CONGAREE SWAMP
national monument

south carolina

general management plan
wilderness suitability study
& environmental assessment

September 1987
INTRODUCTION

The National Park Service has prepared a General Management Plan for Congaree Swamp National Monument in Richland County, South Carolina. The proposal as well as alternatives are described in the General Management Plan/Wilderness Suitability Study/Environmental Assessment (GMP/WSS/EA) which was released for public review in November 1987. During this review period, a public hearing was held pursuant to requirements of the Wilderness Act.

The purpose of this document is to record the selection of plan proposals and a Finding of No Significant Impact pursuant to the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act. This document should be attached to the GMP/WSS/EA.

SUMMARY OF PUBLIC RESPONSE AND REVISIONS TO THE GENERAL MANAGEMENT PLAN

A total of 589 comments were received during the review period. The primary issue addressed by respondents was boundary expansion. The vast majority, i.e. 577, were in favor of an addition of approximately 6,300 acres, the so-called "Citizens' Proposal."

The response of the South Carolina congressional delegation was to join unanimously in sponsoring legislation in both houses to add 7,000 acres in support of the Citizen's Proposal. The Governor of South Carolina was in full support. This legislation, Public Law 100-524, was signed into law October 24, 1988.

Seven public responses included comments on development of the monument. All were in favor of either development as proposed or a slight addition on the eastern end.

Three responses received addressed the types of visitor use proposed in the draft plan. They were supportive.

Two responses included suggestions on the monument's resource management program, i.e. the development of a research plan and the provision of laboratory space for researchers.
As a result of information received and passage of Public Law 100-524, the following changes in the draft proposal have been made.

Approximately 7,000 acres have been added to the monument. The Act designated 15,010 acres as wilderness and 6,840 acres as potential wilderness.

The debris in Cedar Creek that forms an unnatural rapid will be removed. Structures on lands to be acquired will also be removed.

The air quality monitoring station and the road required to service it will be retained in their present locations. Future removal of the station from the floodplain could occur if another location is found suitable.

**SUMMARY OF ENVIRONMENTAL CONSEQUENCES**

Development includes road construction, visitor center/office, maintenance facility, parking, and rehabilitation of the existing ranger station for employee housing all of which are to be located in designated development zones in areas of cut-over timber outside the 100-year floodplain. All development except primitive campsites and trails will be outside of the wilderness area.

The Advisory Council on Historic Preservation and the South Carolina State Historic Preservation Officer have been consulted at various phases of planning in compliance with the 1981 Amendment to the 1979 Programmatic Memorandum of Agreement and Section 106 of the National Historic Preservation Act of 1966.

Construction within the 100-year floodplain consists of small gravel parking lots, short gravel road sections, trails, primitive campsites and a boat ramp. In accordance with Executive Orders 11988 and 11990, this development will not adversely affect the floodplain or wetlands.

No prime or unique farmlands as defined by the Department of Agriculture will be affected by this plan.

In accordance with Section 7 of the Endangered Species Act, the Fish and Wildlife Service was consulted and red-cockaded woodpecker habitat exists in the monument boundary. This area is designated a Protected Natural Area Subzone to allow for specific habitat maintenance practices.
CONCLUSION

The National Park Service has made a Finding of No Significant Impact since implementation of the proposal does not constitute a major Federal action significantly affecting the human environment and an Environmental Impact Statement will not be prepared.

Approved: ____________________________ Date: 12/13/88
Robert M. Baker
Regional Director
Southeast Region
GENERAL MANAGEMENT PLAN
WILDERNESS SUITABILITY STUDY
ENVIRONMENTAL ASSESSMENT

CONGAREE SWAMP NATIONAL MONUMENT
SOUTH CAROLINA

SOUTHEAST REGION
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

September 1987
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SUMMARY

In order to preserve an outstanding example of an old-growth bottomland hardwood forest, a 15,138-acre portion of the Congaree River floodplain was set aside by Congress in 1976 as Congaree Swamp National Monument. In the establishing legislation, Congress requested preparation of a general management plan and wilderness suitability study. Recognizing that acquisition of one large tract would likely present difficulties in resource protection and management due to its boundary configuration, Congress stated that the general management plan should include consideration of additional lands for resource protection, scenic integrity, and management of the area. An assessment of the appropriate amount and types of visitor use and facilities was also to be included.

Other management issues needing attention include public access, visitor services, resource protection, and administrative facilities.

The plan recommends that 2,464 acres be added to the monument boundary. This addition will help protect resources within the current boundary. Including these lands will also protect closely related, complementary resources, such as additional record size trees, an unprotected portion of the monument's primary canoeing stream, an unprotected portion of a historic dike, and additional endangered species habitat. Management zoning is proposed that will keep all significant development on the periphery of the monument and out of the prime resource area. Wilderness designation is proposed for the majority of the monument. The proposal will provide a primitive-type visitor experience conducive to resource appreciation and study. Primary activity types will be hiking, canoeing, and primitive camping. Principal development proposed includes a visitor center/administrative office, minor road and parking lot construction, and a maintenance facility. Inventories of natural and cultural resources, monitoring, and coordination will be continued to protect monument resources and provide for visitor enjoyment.

Adverse effects of the proposal include a minor reduction of tax revenues and timber harvest potential, construction on previously undeveloped lands, and a small increase in impact on soils, water, wildlife, and vegetation due to increased visitor use.

Mitigation of adverse impacts include payments-in-lieu-of-taxes, adherence to all applicable construction codes and mitigation requirements, and monitoring of visitor use effects and appropriate actions to regulate use.
Lands proposed for inclusion within the monument involve 25 landowners. No residences exist on these lands. If Congress authorizes adjustment of the boundary, a detailed Land Protection Plan will be prepared which addresses methods and priorities of protection.

Legislative direction concerning the basic purpose of the monument, i.e., protection of the existing forest, limited the consideration of use and development options. Large-scale development to sustain heavy use was not considered appropriate. Several alternatives were considered which address the boundary adjustment and visitor use and development. Two were selected for detailed analysis. One of the two would be less comprehensive and less costly than the proposal. It would provide only lands required for public access, roads and parking, and would provide only for expansion of the existing ranger station. The other would add more acreage than in the proposal for protection of additional resources. The type of visitor use and scale of development would be about the same as in the proposal.
PURPOSE AND NEED FOR THE PLAN

In order to preserve and protect for the education, inspiration, and enjoyment of present and future generations an outstanding example of an old-growth southern bottomland forest, the Congaree Swamp National Monument was established by Public Law 94-545 on October 18, 1976, (see appendix A).

The establishing Act specified that a general management plan (GMP) for the use and development of the monument would be transmitted to Congress. The purpose of the GMP is to identify:

1. The lands and interests in lands adjacent or related to the monument which are deemed necessary or desirable for the purposes of resource protection, scenic integrity, or management and administration of the area in furtherance of the purposes of the Act, and the estimated cost thereof;

2. The number of visitors and types of public use within the monument which can be accommodated in accordance with the protection of its resources;

3. The location and estimated cost of facilities deemed necessary to accommodate such visitors and uses.

The Act also specified that a recommendation as to the suitability or nonsuitability of any area within the monument for preservation as wilderness will be reported to the President.

A general management plan sets forth the basic management philosophy for a park and provides the strategies for addressing issues and achieving identified management objectives over a 5- to 10-year period. Two types of strategies are presented in the GMP: those required to properly manage the park's resources, and those required to provide for appropriate visitor use and interpretation of the resources. Based on these strategies, programs, actions, and support facilities necessary for efficient park operation and visitor use are identified. In addition, plans must be consistent with National Park Service (NPS) Management Policies, must be in compliance with legislative and executive requirements, must reflect resource limitations, visitor safety considerations, and budgetary constraints, and must recognize the concern expressed by the public and other agencies during planning efforts.

Park-specific management issues to be addressed follow.
(a) Currently, access to the park is over private lands which does not assure the public's access to the monument.

(b) The boundary of the monument follows the boundary of the previous owner's property and does not necessarily enclose an appropriate area considering resource protection and administration.

(c) What area of the monument, if any, is suitable for wilderness recommendation as mandated by the authorizing legislation?

(d) Visitor use is relatively low in the monument (16,524 in 1986) and is focused on hiking, fishing, canoeing, birdwatching and camping. Schools are using the area for field trips and outdoor laboratory studies. Camping is by permit only. Canoeing on the creeks is often hampered by debris and fallen trees. What types and quantities of visitor use are appropriate to this area?

(e) Considering that the monument is almost entirely floodplain, what development is appropriate to provide for visitor enjoyment and administration of the area?

(f) Visitor orientation is limited in the monument. Consequently, understanding of the resources and appreciation of the monument's significance are confined to only a portion the visitors.

(g) Four out of five hiking trails begin near the inactive hunt camp complex in the interior of the park. Since the road to the complex is closed to vehicles of the general public, there is a question concerning the effectiveness of these facilities in providing for visitor enjoyment.

(h) The inactive hunt camp building is underutilized, in poor condition and closed to the general public. There is a question concerning disposition of this building.

The monument's current management objectives, as found in the Statement for Management, are included in the Appendices. They are primarily directed toward protection of the resource and providing a safe, educational, and enjoyable visitor experience.

Wilderness suitability is based on criteria in the Wilderness Act and consideration of park resources and management objectives. That Act defines wilderness as an area "which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its
preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value."
DESCRIPTION OF THE MONUMENT

Regional Setting

Congaree Swamp National Monument is located approximately 20 miles southeast of Columbia, South Carolina, near the center of the State (see Regional Location and Access map). Columbia lies in Richland County, an area encompassing the industrial piedmont and the more rural coastal plain. The monument lies in the eastern part of the county in an area characterized by timber management and small farms.

The Congaree River is the life blood of the monument due to the interdependence of the floodplain with this major river. The river is formed in Columbia at the confluence of the Saluda and Broad Rivers. Lake Murray, a large hydroelectric impoundment, is located on the Saluda River. There are no major impoundments on the Broad River at this time.

Water impounded in Lake Murray and released by the South Carolina Electric and Gas Company influences the amount of water that flows into the Congaree River. Flooding conditions are generally caused when excessive rainfall occurs in the western section of North and South Carolina and by release of water from Lake Murray. Warning of impending flooding conditions is adequate to move visitors safely from the monument.

Waste from rapidly developing Columbia, unless properly treated, can adversely affect water entering the monument. During heavy rains, raw sewage overflows the Columbia treatment system. Treated effluent from two large industries is discharged into the Congaree River and is monitored by the State Department of Health and Environmental Control and the State Water Resources Commission.

The Congaree River receives effluent from many smaller companies and from sewage treatment plants in adjacent counties and the city of Columbia. These plants are also monitored by State regulatory agencies.

There are no existing municipal water supply or sewage disposal systems in the immediate vicinity of the monument. The closest such utilities are found in Columbia, and the utility lines do not extend much farther than the city limits. Adjacent to the monument, potable water is obtained from wells, and sewage is disposed of by septic tank systems.

South Carolina has classified the Congaree River as Class B waters. This classification indicates that the Congaree waters are suitable for secondary contact recreation (i.e. boating,
sport fishing), as a source of drinking water supply after conventional treatment, as a resource which supports the propagation of flora and fish populations, and for industrial and agricultural uses. The State's Water Resources Commission has identified as eligible for designation as a Class II State Scenic River 37 miles of the Congaree River. Of this length, 22 are along the monument boundary. The purpose of the State Scenic Rivers Act is to provide protection of selected river areas for the benefit of present and future generations. The State has authority to purchase scenic easements along designated rivers. Management would seek to maintain and enhance the scenic values of the river corridor while preserving the rights of adjacent landowners to use their lands for customary agriculture and other rural purposes.

Other outside influences on the monument include McEntire Air National Guard Base located approximately 8 miles north of the monument, Shaw Air Force Base approximately 20 miles east of the monument, and Fort Jackson some 13 miles north. Noise from overflights by aircraft from these facilities has an adverse effect on the visitors' experience and may impact birds and wildlife.

Union Camp Corporation is operating one of the world's largest paper plants on the nearby Wateree River. This plant is located 8 miles northeast of the monument. The resulting influence has been odor from the plant which adversely affects visitor enjoyment. Air quality is being monitored at the monument to determine any effects from this and other sources.

Use of a 50-acre toxic waste site located about 4 miles from the monument has ceased and the area cleaned up. There is still concern, however, over runoff from the site since it drains into Myers Creek, a tributary of Cedar Creek at the northwest corner of the monument. Possible contamination of ground water which flows toward the monument is also a concern. The State has classified Cedar Creek as Class A waters indicating freshwater suitable for primary contact recreation (direct water-body contact).

A nuclear fuel plant is within 4 miles of the western boundary on State Highway 48. It has no known detrimental effect on monument resources.

Major northeast-southwest transportation arteries include I-20, I-77, and I-95. The major northwest-southeast transportation artery is I-26, which passes just south of Columbia and links Charleston, South Carolina, with the Greenville-Spartanburg area.
Recent completion of I-326 makes the monument very accessible to travelers of I-26. U.S. routes provide north-south and east-west access. State Highway 48 (also known as Bluff Road) provides access close to the northern edge of the monument via Old Bluff Road (see Vicinity map). Primary access from Old Bluff Road to the monument is currently provided only by means of dirt roads across private property. There are no easements across the private property, and access now is by tacit agreement.

Within a 50-mile radius of the monument, the emphasis is on flat-water recreational pursuits on Lakes Marion, Murray, and Moultrie. Eight State parks with overnight facilities are found in the area. To the south are Francis Marion National Forest and Four Holes Swamp.

The climate of the area is temperate and characterized by warm summers and mild winters. Spring, the most changeable season of the year, varies in temperature from an occasional cold snap in March to a generally warm and pleasant May. Long summers are prevalent with warm weather usually lasting from May until September. Fall is the most pleasant time of the year. Rainfall during the late fall is at an annual minimum, while sunshine is at a relative maximum. Winters are generally mild with the colder weather usually lasting from late November to mid-March.

The Columbia Metropolitan Statistical Area population is projected to increase from 409,953 in 1980 to 587,700 in 2010, an increase of 177,747 persons or 43.4 percent. Richland County's population is expected to increase by 78,900 from 1980 to 2010, 29.3 percent. The large rural census tract which contains the monument is expected to continue its past trend of a slightly increasing population, reaching 7,400 in 2010 from 6,035 in 1980. Calhoun County, adjacent to the southern boundary of the monument, is primarily agricultural and had a 1980 population of 12,206. Projected population in 2010 is 13,700.

Adjacent Lands

The area immediately surrounding the monument is primarily used for small farms or timber management. The lands above the bluffs are used substantially for both, while on the floodplain, timber management predominates. Hunting preserves represent an important secondary land use category.
The portion of Richland County in which the monument lies is zoned a "rural district." No land use regulation exists in Calhoun County across the Congaree River. Calhoun County is beginning to draw considerable interest from various types of industry that are looking for land close to the Congaree River. If any change in the area is to be expected over the next 10-20 years, it will be gradual transformation from agricultural to residential and industrial land use. There is an increasing amount of land going on the market for sale of 1 to 15-acre tracts.

Four adjacent land parcels were sold in 1984 and 1985. New owners are improving these lands as hunting preserves. One in particular, the tract that protrudes into the center of the monument, is planned for development by the current owners as a hunting preserve with roads, field for grazing, lodges and a clubhouse.

Some private land between the southern boundary of the monument and the Congaree River has been clear-cut and selectively cut as late as 1983. Lands immediately to the east have been clear-cut in small patches right up to the monument boundary. Timber lands on the north boundary are scheduled for cutting in the immediate future. These timber practices adjacent to the monument adversely affect the monument by exposing the large trees to windthrow, by promoting understory growth from greater light penetration, and by adding greater sediment loads to waters in the monument from the disturbed areas.

Floodplain lands outside the monument relate importantly to the monument because of their ecological interrelationship. These lands lie generally along the northern boundary of the monument, in scattered parcels between the monument and the Congaree River, and on the south side of the river up to the bluffs in Calhoun County. Up and down river, the floodplain extends for many miles. The fact that the present monument boundary does not include more of the immediately adjacent floodplain is because only the one, primary ownership in the floodplain was acquired.

The Bluffs south of the monument are themselves of notable significance. Personnel of the South Carolina Heritage Trust Program and other noted field scientists have identified these steep, relatively undisturbed, forested bluffs as existing nowhere else in comparable form in the coastal plain, and perhaps even the piedmont, of the State. It would appear that they are also of at least regional significance. The South Carolina Heritage Program considers these bluffs to be high priority for
protection and is actively pursuing their protection through a combination of methods which could include acquisition, conservation easements, and management agreements.

Natural Resources

a. Vegetation

Although most of the plant species found in Congaree Swamp National Monument are common to bottomland environments of the southeastern United States in general, the uncut portions of the monument are the most extensive mature bottomland hardwood forest remaining in the southeastern United States. (Note: See Appendix E for scientific names of plants and wildlife referred to in this document.) Because of these expansive stands of old-growth timber, the area of the monument and certain adjacent lands as shown on the Existing Conditions map were designated a National Natural Landmark in 1974. Such a designation is a recognition of resource significance regardless of ownership. While landowners are encouraged to protect the resource, they are in no way prohibited from any land use practices that may harm the resource. Establishment of the monument through acquisition of the largest tract guaranteed protection of the majority of the Landmark.

At the turn of the century, some of the monument area was logged for bald cypress. More recently, approximately 700 acres of the present monument area have been clear-cut, and approximately 2,000 acres have been selectively cut.

The hardwood forest which covers the majority of the monument represents the primary resource. This unique and diverse plant community contains numerous national and State record trees including vast stands of magnificent tupelo and bald cypress, oaks and sweetgums. Record trees include four national champions and many South Carolina champions, with over 60 additional trees measuring at least 80 percent of the national record for their species. Numerous loblolly pines over 150 feet tall are interspersed among the hardwoods. The number of different tree species identified in the monument has reached 87.

The floodplain, having an elevation change of only 10 feet in over 13 miles, has a surprisingly varied and complex pattern of vegetative communities. These exist in response to slight topographic gradients and the successional stages related to sedimentation of old channels of the river. Because of this minimal relief, even slight elevation changes affect the duration and frequency of flooding and, therefore, the variety of plant communities. In general appearance, the forests are grovelike and largely clear of heavy undergrowth except vines and shrubs.
In 1983, the monument was included in UNESCO's international network of biosphere reserves as part of the South Atlantic Coastal Plain Biosphere Reserve. As such, the monument serves as a representative ecological area and as a focus for research and education. The area will serve as a benchmark for measurements of long-term changes.

b. Water Resources

The Broad and Saluda Rivers converge west of the city of Columbia to form the Congaree River. Most of the monument is contained within the floodplain of the Congaree River. The U.S. Geological Survey reports that ninety percent of the monument will flood on the average of once a year. In an average year, 10 separate flooding events may occur. Flooding coupled with the old-growth vegetation provides a very unique ecosystem that has been all but lost in the southeastern United States.

Under average flood conditions, the natural levees and other elevated points on the floodplain and the bordering bluffs escape inundation. According to the Flood Insurance Rate Map for Richland County, nearly all land within the boundary of the monument would be inundated by a 100-year flood—a flood with a 1 percent chance of occurring in a given year. The 100-year flood is estimated to rise to approximately the 110-foot contour in the vicinity of the monument. Thus, any development in the existing monument boundary must conform to guidelines concerning floodplain management and wetland protection.

The watershed upstream from the monument extends into the North Carolina foothills and the northwestern section of South Carolina. This vast watershed brings with it a potential for contamination of surface waters to the monument. Since the monument is directly affected by flooding, surface water quality is of major concern as polluted water would come into direct contact with vegetation and wildlife.

Groundwater and surface water are closely related in the monument. The groundwater table is only within a few feet of the surface and during floods the groundwater may rise to the surface. Therefore, any disturbances in the ground water could affect the monument's water quality and quantity.

c. Air Quality

Because the monument possesses important air quality attributes, it is classified as a class II clean air area (42 USC 7401 et seq.) in order to preserve and protect the air quality. Under class II, modest increases in air pollution are allowed beyond baseline levels for sulfur dioxide and particulate matter,
provided that the national ambient air quality standards established by the Environmental Protection Agency are not exceeded.

The State Legislature appropriated funding for air quality and acid deposition monitoring. The South Carolina Department of Health and Environmental Control established and maintains an acid deposition station and air quality monitoring equipment for total suspended particulates, sulfur dioxide, ozone, and nitrogen dioxide in the monument.

d. Wildlife

Congaree Swamp National Monument and its surrounding area provide some good wildlife habitat. Habitat attributes include high fall mast production and the partial sanctuary provided by the monument. Places for feeding, nesting, and resting are found throughout the area. The principal limiting factor is periodic inundation; flooding may hinder full-time use of the area by such animals as deer, turkeys, raccoons, and squirrels.

Wading birds, songbirds, raptors, turkeys, and barred owls are some of the bird species found in the area. The wood duck is the most common species of waterfowl. White-tailed deer, raccoons, and squirrels thrive on the mast produced by trees of the monument. Feral hogs, which are relatively common in the area, compete with the deer and other animals for food. Amphibians are plentiful because of the wet environment. Reptiles are common inhabitants. Bobcats and river otters are seen occasionally. Several other animals considered significant by local naturalists are found in the monument. These include the Swainson's warbler, Louisiana heron, swallow-tailed kite, Mississippi kite, spotted turtle, marsh rabbit, fox squirrel, and pine wood snake.

The Congaree River is the primary fishery of the area. On the floodplain, fishing is limited to accessible reaches of Cedar Creek and Toms Creek and to some of the oxbow lakes. Game fishes of the monument include largemouth bass, blue gills, black crappies, yellow perch, catfish, and several species of sunfish; nongame fishes include gar, daces, shiners, bowfin, and minnows. Striped bass are found in the Congaree River. Other aquatic fauna in the monument include swamp crayfish, chimney crayfish, Asiatic clams, and several species of snails.

e. Endangered or Threatened Species

Flora - The southern rein orchid, considered "of special concern" by the State of South Carolina, is known to occur along the banks of Cedar Creek within the monument. Several other plants of State significance may be found in the monument although they
have not yet been inventoried. These are the nutmeg hickory, wahoo, umbrella tree, Florida adder's mouth, green fringed orchid, and false rue-anemone.

There are no plants known to occur within the monument that are endangered or threatened as defined by the Endangered Species Act of 1973, as amended. However, several plant species listed by the Smithsonian Institution as threatened could potentially occur. These plant species are the serviceberry holly, North American sandalwood, dwarf trillium, bay starvine, Schweinitz's sunflower, barren strawberry, smooth coneflower, and the southern rein-orchid.

Fauna - The nationally endangered red-cockaded woodpecker is known to have active colonies within a small portion of the monument on the pine uplands. The nationally endangered bald eagle is occasionally seen flying over the monument but is not known to be nesting in the monument at the present time. Given its habitat requirements, the American alligator is probably no more than a periodic visitor to the monument. There have been reports of observations of the nationally endangered (possibly extirpated) ivory-billed woodpecker and the nationally endangered eastern cougar. It is doubtful that either of these animals still inhabits the monument, but if they do exist here, they would probably be found in the isolated eastern section of the monument.

Cultural Resources

In accordance with provisions of Executive Order 11593 (Protection and Enhancement of the Cultural Environment) and the National Historic Preservation Act, as amended, cultural resources within the monument have been inventoried for the NPS by the University of South Carolina Institute of Archeology and Anthropology. Results of that survey indicate that prehistoric occupation of the present Congaree Swamp National Monument consisted of brief visits during which prehistoric inhabitants hunted for and gathered necessary items on the riverine floodplain.

During this cultural resource inventory, nine historic and twelve prehistoric sites were located. A total of six historic sites are in the process of being nominated to the National Register due to their State and local importance. Only two prehistoric sites were considered potentially significant, pending further research. The remaining historic and prehistoric sites were considered to be too modern, disturbed or of questionable integrity to be considered significant.
A small number of prehistoric and historic objects have been collected by monument staff and others. No suitable storage facilities currently exist.

The distribution of sites within the monument area generally seems to reflect a prehistoric occupation pattern that occurs sporadically in the swamp interior rather than near the river. The distribution of historic sites shows more of an orientation toward the river, expressed in the construction of dikes and earthen "cattle mount" mounds.

The dikes and cattle mounts provide information about previously unrecognized cultural patterns of the cattle raising industry and the cultivation of cash crops in bottomland environments. These patterns are unique to the central portion of South Carolina, and especially the lower Congaree River valley floodplain. One dike in the northwest corner of the monument is partially outside of the boundary.

Sites are currently being affected only by natural processes including flooding, erosion and vegetative succession. Natural erosion of the dikes and mounds by flood water would be negligible if the ground cover of grass, cane and vines were maintained, but it is often destroyed by wild pigs.

The mounds and other structures are the only ground above water level during a normal flood. Pigs, deer and stray cattle use them as refuges until water continues to rise and drives them to the bluffs. During these flooding periods, and even when the area is not flooded, the pigs root on the tops of the mounds loosening the dirt, which washes away when the water flows over it. The Horsepen mound was heavily damaged by pigs in 1980. State and National Park Service specialists have recommended a special study on the pig problem, and this research effort is scheduled for the near future.

Facilities

The monument has no permanent roads or buildings. The entrance road from Old Bluff Road (over private land) is a graded dirt road. The one-lane road leading to the hunt camp complex is also unimproved.

Several temporary buildings have been constructed which include a ranger station, public rest room, and several maintenance buildings. The environmental education center (abandoned hunt club house—initial construction in 1963-1964) and a patrol cabin are buildings that belonged to the former owner and are now being used for group meetings and housing when needed. These older
buildings are marginally functional and in need of repair. These two buildings are located on the floodplain. Random parking is available along the roadway for 30-35 vehicles near the ranger station and at the club house.

Some 22 miles of primitive trails and footbridges have been constructed in the west central section of the monument. A 3/4-mile boardwalk has been constructed from the bluff line near the ranger station to Weston Lake.

The only access (administrative only) to the Congaree River is by unimproved road on the western edge of the monument leading to a boat ramp built by the former owners. The road is barely passable and the concrete ramp is in disrepair but usable. This road and ramp are used by park personnel for routine patrolling of the southern edge of the monument by boat. The northernmost portion of this road traverses three privately owned tracts used by agreement with the landowners.

Utility systems include one underground septic tank that serves the ranger station and public rest rooms. Water is provided by a well. At the hunt club house there are two exposed septic tanks without drain fields. A well provides water. Electricity is furnished by Tri-County Rural Electric Coop.

Monument headquarters, i.e., the office of the superintendent and a secretary, is located in a Federal office building in Columbia.

Visitor Use

A variety of visitor uses has evolved since the monument was opened to the public in January 1983. Although the park was established in 1976, a hunting lease restricted the use of the property through 1982. Visitor registration began in 1984 when a ranger station was built near the main entrance into the park. Before then visitor counts were estimated. The following figures reflect park visitation for the years 1978-1986:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ACTUAL VISITS</th>
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<tbody>
<tr>
<td>1978</td>
<td>190</td>
</tr>
<tr>
<td>1979</td>
<td>228</td>
</tr>
<tr>
<td>1980</td>
<td>540</td>
</tr>
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<td>1981</td>
<td>1,516</td>
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<td>1984</td>
<td>9,126</td>
</tr>
<tr>
<td>1985</td>
<td>12,421</td>
</tr>
<tr>
<td>1986</td>
<td>16,524</td>
</tr>
</tbody>
</table>
Visitor-use patterns have been fairly consistent, with spring and fall being the highest use seasons due to moderate daily temperatures and fewer biting insects. This trend is expected to continue. The following monthly visitation figures for 1986 reflect this seasonal pattern.

<table>
<thead>
<tr>
<th>Month</th>
<th>Visitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>764</td>
</tr>
<tr>
<td>February</td>
<td>1,277</td>
</tr>
<tr>
<td>March</td>
<td>2,535</td>
</tr>
<tr>
<td>April</td>
<td>1,889</td>
</tr>
<tr>
<td>May</td>
<td>1,296</td>
</tr>
<tr>
<td>June</td>
<td>965</td>
</tr>
<tr>
<td>July</td>
<td>647</td>
</tr>
<tr>
<td>August</td>
<td>825</td>
</tr>
<tr>
<td>September</td>
<td>805</td>
</tr>
<tr>
<td>October</td>
<td>1,658</td>
</tr>
<tr>
<td>November</td>
<td>2,800</td>
</tr>
<tr>
<td>December</td>
<td>1,063</td>
</tr>
</tbody>
</table>

Weekend visitation is the most popular. Use by school groups is significant and increasing. There is a 1-day annual event in November that drew over 400 people in 1986. Approximately 60 percent of visitors live within a 2-to 3-hour drive of the monument. Close to 20 percent of all visitors are on extended trips, stopping by the park as one stop on their itinerary.

Visitor activities offered in the park are hiking, fishing, birdwatching, canoeing and primitive camping. The low visitation appears to be much less than the amount the area could sustain without deterioration of the resource and visitor enjoyment. This judgment is based on the fact that a large portion of the area is completely undeveloped. The existing trail system is underutilized, based on staff observation, and the potential for additional trails would seem to be very large. Trail use, with associated activities such as environmental education, primitive camping, and fishing, is and will always be the predominant method of monument use.

Canoeing is and will continue to be the other major way to experience the monument. Cedar Creek is the primary canoeing stream. It traverses virtually the entire length of the monument, offering both short and long trip opportunities. In order to make the canoeing experience feasible for most who would want to participate, a minor amount of passageway clearing is undertaken. No attempt is made to clear all obstructions, but rather just to remove short sections of logs that otherwise would completely block passage during times of normal water levels.

One of the two primary access points to Cedar Creek, i.e., the one at the northwest corner of the monument, is available only by tacit agreement with a private landowner.
Primitive camping began in December 1984, by permit only. In 1985, 23 permits representing 113 campers were written. In 1986, 202 campers went in on 31 permits. Two areas have been designated as group campsites, one on high ground approximately 1/4 mile away from the ranger station, and one located on the grounds of the environmental education center (hunt camp).

Fishing occurs in the monument's creeks and lakes. Participation is largely by residents of the immediate vicinity.

The existing array of activity types is appropriate for the area, and there are no plans to introduce additional types of recreational opportunities.

Flooding affects visitor use in the monument. During February and March, flooding is considerable with water covering the entire bottomland much of the time. During this time, only the boardwalk and a trail on the upland are usable for the majority of visitors. Some visitors boat or canoe the area at this time but the dangers of getting lost are high. The relatively high visitation figures for these 2 months reflect the favorable combination of cool-to-moderate temperatures, few bothersome insects, and the unusual scenery afforded by a bottomland in flood. The boardwalk affords the interesting opportunity of safely traversing the flooded area.

During the rest of the year, flooding is unpredictable since it depends on sporadic rainfall in the watershed. Monument personnel have 16-hour notification of expected flooding. Typically, these floods last approximately 3 days. For several days after, trails are muddy and use is impractical. No primitive camping permits are issued under these conditions.

Boating and fishing in the Congaree River are actually outside the monument as the boundary is the mean water level on the left, or northern, bank. Use of the Congaree River as an avenue of access into the monument is currently very minor. Use of monument lands consists of short stops and occasional camping on sandbars. Boat access to the river that is available to the public is located approximately 5 river miles downstream and 12 river miles upstream. Typical use of the river in the vicinity of the monument is sport fishing and pleasure boating. The potential exists for greater use of the monument by providing designated primitive camp sites and trails in the vicinity of the river.
Unauthorized use of the monument exists in the form of illegal hunting. Also, hunting dogs frequently enter the monument when hunting occurs on adjacent lands causing game in the monument to be driven out and past hunt stands.

Orientation of the visitor occurs at the temporary ranger station. Interpretive displays consist of a small number of cultural and natural items, photographs, maps, and related books and pamphlets. Guided walks and canoe trips are provided. It has been noted that noise from overflights by jets from the nearby Air Force and Air National Guard bases significantly disrupt the visitor experience. Less frequent but even more disrupting are helicopter overflights from Fort Jackson.

Monument personnel are currently providing interpretation of the area along three main themes:

1. unique river bottom hardwood forest community associated with a swamp-like floodplain with visible former river courses reflected in its topography and vegetative patterns;

2. remarkable sizes of the trees including a number of national and State champions; and

3. presence of swamp ecology of the hardwood type with relatively unspoiled flora and fauna.

Cultural influences, i.e., Indian activities, farming, logging, and hunting, are treated as a minor theme in monument interpretation.

Considering the growth of visitation to the monument since 1984 (when visitor registration began), a low-range projection of annual visits is estimated at 60,000 in 1997 (through the life of this plan). With the greater attraction provided by the proposed development and increased interpretive programming, 1997 visitation could approach 80,000. Estimates include consideration of the limited array of activities to be available at the monument, a growing urban area nearby, increased awareness and interest in opportunities available at the monument, and better interstate highway accessibility.
PROPOSAL

The proposal as described in this chapter represents the proposed general management plan for Congaree Swamp National Monument.

Boundary Adjustment and Land Management

The monument's establishing legislation directed that the general management plan indicate those lands needed for resource protection, scenic integrity, or management and administration of the area.

For resource protection, two aspects were considered, i.e., protection of resources already within the current monument boundaries, and protection of additional resources outside the existing monument boundary. Scenic integrity is less tangible and generally relates to views important to a quality visitor experience. Management and administration clearly relate to identifiable needs to assure effective protection of monument resources and provision of appropriate visitor enjoyment. Included in this is public and administrative access, law enforcement, and public safety. Lands proposed for inclusion within the boundary are primarily for the purposes of resource protection and management and administration. Scenic integrity is a secondary purpose for a minor portion of these lands because of the heavily forested condition of the area which restricts longer-range views.

The accompanying map, Proposed Boundary and Management Zoning, shows those lands, totaling 2,464 acres, proposed for inclusion in the boundary. A discussion of protection methods and costs is included in the Plan Implementation section.

Lands proposed for inclusion in the boundary are as follows:

- lands along the Congaree River (approximately 1,669 acres): These parcels will provide protection of significant timber resources including at least two national and 10 State record trees. Including these lands will also protect existing monument resources from effects of existing and possible future incompatible uses, e.g., hunting and timber harvest. Establishing the monument boundary at the Congaree River will permit much greater effectiveness in managing the area. Placing the boundary at such a distinct, easily recognized feature
will allow both the public and monument staff to know immediately what is within the boundary. Resource management and law enforcement will, therefore, be enhanced. Having the river and the boundary coincident will also provide for protection of a continuous scenic view of the monument by users of the river.

- lands along the north side of the monument (approximately 795 acres): From the standpoint of protecting additional resources, including these parcels will protect bottomland hardwood timber between the current monument boundary and the bluff, the portion of Cedar Creek now outside the boundary, habitat for the endangered red-cockaded woodpecker, and an historic floodplain dike. This will also protect existing monument resources through protection of adjacent bluffs, prohibiting incompatible use of these areas that are hydrologically related to the monument floodplain. These lands will also provide administrative access to the Congaree River, and access and facilities for the public. By establishing the boundary more along the natural feature of the bluff, the boundary will be more recognizable. Law enforcement and resource management will be enhanced. Visitors will also benefit from added protection of scenic views in several areas, most notably the Cedar Creek corridor.

The proposal includes a classification of lands within the proposed boundary to designate where various strategies for management and use will best fulfill management objectives and achieve the purpose of the monument. Such classification considers land capability to support identified uses. Two primary management zones are used --Natural Zone and Development Zone.

Natural Zone (17,267 acres) - Lands and waters in this zone will be managed to ensure that natural resources and processes remain largely unaltered by human activity. Developments will either be absent or limited to dispersed recreational and management facilities that are essential for management, use, and appreciation of natural resources. A subzone, Protected Natural Area (110 acres), is used in this plan in recognition of the need for management strategies to enhance habitat/nesting sites of the endangered red-cockaded woodpecker.
Development Zone (225 acres) - Lands in this zone will be managed to support development and intensive public use which substantially alter the natural environment. Parking lots, public use roads, aggregations of buildings, and park utilities will be included in this zone.

The above-referenced map shows proposed management zoning.

Visitor Use

In keeping with the primary purpose of the monument, i.e., the protection of the existing forest, the visitor experience that will be provided for will be one of resource appreciation and study, quiet contemplation, and solitude.

Except for basic visitor access and facilities that will be located on the periphery of the monument, visitors will enjoy the area as is, i.e., in its primitive condition. Only trails and primitive campsites will be available in the interior of the monument.

Interpretation of monument resources will remain unchanged in terms of themes presented. The proposed visitor center will significantly enhance this aspect of monument operations by providing more space for visitor contact, exhibits, and displays of informational material. It will also provide a needed central public contact point that will assist in disseminating safety hazard information and monument regulations.

The existing array of activities is appropriate for the area, and no changes are proposed. Since current use levels are very low, no special considerations such as limitations are included in this proposal. Due to the nature of the area and the purpose of its establishment, monitoring of use levels, crowding, and other concerns that would stem from visitor use will be an ongoing responsibility of monument personnel. Specific controls for visitor safety and resource protection will be implemented as necessary. Such controls may include closing trails, opening new ones, and relocating primitive campsites.

A complementary use of the monument that will be encouraged is an expanded environmental education and research opportunity. To facilitate this, the National Park Service will offer the educational community the opportunity to conduct special courses and research compatible with the purpose of the monument. Construction and operation of a related facility adjacent to or near the monument would be appropriate and could even be located in the monument development zone if a suitable site nearby cannot be located.
Development

The development zones mentioned below are shown on the previous map. Quantities shown for various facilities are to be considered conceptual in nature. They have been used as the basis for cost estimates which appear in the Plan Implementation section.

Development Zone 1 - This approximately 1-acre zone will provide access to Cedar Creek for fishing and canoeing. Currently there exists a dirt road off the paved county road (Old Bluff Road) and undesignated parking off the dirt road for 2-4 vehicles. A short trail leads to the creek. Proposed facilities are a gravel road (50 feet) leading from Old Bluff Road to a gravel parking area for 10 vehicles. No improvement of the trail is proposed.

Development Zone 2 - This area of approximately 222 acres will be the primary entrance to the monument and will contain visitor contact and administrative facilities. Proposed facilities are a paved entrance road (0.8 miles), a 3,750-square foot visitor center/administrative office, paved visitor parking for 25 cars and 4 buses, a gravel access road (0.4 miles) leading from the visitor center to trailhead parking (gravel) for 20 cars and a primitive walk-in campground (10 sites) with associated parking. The monument's maintenance facility (2,100 square feet) will also be located in this zone. All permanent structures will be located outside the 100-year flood zone. Headquarters will be relocated from Columbia to the administrative offices in this zone.

Development Zone 3 - This approximately 2-acre zone will provide fishing and canoe access to Cedar Creek and could also serve as a trailhead. Like Zone 1, existing conditions include a short dirt road off the paved county road and undesignated parking off the dirt road for 4-5 vehicles. A short trail leads to Cedar Creek. Facilities proposed are a gravel road (200 feet) leading to a gravel parking lot for 15 cars. No improvement is proposed for the trail to the creek. A step-down ramp is proposed for safe and convenient canoe ingress/egress.

Other Development - There is other development included in the proposal that falls outside of the development zones and remains consistent with the Natural Zone objectives.

On the western end of the monument, there is presently an unimproved road extending from Old Bluff Road to an old boat ramp on the Congaree River. This road and ramp are used by monument personnel only. This road provides the only vehicle access to the Congaree River. The northernmost portion of the road traverses privately owned land. In order to minimize cost, a
realignment of this road is proposed to avoid additional land acquisition. A short section of dirt road (0.2 miles) will be constructed to connect existing sections. Current actions to occasionally rehabilitate poorly drained sections of the road will continue. Improvement of the boat ramp is also proposed.

Primitive tent sites will be designated at several suitable locations along Cedar Creek, Congaree River, and existing hiking trails. Such sites will promote greater use and appreciation of the interior of the monument by providing a backcountry camping experience.

Wayside exhibits will be placed at appropriate locations along the existing boardwalk.

The existing hiking trail system will be maintained in its primitive condition. Sufficient and appropriate access to the system will be provided by the boardwalk with its wayside exhibits. Additional primitive trails and boardwalks will be constructed incrementally as visitation increases and a need to disperse use appears in order to maintain a quality visitor experience and minimize resource impacts. Clearly marked trails allow use of the monument interior in the only safe way considering the ease with which people can get disoriented in this heavily-wooded area.

This proposal also includes removal of the old hunt camp complex, including demolition and removal of structures, relocation onto the bluff of the State's air quality monitoring station, removal of portions of the access road to restore drainage patterns, and scarification of the remaining filled areas to promote natural revegetation.

The temporary ranger station will be remodeled to provide housing for an employee. The existing maintenance facility will be removed.

Suitable facilities such as all public use buildings will be designed to accommodate handicapped visitors in conformance with applicable laws and regulations.

Wilderness

As shown on the Wilderness Proposal map, the majority of the monument is suitable for wilderness designation. Designation is proposed for all lands in Federal ownership that have not been recently cut over, less Development Zones and the Protected Natural Area Subzone, and lands on the western edge of the monument.
Designation as potential wilderness is proposed for all lands in Federal ownership that have been cut over, plus all lands to be eventually acquired, less Development Zones and the Protected Natural Area Subzone.

Lands must be in Federal ownership to be designated wilderness. As soon as lands that have been cut over return to a state where man's imprint on the land is no longer readily apparent, those lands will be designated as wilderness. Land on the western edge of the monument is excluded as a corridor to allow administrative vehicle access to the Congaree River and necessary road and boat ramp maintenance. The Protected Natural Area Subzone is excluded to allow appropriate habitat manipulation such as prescribed burns and restriction of access.

Resource Management

In order to fulfill the legislative mandate to preserve and protect this outstanding example of bottomland forest, as well as to address identified management issues, a number of resource management strategies have been identified. Several have been previously discussed under other headings.

The proposed boundary adjustment and associated land acquisition represent a key strategy in protecting monument resources by adding to the monument lands that are hydrologically related and are related importantly in other ways as discussed previously in the Boundary Adjustment section.

The selection of management zones as portrayed on the previous map indicates that conservation of natural resources and processes, and accommodation of uses that do not adversely affect those resources and processes, will guide management action. The zoning of the entire bottomland as Natural Zone is consistent with and will promote the preservation and protection of the area. Placement of Development Zones outside the forested bottomland on the area's periphery will also promote resource protection. Zoning the woodpecker habitat on the upland as Protected Natural Area Subzone will allow for specific management actions promoting habitat maintenance and enhancement.

Designation of most of the monument as wilderness or potential wilderness underscores the preservation/protection objective. However, other than imposing a limitation on the type of tools/equipment used in maintenance of the dispersed facilities as previously described, designation will not result in changes in planned management activity. This is due to Congressional direction regarding the purpose of the monument and the approach
Wilderness Proposal
Congaree Swamp National Monument

LEGEND
- - - Monument Boundary - Existing
--- - - Monument Boundary - Proposed
wilderness (12,279 acres)
Potential Wilderness (4772 acres)

ON MICROFILM
proposed to provide for visitor use. The Appendices contain National Park Service Management Policies for wilderness management.

Removal of the hunt camp complex from the floodplain will allow restoration of the affected area. Scarification of compacted areas will promote natural revegetation.

Updates on the record tree inventory and threatened and endangered species inventory will continue.

Protection of cultural resources will be enhanced by proposed land acquisition in the northwest corner which would bring the remaining portion of a dike under National Park Service control. Also, actions to be continued include boundary clarification of historic resources and nomination to the National Register of Historic Places, determination of significance of two prehistoric sites and possible register nomination, and monitoring the condition of known resources. In areas specifically slated for facility development, archeological testing will be conducted prior to construction and, if appropriate, either the facility site moved or a data recovery effort undertaken. Suitable artifacts will be exhibited in the visitor center while any others will be protected and housed off-site.

Use of trails and primitive camps will be monitored and limited as necessary to prohibit resource degradation. The removal of fallen trees or sections of trees on Cedar Creek to maintain canoe passage during normal water levels will be kept to a minimum.

Water quality and quantity and impacts of acid rain will continue to be monitored.

Coordination with State, other Federal, local, and private entities will continue as follows:

- with military establishments to reduce or eliminate noise impacts from aircraft overflights,
- with the State for air quality, water flows and quality, and fishery and wildlife management,
- with counties concerning land use decisions affecting the monument,
- with the Federal Energy Regulatory Commission concerning hydropower development,
- with the Corps of Engineers and Environmental Protection Agency for water quality and wetland protection,

- with Fish and Wildlife Service for management of wetlands, fish, wildlife and threatened and endangered species,

- with U.S. Geological Survey for water resource monitoring and management,

- with timber companies and other private landowners concerning effects of adjacent land use,

- with Georgia-Pacific Corporation concerning administrative access over company land to more remote areas of the monument,

- with national (and international) research organizations for future biosphere reserve-related research, and

- with educational institutions concerning use of the monument for field studies and research.

**Staffing**

On-site management of the monument will be accomplished by a superintendent and staff responsible for administration, maintenance, interpretation, resource management, and law enforcement. The monument has six permanent, full-time and two part-time employees. Implementation of the proposal will require additional personnel. A preliminary estimate calls for from four to six new positions. Specific staffing requirements will be evaluated and addressed through an operations plan to be prepared after the general management plan is approved.

**Plan Implementation**

If Congress authorizes the boundary adjustment and necessary funding, a detailed Land Protection Plan will be prepared which will identify the optimum strategy to achieve management objectives for these additional lands. Land Protection Plans analyze alternative protection methods including fee and less-than-fee acquisition and establish priorities for action.

Lands identified for acquisition will be acquired as funds are made available. Of primary concern are the tracts providing visitor and administrative access and the tracts that include portions of Cedar Creek. If the 2,464 acres were acquired in fee, the estimated cost would be $4,300,000.
The proposed facilities are basic to monument administration and visitor use and are not so extensive to suggest phasing their implementation. Estimated construction costs are shown in the following table. Amending legislation will be needed to increase the dollar ceiling on development.

Needed major equipment items are currently owned or leased by the monument and include two pickup trucks, one sedan, van, tractor, grader, and three outboard motor boats.

The monument's annual operating costs are currently $216,000 (FY 1987). Annual operations and maintenance costs are expected to increase. They will be addressed in the operations plan to be developed after approval of this plan.

Current use of existing buildings will continue until needed funds for the various elements of plan implementation are available.
## Estimated Development Cost

<table>
<thead>
<tr>
<th>Development</th>
<th>Gross Construction Cost</th>
<th>Advance and Project Planning Cost</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ZONE 1i</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gravel road (50 ft.) and parking (10 cars)</td>
<td>$13,490</td>
<td>$2,580</td>
<td>$16,070</td>
</tr>
<tr>
<td><strong>ZONE 2i</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paved entrance road (0.8 mi.)</td>
<td>319,640</td>
<td>61,000</td>
<td>380,640</td>
</tr>
<tr>
<td>Visitor center/office (3,750 sq. ft.)</td>
<td>589,500*</td>
<td>112,500</td>
<td>702,000</td>
</tr>
<tr>
<td>Utilities</td>
<td>314,660</td>
<td>60,050</td>
<td>374,710</td>
</tr>
<tr>
<td>Parking (25 cars, 4 buses)</td>
<td>75,980</td>
<td>14,500</td>
<td>90,480</td>
</tr>
<tr>
<td>Maintenance facility (2,100 sq. ft.)</td>
<td>483,390</td>
<td>92,250</td>
<td>575,640</td>
</tr>
<tr>
<td>Gravel road (0.4 mi.) and trailhead parking (20 cars)</td>
<td>140,040</td>
<td>26,730</td>
<td>166,770</td>
</tr>
<tr>
<td>Primitive campground/parking (10 sites)</td>
<td>72,050</td>
<td>13,750</td>
<td>85,800</td>
</tr>
<tr>
<td>Rehabilitation of ranger station</td>
<td>39,300</td>
<td>7,500</td>
<td>46,800</td>
</tr>
<tr>
<td>Removal of old maintenance facility</td>
<td>5,110</td>
<td>980</td>
<td>6,090</td>
</tr>
<tr>
<td><strong>ZONE 3i</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gravel road (200 ft.) and parking (15 cars)</td>
<td>27,510</td>
<td>5,250</td>
<td>32,760</td>
</tr>
<tr>
<td>Step down ramp</td>
<td>1,970</td>
<td>380</td>
<td>2,350</td>
</tr>
</tbody>
</table>

* Excluding exhibit cost
### Other Developments

<table>
<thead>
<tr>
<th>Description</th>
<th>Gross Construction Cost</th>
<th>Advance and Project Planning Cost</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Construction (dirt; 0.2 mi.)</td>
<td>$20,960</td>
<td>$4,000</td>
<td>$24,960</td>
</tr>
<tr>
<td>Improve boat ramp</td>
<td>17,820</td>
<td>3,400</td>
<td>21,220</td>
</tr>
<tr>
<td>Primitive tent sites (10)</td>
<td>5,900</td>
<td>1,130</td>
<td>7,030</td>
</tr>
<tr>
<td>Trails (10 miles)</td>
<td>98,250</td>
<td>18,750</td>
<td>117,000</td>
</tr>
<tr>
<td>Boardwalk wayside exhibits</td>
<td>9,170</td>
<td>1,750</td>
<td>10,920</td>
</tr>
<tr>
<td>Removal of hunt camp facilities</td>
<td>19,130</td>
<td>3,650</td>
<td>22,780</td>
</tr>
<tr>
<td>Removal of road sections and scarification</td>
<td>11,530</td>
<td>2,200</td>
<td>13,730</td>
</tr>
</tbody>
</table>

| Total                                               | $2,265,400              | $432,350                          | $2,697,750         |
Summary of Effects

The following table summarizes positive and negative effects of implementing the proposal.
### EFFECTS OF THE PROPOSAL

<table>
<thead>
<tr>
<th>Proposal Element</th>
<th>Positive</th>
<th>Negative</th>
<th>Mitigation of Negative Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boundary Adjustment</td>
<td>Protection of at least 2 national record trees, 10 State record trees, and 4 others whose size is 80+ percent of national records.</td>
<td>2,464 acres removed from tax rolls (approximately $4,500 of Richland County tax digest).</td>
<td>Payments-in-lieu-of-taxes pursuant to P.L. 94-565.</td>
</tr>
<tr>
<td>Protection of historic dike.</td>
<td></td>
<td>25 landowners affected (23 individuals, 2 corporations)</td>
<td>Payment of fair market value. No residences involved (all but one tract undeveloped).</td>
</tr>
<tr>
<td>Protection of additional endangered species habitat (woodpecker).</td>
<td></td>
<td>Current uses, including timber management and hunting, would cease on the 2,464 acres.</td>
<td></td>
</tr>
<tr>
<td>Assured public access in perpetuity.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater visitor protection by eliminating hunting in areas where such activity is hazardous.</td>
<td></td>
<td>Cost: $4,300,000</td>
<td></td>
</tr>
<tr>
<td>Reduced poaching and effects of roaming hunting dogs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete protection of Cedar Creek canoeing experience.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased efficiency in administration and management control.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced potential for adverse effects of adjacent development, e.g., erosion, pollution.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposal Element</td>
<td>Positive</td>
<td>Negative</td>
<td>Mitigation of Negative Effects</td>
</tr>
<tr>
<td>------------------</td>
<td>----------</td>
<td>----------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Development</td>
<td>Improved visitor accessibility and services.</td>
<td>Improved monument administration.</td>
<td>Total construction project cost: $2,697,750</td>
</tr>
<tr>
<td>Wilderness Designation</td>
<td>Additional protection of the monument's primary resources.</td>
<td>Greater potential for impacts on vegetation, wildlife, water, and cultural resources by increased visitation.</td>
<td>Visitor use monitoring and regulation.</td>
</tr>
<tr>
<td>Visitor Use Strategies</td>
<td>Resources protected by allowing only consistent types of use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resources protected by regulated use levels.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource Management Strategies</td>
<td>Greater resource protection by specific management actions such as surveys, monitoring, and coordination.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DESCRIPTION OF ALTERNATIVES CONSIDERED

The consideration of alternatives included a number of different combinations of adjacent tracts of land. These combinations would include in the monument varying amounts of additional resources. Legislative direction concerning the purpose of the monument served to limit the consideration of development for the area. With the emphasis on protecting the existing forest, large-scale development options were deemed inappropriate. Rather, after appropriate uses were identified, and consideration given to existing and projected use levels, supporting development was determined with alternatives reflecting variations in the facilities provided. One alternative includes simply renovating and expanding the existing visitor contact station in lieu of constructing a new visitor center. Retaining and renovating the hunt camp complex to provide more opportunity for environmental education was also considered.

While typically a "no-action" (status quo) alternative is evaluated in depth, this is not the case here. This is due to the fact that the monument is operationally sub-marginal and certain actions are necessary to bring the monument up to a minimum operational standard. Essentially, this minimum standard is represented by Alternative 1. A continuation of existing conditions would result in a continuation of current problems as referenced in the planning issues in the section, Purpose and Need for the Plan.

A number of specific actions are common to all alternatives, some of which are because of the present operational condition. Such actions include providing visitor access, parking and road improvements in all development zones, suitable interpretive, administrative, and maintenance facilities, primitive camp sites, trails, and boat ramp rehabilitation. The differences between the alternatives and the proposal are emphasized in this discussion.

One of the alternatives considered (Alternative 1) included only those lands required for public access (Development Zones 1 and 2). The expansion of the existing visitor contact station was included with this alternative which represented the minimally acceptable condition. Alternatives were also considered that would add more lands than indicated for the proposal. One of these is evaluated more specifically in this section (Alternative 2). It would add more land on the east end of the monument.
Another alternative would add even more land in Calhoun County south of the Congaree River. This would add the bluffs identified by personnel of the South Carolina Heritage Trust Program and others as having at least State and regional significance. The bottomlands on the south side of the river are forested with agricultural fields interspersed. Since the Congaree River is an appropriate boundary for the monument, and because these lands are not needed to help protect the monument, there is no essential reason for the National Park Service to propose inclusion of these lands in the boundary. The National Park Service recognizes the State's interest in the bluffs and the river and will seek to assist the Heritage Trust and Scenic Rivers Programs in their efforts to protect these resources. Assistance would depend on the State's own plans and priorities for these areas.

Another possibility was to include all the National Natural Landmark lands as shown on the map, Existing Conditions. However, in view of the extensive logging on some of these lands since designation, a reevaluation of the landmark boundary, has been scheduled by the National Park Service. Consequently, the present landmark boundary, per se, is not a significant consideration. Also, considering the criteria for land acquisition, those portions of the Landmark believed to be suitable are included in the proposal.

The particular combination of lands and development selected as the proposal represented a responsive approach to legislative direction and also fully addressed the identified management issues.

The following alternatives were given specific consideration. Only the differences between the proposal and the alternatives are highlighted. Visitor-use concepts and resource management strategies would be the same as in the proposal.

**Alternative 1**

This boundary adjustment would provide for the acquisition of lands needed for public access and facilities, approximately 166 acres. These lands, essentially Development Zones 1 and 2, are shown on the accompanying map of Alternative 1. The existing ranger station would be renovated and expanded to provide more office and exhibit space. While the area suitable for wilderness designation would be the same as the proposal, the "potential wilderness" area would be necessarily reduced. This is also
shown on the accompanying Alternative 1 Wilderness map. Total development cost for this alternative would be $1,265,170. Land cost is estimated at $214,000.

**Alternative 2**

As depicted on the accompanying map of Alternative 2, this alternative boundary would include approximately 3,255 additional acres. This represents 791 acres more than the proposal. The inclusion of these additional 791 acres would add more old-growth timber to the monument on its eastern end some of which is on land that would tie more of the monument boundary to the natural boundary of the northern bluff. In this alternative, the hunt camp complex would remain and be renovated as an environmental education building. The access road to the hunt camp would be improved although not surfaced or widened except for several pull-offs to provide for passing vehicles and viewing of wayside interpretive exhibits. A group campground would be improved and self-contained toilets added. The "potential wilderness" area would be expanded to complement the increase in monument lands. Total development cost would be $2,748,870. Lands are estimated to cost $7,000,000.
LEGEND

- - Monument Boundary - Existing
- Monument Boundary Alternative 2
- Natural Zone (18,043 acres - 98.1%)
- Protected Natural Area Subzone (110 acres - 0.6%)
- Development Zone (240 acres - 1.3%)
LEGEND

- Monument Boundary - Existing
- Monument Boundary - Proposed
- Wilderness (12,264 acres)
- Potential Wilderness (5663 acres)

Wilderness Alternative 2
Congaree Swamp National Monument
ENVIRONMENTAL CONSEQUENCES OF THE PROPOSAL AND ALTERNATIVES

This section discusses environmental consequences of the proposal and Alternatives 1 and 2 as they affect different resources and subjects.

Old-Growth Timber: The proposal and both alternatives would maximize protection of this resource through a variety of management strategies including Congressional wilderness designation of almost the entire monument. The only difference is in the amounts of such timber considered for protection. The proposal would add an estimated 600 acres of old-growth timber; Alternative 1 would add no additional old-growth timber; and Alternative 2 would add an estimated 1,390 acres of old-growth timber.

Cultural Resources: Management strategies in the proposal and the alternatives would provide for further survey, nomination to the National Register of eligible resources, and monitoring. The proposal and Alternative 2 would provide protection for that portion of a historic dike currently lying outside the monument boundary. Development sites would be tested and the facility site moved or the resource salvaged as appropriate. The office of the South Carolina State Historic Preservation Officer has assisted in the preparation of this document.

Floodplains and Wetlands: The Flood Insurance Rate Map for Richland County was used to identify the 100-year floodplain. Proposed development within the 100-year floodplain includes small gravel parking lots, short gravel road sections, trails, primitive campsites, and a boat ramp. Alternatives 1 and 2 would also include these elements. Alternative 2 would retain the hunt camp complex in the interior of the monument.

The proposal and alternatives are considered to have no direct or indirect impact on the floodplain (Executive Order 11988 "Floodplain Management") or on wetlands (Executive Order 11990 "Protection of Wetlands") because they do not:

1. support, encourage, allow, serve, or otherwise facilitate additional floodplain or wetland development; or

2. reinforce existing land uses which have developed without reflecting the concepts of hazard and risk minimization and restoration of natural floodplain and wetland values; or

3. have secondary or dispersed effects which reach into the floodplain or wetland and can cause change to the ecological system functioning there or can increase potential for flood loss of existing developments.
Based on this analysis, a floodplain/wetland Statement of Findings will not be required.

**Water Quality:** Development actions included in the proposal and alternatives have the potential for sedimentation; however, all construction would be conducted in full compliance with National Park Service, State, and county regulations concerning sediment control. Sewage treatment would be provided consistent with all applicable regulations.

**Endangered Species:** The National Park Service has consulted with the Fish and Wildlife Service in accordance with the Endangered Species Act. The proposal and the alternatives include management strategies to promote habitat preservation for protection of the red-cockaded woodpecker. The proposal and Alternative 2 incorporate additional acreage known to have nesting sites. Surveys and monitoring for other endangered or threatened flora and fauna would be continued as part of the proposal or any alternative.

**Socioeconomic Environment:** Alternative 1, with its minimal land acquisition, would have the least impact on surrounding landowners and county tax revenues. Alternative 2 would have the greatest impact.

**Visitor Use and Experience:** The proposal and alternatives would all provide for a similar visitor experience. The proposal and Alternative 2 would provide greater safety by reducing hazards from hunting on lands to be included in the boundary. They would also promote greater visitor understanding of the resources through the provision of a visitor center with exhibits. Use could be expected to be somewhat greater under the proposal and Alternative 2 because of the slightly higher degree of development.

**Special Populations:** In accordance with Public Law 90-480 (Section 504) and National Park Service design standards developed pursuant thereto, appropriate visitor and administrative facilities will be accessible to special populations.
### COMPARISON OF PROPOSAL AND ALTERNATIVES

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<th>Alternative 2</th>
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<tr>
<td>Boundary Adjustment</td>
<td>Add 2,464 acres</td>
<td>Add 166 acres</td>
<td>Add 3,255 acres</td>
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<td></td>
<td>$4,300,000</td>
<td>$214,000</td>
<td>$7,000,000</td>
</tr>
<tr>
<td>Management Zoning</td>
<td>Natural Zone-17,267 acres</td>
<td>Natural Zone-15,034 acres</td>
<td>Natural Zone-18,043 acres</td>
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<td></td>
<td>Protected Natural Area</td>
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<td></td>
<td>Subzone-110 acres</td>
<td>Subzone-45 acres</td>
<td>Subzone-110 acres</td>
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<tr>
<td></td>
<td>Development Zone-225 acres</td>
<td>Development Zone-225 acres</td>
<td>Development Zone-240 acres</td>
</tr>
<tr>
<td>Wilderness</td>
<td>Wilderness-12,279 acres</td>
<td>Wilderness-12,279 acres</td>
<td>Wilderness-12,264 acres</td>
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<tr>
<td></td>
<td>Potential-4,772 acres</td>
<td>Potential-2,576 acres</td>
<td>Potential-5,563 acres</td>
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<tr>
<td>Development</td>
<td>Road construction, visitor center/office, maintenance facility, parking, primitive camping, rehab of ranger station for employee housing, boat ramp improvement, trails, removal of hunt camp. $2,697,750 total construction cost. Provision for special populations.</td>
<td>Same as proposal except the ranger station would be expanded for use as visitor center/office. $1,265,170 total construction cost.</td>
<td>Same as proposal except the hunt camp would be retained. $2,748,870 total construction cost.</td>
</tr>
<tr>
<td>Visitor Use</td>
<td>Provide experience of solitude and resource appreciation in primitive setting. Hiking, fishing, canoeing, environmental education, and primitive camping opportunities. No change expected in use patterns. Steady increase in volume.</td>
<td>Same as proposal with less increase in volume expected.</td>
<td>Same as proposal</td>
</tr>
<tr>
<td>Factor</td>
<td>Proposal</td>
<td>Alternative 1</td>
<td>Alternative 2</td>
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<tr>
<td>Resource Management</td>
<td>Continue inventories, monitoring, and coordination. No significant changes.</td>
<td>Same as proposal</td>
<td>Same as proposal</td>
</tr>
<tr>
<td>Cultural Resource Management</td>
<td>Continue surveys, nomination process, and monitoring. Include historic dike in boundary.</td>
<td>Same as proposal except no inclusion of dike.</td>
<td>Same as proposal</td>
</tr>
<tr>
<td>Old-Growth Timber</td>
<td>Add an estimated 600 acres.</td>
<td>No addition</td>
<td>Add an estimated 1,390 acres.</td>
</tr>
<tr>
<td>Floodplains/Wetlands</td>
<td>No effect since primary development on bluff</td>
<td>Same as proposal</td>
<td>Same as proposal</td>
</tr>
<tr>
<td>Water Quality</td>
<td>Monument development to conform to all Federal/State and local laws/regulations. Monitoring and coordination to continue.</td>
<td>Same as proposal</td>
<td>Same as proposal</td>
</tr>
<tr>
<td>Endangered Species</td>
<td>Add 65 acres of habitat. Continue special management, inventories, and monitoring.</td>
<td>Same as proposal except no additional habitat.</td>
<td>Same as proposal</td>
</tr>
<tr>
<td>Socioeconomy</td>
<td>2,464 acres removed from tax rolls. No personal residences involved.</td>
<td>Same as proposal except less acreage involved (166 acres).</td>
<td>Same as proposal except more acreage involved (3,255 acres).</td>
</tr>
<tr>
<td>Management/Administration</td>
<td>Consolidation of personnel. More easily administered boundaries.</td>
<td>Same as proposal except for a continuation of much of the boundary-associated problems.</td>
<td>Same as proposal</td>
</tr>
</tbody>
</table>
AGENCIES CONSULTED

Federal
U.S. Fish and Wildlife Service
President's Advisory Council on Historic Preservation

State of South Carolina
Office of the Governor, Division of Natural Resources and the Environment
Wildlife and Marine Resources Department, Heritage Trust
State Historic Preservation Officer
Water Resources Commission

Local
Central Midlands Regional Planning Council
Lower Savannah Council of Governments
Appendices

Appendix A: Congaree Swamp National Monument legislation.
Appendix B: Congaree Swamp National Monument management objectives
Appendix C: National Park Service Wilderness Management Policy
Appendix D: References and Available Literature
Appendix E: List of Plant and Animal Scientific Names
Appendix F: Study Team
Appendix A

Congaree Swamp

An Act to authorize the establishment of the Congaree Swamp National Monument in the State of South Carolina, and for other purposes. (80 Stat. 2317) (P.L. 94-545)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to preserve and protect for the education, inspiration, and enjoyment of present and future generations an outstanding example of a near-virgin southern hardwood forest situated in the Congaree River floodplain in Richland County, South Carolina, there is hereby established the Congaree Swamp National Monument (hereinafter referred to as the "monument"). The monument shall consist of the area within the boundary as generally depicted on the map entitled "Congaree Swamp National Monument", numbered CS-80,001-B, and dated August 1976 (generally known as the Beidler Tract), which shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior. Following reasonable notice in writing to the Committees on Interior and Insular Affairs of the Senate and House of Representatives of his intention to do so, the Secretary of the Interior (hereinafter referred to as the "Secretary") may make minor revisions of the boundary of the monument by publication of a revised map or other boundary description in the Federal Register, but the total area may not exceed fifteen thousand, two hundred acres.

SEC. 2. (a) Within the monument the Secretary is authorized to acquire lands, waters, and interests therein by donation, purchase with donated or appropriated funds, or exchange. Any lands or interests therein owned by the State of South Carolina or any political subdivision thereof may be acquired only by donation.

(b) With respect to any lands acquired under the provisions of this Act which at the time of acquisition are leased for hunting purposes, such acquisition shall permit the continued exercise of such lease in accordance with its provisions for its unexpired term, or for a period of five years, whichever is less: Provided, That no provision of such lease may be exercised which, in the opinion of the Secretary, is incompatible with the preservation objectives of this Act, or which is inconsistent with applicable Federal and State game laws, whichever is more restrictive.


(b) The Secretary shall permit sport fishing on lands and waters under his jurisdiction within the monument in accordance with applicable Federal and State laws, except that he may designate zones where and establish
periods when no fishing shall be permitted for reasons of public safety, administration, fish or wildlife management, or public use and enjoyment. Except in emergencies, any regulations promulgated under this subsection shall be placed in effect only after consultation with the appropriate fish and game agency of the State of South Carolina.

Sec. 4. Within three years from the effective date of this Act, the Secretary shall review the area within the monument and shall report to the President, in accordance with subsections 3 (c) and 3 (d) of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1132 (c) and (d)), his recommendations as to the suitability or nonsuitability of any area within the monument for preservation as wilderness, and any designation of any such area as wilderness shall be accomplished in accordance with said subsections of the Wilderness Act.

Sec. 5. (a) The Secretary may not expend more than $35,500,000 from the Land and Water Conservation Fund for land acquisition nor more than $500,000 for the development of essential facilities.

(b) Within three years from the effective date of this Act the Secretary shall, after consulting with the Governor of the State of South Carolina, develop and transmit to the Committees on Interior and Insular Affairs of the United States Congress a general management plan for the use and development of the monument consistent with the purposes of this Act, indicating:

(1) the lands and interests in lands adjacent or related to the monument which are deemed necessary or desirable for the purposes of resource protection, scenic integrity, or management and administration of the area in furtherance of the purposes of this Act, and the estimated cost thereof;

(2) the number of visitors and types of public use within the monument which can be accommodated in accordance with the protection of its resources;

(3) the location and estimated cost of facilities deemed necessary to accommodate such visitors and uses.

Approved October 18, 1976.

House Report No. 94–1570 (Comm. on Interior and Insular Affairs).
Senate Report No. 94–1311 (Comm. on Interior and Insular Affairs).
Congressional Record, Vol. 122 (1976):
Sept. 21, considered and passed House.
Sept. 28, considered and passed Senate, amended.
Sept. 29, House agreed to Senate amendment.
Weekly Compilation of Presidential Documents, Vol. 12, No. 43:
Oct. 19, Presidential statement.
An Act to amend certain provisions of law relating to units of the national park system and other public lands, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Public Lands and National Parks Act of 1983".

Sec. 2. (a) The Secretary of the Interior is authorized to accept a conveyance of approximately four acres of land adjacent to the Effigy Mounds National Monument in the State of Iowa, and in exchange therefor to convey the grantor, without monetary consideration, approximately three acres of land within the monument, all as described in subsection (b) of this section. Effective upon consummation of the exchange, the land accepted by the Secretary shall become part of Effigy Mounds National Monument, subject to the laws and regulations applicable thereto, and the land conveyed by the Secretary shall cease to be part of the monument and the boundary of the monument is revised accordingly.

(b) The land referred to in subsection (a) which may be accepted by the Secretary is more particularly described as that portion of the southeast quarter of the southeast quarter of section 28 lying south and east of County Road Numbered 561, and the land referred to in subsection (a) which may be conveyed by the Secretary is more particularly described as that portion of the northeast quarter of the northeast quarter of section 33 lying north and west of County Road Numbered 561, all in township 96 north, range 3 west, fourth principal meridian, Allamakee County, Iowa.

Sec. 3. Section 9 of the Act entitled "An Act to provide for the establishment of Cape Cod National Seashore", approved August 7, 1961 (16 U.S.C. 459b-8), is amended by striking out "$33,500,000" and inserting in lieu thereof "$42,917,575".

Sec. 4. Section 8 of the Act entitled "An Act to provide for the establishment of the Cape Lookout National Seashore in the State of North Carolina, and for other purposes", approved March 10, 1966 (16 U.S.C. 459g-7), is amended by striking out "$7,903,000" and inserting in lieu thereof "$13,903,000".

Sec. 5. Section 15 of the Act entitled "An Act to establish in the State of Michigan the Sleeping Bear Dunes National Lakeshore, and for other purposes", approved October 21, 1970 (16 U.S.C. 460x-14), is amended by striking out "$66,153,000" and inserting in lieu thereof "$82,149,558".

Sec. 6. Section 5(a) of the Act of October 18, 1976, entitled "An Act to authorize the establishment of the Congaree Swamp National Monument in the State of South Carolina, and for other purposes" (Public Law 94-545; 90 Stat. 2517; 16 U.S.C. 431 note) is amended by striking out "$35,500,000" and substituting "$60,500,000"; and by striking out "$500,000" and inserting in lieu thereof "$2,000,000".
Public Law 98-506
98th Congress

An Act

To amend the Act authorizing the establishment of the Congaree Swamp National Monument to provide that at such time as the principal visitor center is established, such center shall be designated as the "Harry R. E. Hampton Visitor Center", and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. Section 3 of the Act approved October 18, 1976 (90 Stat. 2517), is amended by adding at the end the following new subsection: "(c) At such time as the principal visitor center at such monument is established, such center shall be designated as the 'Harry R. E. Hampton Visitor Center'."

Waste disposal. SEC. 2. Section 5 of the Act of July 15, 1968 (82 Stat. 354), is amended by redesignating subsection (c) as subsection (d) and by inserting the following new subsection (c) after subsection (b):

"(c) In order to protect the air, land, water, and natural and cultural values of the National Park System and the property of the United States therein, no solid waste disposal site (including any site for the disposal of domestic or industrial solid wastes) may be operated within the boundary of any unit of the National Park System, other than—

"(1) a site which was operating as of September 1, 1984, or

"(2) a site used only for disposal of wastes generated within that unit of the park system so long as such site will not degrade any of the natural or cultural resources of such park unit.

The Secretary of the Interior shall promulgate regulations to carry out the provisions of this subsection, including reasonable regulations to mitigate the adverse effects of solid waste disposal sites in operation as of September 1, 1984, upon property of the United States."


LEGISLATIVE HISTORY—S. 1889:

HOUSE REPORT No. 98-1069 (Comm. on Interior and Insular Affairs).
SENATE REPORT No. 98-553 (Comm. on Energy and Natural Resources).

Aug. 9, considered and passed Senate.

Sept. 24, considered and passed House, amended.

Oct. 5, Senate concurred in House amendments.
APPENDIX B

MANAGEMENT OBJECTIVES FROM CURRENT STATEMENT FOR MANAGEMENT

SHORT TERM

1. Secure NPS-controlled access to the monument.

2. Complete the GMP.

3. Revise the Resource Management Plan to depict current status of the resources and needs. Updated project statements will include requests for assistance and funding.

4. Survey several areas for boundary line marking.

5. Prepare needed action plans consistent with an approved General Management Plan, Statement For Management and other plans, i.e., a visitor use study, wayside exhibit plan, and handicapped access plan.

LONG TERM

Natural Resources

1. Protect and perpetuate the monument's natural resources, including the bottomland hardwood ecosystem, by protecting the complex hydrological and biological processes. Manage these resources in ways that enhance natural ecological and hydrological processes and mitigate the adverse effects of human activities.
2. Manage the monument as an undeveloped natural area, except for such minimal facilities as may be required for the health and safety of monument visitors.

3. Manage the water resources of the monument to ensure that the water regimen is not impaired and that the adverse effects on the natural resources are minimized.

4. Educate and control visitors as necessary for the management of wildlife, the preservation of other natural resources and for the protection of the visitor.

5. Provide opportunities for fishing under applicable state laws and in conformance with other stated management objectives.

6. Minimize disturbance of natural landforms, vegetation, and wildlife habitat due to vehicle use, monument development, and public recreational activities at the monument, and restore natural ecological conditions to lands adversely affected by such uses and activities in the past.

7. Perpetuate, free from the adverse effects of human disturbance, suitable habitat conditions to support the monument's rich flora and fauna, with particular emphasis on endangered or threatened species, or species uncommon elsewhere.

8. Reduce the spread of and, to the extent necessary and practicable, eliminate existing populations of exotic animals and plants introduced through man's activities.
VISITOR USE

1. Encourage a range of recreational activities that do not adversely affect the monument's natural and cultural values or duplicate existing programs and facilities outside the monument.

2. Provide orientation, information, and essential services to visitors at environmentally and esthetically compatible locations. This information would solicit and encourage the visitors, as well as park neighbors, to help protect the monument's ecosystems.

3. Foster public enjoyment, appreciation, and understanding of the significance of the Congaree Swamp National Monument and its plant and animal communities.

4. Provide visitor access to remote areas of the park by use of a primitive trail system for fishing, hiking, nature study, primitive camping and other compatible recreational activities.

5. Obtain or provide water, power, communications and waste disposal systems that will meet management and visitor needs without adversely affecting the ecosystem or the scenic values.

VISITOR SAFETY

1. Provide for visitor safety and resource protection by disseminating information in the monument and nearby communities on the hazards associated with recreational activities in the monument.
2. Develop an efficient management capability in law enforcement as well as in search and rescue activities.

DEVELOPMENT

1. Ensure that development within the monument's authorized boundaries is the minimum necessary to provide essential visitor services and to support management operations.

2. Ensure that all facilities are visually compatible with each other and with the floodplain and woodland environment, and that any visual intrusions are eliminated.

3. Ensure that any and all facilities provided are in accordance with Executive Order 11988 (Floodplain Management).

4. Ensure to the greatest extent possible that all facilities utilize and contain energy efficient construction.

ENVIRONMENTAL EDUCATION

1. Encourage and assist in the use of the monument resources for educational purposes by schools and other groups studying river swamp or alluvial floodplain ecology.

ACQUISITION OF INFORMATION

1. Secure adequate information to facilitate effective management of the monument's resources and to ensure the safety of visitors and employees.
2. Encourage and participate in research by educational institutions and other suitable groups for the purpose of developing new information on which to base sound monument management.

3. Locate the national and state record trees within the boundary of the monument.

4. Determine the legal implications, through review of South Carolina's riparian law, of a change in the river channel on the presently authorized boundary.

LANDS

1. Establish a boundary that provides adequate protection for the monument's ecosystems.

2. Establish a permanent, surveyable boundary that does not fluctuate with natural phenomena.

COOPERATION

1. Cooperate with the State of South Carolina, Richland and Calhoun Counties, and other governmental agencies and private concerns for the purpose of assuring protection of monument resources and scenic values from the adverse impacts of boating, industrial development and operations, urban development, and other activities and uses.
2. Cooperate with other agencies monitoring the Congaree Swamp environment to identify, locate, and assess activities within the region that are polluting or otherwise adversely affecting monument resources.

3. Seek cooperative agreements with appropriate agencies of the State of South Carolina and involved federal agencies to study the Congaree River and determine the best possible methods of river management and the legal responsibility for that management.
## APPENDIX C

### CHAPTER VI

**WILDERNESS PRESERVATION AND MANAGEMENT**

Management Policies of the National Park Service
United States Department of the Interior

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Wilderness Preservation and Management

THE NATIONAL PARK SERVICE WILL PRESERVE AN ENDURING RESOURCE OF WILDERNESS IN THE NATIONAL PARK SYSTEM AS PART OF THE NATIONAL WILDERNESS PRESERVATION SYSTEM, TO BE MANAGED FOR THE USE AND ENJOYMENT OF WILDERNESS VALUES WITHOUT IMPAIRMENT OF THE WILDERNESS RESOURCE.

From the earliest beginnings of the National Park System, the concept of wilderness preservation has been an integral part of park management philosophy. In the ensuing century, the national park movement has been a focal point for an evolving wilderness philosophy within our country.

In 1964 the efforts of the wilderness movement were capped by passage of the Wilderness Act (P.L. 88-577, 78 Stat. 890). The main thrust of the Act was to establish a National Wilderness Preservation System and provide for the study of Federal lands in the National Forests, Wildlife Refuges, and the National Park System for inclusion in the System. Consistent with the Wilderness Act, no park area may be designated as wilderness except by an act of Congress.

The Wilderness Act specifies that designation of a park area as wilderness shall in no manner lower the standards evolved for the use and preservation of such park in accordance with the Act to Establish a National Park Service, August 25, 1916 (39 Stat. 535), and other applicable legislation.

Wilderness areas shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, including "outstanding opportunities for solitude or a primitive and unconfined type of recreation." Thus, the preservation of wilderness character and values is the prime administrative responsibility of the Service, and activities to achieve other legal purposes of areas designated as wilderness must be administered so as to preserve the wilderness character. The public purposes for which park wilderness shall be managed relate to recreational, scenic, scientific, educational, conservation, and historical uses.

The National Park Service has conducted wilderness studies in conformity with the Wilderness Act, and the Secretary of the Interior has submitted legislative recommendations to the President and the Congress for designation of park areas as wilderness. The Service will continue wilderness studies on parks authorized since the passage of the Wilderness Act wherever required or desirable.

2-78
The policies contained in this chapter relate specifically to park wilderness or to park areas that have been studied and recommended for wilderness designation. Policies of general application to parks are contained in other chapters and are not repeated here. The Service's wilderness policies may vary from those of the Forest Service and the Fish and Wildlife Service, based on the differing missions of the three agencies. All, however, have as their goal the preservation of wilderness character.

The Service has traditionally used the term "backcountry" to refer to primitive, undeveloped portions of parks. This, however, is not a specific land classification, but refers to a general condition of land that may span several of the Service's land classifications that are essentially undeveloped and natural in character. Where the term wilderness is used, it will apply only to congressionally designated wilderness or to areas being studied or proposed for wilderness designation. The park "backcountry" would include the designated or proposed wilderness, but could also include other roadless lands which contain minor developments not appropriate in wilderness and provide for a number of different park purposes and activities.

WILDERNESS REVIEWS

The Service will continue to review areas that qualify for wilderness study, consistent with provisions of the Wilderness Act and subsequent legislation directing that wilderness studies be made. Wilderness studies shall be subject to compliance with the Procedures for the Protection of Historic and Cultural Properties promulgated by the Advisory Council on Historic Preservation.

(See The General Management Plan II-2, Wilderness Study Review II-8.)

PROTECTION OF ROADLESS STUDY AREAS

Roadless study areas subject to review for wilderness designation will be protected from activities which would endanger or alter their natural, primitive character until administrative study or the legislative process determines their suitability for wilderness designation.

NATURE OF WILDERNESS LAND

The Act defines wilderness, in part, as undeveloped Federal land retaining its primeval character and influence which

... generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable ...
In interpreting this section, the Service considers lands that have been logged, farmed, grazed, or otherwise utilized in ways not involving extensive development or alteration of the landscape as qualifying for consideration of inclusion in wilderness proposals. Where such uses have impaired wilderness qualities, management will be directed toward restoration of wilderness character.

MANAGEMENT CONSIDERATIONS

An area will not be excluded from a wilderness recommendation solely because established or proposed management practices require the use of tools, equipment, or structures if those practices are necessary for the health and safety of wilderness travelers or protection of the wilderness area.

GRAZING AND STOCK DRIVEWAYS

Lands will not be excluded from a wilderness recommendation solely because of prior rights or privileges, such as grazing and stock driveways, provided these operations do not involve the routine use of motorized or mechanical equipment and do not involve development and structures to such an extent that the human imprint is substantially noticeable.

(See Grazing IV-5.)

HISTORIC FEATURES

Historic features which are primary attractions for park visitors are not included in wilderness. However, an area that attracts visitors primarily for the enjoyment of solitude and unconfined recreation in a primitive setting may also contain historic features and still be included in wilderness. Typical historic features which may be included are archeological sites, historic trails, travel routes, battle sites, and minor structures. Historic trails may serve and be maintained as part of the wilderness trail system. However, if the planned scope and standard of maintenance would result in the imprint of man's work being substantially noticeable, the trail or other feature should not be included in wilderness.

(See National Trails System I-13.)

POTENTIAL WILDERNESS ADDITIONS

When non-qualifying lands are surrounded by or adjacent to an area proposed for wilderness designation, and such lands will within a determinable time qualify and be available Federal land, a special provision should be included in the legislative proposal which would provide for the future designation of these lands as wilderness upon publication in the Federal Register of a notice by the Secretary of the Interior that all uses thereon prohibited by the Wilderness Act have ceased.
MINING OR PROSPECTING

Any recommendation that lands presently subject to mineral exploration and development be designated wilderness will only be made subject to the mineral interests being eliminated.

(See Mineral Exploration, Leasing, and Mining IV-6.)

UTILITY LINES

Lands containing above-ground utility lines are not included in recommended wilderness. Areas containing underground utility lines may be included if the area otherwise qualifies as wilderness and the maintenance of the utility line does not require the routine use of mechanized and motorized equipment. No new utility lines are to be installed, and existing utility lines may not be extended or enlarged.

(See Utilities III-7, Utility and Transportation Corridors and Rights-of-Way VII-15.)

WILDERNESS USE

Wilderness is recognized in the Wilderness Act as an area

... where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.

The visitor must accept wilderness largely on its own terms. Modern conveniences are not provided for the comfort of the visitor; and the risks of wilderness travel, of possible dangers from accidents, wildlife, and natural phenomena must be accepted as part of the wilderness experience.

For a majority of park visitors, park wilderness will be appreciated primarily from outside wilderness boundaries as part of the park scene, viewed from park roads and developments. To them, as well as to the visitor who hikes into the wilderness, protection of the wilderness character is essential to the quality of the park experience.

INFORMATION ON WILDERNESS USE

Information on wilderness and backcountry use will be available in each park having such resources, specifying

- the kinds of clothing and equipment necessary for such use;
special dangers of wilderness use and precautions to be observed by the user; and

- regulations regarding wilderness and backcountry use.

(See Information and Orientation VII-2, Environmental Education VII-5, Visitor Safety and Protection VII-24.)

LIMITATION OF WILDERNESS USE

If necessary to preserve the wilderness character, the Service will limit or disperse use through a variety of means best suited to the particular wilderness concerned.

(See Limitation of Visitor Use VII-1.)

OVERNIGHT USE

The Service may designate campsites where the protection of resources dictates the need. Campsite facilities are to be the minimum necessary for the health and safety of the wilderness traveler and for the protection of the resources. Facilities may include an identifying site marker, pit toilet, tent sites, and unobtrusive fire rings.

(See Overnight Accommodations III-8, Backcountry Use VII-10)

DAY USE

In smaller wilderness areas where the use pattern is essentially day use, provision of campsites may not be necessary, or they may be provided outside of wilderness boundaries.

COMMERCIAL SERVICES

Guide services for horseback trips, hiking, mountain climbing, boat trips and similar services designed to provide opportunities for the enjoyment of primitive and unconfined types of recreation or other wilderness purposes of the area are permissible under careful control by each park as to their nature, number and extent. Structures or facilities in support of such commercial services are not permitted within wilderness.

(See Backcountry Commercial Services VII-12, Establishment via Prospectus VIII-3.)

CACHES

The storage of boats or other equipment by the public is not permitted. All equipment brought in must be taken out at the end of each wilderness trip.
RESEARCH

The Service, recognizing the scientific value of wilderness areas as natural outdoor laboratories, permits those kinds of research and data gathering which require such areas for their accomplishment, and which will not adversely modify either the physical or biological resources and processes of the ecosystems, nor intrude upon or otherwise degrade the aesthetic values and recreational enjoyment of wilderness environments. All activities must be in accord with wilderness management policies.

(See Information Base II-1, Science Program IV-2, Research and Collecting Permits VII-2Q)

REFUSE DISPOSAL

Refuse may not be disposed of within wilderness, except for the burning of combustible materials where campsites are permitted. The "carry out" concept will be implemented by each park containing wilderness.

(See Backcountry Sanitation VII-12.)

HYDROMETEOROLOGIC DEVICES

Hydrologic or hydrometeorologic devices are usually permanent or semi-permanent installations used to gather water and climatic data related to the management of resources outside of the wilderness. Such existing devices may be retained in wilderness. New or additional devices should not be placed in wilderness, except upon a finding by the Secretary of the Interior that essential information cannot be obtained from location outside of wilderness and that the proposed device is the minimum tool to successfully and safely accomplish the objective. The installation, servicing, and monitoring of these devices shall be accomplished by such means as will assure human safety and will result in the minimum permanent and temporary adverse impact upon the wilderness environment.

(See Use of the Minimum Tool or Equipment VI-6.)

WILDERNESS MANAGEMENT

USE OF THE MINIMUM TOOL OR EQUIPMENT

In the management of wilderness resources and of wilderness use, the Service will use the minimum tool necessary to successfully, safely and economically accomplish its management objectives. When establishing the minimum tool, economic factors should be considered the
least important of the three criteria. The chosen tool or equipment should be the one that least degrades wilderness values temporarily or permanently. Accepted tools, equipment, structures and practices may include but are not limited to: fire towers, patrol cabins, pit toilets, spraying equipment, hand tools, and fire-fighting equipment. The specifics of wilderness management for a given park will be included in the park's backcountry management plan.

A detailed discussion of the minimum tool and the specific approval authority required are provided in the backcountry/wilderness management guidelines. Specific approval is required for the non-emergency use of motorized or mechanical equipment, the installation of new facilities or the modification of existing facilities in wilderness.

**MOTORIZED OR MECHANICAL EQUIPMENT**

1. As a general rule, use of motorized equipment or mechanical transport by the public is not allowed. Boating with hand propelled craft is an acceptable use of wilderness. Language customarily used in the National Park Service's recommended wilderness legislation would make applicable to the National Park Service a special provision of the Wilderness Act pertaining to the use of aircraft and motorboats. Under this provision, where the use of aircraft and motorboats has already become established, the use may be permitted to continue subject to such restrictions as the Secretary of the Interior deems desirable. This does not mean that previously established motorboat and aircraft uses of an area must be allowed to continue upon the designation of that area as wilderness, or that water areas must be excluded from wilderness recommendation where motorboats are involved. Any recommendation to allow established aircraft or motorboat use to continue in wilderness would be based upon a finding that the purpose, character, and manner of such use is suitable to the specific wilderness under consideration.

2. Administrative use of motorized equipment or mechanical transport, including motorboats and aircraft, is permitted only as follows:

   a. In emergency cases involving the health and safety of wilderness users or the protection of wilderness values.

   b. As necessary to meet the minimum needs of management to achieve the purpose of the area.

   *(See Aircraft Operations VII-14.)*

2-78
MANAGEMENT FACILITIES

Wilderness is defined, in part, as undeveloped Federal land retaining its primeval character and influence, without permanent improvements. Facilities are permitted only as necessary to meet the minimum requirements for the administration of the wilderness area.

ROADS

Permanent roads are not permitted in wilderness. Where wilderness includes abandoned roads, their use by vehicles is not permitted and the road should be restored to a natural condition. Temporary vehicular access is permitted only to meet the minimum requirements of emergency situations.

TRAILS

Narrow, unpaved foot and horse trails are permissible. Trails intended for foot travel only will be maintained, generally, to a width sufficient for persons to walk single-file. Trails intended for combined foot and horse travel, or for horse travel only, will be maintained to a width sufficient for horses and their riders to travel single file. Trail bridges are permitted at stream crossings if the crossing, without a bridge, would be unsafe during the normal period of use.

(See Trails and Walks III-4.)

HELIPORTS, HELIPADS, HELISPOTS, AND AIRSTRIPS

Heliports, helipads, and airstrips are not permissible. Natural openings may be utilized as helispots. No site marking or improvements of any type will be permitted, except in conjunction with specific emergencies, after which the area will be restored.

(See Aircraft Operations VII-14.)

COMMUNICATIONS FACILITIES

Radio facilities are permitted where necessary for management of the wilderness area.

(See Miscellaneous Management Facilities III-15.)

FIRE MANAGEMENT

Action will be taken to control wildfires in such a way as to protect natural and cultural features and to minimize the lasting impacts of the control action and the fire itself.

(See Fire Management IV-13.)
FIRE LOOKOUTS

Fire lookouts for wilderness protection are permitted where there is no adequate alternative method of fire detection.

(See Miscellaneous Management Facilities III-15.)

RANGER STATIONS, PATROL CABINS, AND STORAGE STRUCTURES

These structures are permitted only to the minimum extent necessary for wilderness management.

(See Management Facilities III-13)

FENCES AND HITCHING RACKS

Fencing and hitching racks are permitted only where essential for protection of the resource.

CHALETS AND CONCESSIONER CAMPS

These facilities are not permissible.

(See Overnight Accommodations III-8.)

SIGNS AND MARKERS

Signs and markers may be provided only where they are necessary for visitor safety, management, or resource protection.

(See Signs III-16.)

TABLES

Picnic tables are not permissible.

TOILETS

Toilet facilities are limited to locations where there are health and sanitation problems or danger of serious resource damage, and where reducing or dispersing visitor use is not practical or realistic.

(See Comfort Stations III-10, Solid Waste IV-18, Backcountry Sanitation VII-12.)

2-78
PLAQUES, MEMORIALS, AND BURIAL PLOTS

Existing commemorative features and burial plots may be retained. No future additions may be made, unless permitted by existing reservations.

(See Memorials III-15, Cemeteries and Burials VII-18.)
REFERENCES
AND AVAILABLE LITERATURE

A large amount of research and field studies have been conducted in the area of Congaree Swamp National Monument. The following list is excerpted from the monument's Statement for Management. Several of the items listed include extensive bibliographies. Many of the documents were either researched by the study team or the team consulted with specialists who are familiar with the documents' contents.

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Additional references used are listed below.


________, Calhoun County Area Development Statistics (unbound), no date.


APPENDIX E

Congaree Swamp National Monument

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APPENDIX F

Study Team

John Fischer, Park Planner, Southeast Regional Office (Team Captain)
Robert McDaniel, Superintendent, Congaree Swamp National Monument
Richard Sussman, Park Planner, Southeast Regional Office
Alan Woodrow, Landscape Architect, Southeast Regional Office
Steve Price, Environmental Protection Specialist, Southeast Regional Office
Steve Milton, Chief Appraiser, Southeast Regional Office

Valuable assistance was provided the study team by National Park Service personnel from the Regional Office's Divisions of Science and Ranger Activities, the Southeast Cultural Resource Preservation Center, the Southeast Archeological Center, and by staff at the monument.

The work of the study team was dependent in large part on the time and efforts of others. In particular, this includes personnel from the South Carolina Office of the Governor, the State Heritage Trust Program, the Office of the State Historic Preservation Officer, the South Carolina Chapter of the Sierra Club, and Georgia-Pacific Corporation.

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Southeast Region
National Park Service
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