

**DRAFT  
ENVIRONMENTAL ASSESSMENT  
AND  
FINDING OF NO SIGNIFICANT IMPACT**

**CONVEYANCE OF  
RICHARD B. RUSSELL SEPARABLE  
MITIGATION LANDS**

**COLLETON, HAMPTON AND  
JASPER COUNTIES  
SOUTH CAROLINA**

**APRIL 2005**



Prepared by:  
US Army Corps of Engineers  
Savannah District  
Environmental Resources Branch

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## ENVIRONMENTAL ASSESSMENT CONVEYANCE OF RICHARD B. RUSSELL SEPARABLE MITIGATION LANDS, COLLETON, HAMPTON AND JASPER COUNTIES, SOUTH CAROLINA

### 1.0 DESCRIPTION OF THE PURPOSE AND NEED OF ACTION

#### 1.1 INTRODUCTION

The Richard B. Russell Dam and Lake was authorized by the Flood Control Act of 1966 (P.L. 89-789) to provide power production, incidental flood control, recreation, additional stream flow regulation, water supply, and fish and wildlife management to the region. The dam is located on the Savannah River, approximately 16 miles southeast of Elberton, Georgia, and 4 miles southwest of Calhoun Falls, South Carolina (Figure 1). Land acquisition was initiated in 1975 for the project. Approximately 59,760 acres were required for the project; 11,500 acres were designated for recreation. Filling of the reservoir began in October 1983 and 26,650 acres were permanently inundated.

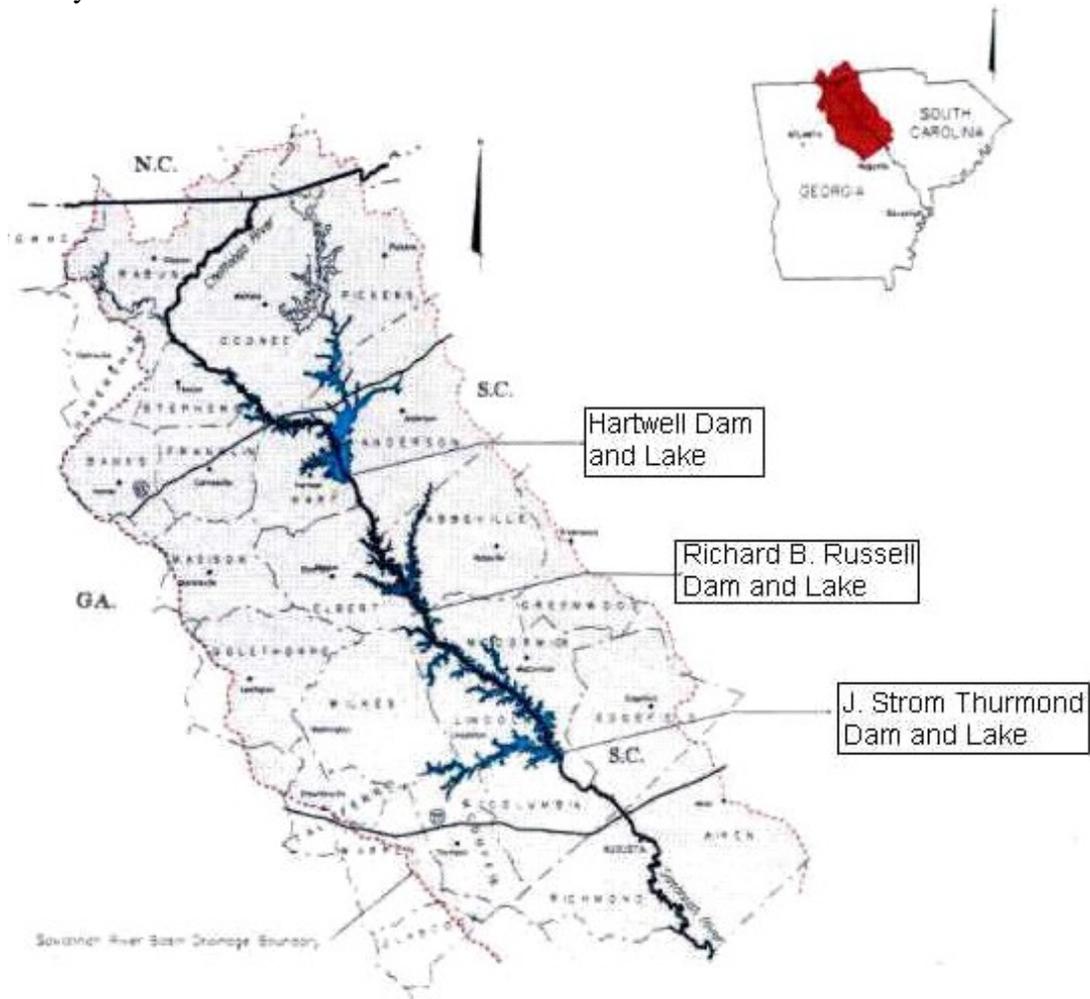


Figure 1: Location Map of Richard B. Russell Dam

A direct effect of the Richard B. Russell Dam and Lake was the loss of wildlife habitat created by the conversion of bottomland hardwood and mixed pine/hardwood habitats to open water. Impacts to coldwater fisheries also resulted from project construction. The reservoir inundated 9 to 10 miles of coldwater habitat, eliminated 20 miles of stream habitat that supported a warmwater fishery, and curtailed the spawning and migration of several species of fish in the Savannah River. The US Fish and Wildlife Service (USFWS), the US Army Corps of Engineers (USACE), Georgia Department of Natural Resources and South Carolina Department of Natural Resources (SCDNR)<sup>1</sup> developed a fish and wildlife mitigation plan to compensate for lost wildlife habitat (USACE, 1995). Approximately 4,100 acres near J. Strom Thurmond Dam and Lake were set aside for wildlife management. The USACE Savannah District also intensively manages the collar (i.e., 300-foot setback) lands around RBR Lake for wildlife. Additionally, USACE purchased separable land tracts in Georgia and South Carolina. Lands acquired in South Carolina include the following:

- Mary's Island Mitigation Tract (Donnelley) (3,408 acres)
- Maner Tract (297 acres)
- Treadwell Tract (582 acres)
- Westvaco (Palachuola) Tract (5,878 acres)

Mary's Island mitigation tract is located in Colleton County and is managed as part of the 8,048-acre Donnelley Wildlife Management Area (WMA). The Treadwell, Maner and Westvaco tracts are managed as part of the Palachuola WMA in Hampton and Jasper Counties (Figure 2). All tracts are intensively managed by SCDNR for wildlife under the terms of real estate licenses/leases issued by Real Estate Division, USACE, Savannah District. USACE makes annual payments to SCDNR for costs associated with managing the tracts.

The Water Resources Development Act (WRDA) of 1999 directed the Secretary of Army to transfer title of the mitigation lands at J. Strom Thurmond Lake and the separable tracts to the state of South

Carolina along with a lump sum payment to cover future operation and maintenance costs. The lump sum payment would be in lieu of the annual payments. USACE conducted a preliminary life cycle financial analysis in 2000, and based on that analysis, wording in the legislation was changed to eliminate the lands near J. Strom Thurmond Lake from conveyance. WRDA 2000

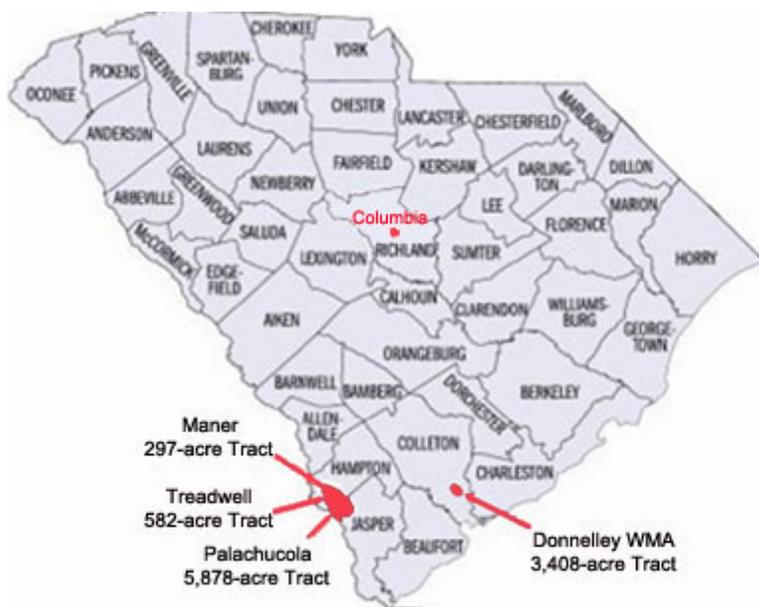


Figure 2: Tract Location Map

<sup>1</sup> South Carolina Wildlife and Marine Resources Department officially changed their agency name to South Carolina Department of Natural Resources in July 1994. The agency will be referred to as SCDNR throughout this document.

specifically directed USACE to transfer ownership of only the separable lands in South Carolina with a lump sum payment for management costs (see Appendix B). WRDA 2000 also directed USACE to prepare a binding agreement between the agencies to execute the transfer. A copy of that agreement is located in Appendix C.

## **1.2 PROPOSED ACTION**

The proposed action is to convey by deed from the US Government to the State of South Carolina 10,165 acres of mitigation lands that are presently managed for wildlife. The lands are located in Colleton, Hampton and Jasper counties, South Carolina.

## **1.3 PURPOSE OF THE PROPOSED ACTION**

The purpose of the proposed action is to provide intensive wildlife management of the Richard B. Russell separable mitigation lands in perpetuity in a more cost effective and efficient manner.

## **1.4 NEED FOR THE PROPOSED ACTION**

Each year USACE, Savannah District, sends funds from its operations and maintenance budget to the State of South Carolina for management of federally owned wildlife mitigation lands. The amounts are increased annually to account for inflation; conversely payments are reduced by the amount of timber revenues or miscellaneous income the state generates from the wildlife mitigation tracts.

The mitigation tracts are managed in accordance with the “Final Richard B. Russell Mitigation Implementation Plan (MIP),” dated April 1995 (USACE, 1995). The plan, developed by USACE and SCDNR, contains operations and maintenance activities that are revised every five years as well as annual management plans. The annual plans are reviewed by USACE staff to make sure proposed projects are in compliance with the terms of the 1995 mitigation plan. In addition to reviewing the annual management plans, USACE is responsible for oversight of legal documents and other compliance activities. USACE Planning Division is responsible for Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, compliance requirements. USACE Real Estate Division is responsible for ensuring that all real estate licenses and leases are current and that management of the tracts is in accordance with the terms of such agreements. Approximately 80 person hours are spent annually conducting mandatory inspections, attending meetings, reviewing documents and expenditures, and conducting compliance activities to make sure the tracts are managed for wildlife mitigation purposes in accordance with federal laws and regulations.

## **1.5 SCOPE**

The scope of this EA is limited to assessing the potential environmental and socio-economic effects resulting from implementing the alternatives. The resource areas discussed and evaluated are only those areas with a potential to be affected by the alternatives. Issues determined to have no relevance to the decision or to have effects inconsequential to the decision were eliminated from further analysis. These issues are presented in Table 1.

**Table 1: Resources Eliminated from Further Analysis**

RESOURCE	RATIONALE FOR ELIMINATION
Water Quality	There would be no direct or indirect effects on water quality.
Wetlands	There would be no direct or indirect effects on wetlands.
Soils	There would be no direct or indirect effects on soils.
Recreation	There would be no direct or indirect effects on recreation.
Land Use	There would be no direct or indirect effects on land use.
Noise	There would be no direct or indirect effects to noise.
Safety	There would be no direct or indirect effects to safety.

### **1.6 AUTHORIZATION DOCUMENTS AND ENSUING LICENSES AND AGREEMENTS**

The following management plans, lease agreements, licenses and legislation are incorporated into this document by reference:

**Section 601(a) of WRDA 86 (P.L. 99-662), 99th Congress, November 17, 1986.** The document can be viewed online at <http://laws.fws.gov/lawsdigest/wat1986.html>.

This legislation authorized the mitigation plan contained in the Report of the Chief of Engineers, dated May 11, 1982, House Document Number 97-244. The main features of the mitigation plan include intensive management of selected Thurmond Lake lands, purchase of separable mitigation lands, and annual trout stocking.

**Section 563(i) of WRDA 99 (P.L. 105-53), August 17, 1999.** This document can be viewed at the Planning Division office, USACE, Savannah District.

This legislation directs the Secretary of the Army to convey to the State of South Carolina all right, title, and interest of the US in the designated mitigation lands. The legislation excludes approximately 800 acres of land at J. Strom Thurmond Lake between elevation 330' msl and 346' msl from the conveyance. The separable mitigation tracts and other lands at J. Strom Thurmond Lake are to be conveyed.

**Section 348(k) of WRDA 00, (P.L. 106-541), December 11, 2000.** This document can be viewed at the Planning Division office, USACE, Savannah District.

This legislation amends Section 563(i) of WRDA 1999 and excludes all of the lands at J. Strom Thurmond Lake from the conveyance. The legislation also directs South Carolina to pay for all costs associated with the conveyance.

**DACW21-3-85-1904, Department of the Army License for Fish and Wildlife Management Purposes.** This document can be viewed at the Real Estate Division office, USACE, Savannah District.

This license allows the State of South Carolina to use approximately 4,085 acres of land and water areas on Thurmond Lake for fish and wildlife management. The agreement is in effect until 31 July 2032. The license requires USACE to make an annual payment to South Carolina for management of the wildlife lands and for stocking of 12-inch trout. The agreement states that USACE will conduct all timber sales. Revenues generated are deducted from the annual payment.

**DACW21-1-93-0910, Department of the Army Lease.** This document can be viewed at the Real Estate Division office, USACE, Savannah District.

This lease agreement allows South Carolina (Lessee) to use, manage, and occupy 10,165 acres of land and water in Colleton, Hampton and Jasper counties, South Carolina, for the purposes of intensive wildlife management for a period of 50 years. All monies received by the lessee from operations conducted on the mitigation project, including, but not limited to user fees, timber harvesting, or other considerations, must be utilized for the administration, operation, or development of the premises. The agreement states that any funds not used will be deducted from the annual USACE payment.

**Agreement between the Department of the Army and South Carolina Wildlife and Marine Resources Department, dated July 20, 1992.** This agreement may be viewed at the Planning Division office, USACE, Savannah District.

This agreement states the Federal Government will provide annual wildlife management payments to South Carolina. The agreement also states that the amount of revenues generated by South Carolina from timber sales will be deducted from the annual payment.

**The Board of Engineers for Rivers and Harbors letter dated 19 October 1981 to the Chief of Engineers, House Document Number 97-244.** This letter may be viewed at the Planning Division office, USACE, Savannah District.

This letter contains a provision for state game agencies to manage and harvest timber resources on mitigation sites.

**The Final Richard B. Russell Mitigation Implementation Plan, April 1995.** This plan may be viewed at the Planning Division office, USACE, Savannah District.

This management plan is a joint USACE/State master plan containing details of how the mitigation lands will be managed.

## **2.0 ALTERNATIVES CONSIDERED**

The mitigation plan for the construction of the Richard B. Russell Dam and Lake required USACE to acquire lands to mitigate for wildlife habitat losses. Although the lands are federally owned, the mitigation lands are intensively managed for wildlife by SCDNR. Legislation in 2000 authorized USACE to transfer the lands by deed to SCDNR, the managing agency. As stated in WRDA 2000, there can be no change in the land use or management practices as the lands were acquired for wildlife management only. Therefore criteria considered in selecting

alternatives were in conformity with all Federal and State laws and changing land ownership. The alternatives evaluated in this EA are the following:

- Alternative I (No Action Alternative) - Federally owned land, managed by SCDNR
- Alternative II (Proposed Action) - Convey lands to SCDNR

The alternatives are described below. The effects of the alternatives are analyzed in Section 4.0 by resource area.

## **2.1 ALTERNATIVE I (NO ACTION ALTERNATIVE) – FEDERALLY-OWNED LAND, MANAGED BY SCDNR**

Inclusion of the No Action Alternative is prescribed by the Council on Environmental Quality (CEQ) regulations (40 CFR 1502.14). The No Action Alternative describes the current conditions and activities occurring on the tracts and serves as the benchmark against which Federal actions are evaluated. The No Action Alternative would maintain the *status quo*.

Under this alternative the US Government would continue to hold the title to the tracts, SCDNR would continue to manage the lands, and Congress would not direct USACE to transfer the land to SCDNR. Management would continue in accordance with the MIP and the wildlife/forestry management master plan, a component of the MIP. SCDNR would prepare and submit annual management plans for review by USACE personnel. The plans would include detailed work plans, budgets and expected revenues from timber sales. Plans would be submitted two years in advance of the implementation year. USACE personnel would provide annual payments to the agency for approved operations and maintenance costs; funding would be subject to appropriations by Congress and apportionments by the Office of Management and Budget. The payments would be adjusted for inflation and for revenues generated from timber sales or other sources of income. USACE cultural resources staff would complete all Section 106 of the NHPA compliance requirements as necessary.

Terms and conditions of management agreements currently in place would continue to be implemented. USACE Real Estate specialists and legal counsel would renew and revise the agreement documents as appropriate. The following is a list of agreements, licenses and lease agreements implemented to comply with provisions of HD 97-244 and WRDA 1986. Only agreements pertaining to the South Carolina lands are listed below:

- Timber and Fish Attractor Agreements in HD 97-244
- Agreements with South Carolina on separable lands
- Real Estate Licenses for JST lands, South Carolina
- Trout Stocking Provision (located in South Carolina Real Estate License)
- Separable land leases
- Cooperative agreements and amendments
  - 5-year South Carolina creel
  - Hartwell tailrace creel

USACE would continue to provide funds to SCDNR for stocking of 12-inch trout in South Carolina trout waters.

The following activities are currently permitted on the tracts and would continue under this alternative:

- Public Hunting
- Public Fishing
- Wildlife Viewing Opportunities
- Thinning
- Pine Reforestation
- Prescribed Burning
- Wildlife Habitat Management
- Waterfowl Management
- Non-game Wildlife Management
- Wetland Management

The lands would remain subject to all Federal laws and regulations that apply to activities conducted on federally owned lands.

## **2.2 ALTERNATIVE II (PROPOSED ACTION) - CONVEY LANDS TO SCDNR**

Under Alternative II Congress would direct the US Army to convey title of the separable mitigation tracts to SCDNR. Conveyance would be through a quitclaim deed. The agreement between the Department of Army and South Carolina Wildlife and Marine Resources Department dated July, 10, 1992, and Army Lease No. DACW21-1-93-0910 and supplement agreements would become null and void. As stated in WRDA 2000, the US Government would provide a lump-sum payment of \$4.85M to SCDNR for future operation and maintenance activities; USACE would discontinue the annual wildlife management payments. The requirement for submittal and approval of an annual project schedule and budget would terminate; annual funding would no longer be subject to the availability of funds.

Management activities for the purposes of intensive wildlife habitat mitigation listed in Section 2.1 would continue with minor changes. USACE and SCDNR would modify the MIP as needed to reflect the changes in management practices for fish and wildlife mitigation purposes. Timber thinning and hardwood cutting activities would be increased short term to improve wildlife habitat and reduce fire hazards immediately after conveyance of the lands. After the brief intensification of timbering activities, the harvest and thinning schedule would revert back to a schedule similar to that which was used when the lands were federally-owned (Emily Cope, 2005). Revenues generated from timber sales would be applied to management of the lands. In accordance with the wording in WRDA 2000 (Appendix B) and the MOA for conveyance (Appendix C), the lands would revert back to the Federal government were it determined SCDNR's management activities were not in compliance with the MIP.

Activities conducted on the tracts would be subject to review under South Carolina laws and certain federal laws such as the Endangered Species Act. SCDNR would be responsible for the management of all historic properties located on the tracts.

USACE would provide funds to SCDNR to continue stocking 12-inch trout in South Carolina trout waters.

### **3.0 AFFECTED ENVIRONMENT**

This chapter describes the existing environment of the resources that may be affected by the proposed action as described in Chapter 2. It also describes the potential consequences for the human environment. The human environment is defined as all of the environmental resources, including all physical, biological, social, and economic conditions occurring in the affected area.

The analysis presented in this chapter includes impacts that would occur from the implementation of the proposed action and continued existing conditions under the no action alternative. It is organized by resource, giving a description of the baseline conditions for that resource.

#### **3.1 SUMMARY OF RESOURCES NOT ANALYZED IN DETAIL**

As noted in Section 1.5, issues or resources determined to have no relevance to the decision or have effects inconsequential to the decision were eliminated from further analysis. These issues or resources are:

- Water Quality
- Wetlands
- Soils
- Recreation
- Land Use
- Noise
- Safety

#### **3.2 SUMMARY OF RESOURCES ANALYZED IN DETAIL**

Resources that may potentially be affected by the proposed action are analyzed in detail. These issues or resources are as follows:

- Vegetation
- Wildlife
- Protected Species
- Hazardous materials/waste Management
- Air Quality
- Demographics and Economy

➤ Cultural Resources

### 3.3 PHYSICAL ENVIRONMENT

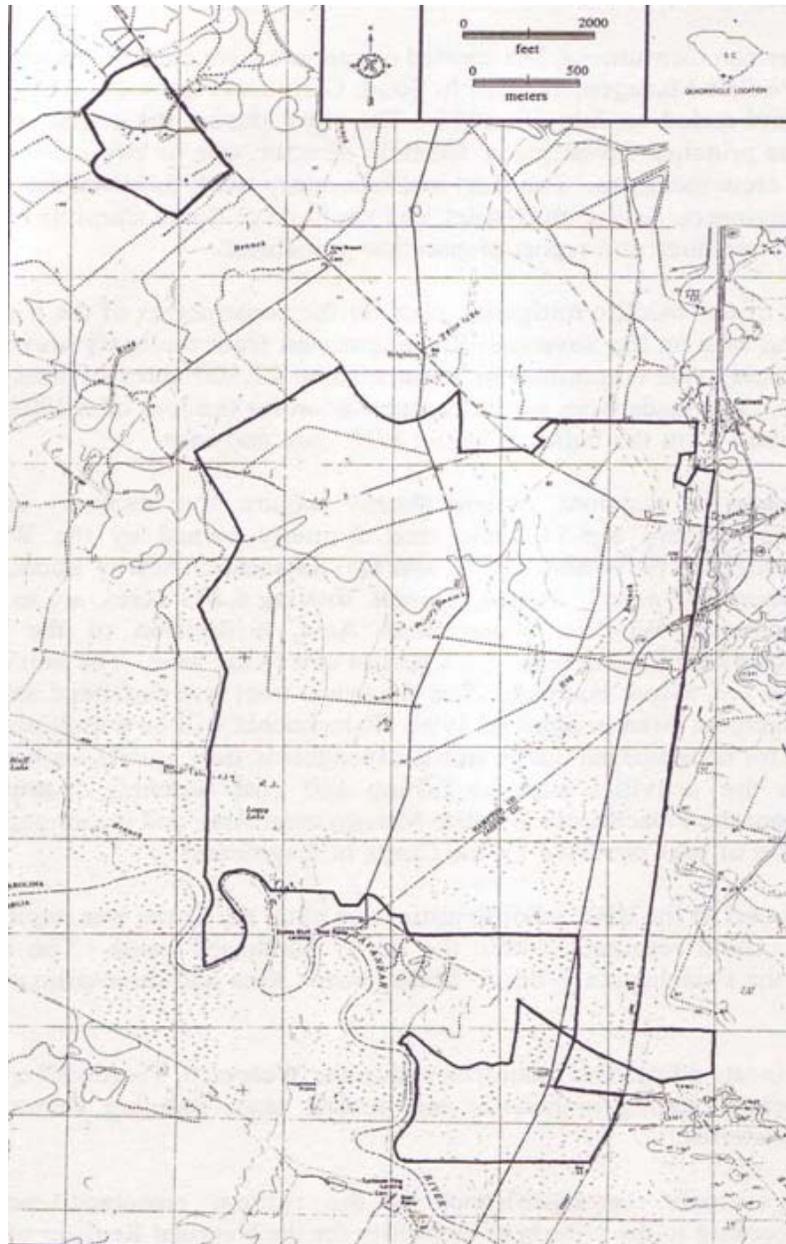
#### 3.3.1 Physiographic Setting

South Carolina covers an area of more than 30,000 square miles and is divided into three physiographic provinces - Blue Ridge, Fall Line and Coastal Plain (Figure 3). Only a small portion of the state is situated in the Blue Ridge province; the majority of the state lies within the Coastal Plain province. The Piedmont physiographic province occupies the area between the Blue Ridge province and the Fall Line, and the area between the Fall Line and the Atlantic Ocean constitutes the Coastal Plain physiographic province. The Blue Ridge and Piedmont provinces are composed of igneous and metamorphic rocks, mostly gneiss, schist, phyllite, and slate. Elevations are as high as 650 ft above sea level at the Fall Line and over 3,500 ft in the Blue Ridge. The Coastal Plain province consists of variations of sand, clay, and limestone that overlie the Piedmont rocks. Elevations range from mean sea level at the coast to as much as 650 ft at the Fall Line. Both the Palachucola WMA and the Mary's Island mitigation tract are situated within the Coastal Plain physiographic province.



**Figure 3: Map of Physiographic Provinces**  
(Blue Ridge, Fall Line and Coastal Plain)

**Palachucola WMA** - The Westvaco, Maner and Treadwell tracts are located in Hampton and Jasper Counties, in southern South Carolina. The property is located on the Pineland, Shirley and Brighton, SC USGS 7.5' series quadrangles (Figure 4). The Palachucola WMA borders a small section of the Savannah River, with most of its terrain lying northward from the river. Landforms specific to the area extend south and north away from the river, and include the river, an active floodplain, relict dunes, a black swamp, a fluvial terrace, and the upland Wicomico marine terrace.



**Figure 4: Palachucola Wildlife Management Area**  
(Hampton and Jasper Counties, South Carolina (USGS 7.5' Series Pineland [1988], Shirley [1978], and Brighton [1978] Quadrangles))

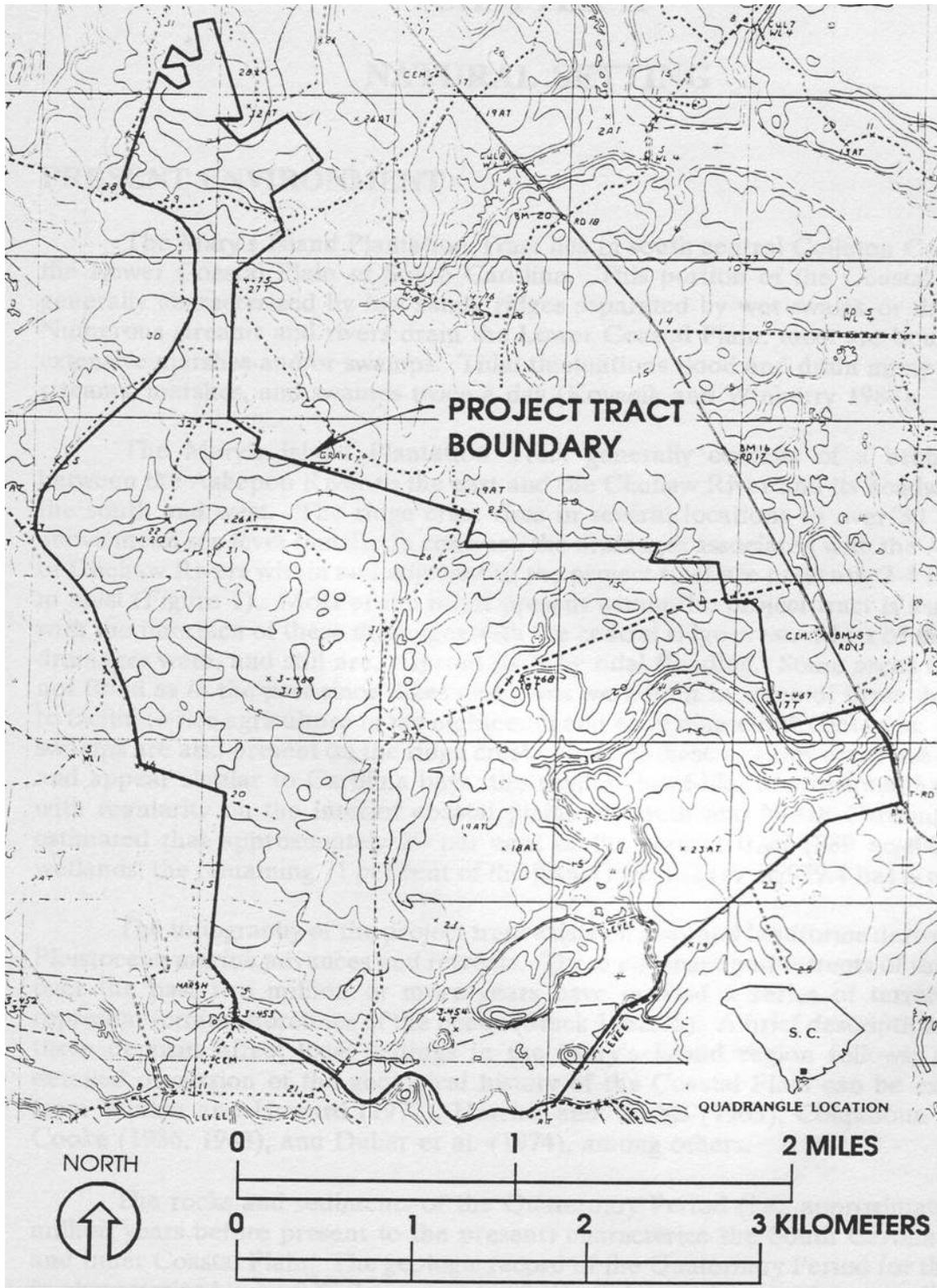
The northern most portions of the WMA consist of the level to gently undulating surface of the Wicomico Terrace. The terrace's surface is typically marked by Carolina Bays. These landforms are typically elliptical in shape and often occur in groups and exhibit a southeastward orientation which coincides with the direction of prevailing continental winds. Elevation of the WMA ranges from 70-100 ft above mean sea level.

Rainfall in the area ranges from 32 to 36 inches annually between March and September. The average winter temperature is 50 degrees Fahrenheit. The average daily maximum temperature is 76.8 degrees Fahrenheit. A few days of temperatures exceeding 100 degrees Fahrenheit are normally recorded during the year. The Beaufort and Jasper County soil survey characterizes the area's climate as subtropical, with long, hot, relatively wet summers followed by short, mild, relatively dry winters (USDA, 1990). Jasper County averages 48.3 inches of rainfall each year. Approximately 70 percent of the rainfall occurs in April through October. The least amount of precipitation falls in October and the monthly high occurs in July. Relative humidity averages 49 percent in spring and 53 percent for the remaining seasons. In recent years (1998-present) precipitation has declined substantially due to drought conditions throughout the state. In 2001, the Coastal Plain received only 36 inches of rainfall (Waters 2003:3).

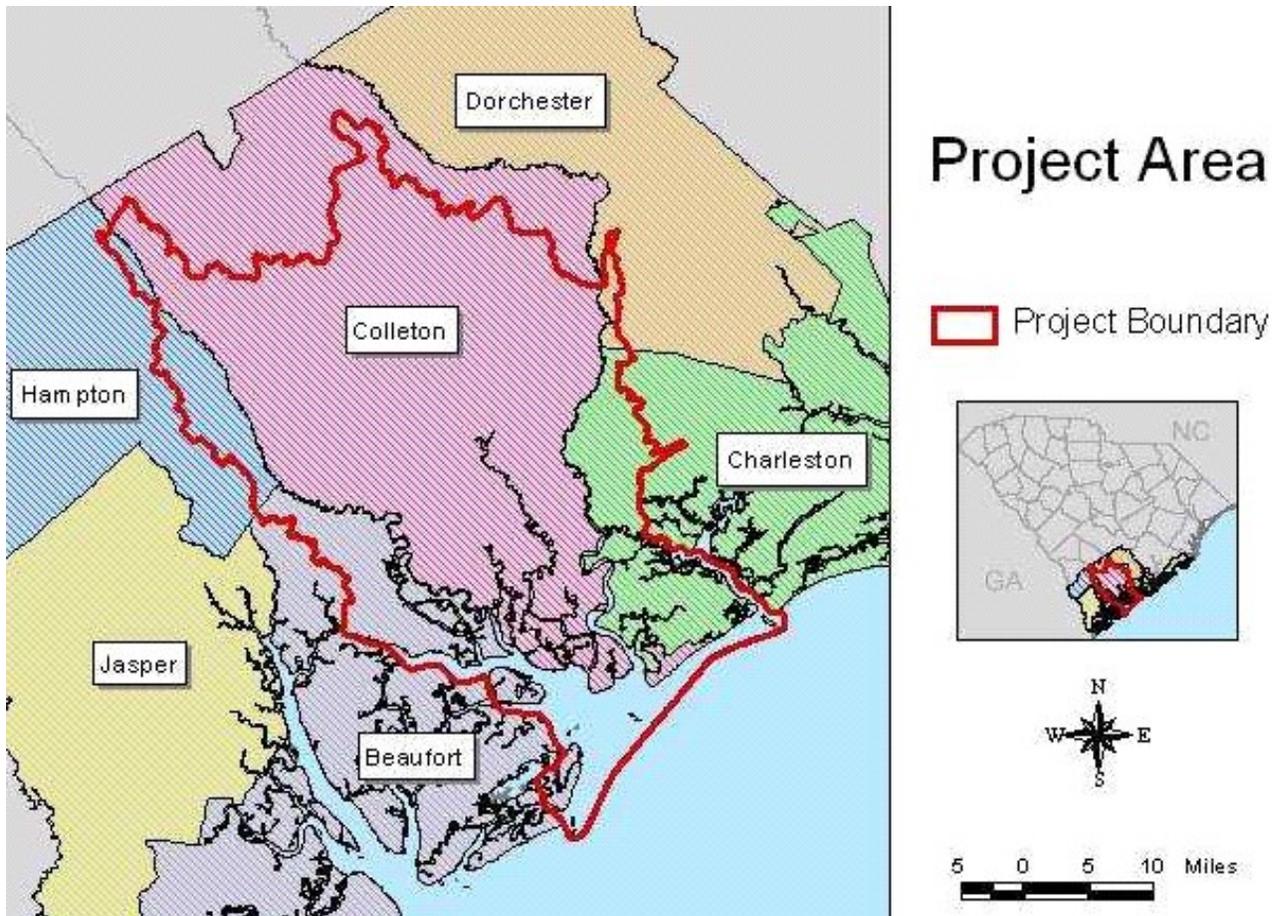
**Mary's Island** - The Mary's Island mitigation tract is located in Colleton County, South Carolina. The Mary's Island tract is located on the Green Pond, SC USGS 7.5' series quadrangle (Figure 5). The tract is part of the Donnelley WMA which is located in the Ashepoo, Combahee, Edisto (ACE) Basin (Figure 6). Major rivers near the mitigation tract are the Combahee, Chehaw, and Ashepoo. Soils within Colleton County were deposited or formed during the Pleistocene epoch. During this time period the ocean retreated several times leaving behind formations and terraces indicating former shorelines. The terraces in Colleton County, in sequence from the sea, are the Recent, Pamlico, Talbot, Penholoway, Wicomico, and Sunderland. The mitigation tract is primarily comprised of soil from the Pamlico terrace. Elevation in the tract ranges from sea level (0) to 24 feet above mean sea level.

The Mary's Island tract consists of a broad ridge between the Ashepoo River to the east and the Chehaw River to the south and west. The ridge crest rises in several locations to over 30 feet above mean sea level. In contrast the drainages associated with the Ashepoo or Chehaw Rivers within and adjacent to the tract are presently 2-4 feet above mean sea level. Most of the drainages are affected by daily tidal flooding. Some of the interior swampy areas are circular and appear similar to Carolina bays.

Like the Palachucola WMA, the climate of the Mary's Island tract is classified as subtropical, with long, hot, relatively wet summers followed by short, mild winters. Total annual precipitation is 52 inches, with 60 percent occurring in April through September. The winter average temperature is 49 degrees Fahrenheit; in summer the average temperature is 79 degrees Fahrenheit, which a maximum average daily temperature of 90 degrees Fahrenheit.



**Figure 5 - Mary's Island Plantation Tract  
(USGS Green Pond 7.5 minute quadrangle)**



Note: figure from Characterization of the Ashepoo-Combahee-Edisto (ACE) Basin, South Carolina, SCDNR n.d.

Figure 6: Ace Basin Project Area

### 3.4 BIOLOGICAL RESOURCES

#### 3.4.1 Vegetation

Forest communities of the present day southeastern United States are classified into four zones: oak-hickory forest, climax magnolia forest, pine forest, and maritime (North Carolina coast). In South Carolina, the oak-hickory forest is located primarily in the Piedmont region; the pine forest largely occupies the Coastal Plain. The magnolia forest extends into the Coastal Plain of South Carolina and covers the southern half of the coastal edge. The magnolia forest contains a high percentage of broad-leaved evergreen trees along with pockets or areas of pine forest.

**Palachucola WMA:** The WMA is located within the pine forest zone. Naturally occurring pine forests contain four important pine species - longleaf (*Pinus palustris*), loblolly (*Pinus taeda*), shortleaf (*Pinus echinata*) and slash (*Pinus elliotti*) and hardwoods such as sweetgum (*Liquidambar styraciflua*), and different varieties of maples (*Acer*) and oaks (*Quercus*). Generally the dominant pine species in a pine forest is longleaf. Understory vegetation typically consists of sumac, sparkleberry, alder, muscadine, dwarf palmetto, sedges, and rushes.

Approximately 3900 acres of the 6,757-acre WMA contain pine stands. The remaining acreage is comprised of hardwood and mixed hardwood timber stands.

Vegetation in the Westvaco tract of the WMA is atypical of the lower Coastal Plain because of extensive cotton farming and commercial timber management practices that took place from Colonial times until the 1990s. In this tract, loblolly is the predominant overstory forest type. Understory in these areas consists of woody shrubs, legumes, grasses and herbs that are not typical of Coastal Plain vegetation. Understory in the hardwood stands is more typical of native vegetation.

**Mary's Island Tract:** The tract is also located within the pine forest zone. Unlike the Palachucola WMA, vegetation in the tract is typical of the lower Coastal Plain. The predominant overstory species is pine (56 percent) followed by mixed pine hardwoods, bottomland hardwoods and backwater marsh. Understory species in the pine forests are typical of the South Carolina Coastal Plain.

The tract contains three unique plant communities: a natural longleaf pine community, scattered depression meadows, and an emergent backwater marsh.

Prescribed burns are conducted on a regularly scheduled basis to increase habitat diversity for wildlife on both the Palachucola WMA and Mary's Island. The longleaf ecosystems are burned on a schedule that closely simulates the natural cycle. Thinnings are conducted to promote vegetative conditions conducive to wildlife habitat.

### 3.4.2 Wildlife

The Palachucola WMA and the Mary's Island mitigation tract encompass a portion of the most diverse and fertile ecosystems within South Carolina. The tracts were specifically chosen as wildlife mitigation lands due to the abundance and variety of species of wildlife within the project areas. The tracts provide habitat for game species as well as non-game species. Both the Palachucola WMA and Mary's Island are intensively managed for the following game species:

- White-tailed Deer (*Odocoileus virginianus*)
- Feral Pig (*Sus scrofa*)
- Wild Turkey (*Meleagris gallopavo*)
- Bobwhite Quail (*Colinus virginianus*)
- Gray Squirrel (*Sciurus carolinensis*)
- Wood Duck (*Aix sponsa*)
- Mourning Dove (*Zenaida macroura*)
- Eastern Cottontail (*Sylvilagus floridanus*)
- Swamp Rabbit (*Sylvilagus aquaticus*)

In addition to the species listed above, wintering waterfowl, songbirds (85 species), furbearers (beaver, muskrat, raccoon, nutria, mink, fox, bobcat, otter, opossum, skunk and coyote), small mammals, reptiles and amphibians inhabit the tracts.

### 3.4.3 Protected Species

Federally listed species are protected under the Endangered Species Act (ESA) of 1973, as amended (16 USC 1531-1543). The US Fish and Wildlife Service review Federal actions that may result in adverse impacts on federally listed (i.e., Threatened/Endangered) species. The review ensures that any action authorized, funded, or carried out by a Federal agency is not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction of habitat. The Department of Army conducts consultation (formally or informally) in compliance with Section 7(a)(2) of the ESA.

No baseline studies have been conducted of the Palachuola WMA or the Mary's Island mitigation tract. Due to the presence of favorable habitat in Hampton, Jasper and Colleton counties, Canby's Dropwort (*Oxypolis canbyi*) could potentially occur on the Palachuola WMA and Mary's Island mitigation tract. Several endangered and threatened species that are known to inhabit or visit the mitigation lands are listed below. A list of endangered and threatened species occurring in Hampton, Jasper and Colleton counties is found in Appendix D.

#### Southern bald eagle (*Haliaeetus leucocephalus*) – Threatened

Bald eagles build their nests in tall trees along coasts or on the banks of rivers and lakes. Suitable nest sites are chosen based on proximity to water, vantage point, and height of the tree. Eagle nests are often found in tall, live pines with a higher canopy than surrounding trees. Usually, nesting sites are close (within 1 mile) to large bodies of water such as impounded marshes. Nesting in South Carolina occurs along the major river drainages of the lower Coastal Plain. The ACE Basin, wherein the Mary's Island mitigation tract lies, constitutes the most important nesting area in the state, with 40 percent of nesting eagles living within its boundaries. In summer 1997, nesting bald eagles numbered 114 in 27 counties in South Carolina (SCDNR n.d. b.). One bald eagle nest is located adjacent to the Savage Backwater in the Mary's Island mitigation tract. The nest is isolated from the main traffic flow and is accessible only by foot. Annual nesting surveys are conducted by Wildlife Diversity staff of the SCDNR.

#### Red-cockaded Woodpecker (*Picoides borealis*) – Endangered

The Red-cockaded woodpecker is a permanent resident of mature pine forests, with an age of 60 years or greater, that lack a hardwood understory, such as those maintained by sporadic wildfires. Many of the woodpeckers in South Carolina reside in Francis Marion National Forest; others inhabit the Sea Islands and coastal regions of South Carolina (SCDNR n.d. b.). Colonies are known to exist on the Webb WMA, a tract adjacent to the Palachuola WMA. Three RCW cavity trees have been observed in pine stands 40 years and older. These cavities are not active at present nor has nesting activity been observed on the Palachuola WMA (SCDNR 2003). There are no recorded colonies in the ACE Basin; no colonies exist on or near the Mary's Island Tract.

Consultation with the USFWS would not be required prior to conveyance of the mitigation tracts. In accordance with Mr. Jason Ayres, USFWS, Charleston, SC, (2005) the nature of the

action and the fact that no active colonies are located on the tracts preclude the need for formal or informal consultation in accordance with Section 7 (a)(2) of the ESA.

Wood Stork (*Mycteria Americana*) – Endangered

In South Carolina, wood storks nest in four counties, including Colleton County. Three nesting colonies are found within the boundaries of the ACE Basin study area. Nests are typically located on trees surrounded by water, such as in cypress swamps, shallow creeks, and impoundments. Wood storks form nesting colonies that may contain up to 10,000 nests. In South Carolina, the seven nesting colonies in existence contain an average of 102 nests. Wood stork populations have declined drastically in recent times, primarily because of habitat alteration. The availability of suitable feeding areas has been reduced due to draining of wetlands, flood control practices, land development, and lumbering (SCDNR n.d. b.). Wood storks commonly use Mary's Island as foraging grounds (SCDNR n.d. a.). No wood storks have been observed on Palachucola WMA.

Canby's Dropwort (*Oxypolis canbyi*) - Endangered

A perennial plant, Canby's dropwort stands 0.8 to 1.2 meters tall. Its leaves are quill-like and bear compound umbels of small flowers. These five-parted flowers have white petals and pale green sepals, some of which are tinged with red. The plant has a slight dill fragrance. Localized populations are found in Hampton and Colleton Counties.

This plant grows in coastal plain habitats including wet meadows, wet pineland savannas, ditches, sloughs, and around the edges of Cypress-pine ponds. The healthiest populations seem to occur in open bays or ponds which are wet most of the year and have little or no canopy cover. Ideal soils for Canby's dropwort have a medium to high organic content and a high water table. They are also acidic, deep, and poorly drained (Aulbach-Smith, 1985). The most significant threat to the species is the direct loss or alteration of its wetland habitats. Ditching and draining of lowland areas, primarily for agricultural and sivicultural purposes, has altered the groundwater table and changed the vegetative composition in many areas of the mid-Atlantic coastal plain where the species historically occurred. In addition to changing soil moisture levels, lowering of the water table enables other plants to become established, modifies vegetative succession, and makes sites less conducive overall to the plant's growth and reproduction. Roadside maintenance or improvements could also threaten the other remaining South Carolina populations.

The annual management plans prepared by SCDNR identify areas that have been designated sensitive habitat (SCDNR 2003, n.d. a.). On the Palachucola WMA, the following areas have been identified:

- Bottomland and muck swamp hardwood wetlands,
- Gum-pond wetlands
- Longleaf/wiregrass plant communities.

Sensitive habitat areas on Mary's Island are the Savage Backwater wetland

### 3.5 ENVIRONMENTAL SAFETY AND MANAGEMENT

#### 3.5.1 Hazardous Materials/Waste Management

USACE, Savannah District, conducted a Preliminary Assessment Screening (PAS) in 1993 prior to the acquisition of the mitigation tracts (Gulf Engineers and Consultants (GEC), 1993; USACE, 1993). As part of the PAS landowners were asked to complete questionnaires and identify potential environmental hazards. Follow on site visits were conducted by USACE and GEC personnel to record observed site conditions.

A backfilled cattle dipping vat was identified on the Mary's Island mitigation tract. Federal and state governments initiated a program to eradicate the cattle fever tick in the mid 1910s - 1960s. Typically the process for cattle dipping was to excavate a pit below grade, construct a concrete vat which was then filled with solution prior to herding the cattle through. Arsenic was one of the main components in the dipping solution. Synthetic pesticides were added to increase the effectiveness of the arsenic after 1940 (Thomas, 2000). The typical vat was a concrete-lined hole in the ground about 2.5 to 4 feet wide, 5 to 7 feet deep and 25 to 30 feet long (Thomas, 2000). After 1940 chemicals such as dichlorodiphenyltrichloroethylene (DDT), dichlorodiphenyldichloroethylene (DDE), dichlorodiphenyldichloroethane (DDD) BHC, chlordane and toxaphene were added to the arsenic cattle dipping solution. Most of the chemicals used in the solution are carcinogenic to humans and remain for long periods of time in the environment (Thomas, 2000). Soil and groundwater sampling were recommended to identify contaminants.

USACE, Savannah District, also prepared an Environmental Baseline Survey (EBS) in 2004 to identify potential environmental hazards prior to conveying the property to South Carolina (USACE, 2005a, b). SCDNR staff completed the EBS questionnaires in 2004. It was noted during the 2004 survey that no soil or groundwater sampling had been conducted in the area of the cattle dipping vat on the Mary's Island tract as recommended in 1993. USACE and SCDNR contacted the South Carolina Department of Health and Environmental Control (DHEC) to determine the level of investigation that would be necessary prior to conveyance of the property. On February 7, 2005, Stephen Burdick and Francis Carns, DHEC Waste Assessment Section, conducted a site visit and field testing to determine if reportable quantities of hazardous substances were present in and/or near the cattle dipping vat. An abbreviated report detailing the sampling and analysis of the soils is found in Appendix E. The DHEC team screened for a wide range of organic and inorganic substances that were known to have been used as pesticides. All analyses revealed that none of the soil screening levels were exceeded for the samples. DHEC determined that no further action was warranted.

The majority of hazardous and solid waste generated on the Palachucola WMA and the Mary's Island Tract are from maintenance activities (vehicle, building and grounds). Materials such as motor oil, oil filters, batteries and paint, as well as others, are collected and taken to local recycling centers that operate as part of the SCDHEC, Office of Solid Waste Reduction and Recycling's countywide recycling program. Recycling centers in Hampton County near the Palachucola WMA are located in the towns of Estill, Garnett, and Hampton. Materials generated on Mary's Island are recycled at the Walterboro, South Carolina, location.

USACE, Savannah District, prepared a Finding of Suitability to Transfer (FOST) to document environmental findings and the suitability for the United States to transfer lands it owns in Colleton, Hampton and Jasper counties, South Carolina. Based on an analysis of the information obtained from the EBS, the lands are considered Department of Defense Environmental Condition Category 3. A category 3 designation means the property contains areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response. A hazardous substance notification is not required because the level of hazardous substances is below the reportable quantity as found in 40 CFR 302.4, Appendix A EPA Final Reportable Quantities for Chemical Agents Criteria for Low-Hazard Facilities. The US Army Corps of Engineers has determined the lands are suitable for transfer and subsequently will sign a FOST.

### **3.5.2 Air Quality**

The Environmental Protection Agency's (EPA) Office of Air Quality Planning and Standards has set National Ambient Air Quality Standards for pollutants considered harmful to public health and the environment. The Office of Air Quality Planning and Standards has set National Ambient Air Quality Standards for six principal pollutants, called criteria pollutants. These pollutants are: carbon monoxide (CO), nitrogen Dioxide (NO<sub>2</sub>), Ozone (O<sub>3</sub>), Lead (Pb), Particulate {particles with diameters of 10 micrometers or less (PM 10)}, and sulfur dioxide (SO<sub>2</sub>) (US EPA 2004).

In July 2002, EPA endorsed a protocol for developing voluntary 8-hour ozone Early Action Compacts (EACs). The EACs provide local areas with flexibility to control air emissions and offer a means of achieving cleaner air sooner than the Clean Air Act requires. Only areas that are attaining the 1-hour ozone standard are eligible to participate in the EAC process. The compacts include all necessary elements of a comprehensive air quality plan, but are tailored to local needs. In December 2002, the SCDHEC entered into compacts with EPA and local governments. Hampton, Jasper and Colleton counties, as well as 42 other counties, signed compacts (SCDHEC 2004).

Air quality impacts on the mitigation tracts are in the forms of dust generated by vehicular movement and smoke from controlled burns.

## **3.6 SOCIOECONOMIC ENVIRONMENT**

### **3.6.1 Demographics and Economy**

**Colleton County:** Colleton County was created as part of a large parish in 1682 and was named for one of the Lords Proprietors, Sir John Colleton (1608-1666). The county seat is Walterboro. This part of the lowcountry was known for its extensive rice and cotton plantations. After the Civil War northerners purchased many of the old plantations to use them as hunting preserves; several of the old plantations are now being incorporated into the ACE Basin, a nature preserve bounded by the Ashepoo, Combahee, and Edisto rivers (SCIway 2003).

The majority of Colleton County is forest (72%), and approximately 25% of the county is used for agricultural purposes. Predominant crops are soybeans, corn, tobacco and livestock. During recent years Colleton County has developed and diversified with manufacturing and light industrial firms playing a vital role in shaping the county's future. The top five employers in

Colleton County in October-December 2003 were the following: Colleton County School District, Walterboro Community Hospital, Colleton County, CCX Fiberglass Products, and Wal-Mart Associates Inc. (South Carolina Employment Security Commission 2004a).

**Hampton County:** Hampton County and its county seat Hampton were named for Confederate general and Governor Wade Hampton (1818-1902). The county was formed from Beaufort County in 1878. Parts of Hampton County were later divided to form Jasper (1912) and Allendale (1919) Counties.

Hampton County is a member of the Southern Carolina Regional Development Alliance, an organization formed to enhance and attract economic development to the four-county region of Allendale, Bamberg, Barnwell and Hampton counties. Since 2000, 31 companies have expanded or located in Hampton County with more than \$49 million in new investment and 475 additional jobs. In 2002, capital investment totaled \$19.5 million among nine firms with 91 new jobs being added. In 2003, capital investment totaled \$10.3 million among two firms with 210 new jobs being added. Hampton County's major industrial employers include: Nevamar, Carsonite International, Carolina Soya, Le Creuset of America, T.O. Plastics, Composite Materials Technology, Elliott Sawmilling Company, Hampton Gin (Hampton County Economic Development Commission 2004).

**Jasper County:** Jasper County was named after the Revolutionary War hero, Sergeant William Jasper. The county was formed in 1912 from neighboring Beaufort and Hampton Counties. Jasper County is situated between the historic port cities of Charleston and Savannah. The county boasts four primary US highways, a north-south rail line for both freight and passenger service, and a 3,100 foot paved runway for private aircraft in Ridgeland, the county seat. Jasper County contains three major industrial parks that host a wide variety of industrial activities. Building material fabrication, musical instrument manufacturing, food processing, bulk export and import products, and truck chassis manufacture are but a few of the industrial employers in the County. In November of 1999, Jasper County reported an unemployment rate of 2.8 percent which is indicative of the health of the County's economy (Jasper County Chamber of Commerce n.d.). The top five employers from October-December 2003 were the following: Jasper County School District, County Of Jasper, SC Department of Corrections, Beaufort Jasper Comprehensive Health Services, and Razor Component System Inc. (South Carolina Employment Security Commission 2004b).

**Table 2: Economic and Demographic Characteristics**

Source: US Census Bureau, Census 1990 and 2000

<b>GEOGRAPHIC AREA</b>	<b>SOUTH CAROLINA</b>	<b>COLLETON COUNTY</b>	<b>HAMPTON COUNTY</b>	<b>JASPER COUNTY</b>
Land Area (square miles)	30,109	1,056	560	656
<b>POPULATION</b>				
1990	3,486,703	34,377	18,191	15,487
2000	4,012,012	38,264	21,386	20,678
Increase 1990-2000	15.1%	11.3%	17.6%	33.5%
<b>INCOME AND EMPLOYMENT</b>				
Median Income, 1999	\$37,082	\$29,733	\$28,771	\$30,272
Percent of population living below poverty level, 1999	14.1%	21.1%	21.8%	20.7%
In labor force, 16 yrs and older, 1990	1,762,523	15,341	7,637	6,598
<b>RACE</b>				
Caucasian (2000)	67.2%	55.5%	42.9%	42.4%
Caucasian (1990)	69.0%	54.3%	45.5%	42.2%
Black or African American (2000)	29.5%	42.2%	55.7%	52.7%
Black or African American (1990)	29.8%	45.0%	54.3%	57.4%
American Indian or Alaska Native (2000)	0.3%	0.6%	0.2%	0.4%
American Indian or Alaska Native (1990)	0.2%	0.5%	0.2%	0.1%
Asian (2000)	0.9%	0.3%	0.2%	0.4%
Asian (1990)	0.6%	0.1%	0.1%	0.2%
Hispanic or Latino (2000)	2.4%	1.4%	2.6%	5.8%
Hispanic or Latino (1990)	1.1%	0.7%	0.5%	0.6%

### 3.6.2 Environmental Justice

Executive Order 12898 (59 FR 7629) requires that “each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities, on minority populations and low-income populations.” Each federal agency, whenever practicable and appropriate shall collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding Federal facilities that are: 1) subject to reporting requirements under the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11001-11050 as mandated in Executive Order No. 12856; and 2) expected to have a substantial environmental, human health, or economic effect on surround populations. Such information shall be made available to the public, unless prohibited by law.

Racial and ethnic data for the state, Colleton, Hampton and Jasper counties for 1990 and 2000 is presented in Table 3. The dominant ethnic group in 2000 in the state (67.2%) and Colleton County (55.5%) was the Caucasian group. The dominant ethnic group in 2000 for Hampton (55.7%) and Jasper (52.7%) Counties was the Black or African American Group. The Hispanic group exhibited the largest population increase statewide and in Hampton and Jasper Counties. The ethnic group increased its population throughout the state by 211.2%. Jasper County showed the greatest increase in its Hispanic population with an increase of 1624.6% over the 10-year period. The Native Hawaiian group showed the greatest increase in its population in Colleton County, increasing by 275% from 1990-2000. The Native Hawaiian group accounted for 0.03% of the total population in Colleton County.

The US Census Bureau uses a set of money income thresholds that vary by family size and composition to determine which families are poor. If a family's total income is less than its threshold, then that family, and every individual in it, is considered poor. In 1999 the average estimated poverty threshold for an individual was an annual income of \$8,500 and for a four-person household it was \$17,028 (US Census Bureau January 2000). The following data is presented by census tract, which is a small, relatively permanent subdivision of the county. Generally census tracts contain around 4000 inhabitants.

**Table 3: Census Tract Data**

	Colleton County Tract 9708		Hampton County Tract 9804		Hampton County Tract 9805		Jasper County Tract 9501	
	No.	%	No.	%	No.	%	No.	%
Total population (2000)	2417	100	7316	100	2024	100	5247	100
Population for whom poverty status is determined <sup>1</sup>	2389	100	5656	100	2009	100	5247	100
Income in 1999 below poverty level	360	15.1	1527	27	514	25.6	1031	19.6
Income in 1999 above poverty level	2029	84.9	4129	73	1495	74.4	4216	80.4

<sup>1</sup> Poverty status was determined for all groups except institutionalized persons, persons living in military group quarters, persons in college dormitories, and all unrelated individuals under age 15.

### 3.7 CULTURAL RESOURCES

#### 3.7.1 Prehistoric Overview

The prehistory of coastal South Carolina has received extensive research and investigation. Some of the most comprehensive overviews of the area have been written by Anderson (1977), Anderson and Logan (1981) and Goodyear and Hanson (1989). The prehistoric period has been divided into periods which represent distinct cultural adaptations in the region.

The earliest presence of man in the Coastal Plain of South Carolina occurred during the Paleoindian period (10000 – 8000 BC). This time period corresponds with the terminal Pleistocene, when the climate was much colder than today and sea levels were more than 200ft below present levels. Paleoindian points have been recorded in the lower Coastal Plain but intact sites are rare in the region. This indicates the area was only minimally used during the Paleoindian period. Paleoindian sites are more commonly found on the coast.

The Archaic period is divided into Early (8000-6000 BC), Middle (6000-2500 BC) and Late (2500-1500 BC) phases. Groups who lived during the Early Archaic time period inhabited an oak-hickory forest that was establishing itself on the Coastal Plain as the climate began to warm. Little is known about the Early Archaic period in the Coastal Plain. Side- or corner-notched projectile points are diagnostic indicators of the Early Archaic period. Archaeological evidence suggests that Early Archaic people lived in bands consisting of 50-150 people. The bands lived near major drainages and moved seasonally.

Trends that began in the Early Archaic period continued into the Middle Archaic. During this time period population increased and more sites are found in the lower coastal plain region. Archaeological evidence suggests that Middle Archaic populations developed a pattern of flexible adaptability in response to the changing environmental conditions.

By the end of the Late Archaic period sea level had risen to within 1 meter of present day levels and extensive estuaries were in place. During this cultural period there is evidence of exploitation of shellfish. Large shell midden sites are found through coastal Georgia and South Carolina. Smaller shell rings are found in the interior coastal area. Typical to the Palachucola WMA and Mary's Island areas are shell rings, which are usually round or oval rings of shell and other artifacts. These rings have been interpreted as habitation loci adjacent to productive shellfish beds. Another major development during this period is the invention of ceramic technology, or pottery. Both the shell rings and the manufacture of ceramics attest to a more sedentary lifestyle.

The Woodland period, like the preceding Archaic period, has also been divided into three phases: Early (1500-200 BC), Middle (200 BC-AD500), and Late (AD500-900). The Early Woodland phase is similar to the Late Archaic phase. During the Early Woodland period, population increased and more groups moved into the project area. Woodland period sites are very common on the South Carolina coast and generally consist of shell rings near tidal marshes, and ceramic and lithic scatters. Ceramic technology continued to develop during this period and the ceramics are differentiated from earlier types by the temper and the various exterior surface decorations.

The Mississippian period (AD900-1550) in the Southeast was a time of mound ceremonialism, regional distribution of goods and the establishment of horticulture and the chiefdom society. During the Early and Middle Mississippian phases major sites were located near the Savannah River. During the Late Mississippian phase, the major centers moved farther inland. No mound centers have been found in the Coastal Plain of South Carolina.

### 3.7.2 Historic Overview

**Palachucola WMA:** An archaeological survey of the WMA was conducted by Panamerican Consultants, Inc. in 1994 (Hayworth et al., 1995). A total of 65 sites were identified or revisited; 39 of the 65 sites were recommended eligible or potentially eligible for the National Historic Register of Historic Places (NRHP). One of the sites, the Maner House, was purchased by an adjacent landowner and moved from the property. Much of the information presented below can be found in the Hayworth et al. report.

The Palachucola WMA has been managed for timber, cattle production and agriculture since the first Europeans inhabited the region in the 18th Century. The swampy conditions of the area were initially prohibitive to settlement and intensive agriculture. A map from 1775 shows the location of “Williamsons Pen” which may have been a livestock roundup or holding area, located southeast of the wildlife management area. A notation on the same map reads: “All Pine Land Back from the River,” indicating the area that is now the Palachucola WMA.

No settlements or landowners appear in the area until the early 1800s. The Mills 1825 Atlas illustrates three landowners in the project area (Maner, Tison and McKenzie) and several bordering the property (Bostick, Major Maner, Methodist Church). Most of the landowners received the lands through land grants. Plantations located within or adjacent to the project area were: Gravel Hill (William Francis Maner); Mistletoe Grove (summer home) and Turkey Hill (Ruben Henry Tison); and Ingleside (Benjamin Bostick). Cash crops grown on the plantations included cotton, rice, and indigo. With the exception of the Methodist Church and Mistletoe Grove, all buildings within and adjacent to the project area were burned and looted by General Sherman’s troops as they marched north in January 1865.

An 1873 Beaufort County map (Hayward et al. 1995) shows several landowners in and near the Palachucola WMA. The names Tison and Bostick are still in the same general positions as on the 1825 Mills Atlas. The Maner name also remains, but there are additional locations outside of the project area. This indicates little change in land ownership or management. Most of the postbellum plantations contained housing for the former slaves and tenant farmers. Archeological evidence of several of the tenant and slave houses and the plantations was found during the 1995 archeological survey (Hayward et al., 1995).

In the early 1900s, development and settlement increased within the project area. Development occurred primarily along or near existing railroad lines and roads. Most of the structures depicted on the USGS topographic maps for the Pineland (1918) and Shirley (1919) quadrangles show structures that were probably homesteads. Several late 19th and early 20th Century house sites were located during the 1995 archeological survey of the property (Hayward et al., 1995). A 1923 Jasper County Map shows part of the Palachucola Hunting Club located in the southern half of the property. John King Garnett, a local leading citizen, formed the club.

The Palachucola WMA has remained in private ownership during the past 300 years. The area’s owners have included plantation owners, hunting clubs and most recently timber companies (Gair Woodlands; KMI Continental Garnett and KMI Continental Clinton, Inc; Westvaco

Corporation). Land use has centered around agricultural, hunting, recreational, and timbering activities.

**Mary's Island Mitigation Tract:** An archaeological survey of the Mary's Island Mitigation Tract was conducted by Brockington and Associates in 1993 (Poplin and Eubanks, 1994). The survey utilized a sampling of the tract rather than an intensive (100 percent) survey. The sampling strategy was based on soil type and proximity to water. Sixteen sites were identified during the survey; seven were recommended eligible or potentially eligible for the NRHP. Additional site and background information can be found in the archaeological report.

Many early settlements and plantations in the low country were situated near the Ashley, Cooper and Wando Rivers. Most plantation owners acquired their lands through land grants from the king or lords proprietors. Cash crops such as cotton, rice and indigo were grown and transported to Charleston and other markets via the rivers. Timber production and cattle grazing were also common within the Mary's Island tract.

After 1865 the rice fields were abandoned in the region due to a lack of capital and an adequate labor force. Many of the former rice fields were used for hunting lands for the owners, travelers, or squatters. Wealthy industrialists purchased many of the old plantations with the goal of maintaining the lands as hunting retreats.

By the late 19th Century, timber became a valuable commodity on the former agricultural lands, drawing businesses and railroads to the area. In 1901 the Savannah River Sawmill Company built a mill at Wiggins, SC, south of the tract. Tree harvesting continued until the mill was dismantled in 1922. A railroad identified as "Lumber RR" passed through the mitigation tract, but no remnants of the railroad are extant.

#### **4.0 ENVIRONMENTAL CONSEQUENCES**

This section analyzes, by resource area, any environmental effects, direct or indirect, of the proposed action and alternatives. A summary of effects is presented in Table 4.

##### **Definition of Effects**

**Positive Effect** - An enhancement or improvement to the current or expected future condition of the subject resource.

**No Effect** - No effect is anticipated on the subject resource.

**Negligible Effect** - Of such a limited nature that this effect is determined to be minimal on the subject resource.

**Minor Adverse Effect** - Temporary or minor degradation, disruption, incompatibility, or disturbance of the subject resource.

**Adverse Effect** - Considerable, though not complete degradation, disruption, incompatibility, or disturbance of the subject resource.

**Significant Effect** - Significantly as used in NEPA requires consideration of both context and intensity.

**Table 4: Anticipated Effects on Resources**

RESOURCE AREA	ANTICIPATED EFFECTS UNDER FEDERAL OWNERSHIP ALTERNATIVE I (NO ACTION)	ANTICIPATED EFFECTS UNDER SCDNR OWNERSHIP ALTERNATIVE II (PREFERRED ALTERNATIVE)
Vegetation	No effect on vegetation	A short-term minor adverse effect on vegetation due to crushing and disturbance of vegetation from heavy machinery
Wildlife	No effect	Short-term intermittent and minor adverse effects on wildlife such as energy loss, injury, avoidance or abandonment of habitat or home range, and direct habitat loss due to increased timber harvesting and thinning. Positive effect on species that rely on herbaceous plants for food and cover
Protected Species	No adverse effect due to strict guidance regulating activities that could affect protected species and coordination with USACE and USFWS	No adverse effect due to strict guidance regulating activities that could affect protected species and coordination with USFWS
Hazardous Materials/ Waste Management	No effect	No effect
Air Quality	Negligible effect on air quality in immediate area of activity. No effect on overall air quality Palachuola WMA and Mary's Island or on adjacent landowner's tracts	Short-term intermittent and minor adverse effect on air quality in immediate area of activity. No effect on overall air quality Palachuola WMA and Mary's Island or on adjacent landowner's tracts
Demographics and Economy	No effect	Minor adverse effect due to discontinuation of PILT funding
Environmental Justice	No effect on private residences and health and safety of children	Short-term negligible effects from increased frequency of noise
Cultural Resources	No effect	No effect due to the execution of Memorandum of Agreement and compliance with Section 106 of the NHPA

## **4.1 BIOLOGICAL RESOURCES**

### **4.1.1 Vegetation**

#### **4.1.1.1 Alternative I (No Action Alternative) – Federally Owned Land, Managed by SCDNR**

Alternative I would be expected to have no effect on vegetation on the Palachucola WMA and Mary's Island tract. Wildlife management activities and silvaculture operations would continue as they have in the past. Prescribed burns would be conducted in the winter-late summer period to enhance wildlife habitat. Timber thinning and harvesting would be conducted on a limited basis to avoid hazardous fire conditions and to improve wildlife habitat.

#### **4.1.1.2 Alternative II (Proposed Action) – Convey Lands to SCDNR**

Implementation of Alternative II would be expected to have a short-term minor adverse effect on vegetation on the Palachucola WMA and the Mary's Island tract. Under this alternative more intensive timber stand thinning and harvesting would be conducted immediately after the conveyance of the land to SCDNR. Increased timber thinning and harvesting activities would be expected to disturb or crush vegetation in the mitigation tracts due to the usage of heavy machinery. The effects would be expected to subside and return to pre-conveyance conditions after the thinning and harvesting schedule returned to the pre-conveyance schedule.

### **4.1.2 Wildlife**

#### **4.1.2.1 Alternative I (No Action Alternative) – Federally Owned Land, Managed by SCDNR**

Alternative I would have no effect on wildlife on the WMA or Mary's Island. Wildlife and habitat management practices would continue as described in the MIP and the annual management plans. Wildlife food plots planted in chufas, clover, rye, wheat and native vegetation would provide food sources for turkeys, quail and songbirds. Prescribed burns combined with scheduled thinnings would increase herbaceous plants which provide food, nesting and escape cover for wildlife.

Bluebird and wood duck boxes would continue to be placed on the tracts to provide nesting for the respective species.

#### **4.1.2.2 Alternative II (Proposed Action) – Convey Lands to SCDNR**

The increased thinning and timber harvesting associated with this alternative could have short-term intermittent and minor adverse effects on wildlife such as energy loss, injury, avoidance or abandonment of habitat or home range, and direct habitat loss. Disturbing leaf litter during timber harvest or thinning activities could result in adversely affecting reptiles, amphibians and other small organisms that rely on the leaf litter for habitat, predator evasion and breeding. The adverse effects would be expected to subside once the thinning and harvesting schedule returned to the pre-conveyance schedule.

Positive effects to certain species of wildlife would be expected due to prescribed burns and thinnings which would increase herbaceous plants which provide food, nesting and escape cover for wildlife.

### **4.1.3 Protected Species**

#### **4.1.3.1 Alternative I (No Action Alternative) – Federally Owned Land, Managed by SCDNR**

Alternative I is not likely to adversely affect protected species. The MIP and annual management plans identify sensitive habitat areas (Section 3.2.6). Activities in or near these areas are regulated. SCDNR will continue to coordinate with USFWS and Savannah District when land or vegetative disturbance will have the potential to adversely affect protected species.

#### **4.1.3.2 Alternative II (Proposed Action) – Convey Lands to SCDNR**

Alternative II is not likely to adversely affect protected species. The MIP restricts and regulates activities that are conducted in and around endangered species. SCDNR would consult with the USFWS as required by the Endangered Species Act when land or vegetative disturbance has the potential to adversely affect protected species.

## **4.2 ENVIRONMENTAL SAFETY AND MANAGEMENT**

### **4.2.1 Hazardous Materials/Waste Management**

#### **4.2.1.1 Alternative I (No Action Alternative) – Federally Owned Land, Managed by SCDNR**

Alternative I would not be expected to have an adverse effect on hazardous materials/waste management. Chemicals such as insecticides and herbicides are stored in secure areas and are mixed and applied by licensed professionals. The recycling program presently in place would continue. Items such as motor oil, oil filters, batteries, paint and other approved recyclables would be taken to the nearest recycling center.

#### **4.2.1.2 Alternative II (Proposed Action) – Convey Lands to SCDNR**

Alternative II is not likely to adversely affect hazardous materials/waste management. Greater amounts of or more types of chemicals would not be necessary to manage the insects and vegetation on the tracts. Chemicals would be stored in secured areas and application would be by licensed professionals. Recyclable materials such as motor oil, oil filters, batteries, and paint, as well as other approved materials, would be taken to the nearest recycling center for disposal.

Soil and groundwater sampling in the vicinity of the former cattle dipping vat would be conducted if instructed by SCDHEC prior to conveyance of the Mary's Island mitigation tract conveyance. All required remediation would be completed prior to the transfer of the property.

### **4.2.2 Air Quality**

#### **4.2.2.1 Alternative I (No Action Alternative) – Federally-owned Land, Managed by SCDNR**

Alternative I would have negligible effects on air quality in the immediate vicinity of activity and would not affect the overall air quality on Palachucola WMA or Mary's Island, nor on adjacent tracts. These effects would be the result of dust and smoke of vehicles and machinery on maintained roads throughout the mitigation tracts. The creation of dust would vary with the activity/maintenance schedule and would not be consistent. As now, smoke would be generated during prescribed burns.

#### **4.2.2.2 Alternative II (Proposed Action) – Convey Lands to SCDNR**

Implementation of Alternative II would cause short-term minor adverse effects on air quality in the immediate vicinity of the activity but would not affect the overall air quality on Palachucola WMA and Mary's Island, nor the adjacent tracts. Alternative II would allow for more intensive timber harvesting and thinning immediately after the conveyance of the lands to SCDNR. The increased frequency of these activities would be expected to cause minor adverse effects on air quality due to the heavy machinery required to conduct these activities. Air quality would be expected to return to pre-conveyance conditions once the thinning and harvesting schedule returned to the pre-conveyance schedule.

### **4.3 SOCIOECONOMIC ENVIRONMENT**

#### **4.3.1 Demographics and Economy**

##### **4.3.1.1 Alternative I (No Action Alternative) – Federally Owned Land, Managed by SCDNR**

Alternative I would have no effect on demographics and/or the economy. There would be no change in employment, tax revenues or population in Colleton, Hampton, or Jasper County. Annual Payment in Lieu of Taxes (PILT) funding would continue. Payments in Lieu of Taxes are Federal payments to local governments that help offset losses in property taxes due to nontaxable Federal lands within their boundaries. The formula used to compute the payments is contained in the PILT Act and is based on population, receipt sharing payments, and the amount of Federal land within an affected county. Disbursements made in FY04 to Colleton, Hampton and Jasper counties for the mitigation lands were \$4,755.00, \$7,180.00, and \$2,248.00, respectively (Loretta Fountain, January 2005).

Wildlife Region V personnel staff for Palachucola WMA would consist of 2 biologists, 8 technicians, 2 custodial workers and 1 secretary. The staff would be assisted as needed by personnel from the SCDNR Wildlife Diversity Section.

Personnel required to manage Mary's Island would consist of the Area Manager, Natural Resource Tech III and Tech II. The Project Coordinator for Donnelley WMA would spend approximately 25 percent of his management time overseeing projects on Mary's Island. An Administrative Specialist II would also be required.

##### **4.3.1.2 Alternative II (Proposed Action) – Convey Lands to SCDNR**

Implementation of Alternative II would not have a minor adverse effect on demographics, but would have a minor adverse effect on the economy. There would be no change in employment or population in Colleton, Hampton, or Jasper County. No additional SCDNR wildlife biologists, technicians or other staff would be required to manage the tracts, nor would additional conservation officers be necessary for patrol and law enforcement on the Palachucola WMA or Mary's Island.

Tax revenues would be affected by this alternative. The change in land ownership from a federal to a state agency would disqualify South Carolina from receiving PILT Act funding for these lands. The annual PILT payments make up a relatively inconsequential amount of the revenue received by the counties and the loss of such would not be expected to halt planned infrastructure

or other projects. SCDNR would not be subject to taxation by the local governments (Dean Harrigal, January 2005).

#### **4.3.2 Environmental Justice**

##### **4.3.2.1 Alternative I (No Action Alternative) – Federally-owned Land, Managed by SCDNR**

Alternative I would not require the relocation or displacement of minority or ethnic populations. No effects to safety or human health would be expected from this alternative.

##### **4.3.2.2 Alternative II (Preferred Action) – Convey Land to SCDNR**

Implementation of Alternative II would not require the relocation or displacement of minority or ethnic populations. Short-term negligible effects from increased frequency of noise associated with timber thinning and harvesting activities would occur to persons living adjacent to the Palachucola WMA or Mary's Island shortly after the conveyance. Noise levels and frequencies would be expected to return to pre-conveyance conditions once the thinning and harvesting schedule had returned to the pre-conveyance schedule. No effects to safety would be expected.

#### **4.4 CULTURAL RESOURCES**

##### **4.4.1 Alternative I (No Action Alternative) -- Federally Owned Land, Managed by SCDNR**

Alternative I would be expected to have no effect on historic properties on Palachucola WMA or Mary's Island. Avoidance would be the primary means of site preservation and management. Archeological sites determined potentially eligible or eligible for the National Register of Historic Places would be avoided during thinning or timber harvesting activities. Should avoidance prove impossible, the undertaking would be coordinated with Savannah District staff, which would complete Section 106 of the NHPA of 1966, as amended, compliance requirements.

Improvements made to the historically significant Treadwell house (Mistletoe Grove) and other standing structures located on the Palachucola WMA would be coordinated with Savannah District and the SC State Historic Preservation Office (SHPO) to avoid adversely affecting the integrity of the structure and to comply with Section 106 of the NHPA.

##### **4.4.2 Alternative II (Preferred Action) – Convey Lands to SCDNR**

Implementation of this alternative would have no effect on historic properties on the Palachucola WMA and Mary's Island as a Memorandum of Agreement will be executed in accordance with 36 CFR 800. Historic properties located on state owned lands are not protected under the NHPA or other federal regulations. Per 36 CFR 800.5 the transfer of property out of Federal ownership or control is considered an adverse effect as defined in 36 CFR 800 unless enforceable restrictions or conditions accompany the transfer.

Prior to the conveyance of the Palachucola WMA and the Mary's Island Mitigation Tract, a Memorandum of Agreement (MOA) would be prepared in accordance with 36 CFR 800, *Protection of Historic Properties*, to avoid adversely affecting the historic properties. A draft agreement is located in Appendix E. The MOA would be signed by the USACE, Savannah District, SCDNR and the SC SHPO before submittal to the Advisory Council on Historic Preservation for filing. The MOA would be a binding agreement between all parties to ensure the long-term preservation of the historic properties. Execution of this agreement would

complete the Corps' Section 106 of the NHPA compliance requirements. No further coordination with Savannah District cultural resources staff would be required.

#### **4.4.3 Cumulative Impacts**

“Cumulative impact”, as defined in CEQ 1508.7, is the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Analysis of both the No Action alternative and the Preferred Alternative has resulted in the identification of no cumulative impacts.

#### **4.4.4 Irreversible and Irrecoverable Resource Commitments**

The proposed action, or any other alternative, could result in an irreversible and irretrievable commitment of a range of natural, physical, human and fiscal resources.

The fossil fuels, labor and construction materials that would be expended if this project is implemented are generally not considered irretrievable resources. In addition, these resources are not in short supply and their use would not have an adverse effect upon their continued availability.

### **5.0 CONSULTATION/COORDINATION**

This chapter details the consultation and coordination between USACE and other Federal, State, and local government agencies, Native American Tribes, and the public during the preparation of this EA.

#### **5.1 COORDINATION TO DATE**

Consultation and coordination with the USFWS, Charleston Ecological Services Field Unit, has taken place to date:

#### **5.2 FUTURE**

**Public Review Process - Public Notice of Availability:** A Public Notice announcing the availability of the draft report will be mailed to all the parties on the South Carolina Regulatory mailing list in compliance with the National Environmental Policy Act (NEPA); and also copies of the draft EA will be sent to all appropriate parties including Federal, state, and local agencies. The draft EA will be available for comment for 30 days after the notice is released.

Coordination with the South Carolina State Historic Preservation Office (SHPO) and federally recognized tribes is on-going to prepare a Memorandum of Agreement in accordance with 36 CFR 800.

Consultation with the South Carolina Department of Health and Environmental Control is on-going regarding the cattle dipping vat located on Mary's Island.

## 6.0 LIST OF PREPARERS

Julie A. Morgan, US Army Corps of Engineers, Savannah District, 9.5 years experience with cultural resources management in Planning Division; 3 years experience in environmental impact assessment.

William G. Lynch, US Army Corps of Engineers, Savannah District, 17 years Sr. Project Management, Civil Works Programs and Project Management Branch.

Loretta Fountain, US Army Corps of Engineers, Savannah District, 9 years experience as Realty Specialist-Civil Team Leader.

David A. Coleman, US Army Corps of Engineers, Savannah District, 26 years experience with NEPA compliance.

Larry Olliff, US Army Corps of Engineers, Savannah District, 2 years experience with natural resources management in Planning Division.

Gabriele Supon, US Army Corps of Engineers, Savannah District, 9 years, administrative assistant.

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# **APPENDIX A**

## **FINDING OF NO SIGNIFICANT IMPACT**

## FINDING OF NO SIGNIFICANT IMPACT

**Name of Action:** Conveyance of Richard B. Russell separable mitigation lands in Colleton, Hampton and Jasper counties, South Carolina, to South Carolina Department of Natural Resources (SCDNR)

**Description:** The proposed action is to convey by deed from the US Government to the State of South Carolina 10,165 acres of separable mitigation lands that are presently managed for intensive wildlife operations by SCDNR. The lands were acquired by the Federal government to compensate for fish and wildlife habitat losses resulting from the construction of the Richard B. Russell Lake and Dam. The separable lands, located in Colleton, Hampton and Jasper counties, South Carolina, are to be conveyed to SCDNR pursuant to legislation passed by Congress in the Water Resources Development Act of 2000 (Public Law 106-541).

**Alternatives:** Only one alternative, the No Action Alternative, was considered in addition to the proposed action. Inclusion of the No Action Alternative is prescribed by the Council on Environmental Quality regulations (40 CFR 1502.14). Under the No Action Alternative the US Government would continue to hold the title to the tracts, SCDNR would continue to manage the lands, and Congress would not direct the US Army Corps of Engineers to transfer the land to SCDNR.

**Anticipated Environmental Effects:** Implementation of the proposed action will result in short term negligible and minor adverse effects as a result of increased timber thinning and harvesting activities that would take place for a short period immediately after the conveyance. The proposed action would result in short term negligible effects to private residences near the tracts due to increased frequency of noise associated with more intensive timber harvesting and thinning activities. The following resources would receive short term minor adverse effects: vegetation, wildlife, air quality, and demographics and economy. All impacts would subside and return to the pre-conveyance conditions after the timber thinning and harvesting schedules return to the same schedule as before the conveyance. No cumulative impacts or benefits were identified. The proposed action is in compliance with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations".

**Conclusion:** From the information supplied by my staff, I find that the proposed action is environmentally sound and sufficient data is available to determine that the proposed action is not a "major federal action significantly affecting the human environment" when considered individually or cumulatively in the context of the referenced act, including both direct and indirect impacts. Therefore, an Environmental Impact Statement will not be prepared.

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Date

Mark S. Held  
Colonel, US Army  
District Engineer

# **APPENDIX B**

## **WATER RESOURCES DEVELOPMENT ACT 2000**

## **Water Resources Development Act 2000, Section 348(k) Real Estate Provisions**

(k) Richard B. Russell, South Carolina - This is an amendment to section 563(i) of WRDA 99. The Secretary shall convey to the State of South Carolina, without consideration, the land described in Exhibits A, F, and H of Army Lease No. DACW21-1-93-0910. Such land shall be retained in public ownership and managed in perpetuity for fish and wildlife mitigation purposes in accordance with a plan approved by the Secretary. The conveyance is subject to a reversionary interest if it is not managed in accordance with this plan. Subject to the Secretary and the State entering into an agreement with the State to manage the land conveyed, the Secretary shall pay the State \$4,850,000. The agreement shall specify the terms and conditions under which payment shall be made and the rights and remedies available to the Federal Government to recover all or a portion of the payment if the State fails to manage any parcel in a manner satisfactory to the Secretary. (SAD)

# **APPENDIX C**

## **MEMORANDUM OF AGREEMENT FOR CONVEYANCE**

AGREEMENT  
BETWEEN  
THE DEPARTMENT OF THE ARMY  
AND  
THE SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES

THIS AGREEMENT is entered into this 15<sup>th</sup> day of SEPTEMBER, 2004, by and between the DEPARTMENT OF THE ARMY (hereinafter referred to as the "Government"), acting by and through the Assistant Secretary of the Army (Civil Works), and the SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES (hereinafter referred to as the "Department") or its successor agency.

WITNESSETH:

WHEREAS, construction of the Richard B. Russell Dam and Lake Project, Georgia and South Carolina (hereinafter referred to as the Project), was authorized by the Flood Control Act of 1966, Public Law 89-789, Section 203 (80 Stat. 1420); and,

WHEREAS, the Government has acquired approximately 10,165 acres of land in South Carolina (hereinafter referred to as "said lands") as part of the mitigation plan for the construction of the Project in accordance with Section 601 of the Water Resources Development Act of 1986, Public Law 99-662 (100 Stat. 4140), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended), 16 U.S.C. 661 et seq.; and,

WHEREAS, said lands are described in Exhibits A, F, and H of Army Lease No. DACW21-1-93-0910 and associated supplemental agreements; and,

WHEREAS, said lands have been intensively managed for wildlife by the Department in accordance with the Final Richard B. Russell Mitigation Plan, April 1995 (hereinafter referred to as the "Master Implementation Plan"), and Annual Management Plans, jointly developed by the U.S. Army Corps of Engineers, Savannah District (hereinafter referred to as the "Corps") and the Department; and,

WHEREAS, Section 348(k) of the Water Resources Development Act of 2000 (hereinafter referred to as WRDA 2000), Public Law 106-541 (114 Stat. 2629-2630), provides for the Government to convey all right, title, and interest in and to said lands to the Department

for management in perpetuity for fish and wildlife mitigation purposes; and,

WHEREAS, WRDA 2000 requires the Government to pay the Department \$4,850,000 (hereinafter referred to as "said payment") for the management of said lands for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands; and,

WHEREAS, the Department shall be responsible for all costs, including real estate transaction and environmental compliance costs and the cost of a survey satisfactory to the Government, associated with this conveyance and shall reimburse the Government for the Government's costs associated with this conveyance as required in Section 348(k) of WRDA 2000; and,

WHEREAS, the Department shall retain said lands in public ownership and shall manage said lands in perpetuity for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan; and,

WHEREAS, if any parcel of said lands is not managed for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, title to the parcel shall revert to the Government, at the option of the Government; and,

WHEREAS, the Government may recover all or a portion of said payment if the Department fails to manage any parcel of said lands in accordance with the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands.

NOW, THEREFORE, the parties agree as follows:

1. The Government shall convey to the Department all right, title and interest in and to said lands, as described in Exhibits A, F and H of Department of the Army Lease No. DACW21-1-93-0910 and associated supplemental agreements, and the Department agrees to accept all right, title and interest in and to said lands and to retain said lands in public ownership and manage said lands in perpetuity for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands.

2. The Government shall prepare all real estate disposal and required environmental and cultural resources clearance documentation associated with this conveyance.

3. The Government shall make said payment of \$4,850,000 to the Department for the management of said lands in perpetuity for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan.

4. The Government shall make said payment and this conveyance within eighteen (18) months from the date that the funds for said payment are appropriated and made available to the U.S. Army Corps of Engineers to expend for these purposes.

5. The Department shall reimburse the Government for all of the Government's costs associated with this conveyance, including document preparation, performance of environmental and cultural resources clearance work, and review and coordination. The Department shall make the above payment within 90 days after the date of this conveyance.

6. Upon conveyance of the said lands and the Government's payment of \$4,850,000.00 to the Department, the Department shall retain the said lands in public ownership and manage said lands in perpetuity for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands.

7. The conveyance of the said lands is subject to the completion of appropriate environmental documentation as specified in the National Environmental Policy Act of 1969, as amended, and implementing regulations, and approval of a Finding of Suitability to Transfer approved by the Government.

8. The conveyance will be made by quitclaim deed, (a draft format of which is shown in attachment A to this Agreement).

9. After conveyance of said lands and the making of said payment of \$4,850,000, the Agreement between the Department of the Army and the South Carolina Wildlife and Marine Resources Department, dated July 20, 1992, and Department of the Army Lease No. DACW21-1-93-0910 and associated supplemental agreements will terminate and the Government will no longer be responsible to make any further annual operation and maintenance payments on

said lands to the Department beginning with and including the quarter of the Government fiscal year in which said lands are conveyed. The Government will make said operation and maintenance payments to the Department on a quarterly basis during the Government fiscal year in which said lands are conveyed up to and including the quarter of the Government fiscal year immediately preceding the quarter of the Government fiscal year in which said lands are conveyed.

10. Both the Government and the Department shall continue to utilize the Master Implementation Plan, as modified by the Government and Department upon conveyance of said lands, to implement this conveyance and continue to meet the requirement that these lands will be managed in perpetuity to the satisfaction of the Government. If either party requests any change in managing these lands for fish and wildlife mitigation purposes, the parties will implement mutually agreed upon changes by amending the Master Implementation Plan. For purposes of this Agreement, the term "satisfaction of the Government" shall mean in compliance with the Master Implementation Plan, as modified by the Government and Department upon conveyance of said lands.

11. The Department must expend all of said payment and income from said lands for management of said lands for fish and wildlife mitigation purposes. Within six months of said notice by the Government, the Department shall restore or replace or return to the Government any amount of said payment or income from said lands that is expended for other than fish and wildlife mitigation purposes.

12. In accordance with the Agreement between the Department of the Army and the South Carolina Wildlife and Marine Resources Department, dated July 20, 1992, the Department may cut and sell timber within the limits provided in the Master Implementation Plan and Annual Management Plans. If the Department receives monies from mitigation land timber sales within one year of conveyance of said lands, the Government shall reduce the remaining quarterly payment to the Department for intensive wildlife management by the amount of the net revenue realized. The Government shall have the right to recover and the Department shall return the amount of quarterly payment that is in excess of the amount of the net revenue realized from said mitigation land timber sales.

13. The Government hereby retains the right to perform periodic inspections of facilities and operations on the said lands, upon 72 hours notice to the Department, for the purpose of ensuring

the Department's intensive wildlife management including public hunting, fishing, and outdoor recreation use consistent with WRDA 2000 and the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands.

14. If any parcel of said lands is not managed for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, title to the parcel shall revert to the Government, at the option of the Government. Should the Government determine that the Department is not managing said lands for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, the Government will notify the Department and identify the items of noncompliance with the Master Implementation Plan which serve as the basis for such determination. The Government shall allow the Department a period of six (6) months from the time of said notice to achieve full compliance with the requirements of the Master Implementation Plan, prior to the Government exercising its optional statutory reversionary rights."

15. If the Department fails to manage any parcel of said lands in a manner satisfactory to the Government, i.e., in accordance with the Master Implementation Plan, the Government will notify the Department and allow the Department a period of six (6) months from the time of said notice to achieve full compliance with the requirements of the Master Implementation Plan, prior to the Government exercising any of its rights to recover all or a portion of said payment.

16. Upon the conveyance of said lands, the United States shall not be responsible for any injury to persons or damage to property arising out of or incident to the ownership, use or occupancy of the said lands by the Department and the Department shall indemnify and hold the United States harmless from any and all such claims for injury or damage, excepting claims for injury or damage arising from activities of the Government on the said lands which are being conducted exclusively for the benefit of the Government.

17. Nothing herein shall constitute, or be deemed to constitute, an obligation of future appropriations by the United States.

18. Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the legislature of the State of South Carolina, where creating such an

obligation would be inconsistent with the laws of the State of South Carolina.

19. The parties agree that the provisions of this Agreement that relate to obligations and responsibilities of the parties after the transfer of said lands shall remain in force and effect notwithstanding the transfer. If any provision of this Agreement is determined to be invalid or unenforceable, the remaining provisions shall remain in force and unaffected to the fullest extent permitted by law and regulation.

20. The parties agree that this Agreement represents a legally binding agreement. Both parties may enforce its provisions under applicable federal law. This Agreement and all documents and actions prepared and executed pursuant to it shall be governed by the applicable statutes, regulations, directives, and procedures of the United States.

21. In the event of a dispute between the parties, the Government and the Department shall use their best efforts to resolve that dispute in an informal fashion through consultation and communication, or other forms of non-binding alternative dispute resolution with a qualified third party mutually acceptable to the parties. The Government and the Department shall each pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

22. The Department shall establish and maintain adequate records and accounts. The Government shall have the right to perform audits of the Department's records and accounts. The Department will make available at its office all accounting records and supporting documentation for inspection and audit by an authorized representative of the Government. Based on the Government's audit, in accordance with Article 12, any portion of said payment and income from said lands not utilized for management of said lands for fish and wildlife mitigation purposes shall be restored or replaced or returned to the Government within sixty (60) days of request by the Government.

23. As between the Government and the Department, the Department shall be considered the operator of the Project for purposes of liability any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter "CERCLA"), 42 U.S.C. Sections 9601-9675, that may exist

in, on, or under said lands. In the event that hazardous substances regulated under CERCLA are found to exist in, on, or under any of said lands the Department shall be responsible, as between the Government and the Department, for the costs of clean-up and response, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination.

To the maximum extent practicable, the Department shall use and manage said lands in a manner that will not cause liability to arise under CERCLA.

24. All notices, requests, demands, and other communications required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and delivered personally, given by prepaid telegram, or mailed by first-class postage (postage pre-paid), registered, or certified mail, as follows:

IF TO THE DEPARTMENT:

South Carolina Department of Natural Resources  
Executive Director  
Attention: Mr. John Frampton  
Post Office Box 167  
Columbia, South Carolina 29202

IF TO THE GOVERNMENT:

District Engineer  
U.S. Army Engineer District, Savannah  
Attention: PM-C  
Post Office Box 889  
Savannah, Georgia 31402-0889

A party may change the address or person to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

Any notice, request, demand, or other communications made pursuant to this Article shall be deemed to have been received by the addressee at the earlier of such time as it is actually received or seven calendar days after it is mailed.

25. This Agreement may be modified or amended only by written, mutual agreement of the parties.

26. This Agreement shall become effective when signed below by the Secretary, which shall be the date first above-written.

IN WITNESS WHEREOF, the parties have executed the Memorandum of Agreement as of the day and year first written.

THE DEPARTMENT OF THE ARMY

BY: John Paul Woodley, Jr.  
John Paul Woodley, Jr.  
Assistant Secretary of the Army  
(Civil Works)

SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES

BY: John Frampton  
John Frampton  
Executive Director

# **APPENDIX D**

## **ENDANGERED SPECIES LIST**

### **COLLETON, HAMPTON AND JASPER COUNTIES**

**South Carolina Rare, Threatened and Endangered Species Inventory**  
**Species found in Colleton County**  
**Data last updated June 9th, 2003**

SCIENTIFIC NAME	COMMON NAME	LEGAL STATUS*
ACCIPITER COOPERII	COOPER'S HAWK	SC
ACIPENSER BREVIROSTRUM	SHORTNOSE STURGEON	FE/SE
ASCLEPIAS PEDICELLATA	SAVANNAH MILKWEED	RC
CANNA FLACCIDA	BANDANA-OF-THE-EVERGLADES	SC
CARETTA CARETTA	LOGGERHEAD	FT/ST
CAREX BASIANTHA		SC
CAREX CHEROKEENSIS	CHEROKEE SEDGE	SC
CAREX DECOMPOSITA	CYPRESS-KNEE SEDGE	SC
CARYA MYRISTICIFORMIS	NUTMEG HICKORY	RC
CHARADRIUS WILSONIA	WILSON'S PLOVER	ST
CLEMMYS GUTTATA	SPOTTED TURTLE	ST
COLONIAL WATERBIRD		SC
CONDYLURA CRISTATA	STAR-NOSED MOLE	SC
CORYNORHINUS RAFINESQUII	RAFINESQUE'S BIG-EARED BAT	SE
CROTALUS ADAMANTEUS	EASTERN DIAMONDBACK RATTLESNAKE	SC
CYPERUS TETRAGONUS	PIEDMONT FLATSEDGE	SC
ELASSOMA OKATIE	BLUEBARRED PYGMY SUNFISH	SC
EPIDENDRUM CONOPSEUM	GREEN-FLY ORCHID	SC
FORESTIERA GODFREYI	GODFREY'S PRIVET	SC
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	SE
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	FT/SE
HELIANTHEMUM GEORGIANUM	GEORGIA FROSTWEED	SC
HETERODON SIMUS	SOUTHERN HOGNOSE SNAKE	SC
ICTINIA MISSISSIPPIENSIS	MISSISSIPPI KITE	SC
ISOETES RIPARIA	RIVER BANK QUILLWORT	SC
LITSEA AESTIVALIS	PONDSPICE	SC
MACBRIDEA CAROLINIANA	CAROLINA BIRD-IN-A-NEST	SC
MYCTERIA AMERICANA	WOOD STORK	FE/SE
NEOTOMA FLORIDANA	EASTERN WOODRAT	SC
OPHISAURUS COMPRESSUS	ISLAND GLASS LIZARD	SC
OXYPOLIS CANBYI	CANBY'S DROPWORT	FE/SE
PHYSOSTEGIA LEPTOPHYLLA	SLENDER-LEAVED DRAGON-HEAD	SC
PIERIS PHILLYREIFOLIA	CLIMBING FETTER-BUSH	SC
PILEA FONTANA	SPRINGS CLEARWEED	SC

\* FE - Federal Endangered  
 FT - Federal Threatened  
 PE - Proposed for Federal listing as Endangered  
 PT - Proposed for Federal listing as Threatened  
 C - Candidate for Federal listing  
 NC - Of Concern, National (unofficial - plants only)  
 RC - Of Concern, Regional (unofficial - plants only)  
 SE - State Endangered (official state list - animals only)  
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SCIENTIFIC NAME	COMMON NAME	LEGAL STATUS*
PTEROGLOSSASPIS ECRISTATA	CRESTLESS PLUME ORCHID	SC
RUELLIA CAROLINIENSIS SSP CILIOSA	A PETUNIA	SC
SAGERETIA MINUTIFLORA	TINY-LEAVED BUCKTHORN	SC
STERNA ANTILLARUM	LEAST TERN	ST
THALIA DEALBATA	POWDERY THALIA	SC
VILLOSA DELUMBIS	EASTERN CREEKSHELL	SC

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**South Carolina Rare, Threatened and Endangered Species Inventory**  
**Species found in Hampton County**  
**Data last updated June 9th, 2003**

SCIENTIFIC NAME	COMMON NAME	LEGAL STATUS*
AMPHICARPUM MUEHLENBERGIANUM	BLUE MAIDEN-CANE	SC
ANODONTA COUPERIANA	BARREL FLOATER	SC
ARISTOLOCHIA TOMENTOSA	WOOLLY DUTCHMAN'S-PIPE	SC
CAREX BASIANTHA		SC
CAREX CHAPMANII	CHAPMAN'S SEDGE	NC
CAREX CHEROKEENSIS	CHEROKEE SEDGE	SC
CAROLINA BAY		SC
CLEMMYS GUTTATA	SPOTTED TURTLE	ST
COLONIAL WATERBIRD		SC
COREOPSIS GLADIATA	SOUTHEASTERN TICKSEED	SC
CORYNORHINUS RAFINESQUII	RAFINESQUE'S BIG-EARED BAT	SE
CROTALUS ADAMANTEUS	EASTERN DIAMONDBACK RATTLESNAKE	SC
CYPERUS TETRAGONUS	PIEDMONT FLATSEEDGE	SC
ELASSOMA OKATIE	BLUEBARRED PYGMY SUNFISH	SC
EPIDENDRUM CONOPSEUM	GREEN-FLY ORCHID	SC
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	SE
HABENARIA QUINQUESETA	LONG-HORN ORCHID	SC
HALESIA PARVIFLORA	SMALL-FLOWERED SILVERBELL-TREE	SC
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	FT/SE
HYLA AVIVOCA	BIRD-VOICED TREEFROG	SC
HYPERICUM ADPRESSUM	CREEPING ST. JOHN'S-WORT	RC
ICTINIA MISSISSIPPIENSIS	MISSISSIPPI KITE	SC
KINOSTERNON BAURII	STRIPED MUD TURTLE	SC
LASIURUS INTERMEDIUS	NORTHERN YELLOW BAT	SC
LEPUROPETALON SPATHULATUM	SOUTHERN LEPUROPETALON	SC
LOBELIA BOYKINII	BOYKIN'S LOBELIA	SC
MACBRIDEA CAROLINIANA	CAROLINA BIRD-IN-A-NEST	SC
MELANTHIUM VIRGINICUM	VIRGINIA BUNCHFLOWER	SC
MYCTERIA AMERICANA	WOOD STORK	FE/SE
OXYPOLIS CANBYI	CANBY'S DROPWORT	FE/SE
PHYSOSTEGIA LEPTOPHYLLA	SLENDER-LEAVED DRAGON-HEAD	SC
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	FE/SE
PITUOPHIS MELANOLEUCUS MUGITUS	FLORIDA PINE SNAKE	SC

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 SC - Of Concern, State  
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SCIENTIFIC NAME	COMMON NAME	LEGAL STATUS*
PONTHIEVA RACEMOSA	SHADOW-WITCH ORCHID	SC
PSEUDOBANCHUS STRIATUS	DWARF SIREN	ST
PTEROGLOSSASPIS ECRISTATA	CRESTLESS PLUME ORCHID	SC
PYGANODON CATARACTA	EASTERN FLOATER	SC
QUERCUS AUSTRINA	BLUFF OAK	SC
QUERCUS SIMILIS	BOTTOM-LAND POST OAK	SC
RANA CAPITO	GOPHER FROG	SE
RHYNCHOSPORA HARPERI	HARPER BEAKRUSH	SC
RHYNCHOSPORA TRACYI	TRACY BEAKRUSH	SC
SABATIA BARTRAMII	BARTRAM'S ROSE-GENTIAN	SC
SCLERIA BALDWINII	BALDWIN NUTRUSH	SC
SIDEROXYLON LANUGINOSUM	GUM BUMELIA	SC
SIDEROXYLON RECLINATUM		SC
STILLINGIA AQUATICA	CORKWOOD	SC
THALIA DEALBATA	POWDERY THALIA	SC
URSUS AMERICANUS	BLACK BEAR	SC
UTTERBACKIA IMBECILLIS	PAPER PONDSHELL	SC
VILLOSA DELUMBIS	EASTERN CREEKSHELL	SC

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**South Carolina Rare, Threatened and Endangered Species Inventory**  
**Species found in Jasper County**  
**Data last updated June 9th, 2003**

SCIENTIFIC NAME	COMMON NAME	LEGAL STATUS*
ACIPENSER BREVIROSTRUM	SHORTNOSE STURGEON	FE/SE
AGARISTA POPULIFOLIA	CAROLINA DOG-HOBBLE	SC
AIMOPHILA AESTIVALIS	BACHMAN'S SPARROW	SC
ALETRIS OBOVATA	WHITE COLICROOT	SC
AMBYSTOMA CINGULATUM	FLATWOODS SALAMANDER	FT/SE
ANDROPOGON BRACHYSTACHYUS	SHORT-SPIKE BLUESTEM	SC
ANDROPOGON PERANGUSTATUS	NARROW LEAVED BLUESTEM	SC
ANODONTA COUPERIANA	BARREL FLOATER	SC
ANTHAENANTIA RUFA	PURPLE SILKYSKALE	SC
ARISTIDA CONDENSATA	PIEDMONT THREE-AWNED GRASS	SC
BACOPA CYCLOPHYLLA	COASTAL-PLAIN WATER-HYSSOP	SC
BALDUINA UNIFLORA	ONE-FLOWER BALDUINA	SC
CANNA FLACCIDA	BANDANA-OF-THE-EVERGLADES	SC
CAREX AMPHIBOLA	NARROWLEAF SEDGE	SC
CAYAPONIA BOYKINII	CAYAPONIA	SC
CLEMMYS GUTTATA	SPOTTED TURTLE	ST
CLIFTONIA MONOPHYLLA	BUCKWHEAT-TREE	SC
COLONIAL WATERBIRD		SC
CORYNORHINUS RAFINESQUII	RAFINESQUE'S BIG-EARED BAT	SE
CROTALUS ADAMANTEUS	EASTERN DIAMONDBACK RATTLESNAKE	SC
CROTONOPSIS LINEARIS	NARROWLEAF RUSHFOIL	SC
CYPERUS TETRAGONUS	PIEDMONT FLATSEDEGE	SC
DICERANDRA ODORATISSIMA	ROSE BALM	SC
DICHANTHELIUM ACICULARE	BROOMSEDEGE	SC
ELASSOMA OKATIE	BLUEBARRED PYGMY SUNFISH	SC
ELLIPTIO CONGARAEA	CAROLINA SLAB SHELL	SC
EUPATORIUM ANOMALUM	FLORIDA THOROUGH-WORT	SC
FORESTIERA SEGREGATA	SOUTHERN PRIVET	SC
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	SE
HALESIA DIPTERA	TWO-WING SILVERBELL	SC
HALESIA PARVIFLORA	SMALL-FLOWERED SILVERBELL-TREE	SC
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	FT/SE
HETERODON SIMUS	SOUTHERN HOGNOSE SNAKE	SC
HYLA AVIVOCA	BIRD-VOICED TREEFROG	SC
HYPERICUM ADPRESSUM	CREEPING ST. JOHN'S-WORT	RC

\* FE - Federal Endangered  
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SCIENTIFIC NAME	COMMON NAME	LEGAL STATUS*
KINOSTERNON BAURII	STRIPED MUD TURTLE	SC
KOGIA BREVICEPS	PYGMY SPERM WHALE	SC
LAMPSILIS CARIOSA	YELLOW LAMPMUSSEL	SC
LAMPSILIS SPLENDIDA	RAYED PINK FATMUCKET	SC
LEPUROPETALON SPATHULATUM	SOUTHERN LEPUROPETALON	SC
LICANIA MICHAUXII	GOPHER-APPLE	SC
LISTERA AUSTRALIS	SOUTHERN TWAYBLADE	SC
LITSEA AESTIVALIS	PONDSPICE	SC
LYONIA FERRUGINEA	RUSTY LYONIA	SC
LYSIMACHIA HYBRIDA	LANCE-LEAF LOOSESTRIFE	SC
MYCTERIA AMERICANA	WOOD STORK	FE/SE
NEOTOMA FLORIDANA	EASTERN WOODRAT	SC
NEOTOMA FLORIDANA FLORIDANA	EASTERN WOODRAT	SC
NYSSA OGECHE	OGEECHEE TUPELO	SC
ORBEXILUM LUPINELLUM	SAMPSON SNAKEROOT; SCURF PEA	SC
PANICUM NEURANTHUM		SC
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	FE/SE
PINCKNEYA PUBENS	HAIRY FEVER-TREE	SC
PITUOPHIS MELANOLEUCUS MUGITUS	FLORIDA PINE SNAKE	SC
PLANTAGO SPARSIFLORA	PINELAND PLANTAIN	SC
PLATANHERA INTEGRA	YELLOW FRINGELESS ORCHID	SC
POLYGALA HOOKERI	MILKWORT	SC
POLYGALA NANA	DWARF MILKWORT	SC
POTAMOGETON FOLIOSUS	LEAFY PONDWEED	SC
PSEUDOBANCHUS STRIATUS	DWARF SIREN	ST
PSEUDOTRITON MONTANUS FLAVISSIMUS	GULF COAST MUD SALAMANDER	SC
PTEROGLOSSASPIS ECRISTATA	CRESTLESS PLUME ORCHID	SC
PYCNANTHEMUM NUDUM	PINELANDS MOUNTAIN MINT	SC
PYGANODON CATARACTA	EASTERN FLOATER	SC
QUERCUS MYRTIFOLIA	MYRTLE-LEAF OAK	SC
RUDBECKIA MOLLIS	SOFT-HAIR CONEFLOWER	SC
SAGERETIA MINUTIFLORA	TINY-LEAVED BUCKTHORN	SC
SAGITTARIA GRAMINEA VAR WEATHERBIANA	GRASSLEAF ARROWHEAD	SC
SCHWALBEA AMERICANA	CHAFFSEED	FE/SE
SCIURUS NIGER	EASTERN FOX SQUIRREL	SC
SCLERIA BALDWINII	BALDWIN NUTRUSH	SC
SEMINATRIX PYGAEA	BLACK SWAMP SNAKE	SC
SPIRANTHES LONGILABRIS	GIANT SPIRAL LADIES'-TRESSES	SC
SPOROBOLUS FLORIDANUS	FLORIDA DROPSEED	SC
STERNA ANTILLARUM	LEAST TERN	ST
THALIA DEALBATA	POWDERY THALIA	SC
UTTERBACKIA IMBECILLIS	PAPER POND SHELL	SC
VILLOSA DELUMBIS	EASTERN CREEKSHELL	SC

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# **APPENDIX E**

## **SAMPLING AND ASSESSMENT REPORT (ABBREVIATED)**

**March 31, 2005**

# **Sampling and Assessment Report**

## **Mary's Island Mitigation Tract**

**Part of**

## **The Donnelley Wildlife Management Area**

## **Colleton County, South Carolina**

Prepared By:

Stephen Burdick, Manager  
Waste Assessment Section  
Bureau of Land and Waste Management  
Department of Health and Environmental Control

2600 Bull Street  
Columbia, SC 29201-1708

## ACE Basin Sampling and Assessment

### Narrative:

An assessment and sampling team from the Department of Health and Environmental Control's Bureau of Land and Waste Management was requested to attempt to locate and assess a cattle dip trench if existing and any possible contamination, if remaining, at the Mary's Island section of the Donnelley Wildlife Management Area, located in Colleton County, South Carolina. On February 7, 2005, Stephen Burdick and Francis M. Carns of the Waste Assessment Section deployed to the site of the Donnelley Wildlife Management Area, located immediately south of US 17 and the Green Pond community. The site manager for SCDNR, Mr. Dean Harrigal, Wildlife Biologist, escorted the DHEC team to the area where the Cattle dip trench was believed to be located. The DHEC team used a "Fischer Drum Locator" to survey the identified field for magnetic anomalies and then located and flagged an area, approximately 36' x 10', in the middle of the field for further investigation. A "T" handled push probe was used to probe the area inside the survey area and consistent refusal was found at a depth of approximately 24-25" below surface level.

Similar probes to the outside of the rectangular did not meet refusal to a depth of 3 to 4 feet.

As the DHEC team continued to assess the identified area the following observations were made:

- The soils outside the rectangle were consistent in profile; rich black loam 0-6"; gray loam 6-12"; tan to light sandy loam 12-16"; light to red intermixed clays 16 – 36" with no water collecting in the holes and no real moisture in the clays.
- The soils inside the rectangle were consistently a dark to gray rich loam to the depth of 24" where refusal was reached. Water collected in the excavated auger holes to a depth of 6" from the bottom.
- The team's supposition was that the trench was filled with surficial loam soils when the trench was closed and brought to grade level.

### Sampling:

After extensive investigation and field screening, it was decided that besides the background sample, samples would be collected from the inside center of the rectangle and at a distance of 1 foot away from the rectangle ends and sides. With the underlying concrete pad depth below ground level of 24", it was decided that the samples would be collected the samples from the 24-30" depth outside the rectangle and from 18-24" on the pad.

Additional samples were collected for screening analysis by X-Ray Fluorescence. Based on this subsequent screening by XRF, low levels of Arsenic were indicated to be present in the samples. Additional samples were, therefore, collected and submitted for RCRA metals analysis.

Samples were collected for pesticides screening and were submitted for laboratory analysis for the following parameters:

- Total Metals
- Organo-phosphorous pesticides
- Organo-chlorine pesticides

**X-Ray Fluorescence Field Screening Results:**

Soils samples were collected for screening for arsenic and any other elevated metals species at the site. As screening data, these values should be assessed as relative site trends. The inference is that some levels of Arsenic above background levels are present on the pad, D-002 (18-24”), and at the north end of the pad, D-010. These screening values triggered the sampling for arsenic in soil.

Sample #, Location	Screening Value, As
D-001	< 7 (+/- 3) mg/kg
D-002 (12-18”)	< 7 (+/- 3) mg/kg
D-002 (18-24”)	26 (+/- 3) mg/kg
D-007	7 (+/- 3) mg/kg
D-008	8 (+/- 3) mg/kg
D-009	< 8 (+/- 3) mg/kg
D-010	19 (+/- 3) mg/kg

**Analytical Results:**

Inorganic samples (arsenic):

There were no reportable levels of arsenic above the laboratory reporting limits for soils and sediments. The laboratory-reporting limit is 10 mg/kg. All samples results were <10 mg/kg. The data are appended in the appendix. There was a slight but discernable difference between the sandy loam compartment and the clay compartment of the soils, however the data are consistent within the individual soils types. The

Organic samples:

Two different analytical profiles were performed for the samples at this site, specifically for 27 separate Organophosphorous pesticide compounds, by GC/MS, (USEPA SW-846 – method 8270C) and 21 separate Organochlorine pesticide compounds, by GC, (USEPA SW-846 – method 8081A). There were no reportable levels of either Organophosphorous or Organochlorine pesticide compounds above the laboratory reporting limits for soils and sediments. These data are located in the appendix.

**Discussion:**

A literature search indicated that the historically used older classes of pesticides, which may have been used in a cattle dip trench, could have included arsenic trioxide and certain organochlorine and organophosphate types of pesticides.

Some of the more prevalent pesticides used in earlier years, together with their associated MCL, PRG, and SSL values are listed below:

Compound	EPA/SC Drinking Water MCL's (ug/L)	EPA Region IX tap Water (ug/L)	EPA Region IX Soil PRG's Residential/Industrial (mg/kg)	SSL's mg/kg (20xDAF)
Arsenic (Cancer endpoint)	0.010	0.045	0.39 / 1.6	29
Endrin	0.2	--	0.44 / 1.7	0.009
Methoxychlor	2.0	--	18 / 180	1.0
Toxaphene	40.0	--	310 / 3100	160.0
Phosmet	3.0	--	0.44 / 1.6	31.0
Malathion*	N/A	730	1,200 / 12,000	N/A

\* Malathion does have the potential to leach to groundwater and a suggested drinking water concentration of between 3.2 and 6.3 ug/l was cited. Malathion was historically used on livestock

None of the Soil Screening Levels are exceeded for these samples at this site. There is no indication that any further action is warranted at this location at the Mary's Island site in the Donnelly Wildlife Management Area.

# **APPENDIX F**

## **DRAFT MEMORANDUM OF AGREEMENT FOR HISTORIC PROPERTIES**

**Memorandum of Agreement  
Between the US Army Corps of Engineers,  
the South Carolina State Historic Preservation Office**

**submitted to the Advisory Council on Historic Preservation**

**regarding  
Transfer of Title of the Richard B. Russell Mitigation Lands,  
Hampton, and Jasper Counties, South Carolina**

WHEREAS, construction of the Richard B. Russell Dam and Lake Project, Georgia and South Carolina (hereinafter referred to as the Project), was authorized by the Flood Control Act of 1966, Public Law 89-789, Section 203 (80 Stat. 1420); and,

WHEREAS, the United States Army Corps of Engineers (USACE) has acquired approximately 6,757 acres of land in South Carolina, known as the Westvaco, Maner and Treadwell Tracts, Hampton and Jasper Counties, (hereinafter referred to as "said lands") as part of the mitigation plan for the construction of the Project in accordance with Section 601 of the Water Resources Development Act of 1986, Public Law 99-662 (100 Stat. 4140), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended), 16 U.S.C. 661 et seq.;

WHEREAS, Section 348(k) of the Water Resources Development Act of 2000, Public Law 106-541 (114 Stat. 2629-2630), provides for USACE to convey all right, title, and interest in and to said lands to the South Carolina Department of Natural Resources (SCDNR) (the Undertaking) for management in perpetuity for fish and wildlife mitigation purposes; and,

WHEREAS, USACE and SCDNR have signed an agreement, entitled "Agreement Between The Department Of The Army And The South Carolina Department Of Natural Resources" on September 15, 2004, that provides the terms and conditions of the Undertaking (Appendix A); and

WHEREAS, said lands were surveyed for archeological resources in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, 16 U.S.C. § 470 (NHPA) in 1995 to identify historic properties and (Appendix B); and

WHEREAS, USACE has established the Undertaking's area of potential effects (APE), as defined at 36 CFR 800.16(d), to be said lands, which total approximately 6,757 acres (Appendix C); and,

WHEREAS, USACE has determined that the Undertaking may have adverse effects on the historic properties located on said lands; and

WHEREAS, USACE has consulted with the South Carolina State Historic Preservation Office (SHPO), in accordance with Section 106 of the NHPA and its implementing regulations

(36 CFR Part 800.6(b)(1)) to resolve the adverse effects of the Undertaking on historic properties; and,

WHEREAS, pursuant to 36 CFR 800.6(c)(2) USACE has invited SCDNR to sign this Memorandum of Agreement (MOA);

NOW, THEREFORE, USACE and the South Carolina SHPO agree that, upon acceptance of this MOA by the Advisory Council on Historic Preservation (Council), the land transfer includes the implementation of the following stipulations in order to take into account the effects of the Undertaking on historic properties.

### STIPULATIONS

The Corps will ensure that the following stipulations are implemented:

- 1) The Corps will provide copies of all archeological reports, site information, and project files for archeological investigations conducted on said lands to SCDNR.
- 2) All artifacts and field documentation relating to the archeological survey shall be curated at the University of Alabama, Moundville, AL, in perpetuity.

SCDNR will ensure the following:

- 1) A cultural resources management plan (CRMP) will be developed that details the management of the potentially eligible and eligible archaeological sites on said lands. A draft CRMP will be available for review at or prior to the time of the actual land conveyance.
- 2) The CRMP shall minimally contain the following provisions:
  - a) Avoidance shall be the primary means of site preservation on the said lands. The CRMP shall contain a section that contains a detailed discussion of how the sites will be avoided.
  - b) Specific sites may have the potential to yield more significant contributions to the history and prehistory of South Carolina and the regional area. Those sites are: 38HA159, 38HA161, 38HA167, 38HA173, 38HA177 and 38JA207. Should avoidance of these sites prove impossible, the site(s) will be tested prior to the commencement of the undertaking that may affect the archeological site. The CRMP shall discuss how the site(s) will be managed should testing determine the site eligible for the National Register of Historic Places.
  - c) Undertakings that have the potential to affect above ground architectural resources such as Mistletoe Grove, or other standing structures, shall be coordinated with and reviewed by the South Carolina SHPO architecture staff.

- 3) A plan for tree thinning in areas that contain eligible or potentially eligible archeological sites will be developed and implemented. The plan will become a supplement to or an appendix in the CRMP.
- 4) Undertakings that have the potential to affect a potentially eligible or eligible archeological site will be coordinated with federally recognized tribes that may be culturally affiliated to the archaeological remains on said lands. Tribes shall be notified in writing of the proposed undertaking and its effects, and provided the opportunity to comment on the proposed action. A list of tribes that will be coordinated with is found in Appendix C. Coordination is not limited to the tribes listed in Appendix C. The CRMP shall contain a Standard Operating Procedure (SOP) for consultation with applicable tribes.
- 5) In the event of an inadvertent discovery of Native American remains and objects on the said lands, Section 3(d) of the Native American Graves Protection and Repatriation Act (P.L. 101-601) shall apply. The CRMP shall contain an SOP for notification.

Execution of this Agreement by USACE, and the South Carolina SHPO, its subsequent acceptance by the Council, and implementation of its terms, evidence that, in accordance with 36 CFR Part 800, USACE has afforded the South Carolina SHPO and the Council an opportunity to comment on USACE's transfer of title to the property, and USACE has taken into account the effect on the historic properties located on said lands.

US ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT

By: \_\_\_\_\_  
Mark S. Held  
Colonel, US Army  
District Engineer

Date: \_\_\_\_\_

SOUTH CAROLINA STATE HISTORIC PRESERVATION OFFICE

By: \_\_\_\_\_  
Mary W. Edmonds  
Deputy State Historic Preservation Officer

Date: \_\_\_\_\_

Draft  
Nov 2004

SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES

By: \_\_\_\_\_

John Frampton  
Director

Date: \_\_\_\_\_

ACCEPTED: ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: \_\_\_\_\_

Date: \_\_\_\_\_

SAS original

AGREEMENT  
BETWEEN  
THE DEPARTMENT OF THE ARMY  
AND  
THE SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES

THIS AGREEMENT is entered into this 15<sup>th</sup> day of September, 2004, by and between the DEPARTMENT OF THE ARMY (hereinafter referred to as the "Government"), acting by and through the Assistant Secretary of the Army (Civil Works), and the SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES (hereinafter referred to as the "Department") or its successor agency.

WITNESSETH:

WHEREAS, construction of the Richard B. Russell Dam and Lake Project, Georgia and South Carolina (hereinafter referred to as the Project), was authorized by the Flood Control Act of 1966, Public Law 89-789, Section 203 (80 Stat. 1420); and,

WHEREAS, the Government has acquired approximately 10,165 acres of land in South Carolina (hereinafter referred to as "said lands") as part of the mitigation plan for the construction of the Project in accordance with Section 601 of the Water Resources Development Act of 1986, Public Law 99-662 (100 Stat. 4140), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended), 16 U.S.C. 661 et seq.; and,

WHEREAS, said lands are described in Exhibits A, F, and H of Army Lease No. DACW21-1-93-0910 and associated supplemental agreements; and,

WHEREAS, said lands have been intensively managed for wildlife by the Department in accordance with the Final Richard B. Russell Mitigation Plan, April 1995 (hereinafter referred to as the "Master Implementation Plan"), and Annual Management Plans, jointly developed by the U.S. Army Corps of Engineers, Savannah District (hereinafter referred to as the "Corps") and the Department; and,

WHEREAS, Section 348(k) of the Water Resources Development Act of 2000 (hereinafter referred to as WRDA 2000), Public Law 106-541 (114 Stat. 2629-2630), provides for the Government to convey all right, title, and interest in and to said lands to the Department

for management in perpetuity for fish and wildlife mitigation purposes; and,

WHEREAS, WRDA 2000 requires the Government to pay the Department \$4,850,000 (hereinafter referred to as "said payment") for the management of said lands for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands; and,

WHEREAS, the Department shall be responsible for all costs, including real estate transaction and environmental compliance costs and the cost of a survey satisfactory to the Government, associated with this conveyance and shall reimburse the Government for the Government's costs associated with this conveyance as required in Section 348(k) of WRDA 2000; and,

WHEREAS, the Department shall retain said lands in public ownership and shall manage said lands in perpetuity for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan; and,

WHEREAS, if any parcel of said lands is not managed for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, title to the parcel shall revert to the Government, at the option of the Government; and,

WHEREAS, the Government may recover all or a portion of said payment if the Department fails to manage any parcel of said lands in accordance with the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands.

NOW, THEREFORE, the parties agree as follows:

1. The Government shall convey to the Department all right, title and interest in and to said lands, as described in Exhibits A, F and H of Department of the Army Lease No. DACW21-1-93-0910 and associated supplemental agreements, and the Department agrees to accept all right, title and interest in and to said lands and to retain said lands in public ownership and manage said lands in perpetuity for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands.

2. The Government shall prepare all real estate disposal and required environmental and cultural resources clearance documentation associated with this conveyance.

3. The Government shall make said payment of \$4,850,000 to the Department for the management of said lands in perpetuity for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan.

4. The Government shall make said payment and this conveyance within eighteen (18) months from the date that the funds for said payment are appropriated and made available to the U.S. Army Corps of Engineers to expend for these purposes.

5. The Department shall reimburse the Government for all of the Government's costs associated with this conveyance, including document preparation, performance of environmental and cultural resources clearance work, and review and coordination. The Department shall make the above payment within 90 days after the date of this conveyance.

6. Upon conveyance of the said lands and the Government's payment of \$4,850,000.00 to the Department, the Department shall retain the said lands in public ownership and manage said lands in perpetuity for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands.

7. The conveyance of the said lands is subject to the completion of appropriate environmental documentation as specified in the National Environmental Policy Act of 1969, as amended, and implementing regulations, and approval of a Finding of Suitability to Transfer approved by the Government.

8. The conveyance will be made by quitclaim deed, (a draft format of which is shown in attachment A to this Agreement).

9. After conveyance of said lands and the making of said payment of \$4,850,000, the Agreement between the Department of the Army and the South Carolina Wildlife and Marine Resources Department, dated July 20, 1992, and Department of the Army Lease No. DACW21-1-93-0910 and associated supplemental agreements will terminate and the Government will no longer be responsible to make any further annual operation and maintenance payments on

said lands to the Department beginning with and including the quarter of the Government fiscal year in which said lands are conveyed. The Government will make said operation and maintenance payments to the Department on a quarterly basis during the Government fiscal year in which said lands are conveyed up to and including the quarter of the Government fiscal year immediately preceding the quarter of the Government fiscal year in which said lands are conveyed.

10. Both the Government and the Department shall continue to utilize the Master Implementation Plan, as modified by the Government and Department upon conveyance of said lands, to implement this conveyance and continue to meet the requirement that these lands will be managed in perpetuity to the satisfaction of the Government. If either party requests any change in managing these lands for fish and wildlife mitigation purposes, the parties will implement mutually agreed upon changes by amending the Master Implementation Plan. For purposes of this Agreement, the term "satisfaction of the Government" shall mean in compliance with the Master Implementation Plan, as modified by the Government and Department upon conveyance of said lands.

11. The Department must expend all of said payment and income from said lands for management of said lands for fish and wildlife mitigation purposes. Within six months of said notice by the Government, the Department shall restore or replace or return to the Government any amount of said payment or income from said lands that is expended for other than fish and wildlife mitigation purposes.

12. In accordance with the Agreement between the Department of the Army and the South Carolina Wildlife and Marine Resources Department, dated July 20, 1992, the Department may cut and sell timber within the limits provided in the Master Implementation Plan and Annual Management Plans. If the Department receives monies from mitigation land timber sales within one year of conveyance of said lands, the Government shall reduce the remaining quarterly payment to the Department for intensive wildlife management by the amount of the net revenue realized. The Government shall have the right to recover and the Department shall return the amount of quarterly payment that is in excess of the amount of the net revenue realized from said mitigation land timber sales.

13. The Government hereby retains the right to perform periodic inspections of facilities and operations on the said lands, upon 72 hours notice to the Department, for the purpose of ensuring

the Department's intensive wildlife management including public hunting, fishing, and outdoor recreation use consistent with WRDA 2000 and the Master Implementation Plan, as modified by the Government and the Department upon conveyance of said lands.

14. If any parcel of said lands is not managed for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, title to the parcel shall revert to the Government, at the option of the Government. Should the Government determine that the Department is not managing said lands for fish and wildlife mitigation purposes in accordance with the Master Implementation Plan, the Government will notify the Department and identify the items of noncompliance with the Master Implementation Plan which serve as the basis for such determination. The Government shall allow the Department a period of six (6) months from the time of said notice to achieve full compliance with the requirements of the Master Implementation Plan, prior to the Government exercising its optional statutory reversionary rights."

15. If the Department fails to manage any parcel of said lands in a manner satisfactory to the Government, i.e., in accordance with the Master Implementation Plan, the Government will notify the Department and allow the Department a period of six (6) months from the time of said notice to achieve full compliance with the requirements of the Master Implementation Plan, prior to the Government exercising any of its rights to recover all or a portion of said payment.

16. Upon the conveyance of said lands, the United States shall not be responsible for any injury to persons or damage to property arising out of or incident to the ownership, use or occupancy of the said lands by the Department and the Department shall indemnify and hold the United States harmless from any and all such claims for injury or damage, excepting claims for injury or damage arising from activities of the Government on the said lands which are being conducted exclusively for the benefit of the Government.

17. Nothing herein shall constitute, or be deemed to constitute, an obligation of future appropriations by the United States.

18. Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the legislature of the State of South Carolina, where creating such an

obligation would be inconsistent with the laws of the State of South Carolina.

19. The parties agree that the provisions of this Agreement that relate to obligations and responsibilities of the parties after the transfer of said lands shall remain in force and effect notwithstanding the transfer. If any provision of this Agreement is determined to be invalid or unenforceable, the remaining provisions shall remain in force and unaffected to the fullest extent permitted by law and regulation.

20. The parties agree that this Agreement represents a legally binding agreement. Both parties may enforce its provisions under applicable federal law. This Agreement and all documents and actions prepared and executed pursuant to it shall be governed by the applicable statutes, regulations, directives, and procedures of the United States.

21. In the event of a dispute between the parties, the Government and the Department shall use their best efforts to resolve that dispute in an informal fashion through consultation and communication, or other forms of non-binding alternative dispute resolution with a qualified third party mutually acceptable to the parties. The Government and the Department shall each pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

22. The Department shall establish and maintain adequate records and accounts. The Government shall have the right to perform audits of the Department's records and accounts. The Department will make available at its office all accounting records and supporting documentation for inspection and audit by an authorized representative of the Government. Based on the Government's audit, in accordance with Article 12, any portion of said payment and income from said lands not utilized for management of said lands for fish and wildlife mitigation purposes shall be restored or replaced or returned to the Government within sixty (60) days of request by the Government.

23. As between the Government and the Department, the Department shall be considered the operator of the Project for purposes of liability any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter "CERCLA"), 42 U.S.C. Sections 9601-9675, that may exist

in, on, or under said lands. In the event that hazardous substances regulated under CERCLA are found to exist in, on, or under any of said lands the Department shall be responsible, as between the Government and the Department, for the costs of clean-up and response, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination.

To the maximum extent practicable, the Department shall use and manage said lands in a manner that will not cause liability to arise under CERCLA.

24. All notices, requests, demands, and other communications required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and delivered personally, given by prepaid telegram, or mailed by first-class postage (postage pre-paid), registered, or certified mail, as follows:

IF TO THE DEPARTMENT:

South Carolina Department of Natural Resources  
Executive Director  
Attention: Mr. John Frampton  
Post Office Box 167  
Columbia, South Carolina 29202

IF TO THE GOVERNMENT:

District Engineer  
U.S. Army Engineer District, Savannah  
Attention: PM-C  
Post Office Box 889  
Savannah, Georgia 31402-0889

A party may change the address or person to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

Any notice, request, demand, or other communications made pursuant to this Article shall be deemed to have been received by the addressee at the earlier of such time as it is actually received or seven calendar days after it is mailed.

25. This Agreement may be modified or amended only by written, mutual agreement of the parties.

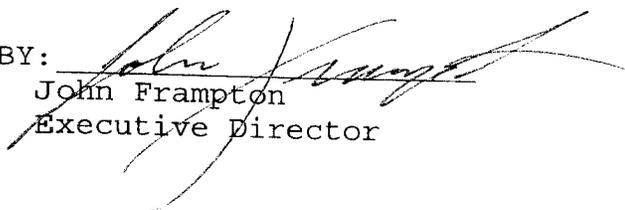
26. This Agreement shall become effective when signed below by the Secretary, which shall be the date first above-written.

IN WITNESS WHEREOF, the parties have executed the Memorandum of Agreement as of the day and year first written.

THE DEPARTMENT OF THE ARMY

BY:   
John Paul Woodley, Jr.  
Assistant Secretary of the Army  
(Civil Works)

SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES

BY:   
John Frampton  
Executive Director

## APPENDIX B

SITE NUMBER	SITE TYPE	NRHP STATUS	SIZE	COMMENTS
38HA152	pre <sup>*</sup> lithic/cer scat	PE	50m x 20m	
38HA154	pre lithic/cer scat	PE	120m x 40m	
38HA155	pre/hist <sup>†‡</sup>	PE	500m x 200m	
38HA156	pre lithic/cer scat	PE	90m x 120m	Paleo?/EA component
38HA159	pre lithic scat	PE	200m x 170m	deposits to 85cmbs
38HA160	pre/hist <sup>*</sup>	PE	110m x 50m	M/L Woodland
38HA161	pre/hist	E	500m diameter	Contact Pd. site related to Palachocolas Town?
38HA163	pre/hist	PE	20x30m; 40x30m	2 concentration areas
38HA165	pre lithic scat	PE	60m x 20m	
38HA166	pre lithic scat	PE	200+m x 50m	
38HA167	hist	PE	120m x 150m	18-19 century
38HA168	hist	PE	120m x 100m	McKenzie homestead?
38HA172	pre/hist	PE	120m x 20m	MW, LW, MS; 18thC
38HA173	pre/hist	PE	100m x 80m	18-19th C/associated with HA172?
38HA175	hist	PE	150m x 140m	19thc house site w/outbuildings; related to Bostick Cemetery?
38HA176	hist	PE	50m x 50m	Savannah Fields Cemetery
38HA177	hist	PE	400m x 200m	antebellum/slave quarters poss. related to Mistletoe Grove.
38HA181	hist	PE	200m x 150m	20th century house site; poss. related to 182, 183, 184
38HA182	hist	PE	100m x 100m	house complex
38HA183	pre/hist	PE	100m x 100m	LW/MS; house
38HA184	hist	PE	400m x 200m	3-19th C house sites
38HA185	hist	PE	50m x 50m	tenant house
38HA186	hist	PE	170m x 50m	19-20C house
38HA190	hist	PE	160m x 130m	20th c farm
38HA191	hist	PE	180m x 130m	20th c farm
38HA192	hist	PE	400m x 200m	19-20C house
38HA194	hist	PE	200m x 300m	20th c farm
38HA195	hist	PE	100m x 70m	20th c farm
38HA196	hist	PE	150m x 150m	20th C
38HA198	hist	PE	100m x 100m	20th c farm
38HA1081 <sup>§</sup>	hist	E		Garnett House
38HA1083	hist	E		Mistletoe Grove
38HA1093	hist	PE	100m x 200m	Bostick Cemetery
38JA207	pre shell midden	PE	200m x 80m	Shell Midden
38JA212	pre/hist	PE	400m x 400m	MW,LW, MS; 19-20
38JA214	pre lithic/cer scat	PE	92m x 40m	deep prehistoric deposits

\* Pre = Prehistoric

† Prehistoric Component Significant Only

‡ Hist=Historic

§ Moved off-site

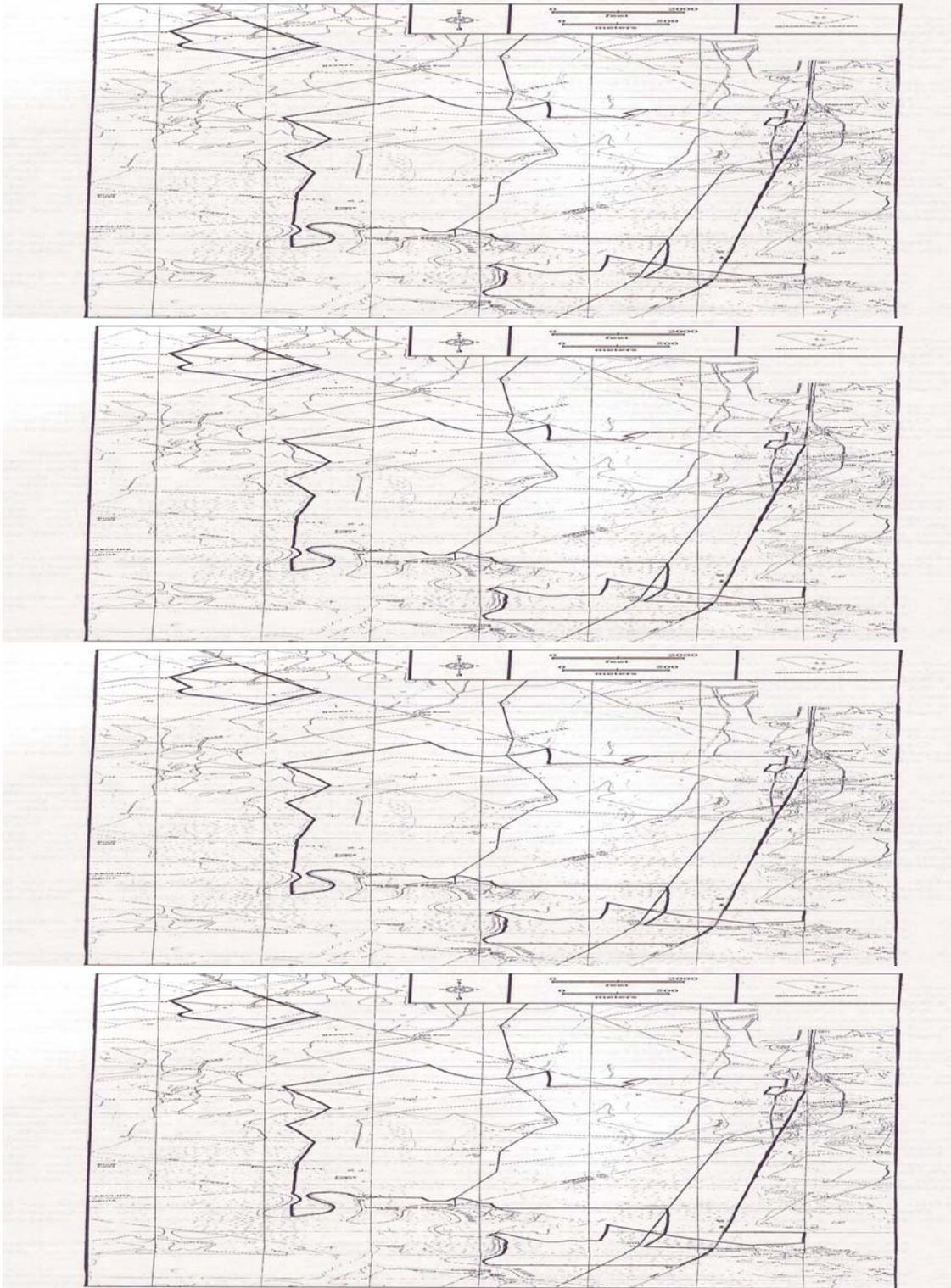
SITE NUMBER	SITE TYPE	NRHP STATUS	SIZE	COMMENTS
38JA215/HA149	pre* lithic/cer scat	PE	80m x 120m	deep prehistoric deposits
38HA150	pre lithic scat	NE		
38HA153	pre lithic scat	NE		
38HA157	pre/hist†	NE		
38HA158	pre lithic scat	NE		
38HA169	hist	NE		
38HA170	hist	NE		
38HA171	hist	NE		
38HA174	hist	?		18-19 century
38HA178	hist	NE		tenant house
38HA179	hist	NE		house place
38HA180	hist	NE		20th c farm
38HA187	hist	NE		tenant house
38HA188	hist	NE		tenant house
38HA189	hist	NE		20th C
38HA193	hist	NE		20th C house
38HA197	hist	?		tenant house
38HA199	hist	NE		school
38HA200	hist	NE		20th C dump
38HA201	pre/hist	NE		
38JA208	pre/hist	NE		lithic/bee keeping
38JA209	pre lithicic	NE		
38JA210	pre cer scatter	NE		unknown pre
38JA211	pre/hist	NE		LA, EW, 20th C
38JA213	pre lithic/cer scat	NE		unknown pre
38JA216	hist	NE		modern
38HA151	pre lithic scat	NE		
38HA162	pre lithic scat	NE		
38HA164	Pre lithic/cer scat	NE		

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\* Pre = Prehistoric

† Hist=Historic

## APPENDIX C



Palachucola Wildlife Management Area, Hampton and Jasper Counties, South Carolina (USGS 7.5' Series Pineland [1988], Shirley [1978], and Brighton [1978] Quadrangles).