SOURCE: NAPP Aerial Photograph - 2006
USDA Soil Survey Data - 1993

0 200 400 800 1,200 1,600 Feet

SCALE:	1 inch = 400 feet
CHECKED BY:	WCD
DRAWN BY:	ADW
DATE:	12/10/2009

S&ME

Aerial and Soils Map

Orangeburg County Waste Water System Expansion Project - Location 2

Bowman, Orangeburg County, South Carolina

S&ME PROJECT NO. 1614-09-439

FIGURE NO. 6

CULTURAL RESOURCES ASSESSMENT OF THE PROPOSED ROUTES AND BONNER AVENUE AREA FOR THE GOODBY'S WASTEWATER TREATMENT PLANT
CALHOUN AND ORANGEBURG COUNTIES, SOUTH CAROLINA

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ABSTRACT -

Brockington and Associates, Inc., conducted a cultural resources assessment of the proposed routes and area for the Goodby's Wastewater Treatment Plant from Elloree and JAFZA International, located in the town of Santee, to the proposed plant in Orangeburg County. We reviewed the location of known archaeological sites, historic properties, historic architectural resources, and cemeteries and reports of previous cultural resources investigations and noted the locations of these resources/ studies within one mile of the four proposed routes. We also conducted an architectural reconnaissance of the proposed routes and noted any historic buildings or structures; Calhoun and Orangeburg counties have not had a countywide survey completed to date. For the most part, the proposed waterline will be installed within existing rights-of-way and easements along various infrastructures along each alignment. Also, the waterline will be underground, so that once installed, it has little potential to create visual impacts to specific historic architectural resources. Intensive survey may be necessary to determine the effect of the proposed waterline on any of the historic properties and sensitive cultural resources that are present along the selected alternate alignment.

TABLE OF CONTENTS -

LIST OF FIGURES -

LIST OF TABLES -

1.1 INTRODUCTION

In July–August 2008, researchers with Brockington and Associates, Inc., conducted a cultural resources assessment of the proposed routes and area for the Goodby's Wastewater Treatment Plant in Calhoun and Orangeburg Counties, South Carolina. This assessment included a review of the locations of known cultural resources (archaeological sites, historic architectural resources, historic properties, and cemeteries) along each route, a review of previous cultural resources investigations along or near each route, and a reconnaissance to identify potential historic architectural resources not included in previous architectural surveys of each route. The assessment provides information that can be employed to determine the potential effect of a route on known cultural resources. This assessment provides partial compliance with federal and state regulations concerning the management of cultural resources in the Coastal Zone of South Carolina. Brockington conducted this assessment for the Orangeburg County Development Commission through ERC, Inc.

The proposed lines consist of four routes and one area. Figure 1.1 displays the location of the proposed routes and the study area along these corridors. Route 1 roughly parallels Cleveland Street (S-38-47) and OC 3312, beginning at the Elloree town limits and extending to its intersection with US Highway 176. Route 2 will roughly parallel Tee Vee Road, beginning at its intersection with S-9-203 and extending south to its intersection with US Highway 301. Route 3 consists of two sections, the first of which begins to parallel US Highway 176 where it first crosses Goodbys Swamp and continues south to its intersection with Woolbright Road; it then turns north to parallel Woolbright Road and continues to its intersection with US Highway 301. The second section begins at the intersection of US Highway 176 and US Highway 301, paralleling US Highway 301 and continuing east to its termination at Interstate (I-) 95. Route 4 will roughly parallel Bonner Avenue, beginning at its intersection with US Highway 301 and extending north approximately 3,000 ft to its termination at Empire Lane, a dirt road. The Bonner Avenue Area is bounded by Bonner Avenue to the west, US Highway 301 to the south, I-95 to the east, and Empire Lane to the north.

For the purposes of this assessment, historic architectural resources are buildings, structures, objects, or landscapes that are greater than 50 years old and retain sufficient historical association and integrity to be included on the South Carolina Statewide Survey of Historic Resources (SCSS). Historic properties are sites, buildings, structures, objects, landscapes, or other resources listed on or eligible for the National Register of Historic Places (NRHP).

Information concerning cultural resources along each route has been compiled into a Geographic Information System (GIS) database that can be incorporated with other environmental and social data about each route to assess the effects of the use of each route on a variety of environmental and social resources and factors. This database has been provided to ERC, Inc., for its use in evaluating the potential effects of each route.

1.2 METHODS OF INVESTIGATION

1.2.1 Archival Research

In July 2008, Brockington staff visited the South Carolina Institute of Archaeology and Anthropology (SCIAA) at the University of South Carolina in Columbia to identify all known archaeological sites along or within 1.0 miles of each route and in the area. Also, SCIAA is the primary repository of reports of previous cultural resources investigations in the project area. Reports of previous investigations within 1.0 miles of each route also were reviewed.

Researchers visited the South Carolina Department of Archives and History (SCDAH) to obtain the locations and descriptions of all known historic architectural resources and historic properties along or near each route. Again, all resources within 1.0 miles of a route were considered. Most of this information was extracted

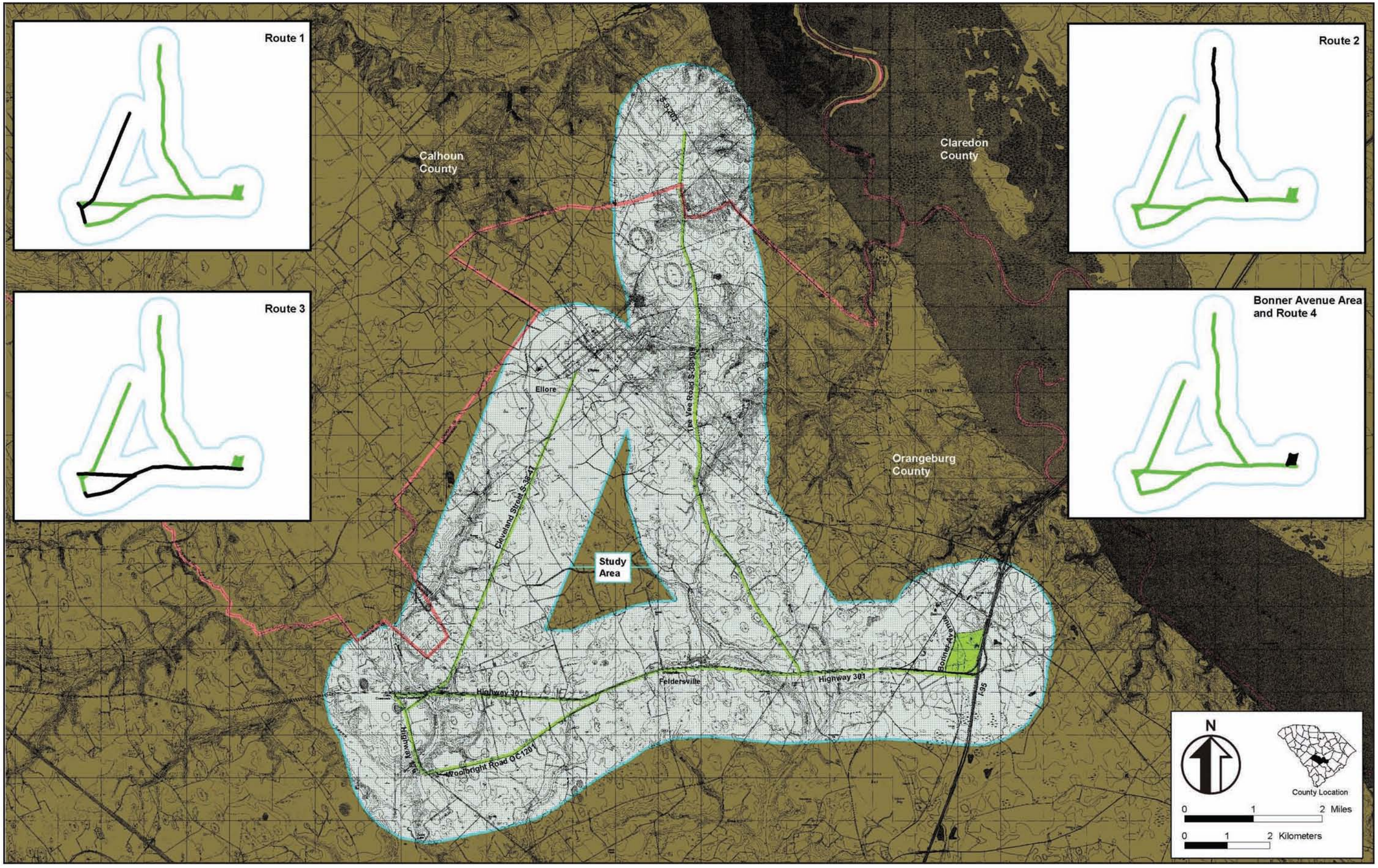

Figure 1.1 The location of proposed routes and Bonner Avenue Area for the Goodby's Wastewater Treatment Plant.

from SCDAH's Cultural Resources Information System (CRIS), a GIS database that summarizes these data, including the areas examined during more recent cultural resources investigations.

Additionally, we reviewed historic maps of the region available at a variety of repositories including the South Carolina Historical Society in Charleston, the South Caroliniana and Thomas Cooper libraries at the University of South Carolina, the SCDAH, the Charleston County Public Library, and the National Archives and Records Administration to identify areas with previous development or settlement. Copies of many of these maps are on file in the Mount Pleasant offices of Brockington and Associates, Inc.

1.2.2 Architectural Field Reconnaissance

In August 2008, an architectural historian conducted a windshield survey of each of the routes to identify any potential historic architectural resources along these corridors. The architectural historian examined a reconnaissance universe extending 500 ft to either side of each proposed route, including the Bonner Avenue Area. The architectural historian also examined previously identified historic architectural resources and historic properties in the reconnaissance universe to assess their current condition. The locations of all potential historic architectural resources were placed in the GIS database of cultural resources.

1.2.3 GIS Database

Researchers compiled the collected data described in sections 1.2.1 and 1.2.2 along with cemetery data visually verified on corresponding USGS 7.5' topographic maps to create a comprehensive GIS database of known cultural resources for the study area. A total of five shapefiles divide the data into previously recorded archaeology sites (polygon), previously surveyed areas (line/polygon), cemeteries (polygon), and potential historic architectural resources from our field reconnaissance (point). Metadata was created for each shapefile, which helps facilitate the understanding and correct use of this data. The data was created with ARCGIS 8.3 and is presented in the NAD 1983 State Plane South Carolina FIPS 3900 (feet) coordinate system.

1.2.4 Evaluation of Potential Effects

We examined the location, numbers, and nature of the cultural resources identified along each route and the Bonner Avenue Area to determine the potential effects that the use of a given alignment might have on known cultural resources. These potential effects are described below for each route.

2.1 NATURAL SETTING

The proposed routes for the Goodby's Wastewater Treatment Plant lie on the inner edge of the Lower Coastal Plain of South Carolina. The proposed routes roughly parallel Cleveland Street (S-38-47), Tee Vee Road, US Highway 176, Bonner Avenue, and US Highway 301 in Orangeburg and Calhoun counties. Routes pass through or around Elloree, Felderville, and Santee. The primary drainage systems of the study area are Four Hole Swamp and Lake Marion. Routes 1 and 3 pass through Goodbys Swamp, while Route 2 passes through Big and Little Poplar Creek. Route 4 does not pass through any drainage area. A more detailed description of each route appears in Chapter 3.

This portion of the Lower Coastal Plain consists of a series of low ridges separated by dense swamps. Major river drainages lie to the north and east (the Santee), to the west (the Edisto), and to the south and west (the Ashley and Cooper). This terrain lies atop a series of marine terraces that represent the former shorelines of North America. Changes in sea level through time resulted in the formation of these terraces; most are composed of sandy soils with some gravels derived from beach and deltaic deposits associated with the shorelines (Kovacik and Winberry 1989). Three of these terraces are present in the study area; all formed during the Pleistocene epoch (DeFrancesco 1988:83; Eppinette 1990:89; Long 1980:43). The oldest terrace, the Wicomico, occurs at 70–100 ft above mean sea level (amsl), primarily in the northwestern portion of the study area. The Penholoway terrace, occurring at 42–70 ft amsl and the next oldest formation, is present in and around Moncks Corner; Lake Moultrie on the Cooper River covers much of this terrace. Most of the central portions of the study area lie on this terrace. The next oldest formation, the Talbot terrace, extends 25–42 ft amsl and contacts the earlier Penholoway formation in an irregular boundary just east of Moncks Corner. The southeastern end of the study area may fall on portions of the Talbot terrace.

Before intensive settlement and agricultural modification, the study area contained a similar series of vegetative communities. General sources such as Quarterman and Keever (1962) and Shelford (1963) summarize the information on floral and faunal communities in the area. Most of the extant woodlands today are mixed pine/hardwood forests. A mixed forest supports an active faunal community including deer and small mammals (e.g., various squirrels and mice, opossum, raccoon, rabbit, fox, skunk), birds (e.g., various songbirds, ducks and wading birds, quail, turkey, doves, hawks, owls), and reptiles/amphibians (e.g., frogs, toads, lizards, snakes, turtles, alligator). Fresh and saltwater fish are abundant in the streams and marshes of the region, and shellfish are present in large numbers in most of the tidally affected waters throughout the region.

The climate of this area is subtropical, with mild winters and long, hot, and humid summers. The average daily maximum temperature reaches a peak of 80.1°F in July, although average highs are in the 80°F range from May through September. A mean high of 46.8°F characterizes the coldest winter month, January. Average annual precipitation is 47 inches for Berkeley County, 50 inches for Dorchester County, and 47 inches for Orangeburg County. Most rain falls in the summer months during thunderstorms; snowfall is very rare. Also, the climate is very supportive of agriculture. Prevailing winds are light and generally from the south and southwest, although hurricanes and other tropical storms occasionally sweep through the area, particularly in the fall months (DeFrancesco 1988:2; Eppinette 1990:2; Long 1980:46).

2.2 CULTURAL SETTING

The history of South Carolina generally can be divided into three primary eras: Pre-Contact, Contact, and Post-Contact. The Pre-Contact era of coastal South Carolina has received much attention from archaeologists. The present interpretations of that prehistory are presented briefly in this section. Readers are directed to Goodyear and Hanson (1989) for detailed overviews of previous research in the region. The following summary is divided

into periods that represent distinct cultural adaptations in the region.

2.2.1 Pre-Contact Era: Paleoindian Period (10000–8000 BC)

Human presence in the South Carolina Coastal Plain apparently began about 12,000 years ago with the movement into the region of hunter-gatherers. Goodyear et al. (1989) have reviewed the evidence for the Paleoindian occupation of South Carolina. Based on the distribution of distinctive fluted spear points diagnostic to the period, they see the major sources of highly workable lithic raw materials as the principal determinant of Paleoindian site location. The concentration of sites at the Fall Line possibly indicates a subsistence strategy of seasonal relocation between the Piedmont and Coastal Plain. Based on data from many sites excavated over most of North America, Paleoindian groups were generally nomadic. Their subsistence focused on the hunting of large mammals, specifically the now-extinct mammoth, horse, camel, and giant bison. Groups were probably small, i.e., kin-based bands of 50 or fewer persons. As the environment changed at the end of the Wisconsin glaciation, Paleoindian groups had to adapt to new forest conditions in the Southeast and throughout North America.

2.2.2 Pre-Contact Era: Archaic Period (8000–1500 BC)

The Archaic is a long period of adaptation to modern forest conditions in eastern North America. Caldwell (1958) has characterized the period as movement toward Primary Forest Efficiency, meaning that during this period human groups continually developed new and more effective subsistence strategies for exploiting the wild resources of the modern oak-hickory forest. Based on extensive work in the North Carolina Piedmont, Coe (1964) subdivided the Archaic period into several sequential phases recognizable by distinctive stone point/knife forms. Coe's (1964) sequence has been confirmed over large parts of the Southeast and is applicable to most of South Carolina. The Archaic also is divided into three temporal subperiods, Early (8000–6000 BC), Middle (6000–2500 BC), and Late (2500–1000 BC).

Archaic groups probably moved within a regular territory seasonally, planning and scheduling the exploitation of wild plant and animal resources. Anderson and Hanson (1988) developed a settlement model for the Early Archaic (8000–6000 BC) in South Carolina involving seasonal movement of relatively small groups (bands) within major river drainages. The Charleston region lies within the range of the Saluda/Broad band. Anderson and Hanson (1988) hypothesize that Early Archaic use of the Lower Coastal Plain was limited to seasonal (springtime) foraging camps and logistical camps; aggregation camps and winter base camps are thought to have been near the Fall Line. They also suggest that as population increased in the Middle Archaic (6000–2500 BC), band mobility decreased and territoriality increased. Blanton and Sassaman (1989) reviewed the archaeological literature on the Middle Archaic subperiod. They document an increased simplification of lithic technology through this period, with increased use of expedient, situational tools. Furthermore, they argue that the use of local lithic raw materials is characteristic of the Middle and Late Archaic. Blanton and Sassaman (1989:68) conclude that "the data at hand suggest that Middle Archaic populations resorted to a pattern of adaptive flexibility as a response to 'mid-Holocene environmental conditions' such as variable precipitation, sea level rise, and differential vegetational succession." These processes resulted in changes in the types of resources available from year to year.

Generally, there is evidence of extensive trade networks covering large areas of North America and of the establishment of sedentary villages during the Late Archaic subperiod (2500–1000 BC). Some of the best evidence of sedentary villages occurs along the South Carolina coast as large middens of oyster shell and other food remains. These refuse heaps probably indicate substantial, relatively long-term habitations. Also, the first evidence of the manufacture and use of ceramics dates from the Late Archaic subperiod.

2.2.3 Pre-Contact Era: Woodland Period (1500 BC–AD 1000)

During the succeeding Woodland period, sedentism apparently increased, although scheduled exploitation of wild food resources in a seasonal round continued. The Woodland period is noteworthy for several technological and social developments: (1) the widespread manufacture

and use of ceramics for cooking and storage, (2) the beginnings of agriculture, and (3) construction of burial mounds and other earthworks. While evidence of burial mounds and agriculture is not extensive at the few South Carolina Woodland-period sites investigated in detail (Brooks and Canouts 1984; Trinkley 1980, 1990), ceramics are widespread and are found at many small sites throughout the state. The varied manufacturing procedures and decorative styles of these ceramics allow differentiation of site collections into three subperiods (Early, Middle, and Late) and inferences of group movement and influence from adjacent geographic areas. Trinkley (1980) and Anderson et al. (1982) have developed classificatory schemes for Woodland-period groups based on ceramics from many sites. Following Anderson et al. (1982), Poplin et al. (1993) developed a classificatory scheme for the ceramic-producing prehistoric periods in the Charleston region.

2.2.4 Pre-Contact Era: Mississippian Period (AD 1000–1521)

The final period of prehistory in South Carolina, the Mississippian period, begins about AD 1000 and ends with the arrival and colonization of the area by Europeans in the 1500s and 1600s. During the Mississippian period, agriculture became well established, and sedentary villages and towns became the dominant habitation type (although relatively isolated farmsteads were also apparently common [see Brooks and Canouts 1984]). Ferguson (1971) proposed a model of Mississippian settlement involving major political centers dominated and surrounded by smaller villages and farmsteads. Major centers were apparently spaced about 160 km (100 mi) apart; hypothesized centers in the project region were located at Town Creek, North Carolina; near Camden, Lake Marion, and Charleston, South Carolina; and near Augusta and Savannah, Georgia (Ferguson 1971). Anderson (1989) and DePratter (1989) have identified large political centers on the Wateree River (near Camden), on the Oconee River (in central Georgia), and at Savannah (Georgia). These centers usually contained one or more large mounds on which temples were built. It should be noted that the ceremonial center at the original Charles Towne settlement on Albemarle Point (38CH1) contained no mound structure (South 2002). Mississippian society appears to have been highly stratified, with hereditary ruling families, middle and poorer classes, and slaves (usually prisoners taken in war from other groups).

2.2.5 Contact Era

The Contact era began in South Carolina with the first Spanish explorations into the region in the 1520s. Native American groups encountered by the European explorers and settlers probably were living in a manner quite similar to the late Pre-Contact Mississippian groups identified in archaeological sites throughout the Southeast. However, the initial European forays into the Southeast contributed to the disintegration and collapse of the aboriginal Mississippian social structures; disease, warfare, and European slave raids all contributed to the rapid decline of the regional Native American populations during the sixteenth century (Dobyns 1983; Ramenofsky 1982; Smith 1984). By the late seventeenth century, Native American groups in coastal South Carolina apparently lived in small, politically and socially autonomous, semi-sedentary groups (Waddell 1980). By the mid-eighteenth century, very few Native Americans remained in the region; all had been displaced or annihilated by the ever-expanding English colonial settlement of the Carolinas (Anderson and Logan 1981:24-25).

Waddell (1980) identified 19 distinct groups between the mouth of the Santee River and the mouth of the Savannah River in the mid-sixteenth century. Anderson and Logan (1981:29) suggest that many of these groups probably were controlled by Cofitachequi, the dominant Mississippian center/polity in South Carolina, prior to its collapse. By the seventeenth century, all were independently organized. These groups included the Coosaw, Etiwan, and Sewee along the Ashley, Cooper, and Wando rivers and the Santee farther to the interior. The Coosaw inhabited the area along the upper Ashley River. The Etiwans were mainly settled on the north and east sides of Charleston Harbor, but their range extended to the head of the Cooper River. The territory of the Sewee met the territory of the Etiwan high up the Cooper and extended to the north as far as the Santee River (Orvin 1973:14).

The ethnohistoric record from coastal South Carolina suggests that the Contact-era groups of the region followed a seasonal pattern that included summer

aggregation in villages for planting and harvesting domesticates, and dispersal into one- to three-family settlements for the remainder of the year (Waddell 1980:147-151). This coastal adaptation is apparently very similar to the Guale pattern of the Georgia coast, as reconstructed by Crook (1986:18).

2.2.6 Post-Contact Era

The Carolina coast was first permanently settled by Europeans in 1670. The earlier Spanish attempts to settle at San Miguel de Gualdape (1526) to the north and at Santa Elena (1566–1587) to the south apparently had limited impact on the study area. The French attempt at Port Royal (1562) also had little impact. The establishment of Charles Towne by the British in 1670, however, sparked a period of intensive fur and slave trade with the Indians of the region and provided a base from which settlers quickly spread up the Cooper River and its tributaries. Charles Towne initially was settled under the proprietary system; not until 1719 did South Carolina become a royal colony.

The early economic development in the project area initially focused on trade with the Indians; however, naval stores production soon replaced the skins, slaves, and other local commodities acquired from the aboriginal inhabitants of the region. Trade with the Indians was pursued aggressively through the beginning of the eighteenth century, but by 1716 conflicts with the Europeans, as well as disease, had drastically reduced or displaced the local native population.

Naval stores production flourished for a short period with the encouragement of bounties provided by the Crown. However, England failed to recognize the extent of the supply of pine on the Carolina coastal strand, and the production of naval stores quickly surpassed demand.

The new colony was organized with the parish as the local unit of government. The church building itself was to serve both religious and political purposes. As Gregorie (1961:5) explains, "The parish church was to be the center for the administration of some local government in each parish, for at that time there was not a courthouse in the province, not even in Charleston." The study area was located in St. Mathews Parish.

By the 1740s, the population of South Carolina had expanded dramatically. More areas were settled, with plantations spreading throughout much of the Lowcountry. Large-scale agricultural production was achieved through the operation of plantations that employed slave labor. Slaves were brought from West Africa to perform the many tasks necessary to produce cash crops on the plantations. Slave labor was especially essential to rice production, with knowledgeable slaves (i.e., those taken from African rice-producing societies) conducting and directing most of the activities associated with rice growing and harvesting (Joyner 1984). This system of production would continue until the end of the Civil War, which resulted in the abolition of slavery throughout the United States.

Most of the early settlements and plantations focused on the Cooper, Wando, Ashley, and Stono rivers and Goose Creek. These waters provided the best opportunities for profitable agricultural production (i.e., rice cultivation) as well as the best avenues of transportation to Charleston or other settlements in the region (South and Hartley 1985). Evidence of the many plantations along these rivers remains today primarily as archaeological sites, although some plantations, such as Rice Hope near Moncks Corner, are still occupied. Interior lands such as those of the study area often served as pastureland for cattle and swine or as a source of timber and game for plantation populations.

During the Revolutionary War, coastal South Carolina saw little action between the failed British attempt to take Charleston in 1776 and their successful occupation of the city in 1780. The British left Charleston in 1782. During the British occupation of Charleston, however, a number of plantations in St. Mathews Parish were visited by British troops. One of the principal battles of the war in the South occurred near the study area at Eutaw Springs. Here the American forces of General Nathanael Greene stopped a British force moving to reinforce and relieve the besieged army of Lord Cornwallis at Yorktown, Virginia. Failure to prevent this reinforcement may have prolonged the war by allowing Cornwallis to escape capture.

An important outcome of the Revolutionary War was the removal of royal trade protection, which caused a drastic reduction in rice profitability. As a result, many

planters in the study area began to supplement their rice crops with cotton agriculture. Unfortunately, soils in the study area were not as productive for cotton as those of the Sea Islands.

Although the Civil War brought extensive battles to Charleston, there were no major battles in the study area. The main impact of the war on the immediate area was social and economic upheaval. Furthermore, the ensuing Reconstruction period brought drastic changes in regional land use. During Reconstruction, there was a dramatic increase in the number of farms and a drastic decrease in average farm size, as predominantly white landowners began selling and/or renting portions of their holdings. For example, in 1880, 55 percent of the farms in nearby Charleston County were tenant-operated (US Department of the Interior 1883). In addition to corn, cotton, and cattle, truck farming was a major element of postbellum agriculture.

In the years following World War II, the region continued to possess significant numbers of small farms. In addition, timber harvesting returned as a major industry, particularly in the more inland portions of Berkeley and Dorchester counties. In addition, when not being harvested for timber, these timberlands often serve as hunting grounds for local inhabitants. Other major industries of the region today include mining for various aggregates, including marl, from which cement is made. Another major development in the region was the construction of Lakes Marion and Moultrie by the South Carolina Public Service Authority in the 1940s. This diversion of the Santee River into the Cooper River drainage generates electricity for the region, provides excellent recreational fishing and boating, and is the source of water for the Lake Marion Regional Water System. Also, with the construction of I-95, more tourists and small industries arrived in the area.

A summary of cultural resources identified along each proposed route and area for the Goodby's Wastewater Treatment Plant follows. A brief description of each route begins each section, followed by a discussion of the archaeological sites, historic architectural resources, and cemeteries identified along each route. The NRHP status of known and potential resources (those identified during our reconnaissance survey) is noted. Figure 1.1 displays the location of each route and the Bonner Avenue Area. Figures 3.1 and 3.2 provide more detailed views of the routes, with the specific locations of all identified resources within the 1.0-mile study area indicated. Note that the discussions of each route include only those resources that are immediately adjacent to that proposed alignment. Given the nature of the proposed lines, it will likely not have visual impacts on historic properties located some distance from the route, although it may alter the setting of such resources.

3.1 CULTURAL RESOURCES IDENTIFIED ALONG/NEAR ROUTE 1

Route 1 extends south from the Elloree Town Limits paralleling Cleveland Street (S-38-47). It crosses US Highway 301 and Goodbys Swamp paralleling OC 3312 to its intersection with US Highway 176. Here it parallels US Highway 176 north to its intersection with US Highway 301 and south to the northern edge of Goodbys Swamp. Figure 1.1 displays the location of Route 1. Figures 3.1 and 3.2 display cultural resources identified along Route 1, and Table 3.1 summarizes the cultural resources identified along Route 1.

Trinkley's (2002) survey of the Oaks 115-kV KV Ttransmission Lline and sSubstation examined a central portion of Route 1, approximately 0.5 miles in length (see Figure 3.2). This survey identified one archaeological site (38OR245) along Route 1. Site 38OR245 is not eligible for the NRHP.

Our reconnaissance of Route 1 identified six currently undocumented historic architectural resources that appear sufficiently intact and of appropriate age to be included in the SCSS (see Figures 3.1 and 3.2). These are primarily residences but also include the Felderville AME Church and a store. The architectural historian feels thatrecommends one one of the houses is potentially eligible for the NRHP, and the remaining buildings not eligible for the NRHP. The Bochette Cemetery is located along the southern end of Route 1, and it lies along the route just north of the intersection of US Highway 301 (see Figure 3.2).

Areas where Route 1 crosses larger drainages (e.g., Goodbys Swamp) possess a better potential to contain Native American sites. Such locales provide access to resources in the swamps as well as resources on the upland divides between the swamps.

3.2 CULTURAL RESOURCES IDENTIFIED ALONG/NEAR ROUTE 2

Route 2 extends from S-9-203 south along Tee Vee Road ending at its intersection with US Highway 301 (see Figure 1.1). There have been no surveys to date or identified archaeological sites on any portion of this route. Table 3.2 summarizes the cultural resources identified along Route 2.

Our reconnaissance of Route 2 identified one currently undocumented historic building, located along the northern portion of the route, that appears sufficiently intact and of appropriate age to be included in the SCSS (see Figures 3.2). The architectural historian recommends the house asnot eligible for the NRHP. No cemeteries are located directly adjacent to this route.

Areas where Route 2 crosses larger drainages (e.g., Little and Big Poplar Swamps) possess a better potential to contain Native American sites. Such locales provide access to resources in the swamps as well as resources on the upland divides between the swamps.

3.3 CULTURAL RESOURCES IDENTIFIED ALONG/NEAR ROUTE 3

Route 3 consists of two sections, the first of which begins to parallel US Highway 176 where it first crosses Goodbys Swamp and continues south to its intersection

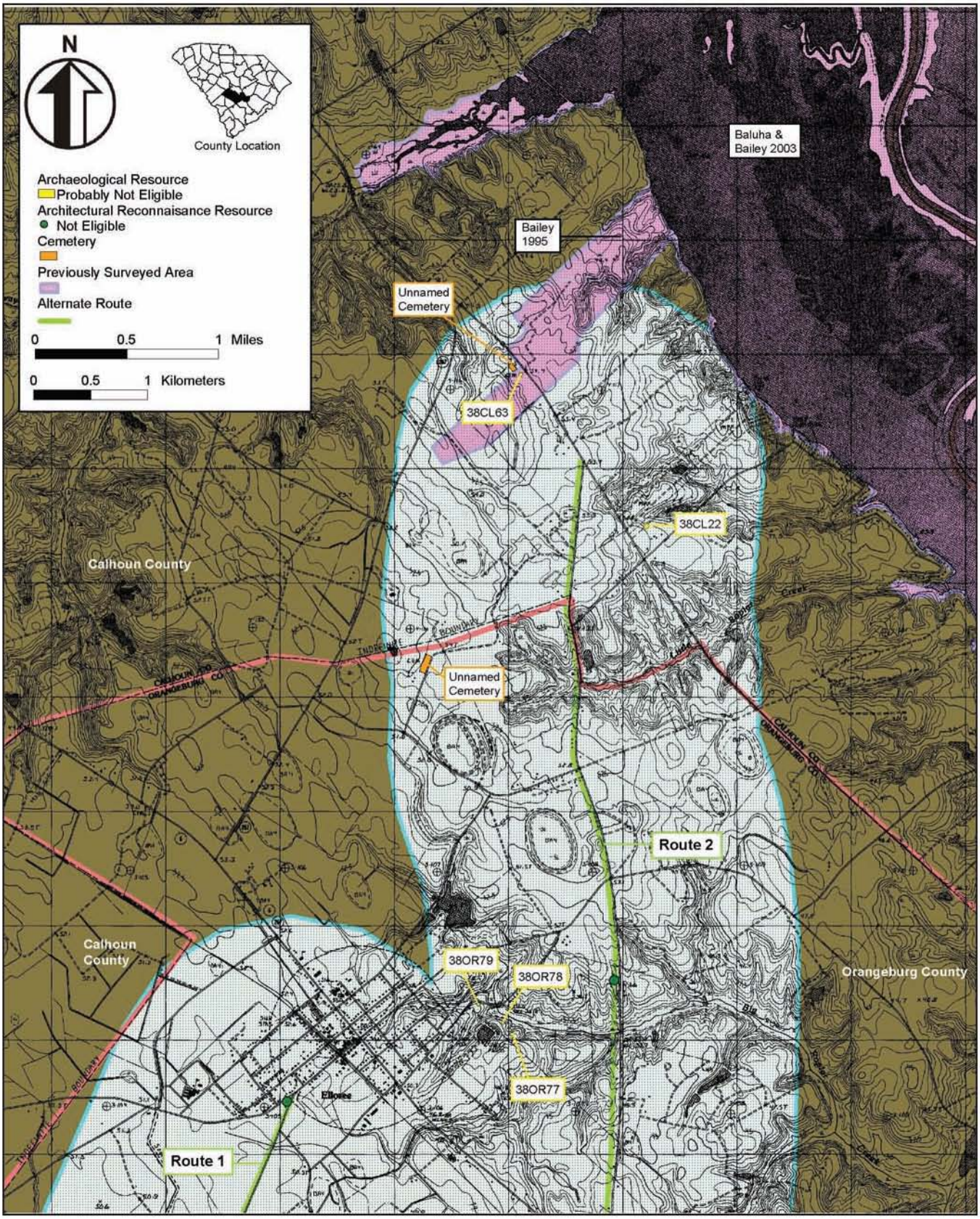

Figure 3.1 Cultural resources along the southern portions of Routes 1 and 2.

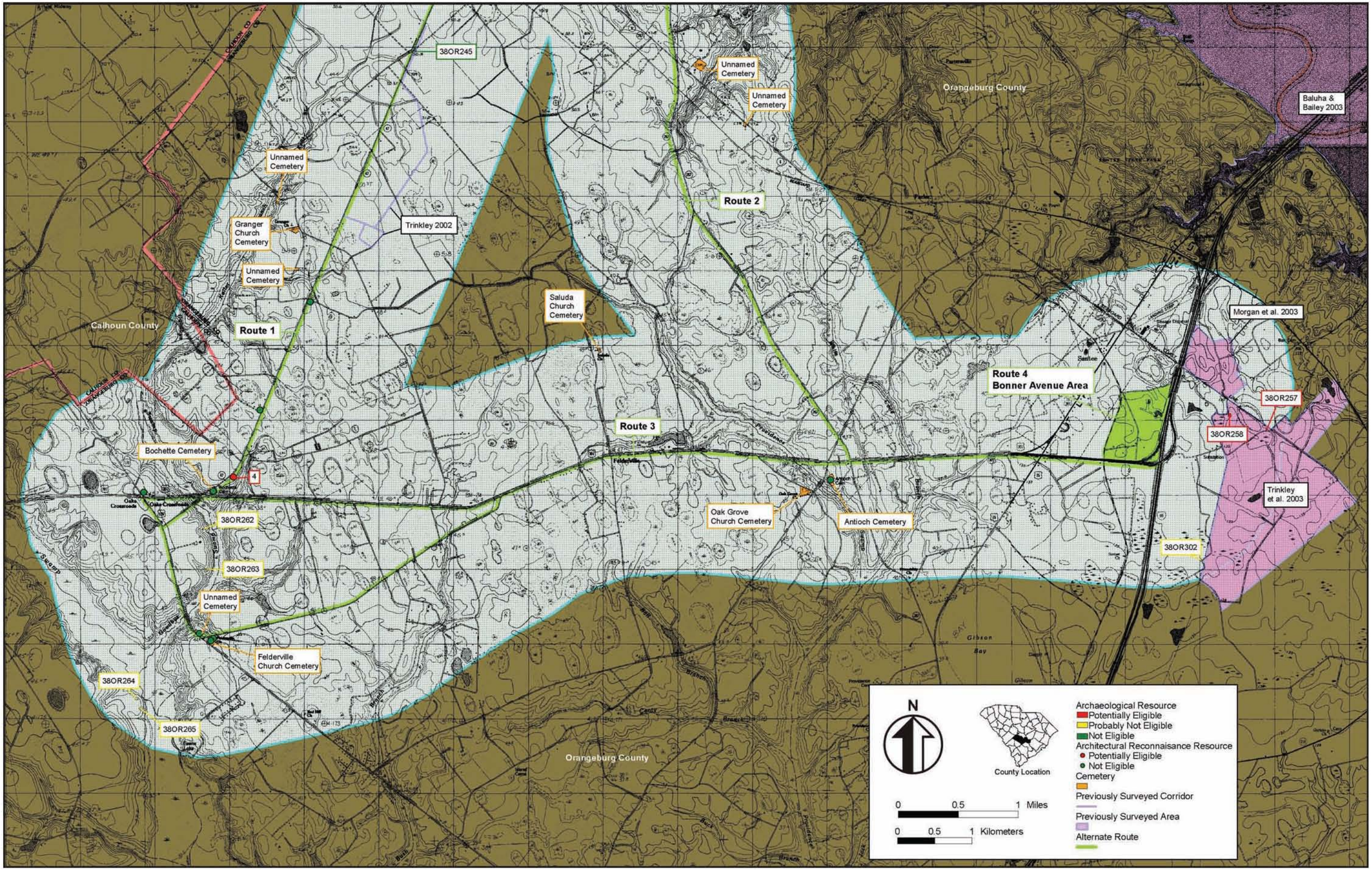

Figure 3.2 Cultural resources along the central portions of Routes 1, 2, 3, and 4.

Table 3.1 Cultural Resources Identified Along Route 1.

Site No./ID	Site Type	NRHP Status	Reference
38OR245		Not eligible	Trinkley 2002
38OR262		Probably not eligible	SCIAA site files
38OR263		Probably not eligible	SCIAA site files
38OR264		Probably not eligible	SCIAA site files
38OR265		Probably not eligible	SCIAA site files
4[3]	House	**Potentially eligible**	Architectural reconnaissance
	House	Not eligible	Architectural reconnaissance
	House	Not eligible	Architectural reconnaissance
	House	Not eligible	Architectural reconnaissance
	Store	Not eligible	Architectural reconnaissance
	Felderville AME Church	Not eligible	Architectural reconnaissance
	Bochette Cemetery		Architectural reconnaissance
	Felderville Church Cemetery		Architectural reconnaissance
	Granger Church Cemetery		USGS 7.5' topographic map
	Unnamed cemetery		Architectural reconnaissance
	Unnamed cemetery		USGS 7.5' topographic map
	Unnamed cemetery		USGS 7.5' topographic map

#[3] – see Figure 3.2

with Woolbright Road (see Figure 1.1). It then turns north to parallel Woolbright Road and continues to its intersection with US Highway 301. The second section begins at the intersection of US Highway 176 and US Highway 301, paralleling US Highway 301 and continuing east to its termination at I--95. There have been no surveys to date or identified archaeological sites on any portion of this route. Figure 3.2 displays the cultural resources identified along Route 3, and Table 3.3 summarizes the cultural resources identified along Route 3.

Our reconnaissance of Route 3 identified four currently undocumented historic buildings that appear sufficiently intact and of appropriate age to be included in the SCSS (see Figure 3.2). Theseis includes two residences,and Felderville AME Church, and a store. The architectural historian recommendsfeels that one of the houses is potentially eligible for the NRHP, and the remaining buildings are not eligible for the NRHP. There are two cemeteries scattered along the Woolbright portion of Route 3 (see Figure 3.2). These include the Felderville Church Cemetery and an unnamed cemetery.

Areas where Route 3 crosses major drainages (e.g., Goodbys Swamp, White Cane Branch, and Providence Swamp) possess a higher potential to contain Native American archaeological sites. Such locales provide access to resources in the swamps as well as resources on the upland divides between the swamps.

3.4 CULTURAL RESOURCES IDENTIFIED ALONG/NEAR ROUTE 4 AND BONNER AVENUE AREA

Route 4 will roughly parallel Bonner Avenue, beginning at its intersection with US Highway 301 and extending north approximately 3,000 ft to its termination at Empire Lane, a dirt road (see Figure 1.1). The Bonner

Table 3.2 Cultural Resources Identified Along Route 2.

Site No./ID	Site Type	NRHP Status	Reference
38CL22		Probably not eligible	SCIAA site files
38CL63		Probably not eligible	Bailey 1995
38OR77		Probably not eligible	SCIAA site files
38OR78		Probably not eligible	SCIAA site files
38OR79		Probably not eligible	SCIAA site files
	House	Not eligible	Architectural reconnaissance
	Antioch Cemetery		Architectural reconnaissance
	Oak Grove Church Cemetery		USGS 7.5' topographic map
	Unnamed cemetery		USGS 7.5' topographic map
	Unnamed cemetery		USGS 7.5' topographic map
	Unnamed cemetery		USGS 7.5' topographic map
	Unnamed cemetery		USGS 7.5' topographic map

Table 3.3 Cultural Resources Identified Along Route 3.

Site No./ID	Site Type	NRHP Status	Reference
38OR257		**Potentially eligible**	Trinkley 2003
38OR258		**Potentially eligible**	Trinkley 2003
38OR262		Probably not eligible	SCIAA site files
38OR263		Probably not eligible	SCIAA site files
38OR264		Probably not eligible	SCIAA site files
38OR265		Probably not eligible	SCIAA site files
38OR302		Probably not eligible	SCIAA site files
4[3]	House	**Potentially eligible**	Architectural reconnaissance
	House	Not eligible	Architectural reconnaissance
	Store	Not eligible	Architectural reconnaissance
	Felderville Church	Not eligible	Architectural reconnaissance
	Felderville Church Cemetery		Architectural reconnaissance
	Antioch Cemetery		Architectural reconnaissance
	Bochette Cemetery		Architectural reconnaissance
	Oak Grove Cemetery		USGS 7.5' topographic maps
	Saluda Church Cemetery		USGS 7.5' topographic maps
	Unnamed cemetery		Architectural reconnaissance

#[3] – see Figure 3.2

Table 3.4 Cultural Resources Identified Along Route 4 and the Bonner Avenue Area.

Site No./ID	Site Type	NRHP Status	Reference
38OR257		Potentially eligible	Trinkley 2003
38OR258		Potentially eligible	Trinkley 2003
38OR302		Probably not eligible	SCIAA site files

Avenue Area is bounded by Bonner Avenue to the west, US Highway 301 to the south, I-95 to the east, and Empire Lane (dirt road) to the north. Figures 3.2 displays cultural resources identified along Route 4 and the Bonner Avenue Area. There have been no surveys to date or identified archaeological sites on any portion of this route or in the area. Table 3.4 summarizes the cultural resources identified along Route 4 and the Bonner Avenue Area.

Our reconnaissance of Route 4 and the Bonner Avenue Area identified no undocumented historic buildings that appear sufficiently intact and of appropriate age to be included in the SCSS (see Figure 3.2). No cemeteries are located directly adjacent to these sections. The route and area do not cross any major drainage.

Cultural resources assessment of the proposed routes and area for the Goodby's Wastewater Treatment Plant in Calhoun and Orangeburg Ccounties, South Carolina, identified known and potential cultural resources in the study area. For this assessment, the study includes all lands within 1.0 miles of a proposed alignment. Reviews of the lists of known archaeological sites, historic properties and known historic architectural resources, previous cultural resources investigations in the study area, and historic and recent maps of the study area and an architectural reconnaissance of the proposed routes provided the locations and descriptions of individual resources and form the basis of our assessment of the potential effect of the proposed undertaking on cultural resources. A brief summary of each alternate route follows with appropriate management recommendations.

Effectively, the installation and operation of the proposed line along any of the routes offers limited opportunities to affect significant cultural resources (properties listed on or eligible for the NRHP) or sensitive cultural resources (cemeteries) due to the use of existing easements or rights-of-way to carry the structure. Most highway rights-of-way are assumed by the South Carolina Department of Transportation and the South Carolina State Historic Preservation Office (SHPO) to be disturbed to the extent that there are no archaeological or historical deposits or features intact in these corridors. Also, once installed, the majority of the line and its associated infrastructure is underground and will not substantially alter the existing landscape such that the setting of individual historic properties may be affected. Thus, the potential of any alignment to affect historic properties is limited.

However, where the proposed line will require the acquisition of new easements or rights-of-way and along some secondary roads and other infrastructure corridors, intensive survey may be necessary to satisfy SHPO that no historic properties will be affected. This applies particularly to areas near known archaeological sites or where federal or state lands are affected. Thus, survey of some or all segments of a selected alternate alignment may be necessary to satisfy federal laws or state regulations associated with the permitting of the project.

4.1 RECOMMENDATIONS FOR ROUTE 1

Trinkley (2002) surveyed a central portion of Route 1 and identified one not-eligible archaeological site (38OR245). This portion of Route 1 requires no additional survey. There are no recorded historic architectural resources along this route; however, there are six currently undocumented historic buildings that appear sufficiently intact and of appropriate age to be included in the SCSS, and one cemetery (Bochette Cemetery) along Route 1. Only one of these undocumented buildings, a house located near the intersection of US Highway 301 and Cleveland Street, is recommended potentially eligible for the NRHP. The use of Route 1 should be designed to avoid the Bochette Cemetery. Unsurveyed areas where Alternate 1 crosses major drainages (e.g., Goodbys Swamp) possess a higher potential to contain Native American archaeological sites and likely would require intensive survey to satisfy SHPO concerns regarding potential effects to historic properties. In addition, the NRHP status of the potentially eligible resources may need to be determined to provide SHPO with sufficient information to assess potential effects to these resources.

4.2 RECOMMENDATIONS FOR ROUTE 2

No intenstive cultural resources surveys, archaeological sites, or historic architectural resources have been identified on any portion of Route 2. Our reconnaissance identified one currently undocumented historic building that appears sufficiently intact and of appropriate age to be included in the SCSS, but the architectural historian recommends this building not eligible for the NRHP. Also, we identified no cemeteries along the length of Route 2. Unsurveyed areas where Alternate 2 crosses major drainages (e.g., Little and Big Poplar Swamps) possess a higher potential to contain Native American archaeological sites and likely would require intensive

survey to satisfy SHPO concerns regarding potential effects to historic properties.

4.3 RECOMMENDATIONS FOR ROUTE 3

No cultural resources surveys, archaeological sites, or historic architectural resources have been identified on any portion of Route 3. Our reconnaissance identified four currently undocumented historic buildings that appear sufficiently intact and of appropriate age to be included in the SCSS as well as two cemeteries (Felderville Church Cemetery and an unnamed cemetery). The architectural historian recommends one of these undocumented buildings, a house located near the intersection of US Highway 301 and Cleveland Street, apotentially eligible for the NRHP. The use of Route 3 should be designed to avoid the Felderville Church Cemetery and the unnamed cemetery. Also, unsurveyed areas where Alternate 3 crosses major drainages (e.g., Goodbys Swamp, White Cane Branch, and Providence Swamp) possess a higher potential to contain Native American archaeological sites and likely would require intensive survey to satisfy SHPO concerns regarding potential effects to historic properties. In addition, the NRHP status of the potentially eligible resources may need to be determined to provide SHPO with sufficient information to assess potential effects to these resources.

4.4 RECOMMENDATIONS FOR ROUTE 4 AND BONNER AVENUE AREA

No cultural resources surveys, archaeological sites, or historic architectural resources have been identified on any portion of Route 4 and the Bonner Avenue Area. Our reconnaissance identified no cemeteries or undocumented historic buildings that appear sufficiently intact and of appropriate age to be included in the SCSS. Also, since tthere are no unsurveyed areas that cross major drainages that might require intensive surveys.

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SABINE & WATERS
ENVIRONMENTAL LAND MANAGEMENT CONSULTANTS

August 4, 2008

Mr. Robert D. West, P.E.
Engineering Resources Corporation
P.O. Box 910
Orangeburg, South Carolina 29116

SUBJECT: **Preliminary protected species survey for the Goodby's Creek Wastewater Collection System, including the highway right-of-way and an additional 100 feet on both sides of the right-of-way for Cleveland Street (S-38-47), Tee Vee Road (SC 267, S-38-199, S-9-215), Bonner Avenue (Exhibit D.7 301, Woolbright Road (Orangeburg County Road 12(1 of 4 1 an area in Santee, SC bounded by Bonner Avenue, US 301 and I-95, all located in Orangeburg and Calhoun Counties, SC.**

Dear Mr. West:

Sabine & Waters, Inc. has completed a preliminary, reconnaissance-level protected species survey of the above referenced corridor. Prior to field investigations, we consulted the August, 2007 update of the South Carolina Distribution Records of Endangered, Threatened, and Candidate Species provided by the U.S. Fish and Wildlife Service to determine which protected species have occurred in the vicinity of the corridor. Based on the list for Orangeburg and Calhoun Counties, the potentially occurring species are as follows:

Common Name	Scientific Name	Federal Status
Red-cockaded woodpecker	*Picoides borealis*	Endangered
Shortnose sturgeon	*Acipenser brevirostrum*	Endangered
Canby's dropwort	*Oxypolis canbyi*	Endangered
Flatwoods salamander	*Ambystoma cingulatum*	Threatened

Red-cockaded Woodpecker – Typical nesting habitat for red-cockaded woodpeckers consists of open stands of pine with an age of 80 to 120 years (USFWS 1992), although nesting occasionally occurs in younger trees. Longleaf pine seems to be preferred, although nests may be found in any species of southern yellow pine. Stands that are

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primarily hardwood or that have a dense hardwood understory are usually avoided. Foraging habitat usually consists of pine or pine-hardwood stands at least 30 years old with an open understory.

Shortnose Sturgeon – During winter, this species occurs in salt water bays and estuaries of medium to high salinity. During late winter to early spring the shortnose sturgeon moves upstream into freshwater swamps where it will spawn among flooded trees when water temperatures reach 10-15 degrees centigrade. During summer the adults will congregate in low salinity estuaries to feed on bottom dwelling invertebrates. Eggs and larvae may be susceptible to siltation effects.

Canby's Dropwort – Typical habitat for this species includes wet meadows, wet pineland savannas, ditches, sloughs, and edges of pond cypress/pine ponds (USFWS 1992). The largest and most vigorous populations have been found to occur in open bays or ponds that are wet throughout most of the year but which have little or no canopy cover (USFWS 1990).

Flatwoods Salamander – Optim **Exhibit D.7** the flatwoods salamander is an open, mesic woodland of longleaf/slash **2 of 4** *istris/P. elliottii*) flatwoods maintained by frequent fires (USFWS 1999). Breeding sites are isolated pond cypress that are generally shallow and relatively small, and are composed of (*Taxodium ascendens*), blackgum (*Nyssa sylvatica* var. *biflora*), or slash pine dominated depressions which dry completely on a cyclic basis.

An examination of the South Carolina Department of Natural Resources' Rare, Threatened and Endangered Species Inventory indicated a record of a red-cockaded woodpecker (RCW) occurrence in the vicinity of the proposed corridor. On August 28, 1993 three active and one inactive cavity trees in a woodlot surrounded by agricultural fields just outside Elloree city limits, approximately 4200 feet south of the city limit sign just off Cleveland Street (S-38-47) were identified. The latitude and longitude location for the site is 33.3055 N and 80.3458 W.

On July 30-31, 2008 preliminary field investigations were conducted along the proposed corridors with the purpose of identifying potential habitat for the species referenced above. It appeared that all proposed corridors follow existing roadsides, property boundaries, and transmission corridors. Vegetation in and along the corridors was characterized as early successional, maintained by regular mowing or by herbicide treatments, and many areas are active agriculture fields. The majority of these areas were considered unsuitable for the above referenced threatened and endangered species. In addition, the area concerning the red-cockaded woodpecker occurrence appears to lack the habitat conditions ideal for RCW's. Presumably this area has been neglected from having the proper management techniques used to establish or maintain RCW habitat.

After recent conversations with National Marine Fisheries Service concerning the shortnose sturgeon in this area it has been concluded that the shortnose sturgeon are only

known to occur in the main-stems of inhabited rivers, and would not be found in swampy areas or low-flow blackwater creeks such as Goodby's Swamp and Providence Swamp.

Certain segments of the corridor, particularly those passing through Goodby's Swamp and Providence Swamp, which are both tributaries of Four Holes Swamp, a tributary of the Edisto River, encompass hydric habitat which could potentially support the flatwoods salamander and Candy's dropwort, although there has been no record of observed occurrence of either of these species.

To confirm the presence or absence of these species, further investigation in the form of intensive pedestrian surveys would be required in all areas of suitable habitat. For plant species, surveys should be conducted to coincide with their respective flowering periods when they are most conspicuous.

Thank you for allowing us to conduct this important work for you. If we may be of further assistance, or if you have questions, please call (843) 871-5383.

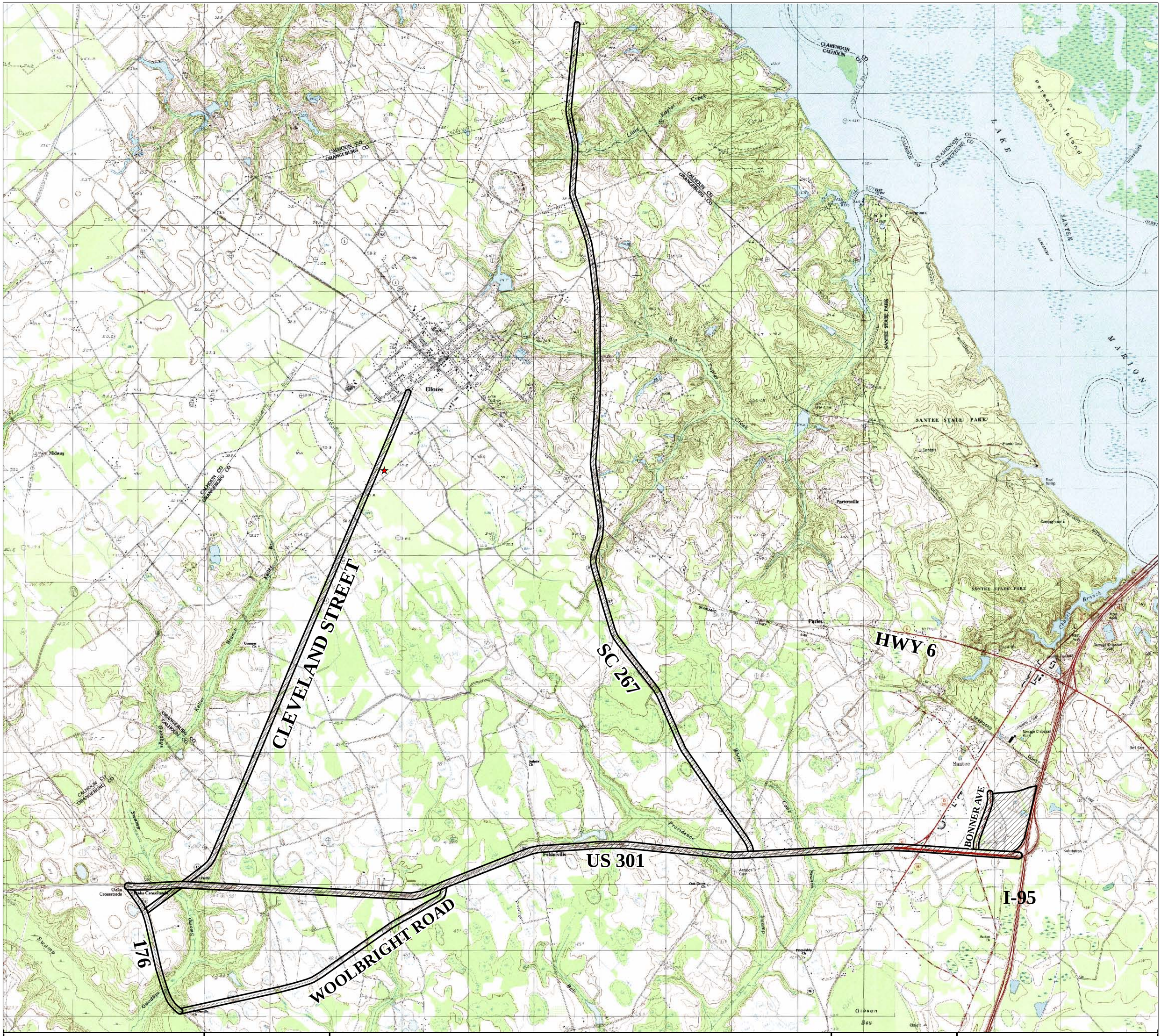
Exhibit D.7
3 of 4

Sincerely,

Ryan M. Wenzel
Staff Ecologist

Enclosure

R:\custdat\ERC\Goodby'sWWRS\PSSRECON



Disclaimer: This map is a graphic respresentation of data obtained from various sources. All efforts have been made to warrant the accuracy of this map. However, Sabine & Waters, Inc. disclaims all responsibility and liability for the use of this map.

Created By: Matthew T Zielke - gis@sabinc.net
Date Created: August 4, 2008

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PROTECTED SPECIES RECONNAISSANCE LOCATION MAP
GOODBY'S WASTEWATER ROUTE SURVEY
ORANGEBURG & CALHOUN COUNTY, SC

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Exhibit D.7
4 of 4

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LEGEND

- CORRIDOR & PARCEL SEGMENTS
- ★ R C W

Appendix E

Francis Marion and Sumter National Forests

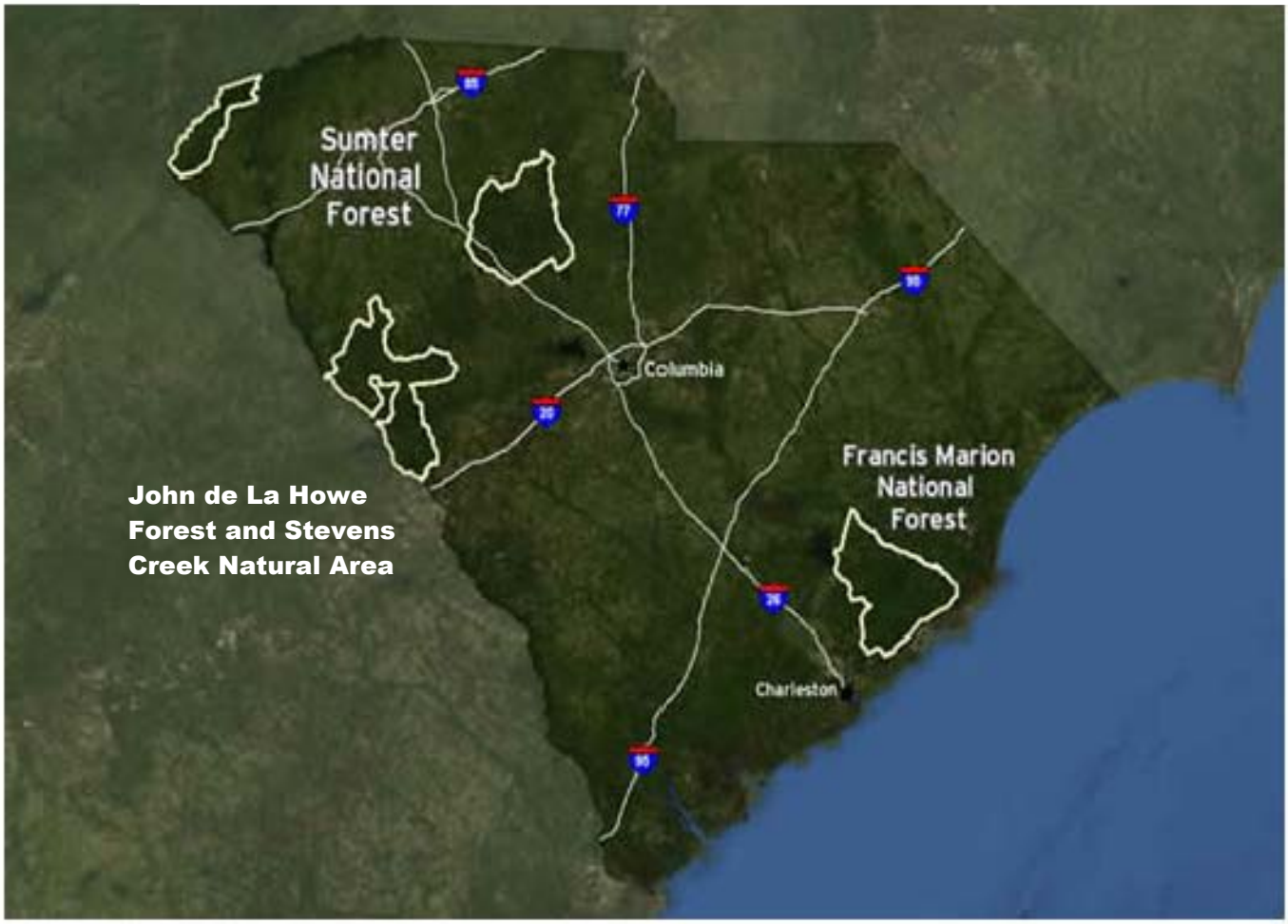

Exhibit E.1

nps.gov

National Park Service
U.S. Department of the Interior

South Carolina

South Carolina is home to primeval forests and cultural sites preserving the his
independence, abolition of slavery, and the clash of cultures.

Related Resources | The NPS in SC

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Exhibit E.2 (1)

History & Culture | Nature & Science | For Kids & Teachers

Charles Pinckney National Historic Site - Mt. Pleasant, SC

Charles Pinckney was a principal author and a signer of the United States Constitution. This remnant of his coastal plantation is preserved to tell the story of a "forgotten founder," his life of public service, the lives of enslaved African Americans on South Carolina Lowcountry plantations and their influences on Charles Pinckney.

Directions, **Operating Hours & Seasons**, **Fees & Reservations**

Congaree National Park - Hopkins, SC

Welcome to the largest remnant of old-growth floodplain forest remaining on the continent! Experience national and state champion trees, towering to record size amidst astonishing biodiversity. Walk, paddle or just relax within this dynamic floodplain ecosystem. Beauty and tranquility reign supreme in the midst of this natural treasure.

Directions, **Operating Hours & Seasons**, **Fees & Reservations**

Cowpens National Battlefield - Chesnee, SC

"... our success was complete... " Daniel Morgan to Nathanael Greene, January 19, 1781 A pasturing area at the time of the battle, this Revolutionary War site commemorates the place where Daniel Morgan and his army turned the flanks of Banastre Tarleton's British army. This classic military tactic, known as a double envelopment, was one of only a few in history.

Directions, **Operating Hours & Seasons**, **Fees & Reservations**

Fort Sumter National Monument - Charleston Harbor, SC

Decades of growing strife between North and South erupted in civil war on April 12, 1861, when Confederate artillery opened fire on this Federal fort in Charleston Harbor. Fort Sumter surrendered 34 hours later. Union forces would try for nearly four years to take it back.

Directions, **Operating Hours & Seasons**, **Fees & Reservations**

Gullah / Geechee Cultural Heritage Corridor - FL,GA,NC,SC

Exhibit E.2 (2)

Designated by Congress in 2006, the Gullah/Geechee Cultural Heritage Corridor extends from Wilmington, N.C. in the north to Jacksonville, Fl. in the south. It is home to one of America's most unique cultures, a tradition first shaped by captive Africans brought to the southern United States from West Africa and continued in later generations by their descendents.

Directions, **Operating Hours & Seasons**, **Fees & Reservations**

Kings Mountain National Military Park - Blacksburg, SC

Thomas Jefferson called it "The turn of the tide of success." The battle of Kings Mountain, fought October 7th, 1780, was an important American victory during the Revolutionary War. The battle was the first major patriot victory to occur after the British invasion of Charleston, SC in May 1780. The park preserves the site of this important battle.

Directions, **Operating Hours & Seasons**, **Fees & Reservations**

Ninety Six National Historic Site - Ninety Six, SC

Here settlers struggled against the harsh backcountry to survive, Cherokee Indians hunted and fought to keep their land, two towns and a trading post were formed and abandoned to the elements, and two Revolutionary War battles that claimed over 100 lives took place here.

Directions, **Operating Hours & Seasons**, **Fees & Reservations**

Overmountain Victory National Historic Trail - NC,SC,TN,VA

The Overmountain Victory National Historic Trail travels through VA, TN, NC & SC, retracing the route of patriot militia as they tracked down the British. Eventually the two forces clashed, ending in patriot victory at the battle of Kings Mountain. The trail is still under development through partnerships, but the public has many places to visit and walk today.

Directions, **Operating Hours & Seasons**, **Fees & Reservations**

South Carolina National Heritage Corridor - Edgefield, SC

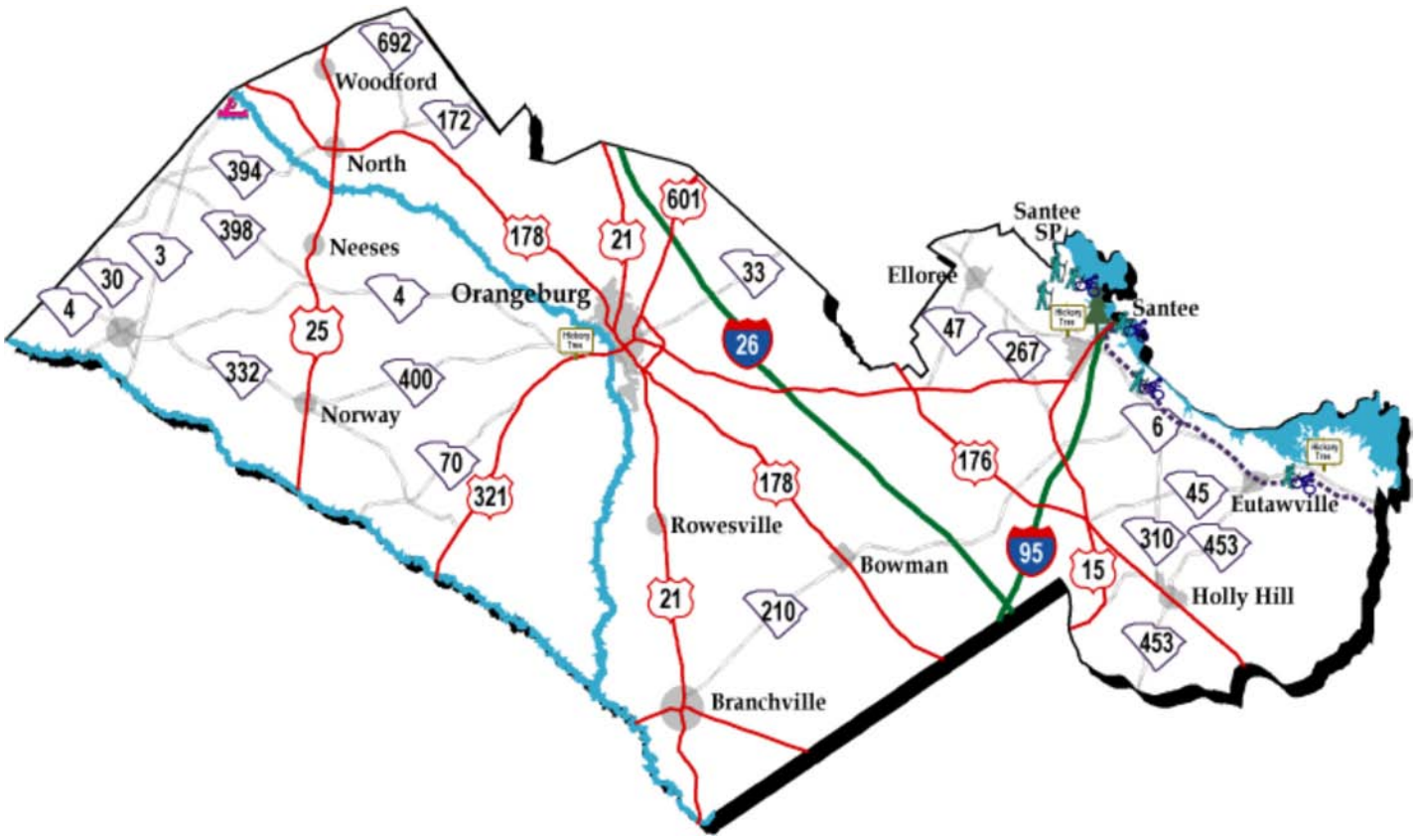
Exhibit E.2 (3)

Discover rice and indigo, pirates and patriots, slaves and freemen, cotton fields and mill villages, swamps and waterfalls, and spirituals and bluegrass by traveling through the South Carolina National Heritage Corridor. From Table Rock Mountain to the wharves of McClellanville, the Heritage Corridor is a setting of southern history and life style that is alive and accessible. more...

Directions, **Operating Hours & Seasons**, **Fees & Reservations**

Exhibit E.2 (4)

Trails Map
Orangeburg County



Point to an icon within the map for the trail name, then click for information about the trail. Depending on which browser you are using, the trail name may be displayed at the icon, or in the lower left of your screen.

South Carolina State Trails Program
South Carolina Department of Parks, Recreation and Tourism
1205 Pendleton Street :: Columbia, SC 29201 :: 803-734-0173

Updated: June 21, 2006

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Exhibit E.3

Search

National Wild & Scenic Rivers

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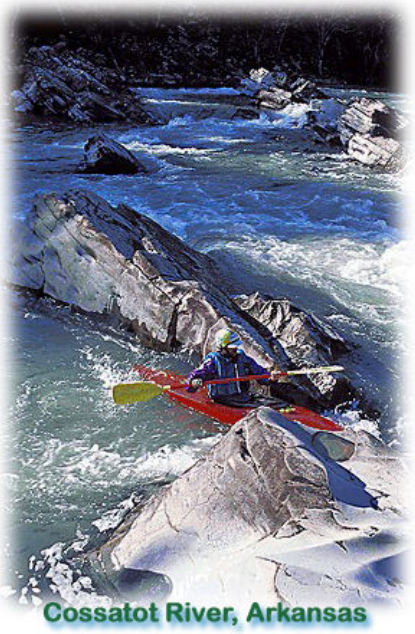
Designated Wild & Scenic Rivers

Select State Go

Rivers that pass through several states may have segments in each state designated. For example, the Klamath River has designations in California and Oregon. Many rivers also have numerous tributaries designated (e.g., Washington's Skagit River). Multiple listings of some rivers indicate more than one segment of the river is designated (e.g., the Missouri River in Nebraska).


Cossatot River, Arkansas

Alabama

- Black Warrior River (Sipsey Fork)

Top of the Page

Alaska

- Alagnak River — National Park Service Site
- Alatna River
- Andreafsky River
- Aniakchak River
- Beaver Creek — Bureau of Land Management Site
- Birch Creek — Bureau of Land Management Site
- Charley River — National Park Service Site
- Chilikadrotna River
- Delta River — Bureau of Land Management Site
- Fortymile River — Bureau of Land Management Site
- Gulkana River— Bureau of Land Management Site
- Ivishak River
- John River
- Kobuk River
- Koyukuk River (North Fork)
- Mulchatna River
- Noatak River
- Nowitna River
- Salmon River
- Selawik River
- Sheenjek River
- Tinayguk River
- Tlikakila River
- Unalakleet River — Bureau of Land Management Site
- Wind River

Top of the Page

Arizona

- Fossil Creek
- Verde River — U.S. Forest Service Site

Top of the Page

Arkansas

- Big Piney Creek
- Buffalo River
- Cossatot River
- Hurricane Creek
- Little Missouri River
- Mulberry River
- North Sylamore Creek
- Richland Creek

Exhibit E.4 (1)

- Clarion River
- Delaware River (Lower) (See also New Jersey)
- Delaware River (Middle) (See also New Jersey) — National Park Service Site
- Delaware River (Upper) (See also New York) — National Park Service Site
- White Clay Creek (See also Delaware)

Top of the Page

Puerto Rico

- Rio Mameyes — U.S. Forest Service Site
- Rio de la Mina — U.S. Forest Service Site
- Rio Icacos — U.S. Forest Service Site

Top of the Page

South Carolina

- Chattooga River (See also Georgia, North Carolina) — U.S. Forest Service Site, Chattooga Net

Top of the Page

South Dakota

- Missouri River (See also Nebraska) — National Park Service Site
- Missouri River (See also Nebraska) — National Park Service Site

Top of the Page

Tennessee

- Obed River — National Park Service Site

Top of the Page

Texas

- Rio Grande — National Park Service Site, Rio Grande in Big Bend National Park

Top of the Page

Utah

- Virgin River Tributaries

Top of the Page

Washington

- Klickitat River
- Skagit River — U.S. Forest Service Site
- White Salmon River

Top of the Page

West Virginia

- Bluestone River — National Park Service Site

Top of the Page

Wisconsin

- St. Croix River (Lower) (See also Minnesota) — National Park Service Site
- St. Croix River (Upper) (See also Minnesota) — National Park Service Site
- St. Croix River (Lower) (See also Minnesota)
- Wolf River

Top of the Page

Wyoming

- Snake River Headwaters
- Yellowstone River (Clarks Fork)

Exhibit E.4 (2)

Top of the Page

Other Data

- Printable table of the National Wild &: Scenic Rivers System (PDF — Print as landscape).
- Instructions for the National Atlas Wild & Scenic Rivers Site (PDF).
- GIS shape files of the National Wild & Scenic Rivers System (270 KB Self-Extracting Zipped File).

Top of the Page

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National Wild & Scenic Rivers

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Exhibit E.4 (3)

South Carolina Segments

Jeff Duncan
National Park Service
Rivers, Trails & Conservation Assistance
175 Hamm Rd. Suite C
Chattanooga, TN 37405
(423) 987-6127

Authorizations / History / Eligibility Descriptions / Outstandingly Remarkable Values / Potential Classification / Wild and Scenic Rivers System

Return to NRI Page

River	County	Reach	Length (miles)	Year Listed/ Updated	Potential Classification	ORVs	Description	Other States
Ashepoo and Jones Swamp Creek	Colleton	RM 0, Atlantic Ocean, to RM 62, headwaters approximately 12 miles above Walterboro	62	1982		S, R, G, F, W, H, C	Excellent example of coastal marshland stream; exceptional wildlife, including endangered bald eagle and osprey.	
Black River	Georgetown, Williamsburg, Clarendon	RM 0, confluence with Pee Dee River, to RM 94, junction of Black River Swamp and Pocotaligo River	94	1982		S, R, G, F, W, H, C	Southern blackwater stream with limestone bluffs and numerous buttressed tree species; oxbow lakes and white sand bars.	
Broad River	Richland, Newberry, Fairfield	RM 8, northeast boundary of Harbison	18	1982		S, R, G, F, W, H, C	Excellent float stream with high scenic values and	

Exhibit E.5 (1)

		State Forest, to RM 26, Parr Shoals Dam					unlimited recreational potential.	
Broad River	Fairfield, Chester, Newberry, Cherokee, York, Union	RM 37, above Parr Shoals Dam, to RM 96, Cherokee Falls	59	1982		S, R, G, F, W, H, C	See initial comments.	
Catawba River	Chester, Lancaster, York	RM 27, above Fishing Creek Reservoir, to RM 56, Lake Wylie	29	1982		S, R, G, F, W, H, C	Scenic whitewater reach that flows through valley trough rich in flora and history; Carolina gneiss exposures.	
Chauga and Taylor Creek	Oconee	RM 6, one mile below SC 74 bridge, to RM 37, headwaters three miles north of Oconee State Park	31	1982		S, R, G, F, W	Popular upcountry mountain stream with class I-III rapids; rock gardens and deep gorge areas similar to Chattooga River; flows through Sumter National Forest; excellent trout fishery.	
Combahee River	Beaufort, Colleton, Hampton	Rm 3, Coosaw River junction, to RM 48, Horse Pen Branch junction	45	1982		S, R, F, W, H, C	Remote and secluded coastal plain stream; clear cypress-stained water; magnificent forested corridor area.	
Congaree River	Calhoun, Richland, Lexington	RM 0, confluence with Wateree and Santee Rivers, to RM 40, Congaree Creek junction below Caycee	40	1982		S, R, G, F, W, H, C	Designated first State Scenic River; popular float stream and fishery; borders Congaree National Monument.	
Coosawatchie River	Jasper, Hampton	RM 7, I-95 bridge, to RM 35, SC 69 bridge	28	1982		S, R, F, W, H, C	Excellent water quality; good fishery; abundance of	

Exhibit E.5 (2)

							wildlife including American Alligator, Southern Bald Eagle, and Red-Cockaded Woodpecker; recorded prehistoric sites.	
Edisto and South Fork	Charleston, Colleton, Dorchester, Bamberg, Orangeburg, Barnwell, Aiken, Edgefield	RM 0, St. Helena Sound, to RM 178, Beech Creek junction	178	1982		S, R, G, F, W, H, C	Excellent example of blackwater stream with tupelo-cypress swamps; lengthy reaches of wilderness; supports good game fishery.	
Edisto River, North Fork	Orangeburg, Aiken, Lexington	RM 0, confluence with Edisto River, to RM 54, SC 278/75 bridge	54	1982		S, R, G, F, W	Typical blackwater stream with tupelo-cypress swamps; supports excellent game fishery.	
Enoree River	Newberry, Union, Laurens, Spartanburg, Greenville	RM 0, confluence with Broad River, to RM 98, headwaters approximately two miles west of US 25 bridge	98	1982		S, R, G, F, W, H, C	Abundance and variety of game species; unique flora; segment designated State Canoe Trail; flows through Sumter National Forest.	
Fair Forest Creek	Union	RM 0, confluence with Tyger River, to RM 23, Spartanburg County line	23	1982		S, R, G, F, W	Excellent waterfowl and wildlife habitat.	
Four Hole Swamp	Dorchester, Berkeley, Orangeburg	RM 0, confluence with Edisto River, to RM 45, one mile above US 301 bridge	45	1982		S, R, F, W, H, C	Penetrates Francis Beidler Forest containing some 1800 acres of virgin cypress and associated rare species; three recorded prehistoric sites in	

Exhibit E.5 (3)

							Dorchester County.	
Little Pee Dee River	Marion, Horry, Dillon	RM 0, confluence with Pee Dee River, to RM 83, SC 57 bridge	83	1982		S, R, F, W, H, C	Low country blackwater river with many reaches of remote swampland and pristine cypress forests; sandy beaches; plentiful waterfowl.	
Little Salkehatchie River	Colleton, Bamberg	RM 0, confluence with Salkehatchie River, to RM 30, approximately two miles above US 601 bridge	30	1982		S, R, F, W	Typical meandering blackwater swamp drainage stream with numerous channels.	
Lumber River	Marion, Horry, Dillon	RM 0, confluence with Pee Dee River, to RM 14, NC State line	14	1982		S, R, F, W, H, C	Forested, swampy floodplain rich in wildlife, including Swainsons Warbler and Red-Cockaded Woodpecker; excellent fishery; of Revolutionary War significance.	
Lynches River	Florence, Sumter, Lee, Darlington, Kershaw, Chesterfield	RM 0, confluence with Pee Dee River, to RM 129, SC 903 bridge	129	1982		S, R, G, F, W	Scenic and secluded coastal plain stream with stretches of whitewater; lush vegetation and dense forests.	
New River and Great Swamp	Beaufort, Jasper	RM 0, Claiborne Sound, to RM 37, I-95 bridge	37	1982		S, R, F, W, H, C	Coastal marshland stream; relatively undeveloped corridor area; abundance of wildlife.	
North Santee River	Georgetown	RM 0, confluence with Santee River, to RM 18, junction of	18	1982		S, R, G, F, W, H, C	Slow moving shallow swamp stream with natural corridor and	

Exhibit E.5 (4)

		Wadmacon Creek					diversity of flora and fauna.	
Pee Dee River	Georgetown, Horry, Marion, Florence, Dillon, Darlington, Marlboro, Chesterfield	RM 0, Atlantic Ocean, to RM 166, NC State line	166	1982		S, R, G, F, W, H, C	Flows through lowland swamps, scenic bluffs; numerous oxbow lakes and sandbars; abundance of wildlife.	
Salkehatchie River	Hampton, Allendale, Bamberg, Barnwell	RM 0, confluence with Combahee River, to RM 41, SC 70 bridge	41	1982		S, R, F, W, H, C	Dense bottomland hardwoods; excellent game fishery and abundance of wildlife.	
Saluda River	Richland, Lexington	RM 3, above Columbia, to RM 10, Lake Murray Dam	7	1982		S, R, G, F, W, H, C	Affords scenic wilderness experience in urban areas; diversified flora and fauna.	
Santee and South Santee	Charleston, Georgetown, Berkeley, Williamsburg, Clarendon	RM 0, Atlantic Ocean, to RM 77, Wilson Dam and Lake Marion	77	1982		S, R, G, F, W, H, C	Slow moving shallow swamp stream with natural corridor exhibiting a diversity of flora and fauna; numerous historical and archaeological sites.	
Savannah River	Jasper, Hampton, Allendale, Barnwell, Aiken	RM 20, King's Island, to RM 190, Bush Field near Augusta	170	1982		S, R, G, F, W, H, C	Popular year round for recreational activities; geological sites, including 160 foot high Shell Bluffs; habitat for variety and abundance of wildlife.	GA
Savannah River	Abbeville, Anderson	RM 265, Beer Garden Creek junction, to RM 292, Hartwell Dam	27	1982		S, R, G, F, W, H, C	See initial comments.	GA

Exhibit E.5 (5)

Turkey Creek	McCormick, Edgefield	RM 0, confluence with Stevens Creek, to RM 33, one mile below SC 40 bridge	33	1982		S, R, G, F, W	Relatively undeveloped slow moving stream with year round flow; variety of game; steep scenic bluffs and rock outcroppings; flows through Sumter National Forest.	
Tyger and North Tyger	Newberry, Union, Spartanburg	RM 0, confluence with Broad River, to RM 47, below SC 231/I-26 bridges	47	1982		S, R, G, F, W, H, C	Characterized by sandbars, 40 foot high bluffs, steep rapids and shoals; 250 foot overlooks; whitewater stretches; unique flora and abundant fauna; densely canopied communities in Sumter National Forest.	
Waccamaw River	Georgetown, Horry	RM 0, confluence with Pee Dee River, to RM 75, NC State line	75	1982		S, R, F, W, H, C	Deep blackwater swamp stream characterized by numerous buttressed tree species, predominately cypress draped with Spanish moss; abundance of wildlife.	
Wateree River	Sumter, Calhoun, Richland, Kershaw	RM 0, confluence with Santee River, to RM 69, below Wateree Lake	69	1982		S, R, G, F, W, H, C	Remote, inaccessible coastal plain river with typical floodplain flora species; abundance of fauna.	

Exhibit E.5 (6)

DEAR WEBSITE VISITOR,
Thank you for visiting SouthCarolinaParks.com! You have been randomly selected to take part in our on-line survey. It will only take a moment to complete and your input is essential to us. We use it to continually improve this website for you. Please **click here** to take the survey.

PARK LOCATIONS

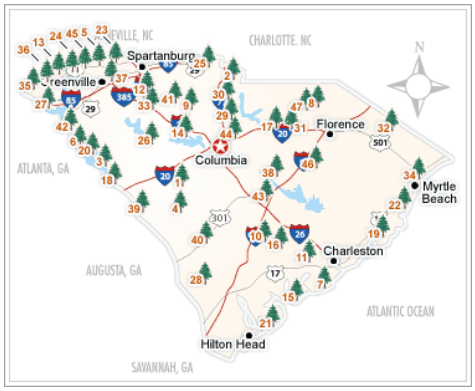
Looking for State Parks with **cabins** or a **recreational lake**; need to find the perfect **meeting location**; want to plan a tour of **South Carolina's State Historic Sites** - use the Park Locator search feature below to locate State Parks of interest to you.

From scenic parks in the Blue Ridge Mountains to recreational lake and Blackwater river parks in the Midlands and white sand beaches and tidal water parks on the Atlantic Ocean, South Carolina State Parks preserve and protect some of the most beautiful natural resources and significant historic sites in America.

The South Carolina **State Parks map** below will help you locate State Parks in the various scenic regions of the Palmetto State.

Hunting Island Lighthouse

South Carolina State Parks



I'm looking for: All Parks

(#1) **Aiken State Natural Area**
(#2) **Andrew Jackson State Park**
(#3) **Baker Creek State Park**
(#4) **Barnwell State Park**
(#5) **Caesars Head State Park/ Mountain Bridge Wilderness Area**
(#6) **Calhoun Falls State Recreation Area**
(#7) **Charles Towne Landing State Historic Site**
(#8) **Cheraw State Park**
(#9) **Chester State Park**
(#10) **Colleton State Park**
(#11) **Colonial Dorchester State Historic Site**
(#12) **Croft State Natural Area**
(#13) **Devils Fork State Park**
(#14) **Dreher Island State Recreation Area**
(#15) **Edisto Beach State Park**
(#16) **Givhans Ferry State Park**
(#17) **Goodale State Park**
(#47) **H. Cooper Black Jr. Memorial Field Trial and Recreation Area**
(#18) **Hamilton Branch State Recreation Area**
(#19) **Hampton Plantation State Historic Site**
(#20) **Hickory Knob State Resort Park**
(#21) **Hunting Island State Park**
(#22) **Huntington Beach State Park**
(#23) **Jones Gap State Park/ Mountain Bridge Wilderness Area**
(#24) **Keowee-Toxaway State Natural Area**
(#25) **Kings Mountain State Park**
(#26) **Lake Greenwood State Recreation Area**
(#27) **Lake Hartwell State Recreation Area**
(#28) **Lake Warren State Park**
(#29) **Lake Wateree State Recreation Area**
(#30) **Landsford Canal State Park**
(#31) **Lee State Natural Area**
(#32) **Little Pee Dee State Park**
(#33) **Musgrove Mill State Historic Site**
(#34) **Myrtle Beach State Park**
(#35) **Oconee State Park**
(#36) **Oconee Station State Historic Site**
(#37) **Paris Mountain State Park**
(#38) **Poinsett State Park**
(#39) **Redcliffe Plantation State Historic Site**
(#40) **Rivers Bridge State Historic Site**
(#41) **Rose Hill Plantation State Historic Site**
(#42) **Sadlers Creek State Recreation Area**
(#43) **Santee State Park**
(#44) **Sesquicentennial State Park**
(#45) **Table Rock State Park**
(#46) **Woods Bay State Natural Area**

Other Items of Interest

A tax professional at Jackson Hewitt Tax Service can help with your donation to SC State Parks.
More

Exhibit E.6 (1)

SC Department of Parks, Recreation & Tourism
1205 Pendleton St
Columbia, SC 29201

Back to Top

South Carolina Vacations | South Carolina Dining | South Carolina State Parks | South Carolina Golf | Girlfriend Getaways | South Carolina Beaches | Reunions in South Carolina | South Carolina PRT | South Carolina Parks 75th Anniversary | South Carolina Junior Rangers Program

Exhibit E.6 (2)

US Fish & Wildlife Service Southeast Reg

South Carolina

LEGEND						
National Wildlife Refuges	Migratory Bird Field Station	Law Enforcement Offices LE Port	National Fish Hatcheries	Fish Resource Coordinators Offices	Ecological Services	Realty Offices

South Carolina Field Offices

ACE Basin NWR
Carolina Sandhills NWR
Cape Romain NWR
Pinckney Island NWR
Santee NWR
Bears Bluff NFH
Orangeburg NFH
ES Charleston
ES Clemson
LE (Charleston)

Exhibit E.7

National Wildernesses in SC Map

Exhibit E.8

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond Goodbys Regional Wastewater Treatment Plant (WWTP) Site (Property Known as Orangeburg County Tax Map No. 0265-00-01-038)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N/A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 275B	Unincorporated Orangeburg Co.	SC	450160 0275 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal Flood Insurance is available (Community participates in NFIP). ☐ Regular Program ☐ Emergency Program of NFIP
2. ☐ Federal Flood Insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for regional wastewater treatment facility in conjunction with a public wastewater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Robert "Bob" M. Freeman, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC 29202 (803) 779-2078	August 6, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond Sander Pointe Farm Land Application Site (Property Known as Orangeburg County Tax Map No. 0265-00-02-034)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N/A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 275B	Unincorporated Orangeburg Co.	SC	450160 0275 B

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	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal Flood Insurance is available (Community participates in NFIP). ☐ Regular Program ☐ Emergency Program of NFIP
2. ☐ Federal Flood Insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for land application of treated wastewater effluent in conjunction with a public wastwater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Robert "Bob" M. Freeman, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC 29202 (803) 779-2078	August 6, 2010

FEMA Form 81-93 DEC 08

Exhibit E.10

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond I-95 & US 15 Highway Wastewater Pumping Station Site (Property Known as Orangeburg County Tax Map No. 0310-00-05-008)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N/A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 275B	Unincorporated Orangeburg Co.	SC	450160 0275 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

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CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for a wastewater pumping station in conjunction with a public wastwater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Robert "Bob" M. Freeman, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC 29202 (803) 779-2078	August 6, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond I-95 & US 176 Highway Wastewater Pumping Station Site (Property Known as Orangeburg County Tax Map No. 0298-00-06-001)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N/A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 275B	Unincorporated Orangeburg Co.	SC	450160 0275 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

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	December 16, 1980	☐ YES Date	Zone C	

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CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for a wastewater pumping station in conjunction with a public wastwater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Robert "Bob" M. Freeman, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC 29202 (803) 779-2078	August 6, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond Tee Vee Road / County Line Pumping Station Site (see site location map 2 of 2)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N / A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 0150B	Unincorporated Orangeburg Co.	SC	450160 0150 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

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CBRA/OPA Designation Date: _____

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IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed Site for a wastewater pumping station in conjunction with a public wastewater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Stewart M. Hill, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC, 29202 (803) 779-2078	October 7, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond Elloree Wastewater Treatment Plant Pumping Station Site (see site location map page 2 of 2)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N / A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 150B	Unincorporated Orangeburg Co.	SC	450160 0150 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal Flood Insurance is available (Community participates in NFIP). ☐ Regular Program ☐ Emergency Program of NFIP
2. ☐ Federal Flood Insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for a wastewater pumping station in conjunction with a public wastewater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Stewart M. Hill, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC, 29202 (803) 779-2078	October 7, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond Tee Vee Road / Hwy 6 Pumping Station Site (see site location map page 2 of 2)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N / A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 150B	Unincorporated Orangeburg Co.	SC	450160 0150 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal Flood Insurance is available (Community participates in NFIP). ☐ Regular Program ☐ Emergency Program of NFIP
2. ☐ Federal Flood Insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for a wastewater pumping station in conjunction with a public wastewater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Stewart M. Hill, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC, 29202 (803) 779-2078	October 7, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond Jafza Pumping Station Site (see site location map page 1 of 2)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N / A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 175B	Unincorporated Orangeburg Co.	SC	450160 0175 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal Flood Insurance is available (Community participates in NFIP). ☐ Regular Program ☐ Emergency Program of NFIP
2. ☐ Federal Flood Insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for a wastewater pumping station in conjunction with a public wastewater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Stewart M. Hill, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC, 29202 (803) 779-2078	October 7, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond White Cane Branch Pumping Station Site (see site location map page 1 of 2)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N / A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 175B	Unincorporated Orangeburg Co.	SC	450160 0175 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal Flood Insurance is available (Community participates in NFIP). ☐ Regular Program ☐ Emergency Program of NFIP
2. ☐ Federal Flood Insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for a wastewater pumping station in conjunction with a public wastewater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Stewart M. Hill, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC, 29202 (803) 779-2078	October 7, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond Providence Swamp Pumping Station Site (see site location map page 1 of 2)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N / A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 175B	Unincorporated Orangeburg Co.	SC	450160 0175 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal Flood Insurance is available (Community participates in NFIP). ☐ Regular Program ☐ Emergency Program of NFIP
2. ☐ Federal Flood Insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for a wastewater pumping station in conjunction with a public wastewater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Stewart M. Hill, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC, 29202 (803) 779-2078	October 7, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond Felderville Pumping Station Site (see site location map page 1 of 2)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N / A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 150B	Unincorporated Orangeburg Co.	SC	450160 0150 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal Flood Insurance is available (Community participates in NFIP). ☐ Regular Program ☐ Emergency Program of NFIP
2. ☐ Federal Flood Insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for a wastewater pumping station in conjunction with a public wastewater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Stewart M. Hill, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC, 29202 (803) 779-2078	October 7, 2010

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANDARD FLOOD HAZARD DETERMINATION FORM (SFHDF)

See The Attached Instructions

O.M.B. No. 1660-0040
Expires December 31, 2011

SECTION I - LOAN INFORMATION

1. LENDER NAME AND ADDRESS	2. COLLATERAL (Building/Mobile Home/Personal Property) PROPERTY ADDRESS (Legal Description may be attached)
United States Department of Agriculture-Rural Development Office Aiken Office of South Carolina 1555 East Richland Avenue Room 100 Aiken, SC 29801	Statutory Lean by virtue of a Revenue Bond Woolbright Road Pumping Station Site (see site location map page 1 of 2)

3. LENDER ID NO.	4. LOAN IDENTIFIER	5. AMOUNT OF FLOOD INSURANCE REQUIRED
	Orangeburg County Wastewater System	N / A

SECTION II

A. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) COMMUNITY JURISDICTION

1. NFIP Community Name	2. County(ies)	3. State	4. NFIP Community Number
FEMA Flood Map Catalog Panel No. 275B	Unincorporated Orangeburg Co.	SC	450160 0275 B

B. NATIONAL FLOOD INSURANCE PROGRAM (NFIP) DATA AFFECTING BUILDING/MOBILE HOME

1. NFIP Map Number or Community-Panel Number (Community name, if not the same as "A")	2. NFIP Map Panel Effective/ Revised Date	3. LOMA/LOMR	4. Flood Zone	5. No NFIP Map
	December 16, 1980	☐ YES Date	Zone C	

C. FEDERAL FLOOD INSURANCE AVAILABILITY (Check all that apply)

1. ☒ Federal Flood Insurance is available (Community participates in NFIP). ☐ Regular Program ☐ Emergency Program of NFIP
2. ☐ Federal Flood Insurance is not available because community is not participating in the NFIP.
3. ☐ Building/Mobile Home is in a Coastal Barrier Resources Area (CBRA) or Otherwise Protected Area (OPA). Federal Flood Insurance may not be available.

CBRA/OPA Designation Date: _____

D. DETERMINATION

IS BUILDING/MOBILE HOME IN SPECIAL FLOOD HAZARD AREA (ZONES CONTAINING THE LETTERS "A" OR "V")? ☐ **YES** ☒ **NO**

If yes, flood insurance is required by the Flood Disaster Protection Act of 1973.
If no, flood insurance is not required by the Flood Disaster Protection Act of 1973.

E. COMMENTS (Optional)

Proposed site for a wastewater pumping station in conjunction with a public wastewater system.

This determination is based on examining the NFIP map, any Federal Emergency Management Agency revisions to it, and any other information needed to locate the building/mobile home on the NFIP map.

F. PREPARER'S INFORMATION

NAME, ADDRESS, TELEPHONE NUMBER (If other than Lender)	DATE OF DETERMINATION
Mr. Stewart M. Hill, E.I.T., Engineering Associate Alliance Consulting Engineers, Inc. P.O. Box 8147, Columbia, SC, 29202 (803) 779-2078	October 7, 2010

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

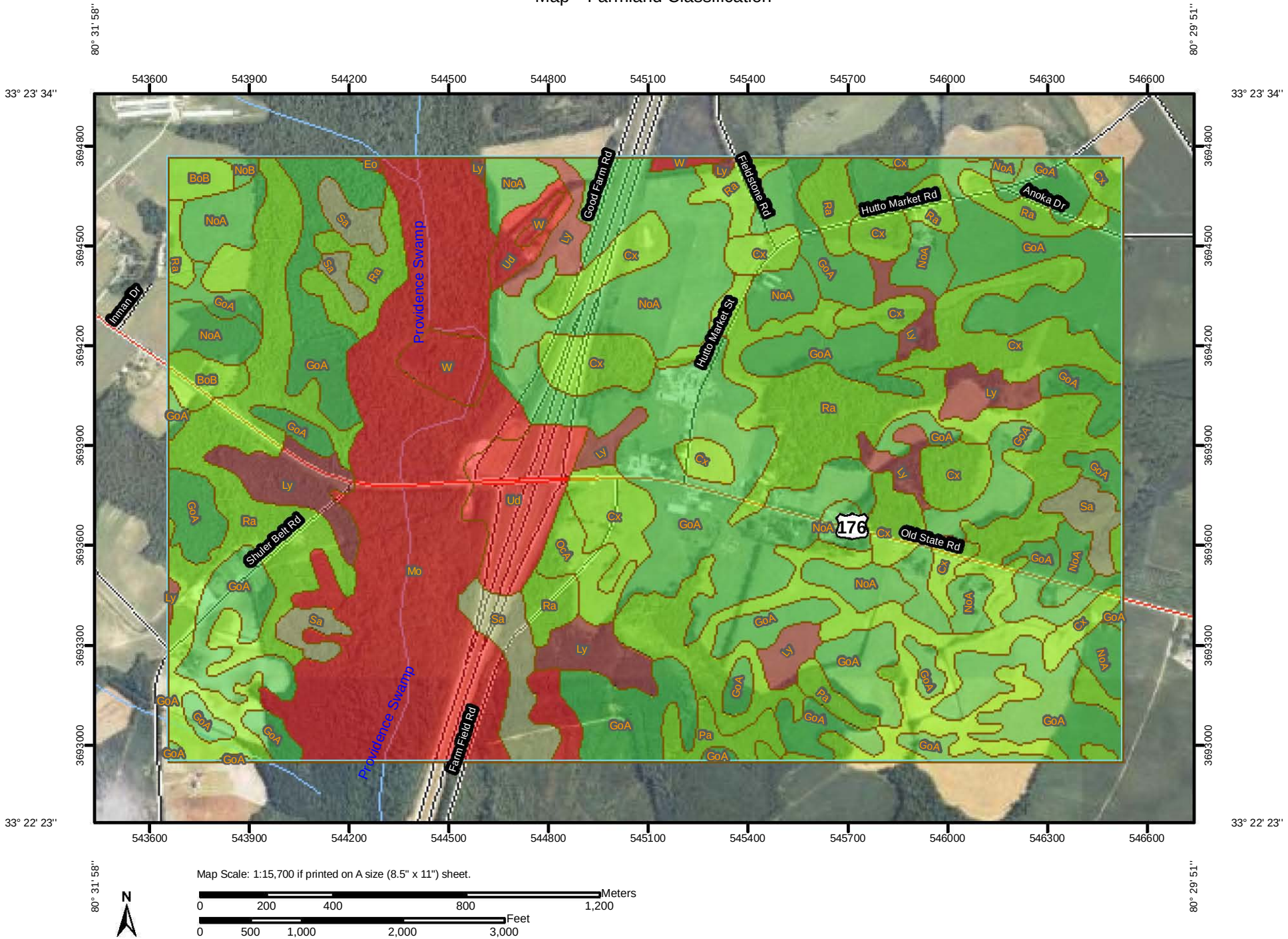
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report
Map—Farmland Classification



Map Scale: 1:15,700 if printed on A size (8.5" x 11") sheet.

N

Meters
0 200 400 800 1,200

Feet
0 500 1,000 2,000 3,000

Exhibit E.21 (2)

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Soil Ratings

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Political Features

- Cities

Water Features

- Oceans
- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:15,700 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Orangeburg County, South Carolina
Survey Area Data: Version 8, Feb 9, 2010

Date(s) aerial images were photographed: 6/17/2006; 6/11/2006; 6/9/2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Farmland Classification

Farmland Classification— Summary by Map Unit — Orangeburg County, South Carolina				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
BoB	Bonneau sand, 0 to 4 percent slopes	Farmland of statewide importance	13.1	1.0%
Cx	Coxville sandy loam	Farmland of statewide importance	121.3	9.4%
Eo	Elloree loamy sand	Not prime farmland	0.6	0.0%
GoA	Goldsboro sandy loam, 0 to 2 percent slopes	All areas are prime farmland	371.8	28.9%
Ly	Lynchburg fine sandy loam	Prime farmland if drained	67.3	5.2%
Mo	Mouzon fine sandy loam	Not prime farmland	184.3	14.3%
NoA	Noboco loamy sand, 0 to 2 percent slopes	All areas are prime farmland	130.4	10.1%
NoB	Noboco loamy sand, 2 to 6 percent slopes	All areas are prime farmland	1.6	0.1%
OcA	Ocilla loamy sand, 0 to 2 percent slopes	Farmland of statewide importance	11.7	0.9%
Pa	Pantego fine sandy loam	Farmland of statewide importance	13.5	1.1%
Ra	Rains sandy loam	Farmland of statewide importance	282.2	21.9%
Sa	Stallings loamy sand	Prime farmland if protected from flooding or not frequently flooded during the growing season	38.9	3.0%
Ud	Udorthents, loamy	Not prime farmland	36.6	2.8%
W	Water	Not prime farmland	14.3	1.1%
Totals for Area of Interest			**1,287.6**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Prime and other Important Farmlands (IA)

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to

water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands (IA)

Prime farmland Land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. (7U.S.C. 4201(c)(1)(A)) Additional Farmland of Statewide Importance All additional land of Land Capability Class I, II, III, or IV that does not meet the definition of Prime Farmland.

Prime and other Important Farmlands (IA)– Orangeburg County, South Carolina		
Map Symbol	**Map Unit Name**	**Farmland Classification**
BoB	Bonneau sand, 0 to 4 percent slopes	Farmland of statewide importance

Prime and other Important Farmlands (IA)– Orangeburg County, South Carolina		
Map Symbol	**Map Unit Name**	**Farmland Classification**
Cx	Coxville sandy loam	Farmland of statewide importance
Eo	Elloree loamy sand	Not prime farmland
GoA	Goldsboro sandy loam, 0 to 2 percent slopes	All areas are prime farmland
Ly	Lynchburg fine sandy loam	Prime farmland if drained
Mo	Mouzon fine sandy loam	Not prime farmland
NoA	Noboco loamy sand, 0 to 2 percent slopes	All areas are prime farmland
NoB	Noboco loamy sand, 2 to 6 percent slopes	All areas are prime farmland
OcA	Ocilla loamy sand, 0 to 2 percent slopes	Farmland of statewide importance
Pa	Pantego fine sandy loam	Farmland of statewide importance
Ra	Rains sandy loam	Farmland of statewide importance
Sa	Stallings loamy sand	Prime farmland if protected from flooding or not frequently flooded during the growing season
Ud	Udorthents, loamy	Not prime farmland
W	Water	Not prime farmland

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ARTICLE II. FLOOD DAMAGE PREVENTION

DIVISION 1. GENERALLY

Sec. 18-31. Findings of fact.

(a) The flood hazard areas of the county are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(b) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, floodproofed, or otherwise protected from flood damages.

(Code 1983, § 6-1)

Sec. 18-32. Statement of purpose.

It is the purpose of this article to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

(1) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion or in flood heights or velocities;

(2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(3) Control the alternation of natural floodplains, stream channels and natural protection barriers which are involved in the accommodation of floodwaters;

(4) Control filling, grading, dredging and other development which may increase erosion or flood damage; and

(5) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

(Code 1983, § 6-2)

Sec. 18-33. Objectives.

The objectives of this article are to:

(1) Protect human life and health.

(2) Minimize expenditure of public money for costly flood control projects.

(3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.

(4) Minimize prolonged business interruptions.

(5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains.

(6) Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas.

(7) Ensure that potential home buyers are notified that property is in a flood area.

(Code 1983, § 6-3)

Sec. 18-34. Definitions.

Unless specifically defined below, words or phrases used in this article shall be interpreted so as to give them the meaning they have in common usage and to give this article its most reasonable application.

Appeal means a request for a review of the director of public works' interpretation of any provision of this article or a request for a variance.

Area of shallow flooding means a designated AO or VO zone on a community's flood insurance rate map (FIRM) with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of special flood hazard means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

Base flood means the flood having a one percent chance of being equaled or exceeded in any given sides.

Basement means that portion of a building having its floor subgrade, below ground level, on all sides.

Development means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.

Elevated building means a nonbasement building, built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers), shear walls or breakaway walls.

Existing manufactured home park or manufactured home subdivision means a parcel, or contiguous parcels, of land divided into two or more manufactured home lots for rent or sale for which the construction of facilities for servicing the lot on which the manufactured home is to be affixed, including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads and the construction of streets, was completed before January 5, 1981.

Expansion to an existing manufactured home park or manufactured home subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including the installation of utilities, either final site grading or pouring of concrete pads, or the construction of streets.

Flood or *flooding* means a general and temporary condition of partial or complete inundation or normally dry land areas from:

(1) The overflow of inland or tidal waters.

(2) The unusual and rapid accumulation or runoff of surface waters from any source.

Flood hazard boundary map (FHBM) means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been designated as zone A.

Flood insurance rate map (FIRM) means an official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

Flood insurance study means the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the flood hazard boundary floodway map and the water surface elevation of the base flood.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Floor means the top surface of an enclosed area in a building, including basement, i.e., top of slab in concrete slab construction or top of wood flooring in wood frame construction. The term does not include the floor or a garage used solely for parking vehicles.

Functionally dependent facility means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair, or seafood processing facilities. The term does not include longterm storage, manufacture, sales or service facilities.

Highest adjacent grade means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a building.

Historic structure means any structure that is:

(1) Listed individually in the National Register of Historic Places, a listing maintained by the Department of Interior, or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

(2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary of the Interior to qualify as a registered historic district;

(3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or

(4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

a. By an approved state program as determined by the Secretary of the Interior; or

b. Directly by the Secretary of the Interior in states without approved programs.

Lowest floor means the lowest floor of the lowest enclosed area. Any unfinished or flood-resistant enclosure, usable solely for parking of vehicles, build access, or storage in an area other than a basement area is not considered a building's lowest floor, provided that such an enclosure is not built so as to render the structure in violation of other provisions of this chapter.

Manufactured home means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. It does not include recreational vehicles or travel trailers unless they are placed on a site for over 180 consecutive days or longer and intended to be improved property.

Manufactured home park or subdivision means a parcel or, if owned by the same person, contiguous parcels of land, divided into two or more manufactured home lots for rent or sale.

Mean sea level means the average height of the area for all stages of the tide. Mean sea level datum shall be used for establishing elevations within a floodplain.

New construction means structures for which the "start of construction" commenced on or after January 5, 1981.

New manufactured home park or manufactured home subdivision means a parcel, or contiguous parcels, of land divided into two or more manufactured home lots for rent or sale for which the construction of facilities for servicing the lot on which the manufactured home is to be affixed, including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads and the construction of streets, was completed on or after January 5, 1981.

Start of construction means (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97-348), includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction or improvement was within 180

days of the permit date. The actual start means the first placement of permanent construction of a structure including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include the excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

Structure means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank, or other manmade facilities or infrastructures.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement means, for a structure built prior to January 5, 1981, any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

(1) Before the improvement of repair is started; or

(2) If the structure has been damaged and is being restored, before the damage occurred.

For purposes of this definition, the term "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either:

(1) Any project for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions; or

(2) Any alteration of a structure listed on the National Register of Historic Places or a state inventory of historic places.

Substantially improved existing manufactured home parks or subdivisions means the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

Variance means a grant of relief to a person from the requirements of this article which permits construction in a manner otherwise prohibited by this article where specific enforcement would result in unnecessary hardship.

(Code 1983, § 6-4; Ord. No. 2009-07-20-05, § I, 7-20-2009)

Cross references: Definitions generally, § 1-2.

Sec. 18-35. Lands to which this chapter applies.

This flood damage prevention ordinance shall apply to all areas of special flood hazard within the jurisdiction of Orangeburg County as identified by the Federal Emergency Management Agency in its Flood Insurance Study, dated June 16, 1980, with accompanying maps and other supporting data that are hereby adopted by reference and declared to be a part of this chapter.

(Code 1983, § 6-5; Ord. No. 2009-07-20-05, § I, 7-20-2009)

Sec. 18-36. Reserved.

Editor's note: Ord. No. 2009-07-20-05, § I, adopted July 20, 2009, deleted § 18-36, entitled "Basis for establishing areas of special flood hazard", and derived from Code 1983, § 6-6.

Sec. 18-37. Establishment of development permit.

A development permit shall be required in conformance with the provisions of this article if the project is located within a floodplain. No on-site development work may be commenced within a floodplain until the permit has been issued.
(Code 1983, § 6-7)

Sec. 18-38. Compliance with article and other regulations required.

No structure or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms or his article and other applicable regulations.
(Code 1983, § 6-8)

Sec. 18-39. Reserved.

Editor's note: Ord. No. 2009-07-20-05, § I, adopted July 20, 2009, deleted § 18-39, entitled "Effect of conflict with other ordinances", and derived from Code 1983, § 6-9.

Sec. 18-40. Interpretation.

In the interpretation and application of this flood damage prevention ordinance, all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit, nor repeal any other powers granted under state law. This chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
(Code 1983, § 6-10; Ord. No. 2009-07-20-05, § I, 7-20-2009)

Sec. 18-41. Warning and disclaimer of liability.

The degree of flood protection required by this article is considered reasonable for regulatory purpose and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This article does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This article shall not create liability on the part of the county or by any officer or employee thereof for any flood damages that result from reliance on this article or any administrative decision lawfully made thereunder.
(Code 1983, § 6-11)

Sec. 18-42. Penalties for violation.

Violation of the provisions of this article or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this article or fails to comply with any of its requirements shall, upon conviction thereof, be subject to punishment as provided in section 1-8, and in addition shall pay all costs and expenses involved in the case.

(Code 1983, § 6-12)
Secs. 18-43--18-60. Reserved.

DIVISION 2. ADMINISTRATION*

***Cross references:** Administration, ch. 2.

Sec. 18-61. Director of planning--Designated to administer article.

The director of planning is hereby appointed to administer and implement the provisions of this article.
(Code 1983, § 6-26; Ord. No. 2009-07-20-05, § I, 7-20-2009)

Sec. 18-62. Same--Duties and responsibilities.

(a) Duties of the director of planning shall include, but not be limited to:
(1) Reviewing all development permits to ensure that the permit requirements of this article have been satisfied.
(2) Advising the permittee that additional federal or state permits may be required and, if specific federal or state permits are known, requiring that copies of such permits be provided and maintained on file with the development permit.
(3) Notifying adjacent communities and the state water resources commission prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
(4) Ensuring that maintenance is provided within the altered or relocated portion of such watercourse so that the flood-carrying capacity is not diminished.
(5) Verifing and recording the actual elevation, in relation to mean sea level, of the lowest floor, including basement, of all new or substantially improved structures. This information to be provided by a registered professional engineer at applicant's expense.
(6) Verifying and recording the actual elevation, in relation to mean sea level, to which the new or substantially improved structures have been floodproofed.
(b) When floodproofing is utilized for a particular structure, the director of planning shall obtain certification from a registered professional engineer or architect at the applicant's expense.
(c) Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazard, for example, where there appears to be a conflict between a mapped boundary and actual field conditions, the director of planning shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
(d) When base flood elevation data has not been provided in accordance with section 18-36, then the director of planning shall obtain, review, and reasonably utilize any base flood elevation data available from a federal, state or other source, in order to administer the provisions of division 3 of this article.
(e) All records pertaining to the provisions of this article shall be maintained in the office of the director of planning and shall be open for public inspection.
(Code 1983, § 6-27; Ord. No. 2009-07-20-05, § I, 7-20-2009)

Sec. 18-63. Permit procedures.

(a) *Application stage.* Application for a development permit shall be made to the director of planning on forms furnished by him and may include, but not be limited to the following plans in duplicate drawn to scale showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures; fill storage of materials; drainage facilities; and the location of the foregoing. Specifically, the following information is required in addition to that required by sections 32-62 and 32-64:

(1) Elevation in relation to mean sea level of the lowest floor, including basement, of all structures.

(2) Elevation in relation to mean sea level to which nonresidential structure has been floodproofed.

(3) Provide a certificate from a registered professional engineer or architect that the nonresidential floodproofed structure meets the floodproofing criteria in section 18-84.

(4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

(b) *Construction stage.* Provide a floor elevation of floodproofing certification after the lowest floor is completed, or in instances where the structure is subject to the regulations applicable to coastal high hazard areas, alter placement of the horizontal structural members of the lowest floor. Upon placement of the lowest floor, or floodproofing by whatever construction means, or upon placement of the horizontal structural members of the lowest floor, whichever is applicable, it shall be the duty of the permit holder to submit to the director of planning a certification of the elevation of the lowest floor, floodproofed elevation or the elevation of the lowest portion of the horizontal structural members of the lowest floor, whichever is applicable, as built, in relation to mean sea level. Such certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by such registered land surveyor or professional engineer. When floodproofing is utilized for a particular building, such certification shall be prepared by or under the direct supervision of a professional engineer and certified by such professional engineer. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The director of planning shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey, or failure to make the corrections required hereby, shall be cause to issue a stop work order for the project.

(Code 1983, § 6-28; Ord. No. 2009-07-20-05, § I, 7-20-2009)

Sec. 18-64. Variance procedures.

(a) The board of zoning appeals as established by the county council shall hear and decide appeals and requests for variances from the requirements of this article.

(b) The board of zoning appeals shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the director of planning in the enforcement or administration of this article.

(c) Any person aggrieved by the decision of the board of zoning appeals, or any taxpayer, may appeal such decision to the court of common pleas.

(d) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the state inventory of historic places without regard to the procedures set forth in the remainder of this section.

(e) In passing upon such applications, the board of zoning appeals shall consider all technical evaluations, all relevant factors, standards specified in other sections of this article, and:
(1) The danger that materials may be swept onto other lands to the injury of others;
(2) The danger to life and property due to flooding or erosion damage;
(3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
(4) The importance of the services provided by the proposed facility to the community;
(5) The necessity to the facility of a waterfront location, where applicable;
(6) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
(7) The compatibility of the proposed use with existing and anticipated development;
(8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
(9) The safety of access to the property in times of flood for ordinary and emergency vehicles;
(10) The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
(11) The cost of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
(f) Upon consideration of the factors listed in subsection (e) of this section and the purposes of this article, the board of zoning appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this article.
(g) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
(h) Conditions for variances shall be as follows:
(1) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
(2) Variances shall only be issued upon:
a. A showing of good and sufficient cause;
b. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
(3) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
(4) The director of planning shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.
(Code 1983, § 6-29; Ord. No. 2009-07-20-05, § I, 7-20-2009)

Sec. 18-65. Administrative procedures.

(a) *Inspections of work in progress.* As the work pursuant to a permit progresses, the director of planning shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the director has a right, upon presentation of proper credentials, to enter on any premises within the territorial

jurisdiction at any reasonable hour for the purposes of inspection or other enforcement action.

(b) *Stop-work orders.* Whenever a building or part thereof is being constructed, reconstructed, altered or repaired in violation of this chapter, the director of planning may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing the work. The stop-work order shall state the specific work to be stopped, the specific reasons for the stoppage, and the conditions under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.

(c) *Revocation of permits.* The director of planning may revoke and require the return of the development permit by notifying the permit holder in writing, stating the reason for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans or specifications; for refusal or failure to comply with the requirements of state or local laws; or for false statements or misrepresentations made in securing the permit. Any permit mistakenly issued in violation of an applicable state or local law may also be revoked.

(d) *Periodic inspections.* The director of planning and each member of his/her inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.

(e) *Violations to be corrected.* When the director of planning finds violations of applicable state and local laws, it shall be his/her duty to notify the owner or occupant of the building of the violation. The owner or occupant shall immediately remedy each of the violations of law on the property he owns.

(f) *Actions in event of failure to take corrective action.* If the owner of a building or property shall fail to take prompt corrective action, the director of planning shall give him written notice, by certified or registered mail to his last known address or by personal service, that:

(1) The building or property is in violation of the flood damage prevention ordinance;

(2) A hearing will be held before the planning director at a designated place and time, not later than ten days after the date of the notice, at which time the owner shall be entitled to be heard in person or by legal counsel and to present arguments and evidence pertaining to the matter; and

(3) Following the hearing, the director of planning may issue such order to alter, vacate or demolish the building; or to remove fill as appears appropriate.

(g) *Order to take corrective action.* If, upon a hearing held pursuant to the notice prescribed above, the director of planning shall find that the building or development is in violation of the flood damage prevention ordinance, he/she shall make an order in writing to the owner, requiring the owner to remedy the violation within such period, not less than 60 days, the director of planning may prescribe; provided that where the director of planning finds that there is imminent danger to life or other property, he may order that corrective action be taken in such lesser period as may be feasible.

(h) *Appeal.* Any owner who has received an order to take corrective action may appeal from the order to the local elected governing body by giving notice of appeal in writing to the director of planning and the clerk to council within ten days following issuance of the final order. In the absence of an appeal, the order of the director of planning shall be final. The local governing body shall hear an appeal within a reasonable time and may affirm, modify and affirm, or revoke the order.

(i) *Failure to comply with order.* If the owner of a building or property fails to comply with an order to take corrective action from which no appeal has been taken, or fails to comply with an order of the governing body following an appeal, he shall be guilty of a misdemeanor and shall be punished in the discretion of the court.

(j) *Denial of flood insurance under the NFIP.* If a structure is declared in violation of the ordinance from which this chapter derives and the violation is not remedied then the director of planning shall notify the Federal Emergency Management Agency (FEMA) to initiate a Section 1316 of the National Flood Insurance Act of 1968, action against the structure upon the finding that the violator refuses to bring the violation into compliance with the ordinance. Once a violation has been remedied the local administrator shall notify FEMA of the remedy and ask that the Section 1316 be rescinded.

(k) The following documents are incorporated by reference and may be used by the director of planning to provide further guidance and interpretation of this chapter as found on FEMA's website at*www.fema.gov* :

(1) FEMA 55 Coastal Construction Manual.

(2) All FEMA Technical Bulletins.

(3) All FEMA Floodplain Management Bulletins.

(4) FEMA 348 Protecting Building Utilities from Flood Damage.

(5) FEMA 499 Home Builder's Guide To Coastal Construction Technical Fact Sheets.

(Ord. No. 2009-07-20-05, § I, 7-20-2009)

Secs. 18-66--18-80. Reserved.

DIVISION 3. FLOOD HAZARD REDUCTION PROVISIONS

Sec. 18-81. General standards.

In all areas of special flood hazard, the following provisions are required:

(1) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.

(2) Manufactured homes shall be anchored to prevent flotation, collapse or lateral movement. Methods of anchoring include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable state requirements for resisting wind forces.

(3) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(4) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

(5) Electrical heating, ventilation, plumbing and air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(6) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

(7) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

(8) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(9) Any alteration, repair, reconstruction or improvements to a structure on which the start of construction was begun after the effective date of the ordinance from which this article derives shall meet the requirements of new construction as contained in this article.

(10) Any alteration, repair, reconstruction or improvements to a building which is not in compliance with the provisions of this article shall be undertaken only if the nonconformity is not furthered, extended, or replaced.

(Code 1983, § 6-41)

Sec. 18-82. Specific standards.

In all areas of special flood hazard where base flood elevation data has been provided as set forth in section 18-36 or subsection 18-62(d), the following provisions of this division are required.

(Code 1983, § 6-42)

Sec. 18-83. Residential construction standards.

New construction or substantial improvement of any residential structure or manufactured home shall have the lowest floor, including basement, elevated no lower than one foot above base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with the standards specified under section 18-85.

(Code 1983, § 6-43)

Sec. 18-84. Nonresidential construction standards.

New construction or substantial improvement of any commercial, industrial or other nonresidential structure or manufactured home shall either have the lowest floor, including basement, elevated no lower than one foot above the base flood elevation or, together with attendant utility and sanitary facilities, be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer shall certify that the standards of this section are satisfied. Such certification shall be provided to the official as set forth in subsection 18-63(a)(3) at the applicant's expense.

(Code 1983, § 6-44)

Sec. 18-85. Elevated buildings standards.

New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood election shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

(1) Designs for complying with this requirement must be certified by a professional engineer and meet the following minimum criteria:

a. Provide a minimum of two openings having a total net area of not less than one square inch for every foot of enclosed area subject to flooding;

b. The bottom of all openings shall be no higher than one foot above grade; and

c. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions;

(2) Electrical, plumbing, and other utility connections are prohibited below the base flood elevation;

(3) Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator); and

(4) The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.

(Code 1983, § 6-44.1)

Sec. 18-86. Standards for manufactured homes and recreational vehicles.

(a) All manufactured homes placed, or substantially improved, on individual lots or parcels, in expansions to existing manufactured home parks or subdivisions, or in substantially improved manufactured home parks or subdivisions, must meet all the requirements for new construction, including elevation and anchoring.

(b) All manufactured homes placed, or substantially improved, in an existing manufactured home park or subdivision must be elevated so that the lowest floor of the manufactured home is elevated no lower than one foot above the level of the base flood elevation.

(c) All manufactured homes shall be anchored to resist flotation, collapse or lateral movement by providing over-the-top and frame ties to ground anchors. Specific requirements shall be that:

(1) Over-the-top ties be provided at each end of the manufactured home, with one additional tie per side at an intermediate location on manufactured homes of less than 50 feet and one additional tie per side for manufactured homes of 50 feet or more;

(2) Frame ties be provided at each corner of the home with four additional ties per side at intermediate points for manufactured homes less than 50 feet long and one additional tie for manufactured homes of 50 feet or longer;

(3) All components of the anchoring system be capable of carrying a force of 4,800 pounds; and

(4) Any additions to the manufactured home be similarly anchored.

(d) In an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage as the result of a flood, any manufactured home placed or substantially improved must meet all of the standards of this section.

(e) All recreational vehicles placed on sites must either:

(1) Be fully licensed and ready for highway use; or

(2) The recreational vehicle must meet all the requirements for new construction, including anchoring and elevation requirements of this section. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices and has no permanently attached structures.

(f) For new manufactured home parks and subdivisions; for expansions to existing manufactured home parks and subdivisions; for existing manufactured home parks and subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads equals or exceeds 50 percent of value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced; and, for manufactured homes not placed in a manufactured home park or subdivision the following criteria are required:

(1) Stands or lots are elevated on compacted fill or on pilings so that the lowest floor of the manufactured home will be at least one foot above the base flood level;

(2) Adequate surface drainage and access for a hauler are provided; and

(3) In the instance of elevation on pilings:

a. Lots are large enough to permit steps;

b. Piling foundations are placed on stable soil no more than ten feet apart; and

c. Reinforcement is provided for pilings more than six feet above the ground level.

(Code 1983, § 6-45)

Sec. 18-87. Standards for floodways.

Located within areas of special flood hazard established in section 18-36 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

(1) Encroachments are prohibited, including fill, new construction, substantial improvements and other developments, unless certification by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge.

(2) If subsection (1) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this article.

(3) Prohibit the placement of any manufactured homes, except in an existing manufactured home park or existing manufactured home subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring standards and the elevation standards of section 18-86 and the encroachment standards of this section are met.

(Code 1983, § 6-46)

Sec. 18-88. Standards for streams without established base flood elevations and/or floodways.

Located within the areas of special flood hazard established in section 18-36, where streams exist but where no base flood data have been provided or where no floodways have been provided, the following provisions apply:

(1) No encroachments, including fill material or structures, shall be located within areas of special flood hazard, unless certification by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

(2) New construction or substantial improvements of structures shall be elevated or floodproofed to elevation established in accordance with subsection 18-62(d).

(Code 1983, § 6-46.1)

Sec. 18-89. Standards for subdivision proposals.

(a) All subdivision proposals shall be consistent with the need to minimize flood damage.

(b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

(c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.

(d) Base flood elevation data shall be provided for all subdivision proposals including manufactured home parks and other proposed developments which are located in or immediately adjacent to a floodplain.

(Code 1983, § 6-47)

Sec. 18-90. Standards for areas of shallow flooding (AO zones).

Located within the areas of special flood hazard established in section 18-36 are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate; therefore, the following provisions apply:

(1) All new construction and substantial improvements of residential buildings shall have the lowest flood, including basement, elevated to the depth number specified on the flood insurance rate map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated, at least two feet above the highest adjacent grade.

(2) All new construction and substantial improvements of nonresidential buildings shall:

a. Have the lowest floor, including basement, elevated to the depth number specified on the flood insurance rate map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated at least two feet above the highest adjacent grade; or

b. Together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

(Code 1983, § 6-48)

Sec. 18-91. Standards for streams with established base flood elevations but without floodways.

Along rivers and streams where base flood elevation (BFE) data is provided, but neither floodway are identified for a special flood hazard area on the FIRM or in the FIS, the following provisions apply within such areas:

(1) No encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

(Ord. No. 2009-07-20-05, § I, 7-20-2009)

Appendix F

Appendix F

1. Preliminary Engineering Report for Areas of Expansion for the Town of Bowman Rural Wastewater System, Orangeburg County, South Carolina, January 5, 2009, revised May 14, 2010 Draft

2. Project Description Areas of Expansion for the Town of Bowman's Rural Wastewater System, Town of Bowman Water and Sewer Department, Orangeburg County, South Carolina, May 10, 2010, revised July 14, 2010 (Draft)

3. Study and preliminary Design of Infrastructure in the Vicinity of The Intersection of I-26 and I-96 in Orangeburg and Dorchester Counties, July 2008

4. Proposed Town of Bowman Water System Expansion Environmental Assessment, Orangeburg County, South Carolina, May 2010

5. 208 Plan Amendment Report for the Goodby's Creek Regional Wastewater Treatment Plant Located in Orangeburg County, South Carolina, September 2009

6. Preliminary Engineering Report for the Goodby's Creek Regional Wastewater Treatment Plant Located in Orangeburg County, South Carolina, January 2008, revised March 2009

7. Preliminary Engineering Report Goodby's Creek Wastewater Transmission System

8. Goodby's Creek Regional Wastewater Treatment Plant Environmental Assessment, Orangeburg County, South Carolina, US Army Corps of Engineers, April 2009, revised May 2010

9. Potable Water and Wastewater Infrastructure Improvements in Orangeburg County at Intersection of US Hwy 301 and US Hwy 176, Orangeburg County, South Carolina. Final Environmental Assessment and Finding of No Significant Impact, January 9, 2007

10. Cultural Resources Assessment of the Proposed Routes and Bonner Avenue Area for the Goodby's Wastewater Treatment Plant, Calhoun and Orangeburg County, South Carolina, August 2008

11. Goodby's Creek Regional Wastewater Treatment Plant Cultural Resource Survey

12. Final Environmental Information Document (EID) Proposed Lake Marion Regional Water System for Calhoun, Clarendon, Dorchester, Orangeburg, and Sumter Counties, South Carolina, US Army Corps of Engineers, Charleston District, October 2003

13. 404(b)(1) Evaluation Lake Marion Regional water Supply System Calhoun, Clarendon, Dorchester, Orangeburg, and Sumter Counties, South Carolina, US Army Corps of Engineers, Charleston District

14. Lake Marion Regional Water Agency Plant Capacity and Alternatives Analysis, June 2003

15. Proposed Town of Bowman Water System Expansions Environmental Assessment, Orangeburg County, South Carolina, June 23, 2010

16. Preliminary Engineering Report for the Water System Expansions for the Town of Bowman, Orangeburg County, South Carolina, May 2010

17. Lake Marion Regional Water Supply System – Phase II Project, Calhoun, Clarendon, Dorchester, Orangeburg, and Sumter Counties, South Carolina Environmental Assessment, US Army Corps of Engineers , Charleston District and US Environmental Protection Agency

18. Environmental Report Phase I Water System Expansion Southern Calhoun County, South Carolina, March 2010

19. Vance Water System, Town of Vance, Orangeburg County, South Carolina, April 2010

20. Proposed Orangeburg County Water System Expansion, Orangeburg County, South Carolina Environmental Assessment, May 2010

21. Jafza Magna Park, Santee South Carolina, brochure

22. Preliminary Master Plan Economic Zones World Logistics and Distribution Park – Santee, Orangeburg, South Carolina, December 29, 2008

23. Section 404 Permit Application and Supporting Documentation Logistics and Distribution Park – Santee, Orangeburg, South Carolina, December 2008

24. Phase I Environmental Site Assessment Proposed Jafza Logistics Park, Orangeburg County, South Carolina, June 2, 2008

25. Jafza Logistics and Distribution Park Design Traffic Technical Report, South Carolina Dept. of Transportation, June 25, 2009

26. Cultural Resources Survey of the Jafza South Carolina, LLC Tract, Santee, Orangeburg County, South Carolina, July 18, 2008

27. Green Energy Holdings, LLC Biomass Draft Environmental Assessment Version 2

28. Land Application Discharge Permit for Goodbys Creek Regional WWTP, November 9, 2010.

29. South Carolina Budget and Control Board, Office of Research and Statistics Community Profiles utilizing information from the US Census Bureau, Census 2000.

concern to the state and its water systems. Similar concerns across the country caused EPA to withhold action on this Rule until more detailed data could be collected and additional studies could be conducted.

In March of 2000, EPA, in conjunction with the USGS, released the Radionuclides Notice of Availability Technical Support Document, which provided the scientific rationale for the Radionuclide Rule that was recently promulgated. This document details the occurrence of radionuclides throughout the United States, with the coastal and lower coastal plain areas of South Carolina having a greater than normal occurrence of alpha-emitting particles, specifically Radium-226 and Radium-228. Although MCLs for these particular radionuclides have not changed with the new regulations, the probability of groundwater systems within the project area to be impacted by these contaminants to a point that specific treatment would be necessary is more likely.

In addition to the implementation of stricter MCLs, the reauthorization of the Safe Drinking Water Act also required that source water assessments be conducted on all public water systems as a means to identify where drinking water sources are vulnerable to contamination. Although these assessments are not limited to groundwater sources, the analysis of such systems will be a major foundation for other future regulations, specifically the Ground Water Rule. As a demonstration of this, the source water assessment for the City of Sumter, the largest groundwater system in the project area, was reviewed. Based on this report, Sumter's wells are located in an area of the state where the aquifer is not confined. What this means, simply, is that the groundwater in this area is the most susceptible to contamination from surface sources. In fact, 111 potential contamination sources were identified within the areas of Sumter's water supply wells. All of the wells had a high susceptibility of becoming contaminated from each of these sources. This underscores the concern with regard to the utilization of groundwater supplies as the only source to supply the future water needs of the area. Assessments for other public water systems can be found on the SCDHEC website at www.scdhec.gov.

Private Water Supplies

While the initial phase of this project plans to serve municipal systems and some portions of the rural area, the eventual goal is to provide water service throughout the five-county planning area. Within this area, much of the population outside of the municipalities relies solely on individual private water supply wells to meet their drinking water needs.

Due to the cost of drilling a well, many rural residents have extremely shallow wells. While this results in a low-cost alternative for water supply, these shallow wells have an abundance of water quality problems. In discussions with current and former SCDHEC staff, numerous incidents of water quality complaints have been investigated within the project area.

The predominant contaminant found in these private wells is bacteria. The bacteriological contaminants get into these wells through a number of pathways, including improper well construction and shallow aquifer contamination from septic tank drain fields or other surface sources. Within Calhoun and Orangeburg counties, many

E\D 10/03

private water supply wells have documented high iron and manganese levels. High hydrogen sulfide levels have been noted in private wells in Bamberg County.

All of these contaminants pose a concern to rural residents. The concern is a public health/aesthetic issue as well as a financial issue. Many of the residents cannot add water treatment devices due to cost and are, therefore, forced to continue to use the contaminated water, which may impact their health and quality of life. A safe, reliable source of water as would be provided through this project is a needed alternative to the situation that many rural residents continue to face with regard to their private water supply wells.

3.11 Surface Waters

The surface waters in the project area include freshwaters located in the southern portion of the Peedee, the central portion of the Catawba-Santee, and central/southern portion of Edisto watersheds. The Peedee Basin includes approximately 5.1 million acres within the state of South Carolina and is divided into the Lynches River Basin (1,422 square miles), Black River Basin (2,102 square miles), Pee Dee River Basin (2,414 square miles), Little Pee Dee River Basin (1,131 square miles), Waccamaw River Basin (626 square miles), and the Atlantic Intracoastal Waterway (AIWW)/Sampit River/Winyah Bay Basin (368 square miles).

The Santee-Catawba Basin incorporates approximately 3.5 million acres and is divided into the Catawba-Wateree Basin (2,381.6 square miles), Santee River Basin (1,208.3 square miles), Cooper River Basin (830.5 square miles), Ashley River Basin (587.7 square miles), and the Coastal Basin (183.8 square miles). The Edisto Watershed encompasses approximately 2 million acres.

The Lake Marion Regional Water project lies in the Black, Lower Santee, and Edisto River Sub-basins. According to the South Carolina State Water Resource Commission and South Carolina Department of Health and Environmental Control these waterways are considered to be viable surface water sources.

The northern portion of the project area contains the city of Manning, and the Town of Summerton, which drains into the Black River sub basin of the Pee Dee River basin. The Black River basin includes 2,051 square miles extending from the sand hills to the upper and lower coastal plains and into the coastal zones. The Black River Basins encompasses 18 watersheds. The 1.3 million acres consists of 37.9% forested land, 28.1% agricultural land, 17.5% scrub/shrub land, 12.9% forested wetland, 2.2% urban land, 0.8% is non forested wetland, and 0.6% is water. Clarendon County receives its ground water from the Black Creek and Peedee aquifer system. Water from Clarendon County drains into the Pocotaligo River and this eventually drains into the Black River near Clarendon County's eastern boarder. The Black Creek aquifer system is the major source of ground water throughout Clarendon County. The top of the aquifer is 300 feet deep at Summerton and about 600 feet at the mouth of the Santee River.

Part III. Limitations and Monitoring Requirements

A. Effluent Limitations and Monitoring Requirements

1. During the period beginning on the effective date of this permit and lasting through the last day of the month that the Approval to Place into Operation is issued for the 0.302, 0.309, 0.335, 0.36, 0.395, 0.483 or 0.518 MGD expansion, or the expiration date, whichever is earlier, the permittee is authorized to apply treated wastewater by drip irrigation. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS		
	Pounds per Day		Other Units					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow	---	---	0.276 MGD	0.276 MGD	---	Daily	Continuous	Effluent
Biochemical Oxygen Demand - 5 Day (BOD_5)	23.0	34.5	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Total Suspended Solids (TSS)	23.0	34.5	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Nitrate Nitrogen (NO_3-N)	23.0	34.5	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Ammonia Nitrogen (NH_3-N)	4.6	6.9	2 mg/l	3 mg/l	---	2/Month	24 Hour Composite	Effluent
Fecal Coliform	---	---	200/100 ml	---	400/100 ml	2/Month	Grab	Effluent
Dissolved Oxygen (DO)	---	---	1.0 mg/l Minimum at all times			Daily	Grab	Effluent
pH	---	---	6.0 – 8.5 Standard Units			Daily	Grab	Effluent

1) Samples must be taken after all wastewater treatment units & treated effluent holding tanks and prior to the drip irrigation system. A clearly defined sampling location (that is not a confined space) must be established for both compliance and effluent sampling.

2) If the plant is not discharging on the sampling day specified in part V.G.3, the permittee shall collect a minimum of one effluent sample during the reporting period on a day when there is a discharge.

2. During the period beginning on the first day of the month, if DHEC provides written approval for the results from the Pilot Study (see Part III. B), after Approval to Place into Operation is issued for the 0.302 MGD expansion and lasting through the last day of the month that the Approval to Place into Operation is issued for the 0.309, 0.335, 0.36, 0.395, 0.483 or 0.518 MGD expansion, or the expiration date, whichever is earlier, the permittee is authorized to apply treated wastewater by drip irrigation. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS		
	Pounds per Day		Other Units					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow	---	---	0.302 MGD	0.302 MGD	---	Daily	Continuous	Effluent
Biochemical Oxygen Demand – 5 Day (BOD_5)	25.2	37.8	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Total Suspended Solids (TSS)	25.2	37.8	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Nitrate Nitrogen (NO_3-N)	25.2	37.8	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Ammonia Nitrogen (NH_3-N)	5.0	7.5	2 mg/l	3 mg/l	---	2/Month	24 Hour Composite	Effluent
Fecal Coliform	---	---	200/100 ml	---	400/100 ml	2/Month	Grab	Effluent
Dissolved Oxygen (DO)	---	---	1.0 mg/l Minimum at all times			Daily	Grab	Effluent
pH	---	---	6.0 - 8.5 Standard Units			Daily	Grab	Effluent

1) Samples must be taken after all wastewater treatment units & treated effluent holding tanks and prior to the drip irrigation system. A clearly defined sampling location (that is not a confined space) must be established for both compliance and effluent sampling.

2) If the plant is not discharging on the sampling day specified in part V.G.3, the permittee shall collect a minimum of one effluent sample during the reporting period on a day when there is a discharge.

3. During the period beginning on the first day of the month after Approval to Place into Operation is issued for the 0.309 MGD expansion and lasting through the last day of the month that the Approval to Place into Operation is issued for the 0.335, 0.36, 0.395, 0.483 or 0.518 MGD expansion, or the expiration date, whichever is earlier, the permittee is authorized to apply treated wastewater by drip irrigation. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS		
	Pounds per Day		Other Units					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow	---	---	0.309 MGD	0.309 MGD	---	Daily	Continuous	Effluent
Biochemical Oxygen Demand - 5 Day (BOD_5)	25.8	38.6	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Total Suspended Solids (TSS)	25.8	38.6	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Nitrate Nitrogen (NO_3-N)	25.8	38.6	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Ammonia Nitrogen (NH_3-N)	5.1	7.7	2 mg/l	3 mg/l	---	2/Month	24 Hour Composite	Effluent
Fecal Coliform	---	---	200/100 ml	---	400/100 ml	2/Month	Grab	Effluent
Dissolved Oxygen (DO)	---	---	1.0 mg/l Minimum at all times			Daily	Grab	Effluent
pH	---	---	6.0 - 8.5 Standard Units			Daily	Grab	Effluent

1) Samples must be taken after all wastewater treatment units & treated effluent holding tanks and prior to the drip irrigation system. A clearly defined sampling location (that is not a confined space) must be established for both compliance and effluent sampling.

2) If the plant is not discharging on the sampling day specified in part V.G.3, the permittee shall collect a minimum of one effluent sample during the reporting period on a day when there is a discharge.

4. During the period beginning on the first day of the month, if DHEC provides written approval for the results from the Pilot Study (see Part III. B), after Approval to Place into Operation is issued for the 0.335 MGD expansion and lasting through the last day of the month that the Approval to Place into Operation is issued for the 0.36, 0.395, 0.483 or 0.518 MGD expansion, or the expiration date, whichever is earlier, the permittee is authorized to apply treated wastewater by drip irrigation. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS		
	Pounds per Day		Other Units					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow	---	---	0.335 MGD	0.335 MGD	---	Daily	Continuous	Effluent
Biochemical Oxygen Demand - 5 Day (BOD_5)	27.9	41.9	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Total Suspended Solids (TSS)	27.9	41.9	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Nitrate Nitrogen (NO_3-N)	27.9	41.9	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Ammonia Nitrogen (NH_3-N)	5.6	8.4	2 mg/l	3 mg/l	---	2/Month	24 Hour Composite	Effluent
Fecal Coliform	---	---	200/100 ml	---	400/100 ml	2/Month	Grab	Effluent
Dissolved Oxygen (DO)	---	---	1.0 mg/l Minimum at all times			Daily	Grab	Effluent
pH	---	---	6.0 - 8.5 Standard Units			Daily	Grab	Effluent

1) Samples must be taken after all wastewater treatment units & treated effluent holding tanks and prior to the drip irrigation system. A clearly defined sampling location (that is not a confined space) must be established for both compliance and effluent sampling.

2) If the plant is not discharging on the sampling day specified in part V.G.3, the permittee shall collect a minimum of one effluent sample during the reporting period on a day when there is a discharge.

5. During the period beginning on the first day of the month, if DHEC provides written approval for the results from the Pilot Study (see Part III. B), after Approval to Place into Operation is issued for the 0.36 MGD expansion and lasting through the last day of the month that the Approval to Place into Operation is issued for the 0.395, 0.483 or 0.518 MGD expansion, or the expiration date, whichever is earlier, the permittee is authorized to apply treated wastewater by drip irrigation. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS		
	Pounds per Day		Other Units					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow	---	---	0.36 MGD	0.36 MGD	---	Daily	Continuous	Effluent
Biochemical Oxygen Demand - 5 Day (BOD_5)	30.0	45.0	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Total Suspended Solids (TSS)	30.0	45.0	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Nitrate Nitrogen (NO_3-N)	30.0	45.0	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Ammonia Nitrogen (NH_3-N)	6.0	9.0	2 mg/l	3 mg/l	---	2/Month	24 Hour Composite	Effluent
Fecal Coliform	---	---	200/100 ml	---	400/100 ml	2/Month	Grab	Effluent
Dissolved Oxygen (DO)	---	---	1.0 mg/l Minimum at all times			Daily	Grab	Effluent
pH	---	---	6.0 - 8.5 Standard Units			Daily	Grab	Effluent

1) Samples must be taken after all wastewater treatment units & treated effluent holding tanks and prior to the drip irrigation system. A clearly defined sampling location (that is not a confined space) must be established for both compliance and effluent sampling.

2) If the plant is not discharging on the sampling day specified in part V.G.3, the permittee shall collect a minimum of one effluent sample during the reporting period on a day when there is a discharge.

6. During the period beginning on the first day of the month, if DHEC provides written approval for the results from the Pilot Study (see Part III. B), after Approval to Place into Operation is issued for the 0.395 MGD expansion and lasting through the last day of the month that the Approval to Place into Operation is issued for the 0.483 or 0.518 MGD expansion, or the expiration date, whichever is earlier, the permittee is authorized to apply treated wastewater by drip irrigation. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS		
	Pounds per Day		Other Units					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow	---	---	0.395 MGD	0.395 MGD	---	Daily	Continuous	Effluent
Biochemical Oxygen Demand - 5 Day (BOD_5)	32.9	49.4	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Total Suspended Solids (TSS)	32.9	49.4	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Nitrate Nitrogen (NO_3-N)	32.9	49.4	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Ammonia Nitrogen (NH_3-N)	6.6	9.9	2 mg/l	3 mg/l	---	2/Month	24 Hour Composite	Effluent
Fecal Coliform	---	---	200/100 ml	---	400/100 ml	2/Month	Grab	Effluent
Dissolved Oxygen (DO)	---	---	1.0 mg/l Minimum at all times			Daily	Grab	Effluent
pH	---	---	6.0 - 8.5 Standard Units			Daily	Grab	Effluent

1) Samples must be taken after all wastewater treatment units & treated effluent holding tanks and prior to the drip irrigation system. A clearly defined sampling location (that is not a confined space) must be established for both compliance and effluent sampling.

2) If the plant is not discharging on the sampling day specified in part V.G.3, the permittee shall collect a minimum of one effluent sample during the reporting period on a day when there is a discharge.

7. During the period beginning on the first day of the month, if DHEC provides written approval for the results from the Pilot Study (see Part III. B), after Approval to Place into Operation is issued for the 0.483 MGD expansion and lasting through the last day of the month that the Approval to Place into Operation is issued for the 0.518 MGD expansion, or the expiration date, whichever is earlier, the permittee is authorized to apply treated wastewater by drip irrigation. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS		
	Pounds per Day		Other Units					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow	---	---	0.483 MGD	0.483 MGD	---	Daily	Continuous	Effluent
Biochemical Oxygen Demand - 5 Day (BOD_5)	40.3	60.4	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Total Suspended Solids (TSS)	40.3	60.4	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Nitrate Nitrogen (NO_3-N)	40.3	60.4	10 mg/l	15 mg/l	---	2/Month	24 Hour Composite	Effluent
Ammonia Nitrogen (NH_3-N)	8.0	12.1	2 mg/l	3 mg/l	---	2/Month	24 Hour Composite	Effluent
Fecal Coliform	---	---	200/100 ml	---	400/100 ml	2/Month	Grab	Effluent
Dissolved Oxygen (DO)	---	---	1.0 mg/l Minimum at all times			Daily	Grab	Effluent
pH	---	---	6.0 - 8.5 Standard Units			Daily	Grab	Effluent

1) Samples must be taken after all wastewater treatment units & treated effluent holding tanks and prior to the drip irrigation system. A clearly defined sampling location (that is not a confined space) must be established for both compliance and effluent sampling.

2) If the plant is not discharging on the sampling day specified in part V.G.3, the permittee shall collect a minimum of one effluent sample during the reporting period on a day when there is a discharge.

8. During the period beginning on the first day of the month, if DHEC provides written approval for the results from the Pilot Study (see Part III. B), after Approval to Place into Operation is issued for the 0.518 MGD expansion and lasting through the expiration date, the permittee is authorized to apply treated wastewater by drip irrigation. Such discharge shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS		
	Pounds per Day		Other Units					
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Point
Flow	---	---	0.518 MGD	0.518 MGD	---	Daily	Continuous	Effluent
Biochemical Oxygen Demand - 5 Day (BOD_5)	43.2	64.8	10 mg/l	15 mg/l	---	1/week	24 Hour Composite	Effluent
Total Suspended Solids (TSS)	43.2	64.8	10 mg/l	15 mg/l	---	1/Week	24 Hour Composite	Effluent
Nitrate Nitrogen (NO_3-N)	43.2	64.8	10 mg/l	15 mg/l	---	1/Week	24 Hour Composite	Effluent
Ammonia Nitrogen (NH_3-N)	8.6	13.0	2 mg/l	3 mg/l	---	1/Week	24 Hour Composite	Effluent
Fecal Coliform	---	---	200/100 ml	---	400/100 ml	1/Week	Grab	Effluent
Dissolved Oxygen (DO)	---	---	1.0 mg/l Minimum at all times			Daily	Grab	Effluent
pH	---	---	6.0 - 8.5 Standard Units			Daily	Grab	Effluent

1) Samples must be taken after all wastewater treatment units & treated effluent holding tanks and prior to the drip irrigation system. A clearly defined sampling location (that is not a confined space) must be established for both compliance and effluent sampling.

2) If the plant is not discharging on the sampling day specified in part V.G.3, the permittee shall collect a minimum of one effluent sample during the reporting period on a day when there is a discharge.

B. Pilot Study

A pilot study that tests the entire system response and checks the system to ensure that it operates properly will be implemented as follows:

1. The permittee shall apply effluent at the approved rates in Part III. E or less over the drip fields until twelve (12) months after an "Approval to Place into Operation" for this system has been issued.

2. The permittee may submit a request to increase the application rate based on substantiating data after twelve (12) month operation (referenced in above item 1) and should obtain an approval from the Department prior to the pilot study. The approved application rates in Part III. E should be maintained for at least six (6) months including three (3) months of the non-growing season (November-February) before requesting a higher application rate for pilot study. If it is justified, which provides no substantial increase in the water table elevations, no seepage at the base of the application area or surface failure, and approved by the Department, the application rate can be increased up to the proposed application rates for the pilot study in Part III. E. In this practice, make up water from potable water; surface water or groundwater can be used to supplement the wastewater contribution.

3. The permittee shall cease the pilot study if the wastewater treatment system does not consistently meet the effluent limitations or the drip fields cannot effectively handle the increased application rates. A re-evaluation of the pilot study conditions and operations will be made and a determination of any needed changes provided by the permittee.

4. The permittee must provide sufficient information in the form of a summary report to the Department to justify the higher application rates for 0.302, 0.335, 0.36, 0.395, 0.483 MGD and/or 0.518 MGD through the pilot study which includes, but is not limited to a water balance for each of the drip fields, otherwise the 0.276 MGD and/or 0.309 MGD permit shall be maintained and the 0.302, 0.335, 0.36, 0.395, 0.483 MGD and/or 0.518 MGD page will not be placed into effect.

5. The evaluations for increasing the flow shall include the following information:

    a. Monitoring Wells (20 shallow groundwater monitoring wells including 3 control wells outside the drip fields)
        (1) Water table elevation and water table depth
        (2) Nitrate (NO_3-N)
        (3) pH (field)
        (4) Field specific conductance
    b. Visual site inspections to observe for surface breakout of the effluent (daily).
    c. Monitoring data from the sampling of the WWTP (as required by the permit limitations) and groundwater monitoring frequency.
    d. Flow and application data (per the permit conditions)
    e. Rainfall data (daily)
    f. Visual representative inspections weekly of the soil surface above the emitters for biomat formation and indication of soil clogging. Inspection of the emitters for clogging as necessary.
    g. Documentation of the proposed application rates based on the actual land used for drip irrigation to each field on a daily basis.

C. Groundwater Requirements

1. Groundwater Monitoring Requirements

a. Each of the 9 groundwater-monitoring wells (3 for each S1, S2 and S3 on Sanders Pointe Farm site) and 3 additional (future) wells at Mathew's Industrial Park shall be sampled by the permittee as specified below:

PARAMETER	MEASUREMENT FREQUENCY	SAMPLE METHOD
Total phosphorus	Quarterly	Pump or Bailer Method
Ammonia (NH_3)	Quarterly	Pump or Bailer Method
Chloride	Quarterly	Pump or Bailer Method
Nitrate (N)	Quarterly	Pump or Bailer Method
Alkalinity	Quarterly	Pump or Bailer Method
pH	Quarterly	Pump or Bailer Method
Sodium	Quarterly	Pump or Bailer Method
TDS	Quarterly	Pump or Bailer Method
Fecal Coliform	Quarterly	Pump or Bailer Method
Specific Conductance	Quarterly	Pump or Bailer Method
Watertable Elevation	Quarterly	Tape

Note: Sampling for Mathew's Industrial Park does not commence until an Approval to Place into Operation for the specific land application site.

b. Additional 3 groundwater-monitoring wells on Mathew's Industrial Park site shall be installed and sampled by the permittee as specified above prior to an Approval to Place into Operation and before the site is in use (i.e., 0.309, 0.335, 0.483 and 0.518 MGD permit)

c. Background groundwater quality data must be submitted prior to final approval to place into operation.

d. Sample collection methods shall be in accordance with DHEC publication "Groundwater Sampling Methods" dated October, 1981, or the most recent revision.

e. All groundwater monitoring wells must be properly maintained at all times.

D. Sludge Disposal Requirements

1. Sludge Transportation and Disposal

Sludge solids will be removed from this facility and transported to the Three River Solid Waste Authority for landfilling under the following conditions:

a. All containers for sludge collection and transportation shall be structurally sound in every respect and shall be so constructed as to prevent leakage or spillage of any kind while in the process of pumping, storage, or transit.

b. The total volume of waste transported shall not exceed 2,712 cubic yards per year.

Orangeburg County, South Carolina

People QuickFacts	Orangeburg County	South Carolina
Population, 2009 estimate	90,112	4,561,242
Population, percent change, April 1, 2000 to July 1, 2009	-1.5%	13.7%
Population estimates base (April 1) 2000	91,514	4,011,832
Persons under 5 years old, percent, 2009	7.3%	6.8%
Persons under 18 years old, percent, 2009	23.9%	23.7%
Persons 65 years old and over, percent, 2009	15.0%	13.7%
Female persons, percent, 2009	53.6%	51.3%
White persons, percent, 2009 (a)	36.0%	68.9%
Black persons, percent, 2009 (a)	61.9%	28.2%
American Indian and Alaska Native persons, percent, 2009 (a)	0.5%	0.4%
Asian persons, percent, 2009 (a)	0.7%	1.3%
Native Hawaiian and Other Pacific Islander, percent, 2009 (a)	0.1%	0.1%
Persons reporting two or more races, percent, 2009	0.8%	1.1%
Persons of Hispanic or Latino origin, percent, 2009 (b)	1.6%	4.5%
White persons not Hispanic, percent, 2009	35.0%	64.9%
Living in same house in 1995 and 2000, pct 5 yrs old & over	65.0%	55.9%
Foreign born persons, percent, 2000	1.0%	2.9%
Language other than English spoken at home, pct age 5+, 2000	3.0%	5.2%
High school graduates, percent of persons age 25+, 2000	71.5%	76.3%
Bachelor's degree or higher, pct of persons age 25+, 2000	16.3%	20.4%
Persons with a disability, age 5+, 2000	21,379	810,857
Mean travel time to work (minutes), workers age 16+, 2000	26.5	24.3
Housing units, 2009	41,799	2,084,232
Homeownership rate, 2000	75.6%	72.2%
Housing units in multi-unit structures, percent, 2000	7.6%	15.8%
Median value of owner-occupied housing units, 2000	$72,600	$94,900
Households, 2000	34,118	1,533,854
Persons per household, 2000	2.58	2.53
Median household income, 2008	$32,694	$44,695
Per capita money income, 1999	$15,057	$18,795
Persons below poverty level, percent, 2008	23.8%	15.7%

Business QuickFacts	Orangeburg County	South Carolina
Private nonfarm establishments, 2007	1,873	107,893[1]
Private nonfarm employment, 2007	28,752	1,648,146[1]
Private nonfarm employment, percent change 2000-2007	0.4%	2.9%[1]
Nonemployer establishments, 2007	4,679	287,197
Total number of firms, 2002	5,457	292,984
Black-owned firms, percent, 2002	25.1%	9.8%
American Indian and Alaska Native owned firms, percent, 2002	F	0.5%
Asian-owned firms, percent, 2002	F	1.5%
Native Hawaiian and Other Pacific Islander owned firms, percent, 2002	F	0.0%
Hispanic-owned firms, percent, 2002	F	1.0%

Women-owned firms, percent, 2002	21.3%	26.2%
Manufacturers shipments, 2002 ($1000)	1,935,859	81,132,781
Wholesale trade sales, 2002 ($1000)	324,816	32,988,974
Retail sales, 2002 ($1000)	773,158	40,629,089
Retail sales per capita, 2002	$8,468	$9,895
Accommodation and foodservices sales, 2002 ($1000)	92,752	6,104,316
Building permits, 2009	187	15,529
Federal spending, 2008	715,301	38,831,638[1]

Geography QuickFacts	**Orangeburg County**	**South Carolina**
Land area, 2000 (square miles)	1,106.16	30,109.47
Persons per square mile, 2000	82.8	133.2
FIPS Code	075	45
Metropolitan or Micropolitan Statistical Area	Orangeburg, SC Micro Area	

1: Includes data not distributed by county.

(a) Includes persons reporting only one race.
(b) Hispanics may be of any race, so also are included in applicable race categories.

D: Suppressed to avoid disclosure of confidential information
F: Fewer than 100 firms
FN: Footnote on this item for this area in place of data
NA: Not available
S: Suppressed; does not meet publication standards
X: Not applicable
Z: Value greater than zero but less than half unit of measure shown

Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, Census of Population and Housing, Small Area Income and Poverty Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits, Consolidated Federal Funds Report

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Orangeburg County Population

- In 2000, Orangeburg County's population was **91,582**, ranking 16th among the 46 South Carolina counties in terms of population size.
- From 1990 to 2000 Orangeburg County's population **increased by 8.0 percent** (an increase of 6,779 people), for a ranking of 35th among the 46 counties in terms of population growth over the last decade.
- From 1990 to 2000 South Carolina's population **increased by 15.1 percent** (an increase of 525,309 people). The population of the United States increased by 13.2 percent during the same time period.

Change in Population 1900-2000

Population 1900-2000

	Orangeburg County	South Carolina	United States
1900	59,663	1,340,316	76,212,168
1910	55,893	1,515,400	92,228,496
1920	64,907	1,683,724	106,021,537
1930	63,864	1,738,765	123,202,624
1940	63,707	1,899,804	132,164,569
1950	68,726	2,117,027	151,325,798
1960	68,559	2,382,594	179,323,175
1970	69,789	2,590,713	203,302,031
1980	82,276	3,120,729	226,542,199
1990	84,803	3,486,703	248,709,873
2000	91,582	4,012,012	281,421,906

Population Change 1900-2000

	Orangeburg County		South Carolina		United States	
	#	% Change	#	% Change	#	% Change
Population Change 1900-1910	-3,770	-6.3	175,084	13.1	15,977,691	21.0
Population Change 1910-1920	9,014	16.1	168,324	11.1	13,738,354	14.9
Population Change 1920-1930	-1,043	-1.6	55,041	3.3	17,064,426	16.1
Population Change 1930-1940	-157	-0.2	161,039	9.3	8,894,229	7.2
Population Change 1940-1950	5,019	7.9	217,223	11.4	19,028,086	14.5
Population Change 1950-1960	-167	-0.2	265,567	12.5	28,625,814	19.0
Population Change 1960-1970	1,230	1.8	208,119	8.7	23,888,751	13.3
Population Change 1970-1980	12,487	17.9	530,016	20.5	23,333,879	11.5
Population Change 1980-1990	2,527	3.1	365,974	11.7	22,164,068	9.8
Population Change 1990-2000	6,779	8.0	525,309	15.1	32712033	13.2

Sources: *U.S. Census Bureau, Population Division. Population of Counties by Decennial Census: 1900 to 1990.*
U.S. Census Bureau, Census 2000. SF1, Table P1.

Population Estimates 2001-2003

The Census Bureau's Population Estimates Program publishes population numbers between censuses. Data series for births, deaths, and domestic and international migration are used to update the decennial census base counts. These estimates are used in federal funding allocations, as denominators for vital rates and per capita time series, as survey controls, and in monitoring recent demographic changes.

	Orangeburg County	South Carolina
July 1, 2001 Population	91,306	4,059,818
% Change in Population 2000-2001	-0.2	0.9

July 1, 2002 Population	91,315	4,103,770
% Change in Population 2001-2002	0.0	1.1
July 1, 2003 Population	91,028	4,147,152
% Change in Population 2002-2003	-0.3	1.1

Sources: *U.S. Census Bureau, Population Division. Table CO-EST2002-01-45 - South Carolina County Population Estimates: April 1, 2000 to July 1, 2003.*

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State Data Center
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Census 2010
Census 2010 Data
About

Population
Estimates
Projections

Census Reports
Demographics
Income and Poverty
American Community Survey

Census 2000 Profiles
State
Counties
Places
Zip Codes
Census Tracts
Glossary

Per Capita Income in Orangeburg County

The per capita income in South Carolina in 1999 was $18,795, below the national per capita income of $21,587. In Orangeburg County, the per capita income was lower than that for the state at $15,057.

Source: *U.S. Census Bureau, Census 2000. SF3, Table P82.*

Per Capita Income by Race

In South Carolina in 1999, the White alone population had the highest per capita income, at $22,095. The Some Other Race alone population had the lowest per capita income, at $10,473.

1999 Per Capita Income by Race

	Orangeburg County	South Carolina	United States
White Alone Population	$21,432	$22,095	$23,918
African American Alone Population	$11,256	$11,776	$14,437
American Indian or Alaska Native Alone Population	$11,491	$15,325	$12,893
Asian Alone Population	$15,245	$20,541	$21,823
Native Hawaiian and Other Pacific Islander Alone Population	$6,253	$21,638	$15,054
Some Other Race Alone Population	$7,309	$10,473	$10,813
Two or More Races Population	$14,051	$11,955	$13,405
Hispanic Population	$8,666	$12,143	$12,111

Source: *U.S. Census Bureau, Census 2000. SF3, Table P157A-H.*

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State Data Center
Contact Us
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Census 2010
Census 2010 Data
About

Population
Estimates
Projections

Census Reports
Demographics
Income and Poverty
American Community Survey

Census 2000 Profiles
State
Counties
Places
Zip Codes
Census Tracts
Glossary

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About Us
State Data Center
Contact Us
Affiliate Data Centers

Census 2010
Census 2010 Data
About

Population
Estimates
Projections

Census Reports
Demographics
Income and Poverty
American Community Survey

Census 2000 Profiles
State
Counties
Places
Zip Codes
Census Tracts
Glossary

Poverty Status by Age in Orangeburg County

- Two age groups that tend to be strongly affected by poverty are children and the elderly.
- In Orangeburg County in 1999, 27.6 percent of children under 18 lived below poverty, compared with 18.8 percent of children in South Carolina and 16.6 percent of children in the United States.
- In Orangeburg County in 1999, 25.6 percent of people age 75 and over lived below poverty, compared with 17.0 percent of people age 75 and over in South Carolina and 11.5 percent of people age 75 and over in the United States.

Poverty Status by Age in 1999

Under Age 5

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Under Age 5	5,949	100.0	259,831	100.0	18,726,688	100.0
Below Poverty	1,995	33.5	52,453	20.2	3,412,025	18.2
Above Poverty	3,954	66.5	207,378	79.8	15,314,663	81.8

Age 5

	Orangeburg County		South Carolina		United States	

	#	%	#	%	#	%
Total Age 5 Population	1,132	100.0	52,323	100.0	3,909,962	100.0
Below Poverty	295	26.1	10,403	19.9	689,664	17.6
Above Poverty	837	73.9	41,920	80.1	3,220,298	82.4

Ages 6 to 11

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Ages 6 to 11	7,995	100.0	348,631	100.0	24,587,815	100.0
Below Poverty	2,152	26.9	66,197	19.0	4,148,573	16.9
Above Poverty	5,843	73.1	282,434	81.0	20,439,242	83.1

Ages 12 to 17

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Aged 12 to 17 Years	8,478	100.0	333,563	100.0	23,700,796	100.0
Below Poverty	2,048	24.2	58,222	17.5	3,496,596	14.8
Above Poverty	6,430	75.8	275,341	82.5	20,204,200	85.2

Ages 18 to 24

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Aged 18 to 24 Years	8,435	100.0	345,628	100.0	24,336,119	100.0
Below Poverty	2,510	29.8	75,362	21.8	5,098,584	21.0
Above Poverty	5,925	70.2	270,266	78.2	19,237,535	79.0

Ages 25 to 34

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Aged 25 to 34	10,166	100.0	538,096	100.0	38,757,567	100.0
Below Poverty	1,899	18.7	64,564	12.0	4,548,547	11.7
Above Poverty	8,267	81.3	473,532	88.0	34,209,020	88.3

Ages 35 to 44

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Aged 35 to 44	13,611	100.0	627,189	100.0	45,232,905	100.0
Below Poverty	2,085	15.3	65,408	10.4	4,235,740	9.4
Above Poverty	11,526	84.7	561,781	89.6	40,997,165	90.6

Ages 45 to 54

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Aged 45 to 54	12156	100.0	542531	100.0	37278189	100.0
Below Poverty	1,797	14.8	50,042	9.2	2,819,338	7.6
Above Poverty	10,359	85.2	492,489	90.8	34,458,851	92.4

Ages 55 to 64

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Ages 55 to 64	8,592	100.0	369,690	100.0	24,005,643	100.0
Below Poverty	1,509	17.6	40,530	11.0	2,162,971	9.0
Above Poverty	7,083	82.4	329,160	89.0	21,842,672	91.0

Ages 65 to 74

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Ages 65 to 74	6,633	100.0	270,294	100.0	18,253,226	100.0
Below Poverty	1,323	19.9	31,507	11.7	1,550,969	8.5
Above Poverty	5,310	80.1	238,787	88.3	16,702,257	91.5

Ages 75 and Over

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Population Aged 75 Years and Over	4,826	100.0	195,553	100.0	15,093,322	100.0
Below Poverty	1,235	25.6	33,181	17.0	1,736,805	11.5

Above Poverty	3,591	74.4	162,372	83.0	13,356,517	88.5

Source: *U.S. Census Bureau, Census 2000. SF3, Table PCT49.*

About Us
State Data Center
Contact Us
Affiliate Data Centers

Census 2010
Census 2010 Data
About

Population
Estimates
Projections

Census Reports
Demographics
Income and Poverty
American Community Survey

Census 2000 Profiles
State
Counties
Places
Zip Codes
Census Tracts
Glossary

Poverty Status in Orangeburg County

Poverty is measured by using 48 thresholds that vary by family size and number of children within the family and age of the householder. To determine whether a person is poor, one compares the total income of that person's family with the threshold appropriate for that family. If the total family income is less than the threshold, then the person is considered poor, together with every member of his or her family. Not every person is included in the poverty universe: institutionalized people, people in military group quarters, people living in college dormitories, and unrelated individuals under 15 years old are considered neither as 'poor' nor as 'nonpoor,' and are excluded from both the numerator and the denominator when calculating poverty rates.

Poverty Status: 1999

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Population for Whom Poverty Status is Determined	87,973	100.0	3,883,329	100.0	273,882,232	100.0
Below Poverty	18,848	21.4	547,869	14.1	33,899,812	12.4
Above Poverty	69,125	78.6	3,335,460	85.9	239,982,420	87.6

Source: *U.S. Census Bureau, Census 2000. SF3, Table PCT49.*

Individuals Below Poverty Level: 1989, 1999

	1989		1999	
	#	%	#	%

Orangeburg County	20,171	24.9	18,848	21.4
South Carolina	517,793	15.4	547,869	14.1
United States	31,742,864	13.1	33,899,812	12.4

Source: *U.S. Census Bureau, Census 1990 and 2000.*

Poverty Status by Sex

Women are more likely than men to have incomes below poverty. In South Carolina in 1999, 12.3 percent of men and 15.8 percent of women lived below the poverty level. In Orangeburg County, 19.2 percent of men and 23.4 percent of women lived below the poverty level.

Poverty Status of Males: 1999

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Male Population	41,368	100.0	1,869,403	100.0	133,578,387	100.0
Below Poverty	7,953	19.2	230,546	12.3	14,925,062	11.2
Above Poverty	33,415	80.8	1,638,857	87.7	118,653,325	88.8

Poverty Status of Females: 1999

	Orangeburg County		South Carolina		United States	
	#	%	#	%	#	%
Total Female Population	46,605	100.0	2,013,926	100.0	140,303,845	100.0
Below Poverty	10,895	23.4	317,323	15.8	18,974,750	13.5
Above Poverty	35,710	76.6	1,696,603	84.2	121,329,095	86.5

Sources: *U.S. Census Bureau, Census 2000. SF3, Table PCT49.*

About Us
State Data Center
Contact Us
Affiliate Data Centers

Census 2010
Census 2010 Data
About

Population
Estimates
Projections

Census Reports
Demographics
Income and Poverty
American Community Survey

Census 2000 Profiles
State
Counties
Places
Zip Codes
Census Tracts
Glossary

Race in Orangeburg County

The question on race for Census 2000 was changed from the question on race for the 1990 Census. Respondents in 2000 were given the choice of selecting one or more race categories to indicate their racial identities. Therefore, data on race from the 2000 Census is not directly comparable with data from 1990 or earlier. **The Census Bureau urges that caution be used when interpreting changes in the racial composition of the United States population over time.**

People who responded to the question on race by indicating only one race are referred to as the race *alone* population.

White Population

For the 2000 Census, the term "White" refers to people having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who reported "White" or wrote in entries such as Irish, German, Italian, Lebanese, Near Easterner, Arab or Polish.

	1990		2000		Percent Change, 1990-2000
	White Population	Percent of Total Population	White Alone Population	Percent of Total Population	
Orangeburg County	34,949	41.2	34,045	37.2	-2.6
South Carolina	2,406,974	69.0	2,695,560	67.2	12.0
United States	199,686,370	80.3	211,460,626	75.1	5.9

Black or African-American Population

For the 2000 Census, the term "Black or African-American" refers to people having origins in any of the Black race groups of Africa. It includes people who reported "Black, African American, or Negro" or wrote in entries such as African American, Afro American, Nigerian, or Haitian.

	1990		2000		Percent Change, 1990-2000
	Black Population	Percent of Total Population	Black Alone Population	Percent of Total Population	
Orangeburg County	49,257	58.1	55,736	60.9	13.2
South Carolina	1,039,884	29.8	1,185,216	29.5	14.0
United States	29,980,996	12.1	34,658,190	12.3	15.6

Asian Population

The term "Asian" refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent (for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand and Vietnam). Asian groups are not limited to nationalities, but include ethnic terms as well.

	1990		2000		Percent Change, 1990-2000
	Asian Population	Percent of Total Population	Asian Alone Population	Percent of Total Population	
Orangeburg County	322	0.4	396	0.4	23
South Carolina	21,399	.6	36,014	.9	68.3
United States	6,908,638	2.8	10,242,998	3.6	48.3

American Indian and Alaska Native Population

The term "American Indian and Alaska Native" refers to people having origins in any of the original peoples of North and South America (including Central America) and who maintain tribal affiliation or community attachment. It includes people who reported "American Indian and Alaska Native" or wrote in their principal or enrolled tribe.

The American Indian and Alaska Native Alone population in Orangeburg County made up 0.5 percent of the total county population, and 3.1 percent of the American Indian and Alaska Native Alone population for the entire state.

	1990		2000		Percent Change, 1990-2000
	American Indian and Alaska Native Population	Percent of Total Population	American Indian and Alaska Native Alone Population	Percent of Total Population	
Orangeburg County	214	0.3	423	0.5	97.7
South Carolina	8,246	.2	13,718	.3	66.4
United States	1,959,234	.8	2,475,956	.9	26.4

People who identified themselves as American Indian and Alaska Native were also asked to report their enrolled or principal tribe. Respondents were able to report more than one tribe. In Orangeburg County, 226 people specified one or more tribes, and 178 did not specify a tribe. The three most reported tribes were: Cherokee (50 people); Sioux (47 people); and Lumbee (Lumbee people). In the entire state, 8,982 people specified one or more tribes, with the most common being Cherokee (3,244 people), Lumbee (971 people) and Latin American Indians (393 people).

Native Hawaiian and Other Pacific Islander Population

The term "Native Hawaiian and Other Pacific Islander" refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. Pacific Islanders include diverse populations that differ in language and culture. They are of Polynesian, Micronesian and Melanesian cultural backgrounds.

	1990		2000		Percent Change, 1990-2000
	Native Hawaiian Population	Percent of Total Population	Native Hawaiian Alone Population	Percent of Total Population	
Orangeburg County	9	0.01	15	0.02	66.7
South Carolina	983	0.0	1,628	0.0	65.6
United States	365,024	0.1	398,835	0.1	9.3

Some Other Race Population

"Some other race" was included in Census 2000 for respondents who were unable to identify with the five Office of Management and Budget race categories. Respondents who provided write-in entries such as Moroccan, South African, Belizean, or a Hispanic origin (for example Mexican, Puerto Rican, or Cuban) are included in the Some other race category.

	# of Respondents Reporting Some Other Race	Percent of Total Population
Orangeburg County	330	0.4
South Carolina	39,926	1.0
United States	15,359,073	5.5

Two or More Races Population

The term "Two or more races" refers to people who chose more than one of the six race categories. The 1990 census did not give respondents the option of selecting more than one race category to indicate their racial identities.

	# of Respondents Reporting Two or More Races	Percent of Total Population
Orangeburg County	637	0.7
South Carolina	39,950	1.0
United States	6,826,228	2.4

Source: *U.S. Census Bureau, Census 1990 and 2000.*

South Carolina State and County Population Projections 2000-2035 Summary

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County	April 1, 2000 Census	July 1, 2005 Estimate	July 1, 2010 Projection	July 1, 2015 Projection	July 1, 2020 Projection	July 1, 2025 Projection	July 1, 2030 Projection	July 1, 2035 Projection
Abbeville	26,167	25,676	25,950	26,760	27,580	28,380	29,070	29,830
Aiken	142,552	148,700	158,120	167,800	177,510	187,210	196,500	206,020
Allendale	11,211	10,737	10,550	10,680	10,820	10,940	11,010	11,110
Anderson	165,740	174,387	184,990	193,370	201,730	210,110	218,520	226,900
Bamberg	16,658	15,744	15,230	14,840	14,470	14,090	13,560	13,110
Barnwell	23,478	23,053	23,560	24,530	25,510	26,490	27,190	28,070
Beaufort	120,937	139,333	156,070	170,640	185,220	199,780	215,270	230,240
Berkeley	142,651	152,858	170,270	181,350	192,450	203,520	214,140	225,010
Calhoun	15,185	14,884	15,210	15,940	16,660	17,390	17,980	18,640
Charleston	309,969	337,199	348,370	357,370	366,380	375,390	386,660	396,640
Cherokee	52,537	53,545	55,800	58,780	61,760	64,760	67,350	70,170
Chester	34,068	32,908	33,020	33,830	34,620	35,440	36,000	36,700
Chesterfield	42,768	42,745	43,480	44,670	45,870	47,050	48,040	49,140
Clarendon	32,502	32,757	33,610	34,900	36,210	37,520	38,600	39,820

Colleton	38,264	38,973	39,870	41,470	43,080	44,680	46,250	47,850
Darlington	67,394	66,917	67,620	68,940	70,260	71,580	72,710	73,940
Dillon	30,722	30,725	30,730	30,800	30,860	30,920	31,000	31,060
Dorchester	96,413	111,722	129,450	139,370	149,300	159,210	170,210	180,580
Edgefield	24,595	25,400	26,560	28,420	30,270	32,130	33,520	35,170
Fairfield	23,454	23,704	23,760	24,470	25,190	25,920	26,610	27,330
Florence	125,761	129,924	134,510	138,860	143,230	147,580	151,940	156,300
Georgetown	55,797	59,534	62,610	66,130	69,650	73,180	76,880	80,500
Greenville	379,616	406,661	443,160	468,020	492,890	517,740	542,290	567,010
Greenwood	66,271	67,708	69,770	72,300	74,840	77,370	79,750	82,240
Hampton	21,386	21,008	21,710	22,550	23,390	24,230	24,860	25,600
Horry	196,629	228,578	265,360	291,080	316,810	342,530	367,680	393,160
Jasper	20,678	21,185	22,920	24,530	26,130	27,730	29,000	30,460
Kershaw	52,647	55,832	60,370	64,040	67,700	71,390	74,810	78,380
Lancaster	61,351	69,821	74,800	77,150	79,480	81,830	83,940	86,180
Laurens	69,567	69,479	72,040	76,120	80,220	84,310	87,660	91,440
Lee	20,119	20,252	20,270	20,720	21,180	21,640	22,060	22,500
Lexington	216,014	233,297	255,100	274,800	294,510	314,220	333,180	352,590
McCormick	9,958	10,016	10,450	11,020	11,590	12,170	12,720	13,280
Marion	35,466	34,450	34,160	34,580	35,020	35,450	35,680	36,020
Marlboro	28,818	27,606	28,430	27,770	27,100	26,430	25,750	25,080
Newberry	36,108	36,983	38,390	39,650	40,900	42,170	43,400	44,640
Oconee	66,215	69,302	73,420	77,860	82,300	86,740	91,070	95,460
Orangeburg	91,582	90,772	91,450	93,920	96,400	98,880	10,0700	10,2890
Pickens	110,757	113,729	120,600	128,260	135,920	143,570	150,420	157,720
Richland	320,677	345,167	366,550	381,230	395,920	410,610	425,960	440,940
Saluda	19,181	18,727	19,150	19,810	20,470	21,140	21,570	22,130
Spartanburg	253,791	265,669	283,530	296,880	310,220	323,550	336,810	350,110
Sumter	104,646	104,849	106,180	109,900	113,630	117,360	121,160	124,910
Union	29,881	28,267	27,640	27,420	27,190	26,980	26,570	26,260
Williamsburg	37,217	34,808	35,370	35,240	35,100	34,980	34,440	34,150
York	164,614	189,398	218,990	235,930	252,860	269,790	287,970	305,440
South Carolina	4,012,012	4,254,989	4,549,150	4,784,700	5,020,400	5,256,080	5,488,460	5,722,720

Source: U.S. Census Bureau, 2000 Census and 2007 Population Estimates. Population projections calculated by South Carolina Budget and Control Board, Office of Research and Statistics.

About Us
State Data Center
Contact Us
Affiliate Data Centers

Census 2010
Summary
Data
About

Population
Estimates
Projections

Census Reports
Demographics
Income and Poverty
American Community Survey

Census 2000 Profiles
State
Counties
Places
Zip Codes
Census Tracts
Glossary

South Carolina State and County Population Projections 2020-2025

Download this table: Excel | CSV

County	July 1, 2020 Projection	July 1, 2021 Projection	July 1, 2022 Projection	July 1, 2023 Projection	July 1, 2024 Projection	July 1, 2025 Projection
Abbeville	27,580	27,750	27,900	28,060	28,230	28,380
Aiken	177,510	179,450	181,390	183,320	185,270	187,210
Allendale	10,820	10,830	10,860	10,890	10,910	10,940
Anderson	201,730	203,400	205,090	206,760	208,430	210,110
Bamberg	14,470	14,390	14,310	14,230	14,170	14,090
Barnwell	25,510	25,700	25,910	26,090	26,290	26,490
Beaufort	185,220	188,130	191,040	193,960	196,870	199,780
Berkeley	192,450	194,650	196,870	199,090	201,300	203,520
Calhoun	16,660	16,800	16,950	17,100	17,240	17,390
Charleston	366,380	368,190	369,990	371,790	373,590	375,390
Cherokee	61,760	62,360	62,970	63,550	64,150	64,760
Chester	34,620	34,790	34,950	35,120	35,280	35,440

Chesterfield	45,870	46,100	46,330	46,580	46,810	47,050
Clarendon	36,210	36,470	36,720	36,980	37,250	37,520
Colleton	43,080	43,390	43,720	44,040	44,360	44,680
Darlington	70,260	70,520	70,780	71,060	71,310	71,580
Dillon	30,860	30,870	30,880	30,900	30,910	30,920
Dorchester	149,300	151,280	153,270	155,250	157,230	159,210
Edgefield	30,270	30,630	31,020	31,390	31,760	32,130
Fairfield	25,190	25,340	25,480	25,630	25,780	25,920
Florence	143,230	144,090	144,960	145,850	146,720	147,580
Georgetown	69,650	70,360	71,060	71,770	72,470	73,180
Greenville	492,890	497,850	502,820	507,800	512,760	517,740
Greenwood	74,840	75,340	75,850	76,360	76,850	77,370
Hampton	23,390	23,570	23,720	23,900	24,070	24,230
Horry	316,810	321,950	327,100	332,230	337,380	342,530
Jasper	26,130	26,440	26,770	27,100	27,410	27,730
Kershaw	67,700	68,460	69,180	69,910	70,640	71,390
Lancaster	79,480	79,960	80,420	80,890	81,360	81,830
Laurens	80,220	81,030	81,870	82,670	83,500	84,310
Lee	21,180	21,260	21,360	21,450	21,540	21,640
Lexington	294,510	298,450	302,390	306,330	310,280	314,220
McCormick	11,590	11,700	11,830	11,940	12,050	12,170
Marion	35,020	35,090	35,180	35,280	35,360	35,450
Marlboro	27,100	26,960	26,830	26,700	26,570	26,430
Newberry	40,900	41,150	41,410	41,660	41,920	42,170
Oconee	82,300	83,180	84,080	84,970	85,850	86,740
Orangeburg	96,400	96,900	97,390	97,890	98,380	98,880
Pickens	135,920	137,450	138,980	140,510	142,040	143,570
Richland	395,920	398,860	401,800	404,730	407,670	410,610
Saluda	20,470	20,600	20,730	20,870	21,010	21,140
Spartanburg	310,220	312,890	315,550	318,230	320,890	323,550
Sumter	113,630	114,380	115,140	115,860	116,620	117,360
Union	27,190	27,150	27,110	27,080	27,030	26,980
Williamsburg	35,100	35,080	35,050	35,040	35,010	34,980
York	252,860	256,230	259,630	263,020	266,410	269,790
South Carolina	5,020,400	5,067,420	5,114,640	5,161,830	5,208,930	5,256,080

Source: U.S. Census Bureau, 2000 Census and 2007 Population Estimates. Population projections calculated by South Carolina Budget and Control Board, Office of Research and Statistics.

Elloree Profile

Demographics

Population

Elloree is located in Orangeburg County, South Carolina and had a population of 742 in 2000.

Source: *U.S. Census Bureau, Census 2000. SF1, Table P1.*

Population by Sex: 2000

	#	%
Total Population	**742**	**100.0**
Male	324	43.7
Female	418	56.3

Source: *U.S. Census Bureau, Census 2000. SF1, Table P12.*

Population by Race: 2000

	#	%
Total Population	**742**	**100.0**

White Alone	413	55.7
African American Alone	326	43.9
American Indian and Alaska Native Alone	1	0.1
Asian Alone	0	0.0
Native Hawaiian or Other Pacific Islander Alone	0	0.0
Some Other Race Alone	0	0.0
Two or More Races	2	0.3

A person of Hispanic or Latino origin is defined as a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, **regardless of race**. There were 1 people, or 0.1 percent of the total population, who were counted as Hispanic or Latino in Elloree in 2000.

Sources: *U.S. Census Bureau, Census 2000. SF1, Tables P3 and P4.*

Population by Age: 2000

	#	%
Total Population	**742**	**100.0**
0 to 18 Years	164	22.1
Under 5 Years	34	4.6
Under 6 Years	30	4.0
5 to 17 Years	119	16.0
18 to 29 Years	85	11.5
30 to 39 Years	83	11.2
40 to 49 Years	103	13.9
50 to 59 Years	96	12.9
60 to 69 Years	94	12.7
70 to 79 Years	91	12.3
65 Years and Over	82	11.1
80 Years and Over	37	5.0
85 Years and Over	10	1.3

Sources: *U.S. Census Bureau, Census 2000. SF1, Tables P12 and P14.*

Urban and Rural Population: 2000

	#	%
Total Population*	**776**	**100.0**
Urban	0	0.0
Rural	776	100.0

*__Note:__ Since SF3 data is based on a sample of the population, total population numbers may not correspond exactly with those released in SF1.

Source: *U.S. Census Bureau, Census 2000. SF3, Table P5.*

Marital Status

Marital Status: 2000

	#	%
Population 15 Years and Over	**638**	**100.0**
Never Married	163	25.5
Now Married	334	52.4
Married, Spouse Present	276	43.3
Married, Spouse Absent	58	9.1
Widowed	94	14.7
Divorced	47	7.4

Source: *U.S. Census Bureau, Census 2000. SF3, Table P18.*

Languages Spoken

The population who speaks a language other than English includes only those who sometimes or always speak a language other than English at home. It does not include those who speak a language other than English only at school or work, or those who were limited to only a few expressions or slang of the other language. Most people who speak another language at home also speak English.

For people who speak a language other than English at home, the response represents the person's own perception of his or her ability to speak English, from very well to not at all. Because census questionnaires are usually completed by one household member, the responses may represent the perception of another household member.

Language Spoken at Home and Ability to Speak English: 2000

	#	% of Total Population Ages 5 and Over	Speak English "Very Well"		Speak English Less than "Very Well"	
			#	%	#	%
Population 5 Years and Over	741	100.0	-	-	-	-
Speak English Only	721	97.3	-	-	-	-
Speak Spanish	5	0.7	2	40.0	3	60.0
Speak Indo-European Languages	15	2.0	4	26.7	11	73.3
Speak Asian or Pacific Island Languages	0	0.0	0	0.0	0	0.0
Speak Other Language	0	0.0	0	0.0	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table P19.*

Linguistically Isolated Households: 2000

A linguistically isolated household is one in which no member 14 years old and over: (1) speaks only English, or (2) speaks a non-English language and speaks English "very well." In other words, all members 14 years old and over have at least some difficulty with English.

	#	%
Total Households	**349**	**100.0**
Speak English	330	94.6
Speak Spanish	7	2.0
Linguistically Isolated	0	0.0
Not Linguistically Isolated	7	100.0
Speak Indo-European Language	12	3.4
Linguistically Isolated	2	16.7
Not Linguistically Isolated	10	83.3
Speak Asian or Pacific Island Language	0	0.0
Linguistically Isolated	0	0.0
Linguistically Isolated	0	0.0
Speak Other Language	0	0.0
Linguistically Isolated	0	0.0
Not Linguistically Isolated	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table P20.*

Economics

Income

Household Income: 1999

Household Income includes the income of the householder and all persons 15 years old and over in the household, whether related to the householder or not. Since many households consist of one person, average household income is usually less than average family income.

	#	%
Total Households	**349**	**100.0**
Annual Household Income Less Than $10,000	69	19.8
$10,000 to $14,999	37	10.6
$15,000 to $24,999	85	24.4
$25,000 to $34,999	38	10.9
$35,000 to $49,999	48	13.8
$50,000 to $59,999	9	2.6
$60,000 to $74,999	19	5.4

$75,000 to $99,999	18	5.2
$100,000 to $124,999	9	2.6
$125,000 to $149,999	0	0.0
$150,000 to $199,999	7	2.0
$200,000 or More	10	2.9
Median Household Income	$22,574	

Source: *U.S. Census Bureau, Census 2000. SF3, Table P52.*

Family Income: 1999

Family income is the income of all members 15 years old and over in a family, summed and treated as a single amount.

	#	%
Total Families	**211**	**100.0**
Annual Family Income Less Than $10,000	20	9.5
$10,000 to $14,999	13	6.2
$15,000 to $24,999	42	19.9
$25,000 to $34,999	27	12.8
$35,000 to $49,999	45	21.3
$50,000 to $59,999	10	4.7
$60,000 to $74,999	13	6.2
$75,000 to $99,999	18	8.5
$100,000 to $124,999	6	2.8
$125,000 to $149,999	0	0.0
$150,000 to $199,999	7	3.3
$200,000 or More	10	4.7
Median Family Income	$35,380	

Source: *U.S. Census Bureau, Census 2000. SF3, Table P76.*

Per Capita Income: 1999

Per capita income is the average income computed for every man, woman, and child in a particular group. The Census Bureau derived per capita income by dividing the total income of a particular group by the total population in that group (excluding patients or inmates in institutional quarters).

	Per Capita Income in 1999
Total Population (All Races)	$21,711
White Alone Population	$21,604
African American Alone Population	$21,916

Hispanic or Latino Population	$0

Source: *U.S. Census Bureau, Census 2000. SF3, Tables P82, P157A-B and P157H.*

Labor Force and Employment Status

The labor force includes all people classified in the civilian labor force (that is 'employed' and 'unemployed' people) plus members of the U.S. Armed Forces (people on active duty in the U.S. Army, Air Force, Navy, Marine Corps, and Coast Guard.

Labor Force and Employment Status: 2000

	Total		Male		Female	
	#	%	#	%	#	%
Population 16 Years and Over	**616**	**100.0**	**273**	**100.0**	**343**	**100.0**
In Labor Force	308	50.0	162	59.3	146	42.6
In Armed Forces	0	0.0	0	0.0	0	0.0
In Civilian Labor Force	308	50.0	162	59.3	146	42.6
Not In Labor Force	308	50.0	111	40.7	197	57.4

- Of the 308 people in the civilian labor force, 93.8 percent (289 people) and 6.2 percent (19 people) were unemployed.
- Of the 162 males in the civilian labor force, 94.4 percent (153 people) were employed and 5.6 percent (9 people) were unemployed.
- Of the 146 females in the civilian labor force, 93.2 percent (136 people) were employed and 6.8 percent (10 people) were unemployed.

Source: *U.S. Census Bureau, Census 2000. SF3, Table P43.*

Labor Force and Employment Status by Race: 2000

	White		African-American		Hispanic	
	#	%	#	%	#	%
Population 16 Years and Over	**368**	**100.0**	**248**	**100.0**	**0**	**100.0**
In Labor Force	203	55.2	105	42.3	0	0.0
In Armed Forces	0	0.0	0	0.0	0	0.0
In Civilian Labor Force	203	55.2	105	42.3	0	0.0
Not In Labor Force	165	44.8	143	57.7	0	0.0

- Of the people in the civilian labor force who are White, 96.1 percent (people) were employed and 3.9 percent (8 people) were unemployed.
- Of the 105 people in the civilian labor force who are African American, 89.5 percent (94 people) were employed and 10.5 percent (11 people) were unemployed.
- Of the 0 people in the civilian labor force who are Hispanic or Latino, 0.0 percent (0 people) were employed and 0.0 percent (0 people) were unemployed.

Source: *U.S. Census Bureau, Census 2000. SF3, Tables P150A,B,H.*

Education

Educational Attainment: 2000

	#	%
Population 25 Years and Over	**545**	**100.0**
Less Than 9th Grade	43	7.9
9th to 12th Grade, No Diploma	89	16.3
High School Graduate	210	38.5
Some College, No Degree	76	13.9
Associate Degree	26	4.8
Bachelor's Degree	85	15.6
Graduate or Professional Degree	16	2.9

Source: *U.S. Census Bureau, Census 2000. SF3, Table P37.*

Educational Attainment By Race: 2000

	White		African American		Hispanic or Latino	
	#	%	#	%	#	%
Population 25 Years and Over	**335**	**100.0**	**210**	**100.0**	**0**	**100.0**
Less Than 9th Grade	14	4.2	29	13.8	0	0.0
9th to 12th Grade, No Diploma	42	12.5	47	22.4	0	0.0
High School Graduate	105	31.3	105	50.0	0	0.0
Some College, No Degree	55	16.4	21	10.0	0	0.0
Associate Degree	25	7.5	1	0.5	0	0.0
Bachelor's Degree	80	23.9	5	2.4	0	0.0
Graduate or Professional Degree	14	4.2	2	1.0	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table P148A,B,H.*

School Enrollment: 2000

	#	%
Population 3 Years and Over	**752**	**100.0**
Enrolled in Nursery School or Preschool	9	1.2
Enrolled in Kindergarten	9	1.2
Enrolled in Grade 1 to Grade 4	48	6.4

Enrolled in Grade 5 to Grade 8	49	6.5
Enrolled in Grade 9 to Grade 12	49	6.5
Enrolled in College (Undergraduate)	21	2.8
Enrolled in Graduate or Professional School	9	1.2
Not Enrolled in School	558	74.2

Source: *U.S. Census Bureau, Census 2000. SF3, Table P36.*

Housing

Households

A household consists of all the people who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live and eat with any other persons in the structure and there is direct access from the outside or through a common hall.

A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of households excludes group quarters. There are two major categories of households, family and nonfamily.

There were a total of 340 households in Elloree in 2000, with an average household size of 2.2 people.

Household Composition: 2000

	#	%
Total Households	**340**	**100.0**
Family Households	200	58.8
One-Person Households	129	37.9
Other Nonfamily Households	11	3.2

Family Households: 2000

	#	%
Total households	**340**	**100.0**
Total family households	200	58.8
Married couple households:	128	37.6
With own children under 18 years	42	12.4
No own children under 18 years	86	25.3
Male householder, no wife present:	13	3.8
With own children under 18 years	4	1.2
No own children under 18 years	9	2.6
Female householder, no husband present:	59	17.4
With own children under 18 years	26	7.6

No own children under 18 years	33	9.7
Total Single-Parent Households with Children Under 18	30	8.8

Sources: *U.S. Census Bureau, Census 2000. SF3, Tables P17 and P18.*

Housing Units

A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room occupied, or intended for occupancy, as separate living quarters. Separate living quarters are those in which the occupant(s) live separately from any other people in the building and which have direct access from outside the building or through a common hall.

In 2000, Elloree reported having 381 housing units.

Housing Units: 2000

	#	%
Total Housing Units	**381**	**100.0**
Occupied Housing Units	340	89.2
Owner Occupied	261	76.8
Renter Occupied	79	23.2
Vacant Housing Units	41	10.8
Vacant for Rent	6	14.6
Vacant for Sale	6	14.6
Rented or Sold, Not Occupied	5	12.2
Vacant for Seasonal, Recreational, or Occasional Use	4	9.8
Vacant for Migrant Workers	0	0.0
Vacant for Other Reasons	20	48.8

Source: *U.S. Census Bureau, Census 2000. SF1, Tables H1, H3, H4 and H5.*

Population in Occupied Housing Units: 2000

	Total		White Alone Householder		African American Alone Householder	
	#	%	#	%	#	%
Population in Occupied Housing Units	**776**	**100.0**	**414**	**100.0**	**324**	**100.0**
In Owner-Occupied Units	608	78.4	344	83.1	233	71.9
In Renter-Occupied Units	168	21.6	70	16.9	91	28.1

Source: *U.S. Census Bureau, Census 2000. SF1, Tables H11 and H11A-B.*

Telephone Service in Owner-Occupied Housing Units: 2000

	Total	Telephone Service Available		Telephone Service Not Available	
		#	%	#	%
Owner-Occupied Housing Units	261	246	94.3	15	5.74713
Householder 15 to 24 Years Old	5	5	100.0	0	0.0
Householder 25 to 34 Years Old	17	14	82.4	3	17.6
Householder 35 to 44 Years Old	50	44	88.0	6	12.0
Householder 45 to 54 Years Old	31	28	90.3	3	9.7
Householder 55 to 64 Years Old	35	32	91.4	3	8.6
Householder 65 to 74 Years Old	74	74	100.0	0	0.0
Householder 75 Years or Over	49	49	100.0	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table H43.*

Telephone Service in Renter-Occupied Housing Units: 2000

	Total	Telephone Service Available		Telephone Service Not Available	
		#	%	#	%
Renter-Occupied Housing Units	86	70	81.4	16	18.6
Householder 15 to 24 Years Old	2	2	100.0	0	0.0
Householder 25 to 34 Years Old	14	10	71.4	4	28.6
Householder 35 to 44 Years Old	20	16	80.0	4	20.0
Householder 45 to 54 Years Old	11	5	45.5	6	54.5
Householder 55 to 64 Years Old	10	8	80.0	2	20.0
Householder 65 to 74 Years Old	11	11	100.0	0	0.0
Householder 75 Years or Over	18	18	100.0	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table H43.*

Vehicle Availability in Owner-Occupied Housing Units: 2000

	Total	One or More Vehicles Available		No Vehicle Available	
		#	%	#	%
Owner-Occupied Housing Units	261	222	85.1	39	14.9
Householder 15 to 24 Years Old	5	2	40.0	3	60.0
Householder 25 to 34 Years Old	17	17	100.0	0	0.0
Householder 35 to 44 Years Old	50	37	74.0	13	26.0
Householder 45 to 54 Years Old	31	29	93.5	2	6.5
Householder 55 to 64 Years Old	35	25	71.4	10	28.6
Householder 65 to 74 Years Old	74	70	94.6	4	5.4
Householder 75 Years or Over	49	42	85.7	7	14.3

Source: *U.S. Census Bureau, Census 2000. SF3, Table H45.*

Vehicle Availability in Renter-Occupied Housing Units: 2000

	Total	One or More Vehicles Available		No Vehicle Available	

		#	%	#	%
Renter-Occupied Housing Units	86	55	64.0	31	36.0
Householder 15 to 24 Years Old	2	2	100.0	0	0.0
Householder 25 to 34 Years Old	14	12	85.7	2	14.3
Householder 35 to 44 Years Old	20	13	65.0	7	35.0
Householder 45 to 54 Years Old	11	11	100.0	0	0.0
Householder 55 to 64 Years Old	10	4	40.0	6	60.0
Householder 65 to 74 Years Old	11	8	72.7	3	27.3
Householder 75 Years or Over	18	5	27.8	13	72.2

Source: *U.S. Census Bureau, Census 2000. SF3, Table H45.*

Poverty

Poverty Status: 1999

	#	%
Population for Whom Poverty Status is Determined	**776**	**100.0**
Income in 1999 Below Poverty Level	164	21.1
Income in 1999 Above Poverty Level	612	78.9

Source: *U.S. Census Bureau, Census 2000. SF3, Table P87.*

Poverty Status by Age: 1999

	Total	**Income in 1999 Above Poverty Level**		**Income in 1999 Below Poverty Level**	
		#	%	#	%
Population Under Age 5	**35**	**23**	**65.7**	**12**	**34.3**
Age 5	5	5	100.0	0	0.0
Age 6-11	72	43	59.7	29	40.3
Age 12-17	59	43	72.9	16	27.1
Age 18-64	399	322	80.7	77	19.3
Age 65-74	119	106	89.1	13	10.9
Age 75 and Over	87	70	80.5	17	19.5

Source: *U.S. Census Bureau, Census 2000. SF3, Table P87.*

Poverty Status by Race: 1999

	Total	**Income in 1999 Above Poverty Level**		**Income in 1999 Below Poverty Level**	

		#	%	#	%
White Alone Population	439	418	95.2	21	4.8
African American Alone Population	336	193	57.4	143	42.6
Hispanic or Latino Population	0	0	0.0	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table P159A-B and 159H.*

Ratio of Income in 1999 to Poverty Level

The ratio of income to poverty level can be used not just to categorize people as above or below the poverty line, but also to measure the degree or depth of poverty. The ratio of income to poverty compares a person's income with their poverty threshold, and expresses that comparison as a fraction. For example, a poverty ratio of 1.0 means a person is living right at the poverty line; a ratio of 0.5 would mean that the person is living in a household making only half of the income designated as the poverty threshold. The Census Bureau describes those with family incomes below one half of their poverty threshold as being "severely poor." People with incomes at or above their threshold but below 125 percent of their threshold are classified as "near poor."

View the poverty thresholds used by the Census Bureau in 1999.

	#	%
Population for Whom Poverty Status is Determined	**776**	**100.0**
Ratio of Income to Poverty Level Under .50	94	12.1
.50 to .74	34	4.4
.75 to .99	36	4.6
1.00 to 1.24	24	3.1
1.25 to 1.49	66	8.5
1.50 to 1.74	26	3.4
1.75 to 1.84	18	2.3
1.85 to 1.99	40	5.2
2.00 and Over	438	56.4

Source: *U.S. Census Bureau, Census 2000. SF3, Table P88.*

Santee Profile

Demographics

Population

Santee is located in Orangeburg County, South Carolina and had a population of 740 in 2000.

Source: *U.S. Census Bureau, Census 2000. SF1, Table P1.*

Population by Sex: 2000

	#	%
Total Population	**740**	**100.0**
Male	314	42.4
Female	426	57.6

Source: *U.S. Census Bureau, Census 2000. SF1, Table P12.*

Population by Race: 2000

	#	%
Total Population	**740**	**100.0**

White Alone	208	28.1
African American Alone	523	70.7
American Indian and Alaska Native Alone	0	0.0
Asian Alone	1	0.1
Native Hawaiian or Other Pacific Islander Alone	0	0.0
Some Other Race Alone	4	0.5
Two or More Races	4	0.5

A person of Hispanic or Latino origin is defined as a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, **regardless of race**. There were 6 people, or 0.8 percent of the total population, who were counted as Hispanic or Latino in Santee in 2000.

Sources: *U.S. Census Bureau, Census 2000. SF1, Tables P3 and P4.*

Population by Age: 2000

	#	%
Total Population	**740**	**100.0**
0 to 18 Years	202	27.3
Under 5 Years	57	7.7
Under 6 Years	46	6.2
5 to 17 Years	130	17.6
18 to 29 Years	102	13.8
30 to 39 Years	86	11.6
40 to 49 Years	79	10.7
50 to 59 Years	54	7.3
60 to 69 Years	92	12.4
70 to 79 Years	99	13.4
65 Years and Over	95	12.8
80 Years and Over	41	5.5
85 Years and Over	4	0.5

Sources: *U.S. Census Bureau, Census 2000. SF1, Tables P12 and P14.*

Urban and Rural Population: 2000

	#	%
Total Population*	**665**	**100.0**
Urban	0	0.0
Rural	665	100.0

*__Note:__ Since SF3 data is based on a sample of the population, total population numbers may not correspond exactly with those released in SF1.

Source: *U.S. Census Bureau, Census 2000. SF3, Table P5.*

Marital Status

Marital Status: 2000

	#	%
Population 15 Years and Over	**552**	**100.0**
Never Married	175	31.7
Now Married	305	55.3
Married, Spouse Present	256	46.4
Married, Spouse Absent	49	8.9
Widowed	50	9.1
Divorced	22	4.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table P18.*

Languages Spoken

The population who speaks a language other than English includes only those who sometimes or always speak a language other than English at home. It does not include those who speak a language other than English only at school or work, or those who were limited to only a few expressions or slang of the other language. Most people who speak another language at home also speak English.

For people who speak a language other than English at home, the response represents the person's own perception of his or her ability to speak English, from very well to not at all. Because census questionnaires are usually completed by one household member, the responses may represent the perception of another household member.

Language Spoken at Home and Ability to Speak English: 2000

	#	% of Total Population Ages 5 and Over	Speak English "Very Well"		Speak English Less than "Very Well"	
			#	%	#	%
Population 5 Years and Over	617	100.0	-	-	-	-
Speak English Only	606	98.2	-	-	-	-
Speak Spanish	4	0.6	4	100.0	0	0.0
Speak Indo-European Languages	7	1.1	5	71.4	2	28.6
Speak Asian or Pacific Island Languages	0	0.0	0	0.0	0	0.0
Speak Other Language	0	0.0	0	0.0	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table P19.*

Linguistically Isolated Households: 2000

A linguistically isolated household is one in which no member 14 years old and over: (1) speaks only English, or (2) speaks a non-English language and speaks English "very well." In other words, all members 14 years old and over have at least some difficulty with English.

	#	%
Total Households	**287**	**100.0**
Speak English	273	95.1
Speak Spanish	5	1.7
Linguistically Isolated	0	0.0
Not Linguistically Isolated	5	100.0
Speak Indo-European Language	9	3.1
Linguistically Isolated	0	0.0
Not Linguistically Isolated	9	100.0
Speak Asian or Pacific Island Language	0	0.0
Linguistically Isolated	0	0.0
Linguistically Isolated	0	0.0
Speak Other Language	0	0.0
Linguistically Isolated	0	0.0
Not Linguistically Isolated	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table P20.*

Economics

Income

Household Income: 1999

Household Income includes the income of the householder and all persons 15 years old and over in the household, whether related to the householder or not. Since many households consist of one person, average household income is usually less than average family income.

	#	%
Total Households	**287**	**100.0**
Annual Household Income Less Than $10,000	77	26.8
$10,000 to $14,999	17	5.9
$15,000 to $24,999	63	22.0
$25,000 to $34,999	31	10.8
$35,000 to $49,999	49	17.1
$50,000 to $59,999	7	2.4
$60,000 to $74,999	10	3.5

$75,000 to $99,999	16	5.6
$100,000 to $124,999	5	1.7
$125,000 to $149,999	0	0.0
$150,000 to $199,999	7	2.4
$200,000 or More	5	1.7
Median Household Income	$22,292	

Source: *U.S. Census Bureau, Census 2000. SF3, Table P52.*

Family Income: 1999

Family income is the income of all members 15 years old and over in a family, summed and treated as a single amount.

	#	%
Total Families	**207**	**100.0**
Annual Family Income Less Than $10,000	43	20.8
$10,000 to $14,999	9	4.3
$15,000 to $24,999	44	21.3
$25,000 to $34,999	23	11.1
$35,000 to $49,999	43	20.8
$50,000 to $59,999	7	3.4
$60,000 to $74,999	8	3.9
$75,000 to $99,999	16	7.7
$100,000 to $124,999	5	2.4
$125,000 to $149,999	0	0.0
$150,000 to $199,999	4	1.9
$200,000 or More	5	2.4
Median Family Income	$28,393	

Source: *U.S. Census Bureau, Census 2000. SF3, Table P76.*

Per Capita Income: 1999

Per capita income is the average income computed for every man, woman, and child in a particular group. The Census Bureau derived per capita income by dividing the total income of a particular group by the total population in that group (excluding patients or inmates in institutional quarters).

	Per Capita Income in 1999
Total Population (All Races)	$15,353
White Alone Population	$34,321
African American Alone Population	$8216

Hispanic or Latino Population	$1200

Source: *U.S. Census Bureau, Census 2000. SF3, Tables P82, P157A-B and P157H.*

Labor Force and Employment Status

The labor force includes all people classified in the civilian labor force (that is 'employed' and 'unemployed' people) plus members of the U.S. Armed Forces (people on active duty in the U.S. Army, Air Force, Navy, Marine Corps, and Coast Guard.

Labor Force and Employment Status: 2000

	Total		Male		Female	
	#	%	#	%	#	%
Population 16 Years and Over	**538**	**100.0**	**231**	**100.0**	**307**	**100.0**
In Labor Force	201	37.4	87	37.7	114	37.1
In Armed Forces	0	0.0	0	0.0	0	0.0
In Civilian Labor Force	201	37.4	87	37.7	114	37.1
Not In Labor Force	337	62.6	144	62.3	193	62.9

- Of the 201 people in the civilian labor force, 87.1 percent (175 people) and 12.9 percent (26 people) were unemployed.
- Of the 87 males in the civilian labor force, 77.0 percent (67 people) were employed and 23.0 percent (20 people) were unemployed.
- Of the 114 females in the civilian labor force, 94.7 percent (108 people) were employed and 5.3 percent (6 people) were unemployed.

Source: *U.S. Census Bureau, Census 2000. SF3, Table P43.*

Labor Force and Employment Status by Race: 2000

	White		African-American		Hispanic	
	#	%	#	%	#	%
Population 16 Years and Over	**182**	**100.0**	**356**	**100.0**	**3**	**100.0**
In Labor Force	38	20.9	163	45.8	0	0.0
In Armed Forces	0	0.0	0	0.0	0	0.0
In Civilian Labor Force	38	20.9	163	45.8	0	0.0
Not In Labor Force	144	79.1	193	54.2	3	100.0

- Of the people in the civilian labor force who are White, 100.0 percent (people) were employed and 0.0 percent (0 people) were unemployed.
- Of the 163 people in the civilian labor force who are African American, 84.0 percent (137 people) were employed and 16.0 percent (26 people) were unemployed.
- Of the 0 people in the civilian labor force who are Hispanic or Latino, 0.0 percent (0 people) were employed and 0.0 percent (0 people) were unemployed.

Source: *U.S. Census Bureau, Census 2000. SF3, Tables P150A,B,H.*

Education

Educational Attainment: 2000

	#	%
Population 25 Years and Over	**429**	**100.0**
Less Than 9th Grade	24	5.6
9th to 12th Grade, No Diploma	105	24.5
High School Graduate	147	34.3
Some College, No Degree	85	19.8
Associate Degree	13	3.0
Bachelor's Degree	26	6.1
Graduate or Professional Degree	29	6.8

Source: *U.S. Census Bureau, Census 2000. SF3, Table P37.*

Educational Attainment By Race: 2000

	White		African American		Hispanic or Latino	
	#	%	#	%	#	%
Population 25 Years and Over	**172**	**100.0**	**257**	**100.0**	**0**	**100.0**
Less Than 9th Grade	0	0.0	24	9.3	0	0.0
9th to 12th Grade, No Diploma	21	12.2	84	32.7	0	0.0
High School Graduate	57	33.1	90	35.0	0	0.0
Some College, No Degree	38	22.1	47	18.3	0	0.0
Associate Degree	8	4.7	5	1.9	0	0.0
Bachelor's Degree	21	12.2	5	1.9	0	0.0
Graduate or Professional Degree	27	15.7	2	0.8	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table P148A,B,H.*

School Enrollment: 2000

	#	%
Population 3 Years and Over	**628**	**100.0**
Enrolled in Nursery School or Preschool	7	1.1
Enrolled in Kindergarten	2	0.3
Enrolled in Grade 1 to Grade 4	25	4.0

Enrolled in Grade 5 to Grade 8	33	5.3
Enrolled in Grade 9 to Grade 12	65	10.4
Enrolled in College (Undergraduate)	14	2.2
Enrolled in Graduate or Professional School	2	0.3
Not Enrolled in School	480	76.4

Source: *U.S. Census Bureau, Census 2000. SF3, Table P36.*

Housing

Households

A household consists of all the people who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live and eat with any other persons in the structure and there is direct access from the outside or through a common hall.

A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of households excludes group quarters. There are two major categories of households, family and nonfamily.

There were a total of 310 households in Santee in 2000, with an average household size of 2.4 people.

Household Composition: 2000

	#	%
Total Households	**310**	**100.0**
Family Households	221	71.3
One-Person Households	82	26.5
Other Nonfamily Households	7	2.3

Family Households: 2000

	#	%
Total households	**310**	**100.0**
Total family households	221	71.3
Married couple households:	127	41.0
With own children under 18 years	31	10.0
No own children under 18 years	96	31.0
Male householder, no wife present:	11	3.5
With own children under 18 years	4	1.3
No own children under 18 years	7	2.3
Female householder, no husband present:	83	26.8
With own children under 18 years	50	16.1

No own children under 18 years	33	10.6
Total Single-Parent Households with Children Under 18	54	17.4

Sources: *U.S. Census Bureau, Census 2000. SF3, Tables P17 and P18.*

Housing Units

A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room occupied, or intended for occupancy, as separate living quarters. Separate living quarters are those in which the occupant(s) live separately from any other people in the building and which have direct access from outside the building or through a common hall.

In 2000, Santee reported having 394 housing units.

Housing Units: 2000

	#	%
Total Housing Units	**394**	**100.0**
Occupied Housing Units	310	78.7
Owner Occupied	220	71.0
Renter Occupied	90	29.0
Vacant Housing Units	84	21.3
Vacant for Rent	38	45.2
Vacant for Sale	16	19.0
Rented or Sold, Not Occupied	12	14.3
Vacant for Seasonal, Recreational, or Occasional Use	9	10.7
Vacant for Migrant Workers	0	0.0
Vacant for Other Reasons	9	10.7

Source: *U.S. Census Bureau, Census 2000. SF1, Tables H1, H3, H4 and H5.*

Population in Occupied Housing Units: 2000

	Total		**White Alone Householder**		**African American Alone Householder**	
	#	%	#	%	#	%
Population in Occupied Housing Units	**665**	**100.0**	**214**	**100.0**	**516**	**100.0**
In Owner-Occupied Units	468	70.4	198	92.5	325	63.0
In Renter-Occupied Units	197	29.6	16	7.5	191	37.0

Source: *U.S. Census Bureau, Census 2000. SF1, Tables H11 and H11A-B.*

Telephone Service in Owner-Occupied Housing Units: 2000

	Total	Telephone Service Available		Telephone Service Not Available	
		#	%	#	%
Owner-Occupied Housing Units	194	184	94.8	10	5.15464
Householder 15 to 24 Years Old	0	0	0.0	0	0.0
Householder 25 to 34 Years Old	7	7	100.0	0	0.0
Householder 35 to 44 Years Old	35	33	94.3	2	5.7
Householder 45 to 54 Years Old	25	20	80.0	5	20.0
Householder 55 to 64 Years Old	23	23	100.0	0	0.0
Householder 65 to 74 Years Old	56	53	94.6	3	5.4
Householder 75 Years or Over	48	48	100.0	0	0.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table H43.*

Telephone Service in Renter-Occupied Housing Units: 2000

	Total	Telephone Service Available		Telephone Service Not Available	
		#	%	#	%
Renter-Occupied Housing Units	84	67	79.8	17	20.2
Householder 15 to 24 Years Old	21	16	76.2	5	23.8
Householder 25 to 34 Years Old	10	7	70.0	3	30.0
Householder 35 to 44 Years Old	20	17	85.0	3	15.0
Householder 45 to 54 Years Old	17	14	82.4	3	17.6
Householder 55 to 64 Years Old	3	3	100.0	0	0.0
Householder 65 to 74 Years Old	2	2	100.0	0	0.0
Householder 75 Years or Over	11	8	72.7	3	27.3

Source: *U.S. Census Bureau, Census 2000. SF3, Table H43.*

Vehicle Availability in Owner-Occupied Housing Units: 2000

	Total	One or More Vehicles Available		No Vehicle Available	
		#	%	#	%
Owner-Occupied Housing Units	194	178	91.8	16	8.2
Householder 15 to 24 Years Old	0	0	0.0	0	0.0
Householder 25 to 34 Years Old	7	4	57.1	3	42.9
Householder 35 to 44 Years Old	35	31	88.6	4	11.4
Householder 45 to 54 Years Old	25	25	100.0	0	0.0
Householder 55 to 64 Years Old	23	23	100.0	0	0.0
Householder 65 to 74 Years Old	56	51	91.1	5	8.9
Householder 75 Years or Over	48	44	91.7	4	8.3

Source: *U.S. Census Bureau, Census 2000. SF3, Table H45.*

Vehicle Availability in Renter-Occupied Housing Units: 2000

	Total	One or More Vehicles Available		No Vehicle Available	

		#	%	#	%
Renter-Occupied Housing Units	84	41	48.8	43	51.2
Householder 15 to 24 Years Old	21	7	33.3	14	66.7
Householder 25 to 34 Years Old	10	8	80.0	2	20.0
Householder 35 to 44 Years Old	20	10	50.0	10	50.0
Householder 45 to 54 Years Old	17	10	58.8	7	41.2
Householder 55 to 64 Years Old	3	3	100.0	0	0.0
Householder 65 to 74 Years Old	2	0	0.0	2	100.0
Householder 75 Years or Over	11	3	27.3	8	72.7

Source: *U.S. Census Bureau, Census 2000. SF3, Table H45.*

Poverty

Poverty Status: 1999

	#	%
Population for Whom Poverty Status is Determined	**660**	**100.0**
Income in 1999 Below Poverty Level	217	32.9
Income in 1999 Above Poverty Level	443	67.1

Source: *U.S. Census Bureau, Census 2000. SF3, Table P87.*

Poverty Status by Age: 1999

	Total	**Income in 1999 Above Poverty Level**		**Income in 1999 Below Poverty Level**	
		#	%	#	%
Population Under Age 5	**46**	**14**	**30.4**	**32**	**69.6**
Age 5	0	0	0.0	0	0.0
Age 6-11	41	26	63.4	15	36.6
Age 12-17	67	43	64.2	24	35.8
Age 18-64	326	212	65.0	114	35.0
Age 65-74	93	71	76.3	22	23.7
Age 75 and Over	87	77	88.5	10	11.5

Source: *U.S. Census Bureau, Census 2000. SF3, Table P87.*

Poverty Status by Race: 1999

	Total	**Income in 1999 Above Poverty Level**		**Income in 1999 Below Poverty Level**	

		#	%	#	%
White Alone Population	184	178	96.7	6	3.3
African American Alone Population	469	258	55.0	211	45.0
Hispanic or Latino Population	3	0	0.0	3	100.0

Source: *U.S. Census Bureau, Census 2000. SF3, Table P159A-B and 159H.*

Ratio of Income in 1999 to Poverty Level

The ratio of income to poverty level can be used not just to categorize people as above or below the poverty line, but also to measure the degree or depth of poverty. The ratio of income to poverty compares a person's income with their poverty threshold, and expresses that comparison as a fraction. For example, a poverty ratio of 1.0 means a person is living right at the poverty line; a ratio of 0.5 would mean that the person is living in a household making only half of the income designated as the poverty threshold. The Census Bureau describes those with family incomes below one half of their poverty threshold as being "severely poor." People with incomes at or above their threshold but below 125 percent of their threshold are classified as "near poor."

View the poverty thresholds used by the Census Bureau in 1999.

	#	%
Population for Whom Poverty Status is Determined	**660**	**100.0**
Ratio of Income to Poverty Level Under .50	131	19.8
.50 to .74	34	5.2
.75 to .99	52	7.9
1.00 to 1.24	64	9.7
1.25 to 1.49	50	7.6
1.50 to 1.74	41	6.2
1.75 to 1.84	0	0.0
1.85 to 1.99	12	1.8
2.00 and Over	276	41.8

Source: *U.S. Census Bureau, Census 2000. SF3, Table P88.*

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State Data Center
Contact Us
Affiliate Data Centers

Census 2010
Census 2010 Data
About

Population
Estimates
Projections

Census Reports
Demographics
Income and Poverty
American Community Survey

Census 2000 Profiles
State
Counties
Places
Zip Codes
Census Tracts
Glossary

Appendix G

Form RD 2006-38
(Rev. 07-07)

Rural Development
Environmental Justice (EJ) and Civil Rights Impact Analysis (CRIA)
Certification

1 . Applicant's name and proposed project description: Orangeburg County Water system expansion in the area between Bowman and Town of Santee.

2. Rural Development's loan/grant program/guarantee or other Agency action: Water and Environmental Programs

3. ☐ Attach a map of the proposal's area of effect identifying location or EJ populations, location of the proposal, area of impact or

☑ Attach results of EJ analysis from the Environmental Protection Agency's (EPAs) EnviroMapper with proposed project location and impact footprint delineated.

4. Does the applicant's proposal or Agency action directly, indirectly or cumulatively affect the quality and/or level of services provided to the community?
☐ Yes ☑ No ☐ N/A

5. Is the applicant's proposal or Agency action likely to result in a change in the current land use patterns (types of land use, development densities, etc)?
☐ Yes ☑ No ☐ N/A

6. Does a demographic analysis indicate the applicant's proposal or Agency's action may disproportionately affect a significant minority and/or low-income populations?
☐ Yes ☑ No ☐ N/A

If answer is no, skip to item 12. If answer is yes, continue with items 7 through 12.

7. Identify, describe, and provide location of EJ population _____

8. If a disproportionate adverse affect is expected to impact an EJ population, identify type/level of public outreach implemented. _____

9. Identify disproportionately high and adverse impacts on EJ populations. _____

10. Are adverse impacts appreciably more severe or greater in magnitude than the adverse impacts expected on non-minority/low-income populations?
☐ Yes ☐ No ☐ N/A

11. Are alternatives and/or mitigation required to avoid impacts to EJ populations?
☐ Yes ☐ No ☐ N/A

If yes, describe _____

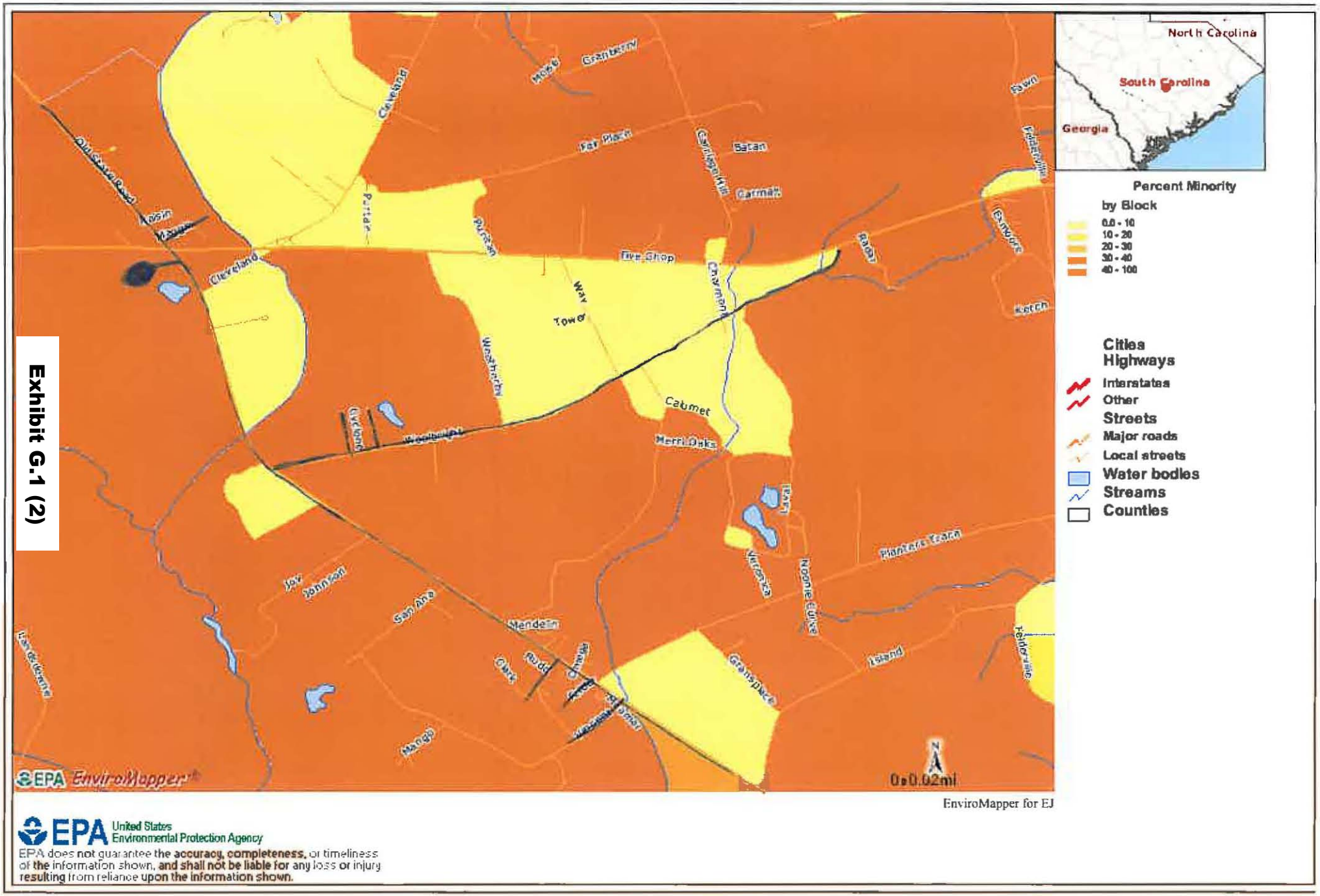
12. I certify that I have reviewed the appropriate documentation and have determined that:
☑ No major EJ or civil rights impact is likely to result if the proposal is implemented.
☐ A major EJ or civil rights impact is likely to result if the proposal is implemented.

Michele J. Cardwell, RDS
Name and Title of Certifying Official

03-02-2010
Date

Exhibit G.1 (1)

Exhibit G.1 (2)



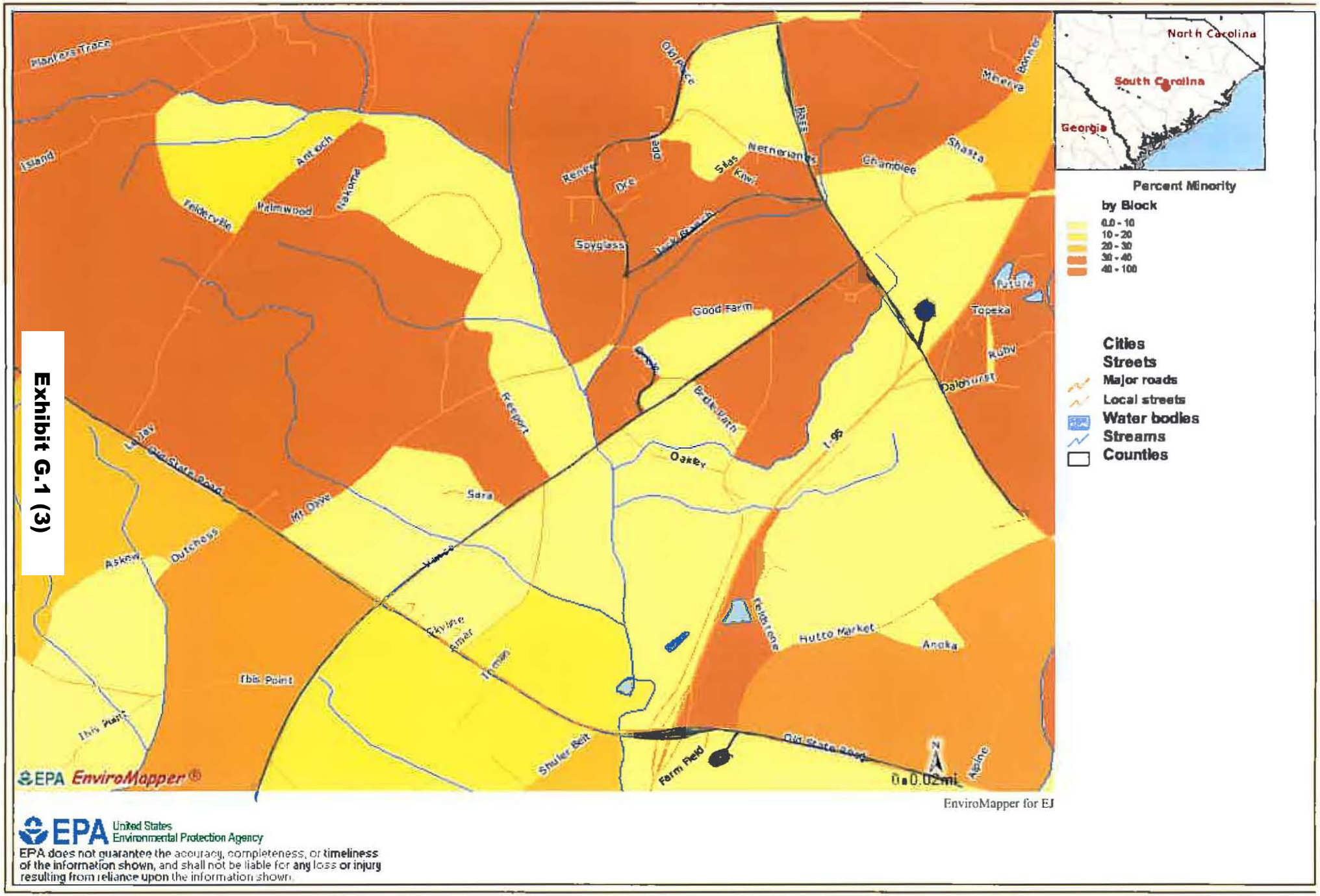


Exhibit G.1 (3)
North Carolina
South Carolina
Georgia
Percent Minority
by Block
0.0 - 10
10 - 20
20 - 30
30 - 40
40 - 100
Cities
Streets
Major roads
Local streets
Water bodies
Streams
Counties
EPA EnviroMapper
0 0.02 mi
EnviroMapper for EJ
EPA United States Environmental Protection Agency
EPA does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any loss or injury resulting from reliance upon the information shown.

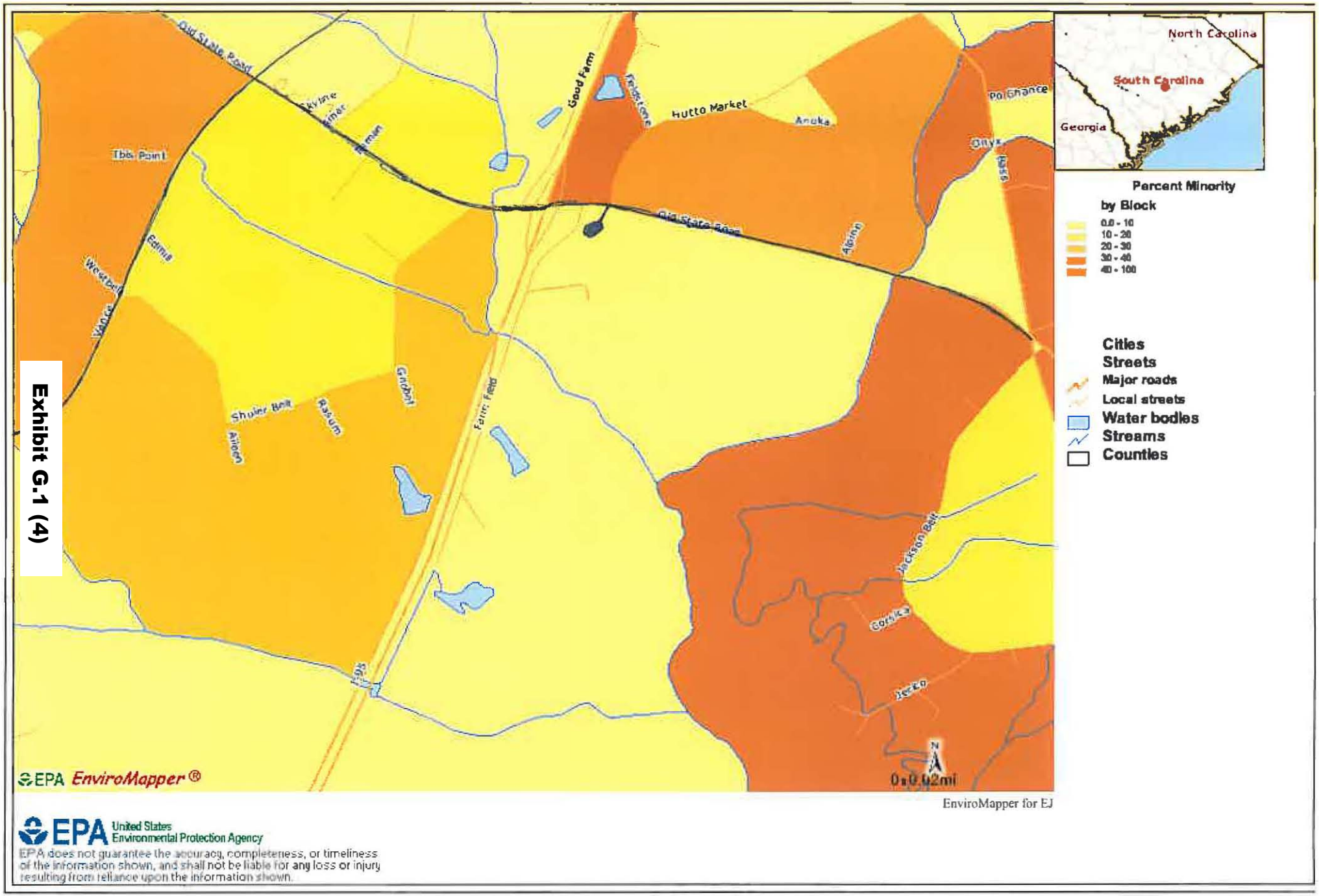


Exhibit G.1 (4)

EPA United States Environmental Protection Agency

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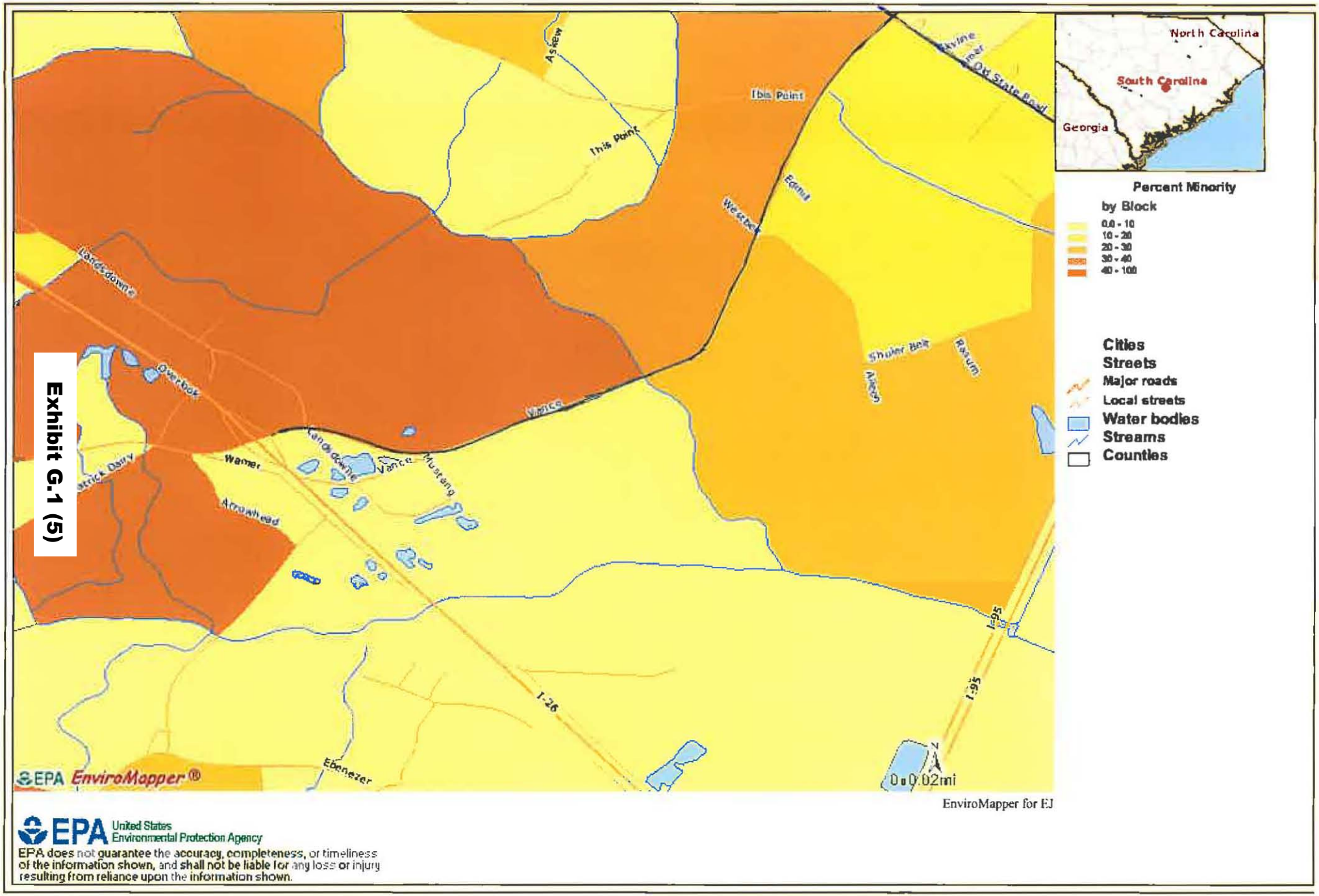
Exhibit G.1 (5)



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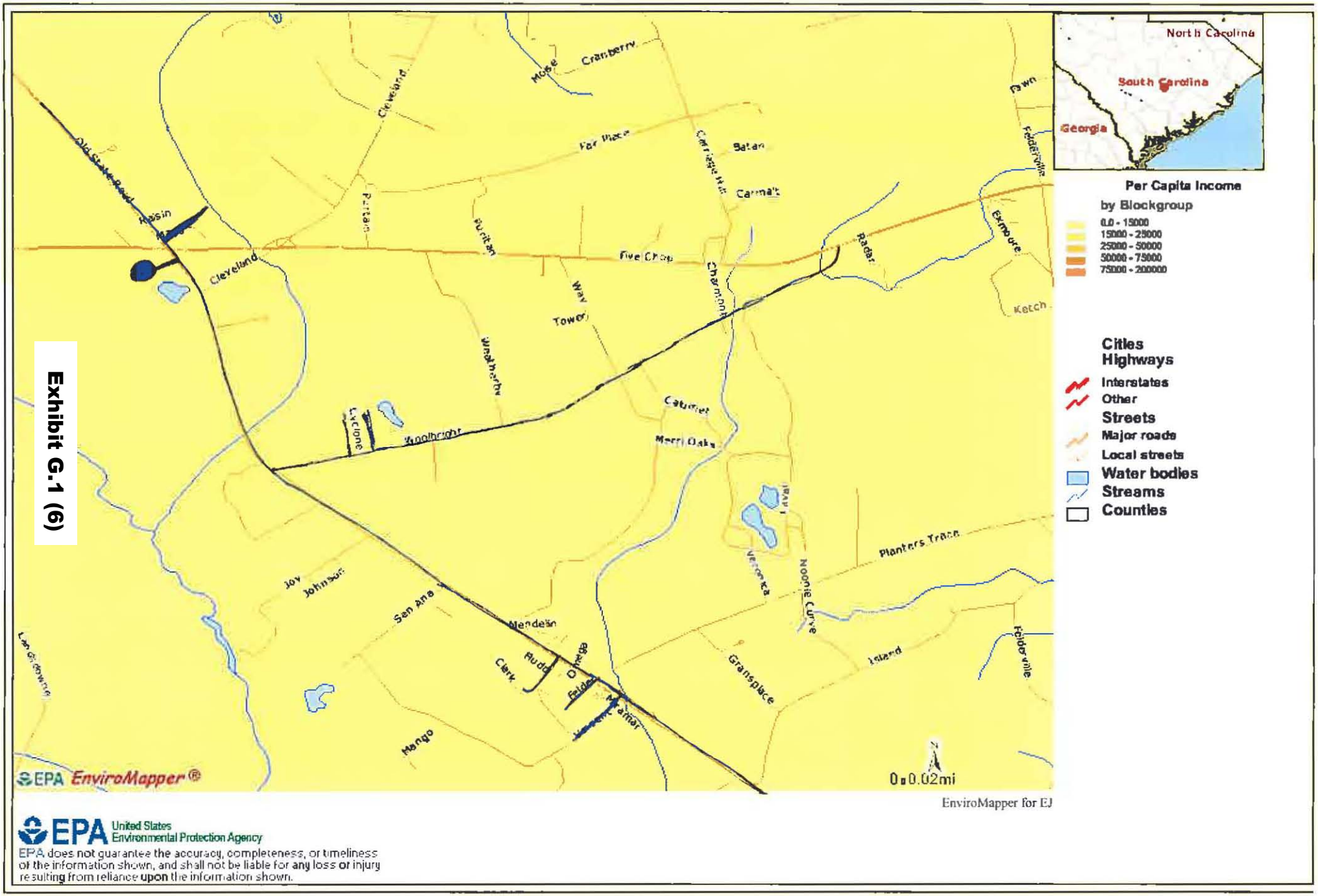

EnviroMapper for EJ

EPA United States Environmental Protection Agency

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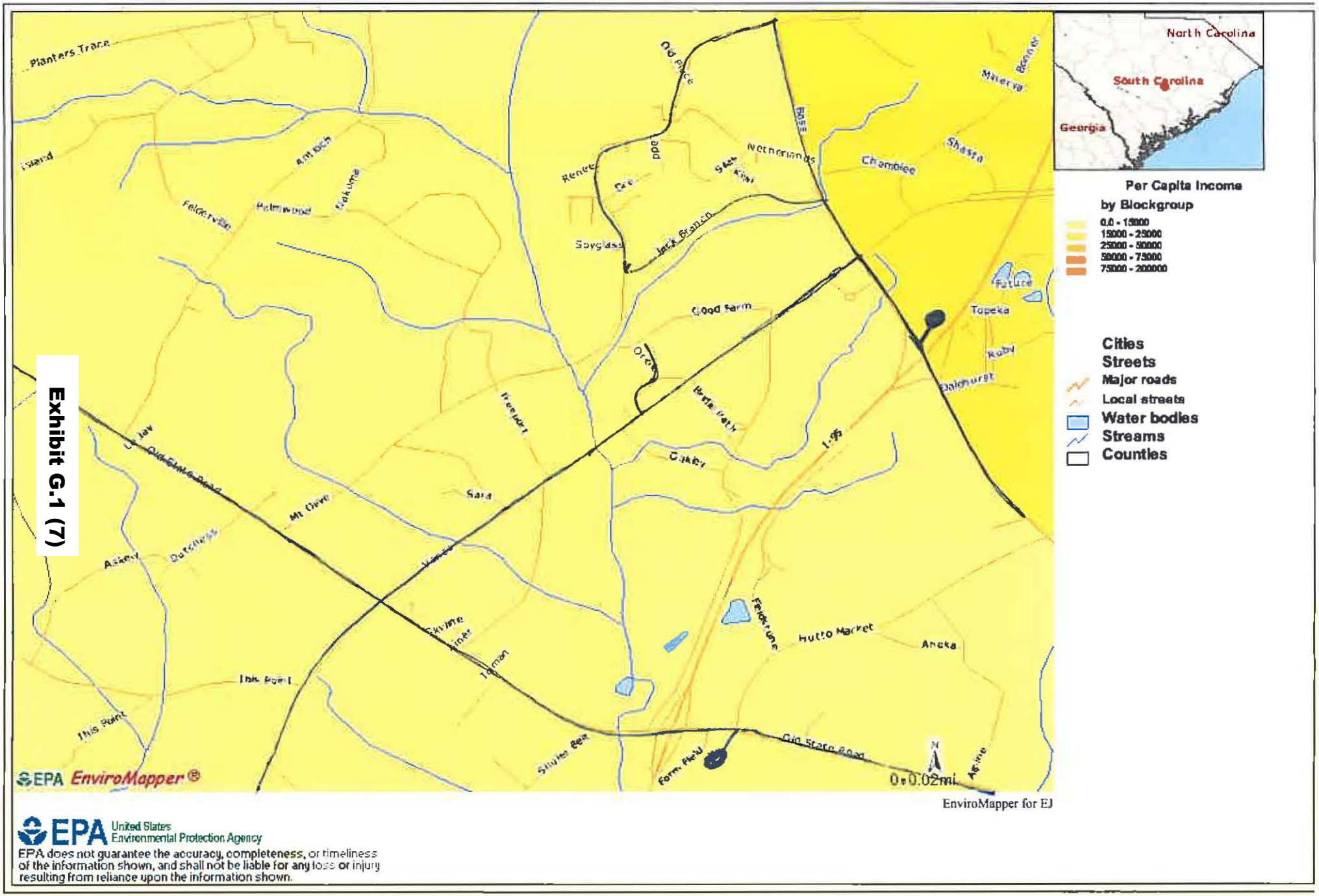

Exhibit G.1 (7)

EnviroMapper for EJ

EPA United States Environmental Protection Agency

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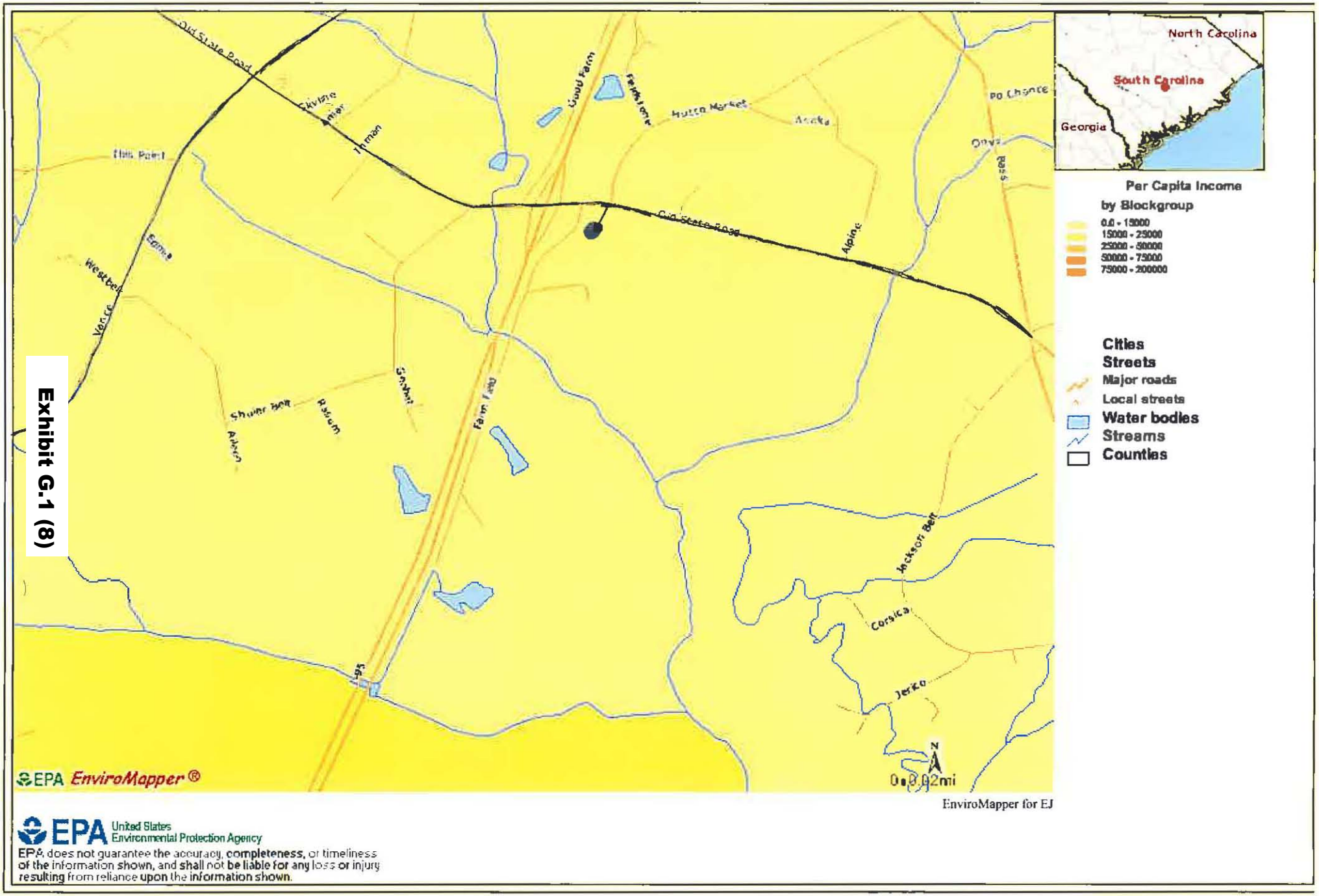

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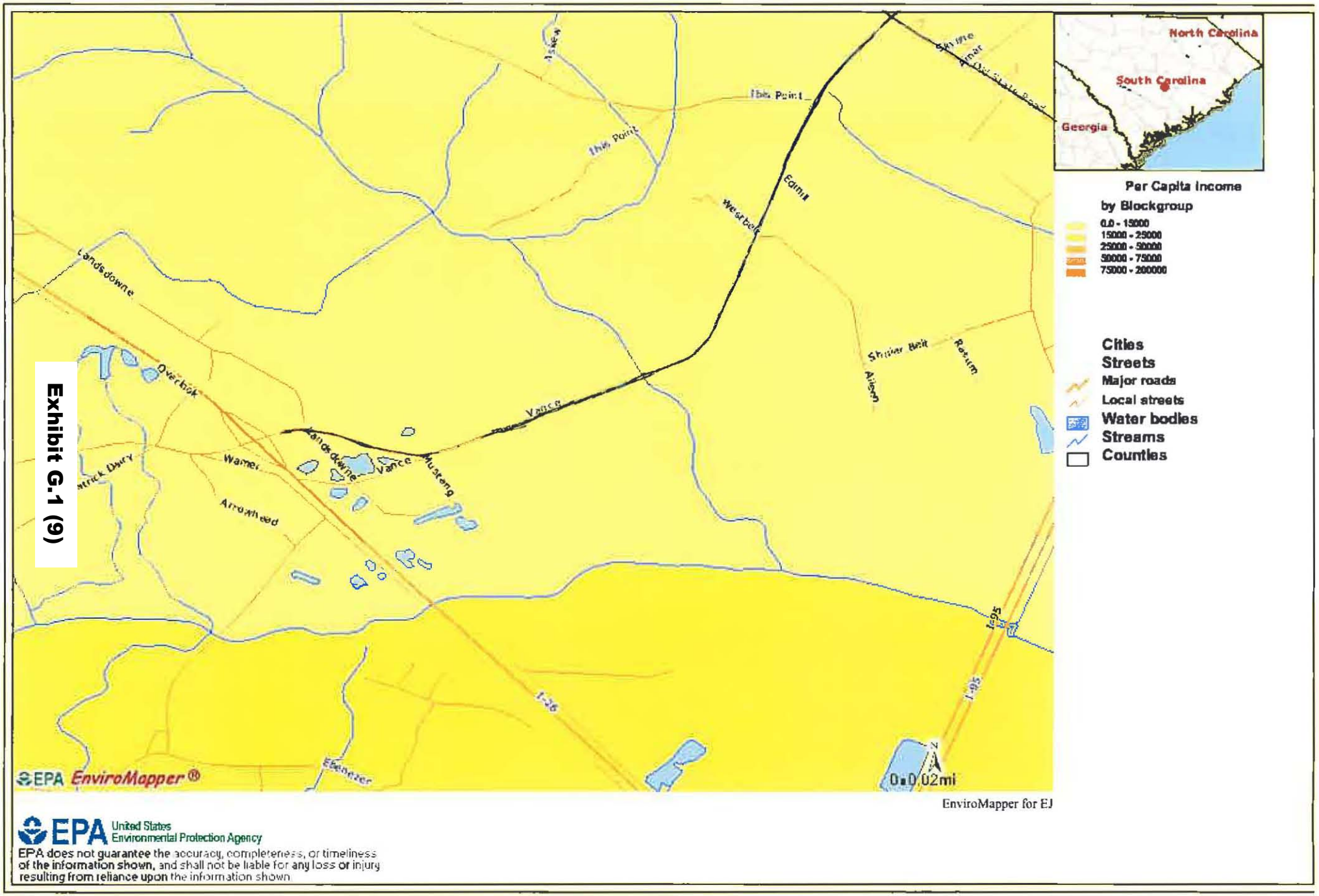

EPA United States Environmental Protection Agency

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Form RD 2006-38
(Rev. 07-07)

Rural Development
Environmental Justice (EJ) and Civil Rights Impact Analysis (CRIA)
Certification

1 . Applicant's name and proposed project description: Orangeburg County Wastewater expansion. Goodby's Creek Regional Wastewater Treatment Plant

2. Rural Development's loan/grant program/guarantee or other Agency action: Water and Environmental Programs

3. ☐ Attach a map of the proposal's area of effect identifying location or EJ populations, location of the proposal, area of impact or

☑ Attach results of EJ analysis from the Environmental Protection Agency's (EPAs) EnviroMapper with proposed project location and impact footprint delineated.

4. Does the applicant's proposal or Agency action directly, indirectly or cumulatively affect the quality and/or level of services provided to the community?
☐ Yes ☑ No ☐ N/A

5. Is the applicant's proposal or Agency action likely to result in a change in the current land use patterns (types of land use, development densities, etc)?
☐ Yes ☑ No ☐ N/A

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☐ Yes ☑ No ☐ N/A

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8. If a disproportionate adverse affect is expected to impact an EJ population, identify type/level of public outreach implemented. _____

9. Identify disproportionately high and adverse impacts on EJ populations. _____

10. Are adverse impacts appreciably more severe or greater in magnitude than the adverse impacts expected on non-minority/low-income populations?
☐ Yes ☐ No ☐ N/A

11. Are alternatives and/or mitigation required to avoid impacts to EJ populations?
☐ Yes ☐ No ☐ N/A

If yes, describe _____

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☐ A major EJ or civil rights impact is likely to result if the proposal is implemented.

Michele J. Cardwell, RDS — Name and Title of Certifying Official

10-04-2010 — Date

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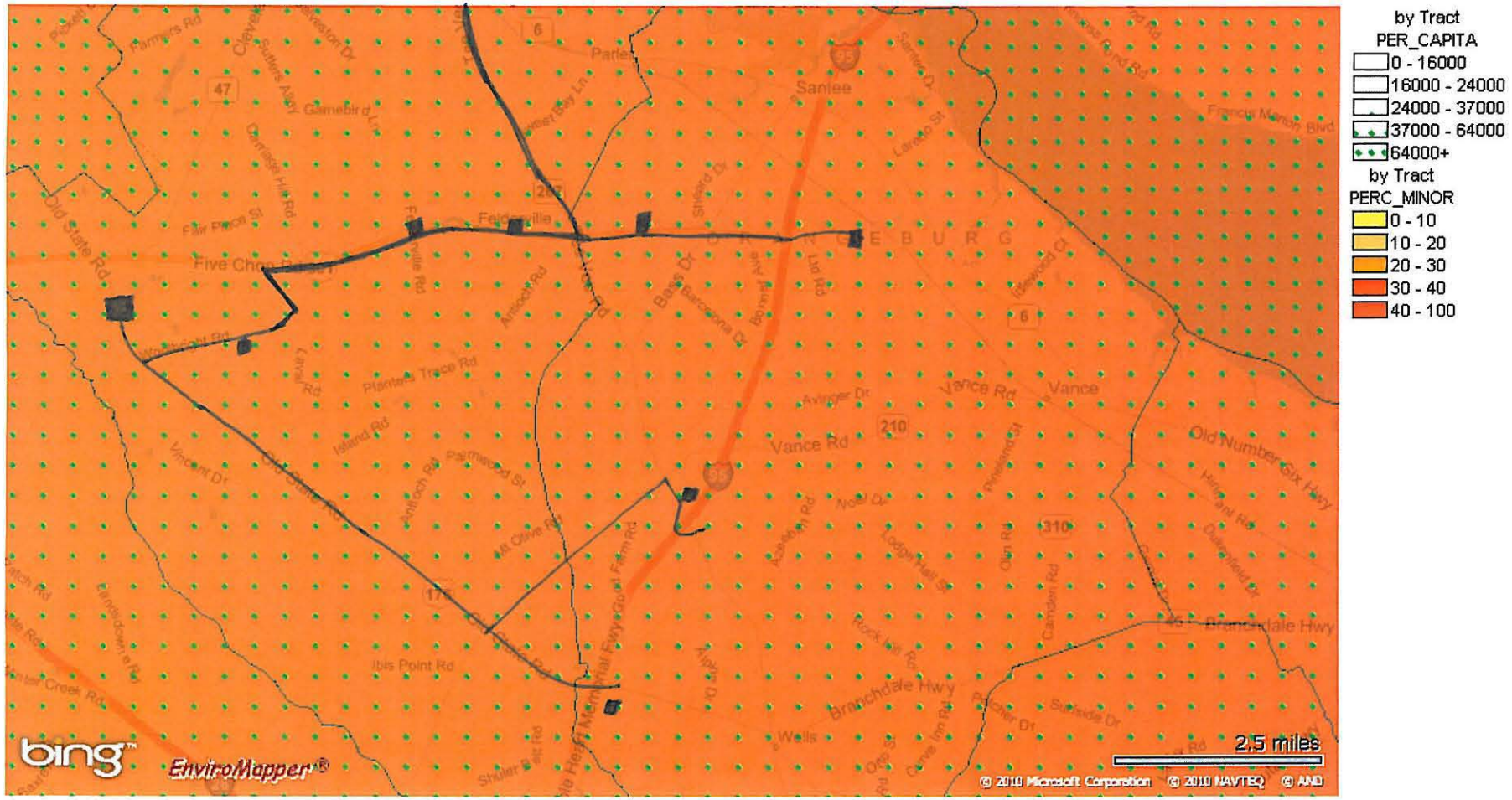
by Tract
PER_CAPITA
0 - 16000
16000 - 24000
24000 - 37000
37000 - 64000
64000+
by Tract
PERC_MINOR
0 - 10
10 - 20
20 - 30
30 - 40
40 - 100
Santee
Vance
Vance Rd
Branchdale Hwy
Old Number Six Hwy
2.5 miles
bing
EnviroMapper®
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Exhibit G.2 (2)

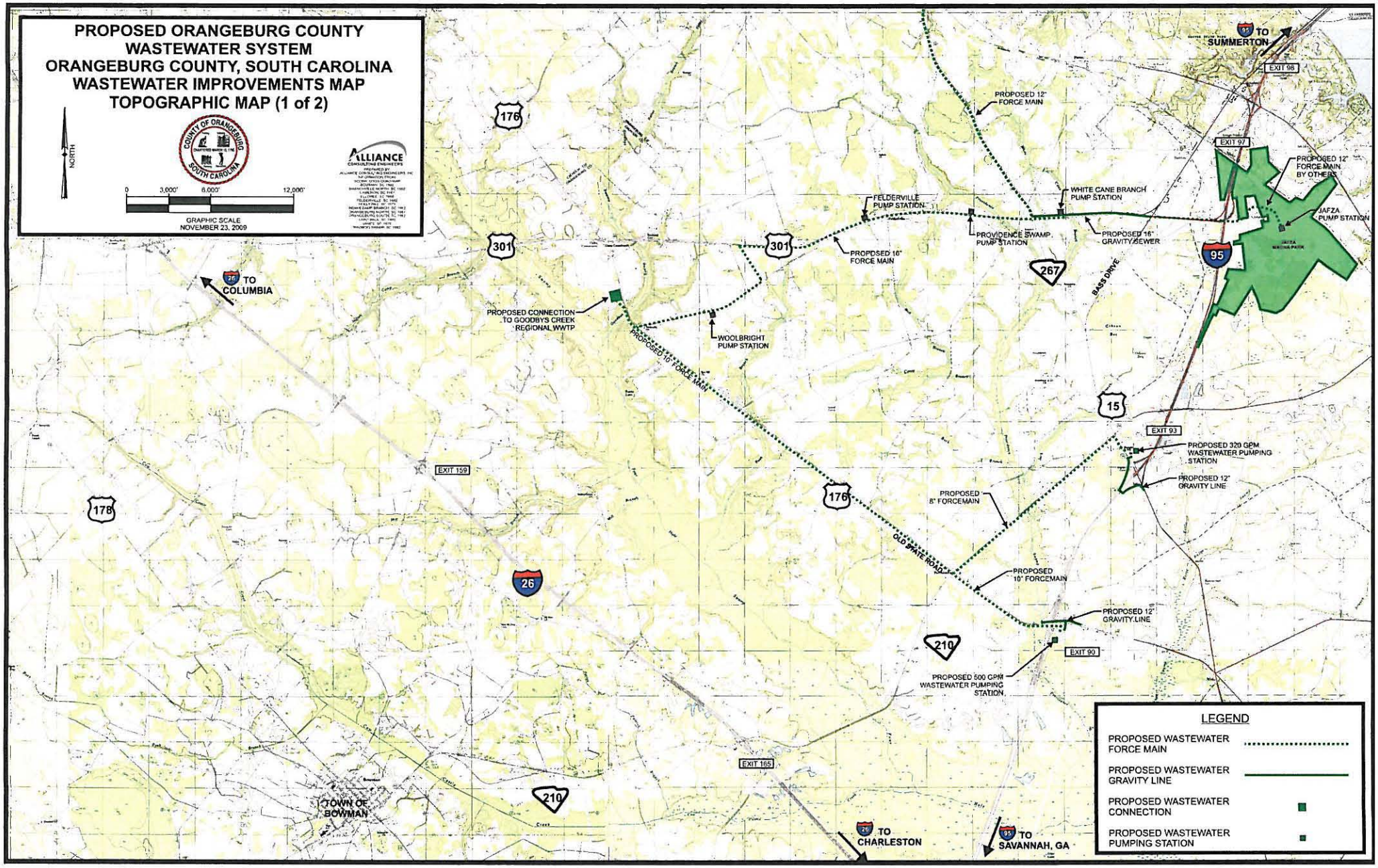
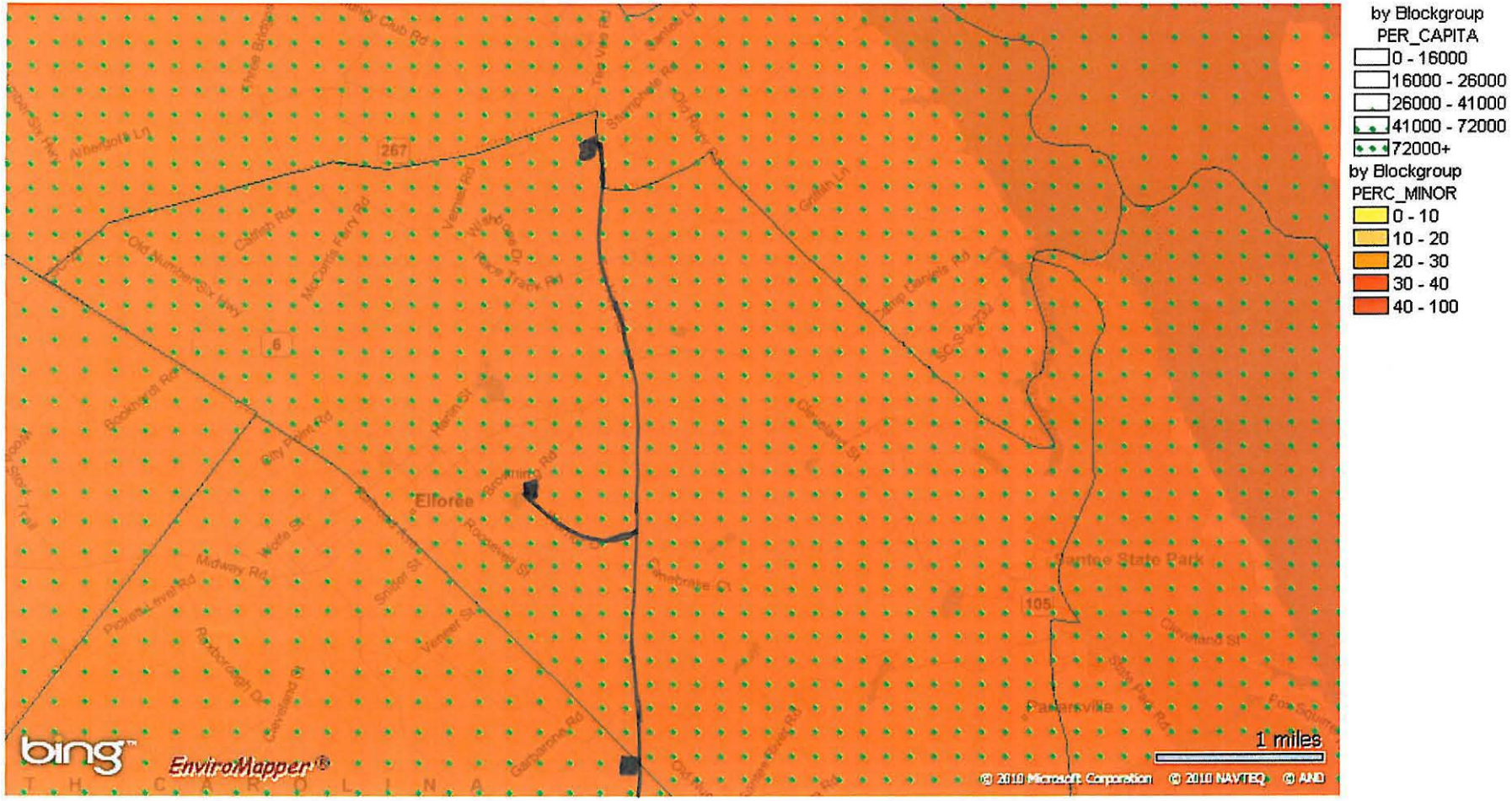

PROPOSED ORANGEBURG COUNTY
WASTEWATER SYSTEM
ORANGEBURG COUNTY, SOUTH CAROLINA
WASTEWATER IMPROVEMENTS MAP
TOPOGRAPHIC MAP (1 of 2)
NORTH
0
3,000'
6,000'
12,000'
GRAPHIC SCALE
NOVEMBER 23, 2009
ALLIANCE
CONSULTING ENGINEERS
TO SUMMERTON
EXIT 98
EXIT 97
PROPOSED 12" FORCE MAIN
PROPOSED 12" FORCE MAIN BY OTHERS
JAFZA PUMP STATION
WHITE CANE BRANCH PUMP STATION
FELDERVILLE PUMP STATION
PROVIDENCE SWAMP PUMP STATION
PROPOSED 16" GRAVITY SEWER
PROPOSED 16" FORCE MAIN
BASS DRIVE
176
301
301
267
95
TO COLUMBIA
PROPOSED CONNECTION TO GOODBYS CREEK REGIONAL WWTP
WOOLBRIGHT PUMP STATION
PROPOSED 16" FORCE MAIN
15
EXIT 93
PROPOSED 320 GPM WASTEWATER PUMPING STATION
PROPOSED 12" GRAVITY LINE
EXIT 159
178
176
PROPOSED 8" FORCEMAIN
OLD STATE ROAD
26
PROPOSED 10" FORCEMAIN
PROPOSED 12" GRAVITY LINE
210
EXIT 90
PROPOSED 500 GPM WASTEWATER PUMPING STATION
EXIT 165
210
TOWN OF BOWMAN
TO CHARLESTON
TO SAVANNAH, GA
LEGEND
PROPOSED WASTEWATER FORCE MAIN
PROPOSED WASTEWATER GRAVITY LINE
PROPOSED WASTEWATER CONNECTION
PROPOSED WASTEWATER PUMPING STATION

Exhibit G.2 (3)


by Blockgroup
PER_CAPITA
0 - 16000
16000 - 26000
26000 - 41000
41000 - 72000
72000+
by Blockgroup
PERC_MINOR
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20 - 30
30 - 40
40 - 100
Elforde
Pasquotank
1 miles
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EnviroMapper®

Exhibit G.2 (4)

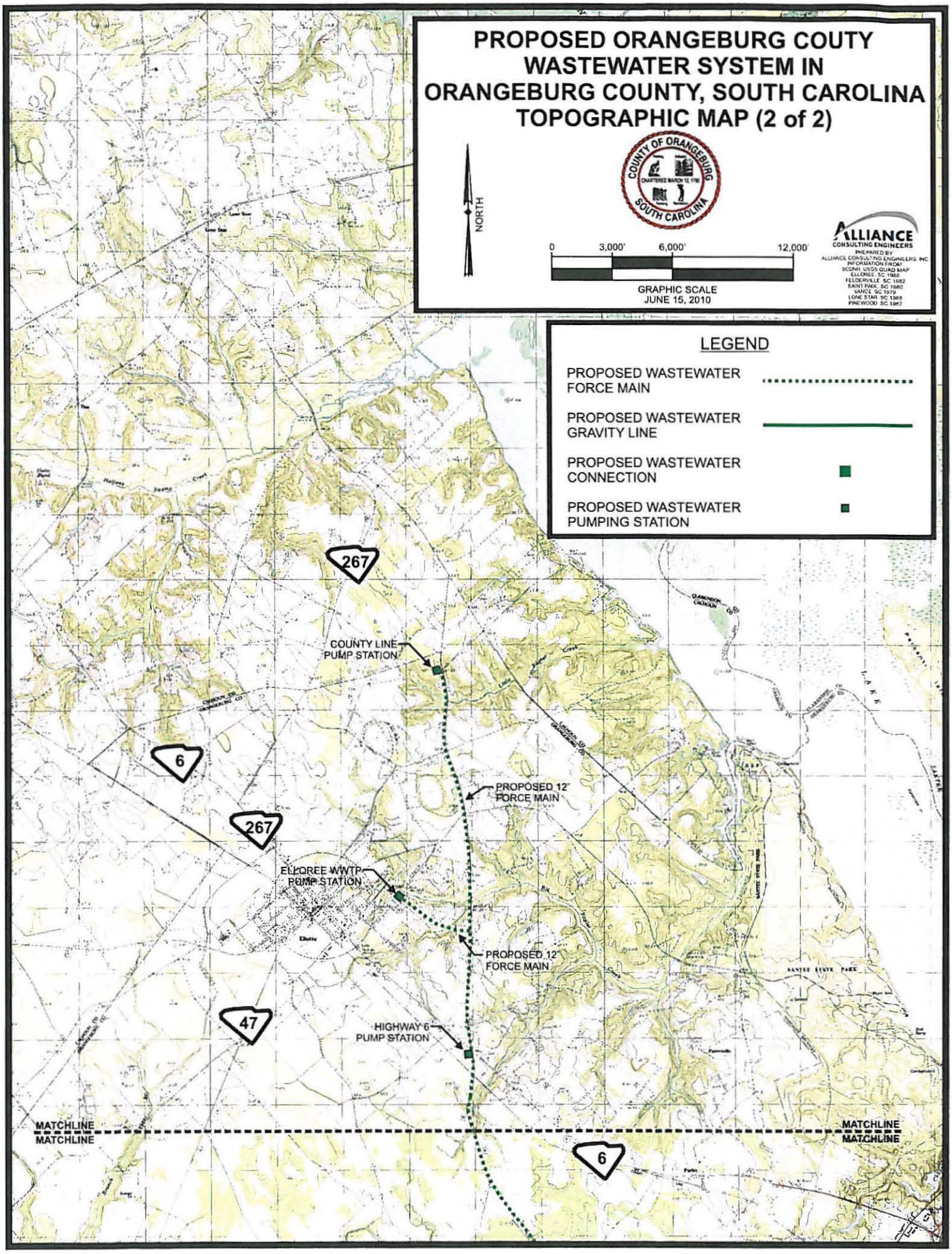
PROPOSED ORANGEBURG COUTY WASTEWATER SYSTEM IN ORANGEBURG COUNTY, SOUTH CAROLINA TOPOGRAPHIC MAP (2 of 2)
NORTH
0
3,000'
6,000'
12,000'
GRAPHIC SCALE
JUNE 15, 2010
ALLIANCE CONSULTING ENGINEERS
LEGEND
PROPOSED WASTEWATER FORCE MAIN
PROPOSED WASTEWATER GRAVITY LINE
PROPOSED WASTEWATER CONNECTION
PROPOSED WASTEWATER PUMPING STATION
COUNTY LINE PUMP STATION
PROPOSED 12" FORCE MAIN
ELLOREE WWTP PUMP STATION
PROPOSED 12" FORCE MAIN
HIGHWAY 6 PUMP STATION
MATCHLINE
MATCHLINE
MATCHLINE
MATCHLINE
267
6
267
47
6

Exhibit G.2 (5)

Appendix H

COUNTY OF ORANGEBURG

COMPREHENSIVE PLAN

PREPARED BY:
THE ORANGEBURG COUNTY PLANNING COMMISSION

CONTENTS

ACKNOWLEDGEMENTS

In accordance with the "South Carolina Local Government Comprehensive Act of 1994," this Comprehensive Planning Document was prepared by the Orangeburg County Planning Commission and recommended to County Council for adoption. The Planning Commission utilized the services of the County Planner, the GIS Manager, and a Planning Consultant in preparation of the plan. A special thanks goes out to all of the concerned citizens who participated in the focus group meetings and public hearings held throughout the County.

County Council
John Rickenbaker - Chairman
Harry Wimberly- Vice-Chairman
Janie Cooper
James Glover
Clyde Livingston
Heyward Livingston
Johnny Wright

Planning Commission
James M. Albergotti - Chairman
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Earl Jeffcoat
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Alfred Smoak

Support Staff
Donnie L. Hilliard - County Administrator
William Clark - Deputy County Administrator
Harold M. Young - County Planning Director
Frank A. Inabinet - Consultant
Greg Thacker - GIS Manager

BACKGROUND

BACKGROUND

Like most rural counties in South Carolina, Orangeburg County has not in the past placed a great deal of emphasis on comprehensive planning and land development regulations. As in many counties, the citizens and elected officials have traditionally believed that the use of any private property should be left to the discretion of the property owner. This attitude still exists among many as it was expressed by some residents in public meetings held during this study process. However, others expressed a need for better planned growth and development in the future.

Historically, this approach has not been a problem in rural, agricultural oriented societies. Most community facilities outside of the towns and cities consisted of farm-to-market roads to serve the purpose for which they were named. The normal transportation system in most areas consisted of these smaller roads, some federal highways for through travel, and railroads. Population did not expand rapidly, and development that occurred in the towns and cities was normally there to meet the needs of the local citizenry.

However, things began to change with the new population growth starting after the end of World War II. Shortly thereafter, the advent of the interstate highways system also began to change the face of rural America. Just during the last twenty to thirty years growth and development changes have been even more dramatic. The children of the "baby-boomers" (post World War II births) are now becoming an economic force. The once predominate agriculture society has been changing to one more service and industrial oriented.

Many of the towns and cities are expanding beyond their corporate limits spurred on by expansion of the transportation systems and growth in commercial, industrial, and tourism oriented economic development.

Officials in Orangeburg County find themselves under ever increasing pressure to plan for, and accommodate, this growth and development, much of which is vital to the healthy economy of the community. In many respects, Orangeburg County is experiencing growth pressures not being seen in many other rural counties. Part of this is because Orangeburg County is the second largest county in land area in the State. The county also has been provided with easy access by Interstates I-26 and I-95 which intersect in the county. The Interstate system and the Santee-Cooper Lakes have provided the impetus for increased tourism related development in that area of the county. The population of the cities and towns in Orangeburg County remains fairly stable, but the urban areas in the county, and outside of many of the city limits, are developing rapidly. For example, the Orangeburg urban area population is approximately three times that of the city itself, and is projected to increase.

Consequently, county officials find themselves having to provide services for these growth areas (Orangeburg, Santee, Holly Hill and others) and often find themselves unable to resolve problems of conflicting land uses within close proximity because of the lack of tools to manage development.

These problems being faced by county leaders are not unique to Orangeburg County, and are being experienced elsewhere in the State. This situation, in part, led state legislators

to pass recent laws requiring counties with land-use programs and development regulations to update their plans and regulations in order to provide county leaders with tools to plan for, and accommodate, growth while directing growth and development in desirable patterns. It is also increasingly apparent that public attitudes, and the attitudes of government officials, are changing and the practice of planning for land-use and development is becoming not only more acceptable, but indeed desirable.

In a very practical sense, County Council members and community leaders find it incumbent upon themselves to provide for the necessary services and community facilities to serve the citizens. In order to do so, it is often necessary to allocate certain uses to those areas where these services and community facilities can be economically and reasonably provided. In order for this to occur, it is necessary to prepare a comprehensive plan which considers the capabilities and needs of a community as a whole and then provides for the practical location and distribution of land uses which can be accommodated by available community facilities.

Many community leaders throughout the state desire to regulate and control development which can be accommodated by their capabilities and facilities. However, the state legislature in 1994 rightly decided that before such regulation and control can be applied, it must be based on a comprehensive plan. It is on this basis, that the Comprehensive Planning Act of 1994 was established. This Act provides Orangeburg County with the opportunity to prepare the necessary comprehensive plan elements and development guidelines so badly needed in certain areas of the county.

In this regard, the Planning Act should not be necessarily viewed as a regulation forced on the county, but more appropriately as an opportunity to better direct future growth and development within the county. **It should be remembered that the primary purpose of any comprehensive plan is to provide community leaders with the information necessary to protect the health, safety and welfare of the general public.** It is to this end that any efforts in the comprehensive plan will be oriented.

This comprehensive plan is concerned only with those geographic areas within the County excluding the corporate limits of the towns. Much of the new development occurring in the County is inside or just outside of these town limits. The plan does not include the land inside the towns, but it does consider the fact that each of the towns is important and is often considered the social and economic focus of their respective communities.

Finally, a comprehensive plan is not a fixed and static document. It is more a growing and ever changing working tool to assist local community leaders and citizens in planning for and managing growth and development. The comprehensive plan should be reviewed and updated periodically as needed to suit the needs of the county and its citizens.

The 1994 Act requires that the comprehensive plan be reviewed every five years and updated every ten years. It is recommended, however, that this plan be updated sooner. This basic planning effort is the first step under the 1994 law and should be refined and expanded to reflect considerable recent and ongoing development as well as the results of the year 2000 census.

VISION STATEMENT

VISION STATEMENT

The Orangeburg County Council recently established a "Mission Statement" for the County of Orangeburg. This mission statement is included as part of the Vision Statement of the Comprehensive Plan.

"The County of Orangeburg exists for the purpose of providing a prosperous and healthy environment for it's citizens. It seeks to create a positive quality of life and economic opportunity for it's citizens through progressive leadership and the development of policies consistent with the present and future needs of the community. The County strives to be accountable to it's citizens by providing the most effective and efficient services possible."

The primary reason for preparing a Comprehensive Plan is to allow citizens and community leaders to anticipate future development patterns and to provide for orderly growth and the timely provision of public services. The anticipated development patterns are not final in any way, and as changes in economic conditions and development demands occur, it is likely that anticipated development patterns may also change. The projected future land use plan is a start in the comprehensive planning process. As the plan is updated and refined in future years it will become an even more of a useful tool for the proper management of growth and development to the benefit of all citizens of the county.

ORANGEBURG COUNTY
OVERVIEW

Location And Access

Orangeburg County (Figure 1) is located near the center of the State approximately one third of the distance from the capital of Columbia toward the coastal city of Charleston. The interstate highway, I-26, connects Orangeburg with these two cities in a somewhat straight northwest to southeast line. Interstate 95 passes through the eastern section of Orangeburg County intersecting with I-26 near the southern edge of the county and then northeasterly to the town of Santee on the shores of Lake Marion. These two interstate highways provide Orangeburg County with excellent access to the upper part of the State, the coast and the Northeastern, Midwestern, and Southeastern United States.

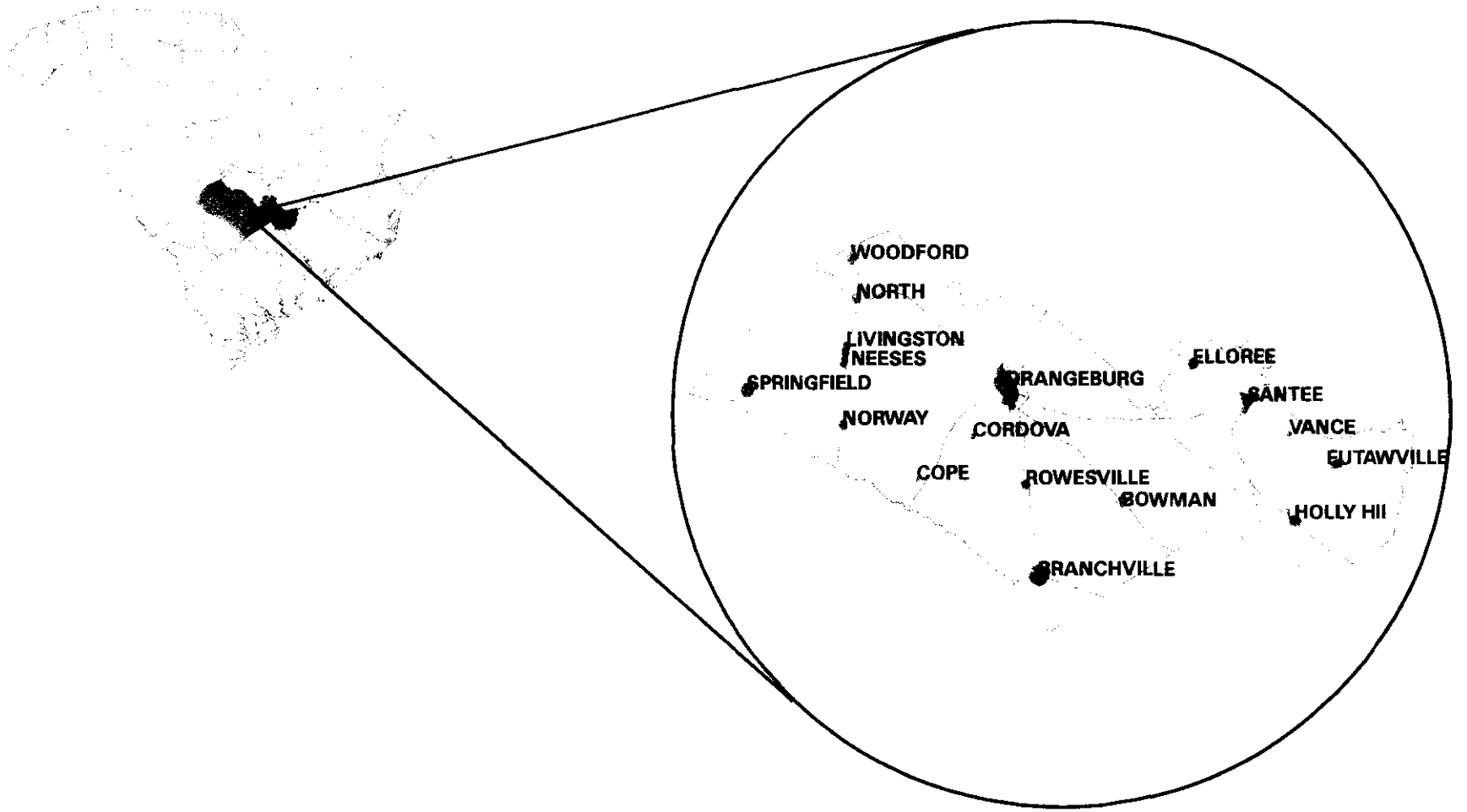
Orangeburg County is bounded on the north by Calhoun, Lexington, and Clarendon Counties and on the northwest by Aiken County. The main Edisto River and the south fork of the Edisto River form the southwestern boundary between Orangeburg County and the counties of Barnwell and Bamberg. Dorchester and Berkeley Counties are on the southern edge of the county and the eastern edge of the county is bounded by Lake Marion.

For businesses and industries, as well as residents and visitors, the two interstates in Orangeburg County provide easy access to 9 interchanges within the county. These interchanges connect to more than 1600 miles of highways in the county. According to Chamber of Commerce reports, there are 15 states within a 500 mile radius of Orangeburg County. This region contains 32% of all U.S. manufacturing facilities and generates 34% of total U.S. retail sales. Interstate 26 leads to the port of Charleston, which is one of the largest container ports along the South Atlantic and Gulf Coast. With convenient and easy highway, rail and air access, Orangeburg County has been expanding its manufacturing base in recent years.

In addition, U.S. highways 301, 601, 78, 178, 321, 21,and 176 also serve Orangeburg County. Numerous South Carolina highways and a network of county roads provide convenient circulation within the county. Railroads serving the county include Norfolk Southern Railroad and the CSX Railroad. The nearest commercial airline passenger service is available at the Columbia Metropolitan Airport and the Charleston Airport. There is a General Aviation airport near Orangeburg which is currently being expanded and is quite active for local businesses and industries. A smaller general aviation airport is located near Holly Hill. The Orangeburg Municipal Airport features a 4,500' lighted runway and an ongoing construction program proposes a second 5,400' runway.

History- The first person to settle in the Orangeburg community was George Sterling in 1704. The area was first known as the Orangeburg District, named for William IV, Prince of Orange, who was the son-in-law of King George II of England. Many of the early settlers in the area were given land grants by the King of England.

The first of these was a colony of two hundred Swiss, German and Dutch immigrants who formed a community on the Edisto River in 1735. Early access to the area from the coast was provided by the Edisto River, then known as the "black river". Other access was by trails over land. While there were many deep rivers and wide swamps to be traversed, many historians believe that travel through the higher land areas was not so difficult because most of the land was covered with large live oak trees. These trees with their large canopies prevented much of the dense undergrowth on land areas and provided for relatively easy travel. Over the years most of these large oak trees were cleared for their wood as well as for opening large areas for agriculture.



GIS/MAPPING DEPT.

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COUNTY OF ORANGEBURG, SOUTH CAROLINA

COMPREHENSIVE PLAN

LOCATION MAP

FIG.1

Railroad access was provided to the area in 1828 when a depot was constructed in Branchville. A branch of rail off the main line at this point led to the town being named Branchville and is known as the oldest railroad junction in the world. The advent of the railroad and other transportation improvements, along with the fertile soil of the area, soon allowed Orangeburg County to become a predominately agriculture based community. With agriculture as the economic base, small trading communities developed throughout the county with Orangeburg City, the first major development area, becoming the largest town and the county seat.

The county grew and prospered until the 1860's when the War Between the States reaped devastation upon the land and in Orangeburg County. Sherman's troops burned homes, the courthouse, jail, and cotton warehouses in the county and the city of Orangeburg in 1865. Sherman set up headquarters in downtown Orangeburg during that time. Following the War, the rebuilding process was slow but eventually agriculture returned as the primary economic base with cotton leading the way as one of the major crops.

Improvements in education began with Claflin College, established in 1869. What is now South Carolina State University was established in 1896. Telephone service was established in the County in 1881. In 1882, the Orange Cotton Mill began operations and flourished because of the cotton agricultural industry.

Climate - Orangeburg County, like most counties in central South Carolina, enjoys a rather temperate climate, even though quite humid during the summer months. The average annual rainfall is approximately 48 inches. The average annual temperature is approximately 63 degrees varying from an average of 79 degrees during the summer and 46 degrees in the winter.

As residents well know, local temperatures can rise to the 100 degree range in the summer and fall to the teens in the winter. Summers are also characterized by late afternoon and evening thunderstorms which account for approximately 33% of the annual rainfall. The hurricane season lasts from June through November with the greatest frequency of hurricanes occurring during the month of September.

Topography and Soils- The geology, topography and soil conditions of the county have remained the same over many years. However, these conditions vary greatly within Orangeburg County itself. The landscape differs greatly from the western part of the county to the eastern part. Previous studies prepared by the Lower Savannah Council of Governments classified three distinct land resource areas within the county. These resource areas were described as areas where climate, soil conditions, vegetation, and land use tend to be similar. These can be observed on the ground. The northwestern portion of the county was classified as Carolina-Georgia Sand Hill Areas. The elevations of the land ranges from 300 to 400 feet and the soils contain consolidated sands and have undergone slight to moderate erosion. The land cover in these areas is characterized by forest and open pastureland.

The central part of the county stretching from the Edisto River southward below Orangeburg to the Elloree, Santee, and Eutawville areas was classified as Southern Coastal Plain Resources Area. The topography ranges in elevation from 200 to 300 feet in this area and the slopes are gently sloping and soils have developed from unconsolidated sands and clays and have slight to moderate erosion. The remainder of the county, which includes the southern most portions of the county around the Branchville and Holly Hill areas, is known as the Atlantic Coast Flatland Resource Area.

Elevations in these areas range from 100 to 200 feet and the area is classified by woodlands, flatlands and pasturelands that are especially well suited to farming and row crops.

The soils in these areas developed from beds of unconsolidated sands and clays and soft limestone and the erosion is slight. The area is also characterized by oval depressions otherwise known as "Carolina Bays" which range in size from less than an acre to over several hundred acres.

Soil types are important in planning future development activities. The suitability of soil types to the land use proposed is very important. Some soil types have limited potential for development because of erosion and drainage problems that could occur as well as insufficient bearing capacity of the soil. New urban development should be planned for areas where the soil types can support development. New development also often conflicts with established agricultural uses. In many areas, soil types which are well suited for agricultural purposes are also well suited for development activities.

Rivers and Flood Plains- Nearly all of Orangeburg County falls within the Edisto River Drainage Basin. A small part of the county bordering on Lake Marion falls within the Santee River Basin. The rivers and streams within the county include the South Fork of the Edisto River which borders the southwestern edge of the county, the North Fork which flows near the towns of North and Orangeburg, the main Edisto River along the southern end of the county and Four Holes Swamp which flows through the eastern third of the county. Figure 2 shows the rivers and flood plains in Orangeburg County.

Orangeburg County Towns

The comprehensive plan for Orangeburg County addresses only those land areas in the county outside of the corporate city limits. However, any description of the county as a whole would be incomplete without some understanding of the towns and cities within the county. The city of Orangeburg is the county seat. The city is centrally located in the county and the area around the city is the most densely populated and developed in the county, but it is certainly not the only growing or developing town in the county. All of the other towns in Orangeburg County have their own unique character and reason for being. A great many people in the county prefer living within or near these towns and identifying with them as their center of the local living environment. Most of the following information was prepared by the Orangeburg County Chamber of Commerce and provides a brief description of the incorporated areas within the county. They are arranged in alphabetical order.

Bowman- Founded in 1887 and incorporated 16 years later, Bowman was named for Reddick Bowman, whose land was purchased for the town. This scenic community is located in the central part of Orangeburg County. In 1927, the first Certified Motor Carrier to be organized in South Carolina was established in Bowman. Bowman's diversified economy produces agricultural and dairy products, as well as various manufactured goods.

In addition to a thriving economy, Bowman boasts a varied recreational program, offering a well-rounded life for both residents and visitors. Bowman Nature Park features picnic areas, walking trails, basketball, volleyball, tennis courts and meeting facilities. A lighted baseball field rounds out the town's facilities.

Hunting and fishing are favorite pastimes for many area sportsmen. Each Christmas season, visitors and residents gather along Main Street for a beautiful candlelight parade. Thousands enjoy the town's contribution to the holidays at this annual event.

Branchville- Founded in 1734 by a Prussian immigrant, Branchville is one of the oldest towns in South Carolina. In 1828, the South Carolina Railroad was built from Charleston to Branchville, then to Hamburg. An extension was later built from Branchville to Columbia, making Branchville the first railroad junction in the world. Located at the tracks on U.S. 21, the old train depot houses a railroad museum and a restaurant.

Situated at the extreme southeastern tip of Orangeburg County, Branchville features many lovely new residences and older homes which add to the town's charm. Residents and visitors enjoy taking advantage of two playgrounds, and a combination football and baseball field. Deer, quail, dove and duck hunting are popular pastimes for hunters in the area, as well as fishing in the Edisto River. Branchville annually celebrates it ties to the railroad industry with the "Raylrode Daze Festivul." Frontier shoot-outs, country music, arts and crafts and plenty of good food are spotlighted at this festival held the last full weekend in September.

Cope- In 1894 Jacob Martin Cope deeded twenty-five acres of land to develop a town around the station for the new railroad. This town was named "Cope" honoring the man who was willing to divide his farm in half by the railroad and use the land to build a town. The old Cope depot still stands and was purchased by a local resident to preserve its historical significance. Another milestone in the town's history was that one of the first Rural Free Delivery (R.F.D.) routes in the United States went out from Cope.

Situated in the western part of the County, this community offers visitors the best of southern hospitality. Sportsmen, whether visitors or residents, enjoy fishing in local area ponds and on the Edisto River as well as hunting deer, quail and other small game.

Cordova - Cordova is located on a ridge between the North and South forks of the Edisto River. As farmers plow their fields, they occasionally unearth an Indian arrowhead or a bit of pottery. Metal detectors can sometimes locate both Revolutionary and Civil War relics. William Smoak, who came to America from Germany in 1820, was the first to settle this area five miles southwest of Orangeburg.

It has been said that an old farmer was looking for a place to buy wood. When he asked where he could buy good wood, he was told, "Go to the people southwest of Orangeburg, they will give you a cord and over." Through the passing of time, the name "Cordova" came to be connected with the people of the area. Probably closer to the truth is the account that the name Cordova, a Spanish name, was selected by the Atlantic Coastline Railroad Company when the railroad was completed in 1893. Several houses in the area are of architectural significance, with two being built around the turn of the century.

Elloree- Elloree is named for an Indian word which means "Home I Love." In the eastern part of Orangeburg County, Elloree is surrounded by some of the best agricultural land in the State. The community offers a hearty welcome to all. Founded in 1886, Elloree was the smallest municipality in the state to win GREAT TOWN status in 1983. Elloree has a rich and full history. It has survived cyclones, fires and other disasters, through which the people of the town have formed a dedicated community.

Residents and visitors can enjoy a community center, a branch of the county library, athletic field and a town park equipped with outdoor cooking and picnic facilities. Santee State Resort Park, five miles from the town, is on Lake Marion and provides fishing, camping, boating, swimming and other water sports. The Elloree Trials, a flat race for thoroughbred horses held in March, is an annual event of nationwide interest among owners of fine horses.

Just recently the town has undertaken a number of public and private improvement projects in the downtown area to improve business activity and increase tourism. These efforts have generated significant interest in the county.

Eutawville- In 1836, the first home was erected "on higher ground in the healthy pines" of Eutaw Village. Planters along the Santee River had long sought and found refuge for their families from humidity, mists, and mosquitoes. Pinelands located close enough to allow occasional trips to their homes were particularly favored, so the planters of Upper St. John's Parish, Berkeley, chose such a spot not very far from Eutaw Spring. Since "Eutaw" in Cherokee means "pine tree", the name was quite appropriate for their summer village.

The famous Battle of Eutaw Springs on September 8, 1781 was the last major Revolutionary Battle in South Carolina. A British Commander camped 2,300 soldiers and was attacked by the Southern Army. Both Armies lost nearly thirty percent of their men. Although the battle ended in a stalemate, both sides claimed victory. The Eutaw Village Festival held the first weekend in July is a time for folks to enjoy "down-home" entertainment. Arts and crafts, bands, a parade and tempting foods are only a few items available for visitors and residents.

Fishing tournaments held throughout the year draw thousands of visitors to the town. Boat racing, bluegrass music and a National Catfish Stew Cook-off are other annual recreational events for outdoorsmen.

Holly Hill- Holly Hill, "the biggest little town in South Carolina", has a long and colorful past. The town was built around a grove of holly trees, hence its name. The last tree from the original grove, estimated to be 98 years old, was removed in 1957. A replacement for this tree was planted as part of South Carolina's Tricentennial Celebration in 1970. The community was originally a part of the Upper St. James, Goose Creek Parish of Charleston District. When districts were done away with in 1868 and replaced by counties, it remained in Charleston County until 1880 when it became a part of Berkeley County. By vote, in 1910, Holly Hill was annexed to Orangeburg County.

Holly Hill boasts two of the county's oldest banks and many lovely old homes as well. The Dennis Gilmore home is one the oldest residences of the town. This two-story home was erected by Samuel Shuler around 1840 and is located on Highway 176 and 453.

Holly Hill received its GREAT TOWN status in 1986 and was the second town in Orangeburg County to achieve this honor. Fishing, sailing, swimming, and water skiing areas are available on Lake Marion, just ten minutes away. Also, there are several athletic fields, tennis courts and playgrounds for recreational enjoyment. Holly Hill has a long and colorful past, which includes being on an early stagecoach route.

Livingston- In 1891, Rufus Livingston gave right-of-way to the South Bound Railroad Company, and the resulting town was given his name. Livingston was chartered on December 9, 1892.

Early enterprises included a sawmill, cotton gin, gristmill, wheelwright and blacksmith business. The Railroad was an integral part of Livingston's life. One could catch the 9 o'clock train to Columbia and return on the 6 o'clock at night. Meeting the afternoon train was a popular pastime for young and old alike. This small town of 170 is surrounded by large outlying communities with many older homes.

"Ole-Fashun Daze", an adventure in old timey country fun and good eating, is an annual event residents and visitors look forward to attending. Held in March of each year, the festival features dishes of bygone years such as puddin' pot, fried chicken, grits and country sausage and of course, hot biscuits. Live entertainment, arts and crafts displays and various other games may be enjoyed. It's an all-out homecoming for townspeople, relatives, friends and guests.

Neeses- Neeses, an agriculturally based community, is in the western part of Orangeburg County. Records show that the post office at Neeses was established as Silver Springs on November 8, 1893. In 1898, the name Silver Springs was changed to Neeses to honor John W. Neese, who sold the right of way to the South Bound Railroad.

One of Neeses' claims to fame is being the home of the state's first and only mushroom farm, started in 1981. Neeses-grown mushrooms are sold and enjoyed throughout the state. Residents today are proud of their farm heritage and in commemoration established the Neeses Farm Museum Festival held the last weekend in May. Those attending the Festival can sample fried mushrooms, or other local favorites, listen to country music, see a parade and enjoy various other attractions including arts and crafts.

North- Ninety-six years ago near the western edge of Orangeburg County, the town of North emerged. North has 1,300 residents and was named for one of the founders, John F. North, who donated land for the town and a depot. Incorporated in December 1892, North is another of the county's railroad towns.

North has lovely residential areas with paved streets and sidewalks. Homes and yards show that citizens care about their community. North citizens have a sense of humor, too. They love to be asked the question, "Where are you from?" "North, South Carolina" can bring many different looks to the faces of the questioners.

Norway- Norway, founded in 1891, is fifteen miles from Orangeburg and contains many different styles of homes in a lovely setting. Norway almost lost its name when its similarity to the Town of North's caused a train wreck in early years. Railroad orders henceforth referred to it as "Waynor" to avoid confusion.

One of the oldest buildings in Norway is a granite faced three-story building located on the corner of Parkhurst and Fourth Street. The building was the tallest on the Seaboard Line between Columbia and Savannah. Norway has the oldest water system in the state, put in around the 1930's. The town still maintains and uses portions of it today. Norway grammar school, built in the 1900's was destroyed by fire in the Spring of 1976. Brick from the building and the bell were used to build the Bell Tower. Within the walls of the Tower is a time capsule to be opened in the year 2026.

Orangeburg- Residents of Orangeburg are proud of its history which helped mold the state and county. In 1730, to encourage settlement, the General Assembly of the Province of South Carolina made the area into a township.

Then came the two hundred Swiss, German and Dutch immigrants in 1735. The site was attractive because of the fertile soil and abundance of wildlife. The river provided an outlet to the port of Charleston for the agriculture and lumber products. The town soon became a well-established and successful colony, composed chiefly of small farmers.

One of the real showcases in Orangeburg is the S.C. Festival of Roses, held in the Edisto Memorial Gardens each year the first weekend in May. In past years, the festival has hosted a tremendous arts and crafts exhibit. Some stage area events include a puppet show and musicals. For the physically fit, a "Run For The Roses" road race is a major attraction of the festival. Golf, softball and tennis tournaments attract many from near and far. For fun and excitement, there is the Canoe Race down Edisto River and the Fireman's Fun Day. The Canoe Race takes approximately 2 hours for all to finish. The "bucket brigade", "ladder raise" and the "hydrant layout" are a few events in which area firemen compete.

To round out the weekend, the Princess of Roses Pageant is held with talented young ladies from across the state competing for the coveted title. The Queen of Roses Pageant, a preliminary to the Miss South Carolina Pageant, takes place earlier in the year. Arts and entertainment thrive in Orangeburg too. The Orangeburg League of the Arts is active in staging shows and workshops which foster the visual and lively arts. The Orangeburg Arts Council is always actively working with the Orangeburg Arts Center or starting various projects. The critically acclaimed Orangeburg Part-Time Players present several plays each year to delight their audiences. Also, the renowned Henderson-Davis Players of South Carolina State University dazzle audiences with a variety of performances.

Hillcrest Recreation Facility, owned and operated by the City of Orangeburg, offers an 18-hole public golf course, driving range, tennis courts, soccer fields and baseball-softball fields.

Rowesville- In 1876, Rowes Pump was incorporated as a town and the name was legally changed in 1889 to Rowesville. The town's founders, and ancestors, many still living in Rowesville, were farmers. Cattle Creek Campground near Rowesville thrived under the leadership of Bishop Francis Asbury. The great Bishop's statue is in Washington, D.C. astride his horse with his Bible under his arm proclaiming to the world that the "old time religion" will never die. Family groups gather for religious fellowship, food and worship. The Encampment was begun by Methodists in 1786, destroyed by fire on February 15, 1898 and rebuilt in 1899.

Santee- Situated adjacent to Lake Marion, Santee is in the eastern part of the county. It formally received its name in the 1930's from an Indian word meaning "the rivers". Residents, tourists, and vacationers enjoy Santee State Park. Located on Lake Marion, the park offers cottages, meeting halls, campsites, picnic areas, lighted tennis courts, swimming, playgrounds, nature trails and of course, fishing, sailing and boating. Visitors to the area are served by the only in-state Welcome Center on I-95. Public and private golf courses challenge the golfer while others enjoy fishing tournaments, all water sports, camping and hunting. The Santee Fun Festival held in mid-September of each year includes many family activities. A variety of games, live entertainment, a beauty pageant and parade are only a few of the festivities.

Nearby, more than 170,000 acres of surface area comprise the Santee Cooper lakes. The lakes were by-products of the most extensive clearing projects on record in the late 1930's.

However, they have now become much more than storage facilities for water used to generate electricity. In addition to the countless hours of recreation afforded to area residents, these man-made resources bring an abundance of tourists annually to the area. Lake Marion and Lake Moultrie differ greatly in their topography. Marion lagged behind Moultrie in site preparation, and was slated also to have an "open" look much like the lower reservoir. At that time, however, the United States was headed into war and the hydropower was needed in support of that effort. President Franklin D. Roosevelt ordered that the lakes be filled in short fashion, leaving cleaning work unfinished on what was to become Lake Marion. Yet that unfinished business has given the upper lake a distinctive appearance, creating small islands, coves, and beaches, plus thousands of structural fishing sites. For the fisherman, one of the greatest features of the lake happened accidentally. Freshwater Striped Bass on their annual migration inland became trapped in the impoundments upon closure. To the amazement of biologists, they not only survived, they began to reproduce. Some fifty years later, the lakes are still renowned for Striped Bass fishing. Today, several other species of gamefish are abundant in both lakes, annually bringing smiles and excitement to everyone from the five-year old who catches a 1/2 pound Bream on a cane pole to the professional angler who hauls in a 40-pound Striper or Catfish.

Springfield- The town of Springfield, chartered in 1880, was originally known as Millersville. Close to the western Orangeburg County border, Springfield offers the best of southern hospitality to one and all. Springfield is the home of the Governor's Frog Jump and International Egg Striking Contest. The festival, held each year before Easter weekend, draws thousands of visitors. Prowlers go up and down the Edisto swamplands looking for huge bullfrogs that they think will be the winner.

Another item of interest is finding the hardest chicken eggs from anywhere over the countryside. Other activities of the festive weekend include a beauty pageant, a variety of games, arts and crafts, and food.

Vance- Vance was once important throughout the state as a center of transportation. Located on the Santee River at Waco Landing (Vance's Ferry), it was an important link between Charleston, Camden and points in North Carolina and Tennessee. Because the damp and swampy land near the Santee River was mosquito-infested and considered unhealthy, the town was eventually moved further inland and Ferry was dropped from its name.

The oldest house in town was built in 1876 by Francis L. W. Dantzler and the front portion of the house was used as a commissary and boarding house. The historic stores and homes along Vance's main avenue stand as a reminder of a bygone era when Vance's Ferry was a state center of transportation. Some of the best peaches in South Carolina are grown in Vance and sold to visitors at many roadside stands. Access to the Santee Cooper Lakes is less than five minutes away where fishing and water sports are enjoyed by all. In season, hunting deer and other small game are favored.

Woodford- No one knows exactly how Woodford got its name, but two stories have been passed down over the years. One tells of a man named Woodford, believed to be connected the South Bound Railroad, who contributed to the establishment of the station in return for naming of the town after him. The other story, which seems to be the most logical, is that the railroad station was established for the purpose of loading and shipping wood. Hence, the town was named Woodford as a shipping point for wood.

The town was established on the lands of the Robinson's and Gissendanner's by an act of the General Assembly of South Carolina in 1891. The North Edisto River near Woodford challenges anglers of all ages with "Redbreast", "Jackfish" and "Squealers".

POPULATION

POPULATION

Inventory of Existing Conditions

Characteristics of past population trends and future projections provide one basis for determining future land use needs and some of the resources necessary to satisfy those needs. These trends and projections are also useful in determining future needs for public services and infrastructure.

Historic Trends - For nearly fifty (50) years prior to 1970 there was very little change in the population of Orangeburg County. There was a slight decrease during the Depression Era, a relatively significant increase during the forties, probably due to an increase in birth rates following World War II, and then relatively little change until the beginning of the seventies. These changes are shown in Table 1.

During the decade from 1990 to 2000 there was a remarkable increase in the population of the county. The increase of 8.0% during that period was more than half of the statewide increase of 15.1%. Increases during this decade occurred in many areas of the South. Table 1 indicates that the County population increased by 8.0% from 1990 to 2000. definitive characteristics of population changes during the last 20 years.

The changes from 1990 to 2000 are significant in terms of changes in characteristics of the population.

TABLE 1

POPULATION TRENDS – ORANGEBURG COUNTY

1930 – 2000

YEAR	POPULATION	%CHANGE
1930	63,864	
1940	63,707	-0.2
1950	68,726	7.9
1960	68,599	-0.2
1970	69,789	1.8
1980	82,276	22.2
1990	84,803	3.1
1997	87,477	3.2
2000	91,582	4.4

Sources: U.S. Census; Lower Savannah Council of Governments; U.S. Census, Population Estimates Program, March 2000

Components of population change include births, deaths, and migration. Some of the increases during the seventies were due to children born to those persons born who were born in the forties. However, much of the increases during the seventies was due to shifts in migration patterns. The reasons for these changes are complex but most likely result from socioeconomic factors. These include the increased availability of job opportunities in the area and elsewhere for higher skilled/educated residents and social changes that affected minority access to jobs. This area of South Carolina also experienced a decline in the traditional agricultural-based economy and a gradual replacement by manufacturing-based economy. Also, because of the lack of significant job opportunities during the periods prior to this decade, (50's and 60's) many high-school graduates who had received post-secondary education elsewhere did not return to the region then because it did not offer the economic opportunities of other areas. During the 70's a significant portion of the net in-migration in the seventies was by minorities who had left the region previously and returned in the 1970's because of improved economic opportunity and access to education.

It is interesting to note the population changes in the county as they might relate to changes in adjacent counties. Table 2 shows the estimated changes of selected counties in South Carolina. Orangeburg County grew 4.4% from 1997 to 2000, while Calhoun County increased by 9%. On the opposite side of the county, Bamberg County increased in population by .002%. Lexington County increased by 7%. The changes probably relate directly to population increases in the Columbia urbanized areas, proximity to those areas, and access to those areas primarily by the interstate system. Calhoun County had the most significant increase probably because it is a primary expansion area for the Columbia metropolitan region.

Table 2

1980, 1990, 2000 Population of Selected Counties & Preliminary Estimates: 1993 - 2000
Population as of July 1

County	01-Apr-80	01-Apr-90	1993	1994	1995	1996	1997	2000
Bamberg	**18,111**	**16,902**	**16,861**	**16,775**	**16,782**	**16,690**	**16,614**	**16,658**
Beaufort	65,364	86,425	94,996	98,146	101,178	104,491	106,582	120,937
Berkley	94,727	128,776	137,320	138,842	134,491	132,078	134,311	142,651
Calhoun	**12,206**	**12,753**	**13,212**	**13,347**	**13,414**	**13,545**	**13,769**	**15,185**
Charleston	276,974	295,041	297,562	290,690	286,013	282,175	284,815	309,969
Darlington	62,717	61,851	64,390	64,473	64,931	65,290	65,784	67,394
Dorchester	58,761	83,060	84,426	89,686	88,667	88,283	90,730	96,413
Greenville	287,913	320,167	330,333	334,680	339,164	334,478	348,523	379,616
Lexington	**140,353**	**367,611**	**182,198**	**186,834**	**191,325**	**195,341**	**200,371**	**216,014**
Oconee	48,611	57,594	59,698	60,510	61,544	62,637	63,461	66,215
Orangeburg	**82,276**	**84,803**	**87,528**	**87,811**	**87,375**	**87,298**	**87,477**	**91,582**
Richland	269,735	286,321	296,935	297,402	299,375	302,330	303,577	320,677
Sumter	88,243	101,276	105,742	106,193	106,643	106,938	106,589	104,646
Williamsburg	38,226	36,815	37,112	37,401	37,247	37,265	27,306	37,217
York	106,720	131,497	138,691	140,632	143,508	146,806	150,502	164,614
South Carolina	3,121,820	3,486,310	3,624,570	3,653,315	3,683,395	3,716,645	3,760,181	4,012,012

Source: U.S. Bureau of the Census, Population Division,
Population Estimates Program, March, 2000

From observations Calhoun County has also experienced some increases in growth from the Columbia urban area primarily because of access to the interstate system. On the other hand, more rural and less accessible Bamberg County only increased by .002%.

While Orangeburg County has apparently experienced a small amount of population growth from expansion of the Columbia urban area it has probably not been impacted as much as Lexington and Calhoun Counties by the spillover from this expansion of the Columbia area.

Regarding migration, it is interesting to note that Orangeburg County has not been experiencing an increase in recent years due to in-migration. In fact there has been a slight decrease in in-migration. This is different from the growth that the county experienced during the 1970's. While much of that growth was attributed to in-migration the recent growth from 1990 to 2000 has resulted from natural increases (difference between the number of births and deaths) occurring during that period. Table 3 shows the components of this change during that period and compares Orangeburg County to other counties in the state.

This table, (Table 3), indicates that a net of 174 people had moved out of Orangeburg County between 1990 and 1997. Obviously any increases in the population in the county occurred because of the larger number of births compared to deaths. This is a characteristic of the more rural areas and counties in South Carolina. Most of the major urban areas are experiencing large increases in in-migration for various reasons.

TABLE 3

COMPONENTS OF POPULATION CHANGE

FOR SELECTED COUNTIES

1990 - 1997

COUNTY	APRIL 1 1990 CENSUS	JULY 1, 1997 ESTIMATES	CHANGE	BIRTHS	DEATHS	NATURAL INCREASE	NET MIGRATION
AIKEN	120,940	133,980	13,040	14,523	8,441	6,082	6,958
BAMBERG	16,902	16,614	-288	1,749	1,229	520	(808)
BEAUFORT	86,425	106,582	20,157	11,975	5,235	6,740	13,417
BERKELEY	128,776	134,311	5,535	16,662	5,353	11,309	(5,774)
CALHOUN	12,753	13,769	1,016	1,286	898	388	628
CHARLESTON	295,041	284,815	-10,226	35,775	17,438	18,337	(28,563)
DARLINGTON	61,851	65,784	3,933	6,886	4,811	2,075	1,858
DORCHESTER	83,060	90,730	7,670	10,083	3,893	6,190	1,480
GREENVILLE	320,167	348,523	38,356	34,570	20,502	14,068	14,288
HORRY	144,053	168,178	25,125	14,969	10,047	4,922	20,203
LEXINGTON	167,611	200,371	32,760	19,963	9,248	10,715	22,045
OCONEE	57,494	63,461	5,967	5,484	4,141	1,343	4,624
ORANGEBURG	**84,803**	**87,477**	**2,674**	**9,517**	**6,669**	**2,848**	**-174**
RICHLAND	285,720	303,577	17,857	31,383	16,552	14,831	3,026
SUMTER	102637	106589	3952	12290	6055	6235	-2283
WILLIAMSBURG	36,815	37,306	491	4,187	2,664	1,523	-1032
YORK	131,497	150,502	19,005	14,712	8,441	6,271	12,734
SOUTH CAROLINA	3,486,310	3,760,181	273,871	391,187	233,107	158,080	1,115,791

source: U.S. Bureau of the Census, Population Estimates and Program, Population Division, March 1998

These include naturally expanding large urban areas (Lexington); increases in tourism and retirement related development (Horry); new industrial development (Greenville and Spartanburg); and, other factors, including better job opportunities.

As previously discussed, there may have been some new development caused by growth in Richland and Lexington counties in certain parts of Orangeburg County, but this has not yet compensated for the out-migration which appears to have been occurring in recent years. If not for recent increase in retirees moving into the county (primarily in the Santee Lake area) the out-migration may have been greater.

There have been other changes in population characteristics within Orangeburg County. Table 4 illustrates population statistics for the incorporated towns in Orangeburg County and for the balance of the county from 1950 to 2000. During this period there has been a decrease in the number of people living within corporate city limits of the majority of the towns in the county. Generally this has resulted because the corporate limits of most of the towns have changed very little over the years. Most of the new residential development around the towns has occurred outside the corporate limits where there has been more room for expansions and for new subdivisions.

The population within the corporate limits of the towns has decreased slightly because of the aging of population; younger people moving outside of the corporate limits to new development areas; and, smaller household sizes within the city limits. Most of the expansion of the population in the county appears to be occurring in those developing areas surrounding the corporate limits of the existing towns.

Table #4

Population Estimates for County and Incorporated Places, 1996-2000

	1950	1960	1970	1980	1990	2000
County	68,726	68,559	69,789	82,276	84,802	91,582
Bowman	857	1,106	1,095	1,137	1,063	1,198
Branchville	1,353	1,182	1,011	1,769	1,107	1,083
Cope	209	227	202	167	124	107
Cordova	175	209	205	202	135	157
Elloree	1,127	1,031	940	909	939	742
Eutawville	478	468	386	615	350	334
Holly-Hill	1,116	1,235	1,178	1,785	1,478	1,281
Livingston	210	208	165	166	171	148
Neese	328	347	388	557	410	413
North	954	1,047	1,076	1,304	809	813
Norway	476	525	579	518	401	389
City of Orangeburg	15,322	13,852	13,252	14,933	13,772	12,765
Rowesville	363	398	392	388	316	378
Santee	107	105	137	612	638	740
Springfield	782	787	724	604	523	504
Vance	106	85	54	89	214	206
Woodford	179	172	195	206	200	196
Balance of County	44,584	44,575	44,810	56,315	62,153	70,118

Source : US Census Bureau

One challenge the County is experiencing with new development is that it is predominately occurring in the developing areas near existing towns. This new growth in these developing areas has led to occasional instances of conflicting land uses in close proximity of the towns. Some cases have resulted in complaints and concerns from citizens regarding adjacent uses not compatible with their existing property use. These conflicts are likely to increase with more development.

Increasing population, and the resultant increase in new development in certain areas, can result in problems with conflicting land uses and other growing pains. However, from these projections, it can be concluded that the growth in the County's population will not be as large as the population statewide, or as large as it will be in certain other areas in the state. Accordingly, the resulting problems with new development may not be as severe as it might be in the larger urban areas.

However, this does not in any way minimize the need for proper planning to accommodate new development, because increases in population, or lack thereof, is certainly not the sole determinate of problems associated with new development. Growth occurring within the county in specific areas can still result in problems if proper planning and foresight are not exercised in the provision of public services. For example, it is clear from the above discussion related to Table 4 that increases in population in Orangeburg County, in the last fifty years have occurred in the unincorporated areas of the county. From this table, the population of the county as a whole increased 24% from 1950 to 2000 while the population increased 36% in the unincorporated areas.

Another comparison indicates that during this same time period the towns decreased in population by 1% compared to the 36% increase for the unincorporated areas.

Again, this would indicate the county is carrying any burden due to population increases alone. One could conclude from this that perhaps some consideration should be given to the shifting of any burden to the towns in some cases. This could be accomplished through annexations, extra territorial jurisdictions or possibly other means.

This concept is mentioned for possible further study. It could solve some problems in growing areas near towns that the county is not yet enabled to address (such as zoning controls). It could provide some benefit to property owners through additional services, and it could benefit some cities by increasing population figures (useful in obtaining State and Federal Aid), and by increasing that particular city's tax base.

Population and Housing Units

Table 5 shows the distribution of population and housing units throughout the county for the years 1970, 1980, 1990 and 2000. (A housing unit is a dwelling, be it a house, apartment, or mobile home for occupation by 1 or more people.)

The land area in Orangeburg County is 1,106 square miles which translates to 707,840 acres. The number of housing units in 2000 was 39,304 which equals 35.5 housing units per square mile on average in the county. Of course, as this table illustrates, the density of housing units varies throughout the county. The higher density of housing units are in the urban areas. For example, the City of Orangeburg had a density of 698.3 housing units per square mile while the Springfield had a density of 164.3 housing units per square mile. Bowman town had 532 and Neeses town had 120.

Occupied and Vacant Housing Units in 2000

Area	2000 Total Housing	1990 Housing	1990-2000 Percent Change	2000 Occuppied Housing Units	1990 Housing Units	1990-2000 Percent Change	2000 Vacant Housing Units	1990 Housing Units	1990-2000 Percent Change
South Carolina	**1,753,670**	**1,424,155**	**23.10%**	**1,533,854**	**1,258,044**	**21.90%**	**219,816**	**166,111**	**32.30%**
Bamberg County	7,130	6,408	11.30%	6,123	5,587	9.60%	1,007	821	22.70%
Barnwell County	10,191	7,854	29.80%	9,021	7,100	27.10%	1,170	754	55.20%
Orangeburg County	**39,304**	**32,340**	**21.50%**	**34,118**	**28,909**	**18.00%**	**5,186**	**3,431**	**51.20%**
Pickens County	46,000	35,865	28.30%	41,306	33,422	23.60%	4,694	2,443	92.10%
Richland County	129,793	109,564	18.50%	120,101	101,590	18.20%	9,692	7,974	21.50%

Household and Per Capita Income- The median household income in Orangeburg County in 1997 was 26,554. This means that half of the households in the county had an income higher than that figure and half had an income below that figure. The median household income for the state was $33,325. Table 6 compares the median household income of selected counties in South Carolina. Again the more rural counties in the state generally have lower household incomes and the more populated urban areas have generally higher incomes. Adjacent Calhoun County had a slightly higher level of $32,200 while on the other side more rural Bamberg County had a level of $23,858. The more urban counties with higher concentration of high tech industries and white-collar jobs generally have higher median household incomes.

Another measure of income levels is the per capita personal income. Table 7 shows the per capita income by counties in South Carolina for the years 1994 to 1998. In 1998 the per capita income in Orangeburg County was $18,777 below the statewide per capita income of $22,372. However, during this five year period the percent **increase in the per** capita income for Orangeburg County was slightly higher (21%) than the State (20.9%). Beaufort County had the number 1 rating in the State probably due to the tourist industry and the large number of high income retirees in that area. Otherwise, the highest income levels were shared by those counties with concentrations of industrial development and white collar jobs. Some of those counties include Greenville, Richland, Charleston, Lexington and York. York County income levels are most probably due to the proximity of Charlotte, North Carolina urban area.

Racial Composition Approximately 1% of the population is made up of American-Indian, Eskimo, Asian and Hispanic origins. Table 8 shows that the US Bureau of the Census in 2000 that the remaining 99% of 91,582 consisted of

Table 6

MEDIAN FAMILY INCOME FOR SOUTH CAROLINA COUNTIES: FISCAL YEARS 1979-2000 (SELECTED YEARS)

MEDIAN FAMILY INCOME IN DOLLARS

COUNTY	1979	1989	1996	1997	1998	1999	2000
Bamberg	12,240	21,377	25,800	27,300	27,900	29,700	31,000
Barnwell	14,831	28,570	37,200	38,500	42,300	44,000	48,400
Beaufort	17,044	34,533	43,100	45,200	47,500	51,800	53,400
Berkeley	17,519	31,646	38,700	39,500	40,200	43,200	44,600
Calhoun	14,926	28,678	32,200	32,200	33,900	37,200	38,200
Lexington	19,387	35,732	43,100	44,300	45,600	49,400	51,100
McCormick	14,437	24,039	28,100	29,200	30,200	32,600	34,100
Marion	13,517	21,872	27,000	28,000	29,100	31,300	33,300
Marlboro	14,139	22,231	29,000	30,000	32,000	35,200	37,500
Newberry	17,379	28,004	34,700	35,900	37,400	40,200	42,000
Oconee	16,101	30,858	36,600	38,900	40,000	43,900	44,900
Orangeburg	**13,658**	**24,473**	**30,900**	**31,900**	**33,000**	**35,700**	**37,700**
Richland	19,387	35,732	43,100	44,300	45,600	49,400	51,100
Saluda	14,363	27,466	33,700	36,100	36,700	40,300	41,300

Note: 1/ - 5/ are estimates for Metropolitan Statistical Areas with 2 or more counties. Example: Richland and Lexington counties (Columbia MSA) in 2000: $51,100.

Source: United States Dept. of Housing and Urban Development, Economic & Market Analysis Divisions

Table 7

Per Capita Personal Income in South Carolina By Counties 1994-1998

COUNTY	1994	1995	1996	1997	1998	1998 Rank
Bamberg	13,964	14,596	15,308	16,276	17,130	37
Barnwell	17,656	18,147	18,105	19,544	23,086	9
Beaufort	25,091	25,896	27,232	29,765	30,765	1
Berkeley	14,630	14,651	14,950	15,731	16,258	41
Calhoun	16,467	17,354	18,138	18,947	19,625	24
Charleston	20,052	20,618	21,923	22,779	24,040	6
Orangeburg	**15,769**	**16,372**	**17,048**	**17,958**	**18,777**	**30**
SOUTH CAROLINA	**$18,686**	**$19,473**	**$20,403**	**$21,416**	**$22,372**	-
UNITED STATES	**$22,581**	**$23,562**	**$24,651**	**$25,924**	**$24,203**	-

Note: County detail may not add to State totals due to rounding.

Source: U.S. Dept. of Commerce, Bureau of Economic Analysis, June 2000. Rank by Office

Table 8
Population By Race By selected Counties 2000

	Total Population	Total 1 Race only	White 1 Race only	Black 1 Race only	Amer Indian & Alaskan 1 Race only	Asian 1 Race only	Pacific Islander 1 Race only	OTHER 1 Race only	POP 2+ Races
South Carolina	**4,012,012**	**3,972,062**	**2,695,560**	**1,185,216**	**13,718**	**36,014**	**1,628**	**39,926**	**39,950**
Bamberg County	16,658	16,569	6,075	10,411	27	32	1	23	89
Barnwell County	23,478	23,308	12,956	9,990	81	91	8	182	170
Calhoun County	15,185	15,080	7,597	7,393	29	21	4	36	105
Charleston County	309,969	306,365	191,928	106,918	813	3,463	172	3,071	3,604
Lexington County	216,014	213,891	181,844	27,274	725	2,259	83	1,706	2,123
Orangeburg County	**91,582**	**90,945**	**34,045**	**55,736**	**423**	**396**	**15**	**330**	**637**
Richland County	320,677	316,355	161,276	144,809	782	5,501	263	3,724	4,322
Saluda County	19,181	19,058	12,622	5,753	44	7	1	631	123

U.S. Census Bureau

34,045 White and 55,736 Black. According to this table the percentage of the total population is approximately 37.2 White and 60.8 Black.

Population Projections

Projections of future population also serve as part of the basis for determining future needs of the community. Table 9 illustrates county and state projections through the year 2015. The county population is projected, according to this table, to increase from the estimated 1995 level of 87,700 to 89,900 in the year 2000 or approximately 3%. It is then projected to increase just under 2% every 5 years until it reaches 95,100 in the year 2015. This is an increase of 8.4% from the estimated population in 1995 to the projected population in the year 2015. Assuming the estimated and projections are relative, the county projection is considerably less than the projected increase for the statewide population of approximately 23% between 1995 and the year 2015.

NOTE: Additional information on the population element is included in the Appendix.

TABLE 9

POPULATION PROJECTIONS

FOR SELECTED

COUNTIES 2000 - 2015

COUNTY	April 01 1990	July 01 1995	JULY 1 2000	July 01 2005	JULY 1 2010	July 01 2015
AIKEN	120,991	133,100	145,100	157,700	17,000	181,100
BAMBERG	16,902	16,900	16,900	16,900	16,900	16,900
BEAUFORT	86,425	94,900	104,800	117,800	130,700	143,900
BERKELEY	128,776	135,300	152,000	166,900	182,400	19,600
CALHOUN	12,753	13,400	13,800	14,200	14,500	14,700
CHARLESTON	295,041	288,300	307,300	312,700	318,300	324,000
DARLINGTON	61,851	65,000	66,500	67,900	69,300	70,500
DORCHESTER	83,060	84,717	89,700	93,500	96,500	99,500
GREENVILLE	320,167	339,900	359,000	377,000	359,500	414,000
HORRY	144,053	157,900	180,600	202,500	225,800	247,000
LEXINGTON	167,611	191,900	212,200	233,200	255,600	276,900
OCONEE	57,494	61,600	66,300	71,300	76,400	81,300
ORANGEBURG	**84,803**	**87,700**	**89,900**	**91,800**	**93,500**	**95,100**
RICHLAND	286,321	299,700	312,600	322,100	331,800	341,300
SUMTER	102,637	106,800	111,600	116,200	120,300	124,000
WILLIAMSBURG	36,815	37,500	37,500	37,500	37,500	37,500
YORK	131,497	143,800	161,100	178,900	198,600	220,400
SOUTH CAROLINA	3,487,714	3,684,000	3,914,000	4,121,000	4,327,000	4,523,000

***IN DORCHESTER POPULATION CORRECTED FOR CENSUS. CHARLESTON & RICHLAND GROUP QUARTERS POPULATION CORRECTED.**

POPULATION SUMMARY

NEEDS AND GOALS

IMPLEMENTATION AND TIME FRAMES

One of the goals established by the Orangeburg County Council for 2002-2003, in addition to those economic oriented, was to "create wholesome health environment enhancing the quality of life". Items mentioned after this statement were "litter control, youth programs, crime prevention, drug abuse prevention, art/culture, and education". This could be considered a goal for the future population of Orangeburg County.

Between 1990 and 2000 the county experienced some out-migration in that more people moved out of the county than moved in. A part of this trend results from some of the younger people, and others, leaving the county for attractive job opportunities and perceived better quality of life. Future planning efforts should concentrate on improvement of these element within the county.

Increases in population within the county are generally occurring within the developing areas just outside the corporate city limits of a number of towns. In this regard much of the burden of the increases in population is being carried by the county government rather than the municipal governments. Resulting new growth in these areas has occasionally brought on conflicts with incompatible uses which cannot be regulated as they are within the various city limits.

One of the needs observed in this analysis related to population was the need for a more accurate understanding of the actual population county within the county. A goal to satisfy in meeting this need would be to encourage all citizens to participate in the upcoming US Census Count in order that a true reflection of the number and

characteristics of the population can be established. This effort could result in maximizing the return in federal dollars, through a variety of programs, to the county in accordance with the population. The implementation and time frame associated with this particular goal would be to begin as soon as possible in time for the upcoming census count. Orangeburg County officials should endeavor to assist as much as possible in the census count.

In addition, during the next two years, the county may wish to consider establishing a means of performing it's own on-going census tabulation utilizing the year 2000 census and other programs in place within the county government. This could include incorporation of population counts within the GIS system for annual updates if this process is deemed appropriate and beneficial. A primary goal of the county related to population is to sustain a healthy growth rate and to provide for the health safety and general welfare of the population.

ECONOMIC CHARACTERISTICS

ECONOMIC CHARACTERISTICS

Existing Conditions

Economic development is important to the citizens and government of Orangeburg County. Orangeburg County Council stated in 1998 that "economic development is the County's number one priority". For some time Orangeburg County has been planning to improve future economic development through a number of long term projects. The county has also undertaken a number of projects in order to make it more attractive to industry and other activities related to economic development. The county has expanded emergency medical services (EMS) substations, it has been promoting a regional water system which would include the Eastern Orangeburg County area, and it has been involved in the creation of Three Rivers Solid Waste Authority, which is developing a regional landfill.

Orangeburg County also has a multi-county industrial park agreement with Dorchester County. Under this State program several industrial sites in Dorchester County will generate tax credits which Dorchester County will receive, while Orangeburg County will receive one percent of the taxes of the Dorchester County property designated for the park concept.

The County Government has also supported the development of industrial parks within the county. An industrial park area, Orangeburg's first, is located south of the city of Orangeburg along U.S. 21. Six of the eight sites in that park are filled with industries employing over 450 persons. The park also has rail access.

The county has supported the creation of a commercial park at the intersection of Highway 601 and I-26 which is currently being developed by private enterprise. The county has also recently entered into an agreement to purchase land and develop an industrial park near the intersection of Highway 301 and I-26. That industrial park will be provided with water and sewer service by the Department of Public Utilities, a part of the City of Orangeburg. With the introduction of water and sewer service along 301 between 1-26 and the City of Orangeburg, it is anticipated that additional development will occur in that corridor. As more jobs are created by that park it will spur more residential and commercial development in other surrounding areas as well. The county as a whole will benefit.

The Orangeburg County Development Commission is actively involved in recruiting industrial development to Orangeburg County. The commission has in pace an active director and staff which undertakes the day to day activities of the Commission. The Commission recently prepared a study of the "Orangeburg Retail Trade market". That study was prepared by the Center for Applied Real-Estate Education and Research (CAREER) of the Marla Moore School of Business at the University of South Carolina. Some of the information in this section was obtained from that report.

As stated in the Orangeburg County Overview section, agriculture has long been the major element of the economic base of Orangeburg County. However, in recent years the primary economic base is shifting from agriculture to manufacturing. There were 1,950 farms in 1980 and by 1997 this number had been reduced to 965. At the same time the average size of a farm increased from 196 to 282 acres. This has indicated a major shift, not only in the economic base but also in the pattern of the development, from a more rural agricultural community to one that is more urban/suburban in nature.

As fewer workers are engaged in agricultural activities and more are involved in industry the location of housing has shifted from the rural areas to the developing areas around the towns within the county.

While jobs may have shifted it should be emphasized that agriculture is, always has been,, and likely always will be, a major economic force in the county.

Labor Force

There have also been shifts in the civilian labor force. The civilian labor force in 1980 was 31,932. It increased by 1999 to 42,090. Of this 10,075 were employed in manufacturing. Normally, manufacturing payrolls are higher than others on an average.

The manufacturing payroll on average has increased from $5,621.00 in 1970 to $12,477.00 in 1980 and $23,573.00 in 1995. As a result the per capita income has increased dramatically in Orangeburg County from 1980 to 1998 (from $4,648.00 to $18,777). The median effective household buying power increased from $12,409.00 to $37,700 and county wide retail sales during this period increased from $274 million to $682 million. This has probably resulted in a tremendous economic impact. There are obviously huge dynamics of change that are taking place that need to be more thoroughly assessed.

Employment

In 1998 there were 28,575 persons employed in Orangeburg County by 1,901total business establishments and a reported total annual payroll of these businesses of $640.09 million.

If this were the case, the average payroll per employee was $22,400. The average hourly wage for Orangeburg County workers was approximately $10.76. Table 1 illustrates the number of employees and percentages by industry categories in 1994 in the county.

According to the South Carolina Department of Social Services (DSS), from July 1998 to September 1998, there was an average of 14,485 persons in 6,221 households in the county receiving monthly food stamp benefits. Orangeburg County was rated as the fifth highest in the State behind Charleston, Richland, Greenville, and Florence counties. Also, during this period there were 2,428 persons receiving Aid to Families with Dependent Children (AFDC). Orangeburg County ranks fifth among the forty-six counties in AFDC participation. There were 22,145 Medicaid-eligible individuals in the County in September 1999.

Migration

Of course the number of businesses is not indicative of all the workers and employees in the county. The 1990 census indicated that Orangeburg County had 34,472 workers age 16 and over. Ninety-nine and two tenths (99.2%) percent of these worked within the State of South Carolina and 80.1% worked within the county. Nineteen and nine tenths (19.9%) of these were employed outside of Orangeburg County. Table 2 provides a breakdown of where workers are employed outside the County and where outside workers come from.

Sales

Gross sales in Orangeburg county were reported to be $1,457,691,000 in 1999. This equates to $15,916 per person.

TABLE 1

EMPLOYMENT BY INDUSTRY

Category	# Employees	Per Cent
Agriculture Services, Forestry, & Fisheries	1,356	3.9
Mining	26	0.1
Construction	2,786	7.9
Manufacturing	9,316	26.5
Transportation & Utilities	1,842	5.2
Wholesale Trade	1,582	4.5
Retail Trade	6,040	17.2
Finance, Insurance & Real Estate	1,201	3.4
Personal Services	1,402	4.0
Entertainment & Recreation Services	256	0.7
Professional & Related Services	7,176	20.4
Public Administration	1,208	3.4
Business, Repair Service	921	2.6
Total (16 Yrs +)	35,112	100.0

Source: U.S. Census, 1990.

TABLE 2

Workers Living in Orangeburg County and Their Location of Employment

County in South Carolina	State or Country	No. of Workers
Orangeburg	South Carolina	27,628
Aiken	South Carolina	537
Bamberg	South Carolina	563
Barnwell	South Carolina	215
Berkeley	South Carolina	549
Calhoun	South Carolina	729
Charleston	South Carolina	686
Clarendon	South Carolina	107
Dorchester	South Carolina	544
Lexington	South Carolina	811
Richland	South Carolina	1,358
Others with Less than 100 Each	South Carolina	473
	California	7
	Georgia	133
	Illinois	14
	Louisiana	2
	Nevada	5
	New Jersey	2
	New York	2
	North Carolina	35
	Texas	49
	Virginia	14
	Japan	1
	Philippines	4
	Abroad, Not Specified	5
	Total:	34,473

Source: U.S. Census, 1990