera flava</i>	Yellow Honeysuckle			G5?	S2
<i>Minuartia uniflora</i>	One-flower Stitchwort			G4	S3
<i>Orobancha uniflora</i>	One-flowered Broomrape			G5	S2
<i>Panax quinquefolius</i>	American Ginseng			G3G4	S4
<i>Rhododendron eastmanii</i>	May White			G2	S2
<i>Trillium rugelii</i>	Southern Nodding Trillium			G3	S2
<i>Viola tripartita</i> var. <i>tripartita</i>	Three-parted Violet			G5T3	S3
<u>Communities</u>					
Oak - hickory forest				G5	S5
Pine - oak heath				G5	S3



Species Reports

Environmental Conservation Online System

Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the [IPaC](#) application.

County: Laurens, SC

Group	Name	Population	Status	Lead Office	Recovery Plan Name	Recovery Plan Action Status	Recovery Plan Stage
Birds	Red-cockaded woodpecker (<i>Picoides borealis</i>)		Endangered	Mississippi Ecological Services Field Office	Red-cockaded Woodpecker Recovery Plan, Second Revision	View Implementation Progress	Final Revision 2
	Wood stork (<i>Mycteria americana</i>)	AL, FL, GA, SC	Endangered	North Florida Ecological Services Field Office	Revised Recovery Plan for the U.S. Breeding Population of the Wood Stork	View Implementation Progress	Final Revision 1
Clams	Carolina heelsplitter (<i>Lasmigona decorata</i>)		Endangered	Asheville Ecological Services Field Office	Carolina Heelsplitter	View Implementation Progress	Final

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