A Selective Reconnaissance Survey of a 998 Acre Tract of Land within the Former Rice Plantation of Hugh Rose known as Fairlawn, Christ Church Parish, Charleston County, South Carolina

Swamp Thing Mitigation Bank

USACE # SAC-2014-01090; SHPO Project No. 18-KL0075

Barr & Associates Contract # STMB-1.1

Archaeological Research Manuscript SCT-37

11 October 2018

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BARR & ASSOCIATES

Terrestrial and Marine Archaeology

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Fairlawn Plantation (SHPO Site 7993)

Fairlawn Plantation graveyard (38CH2577/SHPO Site No. 7993.01)

Barr & Associates Contract # STMB-1.1

Prepared for

Swamp Thing Mitigation Bank and Fairlawn Partners, LLC

Awendaw, SC

by

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Cover Art: Overview of embankment Em-A (view to southeast).

Abstract

This report presents the results of a selective reconnaissance archaeological survey and testing of approximately 3.9 miles (6.3 km) of rice field embankments within the newly proposed 998 acre (404 ha) Swamp Thing Wetland Mitigation Bank. Situated within the confines of an historic tract known as Fairlawn Plantation and located within the northeast portion of Charleston County, South Carolina, this tract is slated for conversion into a freshwater wetland mitigation bank – a process that would require the reduction and/or breaching via gravel-based swales of historic embankments within the interior of the tract.

The current archaeological survey was performed due to requirements set forth in and in accordance with the National Historic Preservation Act (NRHP) of 1966 (36 CFR 60.4 [a through d] as amended) to determine whether their reduction to grade would adversely affect potential cultural resources that may be present within the tract.

Fieldwork, which was conducted between July 14 and July 16, 2018, involved the placement of a series of shovel tests at 30, 100, and 150 foot (10, 30, and 46 m) intervals along nine (9) separate embankments, eight (8) of which are slated for reduction. The ninth embankment consists of the primary north/south embankment/access road for the historic plantation. Not slated for reduction, plans are to keep this embankment intact. However there are three (3) breaches/gravel swales (Stations 1, 2 and 3) designed to facilitate the unimpeded flow of fresh water to the Wando River. A fourth (4) station, is located along a bend at the far north corner of the primary north/south embankment/access road. This section, which was already known to have produced historic cultural resource materials, was tested as a control. As a result of these studies, only one (1) isolated find was identified from all 13 areas tested.

During a previous assessment of the historic property by Barr & Associates, the overall landscape of the 1,200 ac (486 ha) remnant portions of the historic Fairlawn Plantation was assigned SHPO Site No. 7993 as an historic rice field landscape. Within that overall landscape, additional numbers were assigned to various locations within the tract and include 38CH2577/SHPO Site No. 7993.01 (graveyard), 7993.02 (main residential area), and 7993.03 (historic rice processing center). No site numbers were assigned to a mapped slave village near the graveyard nor to two mapped slave villages near the main house complex per instructions from both South Carolina Department of Archives and History and South Carolina archaeological site file office personnel. Intensive Phase I surveys are recommended for the graveyard and nearby slave village, with avoidance of the area (including a 50 foot [15m] buffer) until such studies can be conducted.

Based upon the current reconnaissance survey, the Fairlawn Plantation rice field landscape is considered eligible for inclusion in the NRHP, although no additional fieldwork is considered warranted for either the embankments/dikes or the rice fields themselves.

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Chapter 1
Introduction

This report presents the results of a selective reconnaissance survey of approximately 3.9 miles (6.3 km) or 9.5 acres (3.8 ha) of embankments within the confines of a 998 acre (404 ha) portion of the late-eighteenth and nineteenth century Fairlawn Plantation (SHPO Site No. 7993). It also includes an assessment of the plantation's rice fields, of which the embankments are a component.

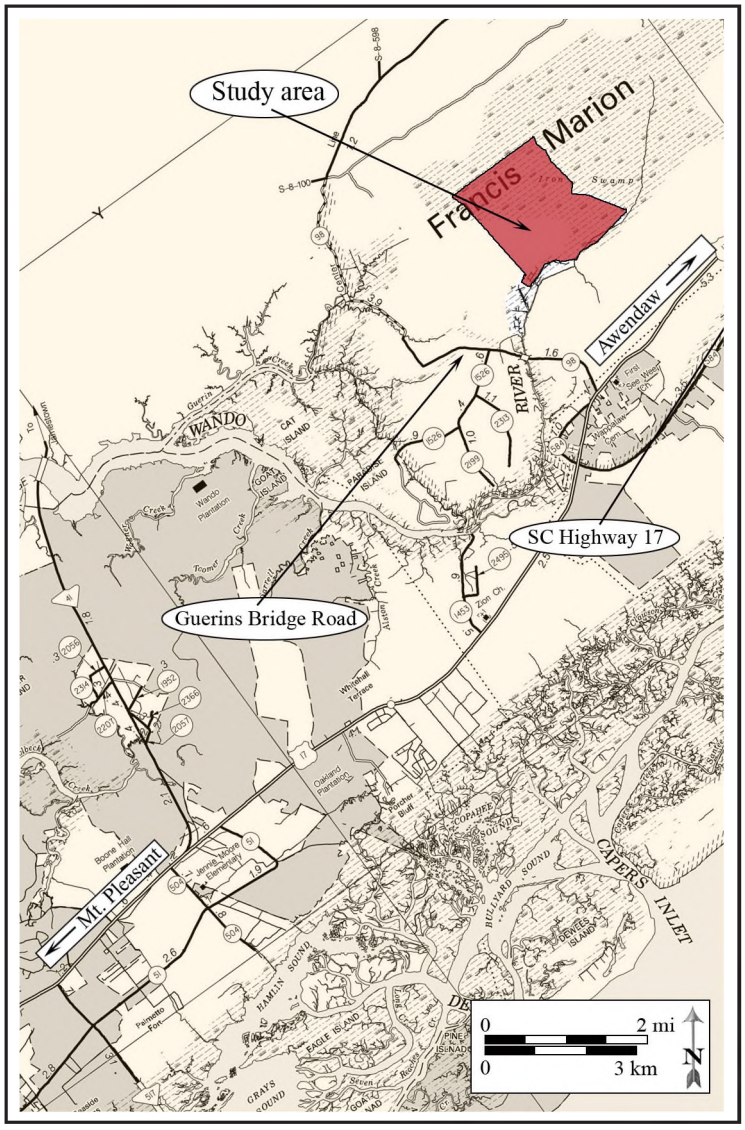


Figure 1.01 Study area within northeast Charleston County, SC (SC DOT 2005).

The remnant Fairlawn plantation is situated within the northeast portion of Charleston County, South Carolina on privately owned property that is surrounded on all sides by the Francis Marion National Forest (Figure 1.01).

The study area has been proposed for conversion into a wetland mitigation bank, a change that will require the installation of three (3) gravel swales in the primary access road embankment to facilitate water flow. Most of the interior embankments/dikes will be reduced in height to the surrounding ground level, and former canals alongside those embankments will be filled (Figure 1.02).

These areas were slated for archaeological investigation because of concerns about the potential presence of significant cultural resources that could be negatively impacted during the conversion. In addition, this survey was contracted by Edouard des Francs of Swamp Thing Wetland Mitigation Bank and Fairlawn Partners,

LLC due to concerns regarding potential permitting requirements set forth by the US Army Corps of Engineers, Charleston District (USACE No. SAC-2014-01090), and the South Carolina State Historic Preservation office (SHPO Project No. 18-KL0075) (*see Appendix A*).

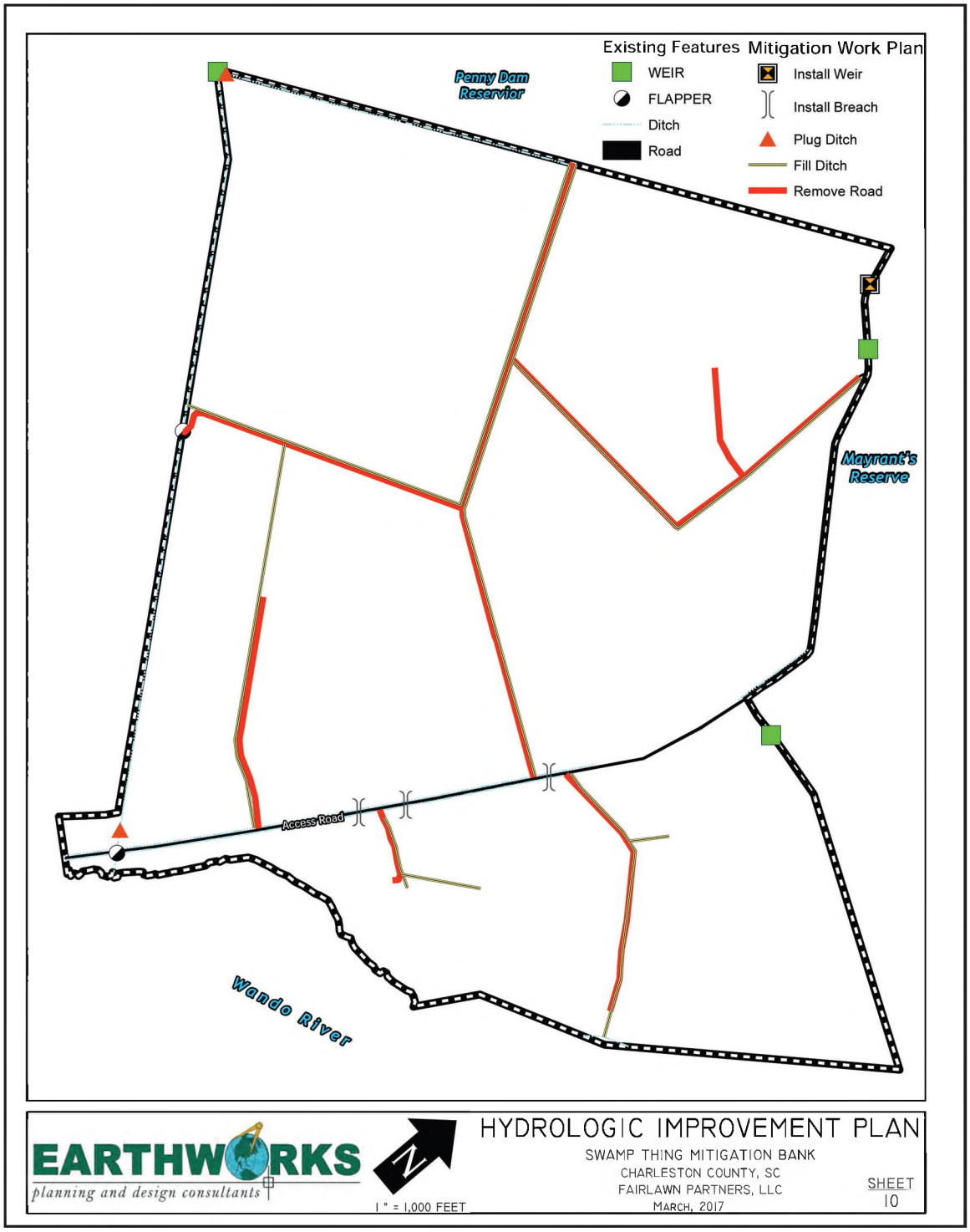


Figure 1.02 **Proposed work plan showing embankments to be reduced to ground level (red) and breached through installation of gravel swales (Earthworks Group Inc. 2017, Sheet 10).**

A mitigation bank is a wetland, stream or other aquatic resource area that has been restored, established, enhanced, or (in certain circumstances) preserved for the purpose of providing compensation for unavoidable impacts to aquatic resources permitted under Section 404 of the Clean Water Act. Cultural resources are only taken into consideration under Section 106 of the NHPA. As proposed, the Swamp Thing Mitigation Bank will fundamentally alter integral portions of the Fairlawn Plantation rice fields.

The report from this work was originally submitted in October 2018. It has been revised twice following comments by Michelle Zulauf of the USACE and Keely Lewis-Schroer of the South Carolina SHPO (*see Appendix A*; Lewis et al., personal communication 07.30.2019). During the April 2019 revision of this reconnaissance report, we applied for, and received, site numbers from the SHPO and from the South Carolina Archaeological Site Files office housed at the South Carolina Institute of Archaeology and Anthropology (SCIAA) (*see Appendix C*).

The entire 1,200 acre remnant of Fairlawn plantation was designated as a rice field landscape and assigned SHPO Site No. 7993. A grave yard located in the east portion of the current study area was assigned numbers by both SHPO and SCIAA and is recorded as Site 38CH2577/SHPO Site No. 7993.01. Two other sub-sites lie within the southwest portion of the overall tract and consist of the main residential area and the historic rice processing center, but fall outside of the current study area and outside of the planned boundaries of the mitigation bank. They were also assigned SHPO numbers (7993.02, 7993.03 respectively) (Figure 1.03) (Barr 2014, rev. 04.29.2019).

In addition, a review of an historic plat of the overall Fairlawn Plantation (c. 1794) indicates the possible presence of an uninvestigated slave village (no site number assigned as yet) near the known graveyard. The Swamp Thing Mitigation Bank plans call for avoidance of both the graveyard and the possible village site, along with a 50 foot (15m) buffer.

Two possible slave villages in the vicinity of the main house complex are depicted on the 1794 plat. They fall outside the proposed mitigation bank boundaries, were not investigated or confirmed, and have not been assigned site numbers.

The proposed mitigation bank is defined as a 998 acre (404 ha) portion of the former Fairlawn Plantation situated within the historic I'On Swamp (var. sp. I'on, Iron) just north of Guerins Bridge Road, between SC Highway 41 and US Highway 17N some 11 miles (17.7 km) northeast of Mount Pleasant, South Carolina. It is found on the USGS 1959 Sewee Bay quadrant topographic map (*see Figure 1.03*). The central UTM coordinates are E619152; N3648529 meters (NAD 27). Although currently a privately owned tract, it is bounded on all sides by the Francis Marion National Forest.

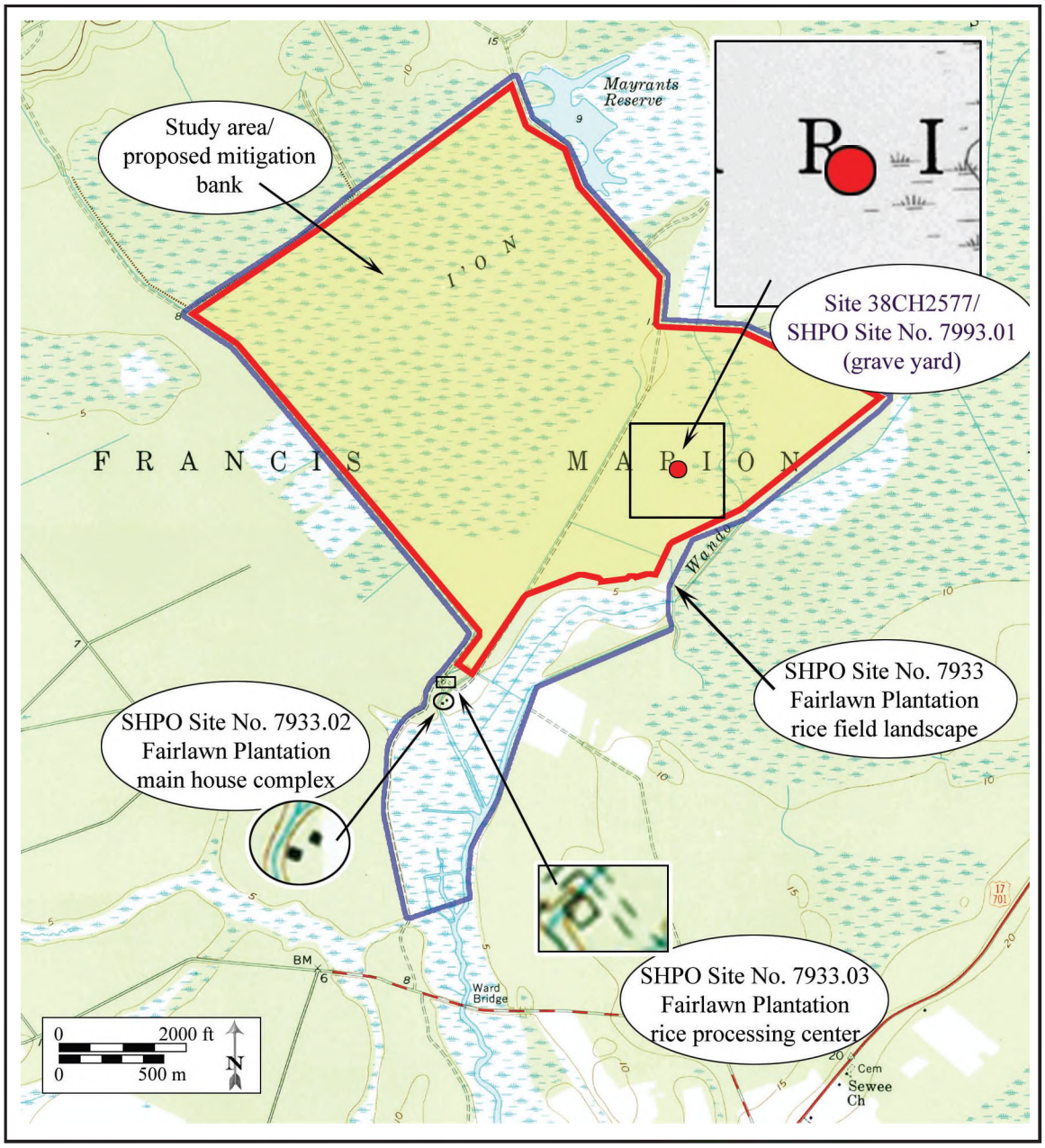


Figure 1.03 Study area and recorded sites on USGS topographic map (USGS Sewee Bay quad 1959).

Project Goals & Objectives

This reconnaissance level study was undertaken as a follow-up to an earlier assessment conducted by Barr & Associates in 2014 (Barr 2014, rev. 2019). The assessment was designed to highlight those areas that might merit further investigation and/or avoidance during the first proposed conversion process and included a review of an historic plat of the property, relevant topographic and aerial maps, as well as LiDAR and three-dimensional Voxler images of the study area. A pedestrian/walkover survey was performed to investigate those areas considered potentially significant (*see Chapter 5 for more information*).

As a result of that survey, one (1) probable African-American graveyard (Site 38CH2577/SHPO Site No. 7993.01) and one (1) possible slave village (no site number assigned) were recorded in areas that, at the time, were slated for conversion. Both were recommended for further investigations and/or avoidance.

Between 2014 and the present time, the property owners redesigned the area to be used for a mitigation bank, reducing the acreage from approximately 1,200 acres to the current 998 acres (486 ha; 404 ha). Avoidance of the potential slave village and graveyard is included in the current work plan (Figure 1.04).

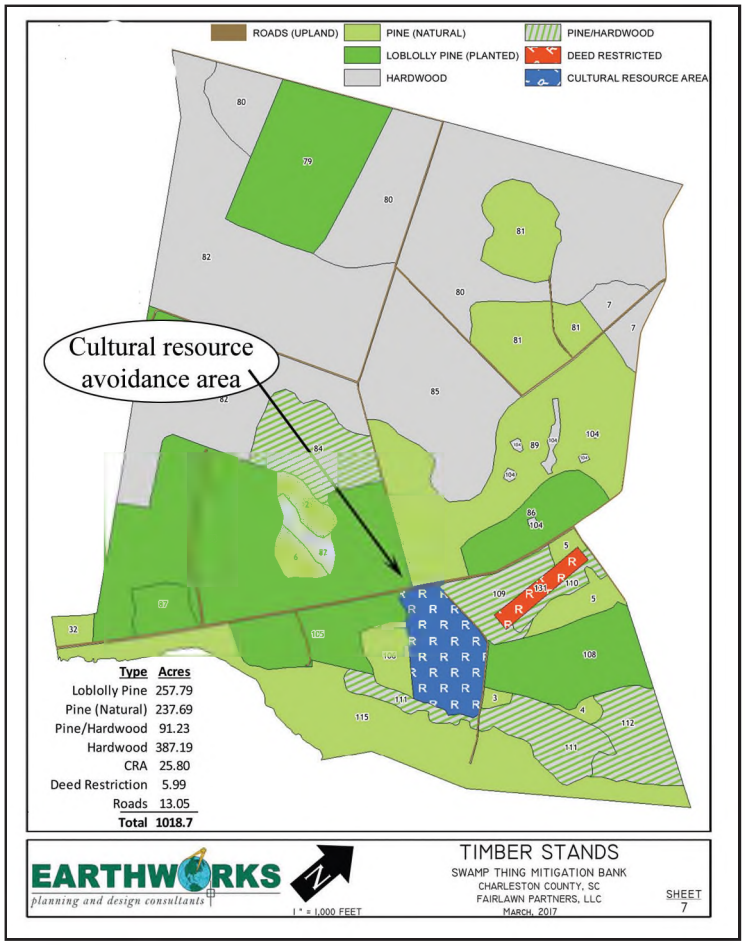


Figure 1.04 Cultural resource avoidance area within overall mitigation bank plans (Earthworks Group, Inc. 2017, Sheet 7).

The owners also changed the name of the proposed mitigation bank from Congaree Carton Wetland Mitigation Bank to Swamp Thing Wetland Mitigation Bank and resubmitted paperwork to the SHPO and USACE for their assessment. Subsequently, under the requirements set forth and in accordance with the National Historic Preservation Act (NHPA) of 1966 (36CFR 60.4 [a-d]), the current reconnaissance study was requested.

The reconnaissance survey was designed with the assistance of SHPO reviewers. Following discussions with Ms. Lewis, it was determined that field work for this study would only address the interior embankments/ dikes slated for reduction, as well as three (3) planned swales in the north/northeast trending primary access road embankment (Figures 1.05, 1.06, 1.07 and 1.08; *see also see Figure 1.02*).

The report was revised in April 2019 based on comments by Ms. Lewis and Ms. Zulauf of the USACE (Barr 2018, rev. April 2019**).** Following additional comments, and a meeting between Ms. Lewis-Schroer, Ms. Zulauf, G. Alan Wood (representative of the mitigation bank), and William B. Barr and Carole Bastian (of Barr & Associates) on 30 July 2019, the current revision (08.16.2019) was prepared and submitted.

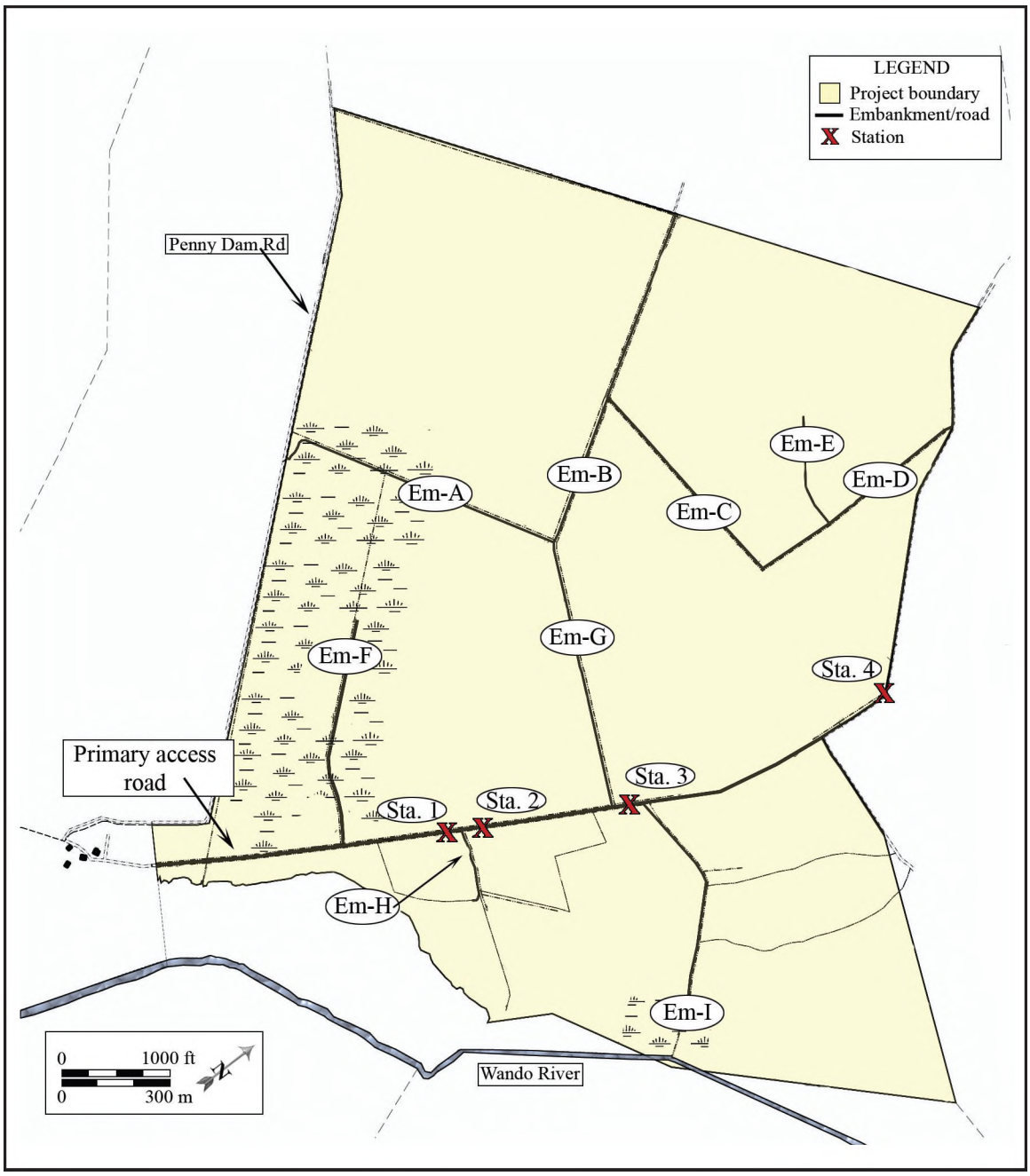


Figure 1.05 Project area map showing study embankments and stations (adapteed from Earthworks Groups Inc. 2017).

Under NHPA, it is the Federal Agency's responsibility to comply with Section 106 and SHPO's responsibility (as representatives of the ACHP) to provide comments, recommendations and concurrence to the Agency's findings.

It is the purpose of this study to provide the SHPO and the USACE with enough information about the historic properties within the area of potential effect (APE) in order to make eligibility determinations and assess the effects of the undertaking on the historic property and ultimately comply with NHPA.

Summary of Results & Recommendations

During reconnaissance testing within the confines of the proposed Swamp Thing Mitigation Bank, only one (1) isolated find (carriage bolt) was encountered. The lack of any additional cultural resource materials within the specific areas investigated suggests that either these were not areas where long term activities took place (other than general maintenance and travel to and from the fields), or that two centuries' worth of erosion and repair have either destroyed or are masking any physical remains.

The current survey determined that the investigated sections of the embankments lack significant archaeological deposits that would be useful for research or commemorative study.

Although there are other areas within the overall Fairlawn property (but excluded from the proposed wetland mitigation bank) that may warrant future research, no additional archaeological ground testing of the particular cultural resources (embankments) studied for this report, or of the rice fields as a whole, are considered warranted (Lewis et al., personal communication 07.30.2019).

Figure 1.06 Overview of typical interior drain (view to northeast near embankment Em-H).

Figure 1.07 Overview of typical topography and vegetation (view to north near embankment Em-A).

Figure 1.08 Overview of interior water canal (view to southwest at embankment Em-A).

Additional work, in the form of a Phase I Intensive Cultural Resources Survey, is recommended for the Fairlawn Plantation graveyard (Site 38CH2577/SHPO Site No. 7993.01) and nearby potential slave village. All impacts to those two sites, as well as a 50 foot (15m) buffer zone should be avoided until that study is completed.

Although the majority of the investigated embankments have suffered significant erosion over the years, leaving them nearly level with the surrounding fallow historic rice fields, the overall layout/design of the rice field infrastructure has not been compromised and they remain in their original place.

Therefore, in its present state, and based upon the nine criteria for evaluation of historic rice fields laid out in the SC Department of Archives and History (SCDAH) and SHPO 2011 publication entitled *Rice Fields and Section 106*, it is recommended that Fairlawn Plantation (SHPO Site No. 7993) is eligible for inclusion on the National Register of Historic Places (NRHP) (SCDAH/SHPO 2011).

Field Personnel & Dates of Survey

Barr & Associates performed the fieldwork for Swamp Thing Wetland Mitigation Bank of Awendaw, South Carolina from July 14 to July 16, 2018. William B. Barr, M.A., RPA served as Principal Investigator and performed the fieldwork. Data analysis and original report production was conducted at the offices of Barr & Associates in Leesville, South Carolina in August and September 2018. The first revised report was produced in April 2019, with the second revision produced in August 2019. Report graphics were provided by Gypsy Soul Productions of Leesville.

Organization of the Report

An environmental setting for the project area is presented in Chapter 2. It includes a brief review of the geology and geomorphology of the survey area, a description of the floral and faunal communities characteristic of the region, and a discussion pertaining to the climate. Chapter 3 summarizes a prehistoric context for the project area. A local history of the project area is presented in Chapter 4, while Chapter 5 covers previous investigations and assessments, field methods and the research design that governed this investigation.

Results of the Phase I reconnaissance survey, including a description of cultural resources identified during the survey, are presented in Chapter 6. Finally, Chapter 7 presents conclusions and management recommendations for the Swamp Thing Mitigation Bank project. Appendix A presents correspondence from Keely Lewis-Schroer of the SC SHPO and her recommendations regarding this cultural reconnaissance survey. Appendix B contains the project's shovel test log. Appendix C contains site forms associated with this property.

CHAPTER 2
ENVIRONMENTAL CONTEXT

The proposed Swamp Thing Wetland Mitigation Bank tract is located in an unincorporated area of Charleston County about 7.7 miles (12.4 km) southwest of Awendaw, South Carolina. It is surrounded by the Francis Marion National Forest (*see Figure 1.01*).

Charleston County, which is elongated on a northeast by southwest axis, measures approximately 30 miles (49 km) north-south by 13 miles (21 km) east-west and contains approximately 604,800 acres (244,763 ha) (Miller 1971:1). The county is situated in the lower Coastal Plain and is bounded to the east by the Atlantic seaboard. It is bounded to the north and west by Dorchester and Berkeley Counties, to the northeast by Georgetown County and to the southwest by Colleton County (Figure 2.01).

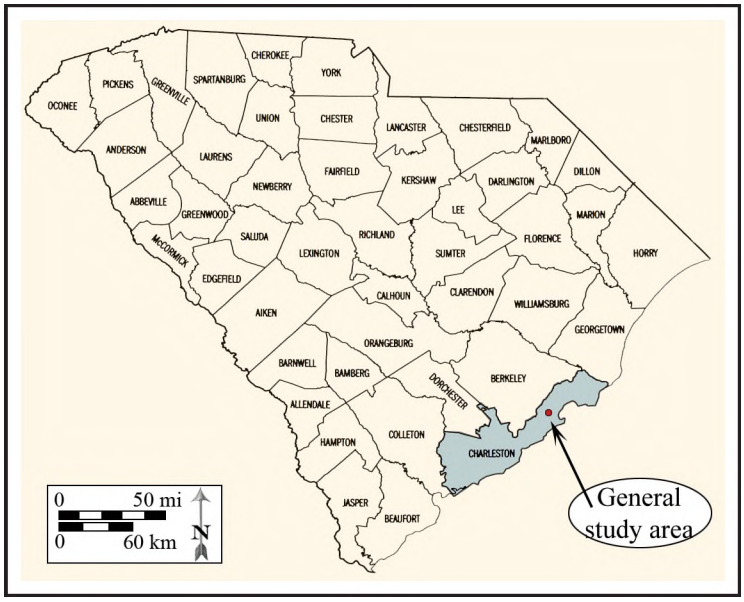


Figure 2.01 Location of Charleston County.

PHYSIOGRAPHY & GEOLOGY

The topography of Charleston County consists of low flat land in the east with slightly undulating hills rising from east to west. However, most of the county is nearly level with only a few areas exhibiting a slope of 6% or more. Approximately 100 miles (161 km) of irregularly shaped coastline borders the Atlantic Ocean.

Elevations range from sea level along the coast to approximately 70 feet (22 m) above mean sea level (AMSL) within the central portion of the county (Miller 1971:74). Found on the USGS 1959 Sewee Bay, SC quadrant topographic map, elevations within the project area range from 5 to 10 feet (1.5 to 3 m) AMSL (Figure 2.02). Central UTM coordinates for Fairlawn Plantation are E619152, N3648529 (NAD 27).

The primary drainages along Charleston County's borders are the Edisto River along its southern boundary and the South Santee River along its northeast boundary. Large interior drainages include the Ashley, Cooper, Kiawah, North Edisto, Stono and Wando rivers. The Wando, Cooper and Ashley all flow toward the Atlantic

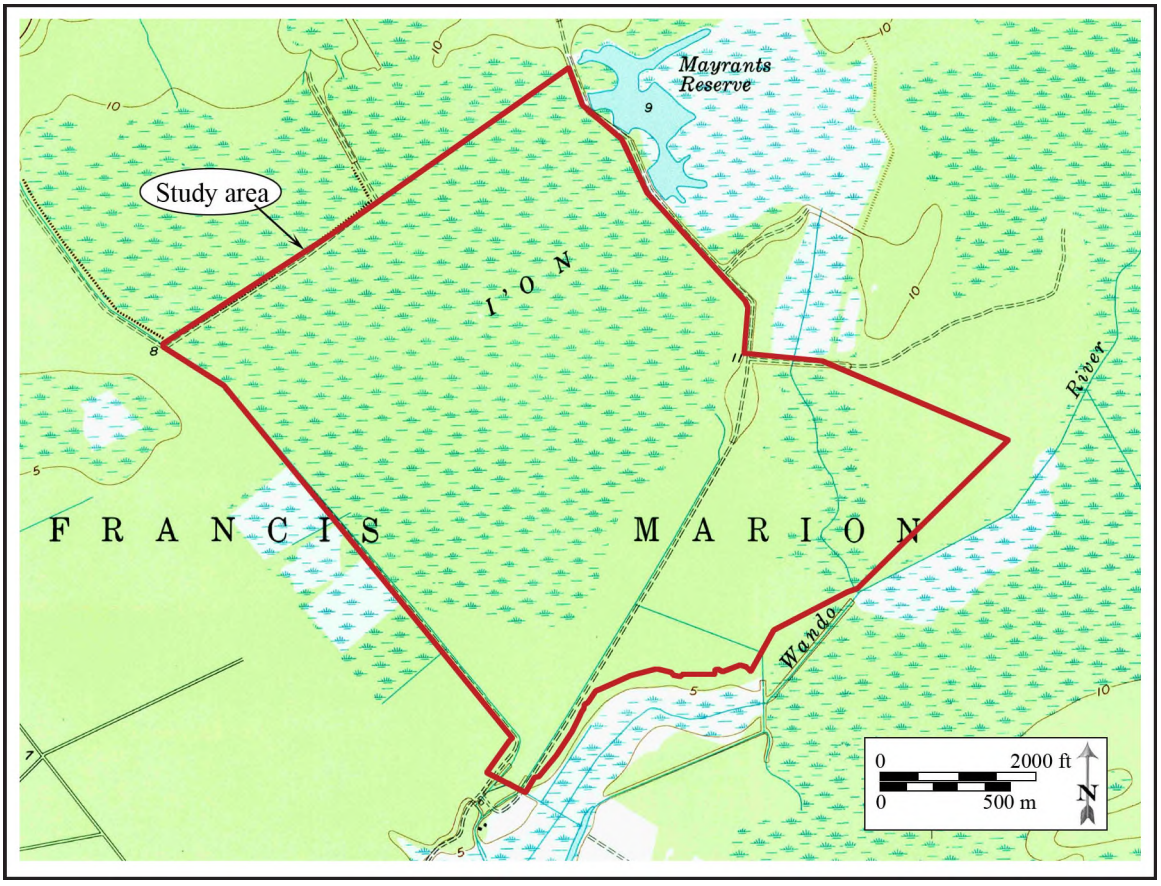


Figure 2.02 Study area on USGS topographic map (USGS Sewee Bay quad 1959).

coast and empty into Charleston Harbor. In addition, there are a number of smaller interior drainages and creeks in the county such as Abbapoola Creek, Bohicket Creek, Church Creek, Pennys Creek and Toogoodoo Creek. The primary drainage within the survey area is the Wando River which marks the proposed mitigation bank's southern boundary.

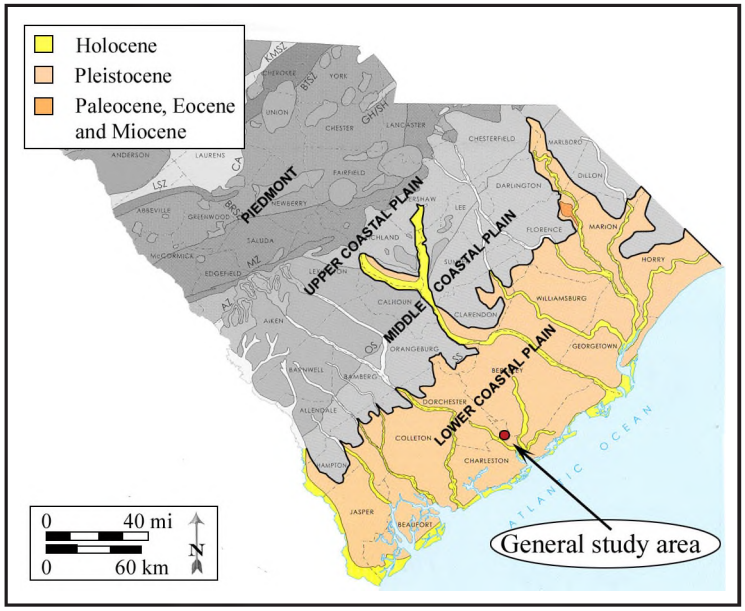


Figure 2.03 Physiographic regions of South Carolina (SC Geologic Survey, rev. 2005).

Charleston County lies entirely within the Atlantic Coastal Plain (Figure 2.03). A majority of the soils in this portion of the Coastal Plain are derived from alternating depositional sequences associated

with marine, or fluvial, deposits. These were associated with Atlantic Ocean tidal fluctuations during the Pleistocene Era and, in Charleston County, contain the Recent, Pamlico and Talbot formations (Miller 1971:71).

Soils

According to Miller (1971), Charleston County contains eleven (11) primary soil associations. These include the Bay boro-Wagram-Orangeburg-Quitman association, the Chipley-Lakeland association, the Kiawah-Seabrook-Dawhoo association, the Mine Pits and Dumps-Made Land association, the Rutledge-Scranton-Pamlico association, the St. John's-Leon association, the Seewee-Rutledge association, the Tidal Marsh association, the Wando-Seabrook association, the Wadmalaw-Yonges-Stono-Meggett association and the Yonges-Hockley-Edisto association.

According to the US Department of Agriculture Soil Conservation Service, five (5) soil series are found within the project area and include Meggett (Me) clay loam, Santee (Se) loam and Santee (Sc) clay loam, Wadmalaw (Wa) fine sandy loam, and Yonges (Yo) loamy fine sand (Figure 2.04). These poorly drained soils on nearly level ground are considered to be well suited for woodlands, plantation pine and cultivation - but poorly suited for urban development (Miller 1971:8-9, 18-19, 25-26, 28-29, 31-32; General Soil Map).

- Meggett (Me) clay loam series soils are level and have a predominant clay subsoil that exhibits ponding during rainy periods. These soils are characterized by an A horizon of very dark grayish brown (10YR 3/2) loam to a depth of 4 inches (10.2 cm). This is followed by a B horizon that typically extends from 4 to 55 inches (10.2 to 139.7 cm) below surface and ranges in color from a gray (10YR 5/1) clay loam from 4 to 14 inches (10.2 to 35.6 cm), followed by a dark gray (10YR 4/1) clay from 14 to 32 inches (35.6 to 81.3 cm), over a dark gray (5Y 4/1) clay from 32 to 38 inches (81.3 to 96.5) cm, over a gray (10YR 6/1 sticky clay from 38 to 55 inches (96.5 to 139.7 cm). The C horizon extends from 55 to 72 inches (139.7 to 182.9 cm) and exhibits a mottled gray, light gray, strong brown and yellowish brown clay (Miller 1971:18-19).
- Santee (Se) loam and Santee (Sc) clay loam series soils consist of nearly level, poorly drained soils with a clayey subsoil that are frequently ponded. These soils are generally characterized by an A horizon of black (N 1/0) loam (0 to 6 inches (0 - 15.2 cm) below surface (bs) that overlays a B horizon that ranges from 6 to 48 inches (15.2 - 122 cm) below surface that is characterized by a black (N 1/0) clay loam from 6 to 14 inches (15.2 - 35.6 cm), a very dark gray (10YR 3/1) clay loam from 14 to 23 inches (35.6 - 58.4 cm), followed by a dark gray (5YR 4/1) clay or clay loam from 23 to 48 inches (58.4 -122 cm). The C horizon extends from 48 to 71 inches (122 - 180.3 cm) and exhibits a dark gray (5YR 4/1), and greenish gray (5G 5/1 and 5GY 5/1) clay (Miller 1971:25-26).

- Wadmalaw (Wa) fine sandy loam series soils consist of nearly level, poorly drained soils that are loamy throughout and pond during rainy weather. They are characterized by an A horizon that extends from 5 to 13 inches (12.7 to 33 cm) below surface and include a black (10YR 2/1) fine sandy loam from 0 to 5 inches (0 to 12.7 cm), a very dark gray (10YR 3/1)

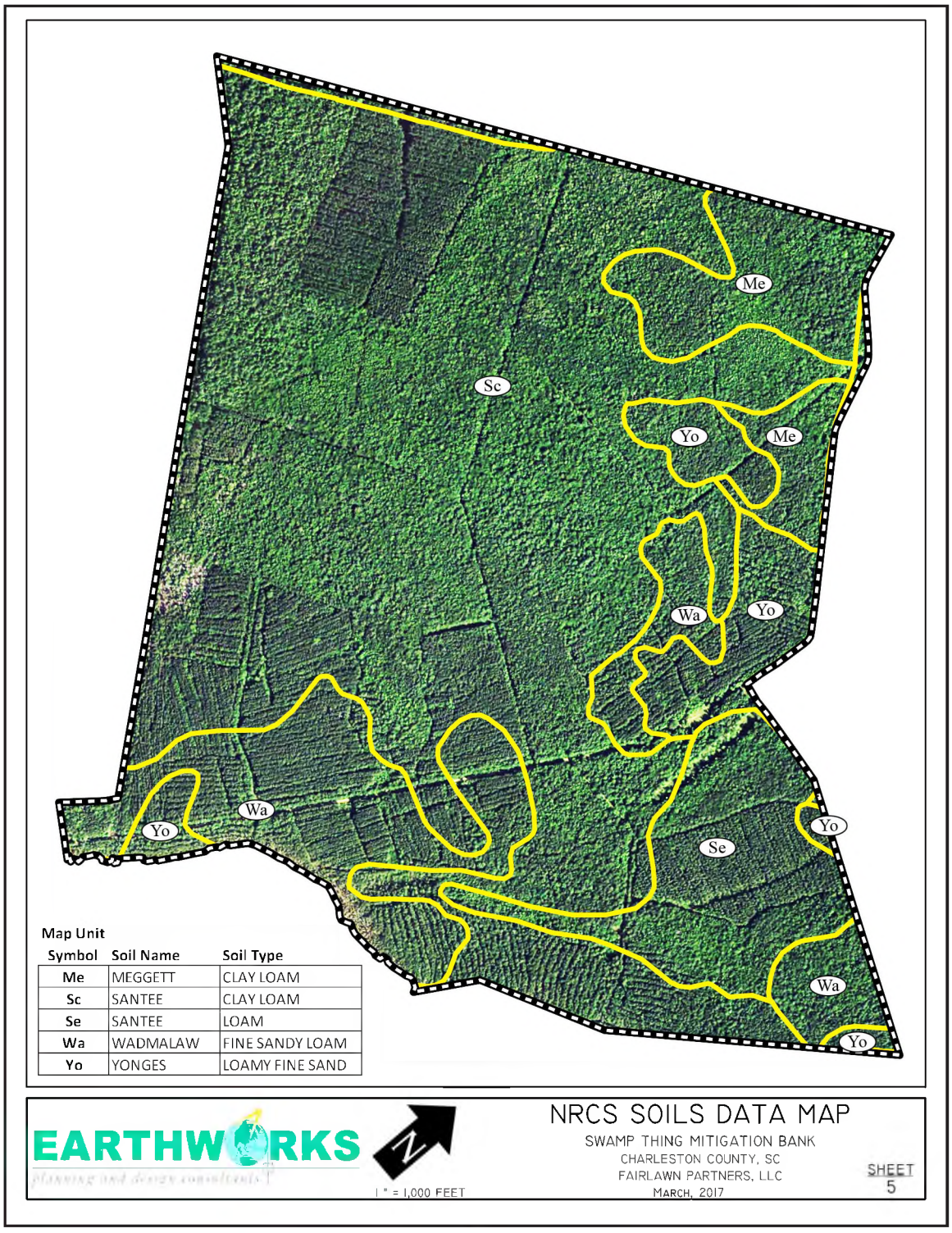


Figure 2.04 Soil map (Earthworks Group Inc. 2017, Sheet 6).

fine sandy loam from (5 to 9 inches (12.7 to 22.9 cm), and a dark gray (10YR 4/1) heavy, fine sandy loam from 9 to 13 inches (22.9 to 33 cm). The B horizon typically extends from 13 to 83 inches (33 to 210.8 cm) below surface and ranges in color and texture from a dark gray (10YR 4/1) heavy, fine sandy loam, over a gray (10YR 5/1) light sandy clay loam from 13 to 33 inches (33 to 83.8 cm), over a gray (5Y 5/1 and 5Y 6/1) sandy clay loam from 33 to 83 inches (83.8 to 310.8 cm) (Miller 1971:28-29).

- Yonges (Yo) loamy fine sand series soils have an Ap horizon of 0 - 10 inches (0 - 25.5 cm) that is characterized by a grayish-brown (10YR 4/2) loamy fine sand. This is followed by a light brownish gray (10YR 2/2) loamy fine sand from 10 - 14 inches (25.5 - 35.5 cm) below surfacee. The B horizon extends from 14 - 60 inches (35.5 - 152.5 cm) and consists of a gray (10YR 5/1) fine sandy clay loam, a gray (10YR 6/1) fine sandy clay with yellowish brown (10YR 5/6) mottles and a gray 10YR 6/1) fine sandy clay loam. This is followed by a C horizon from 60 - 84 inches (152.5 - 213 cm) of either a gray (1oYR 6/1) and light brownish gray (2.5YR 6/2) fine sandy loam and a brownish gray (2.5YR 6/2) light fine sandy loam (Miller 1971:31-32).

PALEO-ENVIRONMENT

Floral evidence for the Full Glacial through Post Glacial periods is found in pollen samples obtained from the South Atlantic Slope region (Watts 1971; Whitehead 1965, 1973). This data indicates a chronological succession of forest types during these glacial periods. Prior to the presence of human beings (pre-13,050 BC), the climate during the Full Glacial Period in the Piedmont and Coastal Plain was dominated by cold-adapted vegetation, predominantly spruce and jack pine. The presence of less common species like oak and ironwood suggests a much colder and drier environment than that which is presently found within the region (Watts 1980:326). Some studies have suggested that this climate was similar to that indicated by pollen data from northwestern Georgia (Michie 1979:8). These environmental reconstructions indicate that hardwoods were rare, growing primarily on alluvial plains and along the river valleys, and that open forests of jack pine and spruce dominated the region.

During the Late Glacial Period (13,050 - 8050 BC), a somewhat warmer and more moist environment prevailed. This is indicated by an increase in deciduous species such as oak, beech, hickory, black walnut and elm, coupled with a decline in the jack pine and spruce populations which previously dominated the area (Watts 1980). An increase in deciduous and seed bearing vegetation such as beech, hemlock, birch and alder was precipitated by warmer summer temperatures, colder winter temperatures and an increase in precipitation (Michie 1979:9; Sassaman et al. 1990:22). The first well-documented evidence of human occupation within the region is at this time, suggesting a direct correlation between the rise of Native American hunting and gathering groups and the presence of preferred resources (Watts 1980; Sassaman et al. 1990:21).

During the Post Glacial Period (8050 - 5050 BC), the region was dominated by an oak and hickory deciduous forest, while other species such as walnut, hemlock and hazelnut disappear from the pollen record. Hickory and ironwood were replaced around 7550 BC by sweetgum and blackgum. Documented environmental changes prior to 5050 BC suggest several periods of rapid warming and an increase in moisture (Watts 1980; Watts and Stuiver 1980). According to Cable and Mueller (1980), these rapid environmental changes created a dynamic ecosystem that required constant adaptive adjustments by early Native Americans (Cable and Mueller 1980:7).

Throughout the Holocene period, oak-hickory communities continued to dominate the region. Between 6050 and 4050 BC, however, southern pine began to displace these oak-dominated forests in the Sandhills and Piedmont region. Within the Sandhills, this vegetational change led to a decrease in nut mast production and the seasonal aspects of mast production probably affected prehistoric demographic movement and land use patterns within the region (Sassaman et al. 1990:22). Evidence of a cooler, wetter climate led Brooks et al. (1986) to suggest that elevation, as well as latitude, determined when and where these vegetational changes occurred. These broad environmental changes probably occurred first in the Coastal Plain and gradually moved west into the Piedmont (Sassaman et al. 1990:22).

Although oak appears to have remained dominant during this period, Whitehead (1973) found that the presence of pine increased from about 3050 BC to the present. Shelford (1963) has described the pre-Contact environment of the Piedmont as "temperate deciduous forest" (Shelford 1963:56-88). Shantz and Zon (1936) developed a graphic representation of this deciduous forest interspersed with pine. They reported that the narrow coastal border, which includes Charleston County, was once dominated by a southeastern pine forest of loblolly, long leaf and slash pine.

Historic Environment

As of 1971, Charleston County included 604,800 acres (244,763 ha) total land area. Land use was divided into the following types.

- ·Cropland - 193,536 acres (78,311 ha)
- ·Pasture - 42,336 acres (17,133 ha)
- Woodlands - 302,400 acres (122,381 ha)
- Urban - 57,128 acres (23,119 ha)

The remaining 9,400 acres (3,804 ha), or 2%, was composed of swamplands and beach margins (Miller 1971:1-5). The construction of beach homes and other shoreline development within the northeast portion of the county and the West Ashley District and James Island areas in the southern portion of Charleston County

precipitated major changes in the environmental landscape. The growth of subdivisions associated with Charleston, James Island and other small towns within the county have contributed to a decline in the amount of arable land since the mid-to late twentieth century. Data gathered in 2007 indicated that just 41,702 acres (166,877 ha), or seven percent of the land in Charleston County, was classified as "farm land".

Flora

Historically, the settlement and economy of South Carolina relied heavily on woodlands, rivers and fur bearing mammals. In Charleston County, timber was of great value to the naval stores industry, the sawmill industry and local boat building. According to Edgar (1998), several sources state that in the early eighteenth and nineteenth century,

> *Long leaf (pinus plustris) and loblolly (Pinus taeda) pines were the most prevalent trees [along the Coastal Plain], but, depending on the location, there were also varieties of oaks (Quercus lavis and Q. margaretta), bays (Gordonia lasianthus and Magnolia virginiana), sweet gums (Liguidambar stryaciflua), and hickories (Carya glabra, C tomentosa, and C pallida). Dense stands of cane (Arundinaria gigantean) grew in bottomlands, and in river swamps bald cypress (Taxodium distchum) and water tupelo (Nyssa aquatica)* (Edgar 1998:6).

Virgin stands of timber remained prior to the arrival of European settlers. As of 1963, forests covered approximately 60% of the state, primarily as the result of state sponsored reforestation programs. Along the Coastal Plain, loblolly (*Pinus taeda*) is usually found in mixed stands of short leaf pine (*Pinus echinata*) and hardwoods. Numerous other species grow in the region and include waterlocust (*Gleditsia aquatica*), American holly (*Ilex opaca*), sparkleberry (*Vaccinium arboreum*) and bluejack oak (*Quercus incana*). Overstory vegetation includes southern red cedar (*Juniperus sillcicola*), eastern cottonwood (*Populus deltoides*), river birch (*Betula occidentalis*) and southern magnolia (*magnolia grandiflora*). Scrub oak and blackberry tend to dominate the understory vegetation and palmetto (*Sabal palmetto*) is still found in Charleston County (Little 1980).

Fauna

The European occupation of the coastal and inland portions of the county had a debilitating effect upon the environmental landscape and was particularly harsh on animal populations. In the early nineteenth century a large number of indigenous species of fish, game and birds inhabited Charleston County. Many fur-bearing mammals were of importance to early settlers, including the muskrat (*Ondatra zibethicus*), mink (*Mustela vison*) and white-tailed deer (*Odocoileus virginianus*). According to Mills, early nineteenth century species within the Coastal Plain included,

> *Of game, there are plenty of deer, foxes, rabbits, raccoons, wolves, and some bears, &c.; and of birds and wild turkey, rice-bird, plover, curlew, wild goose, canvas-back duck, and several other varieties; partridges, snipe, woodcock, wild*

> *pigeon, Indian pullet, and innumerable other birds; besides eagles, various species of hawks, owls, the black-bird, blue-bird, bullfinch, humming-bird, &c. &c.* (Mills 1826:564-565).

The clearing of land for staple crop production induced major changes in the environment. Dikes were placed along cleared land fronting the lower portions of the Cooper and Ashley rivers. Huge rice plantations, using the tide as a water source, became common in the northwest portion of the county. In addition, drainages were altered and rivers were cleared of debris to facilitate navigation and commerce and, in the process, destroyed significant animal habitats. Indigenous species, such as the turkey, passenger pigeon and Carolina parakeet, began to rapidly disappear.

In the lowland swamp, beavers, otters and minks were slowly hunted out and rapidly became regionally extinct. Larger mammals such as bears, wolves, panthers and bobcats moved farther inland as farmers encroached more and more upon their territories. By the nineteenth century, the most common animals in Charleston County were domesticated cattle, hogs and sheep brought in by European settlers. By the twenty-first century, the most common animals are dogs and cats.

The clearing of timber for naval stores and inter-tidal rice production induced even greater changes in the environment and local animal populations. By the twentieth century, localized suburban and industrial development in Charleston, as well as truck farming in the upper portions of the county and on James and Johns Islands, had gradually produced the environment we know today.

Nonetheless, with four geographical zones within the state, a large variety of wildlife may be found. Many are specific to the Atlantic Coastal Plain and a large variety of wildlife may still be found within the Charleston County area.

A number of species of reptiles inhabit the low inter-riverine portions of the county, as well. According to Mills, early nineteenth century species in Charleston County included alligators and snakes.

> *Alligators are found in abundance in the brackish and fresh tide waters. They grow sometimes to be twelve and fourteen feet long, and are extremely destructive to fish and animals, but it is very rare to hear of their attacking men. The rattlesnake is common in the district, as also a variety of other snakes; the bite of some of which is very venomous* (Mills 1826:565).

A large variety of reptiles may still be found in Charleston County.

Climate

The average climate in Charleston County is characterized as mild and temperate with local variations. The county generally has long warm summers ranging in temperature from a high of 89°F (32°C) in May and

August to a low of 76°F (25°C) degrees in April. On infrequent occasions, these temperatures may exceed 100°F (38°C). The winters are considered mild and range from an average daily low of 39°F (3.8°C) in December to a high of 45° (7.3°) in March. The average total annual precipitation for the county is 49.1 inches (125 cm). This ranges from an average high of 11.9 inches (30.2 cm) in July to an average low of 3.9 inches (9.9 cm) in November. The growing season lasts approximately nine months (Miller 1971:72-73).

Historic Hurricanes

Hurricanes have been a major threat to the southeast Atlantic coast, and the Lowcountry surrounding Charleston is no exception. The study area, situated just 10.7 miles (17.2 km) northeast of central Charleston and 7.5 miles (12 km) inland from the coastline, certainly has been impacted by any storm that hit the city.

Written evidence of these storms dates back to the Spanish Repulse Hurricane of 1686, which appears to have made landfall near Beaufort driving two attacking Spanish "galleys so high on land that they had to be abandoned and the attack called off" (Ludlum 1963:41). After that, at least seven storms were documented making landfall in the Charleston region between 1713 and 1813. The most serious of these appears to have been the 1752 storm.

> *[It struck on September 15]... causing a sixteen foot storm surge to [cascdade] over the seawall... The powerful storm leveled buildings, flooded warehouses, killed approximately two hundred colonists, and rendered the city's defensive fortifications nearly useless* (Polhemus 2010:14).

The destruction "... was catastrophic and unmatched until the historic landfall of Hurricane Hugo in 1989" (Polhemus 2010:14).

More solid data is available for storms dating from 1867 to the present from an online database maintained by the National Oceanic and Atmospheric Administration (NOAA: Historical Hurricane Tracks). Figure 2.04 shows the five hurricanes that tracked within about seven (7) miles (11.5 km) of the study area, as well as a Category 3 storm that ran about 13 miles (21 km) east of the study area. Two of the nineteenth century storm tracks ran through Fairlawn plantation and the proposed mitigation bank.

- Unnamed storm 1867 - Little data is available for this Category 1 storm except that it struck in late June. It tracked through the center of the study area.
- Unnamed storm 1885 - This weak Category 2 hurricane tracked through the northwest portion of the proposed mitigation bank. It reached wind speeds in the 90 miles per hour range (145 kph) on August 27, 1885.
- Unnamed storm 1916 - This Category 2 hurricane reached wind speeds of 100 miles per hour (161 kph) on July 14, 1916. Its track ran through the town of Awendaw, about 7.5 miles (12 km) northeast of the study area.

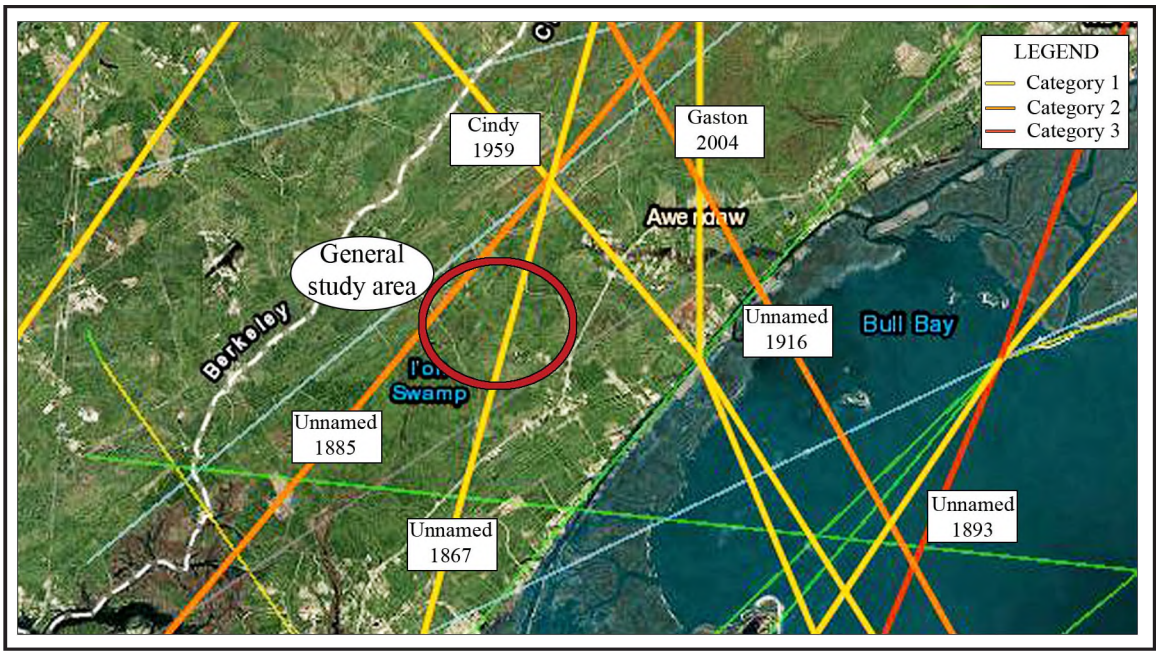


Figure 2.05 Paths of historic hurricanes 1867-2004 (NOAA n.d.).

- Cindy 1959 - Cindy was a weak Category 1 hurricane reaching maximum wind speeds of 65 miles per hour (105 kph) on July 8, 1959 when she reached the study vicinity. The track ran about 3.7 miles (6 km) east of the study area. Tides in the coastal region ran about four (4) feet (1.2 m) above normal (US Department of Commerce 1959).
- Gaston 2004 - Gaston was a Category 1 storm with maximum sustained winds of 70 miles per hour (113 kph) when it neared the study area on August 29, 2004. It made landfall at Bull's Bay, about ten (10) miles (16 km) east of the study area, with a storm surge of about 4.5 feet (1.4 m). The storm track ran through Awendaw, about 7.5 miles (12 km) northeast of the proposed mitigation bank. Despite its relatively low wind speeds (for a hurricane on the Atlantic coast), it caused significant damage, felling numerous trees. In Berkeley County, less than three (3) miles (1 km) north of the study area, some 20 structures were destroyed (Franklin et al. 2004).

An unnamed Category 3 storm made landfall at Bull's Bay, about 10 miles (16 km) east of the study area, in mid-October 1893. The National Weather Service estimates that wind speeds were about 120 miles per hour (193 kmh) when it made landfall. They reported that it caused significant flooding because the ground was already saturated from previous storms (NWS n.d.).

Hurricane Hugo - 1989

It was, however, the catastrophic 1989 Hurricane Hugo that caused severe damage to Fairlawn Plantation and the study area. The Category 4 storm made landfall at the Isle of Palms, less than 13 miles (20.9 km) south of the study area. At the eye of the storm, sustained winds measured 135 miles per hour (217 kph), gusts were in the range of 175 miles per hour (282 kph) and a 19 foot storm surge (2.7 m) was recorded.

As it trekked northward, it crossed the Wando River just seven miles (11 km) west of the study area. In the Francis Marion National Forest, in which the study area is located, "... 75 percent of the marketable trees [were] estimated to be on the ground" (Ehinger 1991:82; Figure 2.06).

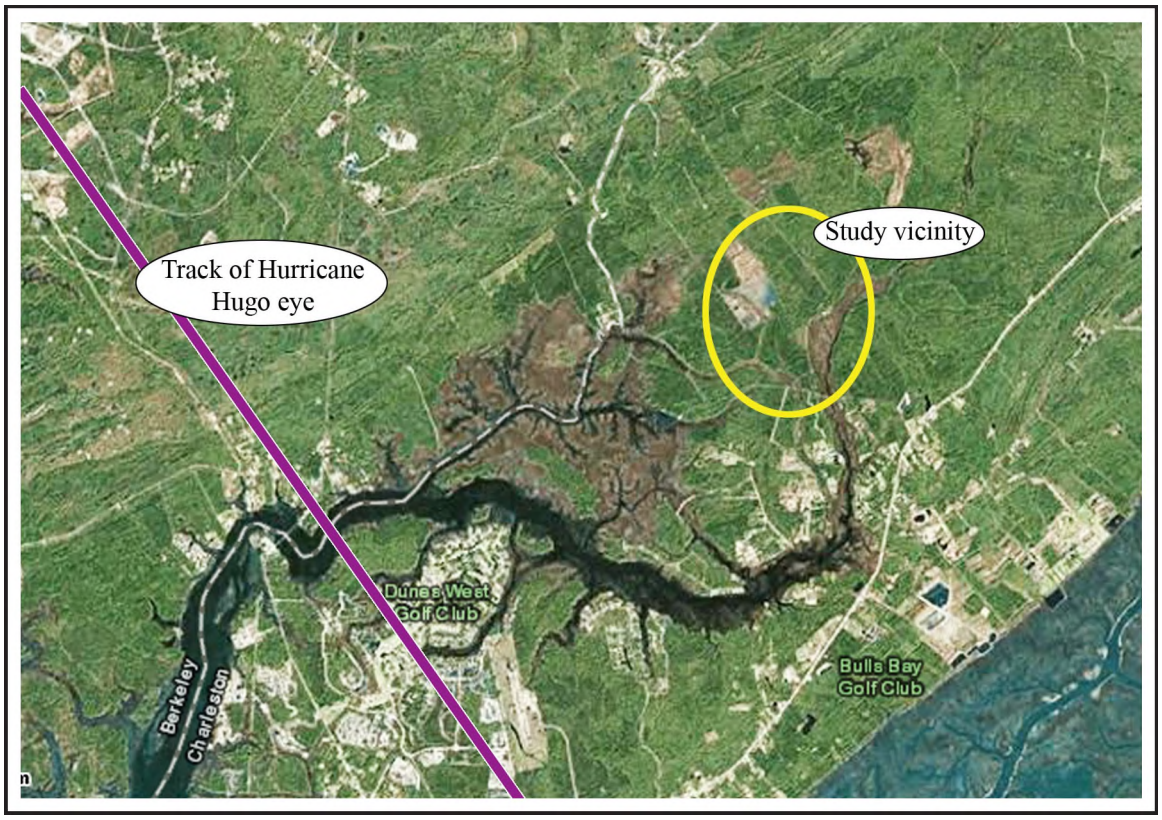


Figure 2.06 Path of Hurricane Hugo 1989 (NOAA n.d.).

At Fairlawn, the storm damage was quite severe. Hurricane Hugo destroyed over 90 percent of the timber on Fairlawn (more than 37 million board feet) and heavily impacted every aspect of the plantation (Roy E. Belser, personal communication 2014).

21st Century Storms

Two hurricanes have impacted the central South Carolina coast in the past few years. Michael, a strong storm coming northwest out of the Caribbean Sea in October 2016, skirted the Atlantic coastline from Savannah, Georgia to just south of Myrtle Beach, South Carolina. It crossed Bulls Bay, approximaely eight (8) miles (12.9 km) east of the study area as a Category 1 storm with sustained winds of about 75 miles per hour (NOAA n.d.). It did not damage the study area, said G. Alan Wood, a representative for Fairlawn Partners, LLC (Wood, personal communication, 2019).

Hurricane Florence was a strong but slow moving Cape Verde storm that hit the Carolinas in September 2018. Although it made landfall at Wrightsville, North Carolina, it turned south into South Carolina. While it

caused massive flooding in many areas, Mr. Wood said that it did not damage the study area (Wood, personal communication, 2019). .

CHAPTER 3
PREHISTORIC CONTEXT

The early Contact Period of European exploration and colonization along the Atlantic coast was marked by English and German settlement along the North Carolina coast and Spanish coastal settlements from Beaufort, South Carolina to Florida. The central coast of South Carolina was occupied by both Siouan and Muskoghean speaking tribes and was pivotal to the major Catawba and Cherokee trade routes used by the Spanish and English explorers (DePratter and Smith 1980; Rights 1957). As such, the early historic Native American tribes of the central South Carolina coast and lower river drainages were often visited or contacted by Europeans well before the Yamasee War (1715-1718). After the war, many communities and population groups were killed or displaced either by Europeans or the diseases they carried.

In the late nineteenth century, archaeological research in this region focused largely on the exploration of coastal and riverine burial mounds, moving to the Savannah River and coastal islands during the early twentieth century (Joseph et al. 1998:25). Ceramic chronologies, defined for this zone since 1960 (South 1976; Phelps 1983; Trinkley 1980), are generally used with well-defined regional, pre-pottery (i.e., stone tool) chronologies (Coe 1964; Goodyear et al. 1989; Anderson et al. 1982; Sassaman 1992) in order to derive some understanding of the local prehistory.

While some archaeological studies focused on the northeast coast of South Carolina (e.g., Michie 1990; Cable 1995; Cable et al. 1993; Joseph et al. 1991, 1998; Roberts 1994; Adams 1993), the majority of the research conducted since 1980 has been centered along the central and southern coast (e.g., Anderson and Logan 1981; Trinkley 1980, 1981, 1983, 1985, 1989; Cable 1992, 1993, 1994; Cable et al. 1993; Drucker and Jackson 1984; Espenshade and Brockington 1989). These studies have yielded a ceramic sequence from estuarine sites that serves as a basis for defining an archaeological sequence for the Paleoindian through Late Woodland/Mississippian periods. Refinement of these sequences, particularly for the Woodland period, developed out of ceramic typologies established for the mid-Atlantic (especially North Carolina) coast and the Southeastern carved, paddle stamped traditions of the Georgia and South Carolina coasts.

The earliest assemblages, which date somewhere between 2200 and 500 BC, are affiliated with the Southeastern tradition, while the later assemblages are considered to be aligned with the Middle Atlantic tradition. The dynamics of these changes are unclear and a broader view of ceramic sequences in the heart of the Southeast tradition indicates that cord-marked and fabric impressed motifs occur in significant proportions throughout non-coastal South Carolina and Georgia as well (Joseph et al. 1998:23).

On the basis of many of these studies, a picture emerges of prehistoric Woodland subsistence and settlement

along the central coast of South Carolina in which seasonal use of estuarine and upland sites focused on fishing, oyster gathering and deer hunting. Most of these sites are found on well drained, often sandy, ridge soils overlooking wetland habitats (Adams 1993).

As noted by John Cable (in Joseph et al. 1998:23), both ethnohistory and archaeology suggest that the South Carolina coast was marked by complex cultural relationships as early as the sixteenth and seventeenth centuries (South 1972). European explorers of that period encountered four different linguistic groups extending from the tidewater zone of North Carolina and Virginia (Algonquians), along the inner North Carolina Coastal Plain (Iroquoian), through the coast and inner Coastal Plain of central South Carolina (Siouan) and down to the southern South Carolina coast (Muskhogeans).

The following chronological sketch presents an overview of South Carolina prehistory (Tables 3.01, 3.02 and 3.03). It is presented as a contextual framework based on the philosophy that "what we know today about the past provides a context from which to evaluate both known and newly discovered sites" (Judge and Smith 1991:7). More detailed treatments are available in recent overviews by Anderson and Joseph (1988), Goodyear and Hanson (1989), Judge and Smith (1991), and Joseph et al. (1998).

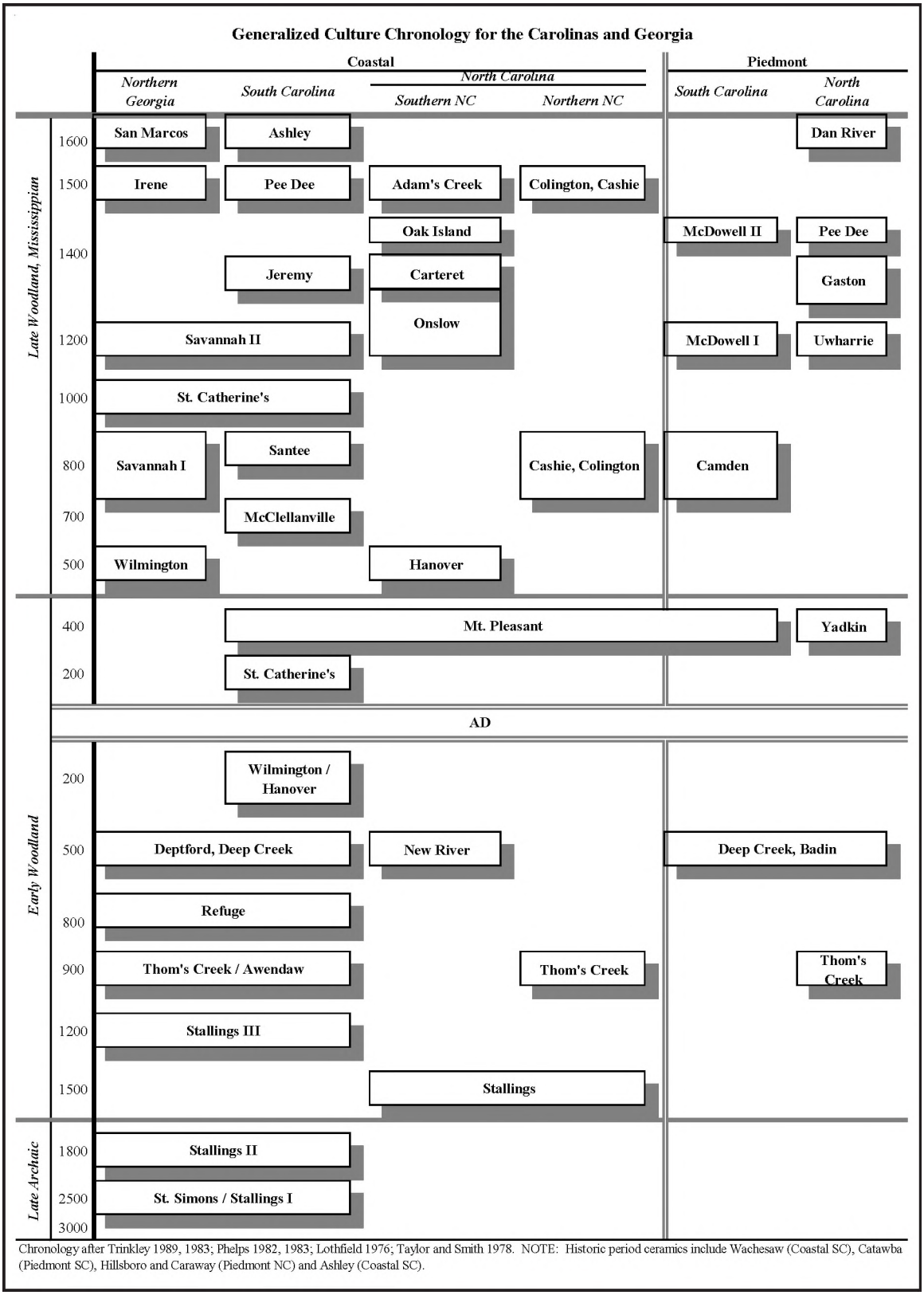
Paleoindian Period

The Paleoindian Period, dating from 10,050 to 8050 BC, denotes the earliest presence of humans in southeastern North America. The manifestation of this culture corresponds with the terminal Pleistocene when the climate was much cooler and sea levels were about 200 feet (61m) below their present level. Very little is known about the Paleoindian Period in the Southeast other than a few undisturbed sites from Florida (Coe 1964). Moreover, until recently, very few Paleoindian sites in South Carolina have been excavated (Goodyear et al. 1989).

Although Paleoindian occupation in the Southeast appears to be widespread, it does not appear to be intensive. The cultures from this period tend to be concentrated on terrace locations found along interior rivers (Michie 1977; Goodyear 1979; Anderson and Logan 1981; Zierden et al. 1986). In South Carolina, environmental adaptation was one of broad-range, high-mobility hunting and gathering band societies with a possible emphasis on the exploitation of megafauna (Service 1966; Gardner 1974). Michie interpreted the association of widespread non-intensive settlement and river drainages to support the concept that Paleoindian subsistence strategies were "... oriented toward the exploitation of now extinct megafauna" (Michie 1977:124).

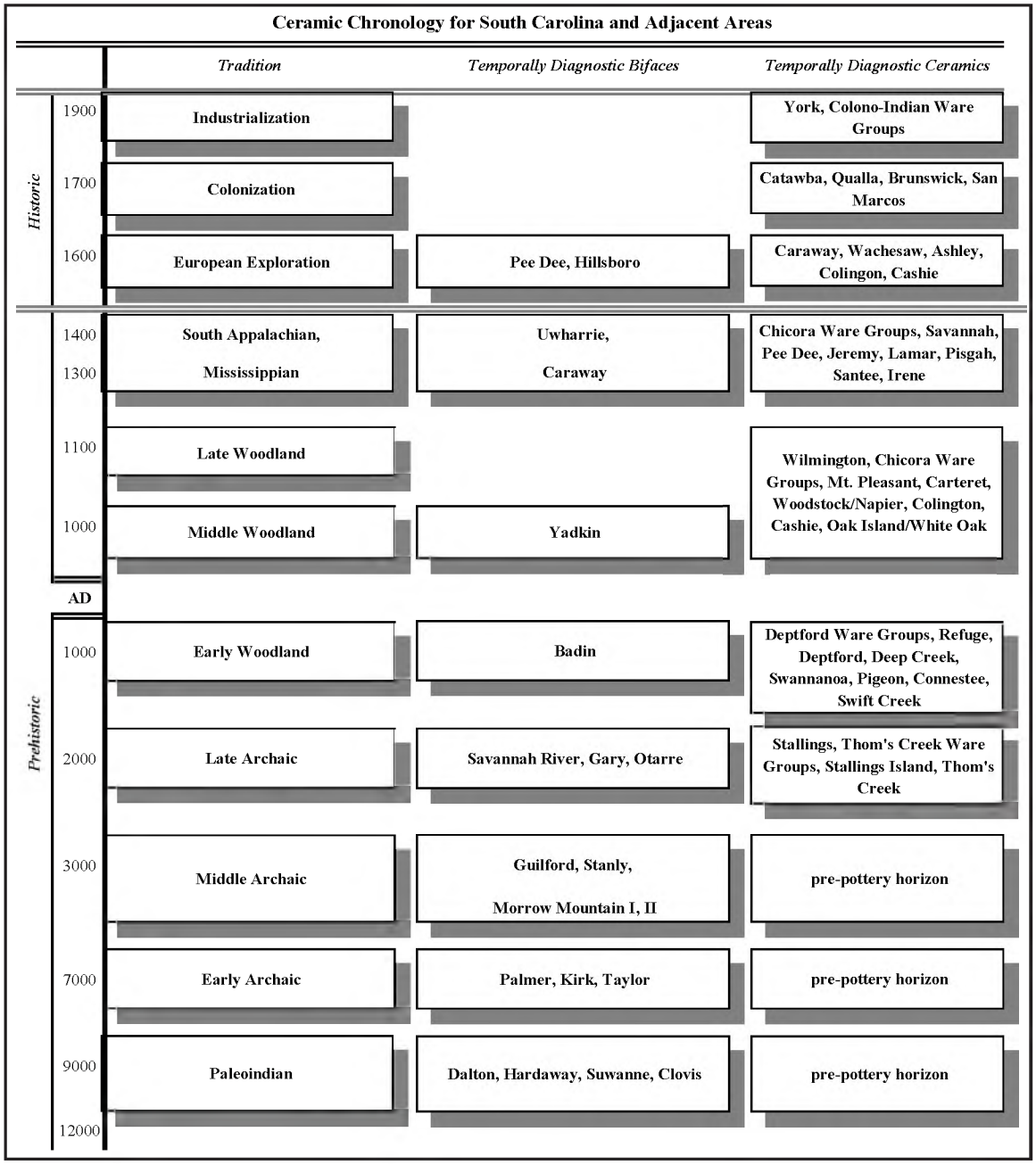
Others suggest a more generalized approach, with small game and plant foods providing the bulk of Paleoindian subsistence patterns (Meltzer 1988; Meltzer and Smith 1986). The limited association of megafauna remains with cultural artifacts in the southeast may support this contention, as well as the theory that Paleoindian

Table 3.01 Ceramic Chronology for South Carolina and Adjacent Areas



Chronology after Trinkley 1989, 1983; Phelps 1982, 1983; Lothfield 1976; Taylor and Smith 1978. NOTE: Historic period ceramics include Wachesaw (Coastal SC), Catawba (Piedmont SC), Hillsboro and Caraway (Piedmont NC) and Ashley (Coastal SC).

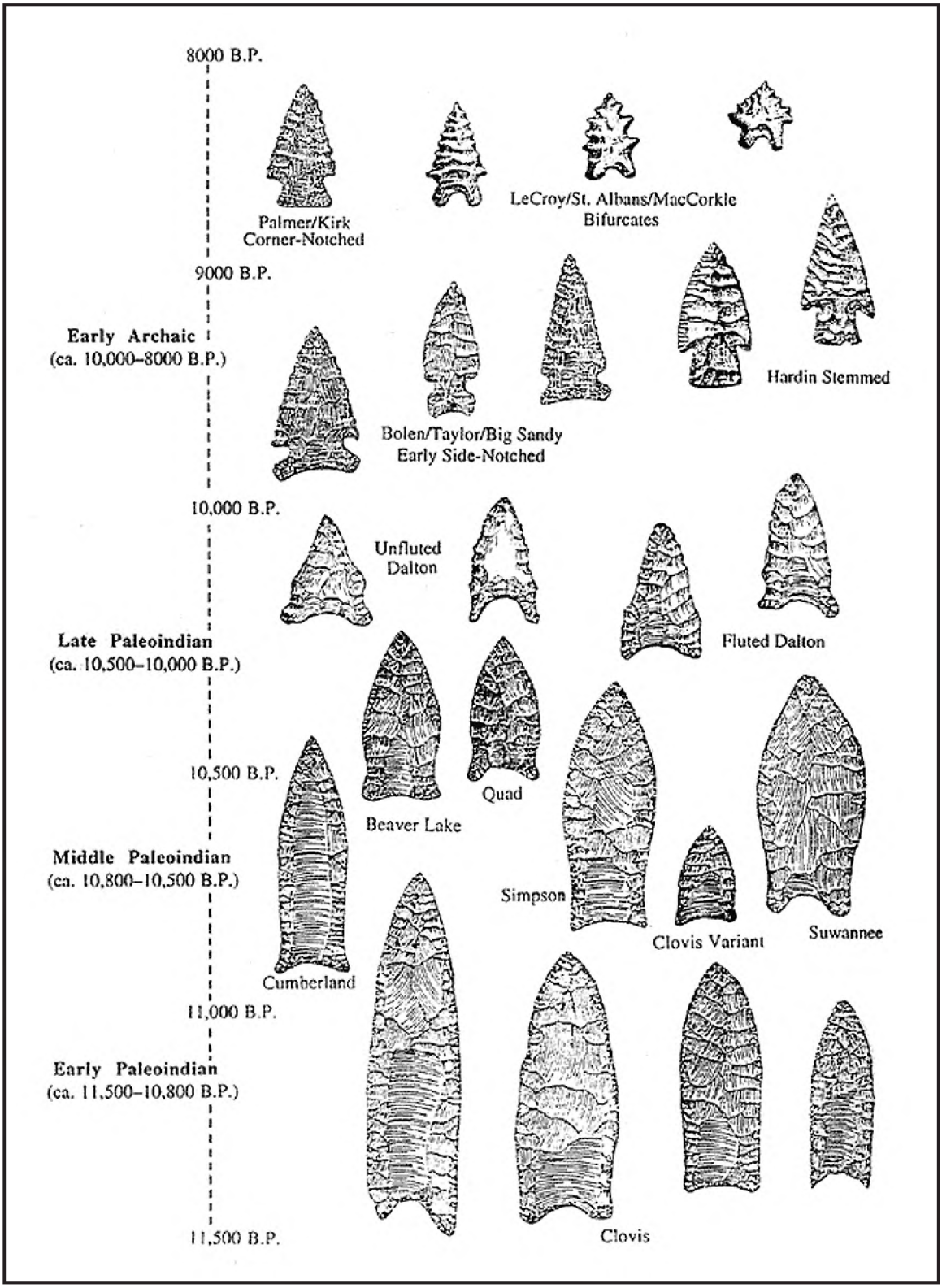
Table 3.02 Generalized Culture Chronology - Carolinas and Georgia



groups were nomadic and functioned as both hunters and foragers. Support for a Paleoindian adaptation to a more varied economy is found at the Shawnee-Minisink site in Pennsylvania (McNutt et al. 1977).

In South Carolina, Paleoindian artifacts are generally found on deflated sites and in association with cultural materials determined to be from the post-Paleoindian Period, suggesting that environmentally attractive ecotones tend to contain multi-component sites. The Paleoindian tool kit, used for the butchering and preparation of game, suggests that a number of new resource areas were beginning to be exploited (Coe

Table 3.03 Projectile Traditions of the Carolinas



1964; Michie 1977; Walthall 1980:30). These tools included a wide range of diagnostic artifacts such as basally thinned, side notched projectile points, lanceolate projectile points, side scrapers, end scrapers and drills (Coe 1964; Williams 1968; Michie 1977). Diagnostic artifacts from this period include Clovis, Hardaway and Dalton projectile points.

Early Archaic Period

The Early Archaic Period, dating from 8050 to 6050 BC, coincides with the final disappearance of the northern deciduous forest and Pleistocene megafauna in southeastern North America. Although there is no indication of a sharp break with the Paleoindian Period, this era corresponds with the adaptation of native groups to Holocene conditions, as well as a diversity of material culture. Although environmental conditions in central South Carolina during this period were colder and more moist than those found today, the climate of the Early Archaic Period was gradually becoming hotter and drier, resulting in vegetational changes (Coe 1964:60). Changing environmental conditions, in the form of an evolving oak-hickory forest on the Coastal Plain, elicited an adaptational response which can be measured in terms of changes within material culture (Whitehead 1965, 1973; Watts 1970, 1980).

Early Archaic sites are generally small and suggest a high degree of mobility (Figure 3.01). The disappearance of megafauna during the Pleistocene may have caused a shift in economic strategies from the migratory pursuit of large herbivores to dependence upon a broad spectrum of local plant and animal resources including white tailed deer. Taylor and Smith (1978) suggested that evidence of increased diversity may be found in Early Archaic lithic assemblages, as well as in the appearance of food storage and preparation facilities. As evidenced by a long-term Kirk Phase midden deposit at the Hardaway site, vegetational changes may also have affected settlement patterning (Coe 1964:60). These factors are also believed to have forced a change in subsistence strategies which developed into the seasonal exploitation of forest resources. Eventually, this cultural lifeway became so widespread and entrenched that it defined the eastern woodlands during the Archaic Period.

Although several sites within the region have produced Early Archaic remains, adaptation by these groups along the Fall Line of South Carolina is not clear (Goodyear et al. 1979; Wetmore and Goodyear 1986:17-19). In studies conducted in the Oconee Valley of the Georgia Piedmont, O'Steen (1983) theorized that fairly restricted occupation suggests the presence of base camps, which were periodically occupied, rather than the presence of intensive, long-term settlement. Socio-economic concerns eventually led to settlement patterns that are characterized by recurring site usage. These subsistence strategies provided Archaic peoples access to areas containing the greatest density and diversity of resources, as well as lithic exchange networks extending across territorial boundaries.

A model for Early Archaic subsistence and settlement along the South Atlantic Slope, proposed by Anderson and Hanson (1988), suggests seasonal residual mobility along with settlement concentrations associated with specific drainages during annual population movements. The presence of microbands associated

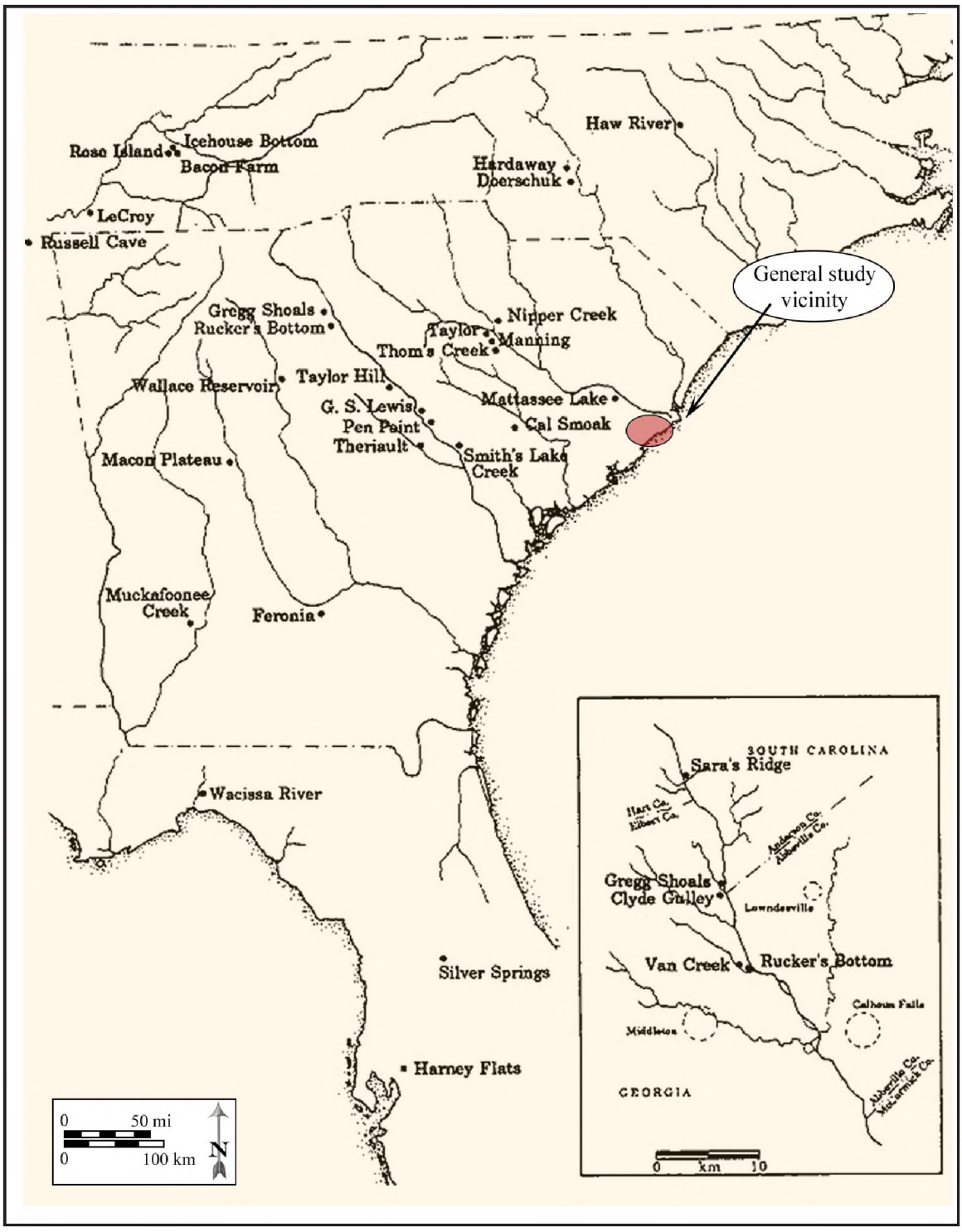


Figure 3.01 Important Early Archaic sites in the Southeast (National Park Service, n.d. [a]).

with environmentally similar large drainages across the region also suggests interaction between larger groups. This would, in turn, suggest the establishment of trade routes involving extra-local raw materials coupled with social interaction between these diverse groups (Anderson and Hanson 1988:271; Daniel 1992). Populations would gather along drainages during the late fall and early winter when resources were less widely distributed across the region. These annual population movements along specific drainages within the Piedmont, upper Coastal Plain and the Sandhills probably were due to concentrations of nut masts and their consumption by ungulates (Sassaman et al. 1990:50-52). There are several Early Archaic sites that are of special importance in our understanding of this period. These include the Lewis East, Pen Point, Taylor, and Nipper Creek sites in South Carolina (Michie 1977; Wetmore and Goodyear 1986; Sassaman and Anderson 1994:84-85), and the Hardaway site in North Carolina (Coe 1964:60).

Diagnostic points have been recovered from all portions of the lower Piedmont and upper Coastal Plain, (Wetmore and Goodyear 1986:18; Goodyear et al. 1989:38). Early archaic finds in the region are typically represented by the presence of side or corner notched projectile points (Dalton, Palmer, and Kirk). They have also been recovered in Early Archaic sites in other areas of the southeast (Coe 1964; Claggett and Cable 1982). These diagnostic artifacts from the Early Archaic include the Kirk Corner Notched point and possibly Palmer and Dalton points. Yet, even though Palmer and Dalton points are generally defined as transitional Paleoindian types, the technological continuation of earlier Paleoindian lithic traditions are not found in later corner notched or bifurcated points (Oliver 1985; Goodyear et al. 1989:39).

Middle Archaic Period

The Middle Archaic, generally dated from 6050 to 4500 BC, is evidenced by a continuation of the climatic changes seen during the Early Archaic which resulted in vegetational changes (Coe 1964:60). Changing environmental conditions continued to elicit an adaptational response which can be measured in terms of changing technologies and material culture (Whitehead 1965, 1973; Watts 1970, 1980). This resulted in the continuation of an increase in population and adaptation to local environments that continued throughout the Middle Archaic (Figure 3.02).

Middle Archaic sites show pronounced differences between those found on the Coastal Plain and those found in the Piedmont. This may be the basis for differing opinions regarding the presence of Middle Archaic sites. In the Piedmont, site densities apparently increased during this time. This suggests that more intensive foraging strategies were implemented, although no specific locale appears to be favored for occupation (Blanton and Sassaman 1989:59-60). In contrast to the Piedmont, sites on the Coastal Plain tend to appear with less frequency but show evidence of more intensive habitation and large scale tool production. This suggests that resources on the Coastal Plains were not as consistently available as those found in earlier periods within the

Piedmont (Sassaman et al. 1990). This, in turn, would indicate a different pattern of settlement for this period between the two major physiographic regions found in South Carolina.

These observations have produced several general statements regarding Middle Archaic settlement patterns

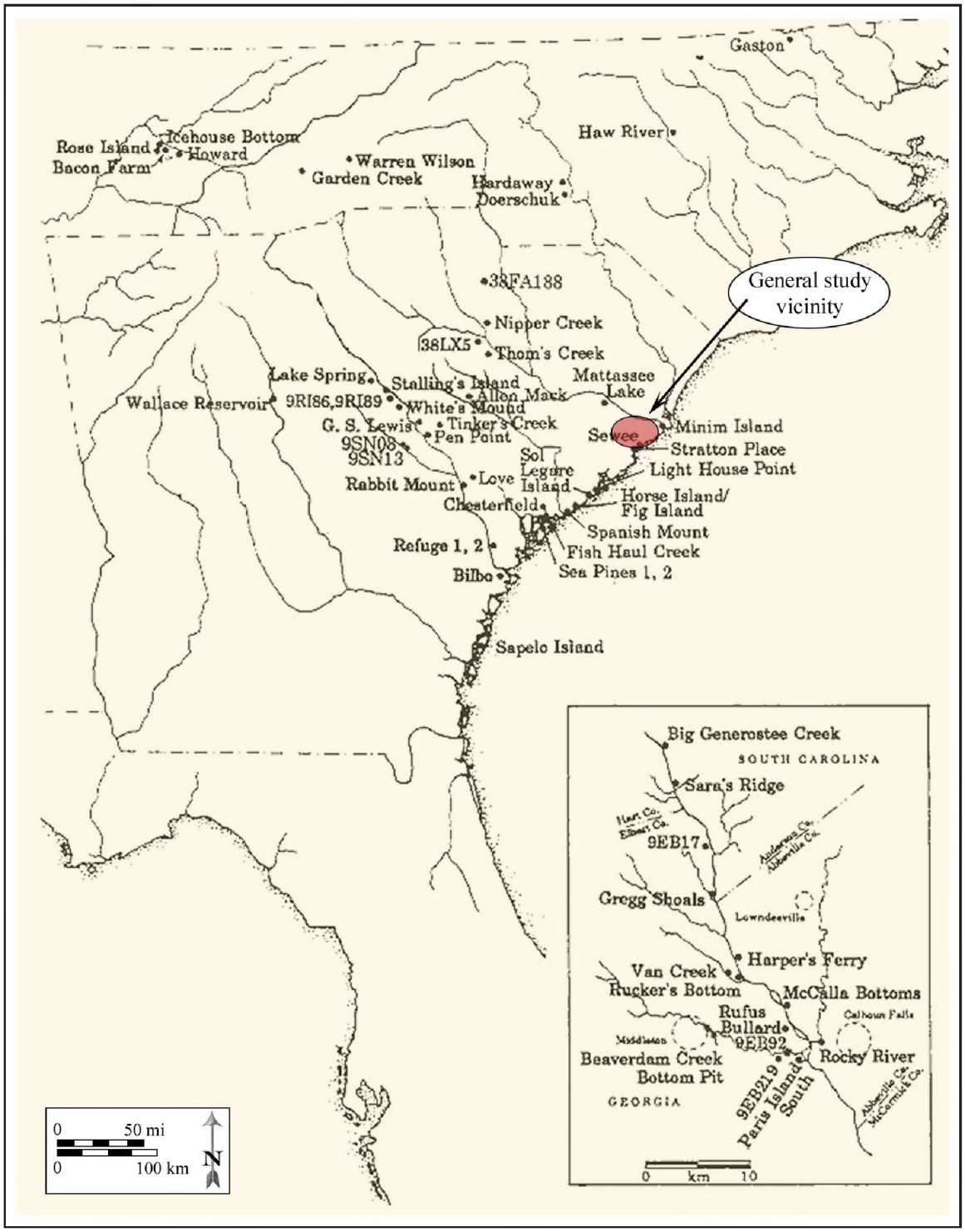


Figure 3.02 Important Mid-to-Late Archaic sites in the Southeast (National Park Service, n.d. [b]).

in the southeastern United States. Some archaeologists argue for increased sedentism and a reduction in mobility (Goodyear et al. 1979:111), whereas others suggest an increase in mobility (Cable 1982; Sassaman 1983). Anderson and Joseph (1988) suggest that the increased utilization of local lithic raw materials are indicative of decreased group mobility, intensified foraging within a tightly circumscribed territory and an increase in population densities. An increase in the proportion of plant fiber in the aboriginal diet may account for the presence of cobble tools found on larger Middle Archaic sites (Anderson and Joseph 1988).

Cable (1982) and Sassaman (1983), on the other hand, have suggested an increase in mobility during the Archaic Period based on the variety of environmental zones found and a lack of site diversity. A high level of mobility, coupled with the rapid replacement of points evidenced in Morrow Mountain sites, may help explain the seemingly large number of sites with Middle Archaic assemblages.

Ward (1983) argued that the Middle Archaic included sedentary hunters and, thus, a relatively stable lifeway that included a "wide range of adaptive responses". He tended to discount explanations that focus on seasonal movement suggesting that "the seasonal transhumance model and the sedentary model are opposite ends of a continuum." He also suggested that it is probable that variations of these two scenarios existed in different regions at different times throughout the Archaic Period (Ward 1983:69).

Abbot et al. (1995) argued for a combination of these models. Abbot and his colleagues noted that the almost certain increase in population levels resulted in the contraction of local territories. Discounting the notion that these territories were exploited from a single base camp without horticultural technology, they concluded that "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbot et al. 1995:9). The lack of horticultural technology, along with the reliance on small territories, would have significantly increased the pressure to successfully exploit the limited resources by the frequent movement of camps.

Overall, however, there is little argument that lithic technologies changed dramatically during the Middle Archaic Period. End scrapers, at times associated with Paleoindian traditions, were discontinued and there was an increase in the use of locally available raw materials. Typical Middle Archaic assemblages are dominated by pitted and battered cobble tools, crude bifaces and unifacial flake tools. In addition, chipped stone axes and atlatl weights are often found in association with these sites (Coe 1964; Goodyear et al. 1979). Diagnostic artifacts for the Middle Archaic include Morrow Mountain, Guilford, Halifax and Stanly projectile points, along with ground stone artifacts. Several Middle Archaic components have been excavated in the Savannah River Valley. These assemblages are heavily weighted towards expedient tool categories (Anderson and Joseph 1988:150). Locally obtained quartz was selected as the preferred lithic raw material in this area (Anderson and Joseph 1988:49). Significant cultural modifications, such as prepared burials and storage pits, are found. Mortars were also introduced during this period.

Late Archaic Period

The Late Archaic, generally dated from 4550 to 1050 BC, is associated with population expansion and increased local adaptation to changing environments (Caldwell 1958). Rainfall increased during this time and began to approximate the modern climate. Pollen records indicate that by 2550 BC there was an increase in pine forest vegetation (Watts 1970, 1980). This probably reduced the availability of oak-hickory nut masts that had been so widespread during the Early and Middle Archaic. Settlement strategies affected by the availability of oak and hickory nut mast production were due to changing environmental conditions. These resources would become more isolated and concentrated and would force a diversification of resource acquisition strategies. Sassaman (1983), in research conducted in the Savannah River valley, and Anderson (1979), in research conducted in Lexington County, South Carolina, found evidence of this diversity in Late Archaic site types. Their research determined that Late Archaic sites may be found in every upland environmental zone.

Evidence from these and other studies collected over the last 20 years suggests that there was an intensive occupation of the flood plains with a reduced, yet diversified, utilization of upland environments during this period (Anderson and Joseph 1988:157). Large sites, presumably representing long periods of occupation by large populations, are often found along major inland drainages and coastal estuaries containing broad floodplains. Many of these sites have been found to contain deep middens, which suggest intensive occupation. Hunting strategies, based on seasonal fish migrations along the Fall Line and into the Piedmont, as well as the utilization of shellfish along the coast, have been suggested as explanations for the presence of these large sites (Taylor and Smith 1978; Claggett and Cable 1982:40).

Taylor and Smith (1978) have suggested that the density of resources available on the floodplain attracted semi-permanent or permanent residents. In contrast, Sassaman (1983) concluded that these dense shell midden sites were formed by temporary concentrations of local and extra-local populations participating in a wide range of ceremonial and ritualistic behavior designed to promote intra-group solidarity. The distinctive large, broad stemmed projectile points generally associated with Late Archaic occupations have been recovered from sites in environmental settings ranging from the mountains to the coast throughout South Carolina (Wetmore and Goodyear 1986:21). Thus, Late Archaic sites can be expected throughout all environmental zones including the riverine uplands of the lower Piedmont, Sandhills and the upper Coastal Plain.

In a proposed model for Late Archaic settlement along the Savannah River, Sassaman et al. (1990:312-314) suggested that aggregates of Native Americans gathered in river valleys during the spring and summer. During the fall and winter, these groups dispersed into smaller family units settling along smaller tributaries and drainages. These seasonal gathering spots tend to exhibit large, dense sites with a very diverse artifact assemblage and are found on river flood plains. Smaller and less diverse sites generally occur along smaller

drainages and inter-riverine areas. Data recovered from excavations at four sites in the Congaree Valley in Lexington County, South Carolina by Anderson (1979) tend to support such a model. Two sites, located in upland settings adjacent to the flood plain, contain remains suggesting limited animal processing activity took place. In contrast, other sites recovered on the flood plain contain evidence of intensive occupation (Anderson 1979:236-237). Taken together, this data suggest long term residence and a wide range of cultural activities based on environment.

The first fiber tempered, fired clay vessels found in South Carolina appear about 4,000 BC during the terminal Late Archaic period. Some researchers regard this technological breakthrough as the dawn of the Woodland Period (*see Trinkley 1980*). This pottery is the sand tempered Thom's Creek series and the fiber-tempered Stallings Island series (Sassaman and Anderson 1994:38-44). Both series are decorated through a process known as punctation, incising and finger pinching. Thom's Creek may exhibit simple and dentate stamping. The Late Archaic also witnessed the introduction of Steatite vessels (*see Coe 1964:112-113; Sassaman and Anderson 1990:158-162, 1994:35*), polished and pecked stone artifacts and grinding stones.

The tool kit for the Late Archaic also includes broad-bladed stemmed projectile points. Considerable variation occurs within the large broad-bladed Savannah River point designation (Coe 1964). Represented by a diachronic trend from larger to smaller projectile point forms (Coe 1964; Oliver 1985), this variation has been stratigraphically documented by Keel (1976) and Oliver (1985). This trend has resulted in the division of this projectile point designation into two temporally significant point types. The larger and more common Savannah River projectile point type is considered diagnostic of occupations that occurred early in the Late Archaic period prior to the appearance of pottery. Conversely, the smaller Savannah River type is associated with terminal Late Archaic sites (Anderson and Joseph 1988).

Woodland Period

The Woodland Period, which began about 3,000 years ago in South Carolina, is marked by intensified pottery use, floodplain agriculture, construction of villages and burial mounds, and the introduction of the bow and small triangular arrow points (i.e., Badin, and Yadkin types) (Coe 1964). Each phase of this period is marked by changes in ceramic technology. However, our understanding of regional, stylistic and morphological variations is still being refined, as is the establishment of a standard ceramic typology for most of the Woodland Period.

The Early Woodland phase is marked by the persistence of Thom's Creek ceramics and the appearance of new, possibly southern-influenced Refuge ceramics (Sassaman and Anderson 1994:42) (Figure 3.03). Thom's Creek II ceramics occur in a variety of South Carolina coastal plain settings and, along with Early

Woodland shell rings, suggest that these people had achieved a relatively permanent, stable village lifestyle. The subsistence basis of this lifestyle was shellfish, fish, hickory nuts (*Carya sp.*) and small mammals (Trinkley 1989).

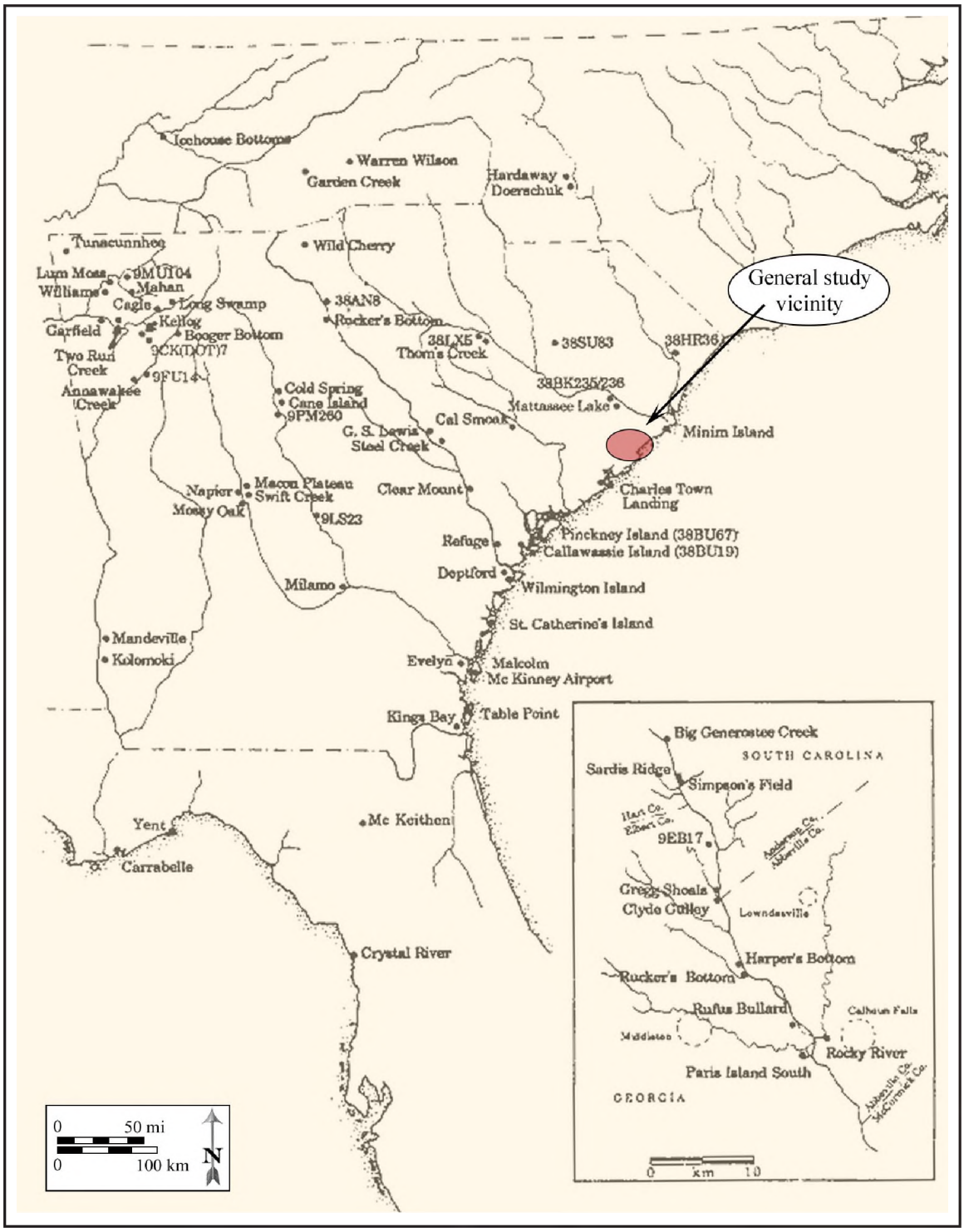


Figure 3.03 Important Woodland sites in the Southeast (National Park Service, n.d. [c]).

The later Refuge and Deptford phases of the Early Woodland Period are marked by a noticeable shift in subsistence and settlement. Refuge Phase settlements became smaller and moved inland along small streams away from shellfish sources. Deptford Phase settlements are characterized by small habitation sites located adjacent to inland swamp terraces and tidal marshes.

The Middle Woodland phase is noted for an expansion of Deptford Phase settlements as far inland as the Fall Line. Small to medium size triangular Yadkin projectile points also appear on Middle Woodland sites. During the Late Woodland, settlements became permanently located in areas of fertile soil along major streams in the South Carolina Coastal Plain. This settlement strategy reflects an increased emphasis on river-based horticulture of indigenous North American cultigens and imported Mesoamerican varieties, supplemented by seasonally available plant and animal resources.

Mississippian Period

The Mississippian Period, dating from about 1100 to 1640 AD, is the most elaborate and complex level of cultural development attained by Native Americans in the southeastern United States prior to the arrival of Europeans (Figure 3.04). The system of complex public works, ceremonial centers supported by an extensive agriculture base, and trade networks found at this time are thought to be the result of a highly stratified society. This widely documented cultural complex in the Southeast includes large sedentary populations organized at the chiefdom level of socio-political integration. Ceremonial centers, hamlets and individual farmsteads characterize Mississippian settlement patterns. Subsistence resources such as wild plants and animals supplemented intensive maize cultivation within river bottoms (Smith 1978).

Mississippian groups tended to prefer two types of ecologically diverse environments and settled either on major drainages containing extensive flood plains or along coastal areas near estuarine resources. Settlement during the Mississippian Period consisted of both small villages and large towns. The smaller village sites consisted of single-family compounds aligned along secondary drainages associated with floodplains that supported the agricultural production of food resources. Larger villages, on the other hand, tended to be associated with specific mound sites. In South Carolina, large Mississippian Period settlements have been recovered along the Wateree-Santee River Basin and drainages associated with the Savannah River.

The late Mississippian Period is characterized by the appearance of elaborate fortifications. According to Anderson and Joseph (1988), these fortifications suggest an increase in competition and warfare between separate chiefdoms. The primary centers in South Carolina, which lay along the Wateree River (Ferguson 1971) and the Savannah River (Taylor and Smith 1978), were abandoned at this time. Although some researchers felt that these two major centers forced the creation of an extensive buffer zone within the central portions of

the state (Anderson and Joseph 1988:319), recent evidence has shown that the central portions of South Carolina were well populated throughout the entire prehistoric period. Erroneous conclusions regarding Native American land usage within the central part of the state stem from a lack of industrial and business based development that generally precipitates professional archaeological studies.

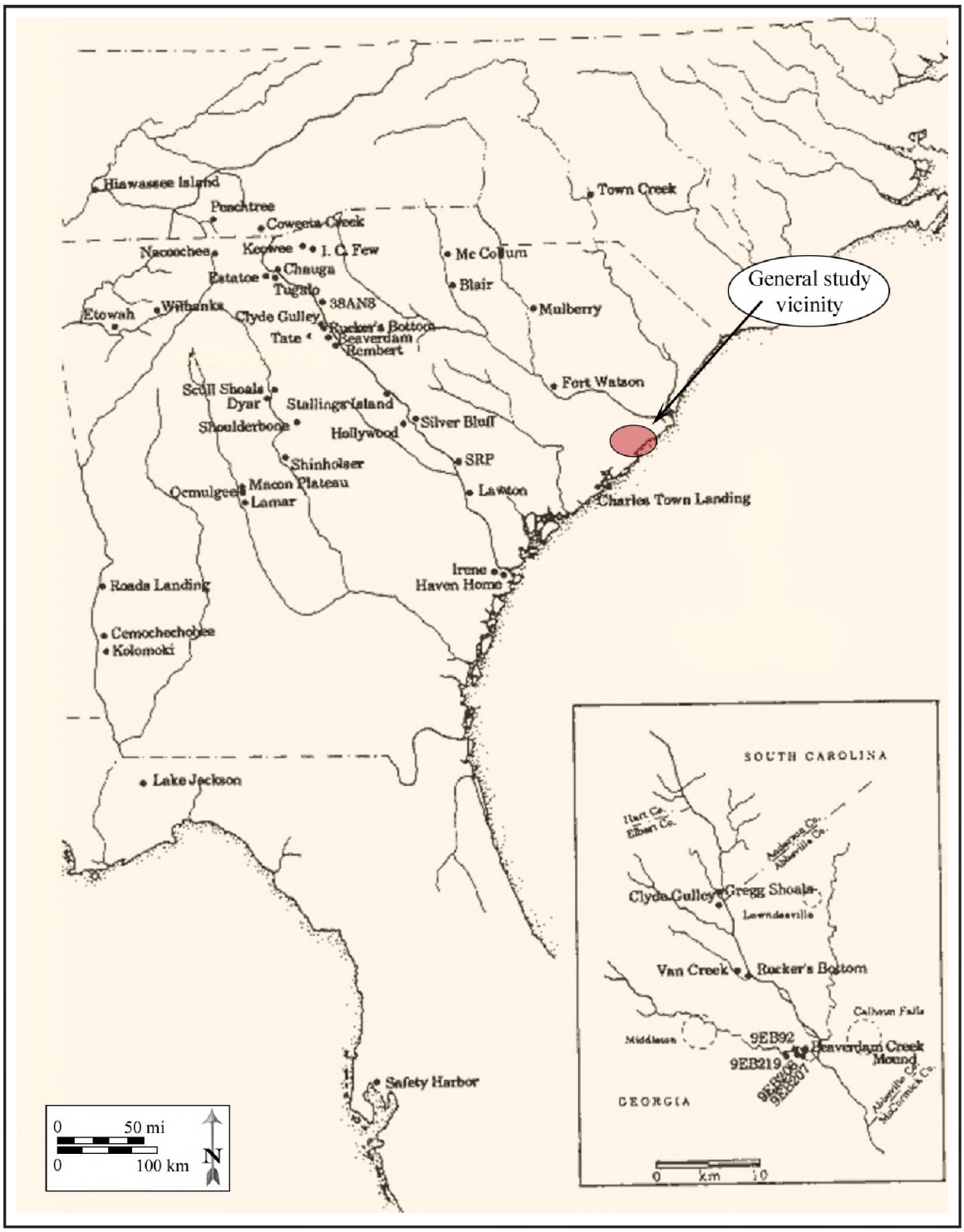


Figure 3.04 Important Mississippian sites in the Southeast (National Park Service, n.d. [d]).

Protohistoric & Contact Period

Travel accounts by sixteenth century European explorers into the interior of South Carolina indicate that the lower Coastal Plain was inhabited by several Siouan and Muskoghean speaking Native American populations, including the Ettiwan, Kiawah (Chiyawa), Kusso, Edisto, Escamacu, Coosa, Cape Fear and Winia groups (Waddell 1980). European trade goods have been identified at late Indian sites in the Pee Dee River drainage at Wachesaw Landing (Trinkley 1980), and similar Contact Period sites have been identified in the Wando-Cooper River system (Trinkley and Caballero 1983; Anderson and Logan 1981).

Southern coastal areas were inhabited by Muskoghean Native-American groups who had pushed east from the valleys of central and west Georgia and Alabama between the thirteenth and sixteenth centuries. Variously termed Guale, Oristo, Cusabo or other local names by the Spanish who first encountered them, most of these groups resisted Spanish, French and English settlement of the coastal region from South Carolina to Florida, culminating in the Yamasee War (1715). After their defeat in 1716, remnant survivors of these Muskoghean groups may have drifted south to join the Seminole (Hudson 1971; Milanich and Fairbanks 1980; South 1972). Certainly by the time of the American Revolution, no documented native groups remained in the lower valleys of the Wando, Edisto, Coosawhatchie or Salkehatchie Rivers (Cook 1773).

By the mid-eighteenth century, disease, displacement, capture and shifting alliances had caused the disappearance of virtually all Native American populations in the Coastal Plain and Fall Line regions of South Carolina. Remnant groups either aligned themselves in the early nineteenth century to form the Catawba Nation in York County, or fled to the beleaguered Eastern Band Cherokee Nation in the mountains of North Carolina (South 1972).

The Catawba Nation, which re-inhabited abandoned bottomlands left by the earlier Waxhaws along the lower Catawba River, (Baker 1975) has survived and continues as a political and socio-cultural entity. After a long period of nineteenth century harassment and removal, the Eastern Band Cherokee Nation has also survived (Brown 1966; Baker 1975; Swanton 1946; Dickens 1976). Both of these tribes are now federally recognized. Several other small modern communities in Dorchester, Berkeley and Marion Counties, while not federally recognized tribes, claim descent from the seventeenth and eighteenth century Pee Dee, Chicora and Edisto populations of the South Carolina Lowcountry.

Chapter 4
Local History & Land Tenure

Data regarding the very early land tenure of Fairlawn Plantation, of which the study area comprises a bit less than half the historic plantation, is spotty with only one (1) available plat from the historic period (Purcell 1794; Figure 4.01). However, several historic documents and previous cultural resource reports and papers provide an overview of its ownership and management during the last two and a half centuries.

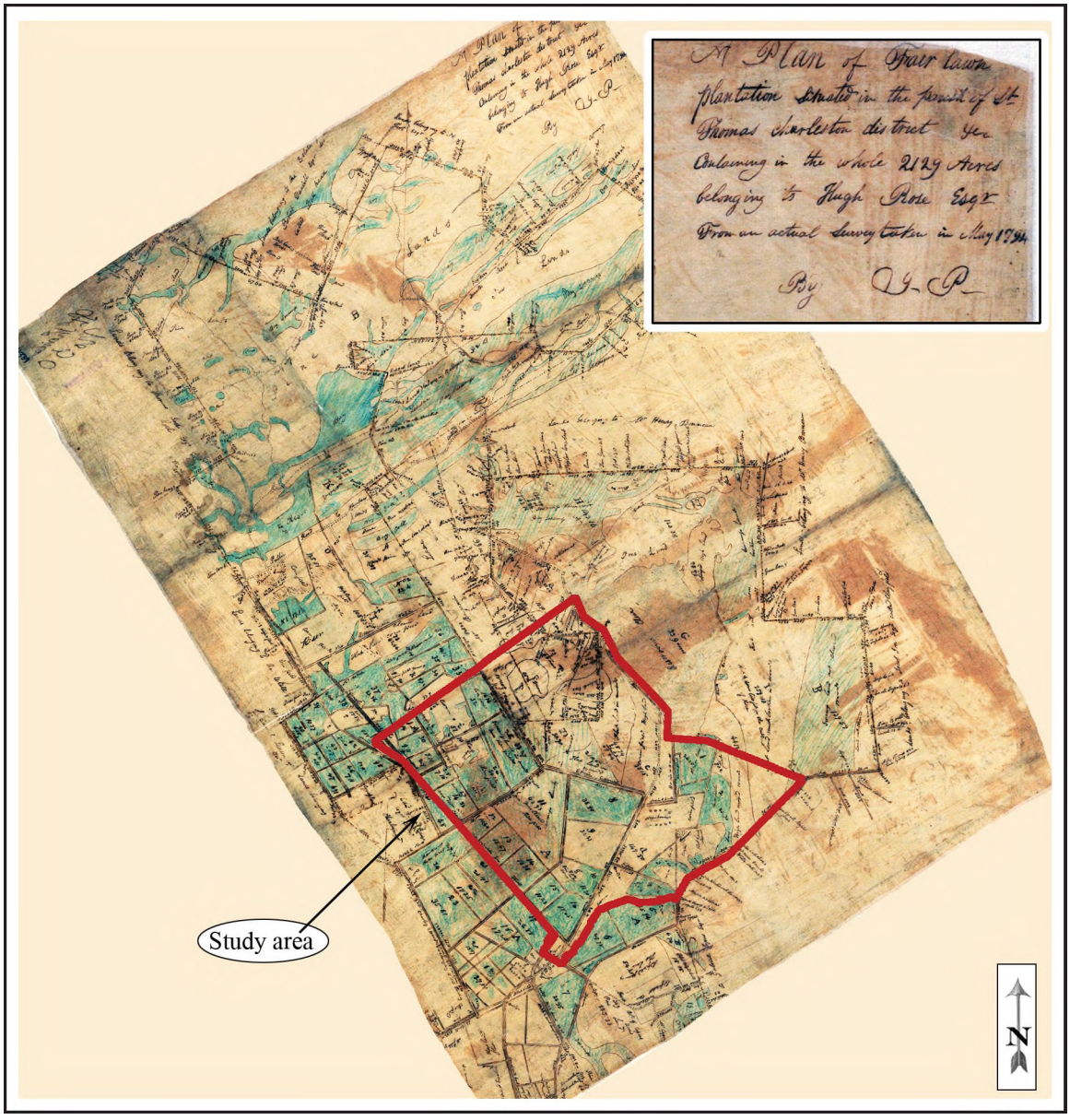


Figure 4.01 **Fairlawn Plantation, ca. 1794. Rice dikes and embankments are visible throughout much of the 2,129 acre property (Purcell 1794).**

Available sources indicate a long history of private ownership dating back to the purchase of Fairlawn Plantation by Hugh Rose in 1794, although all evidence suggests that the plantation was functioning prior to his purchase. The primary historical use of this plantation was inland rice production before its twentieth century use as timberland, a bird sanctuary and a hunt club.

The Rose Family

During the American Revolution, there was much upheaval in the Rose family due to Loyalist sympathies. It affected both John Rose (1722-1805) and his son Hugh (1756-1841) and their properties.

The father, John, immigrated from England, arriving sometime before the 1750s. Reportedly, he was the King's builder in Charleston (Coldham 2000:733). He was also a prominent and successful shipwright who, along with James Stewart, owned "Pritchard's Shipyard" at Hobcaw Point along the Wando River from 1751 to 1769. In addition, John Rose and Henry Laurens were joint owners in the *Heart of Oak* which was built at the shipyard and launched in 1763.

When Rose and Stewart sold their interest in the shipyard in 1769, John Rose's profits amounted to about £30,000 sterling, or roughly $5.6 million in 2018 US dollars. It is likely that Rose used those proceeds to purchase his 2,204 acre (892 ha) Richfield Plantation along the upper reaches of the Wando River just north of the current study area (Rogers, Jr. et al., 1981:213 fn9; Harris and Rust 2004:8; Catterall 2006:75, 79; Officer and Williamson 2014).

During the American Revolution, John Rose considered himself a Loyalist, yet he remained close friends with Henry Laurens. Following the war, when the South Carolina authorities attempted to confiscate his land, Rose claimed to have left Charleston in May 1775.

> *[He] admitted signing the 'Oath of Abjuration', by doing which he repudiated his allegiance to Briton [sic] and embraced the cause of independence. [This] nominal conformity for independence [was not considered sufficient by the victorious Americans and in 1782] the authorities in South Carolina... adjudged John Rose a Loyalist* (Catterall 2006:80-81).

Among their reasoning was testimony that Rose aided General Cornwallis and others, and that "Rose's son Hugh served the British forces as a volunteer in the Royal militia, with both father and son having petitioned to serve". From 1783 to 1788, both men repeatedly petitioned South Carolina to clear their names "... and obtain relief from the 1782 Confiscation Act" (Caterall 2006:80-81).

A claim was submitted by John Rose in November 1788 for nine tracts of land or plantations totaling well over 9,620 acres (3893 ha), a schooner and other vessels, six enslaved carpenters and ship caulkers, several homes in Charleston and a church pew at St. Philip's Church (Coldham 2000:733).

The son, it seems, was more successful in the recovery effort and by 1787, "Hugh Rose [then living in Christ Church Parish and St. Thomas Parish] submitted… [a petition] for the return of his portion of his father's estates" (Catterall 2006:80-81).

> *Apparently the purchaser of the estate, one Singleton, had agreed to surrender his interest in the property, a plantation called Richfield. Consequently Hugh Rose owed only the auction price of the estate, about £3,000 [roughly $636,000 in 2018 USD], considerably less than its stated value of £33,078 sterling and apparently affordable…* (Catterall 2006:81-82).

Hugh did, however, pay nearly £50,000 (roughly $7M in 2017 USD) in fines to recover his father's land (Smith 2012:163).

Hugh Rose's Fairlawn Plantation

In 1794, Hugh Rose purchased the 2,129 acre (861 ha) Fairlawn plantation from Thomas Screven for £4,300 [about $754,000 in 2018 USD] and in 1797, he purchased the 590 acre (239 ha) Windsor Plantation from Daniel Ward.

Additional purchases included 80 acres (32 ha) of Charleywood Plantation from Thomas Wigfall in 1802, and the 1807 purchase of the 765 acre (309 ha) Capers Plantation through a Master in Equity following its loss by Gabriel Capers.

It appears that two additional tracts were also purchased by Rose - the 1,229 acre (497 ha) Bull Head Plantation owned by Robert Danniell (possibly in about 1810), and the 520 acre (210 ha) Port Vines Tract from Samuel Hamlin in 1839. Together, these tracts completed Fairlawn's eventual total acreage of approximately 7,500 acres (3,035 ha) (CCDB U7:240; Smith 2012:163-164).

Evidence from the 1794 Purcell plat indicates that rice field infrastructure (embankments, or earthen dams, and canals) were already in place when Rose purchased the property (Figure 4.02). No data was recovered that could identify when Screven purchased the tract - a date that could help to firmly identify the age of the original embankments. Still it is likely that it would have taken enslaved workers at least a decade to dig the canals and build the embankments, suggesting that Fairlawn had been producing some rice since at least the 1780s.

Once Rose purchased the plantation, improvement of the operation appears to have been one of his highest priorities, including improvement of water flow and the introduction of scientific methods in rice production, clover production and the use of fertilizer. His work resulted in the publication of several articles

in April, June and August 1828, August 1829 and May 1831 in the *Southern Agriculturalist and Register of Rural Affairs*, a publication associated with the Agricultural Society of South Carolina (Smith 2012:176 fn41).

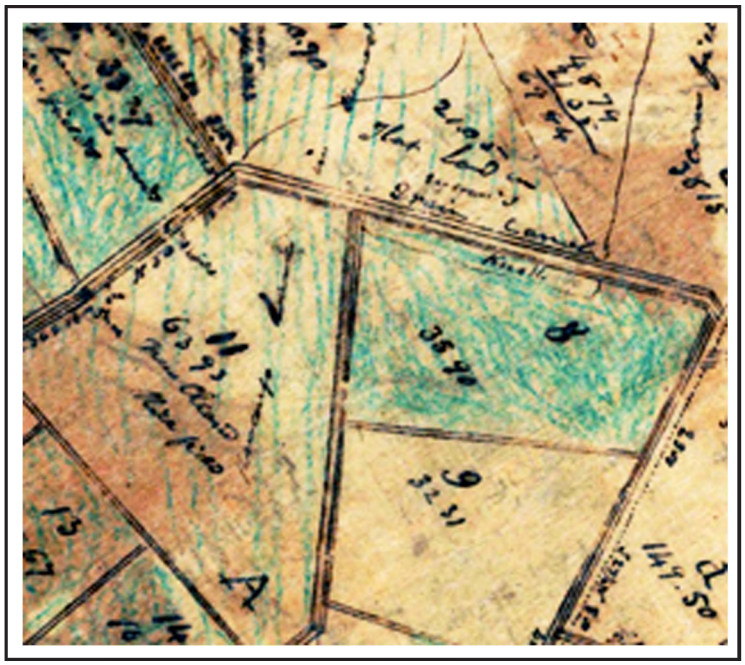


Figure 4.02 Detail of Purcell 1794 plat. Significant rice field infrastructure was in place at the time of Hugh Rose's purchase the same year (Purcell 1794).

Rice Agriculture

Rice production, which had developed quickly following its introduction to South Carolina in 1685, rapidly overtook all earlier agricultural pursuits. By the mid-to-late eighteenth century, both inter-tidal and inland rice agriculture had effected major changes in the local environmental landscape along the Savannah, Ashley, Cooper, Wando and lower Waccamaw rivers. Embankments, or dikes, were constructed along the banks of these rivers to impede the flow of brackish water into the fields, particularly along tidal rivers like the Cooper and Wando, since the introduction of salt water would doom a rice plantation to failure. Inland rice plantations such as Limerick, Wambaw and Fairlawn were more dependent on freshwater swamps, creeks and impoundments for their water supply than on tidal flows.

Figure 4.03 Typical rice trunk (SCDAH 2011:1).

A series of canals (both central and flanking canals), as well as interior drainages, were excavated to interconnect with these fresh water sources. The various canals and drainages were all controlled by trunks, gates and other devices to manage flooding and draining of the rice fields. This equipment was generally installed at significant intersections within the embankments, usually along the upper and lower portions of the fields (Weir 1983:150; Rowland 1987:126; Dethloff 1988:9; Smith 2012:76-80; Figure 4.03).

Transportation was an important component in plantation operations and many planters either cleared

and channelized rivers or excavated canals to transport their raw or processed rice to market from local or plantation-based loading docks or landings. In some instances, the rice field embankments served a dual purpose, with plank roads constructed along their tops (Barr 1996; Trinkley and Hacker 1996b:88). Although little archaeological data exists to establish a temporal range or period for many of these canals and roads, a vast number remain visible within Lowcountry South Carolina.

Indicators of the early importance of rice to the economic landscape of South Carolina may be found not only in extensive landscape adaptations, but also through colonial production figures. Early colonial figures show that 69 pounds per capita were produced in the late 1600s, but grew to more than 900 pounds per capita in 1740. By 1770, rice accounted for 10 percent of the value of all commodities shipped from British North America. South Carolina produced 66 million pounds of that total. The numerous swamps and inter-tidal lands along the Atlantic seaboard became known as South Carolina's Gold Coast during the Antebellum Period, reflecting its importance in the overall economic prosperity of the state (McCusker and Menard 1976:180-181; Edgar 1998:269).

Within the Lowcountry, large populations of enslaved workers were a fact of life from the beginning of South Carolina's settlement. Tens of thousands of black Africans were imported to build the infrastructure for rice production and labor in the sowing, growing, harvesting and milling of rice. They also built roads, bridges, ferry landings, and housing. It was African servitude that fueled the economic giant that the rice industry became by the mid-nineteenth century.

These people, freshly imported during the legal slave trade as well as the Carolina-born descendents of enslaved workers, were primarily from the Congo-Angola regions of Africa. A substantial number, however, came from the rice-growing regions of the African Gold Coast, as well as Senegal and Gambia. Their in-depth knowledge of this crop was instrumental in its cultivation in the colony (Ferguson 1992:61; Joyner 2003:14). Elizabeth Allston Pringle, an Horry Count rice planter, explained the importance of these workers to the establishment and growth of the rice industry.

> *Only the African race could have made it possible or profitable to clear the dense cypress swamps and cultivate them in rice by a system of flooding the fields from the river by canals, ditches, or floodgates, drawing off the water when necessary, and leaving these wonderful rice lands dry for cultivation* (Joyner 1985:14).

Labor requirements on rice plantations combined the workforce necessary for any commercial agricultural business with the domestic tasks needed for the independent sustenance of any large family farm (Figure 4.04). Labor management of the enslaved force divided the manpower into various occupations and into supervisory or management positions held by experienced and skilled workers overseeing general crew, and apprentice laborers learning the various skills. It is no surprise that the larger the slave force, the greater the need for an organized management structure and the greater chance for specialization. Smaller work forces simply had to

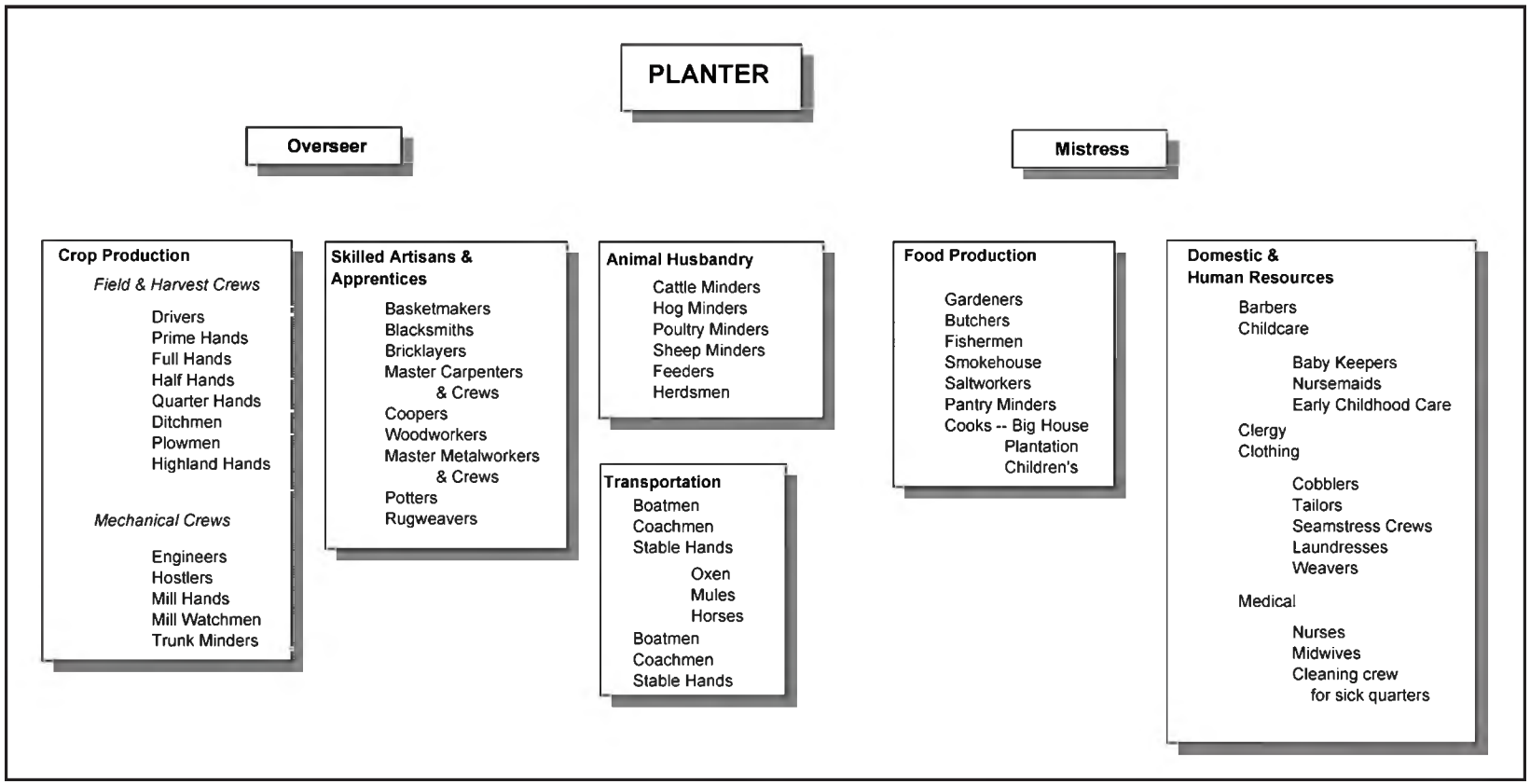


Figure 4.04 Organizational chart of plantation labor (adapted from Joyner 1985:57-90).

accomplish the same tasks with fewer people. Rice agriculture was extremely labor intensive and, unlike cotton, required a year round effort (Figure 4.05).

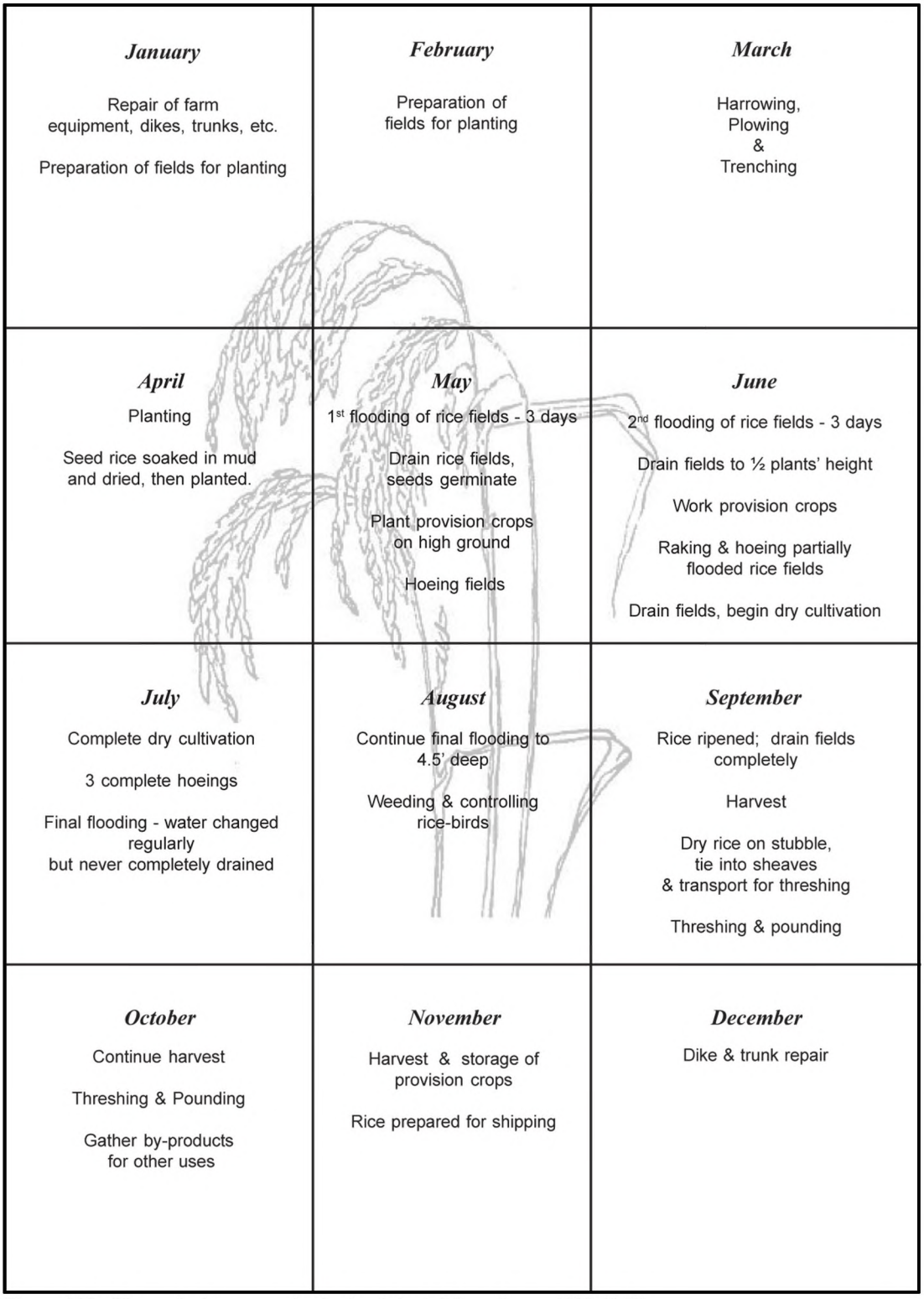


Figure 4.05 Rice agriculture annual calendar (adapted from Joyner 1985:46-50).

Beyond planting and harvesting, a great deal of labor was expended in clearing new fields and the repair and maintenance of the infrastructure required to grow the crop. This included keeping the canals, ditches and drains cleared and the trunks opened. Embankments and gates had to be repaired and barges either constructed or repaired. Plank roads along the tops of the embankments had to be kept in good repair; wagons used to transport the crop from the fields to the barges or mill had to be built and maintained. Loading docks along central canals and landings along the river also had to be constructed and maintained. Draft animals had to be cared for and barrels for shipping the final product had to be constructed.

During the fall, hungry birds had to be kept out of the field during their seasonal migrations. Archaeological investigations at "Old House" (38JA72), the plantation of Thomas Heyward, Jr. in Jasper County, indicate that wood or brick stands may have been constructed to allow the "birder" to stay dry while standing watch in the middle of the wet and swampy fields (Trinkley and Hacker 1996b:88).

Fields were purposely flooded three times during the growing season by water flows. The fields were hoed, drained, weeded and refilled throughout the growing season, with field crews often working in water up to their knees or higher.

Federal Era

By the time Hugh Rose had completed his land purchases and improvements, he had unfettered access to water sources flowing from the Awendaw and Mt. Pleasant Scarps, Wappetaw Swamp, and Guerin Creek. By 1800, "… Fairlawn began to take the shape of a large-scale rice plantation with 865 acres (350 ha) devoted to embanked fields, drains, and canals" (Smith 2012:164).

In addition to having access to the immense 62.51 square mile (162 sq. km) Wando watershed, Rose also had access to a 143 acre (58 ha) "bay swamp" reservoir that flowed into the large Mayrant's Reserve reservoir situated along the northeast side of his plantation. To hold this reservoir in place, a dam of more than a mile in length was constructed. In an effort to gain better control of the hydraulics, he converted another 108 acres (44 ha) into Penny Dam Reservoir approximately 2,000 feet (610 m) west of Mayrant's Reserve (Smith 2012:157, 163, 173-174; *see Figure 1.03*).

By 1839, Rose's agricultural lands totaled 7,500 acres (3,035 ha). At the time of his death in 1841, the central canal extended approximately three and a half miles (5.6 lm) from his upper reserve to the Wando River.

> *[In essence, Fairlawn came to resemble] the layout of [its] tidal [plantation] counterparts without the use of 'estuary hydrology' to irrigate the land. While the canals and embankments at Fairlawn had all the characteristics of a tidal plantation, the lower division rice fields received water from… 600 acres devoted to reservoirs and canals supporting 800 acres of rice fields 'under bank'* (Smith 2012:174, 176).

By 1850, Fairlawn was one of the most productive rice plantations along the upper stretches of the Wando River. In that year, the plantation produced a total of 360,000 pounds of rice (Smith 2012:192).

Antebellum & Postbellum Eras

Following the death of Hugh Rose, Fairlawn was passed on to his son James (1793-1869) (CCWB I 1839-1845:154). At this level of study, little data was recovered concerning James's involvement with the property other than a judgment against his estate in April of 1844 by the Master in Equity who ordered the 765 acre Capers "Swamp" plantation, along with an additional 135 acres, to be sold (CCDB O11:326).

During the 1850s, Fairlawn installed steam-driven threshing and milling operations for processing the rice crop. This replaced the very labor-intensive manual removal of the rice seed from the stalk through the use of flailing sticks. Removal of the hull and bran and polishing of the rice grains, which had previously been accomplished by the use of mortars and pestles and hand winnowing, was also mechanized, saving an enormous amount of labor-intensive work.

Although Fairlawn was exceedingly productive in 1850, the rice industry in general suffered severe setbacks in the 1840s and 1850s. Several factors were at play, including worn-out soils, declining productivity and a scarcity of capital. Environmentally, the 1850s were particularly troubling with droughts and a series of devastating hurricanes that swept the Carolina coast destroying infrastructure and flooding rice fields with salt water (Smith 2012:194, 268).

By the late 1850s, the entire Fairlawn Plantation had been conveyed to George A. Trenholm, planter, and then to Benjamin J. Johnson of Beaufort (CCDB E-14:438). Following Johnson's death in 1862, the property was sold to Dr. Irvine K. Furman (1822-1865), who held it for just three years before he died. Dr. Furman left no will, and the property was divided among his widow and children. The Furman family's ownership involved a number of transfers between one another, as well as inheritances by younger generations.

There is little evidence that any significant rice agriculture was practiced at Fairlawn Plantation following the Civil War. Efforts were made across South Carolina's Lowcountry to devise a labor system based on paid employment, but these proved problematic in the rice fields. Meanwhile, Louisiana was developing a strong rice economy and quickly outstripped production in the Carolina Lowcountry.

Among South Carolina's disadvantages was soft ground which would not allow for harvesting by mechanical means. The combination of competition from areas which could utilize mechanical harvesting equipment, a lack of laborers to work the fields, crop failures and the overall weakness of the post-war economy proved quite difficult to overcome. In fact, the entire Deep South rice production agronomy was on its last leg, and in 1879, Louisiana alone produced half of the total rice grown in South Carolina, Georgia and Louisiana combined (n=62,000 barrels [48%] out of a total of 134,903 barrels) (Dethloff 1988:60, 64).

Economic and competition factors were nearly catastrophic, but when a series of hurricanes drove salt water into the fields from Georgetown southward - permanently salinizing the fields - J. Harleston Read, planter at Georgetown, wrote that it seemed as "though God as well as man is against us" (Rogers III 1972:59).

The failure of rice plantations along the South Carolina coastline was ubiquitous, as family after family lost their properties to foreclosure or were forced to sell. Wealthy northern investors bought up many of the lands, "… repairing and preserving many tidal impoundments for waterfowl hunting. These fields, in private and public hands, now cover nearly 70,000 acres [28.328 ha] along the state's tidal rivers" (Tibbetts 2014:12).

The 20th & 21st Centuries

During the early years of the twentieth century, several of Dr. Furman's heirs conveyed timber cutting rights to various companies. By 1919, the heirs were apparently having financial difficulties because Midland Timber Company foreclosed on a mortgage and Fairlawn was put up for public auction. R.H. Belser purchased the property in 1919 for $31,250.00 (roughly $442,000 in 2018 USD). Mr. Belser assigned his bid to Fairlawn Development Company (CCDB K-29:28), leaving the timber cutting rights that had been negotiated with the Furman family in effect.

Fairlawn Development Company was a South Carolina landholding company owned by members of the Belser family, direct descendants of Dr. Furman. In 1935, the title was conveyed to J. Edwin Belser and R. Hugh Belser as Trustees (Hester 2001:8). It was during this time period that the Francis Marion National Forest was established.

Over the next four decades, undivided interests in the land were distributed to a number of heirs. In July 1979, title to the entire Fairlawn Plantation was vested in Boise Cascade Corporation by the heirs. It subsequently was conveyed to Boise Cascade Timberlands in 1982, and then Congaree Carton Limited Partnership in 1983 (Erter 1983). Although the Belser family no longer retained title to the land, they were granted access and hunting rights to the property (Roy E. Belser, personal communication 2014).

According to Roy Belser, when his father and grandfather owned the property (1919-1983), improvements were made through the construction of buildings within the 3.5 acre (1.46 ha) family compound, as well as improvements within the overall rice field drain structures. Rotted or no longer extant rice trunks were replaced with concrete pipe, then later with corrugated aluminum and plastic pipe at specific road/embankment and canal intersections. Metal gates were installed at specific intersections to control water flow within the central and flanking canals – with additional work done to preserve the integrity of both Mayrant's Reserve and the Penny Dam reservoir. Fairlawn was sold to Boise Cascade Corporation in 1979 and throughout their ownership

the old rice lands were repeatedly planted in bedded pine and subsequently logged (Roy E. Belser, personal communication 2014).

At Fairlawn, the storm damage from the 1989 Hurricane Hugo was very severe (*see Figure 2.06*). The Category 4 storm destroyed over 90 percent of the timber on Fairlawn (more than 37 million board feet) and heavily impacted every aspect of the plantation. Roy Belser noted that "Even what was left was severely damaged. We salvaged for several years but only recovered ten to twenty percent of the original value" (Roy E. Belser, personal communication 2014).

Subsequent work involved the clearing of downed trees from the fields and canals, along with the replanting of bedded pine. In addition, the primary canals were re-excavated to their original depth and damaged trunks and gates were replaced. Spoil from these excavations was added to the tops of the already existing embankments that are used as roadways to access the boundaries and interior sections of the property (Roy E. Belser, personal communication, 2014).

In 2013, the Audubon Society of South Carolina designated 8,000 acres (3,237 ha) of property along I'On Swamp, including Fairlawn plantation, as an important bird area. It was deemed a "vital habitat for species such as the swallow-tailed kite, prothonotary warbler and painted bunting", as well as for dozens of waterfowl whose annual migrations across the state depend on such areas (*The Post and Courier* 10.22.2013).

Chapter 5
Research Design & Methodology

Barr & Associates conducted a level of archaeological investigation suitable for achieving the survey goals and objectives of a selective reconnaissance survey. Methods followed those outlined by the *South Carolina Standards and Guidelines for Archaeological Investigations* (SHPO et al. as amended 2013). The survey was also conducted in accordance with the National Park Service's National Register Bulletin 15 entitled *How to Apply the National Register Criteria for Evaluation* and with the Secretary of the Interior's *Guidelines and Standards* (48 FR 44716-42). Other related materials such as *Rice Fields and Section 106; SHPO Guidelines for Federal Agencies and Applicants* (SCDAH 2011) and *Inland Swamp Rice Context, c. 1690-1783* (Agha et al. 2011) were also consulted.

It should be noted that the Advisory Council on Historic Preservation's regulations entitled *Protection of Historic Properties* (36 CFR 800) were also taken into account and consulted in deference to potential arbitration proceedings that may result from these investigations. They also provided a basis for project recommendations. All field methodologies were designed to meet or exceed the standards and guidelines for archaeological reconnaissance survey as defined by these sources.

Previous Investigations

No National Register of Historic Places (NRHP) sites were identified within a 0.5 mile (0.8 km) radius of the project area. Two archaeological sites (38CH0266 and 38CH2262) were previously identified within this radius. Site 38CH2262 is considered not eligible for the NRHP and 38CH0266 is considered to be of unknown eligibility.

In 2014, Barr & Associates conducted an assessment of the property utilizing an historic (ca. 1794) detailed plat of Fairlawn Plantation, relevant topographic and aerial maps, LiDAR and three-dimensional Voxler images of the study area (Barr 2014, rev. April 2019). The main embankments, as well as present-day trunk locations were examined through a combination of pedestrian and windshield surveys. It should be noted that following this assessment, the boundaries of the proposed mitigation bank were reduced from about 1,200 acres to 998 acres (486 ha; 404 ha) - the project area that was studied during the current reconnaissance survey.

During initial research, seven (7) areas exhibited high probabilities (identified as HP-1 through HP-7) for the presence of prehistoric or historic resources and were examined during the pedestrian survey (Figure 5.01).

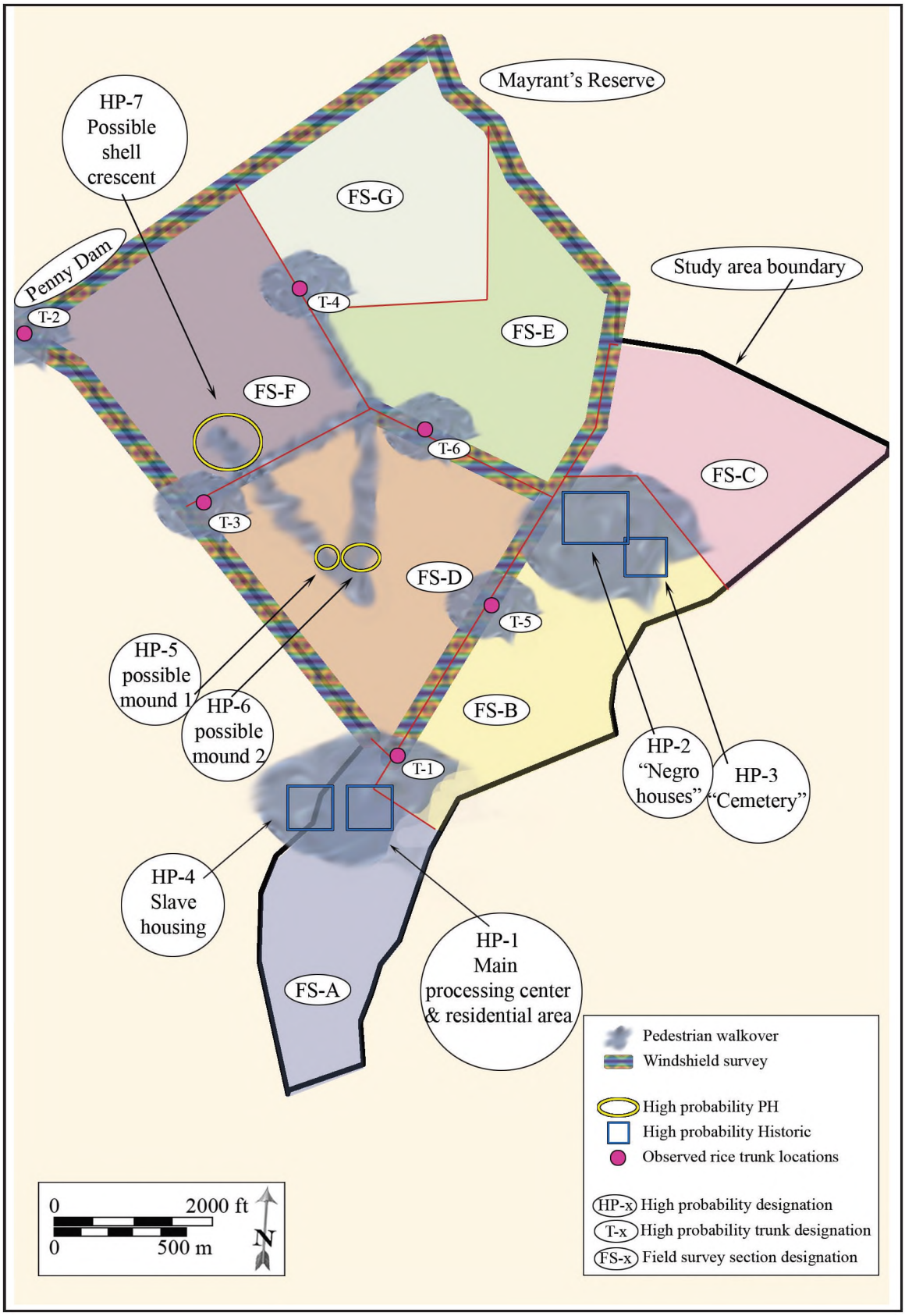


Figure 5.01 **Field survey sections and methodology, high probability areas and observed trunk locations during 2014 assessment.**

The three potential prehistoric features (HP-5, HP-6 and HP-7) proved to be either natural anomalies, push piles or windrows. HP-1 and HP-2, the main residential complex and associated housing for enslaved workers, are located outside the revised mitigation bank boundaries. In April 2019, site numbers were assigned for the residential complex (SHPO Site No. 7993.02) and a nearby rice processing center (SHPO Site No. 7993.03). The possible nearby slave housing has not been investigated and no site number has been assigned.

HP-3, a probable African-American graveyard noted on the historic plat was confirmed through field observations and has been assigned a site number (Site 38CH2577/SHPO Site No. 7993.01). A nearby cluster of "negro houses" (HP-2) depicted on the historic plat has not been field-tested and no site number has been assigned per SHPO and SCIAA instructions.

The graveyard, which exhibits four (4) observed depressions and a single standing stone, as well as the nearby potential slave village, has been recommended for avoidance along with a 50 foot (15m) buffer (*see Figure 1.04*).

Research Design

The current selective reconnaissance survey was designed to determine whether cultural resources materials may be present within those elements of Fairlawn's historic rice infrastructure that would be subject to adverse effects during the tract's proposed conversion to a wetland mitigation bank.

NRHP Eligibility

By definition, historic properties typically include structures and archaeological sites, although they may also include traditional places revered by Native Americans. Criteria for determining eligibility for listing on the NRHP include:

a] Association with events that have made a significant contribution to the broad patterns of our history.

b] Association with the lives of persons significant in the past.

c] Distinctive characterization of a type, period, or method of construction, or representative of the work of a master craftsman, possession of high artistic values, or representations of a significant and distinguishable entity whose individual components may lack distinction.

d] Ability to yield information important to history.

As noted in Chapter 4, Fairlawn was a rice plantation of considerable significance during the Colonial, Federal and Antebellum periods. Its owner, Hugh Rose, was well known for using the latest technology and

methods to improve yields. He also published several treatises in scientific journals regarding the industry, its operation, and ways to improve upon it.

Although Rose's publications, as well as others related to the construction and maintenance of rice plantations, are helpful to our understanding of these complex systems, there is little doubt that modifications were made in the field that are not reflected in these publications. Therefore, archaeological research in the rice fields and support infrastructure is an important aspect of understanding the day-to-day operations of such an enterprise.

Prior to 2011, many historic investigations and archaeological reports involved certain aspects of the rice plantation industry. Some have focused on the economics of the industry, whereas others have concentrated on the main house, graveyards or slave villages (Lewis 1985; Kovacik and Winnberry 1987; Coclonis 1989; Smith 2012, Trinkley 1996; Trinkley and Hacker 1996a, 1996b; Trinkley and Fick 2003).

Researchers interested in specific aspects of South Carolina's rice industry conducted many of these studies, while other studies were undertaken by contract archaeologists and tended to be limited to the scope of the project at hand. Either way, quite often findings were made that led to a greater understanding of rice plantation infrastructure and how it functioned. The interest in these early economic enterprises has become more holistic since 2011 and now includes not only those subjects of earlier study, such as the main house, slave quarters and mills, but also the mechanics involved in the construction, operation and maintenance of canals, embankments, trunks and gates. Other aspects of the day-to-day operations of the plantation, such as the methods and schedules used to control water flow, have also been studied (*see SCDAH 2011; Agha et al., 2011*).

Rice Field System Evaluation Criteria

According to SCDAH and the SHPO, eligibility of rice plantations is divided into two (2) types - inland or tidal rice fields. Hayden Ros Smith (2012) wrote that the Wando River is too brackish for tidal flow and the waters at Mayrants Reserve and the Penny Dam reservoir were used for flooding the fields with fresh water. Thus, Fairlawn is considered an inland rice plantation.

The SHPO developed a list of questions to assist in the evaluations of an existing inland rice plantation (SCDAH 2011: App. A).

1. Is there an identifiable plantation settlement, such as the plantation house, slave cabins, overseer's house, cemeteries, outbuildings, rice mills, rice barns, hunting lodges, or guest cottages near the rice field system or verifiable through research?
2. Can the rice field system contribute to a further understanding of the plantation that contains the system, as well as the plantation's historical development through time?

3. Can the rice system contribute to our understanding of rice planting technology?
4. Is the rice system in an historic swamp or lowland wetland?
5. Can the historic flow of water be identified?
6. Are earthworks, canals, water control structures present?
7. Can all of the following features be identified? A) Dam, B) Facing Ditches and C) facing embankments
8. Does the rice system retain the closed character of a lowland swamp between higher lands?
9. Is the rice system associated with a fresh water source?

These criteria are used in conjunction with the standards set forth by 36 CFR 60.4 (Criteria a - d).

Current Rice Plantation Investigations

The focus of the current investigation is on the embankments/dikes constructed within Fairlawn Plantation and on their planned reduction and/or installation of swales during the proposed conversion of the historic plantation into a wetland mitigation bank. Although there has not been a great deal of research into these structures, some information has been gleaned through both research and archaeological investigations.

Historically, embankments were designed as septums dividing portions of the rice field, but they were also used as roads (or causeways) for laborers to access the fields in order to plant, grow, reap and transport the harvest to the mill and to repair trunks, gates and other critical infrastructure. And although there seems to be little evidence of it today, quite often these embankments were planked. Evidence for planking has been found on old road maps and aerial photos, as well as in field excavations (Barr 1996, Trinkley and Hacker 1996b).

The current study also offered the opportunity to explore the possibilities, and limitations, of historical archaeology. Two major characteristics of the embankments at Fairlawn are considered pertinent to these investigations. The embankments/dikes at Fairlawn, as elsewhere, served a dual purpose. Not only were they used as a means to control the flow of water through the various trunks that ran under them, but they also served as roads into and away from the individual fields. At an average width of just 20 feet (6 m), their daily use suggests that they may exhibit similar evidence of cultural behavior that is seen along roads that have been explored in other types of archaeological investigations. One of these aspects is the abstract concept of litter.

The Archaeology of Litter

Modern thought equates litter with carelessness and a lack of concern for the environment, but there is

much to be learned from it. Litter, in contrast to defined and planned trash deposits, is the result of a more or less spontaneous dumping of individual items, or sometimes the simple loss of items during one's daily activities. As such, littered areas - both historic and modern - can provide significant insight into the hard goods that were considered to be trash by any given society, as well as pinpointing specific areas where it was considered somewhat customary to toss out used items.

Archaeologists regularly come upon trash/litter deposits during field investigations. Most deposits seem to be either at end-of-the-road situations (Barr and Drucker 2001; Drucker et al., 2013; Barr and Bastian 2011), or along very obscure, mostly abandoned roads (Barr and Bastian 2015). Due to its ubiquitous presence, common litter has become the subject of investigation by archaeologists across the globe that are studying how it fits with other human activities and what it means in the archaeological record.

The Implications of Litter

Archaeologists and anthropologists such as Monica L. Smith of the University of California, Los Angeles (UCLA) have given considerable thought to discarded materials. She wrote that in addition to standard archaeological studies of the production and usage of material items,

> *... no less complex a phenomenon is what follows consumption: discard. Studies of the placement of trash... provide insights on the way in which the leave-taking of possessions is [a] pointed statement of identity...*
>
> *When does the violence of the act of discard emphasize the individual's understanding of the object's capacity for meaning and memory, ranging from the gentle afterthought of littering to the forceful hurtling of an undesired item?* (Smith 2011:132).

Smith also said that "The simple act of discard - its timing, frequency and location - is a matter of individual autonomy within a cultural context that is itself actively maintained or modified in each act of throwing away" (Smith 2011:140).

Death Valley Study

For example, in studies of Death Valley, a clear correlation was found between cast off items and various time frames, modes of transportation and both societal and economic activity. Pre-1900 castoff bottles were "... associated with square nails, soldered cans, heavy baling wire, wagon parts, and packsaddle equipment" - all evidence of horse and wagon transportation (Hunt 1975:180). During that study, Charles B. Hunt also determined that after 1920, discarded materials were substantially different.

> *Instead of wagon parts and baling wire, one finds magneto boxes, car tires about 3 inches [wide]... and that infamous monkey wrench known as the knuckle breaker...*

> *Since the latter part of the 1930s, [litter] includes all these artifacts, plus the beer can... [which] seems likely [to] become the index fossil... The abundance of beer cans show that Death Valley residents during this stage were carrying on increased trade with urban centers (*Hunt 1975:180).

Graveyard Litter in the Backcountry

In a study of graveyard littler, it was determined that obscure and/or end-of-the-road locations were prime targets for trash disposal. A good example is the Bond-Bates family graveyard in Batesburg-Leesville, South Carolina (Barr and Bastian 2011). This graveyard, established in the late 1700s, is situated about 100 feet (30 m) from the intersection of two historically important roads - present-day US Highway 1 and Charleston Avenue.

By the early 1910s, urbanization along the main highway had begun in earnest as the village became modernized. The old plantations along the main road were partitioned and new homes were established in what would become a residential area. In 1912, the Batesburg Graded and High School was built opposite the burial ground. Traffic, both foot and wheeled, must have increased significantly. Conversely, as other roadways began to dominate the town, Charleston Avenue became less important and took on the unmistakable character of a residential side street - that of a well-known but somewhat secluded road.

As the graveyard became overgrown and abandoned in the late nineteenth and early twentieth centuries, it became an easy place to discard those types of items we currently regard as litter. Not only is it situated along the left side of the roadway before traffic enters the main route through town - a perfect spot for drivers to toss unwanted evidence of alcohol consumption - but it is situated across the street from a public school making for a perfect spot for impromptu, and probably unsanctioned, social gatherings of young people.

Cultural resource materials recovered and identified from the graveyard indicate a long history of deposition, but also point to a changing society. Ceramic sherds and bottle glass from the graveyard that ranged from 1780 to 1925 coincide with its ownership by the Bond/Bates family. Still others included tools associated with agriculture - a common endeavor in rural South Carolina.

Other artifacts, such as telephone and electrical line insulators, inkwells and window glass associated with the public school, as well as a proliferation of Coca-Cola bottle glass dating from about 1900 to 1965 were all recovered. Liquor bottles (ca. 1880 to 1970), however, were the most prevalent and suggest that drinking (away from home or established bars, and quite likely while driving) was a common activity (Barr and Bastian 2011:228-237).

Potential Littering at Fairlawn

By their nature, historic rice plantations were, and remain, located in areas that are exceedingly rural and

out of the way. They were essentially closed social systems that involved the plantation owner, his family and hired workers, as well as those enslaved workers that performed the day-to-day work required to produce a crop, mill it and ship it to market. Although it may seem counter-intuitive, enslaved laborers took great pride in their work, respected the land they worked upon as their own, and were likely quite conscious of their environment and the effect that trash and common litter would have upon it.

Given Fairlawn's very rural and isolated nature, several questions come to mind regarding the potential for finding cultural resources materials, or litter, during the present survey. What type of artifacts could have been lost or discarded? Would there be deposits of what is commonly known as litter, and if so, from what time frame? Would there be lost tools or parts to wagons or other machinery that broke down during work hours? Could there be personal items, such as mislaid lunch pails, buttons or pipe stems? Or would there be no recoverable artifacts at all, since from the eighteenth to the twenty-first century this plantation was influenced by erosion and by human activities that repeatedly modified, repaired and changed its landscape?

Methodology

Field methodology for this study was developed in concert with guidance from Keely Lewis-Schroer of the South Carolina SHPO. Investigators thought that most potential refuse would be found along the edges of the embankments rather than within the centerline of these corridors since people tend to throw things off the side of a roadway rather than in its middle. Therefore, fieldwork concentrated on the installation of shovel tests along the berm, or sides, of those embankments/dikes that will be impacted by the proposed conversion of the property to a mitigation bank. Fieldwork was designed to

- Determine the presence or absence of cultural resources within the defined limits of the Area of Potential Effect (APE).
- Identify, record and assess all prehistoric and historic period cultural resources recovered within the APE.
- If identified, determine the location of historic cultural resource materials in relationship to existing markers.
- Through this process, assess the significance of National Register of Historic Places (NHRP) eligibility of all archaeological remains identified during the course of the survey.

Close interval shovel testing was conducted at 30 foot (10 m) intervals of four areas, or stations, within the primary access road embankment. Three (3) of those stations are in areas to be swaled. A fourth station was tested in an area that was not planned for swales and/or reduction. Located on the far northwest curve of the primary access road, this area was chosen because investigators were told that landowners had recovered

several artifacts there during the past 50 or more years.

Testing of the interior embankments/dikes was undertaken at 100 to 400 foot (30 to 122 m) intervals, depending upon soil conditions and the presence or absence of cultural resources materials.

Additional documentation included field notes and color photographs of current conditions within the study area, as well as plan view maps generated in the field.

Archival Research

In the course of these investigations, the staff of Barr & Associates reviewed available genealogical and historic information associated with the study area, including that which is available at SCDAH, The Library of Congress, The Thomas Cooper Map Library in Columbia, the Charleston County Register of Mesne Conveyance (RMC), in various archived newspapers available online, and from online archives of original public records.

In addition, a detailed plat dating to the 1790s indicates the placement of various embankments, many of them still extant, which were investigated during this survey (Purcell 1794, *see Fig. 4.01*).

Determination of Eligibility

Initial determination of site eligibility as a rice field landscape was based upon the nine criteria detailed in the SHPO publication *Rice Fields and Section 106* (SCDAH 2011: App. A). From there, site eligibility criteria for the National Register of Historic Places (NRHP), as defined by 36 CFR (Section 106 [a-d]) and in accordance with SC SHPO guidelines (*see SCDAH 2011*), was used to determine whether Fairlawn Plantation is eligible, not eligible, or of unknown eligibility for inclusion in the NRHP.

Laboratory Analysis

Artifact identification, analysis and laboratory processing were conducted in Leesville, South Carolina at the offices of Barr & Associates following completion of the survey. The single field specimen was cleaned and dried, recorded by descriptive and functional type, and documented on standard lab forms. The artifact was labeled and bagged (2-mil and 4-mil polybags) and analyzed for material, age and/or type.

Report Production

Data processing and database processing for the final project report were performed using *Microsoft Word 2000, Microsoft Excel 2000, Adobe PageMaker 7.0, Adobe Photoshop CS3 Extended,* and *CorelDraw Graphic Suite 12* software applications. Following analysis of the artifact and field specimen assemblage, documents and records were prepared for permanent curation according to standards established by the Office of the State Archaeologist.

CHAPTER 6
RESULTS OF SURVEY

A total of 13 areas were slated for investigation - four (4) stations (Sta-1 through Sta-4) - along the primary access road (situated along the north/northeast trending embankment) and nine (9) internal embankments (Em-A through Em-I) (Figure 6.01).

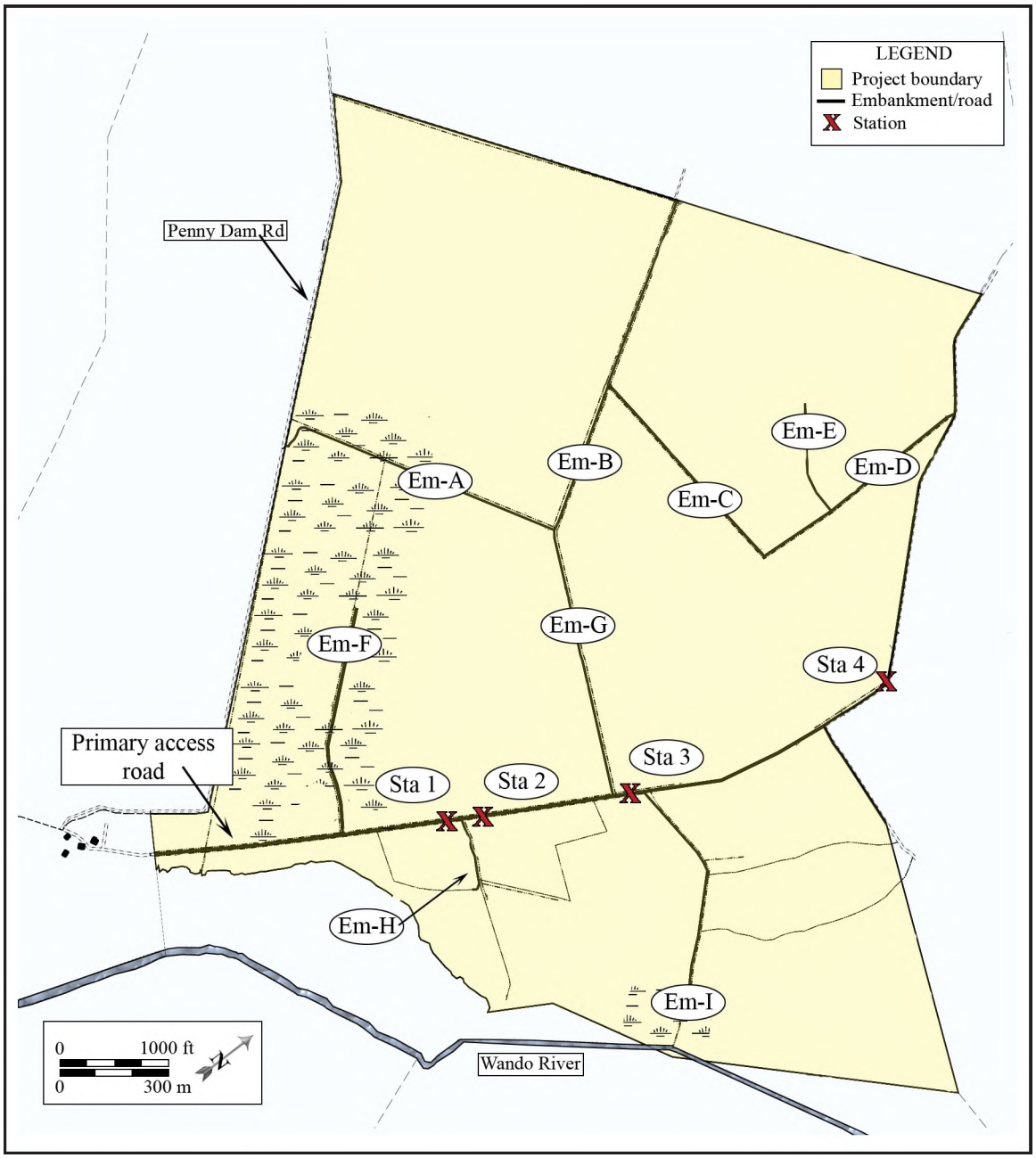


Figure 6.01 Location of focal areas of investigations within the historic Fairlawn rice fields (sdapted from Eartworks Group, Inc. 2017:Sheet 10).

Of the four (4) stations, three (3) are locations where the primary access road/embankment will be breached by installing gravel-based swales to facilitate the flow of fresh water. The remaining station (Sta-4) is not in an area slated for any work, but was tested as a control. This location, situated on the first curve of the primary access road, was identified as a spot where individuals have recovered historic ceramics and other artifacts over the last 50 years or so (Roy E. Belser, personal communication 2014).

All four of these stations were slated for shovel testing at 30 foot (10 m) intervals. Of the nine (9) embankments, all were tested at intervals that ranged between 100, 200 and 400 feet (30, 61 and 122 m).

Inclusive of the 13 tested areas, a total of 3.9 miles (6.3 km) or 9.5 acres (3.8 ha) was subjected to shovel testing. Out of 89 planned shovel tests, 19 were not installed due to standing water, drainage ditches or impenetrable ground (gravel fill). Therefore, a total of 70 shovel tests were installed, resulting in an average coverage of one (1) shovel tests per 296 feet (90.2 m) or 7.4 shovel tests per acre (0.4 ha).

Results of Shovel Testing

Shovel tests ranged from 2.8 to 19 inches (7 to 48 cm) in depth. All shovel tests were excavated along the side edges, or berms, of the embankments. They mirrored one another in the four (4) stations. Along the interior embankments, however, they were installed alternately from side to side of the corridor.

Soil descriptions of all excavated shovel tests and field conditions at time of survey may be found in Appendix B. All soils within this section are described using the Soil Conservation Service *Soil Survey of Charleston County* (Miller 1971) and the USDA Natural Resources Conservation Service (NRCS) soils nomenclature (USDA NRSC 2018).

Station 1 & Station 2

Attempts to place six (6) shovel tests within both Station 1 (Sta-1) and Station 2 (Sta-2) along the primary access road/embankment resulted in "No Digs" due to the presence of rock and gravel fill that had been placed within the embankment corridor to fill potholes and low spots over the years. As such, it was impenetrable (Figures 6.02 and 6.03).

Station 3

The primary access road/embankment is approximately 20 feet (6.1 m) wide and trends north/northeast (N30°E). It is flanked by a single canal and abandoned rice fields on both the west and east side. The embankment stands approximately 1.5 to 2 feet (0.46 to 0.61 m) higher than the former rice fields on either side (Figure 6.04)

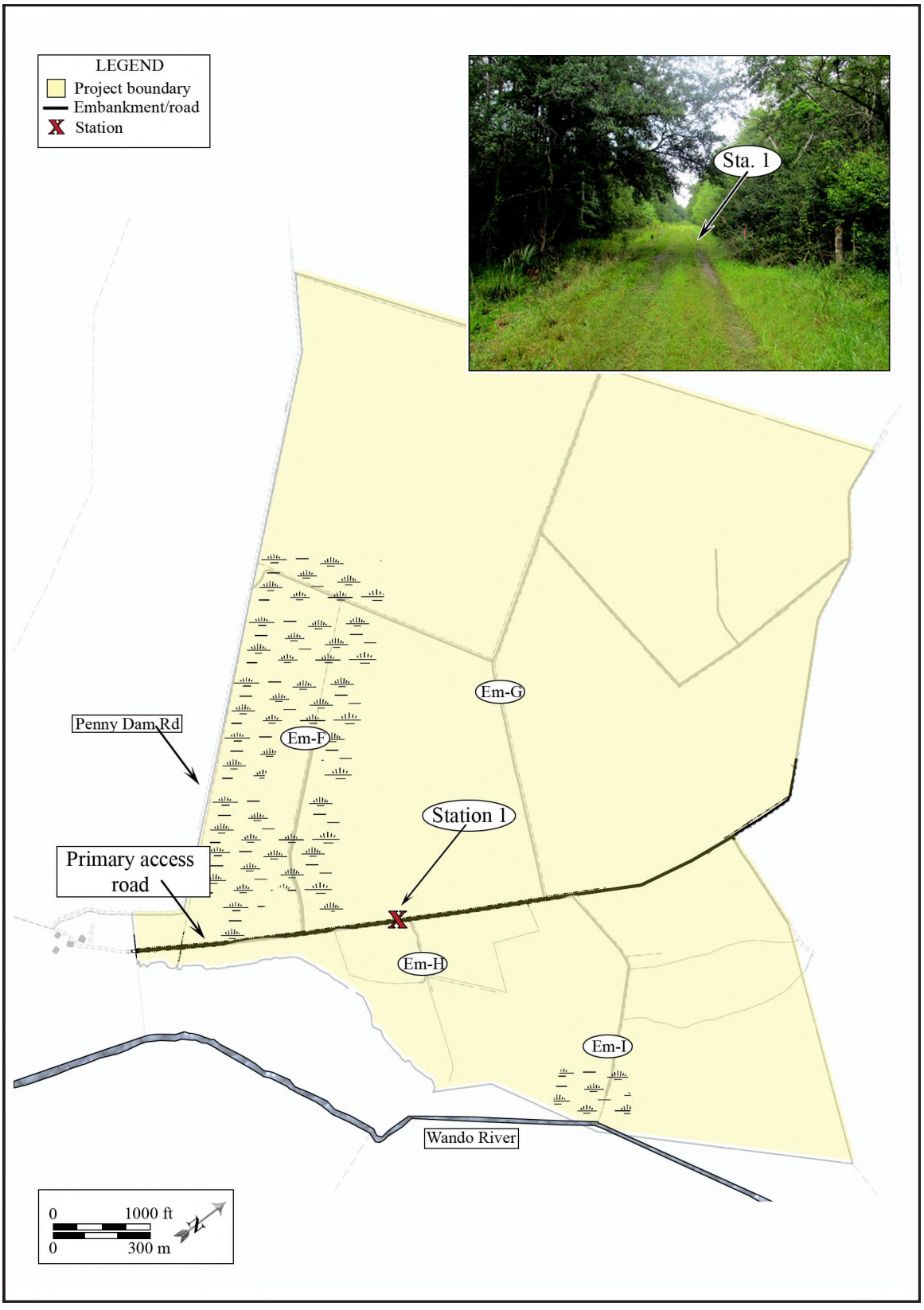


Figure 6.02 Location of Station 1. Inset: Overview (view to northeast).

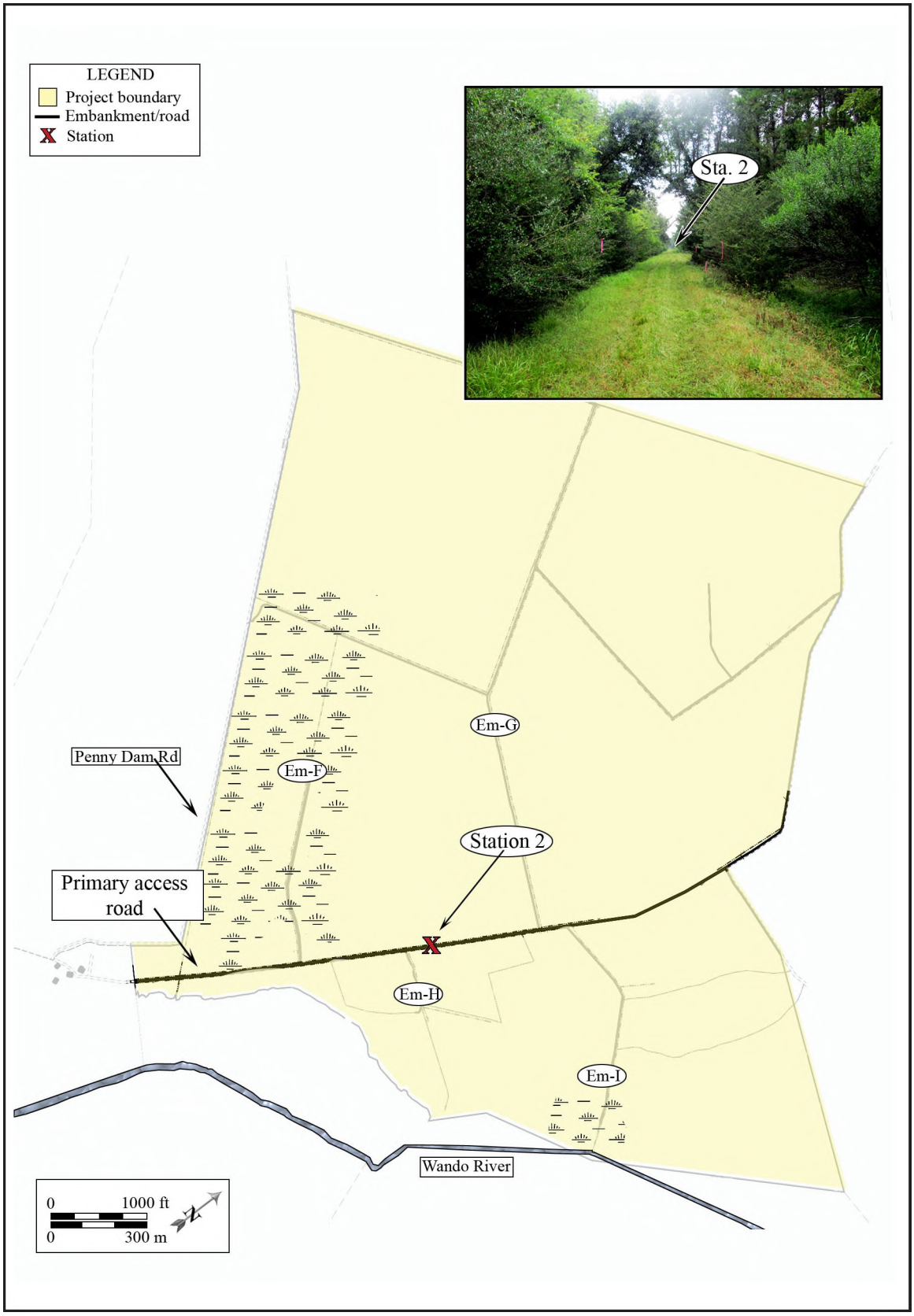


Figure 6.03 Location of Station 2. Inset: Overview (view to northeast).

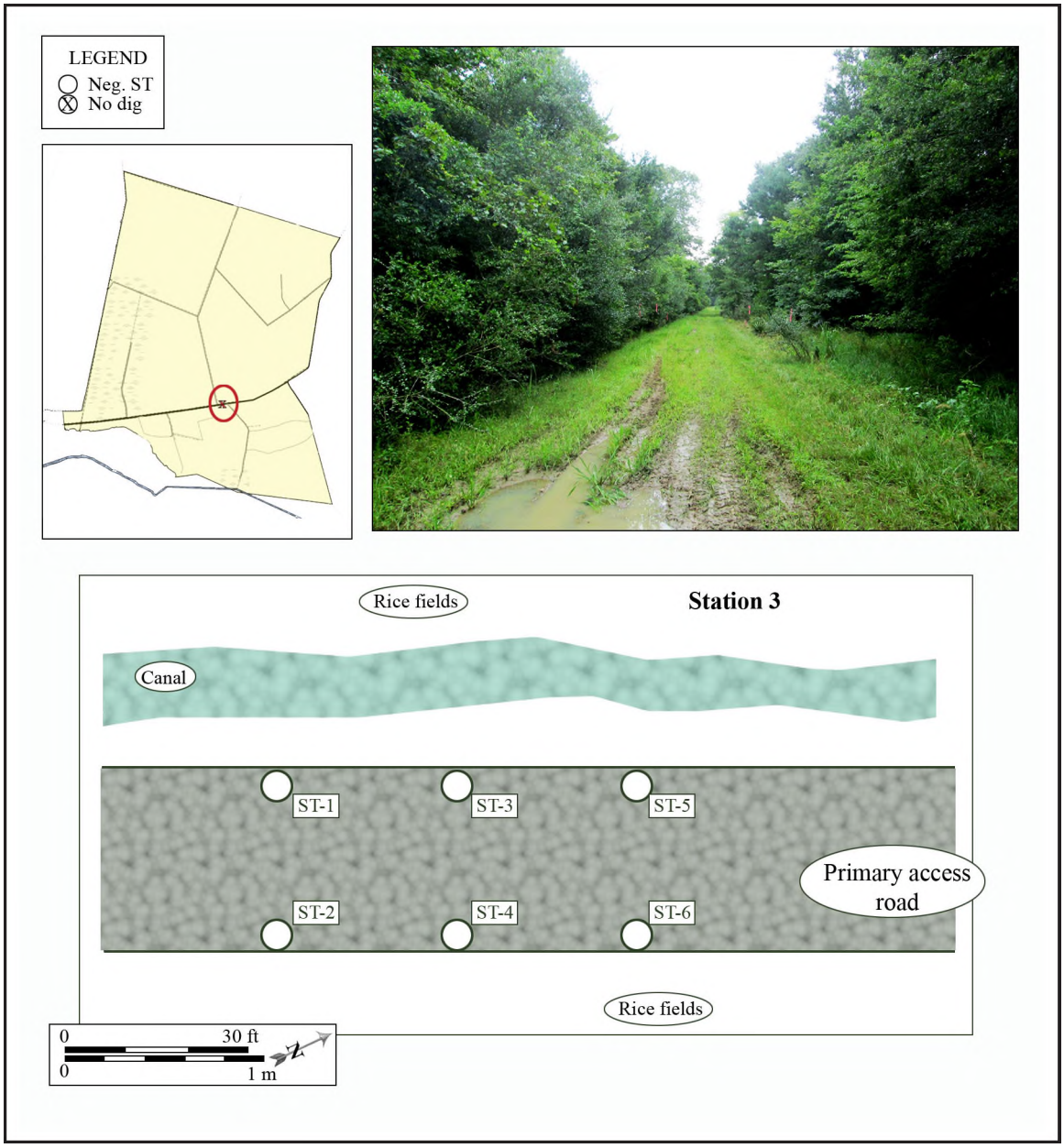


Figure 6.04 Shovel test map, Station 3. Inset photo: Overview (view to northeast).

The natural soils within this area are defined as Santee (Sc) loam and/or clay (NRCS 2018). Overall, a total of six (6) negative shovel tests were installed along either side of the embankment at 30 foot (10 m) intervals. Soil depths ranged from 4.4 to 12 inches (11 to 30 cm) below surface and exhibited three (3) soil horizons that terminated in clay or gravel.

Horizon A - dark yellowish brown (10YR 4/4 and 10YR 4/6) sandy loam, 0 to 6.3 inches (7 to 16 cm) below surface (bs); or gray (10YR 5/1) sandy loam, 0 to 7.1 inches (0 to 18 cm) bs.

Horizon B - dark gray (7.5YR 4/1) sandy loam, 2.8 to 4.4 inches (7m to 11 cm) below surface

(bs); dark yellowish brown (10YR 4/4 and 10YR 4/6) clay, 4.8 to 11.8 inches (12 to 30 cm) bs; or gray (10YR 5/1) clay, 7.1 to 9.1 inches (18 to 23 cm) bs.

Horizon C - very dark grayish brown (10YR 3/2) clay, 4.3 to 6.7 inches (11 to 17 cm) below surface (bs).

Station 4

The primary access road/embankment is approximately 20 feet (6.1 m) wide and trends north/northeast (N30°E).It is flanked by a single canal and abandoned rice fields on both the west and east side. The embankment stands approximately 1.5 to 2 feet higher (0.46 to 0.61 m) than the former rice fields on either side.

Overall, a total of twelve (12) shovel tests were installed along either side of the embankment at 30 foot (10 m) intervals (Figure 6.05). Of these, Shovel Test 8 yielded one (1) carriage bolt approximately 6 inches (15.2 cm) long.

Soils within this area are defined as Yonges (Yo) loamy fine sand (NRCS 2018). Excavated soils ranged from 9.5 to 15.8 inches (24 to 40 cm) in depth and exhibited three (3) soil horizons that terminated in hardpan sand or clay.

Horizon A - gray (10YR 5/1) friable clay, 4.7 to 10.2 inches (12 to 26 cm) below surface (bs); brown (10YR 5/3) sandy clay loam or friable clay, 6.7 to 10.2 inches (17 to 26 cm) bs; yellowish brown (10YR 5/6) clay, 7.9 to 11.8 inches (20 to 30 cm) bs; light brownish gray (10YR 6/2) friable clay, 0 to 6.7 inches (0 to 17 cm) bs; pale brown (10YR 6/3) sandy clay loam, 0 to 3.2 inches (0 to 8 cm) bs; light yellowish brown (10YR 6/4) friable clay, 0 to 6.7 inches (0 to 17 cm) bs; or very pale brown (10YR 8/4) friable clay with gray (10YR 6/1) mottles, 0 to 7.1 inches (0 to 18 cm) bs.

Horizon B - brown (7.5YR 4/4) friable clay, 6.7 to 10.2 inches (17 to 26 cm) below surface (bs); strong brown (7.5YR 4/6) sand, 9.1 to 15.8 inches (23 to 40 cm) bs; dark yellowish brown (10YR 3/6) sand, 11.8 to 13 inches (30 to 33 cm) bs; dark gray (10YR 4/1) clay, 7.1 to 15.8 inches (18 to 40 cm) bs; gray (10YR 5/1) friable clay, 7.9 to 11.8 inches (20 to 30 cm) bs; brownish yellow (10YR 6/6) clay, 7.1 to 13.4 inches (18 to 34 cm) bs; light gray (10YR 7/2) clay, 10.2 to 15.7 inches (26 to 40 cm) bs; very pale brown (10YR 7/4) friable clay or clay, 4.7 to 11.8 inches (12 to 30 cm) bs; or white (10YR 8/1) clay with reddish yellow (7.5YR 6/8) mottles, 6 to 9.5 inches (15 to 24 cm) bs.

Horizon C - gray (10YR 5/1) sand, 11.8 to 14.6 inches (30 to 37 cm) below surface (bs); pale brown (10YR 6/3) clay, 9.8 to 14.2 inches (25 to 36 cm) bs; or light (10YR 7/2) clay, 11.8 to 15 inches (30 to 38 cm) bs.

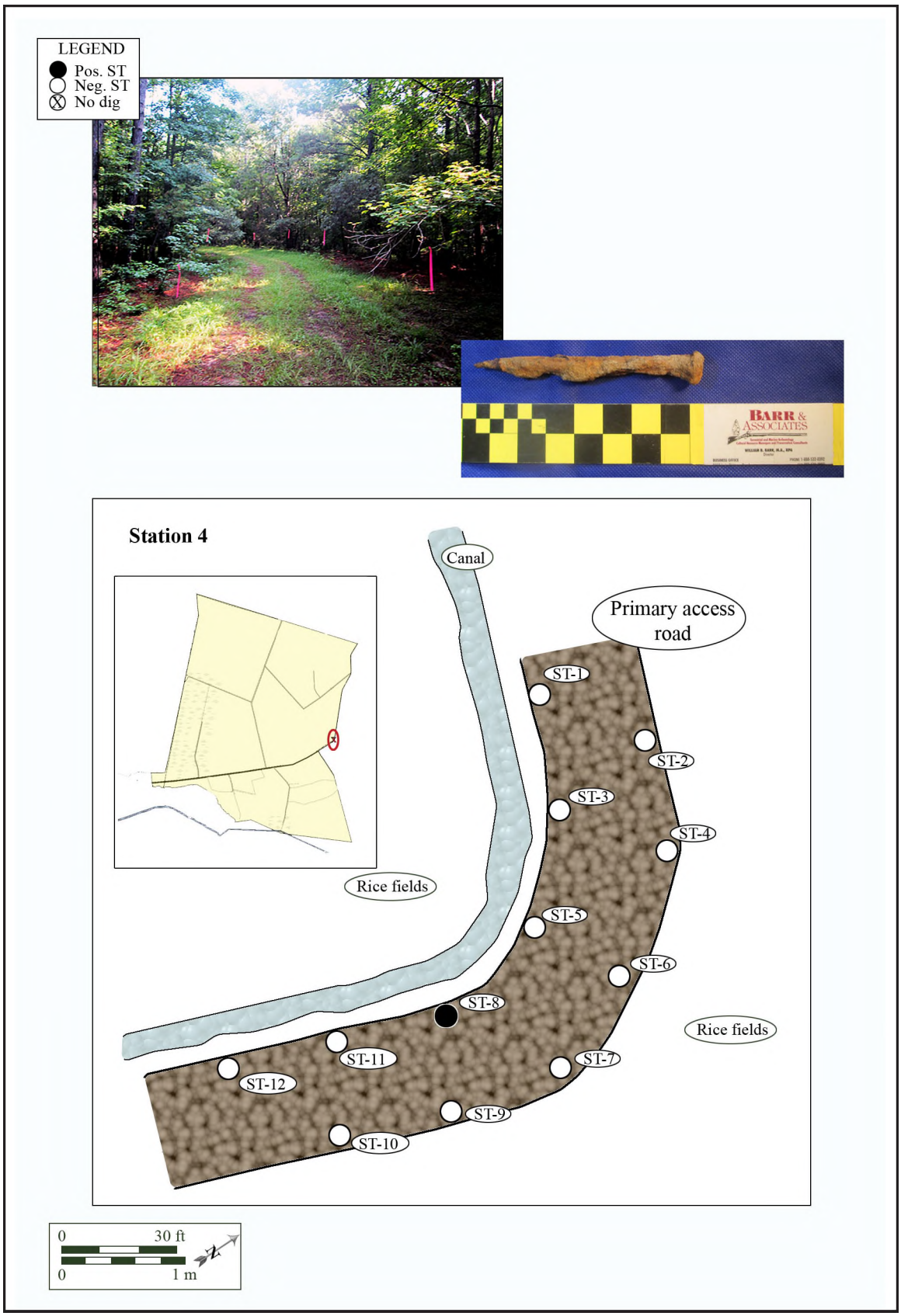


Figure 6.05 Shovel test map, Station 4. Inset photos: Overview (view to northeast); recovered carriage bolt.

Embankment Em-A

Embankment Em-A runs from the southwest property line embankment corridor and extends approximately 2,600 feet (792 m) where it intersects with Embankments Em-B and Em-G. The embankment is approximately 20 feet (6.1 m) wide and trends southwest (S60°W). It is flanked by a single canal and abandoned rice fields on the northwest side and abandoned rice fields along the southeast side. The fields along the southeast side are nearly level with the embankment corridor (Figure 6.06).

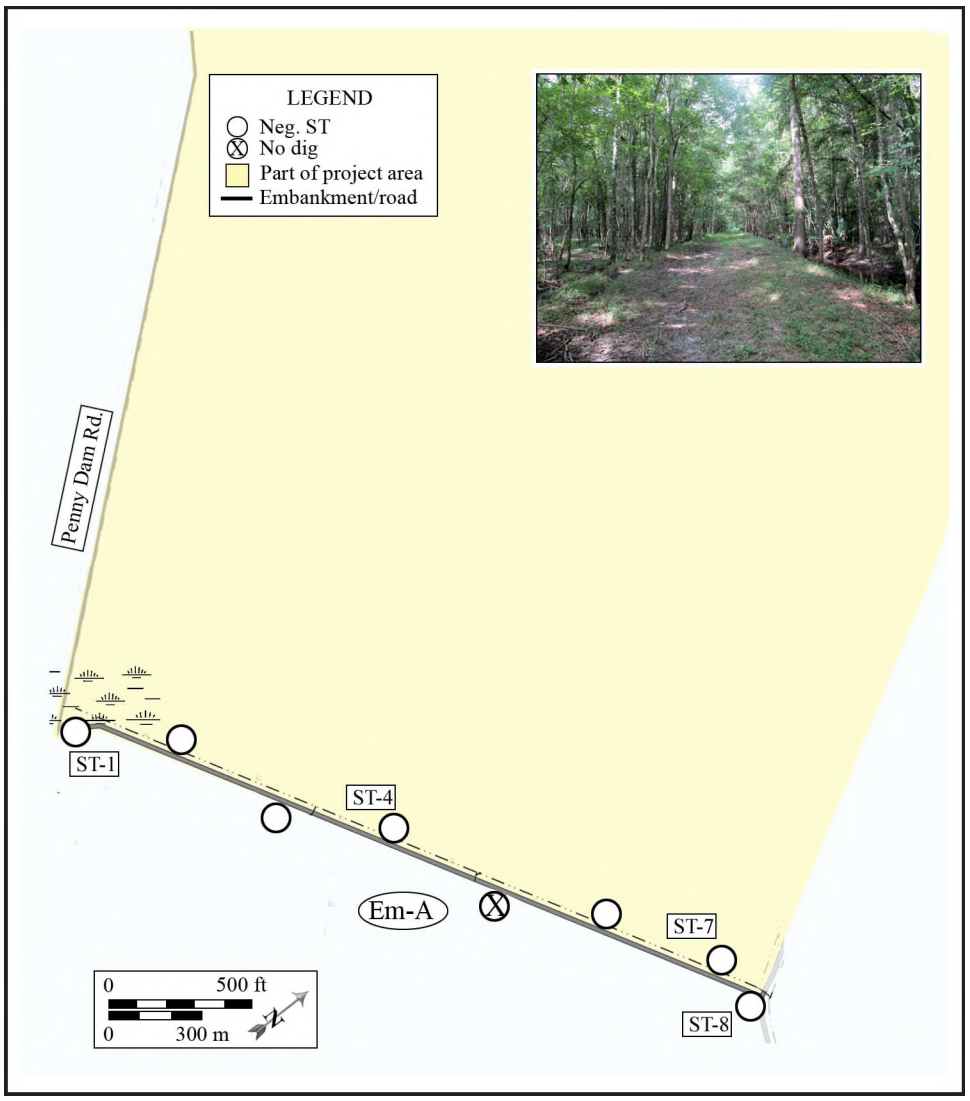


Figure 6.06 Shovel test map, embankment Em-A. Inset photo: Overview from ST# 8 (view to southeast).

The natural soils in this area are defined as Santee (Sc) loam and/or clay (NRCS 2018). Overall, a total of seven (7) negative shovel tests (exclusive of one [1] "No Dig" due to the presence of standing water) were installed at alternate locations along the east and west sides of the corridor at 200 to 400 foot (61 to 122 m)

intervals. Soil depths ranged from 4 to 9.1 inches (10 to 23 cm) below surface and only exhibited one (1) soil horizon that terminated in hardpan clay.

Horizon A – very dark grayish brown (10YR 3/2) clay, 4 to 4.7 inches (10 to 12 cm) below surface (bs); or dark gray (10YR 4/1) friable clay or clay, 4.7 to 9.1 inches (12 to 23 cm) bs.

Embankment Em-B

The Em-B embankment corridor is about 20 feet (6.1 m) wide and trends north/northwest (N32°W). It is flanked by a double canal on the southwest side and a single canal on the northeast side of the corridor. The abandoned rice fields along both sides are nearly level with the embankment corridor (Figure 6.07).

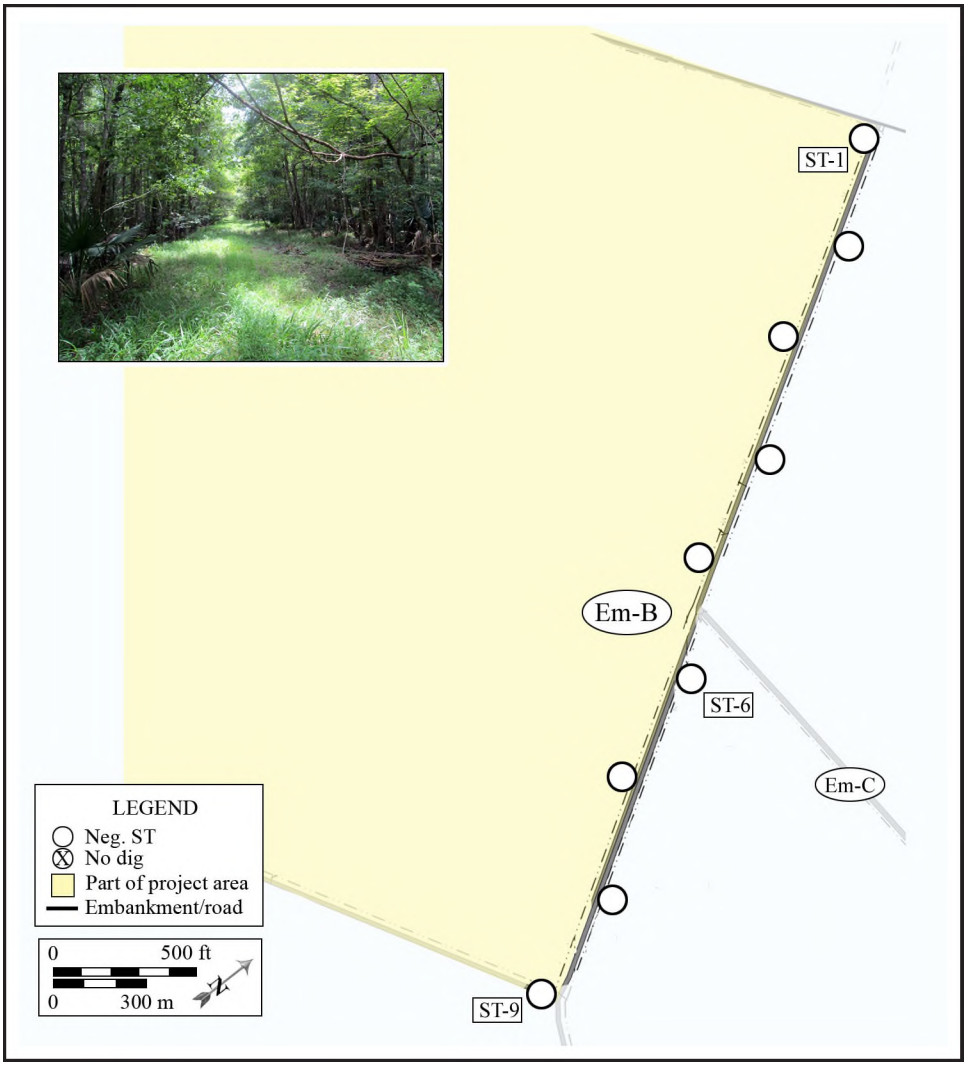


Figure 6.07 Shovel test map, embankment Em-B. Inset photo: Overview from ST# 6 (view to southeast).

The natural soils within this corridor are defined as Santee (Sc) loam and/or clay (NRCS 2018). Overall, a total of total of nine (9) negative shovel tests were alternately installed at 400 foot (122 m) intervals along

the 3,600 foot (1,097.3 m) long embankment corridor. Soil depths ranged from 3.2 to 4 inches (8 to 10 cm) in depth and exhibited only one (1) soil horizon that terminated in hardpan clay.

Horizon A - very dark grayish brown (10YR 3/2) clay, 3.2 to 4 inches (8 to 10 cm) below surface (bs); dark gray (10YR 4/1) clay, 3.2 to 4 inches (8 to 10 cm) bs; dark yellowish brown (10YR 4/4) clay, 0 to 3.2 inches (0 to 8 cm) bs; or gray (10YR 5/1) clay, 0 to 3.2 inches (0 to 8 cm) bs.

Embankment Em-C

The Em-C embankment corridor is approximately 20 feet (6.1 m) wide and trends west to east (N85°E). It is flanked by a single canal and abandoned rice fields on the south side and abandoned rice fields along the north side. These fields are nearly level with the embankment along its north side (Figure 6.08).

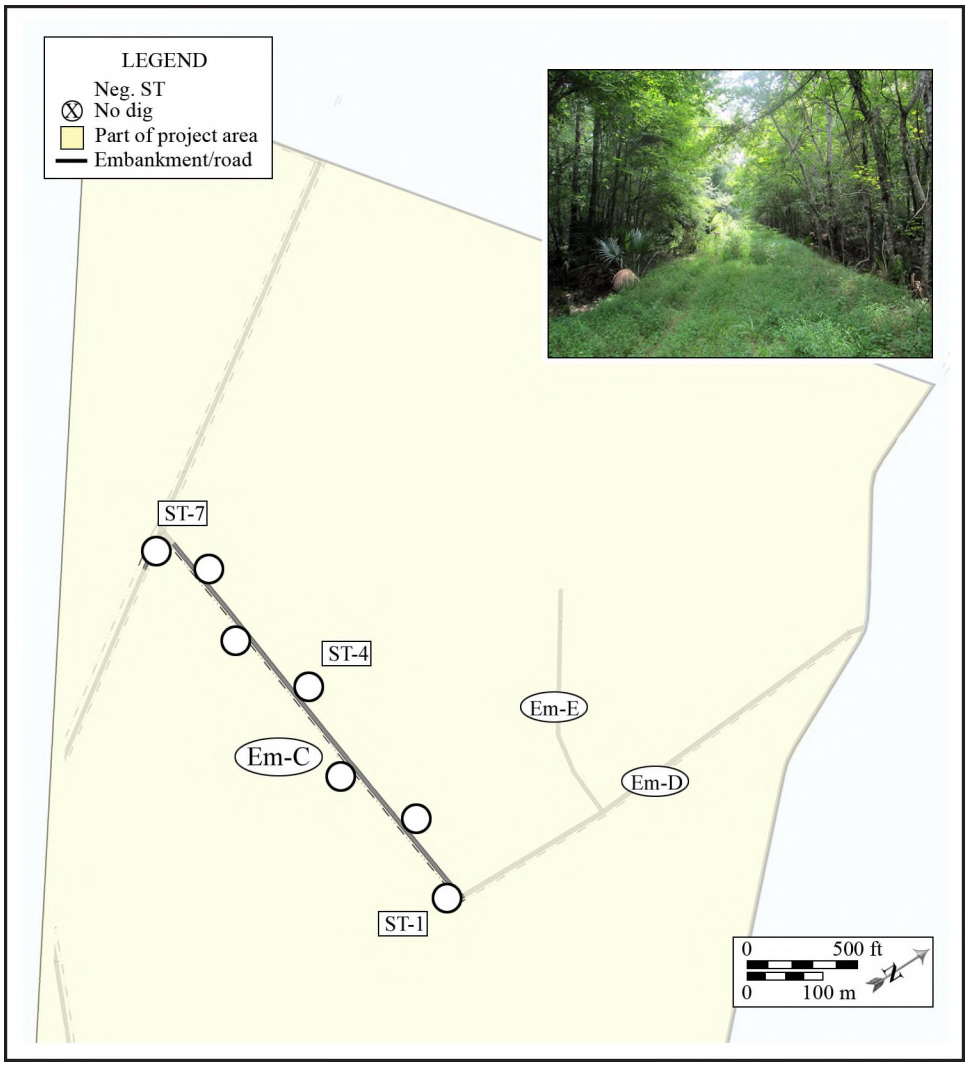


Figure 6.08 Shovel test map, embankment Em-C. Inset photo: Overview from ST# 3 (view to southwest).

Soils within this area are defined as Santee (Sc) loam and/or clay (NRCS 2018). Overall, a total of seven (7) negative shovel tests were installed at 200 to 400 foot (61 to 122 m) intervals along the 2,200 foot (670.6 m) long embankment corridor. Soil depths ranged from 3.2 to 4.8 inches (8 to 12 cm) below surface and exhibited only one (1) soil horizon that terminated in hardpan clay.

Horizon A - dark gray (10YR 4/1) clay, 0 to 4.7 in (0 to 12 cm) below surface (bs); or gray (10YR 5/1) clay, 3.2 to 4 in (8 to 10 cm) bs.

Embankment Em-D

The Em-D embankment corridor is approximately 20 feet (6.1 m) wide and trends from north to south. It is flanked by abandoned rice fields on the west side and a single canal and abandoned rice fields along the east side. These fields are relatively level with the embankment along its east side.

Overall, total of seven (7) negative shovel tests were alternately installed along the 2,400 foot (731.5 m) embankment corridor at 400 foot (122 m) intervals (Figure 6.09).

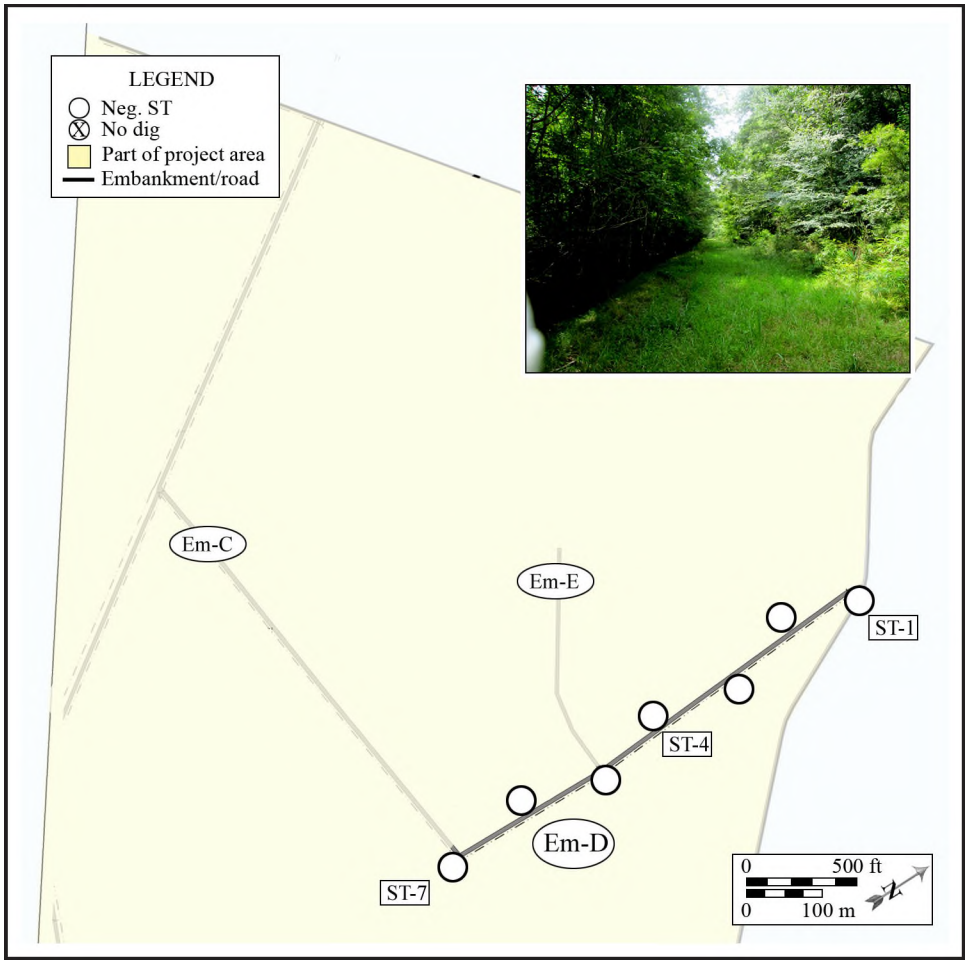


Figure 6.09 Shovel test map, embankment Em-D. Inset photo: Overview from ST# 2 (view to south).

Soils within this area are defined as Meggett (Me) clay loam, Yonges (Yo) loamy fine sand, and Santee (Sc) loam and/or clay (NRCS 2018). Soil depths ranged from 4 to 19 inches (10 to 48 cm) in depth and exhibited four (4) soil horizons that terminated in hardpan sand or clay.

Horizon A - dark yellowish brown (10YR 3/4) clay, 0 to 11 inches (0 to 28 cm) below surface (bs); brown (10YR 4/3) sand, 0 to 11.8 inches (0 to 30 cm) bs; dark yellowish brown (10YR 4/4) sand, 0 to 4 inches (0 to 10 cm) bs; gray (10YR 5/1) clay, 4 to 4.7 inches (10 to 12 cm) bs; yellowish brown (10YR 5/4) sand, 0 to 6.3 inches (0 to 16 cm) bs; or very pale brown (10YR 7/4) clay, 0 to 4 inches (0 to 10 cm) bs.

Horizon B - brown (7.5YR 4/4) sand, 4 to 6 inches (10 to 15 cm) below surface (bs); reddish yellow (7.5YR 6/8) sand, 11.8 to 18.9 inches (30 to 48 cm) bs; or very dark grayish brown (10YR 3/3) sand, 6.3 to 8.7 inches (16 to 22 cm) bs.

Horizon C - dark brown (10YR 4/4) sand, 6 to 9.1 inches (15 to 23 cm) below surface bs; or white (10YR 8/1) sand, 8.7 to 11 inches (22 to 28 cm) bs.

Horizon D - light gray (10YR 7/2) clay, 9.1 to 14.2 inches (23 to 36 cm) below surface (bs).

Embankment Em-E

The Em-E embankment corridor is approximately 15 feet (4.6 m) wide and trends from west (N90°W) to northwest (N55°W). It is flanked on the north and south sides by abandoned rice fields. These fields are relatively level with the embankment along its north side (Figure 6.10).

Figure 6.10 Shovel test map, embankment Em-E. Inset photo: Overview from ST# 1 (view to east).

Overall, a total of three (3) negative shovel tests were alternately installed along the 1,000 foot (304.8 m) embankment corridor at 400 foot (122 m) intervals. Soils in this area are defined as Meggett (Me) clay loam, Santee (Sc) loam and/or clay, and Yonges (Yo) loamy fine sand (NRCS 2018). Soil depths ranged from 4 to 9.8 inches (10 to 25 cm) in depth and exhibited two (2) soil horizons that terminated in hardpan sand or clay.

Horizon A - dark yellowish brown (10YR 4/4) sand, 0 to 6.7 inches (0 to 17 cm) below surface (bs) or gray 10YR 5/1) clay, 4 to 4.7 inches (10 to 12 cm) bs.

Horizon B - reddish yellow (5YR 6/8) sand, 6.7 to 9.8 inches (17 to 25 cm) below surface (bs).

Embankment Em-F

The Em-F embankment corridor is approximately 20 feet (6.1 m) wide and trends north/northwest (N40°W) (Figure 6.11). During survey, this embankment corridor was observed to be nearly level with the fields on the west and east sides and after about 300 feet (91.4 m) is totally inundated with water.

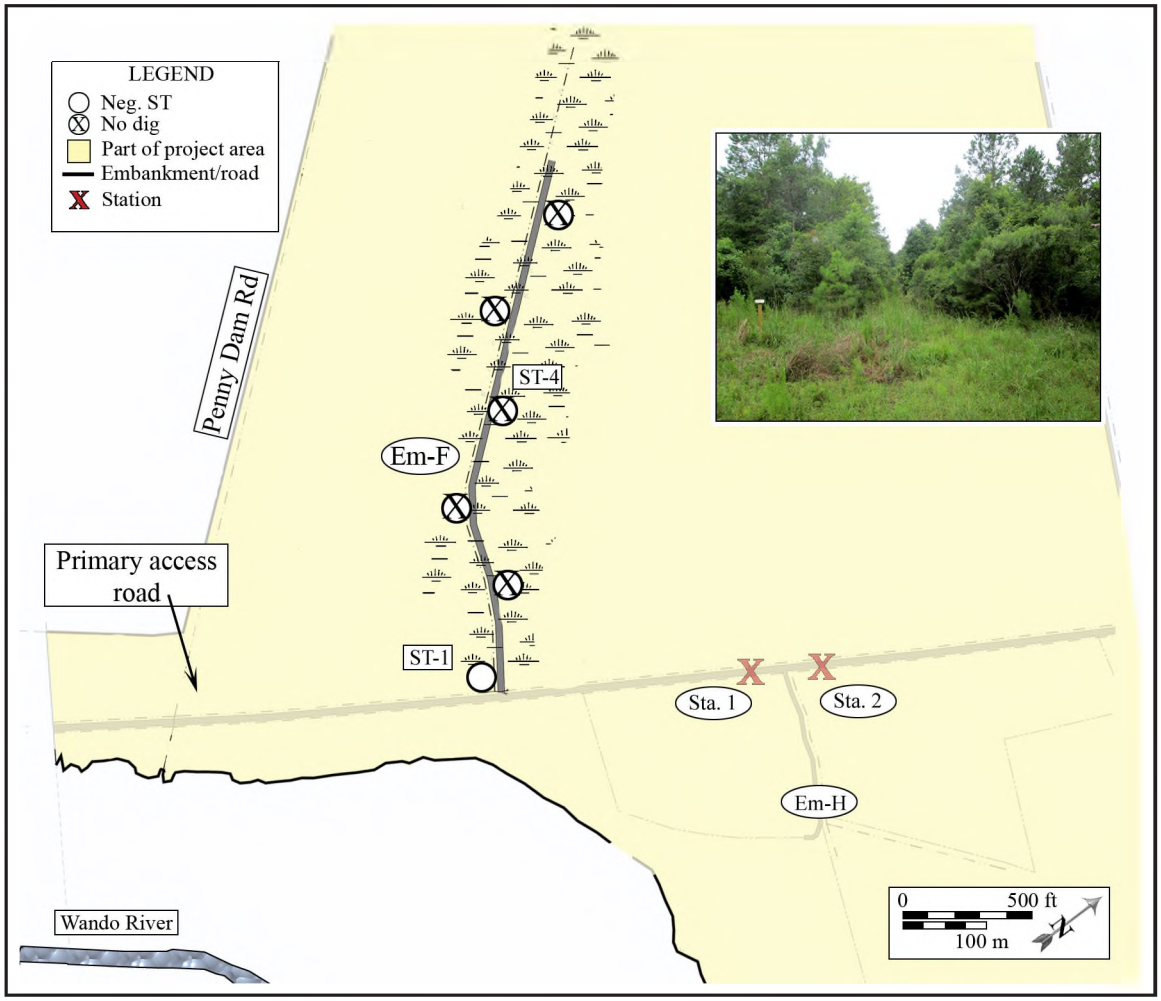


Figure 6.11 Shovel test map, embankment Em-F. Inset photo: Overview from ST# 1 (view to northwest).

Soils within this area are defined as Santee (Sc) loam and/or clay and Wadmalaw (Wa) fine sandy loam (NRCS 2018). Initially slated for the installation of approximately six (6) shovel tests along the 2,000 foot (609.6 m) corridor, only one (1) shovel test was installed due to the presence of extensive standing water This shovel test terminated at 9.9 inches (25 cm) and exhibited two (2) soil horizons that terminated in hardpan sand.

Horizon A - dark yellowish brown (10YR 4/4) sand, 0 to 6.7 inches (0 to 17 cm) below surface (bs).

Horizon B - reddish yellow (5YR 6/8) sand, 6.7 to 9.8 inches (17 to 25 cm) below surface (bs).

Embankment Em-G

The Em-G embankment corridor is approximately 20 feet (6.1 m) wide and trends north/northwest (N20°W). It is flanked by a single canal and abandoned rice fields on the north side and abandoned rice fields along the south side. These fields are essentially level with the embankment along its south side.

Soils within this area are defined as Santee (Sc) loam and/or clay (NRCS 2018). Overall, a total of nine (9) negative shovel tests were installed along the 3,300 foot (1,005.8 m) embankment corridor at 400 foot (122 m) intervals (Figure 6.12). Soil depths ranged from 3.2 to 7.1 inches (8 to 18 cm) and exhibited only one (1) soil horizon that terminated in hardpan clay.

Horizon A - very dark grayish brown (10YR 3/2) clay, 0 to 3.2 inches (0 to 8 cm) below surface (bs); light gray (10YR 4/1) clay, 0 to 3.2 inches (0 to 8 cm) bs; dark yellowish brown (10YR 4/6) clay, 4.7 to 7.1 inches (12 to 18 cm) bs; or gray (10YR 5/1) clay, 0 to 3.2 inches (0 to 8 cm) bs.

Embankment Em-H

The Em-H embankment corridor is approximately 12 to 15 feet (3.7 to 4.6 m) wide and trends southeast (S70°E). It is flanked by a single canal and abandoned rice fields on both the north and south sides. These fields are slightly lower than the embankment along its north side.

Soils within this area are defined as Wadmalaw (Wa) fine sandy loam (NRCS 2018). Overall, a total of three (3) negative shovel tests were installed along the 800 ft (m) embankment corridor at 400 feet (122 m) intervals (Figure 6.13). Soil depths extended to 3.2 inches (8 cm) and exhibited only one (1) soil horizon that terminated in hardpan clay.

Horizon A - dark gray (10YR 4/1) clay, 0 to 3.2 inches (0 to 8 cm) below surface (bs); gray (10YR 6/1) clay, 0 to 3.2 inches (0 to 8 cm) bs; or very pale brown (10YR 7/4) clay, 0 to 3.2 inches (0 to 8 cm) bs.

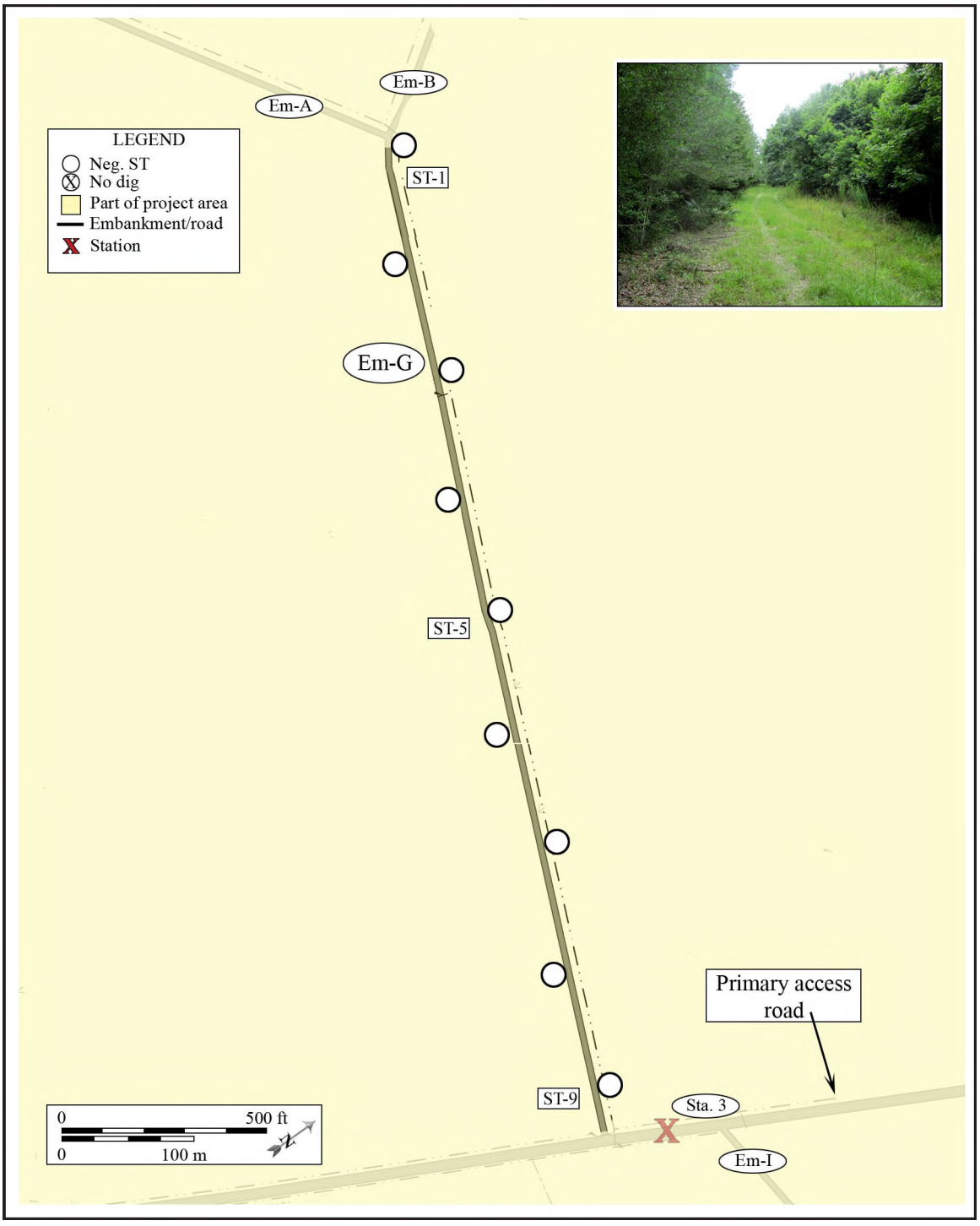


Figure 6.12 Shovel test map, embankment Em-G. Inset photo: Overview from ST# 4 (view to east).

Embankment Em-I

The Em-I embankment corridor is approximately 12 to 15 feet (3.7 to 4.6 m) wide and trends both east (N85°E) and southeast (S40°E). It is flanked by a single canal and abandoned rice fields on both the north/

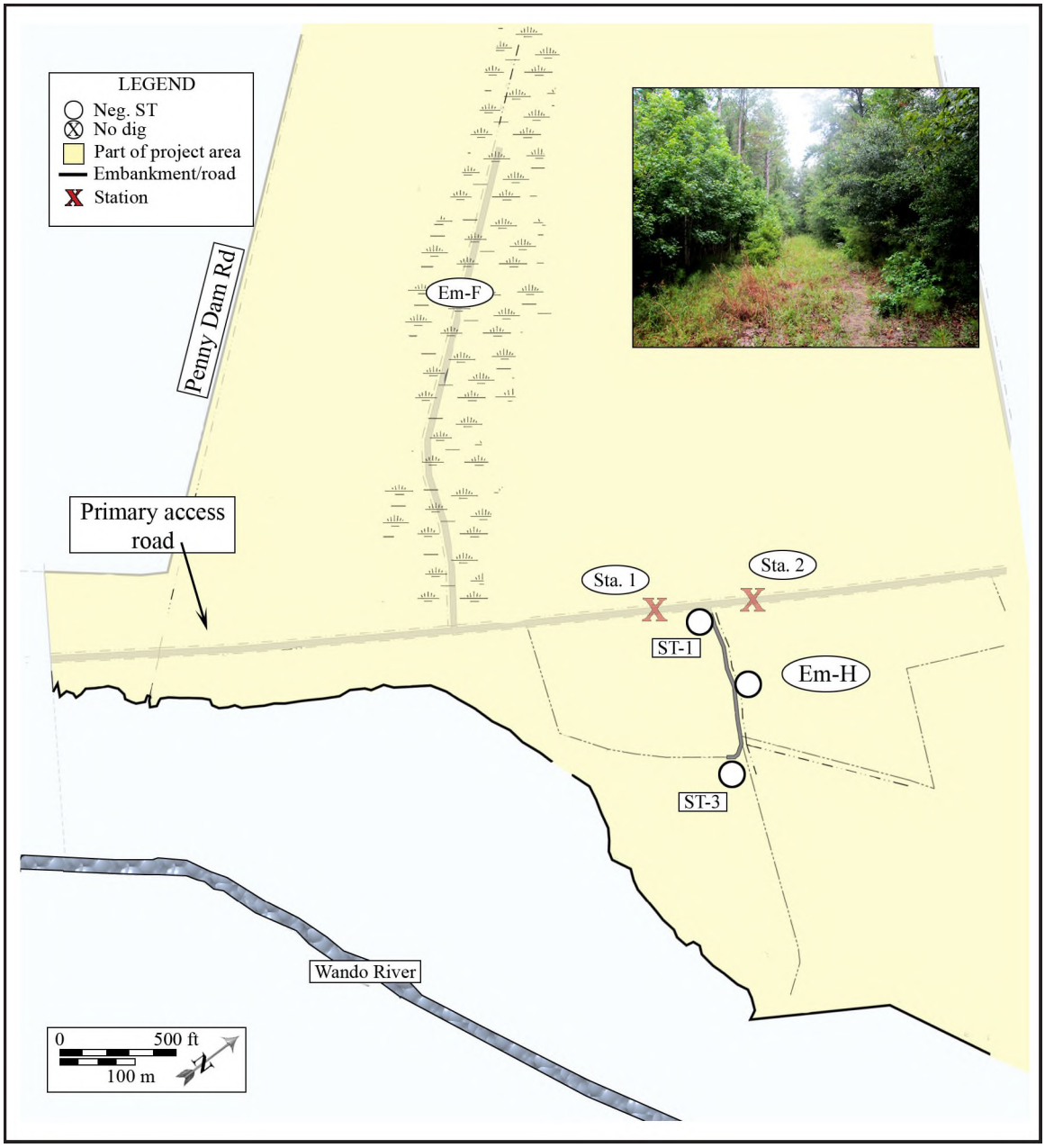


Figure 6.13 Shovel test map, embankment Em-H. Inset photo: Overview from ST# 1 (view to west).

northeast and south/southwest sides of the road, as well as abandoned rice fields. These fields are essentially level the embankment.

Soils within this area are defined as Santee (Sc) loam and/or clay with a small portion of Santee (Se) loam within the southwest portion of the embankment corridor (NRCS 2018). Overall, a total of seven (7) negative shovel tests at 400 feet (122 m) intervals (one [1] of which was a "No Dig" due to standing water) were installed along the 2,400 foot (731.5 m) corridor (Figure 6.14). Soil depths ranged from 4.8 to 11.8 inches (12 to 30 cm) and exhibited four (4) soil horizons that terminated in hardpan sand/clay or clay.

Horizon A - very dark grayish brown (10YR 3/2) clay, 0 to 6 inches (0 to 15 cm) below surface (bs); dark yellowish brown (10YR 4/4) sandy loam or loam, 4.7 to 7.1 inches (12 to 18 cm) bs; yellowish brown (10YR 5/4) sand, 0 to 4.7 inches (0 to 12 cm) bs; light brownish gray (10YR 6/2) sand, 0 to 3.5 inches (0 to 9 cm) bs; or light gray (10YR 7/1) sand, 0 to 5.1 inches (0 to 13 cm) bs.

Horizon B - very dark brown (10YR 2/2) clay, 5.1 to 9.5 inches (13 to 24 cm) below surface (bs); dark gray (10YR 4/1) clay, 3.5 to 5.1 inches (9 to 13 cm) bs; dark yellowish brown (10YR 4/4) clay, 7.1 to 9.1 inches (18 to 23 cm) bs; or light brownish gray (10YR 6/2) sandy clay loam, 4.7 to 6.7 inches (12 to 17 cm) bs.

Horizon C - reddish yellow (7.5YR 6/8) clay, 5.1 to 10.2 inches (13 to 26 cm) below surface (bs); or yellowish brown (10YR 5/4) sandy clay loam, 6.7 to 10.6 inches (17 to 27 cm) bs.

Horizon D - white (10YR 8/1) clay, 10.6 to 11.8 inches (27 to 30 cm) below surface bs.

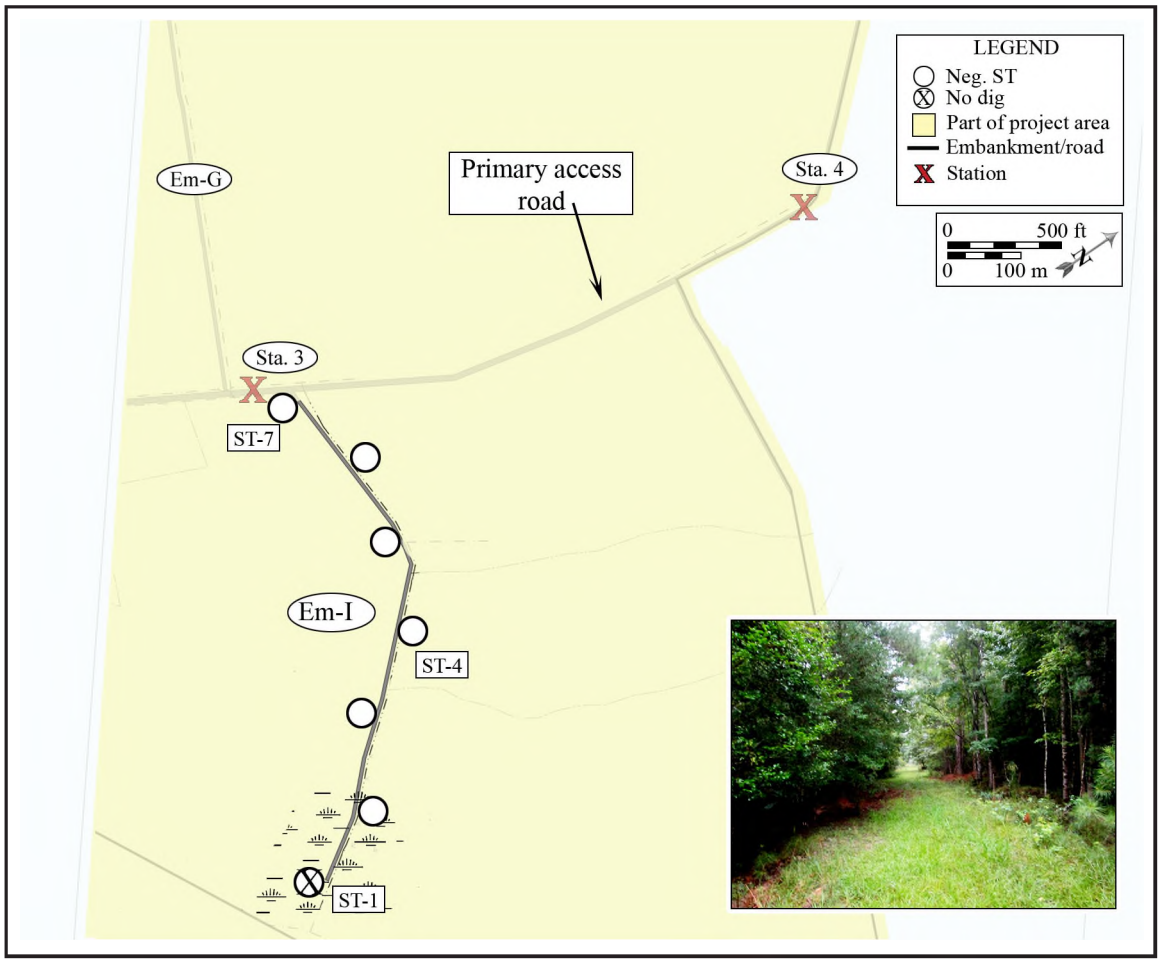


Figure 6.14 Shovel test map, embankment Em-I. Inset photo: Overview from between ST# 2 and ST# 3 (view to northwest).

CHAPTER 7
CONCLUSIONS & RECOMMENDATIONS

The reconnaissance survey of selected portions of Fairlawn plantation located and assessed a total of 13 separate locations (Sta-1 through Sta-4 and Em-A through Em-I) within the study tract. These were chosen for testing because plans for the proposed mitigation bank call for these embankments to undergo either a reduction in height or the installation of gravel-based swales, and because these actions could have an adverse effect on historic cultural resources (i.e. the rice field embankments themselves).

The entire rice field, including these embankments, is an historic landscape in nature (SHPO Site No. 7993). All were constructed at least as early as 1794 and have been maintained continuously through subsequent ownerships and various land usages. The methodology for this survey was designed to determine whether these properties would likely be eligible for inclusion on the National Register of Historic Places (NRHP; 36 CFR 60.4 [Criteria a-d]).

The National Historic Preservation Act of 1966 established criteria for determining eligibility for historic sites and for this report. These criteria for inclusion are supplemented with the SCDAH/SHPO criteria regarding Criterion [c] of the National Preservation Act of 1966. In addition, guidelines for determining rice field site integrity, as well as supporting documents, were consulted (SCDAH 2011: App. A).

As with all of the embankments present within the confines of Fairlawn plantation, the tested dikes were constructed during the initial excavation of canals used to control water flow. It is highly probable that once these embankments had been built, they were planked with boards and used as roads to access portions of the plantation although no evidence of planking was observed during the current survey (*see Barr 1996; Trinkley and Hacker 1996b:88*).

Observations made during a previous Barr & Associates assessment and the current shovel testing confirm that, for many decades, the overall rice field infrastructure (ditches/canals, trunks, embankments, etc.) has been dredged, rebuilt, and/or replaced with modern materials, and the embankments were repaired with gravel and fill.

CONCLUSIONS

Inland rice plantations are remnant physical representations of a rich cultural heritage during the heyday of Carolina rice production. Not only do they represent changes within the physical landscape, they also represent the broad, multiethnic cultural landscape and heritage of the state - one dominated by the white

European elite, but also one in which indentured white Europeans, enslaved black Africans, and enslaved Native Americans all participated.

All indications are that Fairlawn was a working plantation owned by Thomas Screven prior to its 1794 purchase by Hugh Rose. Although the data is limited, it does suggest that Fairlawn may date from as early as the Colonial era, extending to as late as 1865 and its ownership by George Trenholm.

Over time, elite members of society continued to dominate all facets of Lowcountry South Carolina culture, society and its economy from the Colonial Period to the Antebellum Period. They controlled the land, the labor and the law. They provided the capital for the construction of large plantations such as Fairlawn and the construction and purchase of flats and ships to export what was produced. Enslaved workers - initially Native Americans and later black Africans - provided the labor from which these white planters were able to continue their dominance over those relegated to the lower rungs of the socio-economic ladder of success.

Rice Field System Evaluation

According to guidelines published in *Rice Fields and Section 106: SHPO Guidance for Federal Agencies and Applicants*, the SHPO "believe[s] that in order for an... inland rice field to meet the criteria for listing in the NRHP, [it] should include all nine of the following criteria" (SCDAH 2011:App. A).

1. Identifiable plantation settlement.
2. Can the rice field contribute to further understanding of the plantation's history?
3. Can the rice system contribute to further understanding of rice planting technology?
4. Located in an historic swamp or lowland wetland.
5. Identifiable historic water flow.
6. Presence of earthworks, canals and water control structures.
7. Identifiable dams, facing ditches and facing embankments.
8. Character of lowland swamp retained.
9. Associated with a fresh water source.

In short, we believe that Fairlawn Plantation and its associated rice field system does meet all of these criteria.

1. <u>Identifiable plantation settlement</u> - Yes. The remnant portion of Fairlawn Plantation (SHPO Site No. 7993) exhibits the remains of the main house complex (SHPO Site No. 7993.02), an early steam-driven rice processing center (SHPO Site No. 7993.03) and a probable African-American graveyard (SHPO Site No. 7993.01) thought to be associated with a nearby cluster of housing for enslaved workes. Locations of

these features and of the remaining embankments/dikes correlate well with the highly detailed 1794 plat of the plantation.

2. Understanding of plantation's history - Yes. The overall layout of Fairlawn Plantation demonstrates a self-contained and self-sufficient agricultural and economic entity based upon the economic exploitation of commodities for export to European and international markets. While it is clear that technology was updated periodically - i.e. the installation of steam-driven rice processing to replace labor-intensive manual threshing or winnowing activities - a comparison of the embankments and canals from the 1794 plat with their current locations suggests that the overall design of the plantation remained unchanged for the 100-plus years that it functioned as a rice producing enterprise, as well as throughout the tract's twentieth century use as timber land.

3. Understanding of rice planting technology - Yes. The layout of the fields, and the placement of embankments, rice trunks and other infrastructure were no doubt predicated upon then current knowledge of water flow across the growing rice. Actual on-the-ground data from archaeological study of this design would offer both physical and comparative data to the theories published in coeval manuals and treatises in a manner that is currently otherwise unavailable to present-day researchers.

4. Historic swamp or lowland wetland - Yes. The rice field system and plantation are located in the historic I'On swamp/wetland.

5. Historic flow of water - Yes. According to Smith, water flowed from the Mt. Pleasant Scarps, Wappetaw Creek and Guerin Creek towards the brackish Awendaw Creek. Mayrant's Reserve and Penny Dam were components of the historic plantation, holding and dispersing rain and creek-fed fresh water which ran through the rice fields to Awendaw Creek (Smith 2012:173-174).

6. Presence of earthworks, canals and water control structures - Yes. Although rebuilt over time, the current placement/position of the primary infrastructure of the rice fields remains as originally constructed and depicted in the 1794 plat of the plantation. While several minor embankments no longer exist, the primary layout and form of the fields remains extant.

7. Identifiable dams, facing ditches and facing embankments - Yes.

8. Character of lowland swamp retained - Yes. Although modified by the conversion to rice agriculture, the natural reclamation of the environmental wetland is currently taking place. This is found in the natural flooding in the northwest and western section of the property.

9. Associated with fresh water source - Yes. The plantation is associated with Guerin

Creek, Mayrant's Reserve and Penny Dam. The reserves were constructed to facilitate a steady impoundment of fresh water across the fields. Embankments and ditches distributed that flow to insure that water resources were controlled. Since the physical landscape is essentially level, the implication is that these ditches were excavated on a grade to facilitated its flow and drainage, when required, into Awendaw Creek.

NRHP Eligibility

Eligibility for inclusion in the National Register of Historic Places (NRHP) is based upon the property's significance in American history, architecture, archaeology, engineering or culture. It must meet one of four criteria.

a) Association with events that have made significant contribution to the broad patterns of history.

b) Associated with the lives of significant persons in history.

c) Possess distinctive characteristics of a type, period or other method of construction...

d) Ability to yield important information.

Criteria [a] and [b] - important persons or events - There is no doubt that Hugh Rose was a strong, contributing individual during the Federal and Antebellum periods of South Carolina's history. However, as interesting as his life was, it does not rise to the level of significance such as that of Henry Laurens, Thomas Heyward or John Calhoun. Therefore, other than his general participation as a rice planter within the broad patterns of South Carolina's overall economic development, his personal ownership of Fairlawn would not qualify for inclusion on the NRHP under Criteria [a] or [b].

Criterion [c] - distinctive characteristics - The remains of Fairlawn's historic rice fields, their layout and extant infrastructure do represent an intact, significant, distinguishable entity as defined by the SC SHPO publication *Rice Fields and Section 106* (SCDAH 2011:App. A). The presence of definable key structures in extant locations or *in situ* trunks within rice field systems assist in establishing a holistic picture of inland rice plantations that archaeologists and historians studying their development may use for a greater understanding of their layout and function. In addition, the Fairlawn tract contains various aspects that would support strong integrity of location and setting, as well as design, materials, workmanship, feeling and/or association that would qualify the site for inclusion on the NRHP under Criterion [c].

Criterion [d] - ability to yield important information - The Fairlawn tract must be viewed in the context of previously recovered sites related to inland rice agriculture along the South Carolina's Atlantic coast of which 70,000 acres were repaired and preserved during the early twentieth century (Tibbets 2014:12). Although

Fairlawn has been heavily impacted since its purchase in 1919 by R.H. Belser by a combination of extensive logging, repeated plantings of banked plantation pine, the re-excavation of its major flanking and central canals, and the silting-in of interior drains, these modifications to the historic nature of the tract have not affected its overall layout as depicted in a 1794 plat (Purcell 1794). Therefore, due to its intact nature, the overall Fairlawn property exhibits significance for inclusion in the NRHP under Criterion [d].

Recommendations

The current survey determined that although the embankments do not contain significant archaeological deposits that would be useful for research or commemorative study, they themselves are considered significant above-ground features that were integral to the plantation's layout and function. No additional archaeological ground testing of the embankments/dikes or of the rice fields themselves is considered warranted.

An intensive survey of the area potentially containing HP-2 (possible slave housing) and a probable African-American graveyard (Site 38CH2577/SHPO Site No. 7993.01) is recommended. The intensive survey should include field verification and possible site expansion of the two sites. Avoidance of the area, as depicted on the 1794 Fairlawn Plantation plat, along with a 50 foot (15m) buffer, is recommended until such studies can be undertaken.

Finally, there are two areas outside of the current study area and the boundaries of the proposed mitigation bank - the main residential area (SHPO Site No. 7993.02) and a historic rice processing center (SHPO Site No. 7993.03), as well as two areas containing potential housing for enslaved workers. In the event that the property owners eventually want to expand the mitigation bank boundaries or to otherwise conduct ground-disturbing activities in the vicinity of these sites, full intensive archaeological investigations would be considered warranted at that time.

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APPENDIX A

CORRESPONDENCE
SC SHPO (Keely Lewis-Schroer) TO
BARR & ASSOCIATES (William B. Barr)
15 NOVEMBER, 2019

10.11.2018,
rev. 04.29.2019; 08.16.2019

EST. 1905
SOUTH CAROLINA DEPARTMENT OF
ARCHIVES & HISTORY

November 15, 2019

Amanda L. Heath
Chief, Special Projects Branch
Department of the Army
Charleston District, Corps of Engineers
69A Hagood Avenue
Charleston, South Carolina 29403-5107

Re: Swamp Thing Mitigation Bank (STMB)
(SAC-2014-01090)
Charleston County, South Carolina
SHPO Project No. 18-KL0075

Dear Amanda Heath:

Thank you for your letter of October 15, 2019 regarding the subject-referenced undertaking. We additionally received the revised report, *A Selective Reconnaissance Survey of a 998 Acre Tract of Land within the Former Rice Plantation of Hugh Rose known as Fairlawn, Christ Church Parish, Charleston County*, as supporting documentation for this undertaking on October 31, 2019. The State Historic Preservation Office (SHPO) is providing comments to the U.S. Army Corps of Engineers (Corps) pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR 800. Consultation with the SHPO is not a substitution for consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public.

As noted in your letter, the report recommends that the Fairlawn Plantation Rice Field Landscape (SHPO Site No. 7993) is eligible for listing in the National Register of Historic Places (NRHP) under Criterion C and D. The Corps states that they agree with this recommendation and requests our office's review of the report and the Corps' determination of eligibility for Fairlawn Plantation (SHPO Site No. 7993). Our office concurs with this determination.

The Corps notes that the Prospectus for STMB proposes installing a weir on the road between STMB and Mayrant's Reserve that is likely to provide additional hydrology to STMB. Additionally, the Prospectus proposes to remove the Fairlawn Plantation Rice Fields. The Corps states that the proposed activities will have an adverse effect on Fairlawn Plantation, as it will physically destroy the historic rice fields and significantly alter the character of the property's setting that contributes to its historic significance.

Based on the description of the Area of Potential Effect (APE) and the identification of historic properties within the APE, our office concurs that the Fairlawn Plantation Rice Field Landscape (SHPO Site No. 7993) will be adversely affected by this project.

The Corps notes that the Fairlawn Plantation Graveyard (38CH2577/SHPO Site No. 7993.01) is also located within the STMB, as well as HP-2, the possible slave housing referenced in the report. The Corps notes that it is their understanding that, as requested in previous correspondence and meetings between our offices, the project sponsor and consultant, these resources will be recorded and fully delineated in a separate survey. The Corps notes that this delineation will be done to assure that both sites are located within the cultural resources area proposed for avoidance in the Prospectus. The Corps notes that the Fairlawn Plantation Graveyard is also subject to South Carolina state laws addressing abandoned cemeteries and burials. Our office concurs with the recommendation of the report and the Corps for an intensive survey to record, delineate, and evaluate HP-2 and the Fairlawn Plantation Graveyard (38CH2577/SHPO Site No. 7993.01).

The Corps states that, even though no ground disturbing activities are proposed within the cultural resource avoidance area, the Corps has concerns regarding the potential indirect effect of the undertaking on the Fairlawn Plantation Graveyard (38CH2577/SHPO Site No. 7993.01) and HP-2. The Corps requests additional information about how the new water levels may affect these resources under normal conditions and during flood events. The Corps states that they will defer completing a final determination of effects for this undertaking until all the information necessary is provided by the project sponsor. Our office concurs with the Corps' request for additional information regarding the indirect effect of the undertaking on Fairlawn Plantation Graveyard (38CH2577/SHPO Site No. 7993.01) and HP-2.

Our office accepts the draft report as final. To complete the reporting process, please provide at least three (3) hard copies of a final report: one (1) bound hard copy and a digital copy in ADOBE Acrobat PDF format for the SHPO; one (1) bound and one (1) unbound hard copies and a digital copy in ADOBE Acrobat PDF format for SCIAA. Investigators should send all copies directly to the SHPO. The SHPO will distribute the appropriate copies to SCIAA. Please ensure that a copy of our comments letter is included in the Appendices and Attachments of the final report.

Please provide GIS shapefiles for the surveyed area (and architectural sites as applicable). Shapefiles for identified archaeological sites should be coordinated with SCIAA. Shapefiles should be compatible with ArcGIS (.shp file format) and should be sent as a bundle in .zip format. For additional information, please see our GIS Data Submission Requirements.

Please provide final electronic copies of the survey forms and photographs for the above-ground resources following the Electronic Submission Requirements for Planning Surveys and Review & Compliance Surveys.

Please refer to SHPO Project Number 18-KL0075 in any future correspondence regarding this project. If you have any questions, please contact me at (803) 896-6181 or KSchroer@scdah.sc.gov.

Sincerely,

Keely Lewis-Schroer

Keely Lewis-Schroer
Archaeologist
State Historic Preservation Office

cc: David Wilson, Corps
Michelle Zulauf, Corps
Alan Wood, American Forest Management, Inc.
William Barr, Barr and Associates

Appendix B

Shovel Test Log

10.11.2018,
rev. 04.29.2019; 08.16.2019

Shovel Test Log

Project: STMB-1 **Date:** 08.01.2018

ST#	Pos/ Neg	Depth	Soil Color	Soil Type	Commments	Location
Station 1 - Dike Breach - 30 ft Intervals						
1	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
2	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
3	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
4	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
5	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
6	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
Station 2 - Dike Breach - 30 ft Intervals						
1	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
2	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
3	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
4	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
5	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
6	Neg.	No Dig			Gravel on Surface	Main Road/Canal to West
Station 3 - Dike Breach - 30 ft Intervals						
1	Neg.	0-18 cm	10YR 5/1	Sandy Loam		Main Road/Canal to West
		18-23 cm	10YR 5/1	Clay		
2	Neg.	0-16 cm	10YR 4/4	Sandy Loam		Main Road/Canal to West
		at 16 cm		Gravel		
3	Neg.	0-15 cm	10YR 4/4	Sandy Loam		Main Road/Canal to West
		15-30 cm	10YR 4/4	Clay		
4	Neg.	0-12 cm	10YR 4/6	Sandy Loam		Main Road/Canal to West
		12-16 cm	10YR 4/6	Clay		
5	Neg.	0-7 cm	10YR 4/4	Sandy Loam		Main Road/Canal to West
		7-11 cm	7.5YR 4/1	Sandy Loam		
		11-17 cm	10YR 3/2	Clay		
6	Neg.	0-11 cm	10YR 4/4	Sandy Loam		Main Road/Canal to West
		at 11 cm		Gravel		
Station 4 - Control Test - 30 ft Intervals						
1	Neg.	0-30 cm	10YR 5/6	Mottled Clay		Main Road/Canal to South
		30-33 cm	10YR 3/6	Sand		
		33-37 cm	10YR 5/1	Sand		
		at 37 cm		Hard Pan		

ST#	Pos/ Neg	Depth	Soil Color	Soil Type	Commments	Location
2	Neg.	0-20 cm	10YR 5/6	Mottled Friable Clay		Main Road/Canal to South
		20-30 cm	10YR 5/1	Friable Clay		
		30-38 cm	10YR 7/2	Friable Clay		
3	Neg.	0-26 cm	10YR 5/1	Mottled Friable Clay		Main Road/Canal to South
		26-40 cm	10YR 7/2	Clay		
4	Neg.	0-12 cm	10YR 5/1	Friable Clay		Main Road/Canal to South
		12-30 cm	10YR 7/4	Clay		
		at 30 cm		Hard Pan		
5	Neg.	0-15 cm	10YR 6/2	Friable Clay		Main Road/Canal to South
		15-30 cm	YR 8/1 w/7.5YR 6/8 mot	Clay		
6	Neg.	0-16 cm	10YR 6/2	Friable Clay		Main Road/Canal to West
		16-24 cm	YR 8/1 w/7.5YR 6/8 mot	Clay		
7	Neg.	0-18 cm	YR 8/4 w/10YR 6/1 mot	Friable Clay		Main Road/Canal to West
		18-34 cm	10YR 6/6	Clay		
8	Pos.	0-17 cm	10YR 6/4	Mottled Friable Clay		Main Road/Canal to West
		17-26 cm	7.5YR 4/4	Friable Clay		
		26-30 cm	10YR 5/1	Sand		
		at 30 cm		Hard Pan		
9	Neg.	0-26 cm	10YR 5/3	Friable Clay		Main Road/Canal to West
		26-40 cm	7.5YR 4/6	Sand		
		at 40 cm		Hard Pan		
10	Neg.	0-8 cm	10YR 6/3	Sandy Clay Loam		Main Road/Canal to West
		18-40 cm	10YR 4/1	Clay		
11	Neg.	0-23 cm	10YR 5/3	Friable Clay		Main Road/Canal to West
		23-34 cm	7.5YR 4/6	Sand		
		at 34 cm		Hard Pan		
12	Neg.	0-17 cm	10YR 5/3	Sandy Clay Loam		Main Road/Canal to West
		17-25 cm	10YR 7/4	Friable Clay		
		25-36 cm	10YR 6/3	Clay		
Embankement Em-A - 100, 200 & 400 ft Intervals						
1	Neg.	0-18	10YR 4/1	Friable Clay		SE Side Level w/Wooded Lowlands
		at 18 cm		Hard Pan		
2	Neg.	0-23 cm	10YR 4/1	Clay		NW Side, Single Canal
		at 23		Hard Pan		
3	Neg.	0-12 cm	10YR 4/1	Clay		SE Side Level w/Wooded Lowlands
		at 12 cm		Hard Pan		

ST#	Pos/ Neg	Depth	Soil Color	Soil Type	Commments	Location
4	Neg.	0-10 cm	10YR 3/2	Clay		NW Side, Single Canal
		at 10 cm		Hard Pan		
5	Neg.	No Dig				Drainage Ditch
6	Neg.	0-12 cm	10YR 3/2	Clay		NW Side, Single Canal
		at 12 cm		Hard Pan		
7	Neg.	0-12 cm	10YR 3/2	Clay		NW Side, Single Canal
		at 12 cm		Hard Pan		
8	Neg.	0-12 cm	10YR 3/2	Clay		SE Side Level w/Wooded Lowlands
		at 12 cm		Hard Pan		
Embankment Em-B - 400 ft Intervals						
1	Neg.	0-8 cm	10YR 4/1	Clay		NE Side of Dike, Double Canal
		at 8 cm		Hard Pan		
2	Neg.	0-8 cm	10YR 4/4	Clay		SW Side of Dike - Single Canal
		at 8 cm		Hard Pan		
3		0-10 cm	10YR 4/1	Clay		NE Side of Dike, Double Canal
		at 10 cm		Hard Pan		
4	Neg.	0-8 cm	10YR 3/2	Clay		SW Side of Dike - Single Canal
		at 8 cm		Root Bound		
5	Neg.	0-10 cm	10YR 5/1	Clay		NE Side of Dike, Double Canal
		at 10 cm		Hard Pan		
6	Neg.	0-10 cm	10YR 5/1	Clay		SW Side of Dike - Single Canal
		at 10 cm		Hard Pan		
7	Neg.	0-8 cm	10YR 5/1	Clay		NE Side of Dike, Double Canal
		at 8 cm		Hard Pan		
8	Neg.	0-8 cm	10YR 5/1	Clay		SW Side of Dike - Single Canal
		at 8 cm		Hard Pan		
9	Neg.	0-10 cm	10YR 3/2	Clay		NE Side of Dike, Double Canal
		at 10 cm		Hard Pan		
Embankent Em-C - 200 & 400 ft Intervals						
sw	Neg.	0-10 cm	10YR 5/1	Clay		S Side of Dike, Single Canal
		at 10 cm		Hard Pan		
2	Neg.	0-12 cm	10YR 4/1	Clay		N Side, Wooded Lowlands
		at 12 cm		Hard Pan		
3	Neg.	0-8 cm	10YR 5/1	Clay		S Side of Dike, Single Canal
		at 8 cm		Hard Pan		
4	Neg.	0-8 cm	10YR 5/1	Clay		N Side, Wooded Lowlands

ST#	Pos/ Neg	Depth	Soil Color	Soil Type	Commments	Location
		at 8 cm		Hard Pan		
5	Neg.	0-8 cm	10YR 5/1	Clay		S Side of Dike, Single Canal
		at 8 cm		Hard Pan		
6	Neg.	0-8 cm	10YR 5/1	Clay		N Side, Wooded Lowlands
		at 8 cm		Hard Pan		
7	Neg.	0-8 cm	10YR 5/1	Clay		S Side of Dike, Single Canal
		at 8 cm		Hard Pan		
Embankent Em-D - 400 ft Intervals						
1	Neg.	0-16 cm	10YR 5/4	Sand		E. Side of Dike, Single Canal
		16-22 cm	10YR 3/3	Sand		
		22-28 cm	10YR 8/1	Sand		
		at 28 cm		Hard Pan		
2	Neg.	0-28 cm	10YR 3/4	Clay		W Side, Level w/Wood Lowlands
		at 28 cm		Hard Pan		
3	Neg.	0-30 cm	10YR 4/3	Sand		E. Side of Dike, Single Canal
		30-48 cm	7.5YR 6/8	Sand		
4	Neg.	0-10 cm	10YR 4/4	Sand		W Side, Level w/Wood Lowlands
		10-15 cm	7.5YR 4/4	Sand		
		15-23 cm	10YR 4/4	Sand		
		23-36 cm	10YR 7/2	Clay		
5	Neg.	0-12 cm	10YR 5/1	Clay		E. Side of Dike, Single Canal
		at 12 cm		Hard Pan		
6	Neg.	0-10 cm	10YR 7/4	Clay		W Side, Level w/Wood Lowlands
		at 10 cm		Hard Pan		
7	Neg.	0-10 cm	10YR 5/1	Clay		E. Side of Dike, Single Canal
		at 10 cm		Hard Pan		
Embankent Em-E" - 400 ft Intervals						
1	Neg.	0-12 cm	10YR 5/1	Clay		S Side Level w.Woodlands
		at 12 cm		Hard Pan		
2	Neg.	0-10 cm	10YR 5/1	Clay		N Side Level w.Woodlands
		at 10 cm		Hard Pan		
3	Neg.	0-17 cm	10YR 4/4	Sand		S Side Level w.Woodlands
		17-25 cm	5YR 6/8	Sand		
		at 25 cm		Hard Pan		
Embankent Em-F - 400 ft Intervals						
1	Neg.	0-17 cm	10YR 4/4	Sand		SW Side of Dike
		17-25 cm	5YR 6/8	Sand		

ST#	Pos/ Neg	Depth	Soil Color	Soil Type	Commments	Location
		at 25 cm		Hard Pan		
2	Neg.	No Dig		Standing Water		Flooded
3	Neg.	No Dig		Standing Water		Flooded
4	Neg.	No Dig		Standing Water		Flooded
5	Neg.	No Dig		Standing Water		Flooded
6	Neg.	No Dig		Standing Water		Flooded
Embankent Em-G - 400 ft Intervals						
1	Neg.	0-8 cm	10YR 5/1	Clay		NE Side of Dike, Single Canal
		at 8 cm		Hard Pan		
2	Neg.	0-8 cm	10YR 4/1	Clay		SW Side, Lower Wood Lowlands
		at 8 cm		Hard Pan		
3	Neg.	0-8 cm	10YR 4/1	Clay		NE Side of Dike, Single Canal
		at 8 cm		Hard Pan		
4	Neg.	0-8 cm	10YR 3/2	Clay		SW Side, Lower Wood Lowlands
		at 8 cm		Hard Pan		
5	Neg.	0-8 cm	10YR 5/1	Clay		NE Side of Dike, Single Canal
		at 8 cm		Hard Pan		
6	Neg.	0-8 cm	10YR 4/6	Clay		SW Side, Lower Wood Lowlands
		at 8 cm		Hard Pan		
7	Neg.	0-8 cm	10YR 3/2	Clay		NE Side of Dike, Single Canal
		at 8 cm		Hard Pan		
8	Neg.	0-18 cm	10YR 4/5	Clay		SW Side, Lower Wood Lowlands
		at 18 cm		Hard Pan		
9	Neg.	0-12 cm	10YR 4/5	Clay		NE Side of Dike, Single Canal
		at 12 cm		Hard Pan		
Embankent Em-H - 400 ft Intervals						
1	Neg.	0-8 cm	10YR 6/1	Clay		SW Side, Level w/Wood Lowlands
		at 8 cm		Hard Pan		
2	Neg.	0-8 cm	10YR 7/4	Clay		NE Side of Dike, Single Canal
		at 8 cm		Hard Pan		
3	Neg.	0-8 cm	10YR 4/1	Clay		
		at 8 cm		Hard Pan		SW Side, Level w/Wood Lowlands
Embankent Em-I - 400 ft Intervals						
1	Neg.	No Dig		Standing Water		Wooded Lowlands
2	Neg.	0-15 cm	10YR 3/2	Clay		NE Side, Single Canal
		at 15 cm		Hard Pan		
3	Neg.	0-13 cm	10YR 7/1	Sand		SW Side, Level w/Wood Lowlands

ST#	Pos/ Neg	Depth	Soil Color	Soil Type	Commments	Location
		13-24 cm	10YR 2/2	Clay		
		at 24 cm		Hard Pan		
4	Neg.	0-9 cm	10YR 6/2	Sand		NE Side, Single Canal
		9-13 cm	10YR 4/1	Clay		
		13-26 cm	7.5YR 6/8	Clay		
5	Neg.	0-12 cm	10YR 5/4	Sand		S Side, Level w/Wood Lowlands
		12-17 cm	10YR 6/2	Sandy Clay Loam		
		17-27 cm	10YR 5/4	Sandy Clay Loam		
		27-30 cm	10YR 8/1	Clay		
6	Neg.	0-18 cm	10YR 4/4	Sandy Loam		NE Side, Single Canal
		18-23 cm	10YR 4/4	Clay		
		at 23 cm		Hard Pan		
7	Neg.	0-12 cm	10YR 4/4	Clay		S Side, Level w/Wood Lowlands
		at 12 cm		Water-n-Hole		