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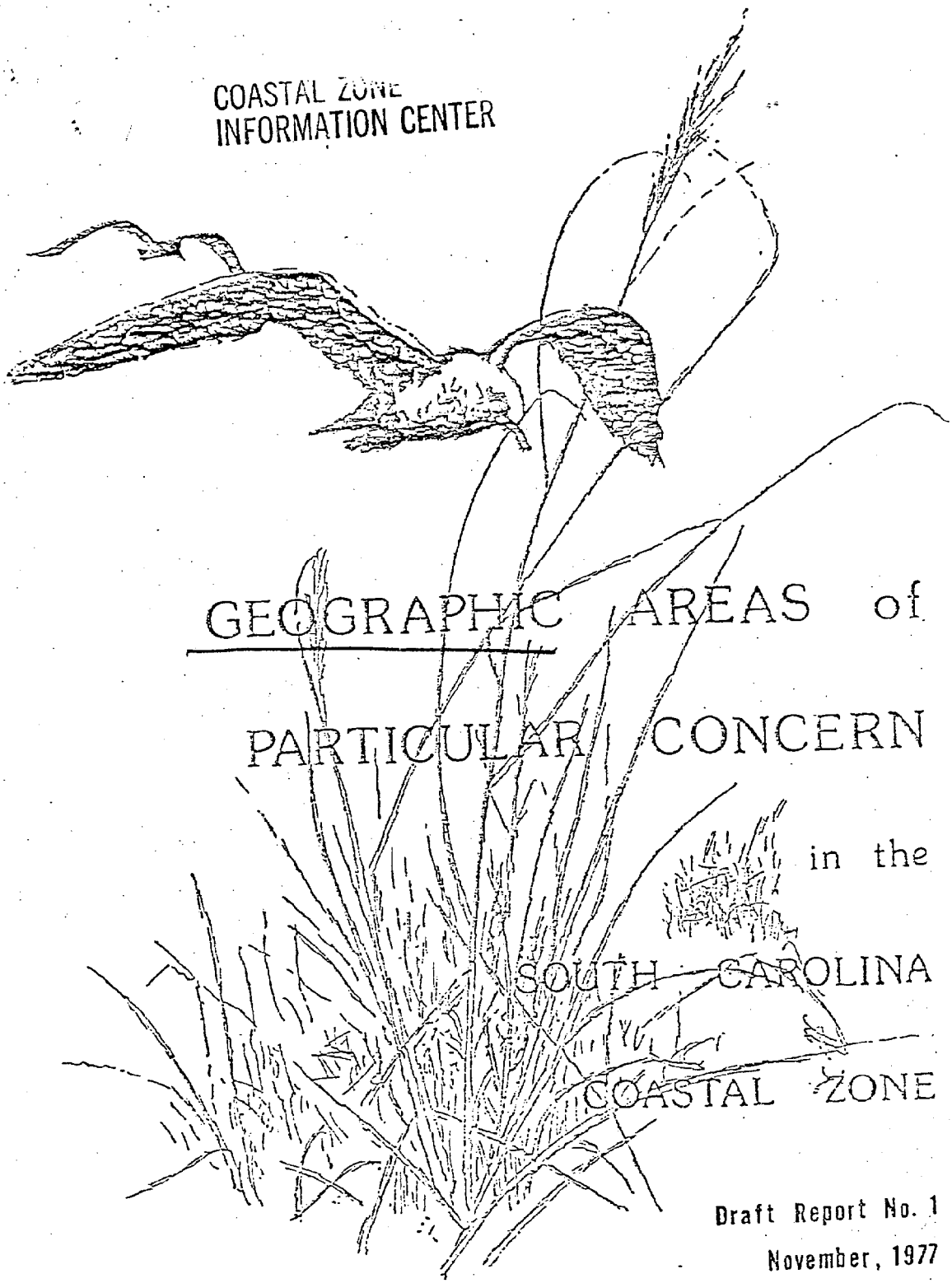

GEOGRAPHIC AREAS of PARTICULAR CONCERN in the SOUTH CAROLINA COASTAL ZONE

Draft Report No. 1

November, 1977

South Carolina Coastal Council

Carolina Coastal Council.

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South Carolina Coastal Council

Principle Staff of the South Carolina Coastal Council for this report:

Harriet Knight, Chief Planner

Also:

Stuart Greeter, Planner
Ann T. Adkins, Federal Agency Coordinator
Richard H. Dawson, Staff Biologist
Ann C. Baker, Energy Impact Coordinator

cover design by

James B. Ellis and D. Bryan Stone

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Preface

In May, 1977, the South Carolina General Assembly enacted a Coastal Zone Management Act for the State (Act 123 of 1977, §48-39-10 et seq. of the Supplement to the 1976 S.C. Code of Laws), finding that the rich variety of natural, commercial, recreational and industrial resources of the South Carolina coastal zone are facing increasing, competing demands. The State's lawmakers recognized the need to regulate and plan for preservation, protection and development of these valuable and fragile resources. Among the State policies expressed in this Act, the basic, overall objectives are as follows:

Section 2(B) (1) To promote economic and social improvement of the citizens of this State and to encourage development of coastal resources in order to achieve such improvement with due consideration for the environment and within the framework of a coastal planning program that is designed to protect the sensitive and fragile areas from inappropriate development and provide adequate environmental safeguards with respect to the construction of facilities in the critical areas of the coastal zone;

(2) To protect, and, where possible, to restore or enhance the resources of the State's coastal zone for this and succeeding generations.

This draft report has been prepared by staff of the South Carolina Coastal Council in keeping with these objectives. It is the initial draft of a segment which will later become part of the comprehensive coastal zone management program for the State.

Geographic Areas of Particular Concern are sites or areas in the coastal zone which offer such unique or important features that they warrant special attention within the context of the management program. These areas are identified and described, the existing management mechanisms determined, and policies and guidelines developed for their preservation and protection.

INTRODUCTION

STATUTORY REQUIREMENTS

Federal

The Federal Coastal Zone Management Act of 1972 (16 U.S.C. §1451 et seq.) while recognizing the entire coastal zone of each state as an important and vital resource, also declares that certain areas are of even more, special significance, and warrant particular attention to their preservation and development. The Act requires, in Section 305(B) (3), that each state inventory and designate the "Areas of Particular Concern" within its coastal zone as part of the state's program.

Section 923.13 of the Rules and Regulations for implementation of the Federal program by each state further defines the Federal requirements for Geographic Areas of Particular Concern (GAPC's). The subsection reads as follows:

> (a) Requirement. In order to fulfill the requirements contained in section 305(B) (3), the management program must show evidence that the State has made an inventory and designation of areas of particular concern within the coastal zone. Such designations shall be based upon a review of natural and man-made coastal zone resources and uses and upon consideration of State-established criteria which include, at a minimum, those factors contained in 15 CFR 920.13, namely:
> (1) Areas of unique, scarce, fragile or vulnerable habitat, physical features, historical significance, cultural value and scenic importance;
> (2) Areas of high natural productivity or essential habitat for living resources, including fish, wildlife and the various trophic levels in the food web critical to their well-being;
> (3) Areas of substantial recreational value and/or opportunity;
> (4) Areas where developments and facilities are dependent upon the utilization of, or access to, coastal waters;
> (5) Areas of unique geologic or topographic significance to industrial or commercial development;
> (6) Areas of urban concentration where shoreline utilization and water uses are highly competitive;
> (7) Areas of significant hazard if developed, due to storms, slides, floods, erosion, settlement, etc; and
> (8) Areas needed to protect, maintain or replenish coastal lands or resources including coastal flood plains, aquifer recharge areas, sand dunes, coral and other reefs, beaches, offshore and sand deposits and mangrove stands. (Federal Register, Vol. 40, No. 6 January, 1975)

The "comment" subsection of these regulations expands the discussion of GAPC's to indicate that:

> It should be emphasized that the basic purpose of inventorying and designating areas of particular concern within the coastal zone is to include them within the purview of the management program. Therefore, particular attention in reviewing the management program will be directed toward development by the State of implementing policies or actions to manage the designated areas of particular concern. (emphasis added).*

The major emphasis in the GAPC segment of a coastal management program, from the Federal viewpoint, is on the adequacy of the State's authority to manage those areas or sites which have been identified. To a lesser extent, the reasons specific areas are significant as coastal resources, and the criteria which establish this significance are also important for inclusion. The individual states may inventory and identify those areas which are significant given the coastal problems or issues which are characteristic of that particular state. Guidance for this designation process is provided in the coastal legislation passed in South Carolina in 1977.

State

The South Carolina Coastal Zone Management Act (Act 123 of 1977; also called the "Tidelands Act") established an eight county coastal zone, to consist of Beaufort, Berkeley, Charleston, Colleton, Dorchester, Georgetown, Horry and Jasper Counties.

This legislation created an eighteen member Coastal Council, charged with two major areas of responsibility: (1) direct permit decisions in certain critical areas (coastal waters, tidelands, beaches and primary sand dunes); and (2) development of a comprehensive coastal management program for the full eight county coastal zone.

Section 8 (B) (4) of the Act mandates that this comprehensive program include the identification of special management areas. It reads as follows:

*Appendix A

> In devising the management program the Council shall:
>
> (a) Inventory and designate areas of critical state concern within the coastal zone, such as port areas, significant natural and environmental, industrial and recreational areas.

These "areas of critical state concern" parallel the geographic area of particular concern requirements mandated by the Federal legislation. The designation process and the areas identified as GAPC's can be devised so as to be consistent with policies for preservation and development of South Carolina's coastal resources, as stated in the South Carolina Coastal Zone Management Act.

SELECTED APPROACH

In order to meet both the Federal and State requirements, this report identifies, maps, and describes the Geographic Areas of Particular Concern in the eight-county coastal zone. (As a point of clarification, many of these areas lie beyond the critical area boundaries as defined in the S.C. Act, since the management program is directed to include all of the eight-county coastal zone.)

The areas included in this draft are those which have already been recognized as being of special importance and concern to the State, by virtue of their inclusion under other State legislation or in other State/Federal programs. These areas represent those issues and specific sites which the people of South Carolina, through the actions taken by their legislative representatives, and authorized commissions and agencies, have distinguished as deserving special management. In response to these expressed concerns, the State has established the existing regulatory and/or management controls over these areas. The authorities which are in place will satisfy the Federal requirement that GAPC's have adequate management, since memoranda of agreement (MOA) will be executed between each of the state commissions with established authority and the South Carolina Coastal Council. These MOAs will specify the type and level of coordination, and that programs will be administered consistent with Council policies for the coastal zone of South Carolina. Their management in the future will be coordinated to ensure consistency with the policies of the Coastal Council for Geographic Areas of Particular Concern.

As development and implementation of the coastal zone program continues, other areas which may deserve particular attention will be further studied. Nominations of potential GAPCs can be made by the Council, other State agencies, local governments, or interested private citizens. When these areas of concern

are identified, they will be reviewed to determine the nature of concern, if they satisfy the appropriate designation criteria, and what type of management needs exist to ensure adequate preservation or control of the areas. These potential sites will be recognized as priorities, and be fully designated once the required management authority is determined and executed.

South Carolina has defined Geographic Areas of Particular Concern in its coastal zone in terms of four broad categories:

- Areas of unique natural resource value, including those exhibiting scarce or vulnerable natural habitats and physical features; those offering substantial recreational value; and those of vital importance in protecting and maintaining coastal resources.
- Areas where activities, development, or facilities depend on proximity to coastal waters, in terms of use of access.
- Areas of special historical, archeological or cultural significance.
- Hazard areas, where intenseive or improper development can increase the risk of damage to life and property, including severe erosion areas.

For each of these categories, standards or criteria are defined, and the specific geographic sites or areas within the coastal zone are identified.

POLICIES FOR GEOGRAPHIC AREAS OF PARTICULAR CONCERN

The South Carolina Coastal Council has designated the Geographic Areas of Particular Concern discussed in this document because of their unique importance as natural, aesthetic, recreational, scientific, or economic resources in the coastal zone. The existing State management authority for each GAPC is identified, and the policies of the authority with jurisdiction shall apply for the appropriate GAPC. In addition, management policies and permitting rules and regulations of the South Carolina Coastal Council for certain specified activities or alterations shall apply to designated GAPCs, where relevant.

GOALS

The goals of the South Carolina coastal zone management program for preservation and development of GAPCs are:

- To give highest priority to the identified primary use or value of a GAPC when considering the preservation or development of that area.
- To ensure management of GAPCs consistent with other policies of the South Carolina coastal zone management program.

POLICY OBJECTIVES

The Management of GAPCs shall be carried out in such a manner as to:

- minimize the disruption of valuable coastal resources;
- protect the integrity of natural resource areas and preserve the most unique and fragile areas;
- protect the habitats of wildlife and marine species, particularly those with special commercial, recreational or ecological value;
- to improve access to and management of recreational areas;
- increase the usefulness of and access to economically important resources, without undue restrictions on the activities, while minimizing negative environmental impacts;
- avoid preemption of appropriate commercial growth where it is consistent with the use of the areas, while seeking to encourage environmentally sound growth patterns and development practices; and
- discourage development in high risk areas, where damage to life, property, and coastal resources is likely to be severe.

GEOGRAPHIC AREAS

I. AREAS OF UNIQUE NATURAL RESOURCE VALUE

Unique resource areas include those exhibiting scarce or vulnerable natural habitats, living marine resources, and physical features; those offering substantial recreational value; and those of vital importance in protecting and maintaining coastal resources.

This category of Geographic Areas of Particular Concern (GAPCs) is especially significant because South Carolina's natural environmental attributes are a resource of incredible value, for ecological, aesthetic, recreational and commercial reasons. In the past, development has been relatively slow, so there are still unspoiled natural areas and abundant wildlife in the coastal zone to enjoy and protect. For example, over 400,000 acres of tidal marsh represent a vital link in the life cycle of a majority of commercial and sport fish species. The forests, marshes, streams, beaches, and coastal waters warrant critical attention in the State's coastal management program because of both their ecological and economic importance. It has become increasingly evident that these are finite and often irreplaceable resources which will need careful preservation and thoughtful management.

Management Authorities

Several different programs which have State ownership, regulatory or management authority over natural resource areas currently exist in South Carolina. The specific authority is described in detail for each individual program in the following pages.

Criteria for Designation

Technically, the criteria for designation of a natural area as a GAPC is its placement in one of the existing Federal or State programs which is identified. However, to indicate the resource values which make these areas particularly significant, general criteria have been developed, drawing from the objectives contained in each of these programs. (Certain of the individual programs have further, specific criteria which are used to qualify areas for inclusion within that program; and these will be identified where such exist.)

The South Carolina Coastal Council recognizes the following criteria for designation of natural resource areas as Geographic Areas of Particular Concern:

1. The area consists of representatives of one or more coastal ecosystem types or habitats, is intact in the sense that essentially all of the expected species and ecological processes are present in normal numbers and vigor, and meets one of the following conditions:

   a. Alteration or destruction of the area would substantially impair the ability of one or more ecosystem types to perpetuate themselves;

   b. The area has qualified as critical habitat for an endangered or threatened species, under the Endangered Species Act of 1973;

   c. The area is unusually large or undisturbed in comparison to others of a similar kind, thus affording a unique opportunity for recreation or scientific observations.

2. The area represents superior habitat for species, which, while not endangered or threatened, are of vital importance as commercial or sports-oriented coastal resources.

3. The area affords maximum recreational opportunities in the coastal zone because of access to beaches or other waterfront, presence of unique physical or cultural features or natural habitats (see #1 above), and/or wide range of active and passive recreation opportunities in a natural setting.

A. The Heritage Trust Program

Management Authority

The South Carolina Heritage Trust Program was established by passage of State Legislation in April, 1976, (Act 600 of 1976). (An Advisory Board and initial staff efforts had begun subsequent to an Executive Order in 1974.) The Heritage Trust Advisory Board and Wildlife and Marine Resources Commission administer a system which provides for inventory, preservation, use and management of unique and outstanding natural or cultural areas.

The public policy stated within the Act is:

> to secure for the people, both present and future generations, the benefits of an enduring resource of natural and cultural areas and features by establishing a system of Heritage Preserves and Sites.

This program provides for dedication of areas or sites by the owner to the Trust, through transfer of fee simple title, or lesser forms of ownership interest, such as open space easements. The advisory Board and Wildlife and Marine Resources Commission review the proposed areas, which are nominated by the staff of the S.C. Wildlife and Marine Resources Department, other State agencies, and citizens of the State.

A major requirement of the program is provision of management criteria, rules and regulations and "allowable use" guidelines for Heritage Preserves. A management plan must be developed for each property in the Heritage Trust. These management mechanisms are intended "to preserve the primary natural character of such areas or features and to provide the maximum public usage thereof which is compatible and consistent with the character of the area". (Section 4 (7))

Inventory

Staff of the Division of Natural Area Acquisition and Resource Planning of the South Carolina Wildlife and Marine Resources Department, with support from other experts in the field, have been actively engaged in thorough investigative surveys of the natural areas of the State. The objectives of this search are identifying "significant elements of the natural environment such as unique and outstanding features, rare and endangered plant and animal species, and natural areas representing the range of biological diversity found in the State". This data has been made available to the Office of Coastal Planning. As the Heritage Trust Program identifies priority areas for preservation or acquisition efforts, this information will also be reviewed by Coastal Council staff and considered for designation as GAPC's, or as future or potential GAPCs.

Designated Sites

Because of their unique value as wildlife habitats and natural areas, Heritage Trust lands have been designated as Geographic Areas of Particular Concern.

Technically, there are currently no Heritage Trust Preserves in the coastal zone, although several are under consideration or in the process of designation. Several sites in the coastal zone have been chosen for possible inclusion within the Heritage Trust Program, but only Capers Island has received approval to date. Official designation as a Heritage Trust Preserve will occur on completion of legal proceedings and development of a management plan for the area. This designation is expected to be completed in late 1977 or early 1978.

Capers Island

Capers Island was purchased by the State of South Carolina in February, 1975, as the result of growing public concern for the conservation of natural resource areas. The island, situated between Dewees Island to the south and the Cape Romain National Wildlife Refuge to the north, serves as a classical example of a coastal barrier island having been built during the course of thousands of years by the interaction of wind and water. To the east the island is bordered by the Atlantic Ocean and to the west by the Atlantic Intra-Coastal Waterway.

Situated approximately three miles from the mainland, Capers is part of an extensive zone of barrier island, coastal salt marshes and estuaries. About 1.4 miles in width and 3.3 miles in length (along the ocean side), the island contains 850 acres of highland and some 1,090 acres of salt marchlands interlaced by networks of tidal creeks.

The topography of the island is characterized by a sandy beach zone and a series of dune ridges dominated by typical maritime forest vegetation, such as live oak, water oak, southern hickory, ash, cabbage palmetto, American holly, Yaupon and magnolia. Between the dune ridges are found low areas containing marshlands, ponds and swamps. The remains of ditches, banks, furrows and roads throughout the island attest to its former cultivation.

The exact history of Capers Island has been lost through the passage of time, but it is known that the island was contained in one of the grants given by the King of England to the early colonists. The Capers family, for whom the island was named, was one of the earliest owners, and members of this family contributed significantly to the history of South Carolina and the nation.

The maritime forest, swamps, ponds and vast pristine marshlands of Capers Island provide valuable habitat for a great variety of wildlife and serve as an invaluable and irreplaceable natural resource for the enjoyment of present and future generations of South Carolina.

B. State Wildlife Preserves

The extensive system of wildlife preserves and game management areas owned or leased by the South Carolina Wildlife and Marine Resources Department are irreplaceable resources, as both protected wildlife habitats and recreational hunting and fishing areas. Because of their value to residents and visitors of the South Carolina coastal area, they have been identified as Geographic Areas of Particular Concern.

Management Authority

The South Carolina Wildlife and Marine Resources Department (WMRD) is empowered to acquire land areas, and enter into agreements with landowners and with the Federal government for purposes of managing wildlife species, and establishing specific sancturaries and game management areas. (§50-3-100, 1976 Code of Laws of South Carolina) The areas owned and managed by WMRD are vital resources of the coastal zone, for conservation of the State's wildlife and also for recreational hunting and fishing opportunities. As part of this management responsibility, a full management plan is prepared for each preserve, identifying short and long-term uses and guidelines for protection and use of the area.

Where critical areas, as defined in the South Carolina Coastal Management Act (Act 123 of 1977), occur within these preserves, additional control is afforded, since Coastal Council permits would be required for any alterations within the critical areas of these preserves.

Inventory

A complete listing of the wildlife and game management areas under ownership and/or management authority of the WMRD in the eight coastal counties was obtained through consultation with WMRD and by reference to S.C. Public Land Ownership Inventory (S.C. Land Resources Conservation Commission, 1977). These areas have been mapped into the Office of Coastal Planning's overlay mapping system, which is being converted to a computer mapping format.

Designated Sites

The following areas, because of their significance as natural habitats and their inclusion under ownership and/or management authority of WMRD, are designated as GAPCs. As new acquisitions are made into the State system of wildlife preserves and game management areas, these will be designated as GAPCs in the South Carolina coastal zone.

Berkeley County

a) Moultrie Game Management Area

This area of approximately 9,700 acres, much of it in Lake Moultrie, is leased by the State for deer, small game and waterfowl hunting.

b) Francis Marion Game Management Area

The entire Francis Marion National Forest is designated as a game management area. It consists of almost 250,000 acres, and is divided into five game management units, with deer and small game hunting scheduled for each. In addition, another 2,900 acres of Santee-Cooper Public Service Authority wildlife habitat land is included in the Francis Marion Area.

c) Hatchery Game Management Area

This game management area of approximately 2,450 acres is managed for waterfowl.

Charleston County

a) Santee Coastal Reserve

Over 17,000 acres of the Santee Coastal Reserve are located on the

northern edge of Charleston County, adjacent to the Santee River (additional acreage is in Georgetown County). The reserve consists of beaches, maritime forest, managed waterfowl impoundments, upland forest and cypress swamp. It includes a major wading bird rookery and osprey nesting area, several carolina bays, and extensive salt marsh areas. The Santee Coastal Reserve is managed by WMRD as a game management area.

Colleton County

a) Bear Island Game Management Area

There are 7,500 acres in this game management area. Managed for waterfowl nesting and feeding by the WMRD, the predominately marsh area consists mainly of old ricefields.

Georgetown County

a) Cedar Island

Part of the Santee Coastal Reserve, (see Charleston County (a))

b) North Island and South Island Plantation

These two islands at the mouth of Winyah Bay were willed to the State by the former owner. They will be managed by WMRD primarily for research activities. (Final transfer of title is anticipated in the immediate future.) They form a vast complex of beaches, maritime forest, waterfowl impoundments and managed woodland. South Island and the adjacent area (Santee Coastal Reserve), extending south to Cape Romain National Wildlife Refuge, harbor some 80% of the sea turtle nesting activity on the South Carolina cost.

c) Pee Dee Game Management Area

Owned and managed by WMRD for waterfowl and upland game species, this area northeast of Georgetown, contains just under 800 acres. Although

relatively small, it is significant principally for its waterfowl impoundments.

d) Santee Delta Game Management Area

Located in marshes between North and South Santee Rivers, this area of roughly 3,300 acres, is a complex of old ricefields. Managed for waterfowl, it is especially significant due to proximity to North Island, South Island Plantation, and the Santee Coastal Reserve. Taken together, they form a major wildlife refuge area.

Horry County

a) Buist Game Management Area

This game management area contains 15,500 acres, and is considered to offer the best deer hunting in that area of the State.

Jasper County

a) Turtle Island

This barrier island has extensive salt marsh areas and almost 100 acres of upland forest. It is virtually undisturbed as a result of its remote location and difficulty of access. The 1,700 acres are owned and administered by the WMRD.

C. State Parks

State park facilities in the coastal zone are valuable resources for the recreational, scenic and educational enrichment of residents and visitors alike. Because of this significance, major existing parks have been recognized as Geographic Areas of Particular Concern.

Management Authority

The South Carolina Department of Parks, Recreation and Tourism (PRT) is mandated to control and maintain the State parks system, and can accept or purchase lands for this purpose, with approval of the State Budget and Control Board (§51-1-60, 1976 S. C. Code of Laws). PRT must prepare a master plan for each major park facility, identifying plans for development of facilities, and the preservation and use guidelines for the park.

On a more long-range basis, PRT is developing an update to the South Carolina State Comprehensive Outdoor Recreation Plan (SCORP). The function of SCORP is to provide a guide for statewide recreation planning and development, and to maintain elgibility for Land and Water Conservation funds from the Federal Bureau of Outdoor Recreation.

Where critical areas form part or all of State park facilities, the Coastal Council will also have regulatory control. Any alterations within critical areas must obtain a Coastal Council permit. This authority will aid in assuring that the use and development of these cherished recreational resources remain consistent with policies and guidelines of the State's coastal zone program.

Inventory

The orgainzation of studies for SCORP centers on six volumes, covering public and private outdoor and indoor recreation systems. Volume 1 of this planning process was a complete inventory of the State's physical

characteristics, natural resources, and existing recreation facilities. This information has been made available to the Office of Coastal Planning. Consultation with staff of PRT has identified the existing major parks in the eight county coastal zone (roadside parks, small neighborhood parks, and the like, have been exempted), and these have been mapped on 7½" U.S.G.S. quadrangle overlays.

Designated Sites

The following existing State parks are designated GAPCs, and are shown in the map appendix. As PRT and the Coastal Council identify other recreational resources which warrant particular State concern in the coastal program, these will be reviewed for designation. Proposed park sites may later be included as priority or potential GAPCs. When new sites are added to the State parks system, these will be designated automatically.

Beaufort County

a) Hunting Island State Park

This 5,000 acre State park facility with just over 4 miles of beach and 200 campsites is the State's second most popular park. Besides 400 day-use parking spaces, the park includes rental cabins, carpet golf, a lighthouse dating from 1873, comfort stations, a wildlife area with nature trails and a boat launching ramp.

Charleston County

a) Charlestown Landing

The first permanent settlement in South Carolina, this site of approximately 500 acres is on the National Register of Historic Places. The park

commemorates the landing of three English ships and establishment of a settlement on the Ashley River in 1670. This family park has both historical and nature themes. Features include a replica of a 17th century trading cache, replica settlers' village and crop garden, and a pavillion with artifacts from the first one hundred years of settlement. The park also offers an animal forest of endogenous South Carolina species, roughly 80 acres of gardens with walking and biking paths, and picnic areas.

Colleton County

a) Givhan's Ferry State Park

This park facility borders on the Edisto River, and has 32 acres in Colleton County. It extends across the river into Dorchester County.

b) Edisto Beach State Park

Covering 1,225 acres of Edisto Island, the park has one and one-half miles of sandy beachfront; saltwater marshes; environmental observation stations; hiking trails; and swimming, picnic and playground facilities.

Dorchester County

a) Givhan's Ferry State Park

With just over 122 acres in Dorchester County, this park is on the Edisto River.

Georgetown County

a) Huntington Beach State Park

Located along US 17, three miles south of Murrell's Inlet, this 2,500 acre tract is owned by the Trustees of Brookgreen Gardens and leased to the State for park development. It has 3 miles of sandy beach, and is chacterized by scenic and wildlife features, including sand dunes, marshes,

protected inlets, freshwater ponds and extensive forest area. It offers camping, picnicing; and nature observation, with boardwalks, interpretive kiosks, and an alligator habitat and feeding station. A deteriorating structure called Atalaya, built by the Huntington family, is open to visitors for a walk through its rambling rooms and gardens.

Horry County

a) Myrtle Beach State Park

While only 312 acres in size, this park is the State's most popular facility. It offers 4 main use areas; 1) campground; 2) day-use area with picnic shelter, restrooms, and changing rooms, and swimming pool along the oceanfront; 3) interpretive area with visitors' center and historic and environmental trails; and 4) recreational facilities, including a 750 foot fishing pier, rental concessions and minature golf. The park has one mile of sandy swimming beach.

D. National Wildlife Refuge System and National Forest Service

1. National Wildlife Refuges

The National Wildlife Refuge System grew out of an increasing concern for the welfare of our Nation's wildlife. The lands within the System serve as a protected area for fish and wildlife and their breeding grounds. The refuges are recognized for their aesthetic, geological, archeological, historical, and scientific value, as well. Because of the varied and unique significance, the lands and waters in the Refuge System are designated by the Coastal Council as Geographic Areas of Particular Concern. Any new refuges designated in the future will be considered by the Council as GAPC's.

Management Authority

The first unit of the present National Wildlife Refuge System (NWRS) was established by an Executive Order in 1903 by President Theodore Roosevelt as the Pelican Island Refuge in Florida. In 1918 the Migratory Bird Treaty Act (16 U.S.C. §703-711) was passed, laying the legislative foundation for later actions establishing most of the migratory bird refuges.

The evolution of NWRS has been sporadic and shaped by many pieces of legislation and executive orders. Many of today's refuges were established by Executive Orders from 1930 to 1940. During the 1960's and 1970's the programs of NWRS have expanded extensively to now include 400 refuges. The Department of Interior manages the NWRS which is presently operating with the guidance of a Final Environmental Impact Statement which outlines their operation through 1985.

The coastal zone management program being developed by the South Carolina Coastal Council is mandated to include a process for Federal consistency, this is, the coordination and review of proposed Federal projects, issue of licenses, or funding support to insure consistency with the State's coastal zone policies. Each Federal agency must certify that its activities are not inconsistent with the State efforts to control those actions that have

direct and significant impact on coastal resources. One application of this process will be regarding the management of National Wildlife Refuges, particularly where all or portions of a refuge are located in a critical area where the Council would normally have direct permit authority for any activities or alterations.

Criteria for Designation

The following are the broad objectives of the Refuge System as found in the Environmental Impact Statement of the NWRS:

1. To preserve, restore and enhance in their natural ecosystems all species of animals and plants that are endangered or threatened with becoming endangered on lands of the NWRS.
2. To perpetuate the migratory bird resource for the benefit of people.
3. To preserve the natural diversity and abundance of mammals and nonmigratory birds on refuge lands.
4. To provide understanding and appreciation of fish and wildlife ecology and man's role in his environment, and to provide visitors at Service installations with high quality, safe, wholesome and enjoyable recreational experiences oriented toward wildlife.

Designated Sites

Cape Romain Migratory Bird Refuge

Cape Romain Migratory Bird Refuge was established in 1932 by a Presidential proclamation. Lying east of U.S. Highway 17 and south of the Santee River along the S.C. coast is this 55,066 acre refuge. The 15 mile segment of Atlantic coastline embraces salt water bays and marshes; intricate coastal waterways; long sandy beaches; and sea island such as Bulls, Raccoon, and Cape Islands. The refuge is open to the public for fishing; limited hunting; and watching, photographing, and studying wildlife, plantlife, and scenery.

Savannah National Wildlife Refuge

Savannah National Wildlife Refuge lies along the S.C. and Georgia border near the Atlantic coast and covers 13,136 acres. Waterfowl hunting

is available on the Georgia side, and fishing impoundments are provided in the 5,071 acres in S.C. Nature drives and walks are also available in the S.C. portion of the refuge.

Pinckney Island

Pinckney Island has recently been willed to the government to be used as a wildlife refuge but has not been officially named or opened as yet. The 4,052 acre island in Beaufort County will not be open until approximately 1980 or 1981 when the Federal government is expected to appropriate the funds for maintenance of the refuge.

2. National Forests

The Forest Service within the U.S. Department of Agriculture is dedicated to the principle of multiple use and management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. In recognition of the valuable resource of our National Forests, any forest so designated in S.C. is identified as a GAPC, and any future national forests will be considered for designation by the Coastal Council as GAPC's.

Management Authority

The Creative Act of March 3, 1891 (26 Stat.1103; 16 U.S.C. §471) gave to the President of the United States the authority to establish national forests by proclamation. The Department of Agriculture has always been responsible for the management of national forests. The National Forest Management Act of 1976 (P.L. 94-588) is the legislation under which each forest is presently operating. Every ten years there is an Environmental Impact Statement developed for each forest to assure operation which is consistent with the objectives of the Forest Service.

Where all or portions of a National Forest occur in the critical areas of the coastal zone, the South Carolina Coastal Council will also have a measure of management authority subject to Federal override in the event of questions of national interest or security, or navigational servitude. The provisions of the Federal consistency procedures developed in the management program will also be applicable to national forests.

Designated Sites

Francis Marion National Forest

This forest, which is located north of the City of Charleston between U.S. Highways 17 and 52 was established on July 10, 1936, by a Presidential Proclamation. The forest is rich in historical landmarks, plantations, and early churches which date back as early as a time when American Indians traveled the area. It is also rich in natural amenities. The forest is on a major flyway for migratory birds and has numerous natural creeks and rivers. The proposed management program as outlined in the Environmental Impact Statement dated August 23, 1977, provides for a sustained yield of timber and other products under the even-aged management system.

E. Scenic Rivers

South Carolina is fortunate to have many river segments that still remain in a natural or near natural state. As such, these areas represent an important historical, cultural, and recreational resource. Rivers were the primary transportation system for early America, both for Indians and the later explorers and settlers. Consequently, archeological sites are found at waterfront locations.

Bounded by large expanses of swamp, several Lowcountry river segments have witnessed little development pressure and remain in primarily wilderness conditions. Other segments are good representatives of natural areas with wide species diversity.

As recreational resources, the rivers serve as a "one-way water trail", offering boaters a unique sense of adventure. The silent movement of a canoe affords the opportunity to observe numerous wildlife species which it would not be possible to approach in other modes of transportation. The recreational potential of South Carolina's coastal rivers is both impressive and unique.

In recognition of this tremendous resource, the Coastal Council recognizes river segments which have been designated as Scenic Rivers as Geographis Areas of Particular Concern.

Management Authority

In an effort to preserve and protect South Carolina's rivers, the 1974 South Carolina General Assembly passed the Scenic Rivers Act (§51-5-10 eq seq. of the 1976 S. C. Code of Laws), which authorized the Water Resources Commission to designate scenic rivers.

Proposals for designation may be made by State agencies, local governments, or citizens groups. To qualify, a river must possess unique and outstanding scenic, recreational, geologic, fish and wildlife, historic or cultural values, in addition to relatively unpolluted waters.

The Water Resources Commission is mandated to develop a comprehensive water and related use plan for designated rivers, with emphasis on protecting the significant resources of these scenic rivers. The Wildlife and Marine Resources Department assists the Commission in formulating and enforcing these plans and regulations.

The management plans for each river segment must address the following:

Class I -- Maintenance of the wilderness character, with camping and river access allowed only at designated public access areas. Prohibiting new roads or buildings, mining and commercial timber harvesting.

Class II -- Preservation of the scenic values, with riparian landowners allowed customary agricultural activities, silviculture, and construction of compatible farm-use buildings. Mining and construction of roads paralleling the river are prohibited.

Class III -- Preservation of the scenic values, with landowners allowed agricultural, residential, recreation,, commerical, and light industrial activities. Mining and construction of new roads paralleling the river are prohibited.

Where all or portions of a designated scenic river is located in the critical areas of the coastal zone, the South Carolina Coastal Council will also have management authority. A permit would be required for any activities or alterations in such a river segment.

The Federal Wild and Scenic Rivers Act (P.L. 90-542) was enacted in 1968. The three basic river classifications in that Act are: 1) wild; 2) scenic; and 3) recreational. These classifications generally parallel the three categories in the South Carolina Act, however, rules for management in the Federal law are more rigorous.

There are presently no national wild and scenic rivers in the coastal zone of South Carolina. However, the Federal Bureau of Outdoor Recreation has inventoried numerous rivers in the coastal zone of South Carolina.

Criteria for Designation

The following criteria are those established for a river segment to qualify under the South Carolina Scenic Rivers program:

Class I -- Natural river

i) it must be free-flowing (no impoundments or diversions)
ii) the shorelines and scenic vistas must be essentially unchanged by man
iii) there must be no extensive paralleling roads closer than one mile
iv) in river gorges, there must be no extensive paralleling roads within one-quarter of the rim
v) there must be only a limited number road crossings and spur roads

Class II -- Pastoral river

May be partially or predominatly used for agriculture, silviculture and other dispersed human activities which do not substantially interfere with public use and enjoyment of rivers and the shores.

Class III -- Partially developed

The adjacent areas may be affected by works of man, but still possess actual or potential scenic, recreational or historic values.

Inventory

The Water Resources Commission has inventories several rivers in the eight coastal counties. They are: the Little Pee Dee, Black, Edisto, Combahee, Salkehatchie, and Ashley Rivers. These same rivers have been inventories by the Federal Bureau of Outdoor Recreation and are being considered as potential designations under the Federal program. Information collected by the Commission includes flow characteristics, water quality, vegetation and wildlife data, and recreational amenities.

Designated Sites

To date, there are no Scenic River segments in the coastal zone. When designations are made and easements or titles donated, these rivers automatically will be considered to qualify as GAPCs.

NOTE: The Ashley River, in Dorchester and Charleston Counties, has been named as eligible for designation. It appears to meet the Class II qualifications, but various segments may be given different classifications. If and when donations are made, individual management plans will be formulated for each donation. Since this river segment is particulary rich in historical resources, the South Carolina Department of Archives and History is assisting the Commission in assessing the intentions of adjacent landowners regarding donation.

F. Marine and Estuarine Sanctuaries

The coastal waters and wetlands of the State are valuable natural resources which have yet to be spoiled by development or real estate speculation. The preservation and protection of these resources is paramount in determining the growth of the seafood, as well as the tourist industries. There are many citizen groups active in pursuing these goals; and State governmental agencies, in particular, the South Carolina Wildlife & Marine Resources Department, have instituted research programs to document and inventory the marine environment. On this basis, the Coastal Council feels that any area designated by the State of South Carolina, in conjunction with the U.S. Department of Commerce, as a marine or estuarine sanctuary should be a Geographic Area of Particular Concern (GAPC).

1. Marine Sanctuaries

Management Authority

Title III of the Marine Protection Research, and Sanctuaries Act of 1972 (P.L. 92-532,86 Stat. 1061), provides the Secretary of Commerce, with approval from the President, the power to designate those areas of ocean waters as far seaward as the outer edge of the Continental shelf, and all other coastal waters where the tide ebbs and flows, as marine sanctuaries. These sanctuaries are intended to preserve or restore such areas for their conservation, recreational, ecological or aesthetic values. The Secretary of Commerce, prior to designating a marine sanctuary, must consult with the Secretaries of State, Defense, Interior, and Transportation and give due consideration to the views of the responsible officials of the affected state. The designation becomes effective sixty days after it is published, unless the governor of the state involved certifies to the Secretary of Commerce the designation, or specified portion, which is unacceptable to his/her state. In this case the designated sanctuary will not include the certified unacceptable areas or become final until such time as the governor withdraws his certification unacceptability.

On March 13, 1974, the Secretary of Commerce authorized the Administrator of the National Oceanic and Atmospheric Administration to exercise the authority granted under Title III. With this authority, NOAA has to develop proposed objectives, guidelines, criteria and procedures for designation of marine sanctuaries.

Potential marine sanctuary sites are screened by the Federal Office of Coastal Zone Management (OCZM) and the National Marine Fisheries Service, where development seems imminent. Development includes potential offshore as well as onshore sites, and is considered "imminent" if it is likely to occur within 18 months, or if actions taken within 18 months will establish the likelihood of development. OCZM offers the opportunity for state coastal zone management offices, commercial fishing organizations, development interests, environmental groups and the public-at-large to submit recommendations for marine sanctuary sites.

If any marine sanctuary areas are designated by the Secretary of Commerce, the S.C. Coastal Council is mandated under the State coastal zone management law (section 5(j) of Act #123 of 1977) "to manage estuarine and marine sanctuaries and regulate all activities therein, including the regulation of the use of coastal waters located within the boundary of such sanctuary". The primary management authority would rest with the S.C. Coastal Council. Its regulatory authority would also apply since any marine sanctuary would be located within the State's critical areas.

To date, the general management principles for marine sanctuaries mainly address regulation of development to be harmonious with the overlying principles of preservation and protection of the sanctuary. The classification of these areas will not affect multiple use which may be permitted to the extent the uses are compatible with the primary purpose(s) for which each sanctuary is established. The establishment of marine sanctuaries may be to complement public or private, local, State or Federal government lands, which have been set aside for similar purposes. The overall management of the sanctuary must include an initial and comprehensive environmental assessment (this should complement the original EIS which must be submitted upon nomination). A continued monitoring program and guidelines to enforce the policies also must be formulated.

Criteria for Designation

The program objectives for marine sanctuaries emphasize the idea of preserving, restoring or enhancing these areas for their conservational, recreational, ecological, research or aesthetic values. Examples of coastal waters which might meet designation status include:

(a) Areas necessary to protect valueable, unique or endangered marine life, geological features, and oceanographic features;

(b) Areas to complement and enhance public areas such as parks, national or state monuments and other preserved areas;

(c) Areas important to the survival and preservation of the nation's fisheries and other ocean resources;

(d) Areas to advance and promote research which will lead to a more thorough understanding of the marine ecosystem and the impact of man's activities.

2. Estuarine Sanctuaries

Management Authority

Section 315 of the Federal Coastal Zone Management Act of 1972 (16 U.S.C. §1451 et seq.) addresses the subject of estuarine sanctuaries and states that the Secretary may "make grants to any coastal state for the purposes of acquiring, developing, or operating estuarine sanctuaries...". Thus, the initiative for participating in the estuarine sanctuary program lies with the state, whereas nominations for marine sanctuaries can come from local, state or federal agencies or any interested persons.

The term "estuarine sanctuary", as defined in the Act, means "a research area which may include any part or all of an estuary and island, transitional area, and upland in, adjoining, or adjacent to such estuary, and which constitutes to the extent feasible a natural unit...". The purpose of establishing an estuarine sanctuary is to set aside an area which would serve as a natural field laboratory where studies of "natural and human processes occurring within the estuaries of the coastal zone" can be made by scientists and students. (Federal Register, Vol. 39, No. 108, Part IV, June 4, 1974)

These sanctuaries would be areas which are relatively undisturbed by man at the time of acquisition and, therefore, could be used to make baseline ecological measurements. The designation of these areas would provide them with long term protection, and multiple use of the sanctuaries would be allowed to the extent that such use or uses are compatible with the primary uses of research and education.

The estuarine sanctuary program is intended to provide research data which would assist in coastal zone management decision-making. The State's coastal zone management program must be designed to protect the

estuarine sanctuary, and land and water use regulations and planning considerations must be applied to adjacent lands. Management of estuarine sanctuary, and land and water use regulations and planning considerations must be applied to adjacent lands. Management of estuarine sanctuaries is the responsibility of the applicant state, and the sanctuaries are intended to be incorporated into the state coastal zone management program. However, designation does not have to await the development and approval of a state's management program where operation of the sanctuary would aid in program development.

In South Carolina, the Coastal Council and the management program which is its responsibility, would have authority for estuarine sanctuary planning and implementation of the necessary management policies and techniques. At this time, there are no designated estuarine sanctuaries in the S.C. coastal zone.

Criteria for Designation

State applications for grants to establish estuarine sanctuaries are carefully reviewed and judged on the following criteria:

1. Benefit to the coastal zone management program;
2. The ecological characteristics of the ecosystem, including its biological productivity, diversity and representativeness;
3. Size and choice of boundaries (should approximate a natural ecological unit);
4. Cost (Federal share of the cost for each sanctuary is limited to $2,000,000.);
5. Enhancement of non-competitive uses;
6. Proximity and access to existing research facilities;
7. Availability of suitable alternative sites already protected which might be capable of providing the same use of benefit;
8. Conflict with existing or potential competing uses;
9. Compatibility with existing or proposed land and water use in contiguous areas.

Inventory (1 and 2)

Inventories and studies have been accomplished, or are in the process of being completed, for most of the natural resources present in the coastal zone. Presently, "An Environmental Base Line Study of South Carolina Estuaries" is underway. Begun in February, 1973 by the S.C. Wildlife & Marine Resources Department (WMRD), this research is to determine basic biological, chemical, and physical characteristics, and their interactions over a several year period. This study is funded by the Coastal Plains Regional Commission and WMRD, funded, in part, by the U.S. Army Corps of Engineers. An inventory of S.C. coastal marshes has recently been completed by WMRD personnel, and research to determine major wetland plant species productivity is nearing completion. Both of these studies were funded, in part, by the S.C. Coastal Council, Office of Coastal Planning.

Additionally, WMRD is funding studies dealing with recreational fishing, over-wintering shrimp management, shellfish resources and anadromous and ground fish stock assessments. The College of Charleston, under a grant from the U.S. Environmental Protection Agency, is beginning a study to document food webs, populations and productivity in a southeast coastal marsh. The University of South Carolina has recently finished and published a report throught the Environmental Protection Agency entitled "The Dynamics of an Estuary as a Natural Ecosystem". The National Marine Fisheries Service has published a recent investigation by staff from WMRD and the College of Charleston entitled: "The Macrofauna of the Surf Zone off Folly Beach, South Carolina." The S.C. Water Resources Commission has funded many past studies dealing with environmental assessments of the Port Royal Sound, Wando River, Santee-Cooper Navigation Project and Ashepoo-Combahee and Edisto Rivers drainages. Finally, the U.S. Fish & Wildlife Service is funding a 21 month study to characterize the sea islands of the S.C. and Georgia coasts through WMRD.

G. Shellfish Areas

1. Commercial Leases

Commercial harvesting of oysters and clams produced approximately one million dollars of direct revenue for South Carolina in 1976. The annual catch of oysters was over 1,800,000 pounds of meat, and the clam harvest for the year totalled 172,000 pounds of clam meat. These constitute extremely important economic resources of the coastal zone, and as such, the areas suitable for shellfish production in the coastal waters of the State are very significant. The Coastal Council recognizes those bottom areas leased for commercial shellfishing as Geographic Areas of Particular Concern.

Management Authority

Sections 50-17-710 through 820 of the 1976 S. C. Code of Laws, covering the Coastal Fisheries Laws for the State, authorizes the Wildlife and Marine Resources Department to lease portions of the water bottoms owned or controlled by the State, for the purposes of commercial shellfishing. Any State resident licensed to do business and who makes his/her livelihood primarily or largely through the commercial shell-fishing industry, may lease shell-fish bottoms, in areas totalling not more than 1,000 acres to any one individual. (Leases for other than commercial uses may be made to State residents for areas totalling as many as two acres. The adjacent upland landowner has preference for a two acre lease in adjoining tidewaters, if this application is made before other leases are granted.). These lease agreements are valid for a five year period. Once an application has been made, and the Division of Marine Resources has determined the area capable of producing shellfish, the boundaries are surveyed and established within the terms of the lease. No other leases for gethering shellfish can be granted within the perimeter boundaries.

Each leasee is required to plant 65 bushels of shell or seed oysters for each acre, in an effort to prevent over-harvesting and depletion of this valuable resource. "Each lease or portion of a lease from which oysters are harvested must be replanted during the following planting season." (Section 50-17-790, 1976 S. C. Code of Laws).

State permits for activities affecting State-owned bottoms are issued by the S.C. Budget and Control Board. Within 1,000 feet of productive shellfish lease areas, leasees are given an opportunity to comment on permit applications. And through memoranda of agreement between the Budget and Control Board and the Department of Health and Environmental Control (DHEC), all activities such as discharges or dredging and fill within 1,000 feet of lease areas are carefully controlled. (DHEC determines water quality criteria and health standards for shellfishing, and the 1,000 feet criteria is a generally accepted standard).

The South Carolina Coastal Council has authority over coastal waters and tidelands to mean high water, and above mean high water where wetlands are contiguous to coastal waters and integrally a part of estuarine systems. A Council permit is required for all activities or alterations in these "critical areas", as defined in Section 3 of Act 123 of 1977. In assessing permit applications, the Council must consider "The extent to which the applicant's completed project would affect the production of fish, shrimp, oysters, crabs or clams or any marine life or wildlife, or other natural resources in a particular area." (Section 15 (3)) The Interim Rules and Regulations for the Permit Process (Chapter 28, r. 32-1 through 32-11, State Register), state specifically that consideration will be given to the rights of the leasee when permits are being evaluated for construction of docks or piers over shellfish lease areas.

2. Recreational Shellfish Grounds

Recreational shellfishing is a popular outdoor activity along the coast of South Carolina. Gathering oysters and clams is not only a unique form of recreation, but a source of fresh seafood for families of the area. As a valuable coastal resource and habitat of a significant living marine resource, recreational shellfish grounds are recognized as Geographic Areas of Particular Concern.

Public oyster grounds are areas along the South Carolina coast where State residents may gather shellfish for their personal use, and these areas must be designated with metal signposts. State shellfish grounds, also marked with signs, are open to all recreational shellfishermen, and by permit to commercial shellfishermen (who may obtain their shells or seed oysters from these State-owned beds).

Management Authority

The Division of Marine Resources is mandated to keep open shellfishing areas for the personal use of S.C. residents, with approval by the County legislative delegations. These public shellfish beds are not to exceed 50 acres in any one county, and their maintenance and adequate marking is the responsibility of the Division. (Section 50-17-1260, 1976 S. C. Code of Laws).

The regulations for shellfishing, Sections 50-17-10 through 130 of 1976 S. C. Code of Laws, apply to recreational shellfishing, and empowers the WMRD to establish the season and the limits for gathering. The Marine Resources Division, Office of Conservation & Management of the S. C. Wildlife & Marine Resources Dept. (WMRD) has jurisdiction over these areas, and conducts numerous management activities, including maintenance of markers; planting of shell and seed oysters, and thinning of over-crowded beds; and periodic surveying of additional productive areas.

The same management authorities of the Budget and Control Board, Department of Health and Environmental Control, and the South Carolina Coastal Council, apply to public and State shellfish grounds as are applicable in commercial lease areas. A detailed discussion is offered in Part 1 of G. Shellfish Areas.

Inventory

Shellfish areas have been included on the Office of Coastal Planning's 7½" U.S.G.S. quadrangle overlay map system, and the information can be computerized readily. This data was made available partly through cooperation with the Division of Marine Resources. In addition, commercial leases must be recorded with the Clerk of the Court in the county of jurisdiction, and this was another source of detailed inventory information. As new areas are leased or assigned for public use, or as shellfish grounds are removed from production or closed to shellfishing, these changes can be made in the mapped data.

Designated Sites

There are 64 commercial shellfish leases, totalling approximately 5,500 acres in the S.C. coastal zone. There are seven State shellfish grounds and another fifteen public grounds along the coast. The map appendix depicts these shellfish areas, and the commercial leases are listed by county in Table I as follows.

Table I
Commercial Shellfish Leases

Beaufort County

Lease #	Leasee	Acreage
1	T. M. Bailey, Jr.	316
7	Hudson Seafood	63.4
13	Hilton Head Co.	2
17	Ocean, Lake & River Fish Co.	884
18	Toomer, Jr.	459
23	Bluffton Oyster Corp.	364
47	Skull Crk Osyter Corp.	12
31	J. S. Clark	2
52	R. Nutt	2
113	D. H. Pinckney	46.9
132	F. G. Toomer	93.8
205	Mrs. O.T. McIntosh	1.3
207	F. G. Toomer	55.5
41	Gault Fish Co.	5.4
46	Coastal Sfd. Co.	98
42	Gault Fish Co.	124
12	Broad Crk. Sfd, Inc.	127
145	-	1.5

Charleston County

Lease #	Leasee	Acreage
4	R. E. Ashely, Sr. & Jr.	108
8	Yonges Isld Canning Co.	380
9	H. Hutchinson	22
10	Yonges Isld C. Co.	335
11	S. Rhodes	1.8
14-A	A. M. Lofton	30
14-B	W. W. Dausey	10
15	C. A. Magwood, Jr.	31
26	A. Solomon	20
20	Carolina Std. Co.	146
21	R. E. Ashely	114
26	T. Duke, III	17.8
28	S. C. Crab Co.	8
30	B. Wilson	11
31	Sullivan E. Merina	285
34	T. P. Duke, Jr.	253
35	Flowers Oyster Co.	740
37	Bulls Bay Std. Co.	11
43	Flowers Oyster Co.	155
44	J. P. Jackson	7
45	Bulls Bay Seafood	297
55	Caper-Dewees Trust	4
61	W. B. Liles	0.6
62	S. Rhodes	41.62
204	Backman Std. Co.	10.33
25	Carolina Std. Co.	174
25-A	Carolina Std. Co.	20
57	R. Dion	2
58	N. A. Terry	2
59	V. G. Burns	2
19	W. P. Baldwin III	10
27	W & P Shepard	14.5

Horry County

Lease #	Leasee	Acreage
2	C. Morse	62
5	Pora H. Nance	184
6	R. Bellamy	72
36	P. Nance	32
39	R. Eason	15.50
96	A. W. Short	1
97	B. L. Marlow	1
98	C. R. Atteberry	1
147	J. L. Tapp	0.4
174	J. Johnson	0.60
178	H. H. Hucks	1.23
22	S. C. Crab Co.	12.8

H. Groundwater Resources

Groundwater is an abundant resource in the coastal zone of South Carolina, however, there are potential problems of quality and quantity. Proper management can ensure the continuing productivity of groundwater resources, but data collection and extensive study is necessary, because this is a complex resource. Groundwater can flow vertically, as well as horizontally, and vertical wells can pass through several aquifers. The water in each aquifer is likely to vary in quantity and quality. In such a case, it is difficult to determine which aquifer(s) might be responsible for the poor water quality or if the capacity of one of the aquifers might be exceeded, at the expected pumpage, to the detriment of other wells in the area.

Because groundwater serves as the vital water supply source for many coastal communities, and the resource may suffer from over-use or waste disposal problems (ie, septic tanks, and seepage from landfills), it is an extremely significant resource of the coastal zone. Those regions which have been identified as potential problem areas, requiring special regulation and coordination of groundwater use, are recognized as Geographic Areas of Particular Concern.

Management Authority

The Groundwater Use Act of 1969 (Section 70-31, 49-5-10 et seq. 1976 S.C. Code of Laws authorizes the Water Resources Commission to designate "capacity use areas" (CUA). The designation process is as follows: A county, municipality or sub-division of State government may request a review by the Commission if it is believed that a situation exists, or is emerging, where the use of groundwater may require coordination or regulation to protect the interests and rights of residents, property owners or the general public. The executive director will then conduct an investigation and submit

the findings and recommendations to the Commission. Recommendations will include identification of area groundwater problems, appropriate conservation measures, and boundaries of a CUA.

Based on the report, the Commission may adopt an order declaring a CUA, give public notice of the declaration, and hold at least one public meeting. After the public hearing, the Commission will take final action on the CUA designation and publish that action as part of its official regulations.

Once a CUA has been designated, the Commission instructs the executive director to prepare proposed regulations commensurate with the degree of control which is needed. The Commission must hold at least one public hearing on the proposed regulations and publish the final action as part of the official rules. These regulations may be modified or revoked, subject to a public hearing.

These regulations may include the following provisions:

1) provisions requiring water users to submit reports concerning quantity and source of waters withdrawn and nature of use;

2) provisions concerning timing of withdrawals, to abate unreasonable adverse effects and salt water encroachment; and

3) provisions concerning well depth, spacing controls, prescribed pumping levels, and maximum pumping rates.

When adopting or modifying the regulations and when reviewing permit applications, the Commission will consider the following:

1) number of persons using an aquifer and their respective withdrawals;

2) nature and size of the aquifer;

3) physical and chemical nature of any impairment of the aquifer;

4) probable severity and duration of such an impairment;

5) injury to public health, safety or welfare which may result if such impairment were not prevented or abated;

6) kinds of businesses or activities related to groundwater uses;

7) the importance and necessity of the uses claimed by permit applicants and the extent of any injury or detriment expected to be caused to other water users; and

8) diversion or reduction in flows in other water courses or aquifers.

The South Carolina Department of Health and Environmental Control (DHEC) also has legal authority to protect groundwater resources, with regard to surface pollution. This is accomplished through a statewide permitting system for septic tanks and waste disposal by earth burial. (Sections 44-1-140 (11), 44-55-20, 44-55-820, 1976 S. C. Code of Laws, regulations PC-SW-1 and 2; SCOCA-SWG-1, 2 and 3).

Criteria for Designation

The decision to designate a capacity use area is based on the report of the executive director of the Water Resources Commission, which describes the groundwater situation and trends. If the situation is poor or deteriorating such that the public interest is in jeopardy, a CUA is likely to declared. Once this happens, no person shall withdraw, obtain or utilize groundwater in excess of 100,000 gallons per day (gpd) without first obtaining a permit from the Water Resources Commission. All permits will be subject to the CUA regulations adopted by the Commission.

Inventory

Presently, the Water Resources Commission is undertaking three capacity use area investigations in the coastal zone.

CUA Investigation	Counties
Lowcountry Area	Colleton, Hampton, Jasper, Beaufort,
Trident Area	Charleston, Berkeley, Dorchester,
Grand Strand Area	Horry, Georgetown

The CUA studies are funded jointly by the Water Resources Commission, the U.S. Geological Survey, and the Coastal Plains Regional Commission. Reports for the Lowcountry and Grand Strand areas should be submitted to the Water Resources Commission by February, 1978. The Commission will then designate CUA's, if deemed necessary. Progress reports indicate groundwater problems do exist in these areas, thus CUA designation seems likely. The major problem in the Lowcountry area seems to be salt water intrusion; in the Grand Strand area, the main problem seems to be a high flouride content, stemming from a mineral which occurs in phosphate rock.

The study of the Trident area may not be completed until 1980. Drinking water is not as serious a concern here because the majority of the population is served by a large surface water source; however, shallow wells in rural areas are still a concern. Also, subsidence and landsurface collapse has occurred in areas underlain at shallow depths by the Santee Limestone aquifer. This area is a potential CUA.

Designated Sites:

Currently, there are no CUAs in the coastal zone. Studies being conducted by the Water Resources Commission may result in CUA designation in the near future. At such time as areas in the coastal zone become CUAs, they will be designated as GAPCs.

I. Rare or Endangered Species Habitats

As our population grows and mankind changes his environment, the continued existence of many plant and animal species becomes doubtful. Plant and animal life play many roles in mankind's existence. First, the diversity of natural species is an indicator of quality of life. The gratification may come from simply knowing an endangered species still exists. As the species' numbers diminish, man generally attaches a higher value to the remaining individuals, and many consider that it is the ethical responsibility of man to preserve other species on earth.

In a scientific sense, endangered species serve as an indicator of changes in the environment. This is important because ultimately man is dependent on the smallest organisms in the food chain. Radical changes in the viability of certain species may serve as an early warning of severe problems in the environment which threaten man.

Another reason for concern about endangered species is their potential direct benefits to man. For example, it is almost impossible to predict which plants or animals might become valuable for enhancement of human health care in the future.

Management Authority

In view of the National and State concern for endangered species, the South Carolina legislature passed the Non-game and Endangered Species Act in 1974 (Section 50-15-10 through 50-15-90, 1976 S. C. Code of Laws). The Act instructs the Wildlife and Marine Resources Commission to conduct investigations on non-game wildlife to determine population distribution, habitat needs, limiting factors, and management measures necessary for their continued existence. Based on such investigations, the Commission must issue appropriate regulations and develop management programs.

The regulations may establish proposed limitations relating to taking, possession, transportation, exportation, processing, sale, offering for sale, or shipment of particular wildlife species.

The Commission is charged with the responsibility to establish programs necessary for the management of non-game and endangered wildlife. The programs may include research, census taking, law enforcement, education, and acquisition of land or aquatic habitats. The Endangered Species Program is coordinated closely with the Heritage Trust Program which allows donations of land or easements.

The Commission must issue a list of State endangered species, including the United States List of Endangered Native Fish and Wildlife and the United States List of Endangered Foreign Fish and Wildlife. The list will be reviewed and updated at least every two years. It is unlawful to take, possess, transport, export, process, sell, offer for sale, ship, or receive any of the identified species. The South Carolina Wildlife and Marine Resources Department (WMRD) is directed to enforce the Act and may issue special permits for scientific, educational, or other purposes.

The State lists current endangered species and, where appropriate, may designate critical habitat areas. Critical habitat areas are specific land tracts that are necessary for the survival of an endangered species, according to the Federal Endangered Species Act. The State Heritage Trust Program and Endangered Species Program work in close coordination in assessing, acquiring and managing sites that constitute endangered species habitat. If a critical area is formally designated, the effects of any Federally funded program in that area must be more carefully considered. This review by the State clearinghouse is an indirect extension of State management authority effectuated under the Federal Endangered Species Act of 1973. The Secretary of Interior makes the final conflict resolution in such a situation.

The Federal Endangered Species Act of 1973 (PL 92-205, December, 1973, amended by PL 94-32, June, 1976, and PL 94-359, July, 1976) was passed with the purpose of providing

> a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species (Sec. 2, (b)).

The national policy is stated as follows:

> all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.

The Secretary of Interior is authorized to publish a listing of endangered and threatened species based on the best available scientific data, and, thereafter, to establish rules and regulations regarding the control of taking, sale, import, export, or other disruption of each species. Endangered species are those in danger of extinction throughout all or a significant portion of their range. Threatened species are defined as those likely to become endangered within the foreseeable future.

The bases of the South Carolina and national programs are parallel, and the protective mechanisms similar in that impact on endangered species is considered. In addition, as previously mentioned, the species identified on the Federal list are included on the S.C. Endangered Species list.

The South Carolina Coastal Council is mandated to consider impacts on wildlife species in granting of permits or activities in critical areas of the coastal zone. The Council will also review and comment on other permits, applications, environmental impact statements and Federally-funded projects (A-95 process) throughout the coastal zone. The Council comments will include an evaluation of the potential impacts on any designated critical habitats for rare or endangered species.

Criteria for Designation

South Carolina Endangered Species are any species of wildlife whose prospect for survival or recruitment within the State are in jeopardy or likely to become so in the foreseeable future. The causes may be; 1) destruction or modification of habitat; 2) species over-utilization for scientific, commerical, or sporting purposes; and 3) other natural or man-made factors. Species on the Federal endangered species lists for native or foreign fish and wildlife are included.

Inventory

An initial Endangered Species Symposium was held in Charleston in November, 1976, at which time Committees of knowledgeable experts and concerned individuals were established. A list of endangered species and "species of special concern" was developed with the aid of these commitees. These committees and the ongoing endangered species programs constitute the inventory required for periodic update of the State listing. The South Carolina Endangered Species list is attached as an appendix.

Designated Sites

Certain critical habitats areas have been identified but no formal designations have been made to date since most of these areas have already been a part of Federal or State preserves or refuges on the coast. At such time as specific habitat areas are designated and management guidelines or rules and regulations are promulgated, these will be adopted as GAPCs.

II. ACTIVITIES OR FACILITIES DEPENDENT ON COASTAL LOCATION

This category includes those activities which are dependent on their proximity to coastal waters, in terms of use or access; or on proximity to specific coastal resources, such as minerals or other raw materials. (For initial purposes, port facilities and actively operating mining sites have been identified.)

Industrial and commercial uses are crucial to the economy of the South Carolina coastal zone. In addition to preservation and protection of natural areas, the State's coastal zone management program must address the development of coastal resources. It must provide the citizens of the State with guidance on the best manner in which to capitalize on development opportunities while minimizing negative environmental effects, disruption of other coastal resources, or infringement on the rights of other coastal property owners.

In subsequent portions of the coastal zone management program, industrial activities and energy production facilities which may have direct and significant impact on coastal waters must be identified, and the Council must develop policies and guidelines for these activities in the coastal zone. As part of its Coastal Energy Impact Program, South Carolina may include an inventory and identification of potential and most suitable sites for location of energy-related facilities.

Uses and facilities dependent on coastal location, for water access or proximity to other coastal resources, are recognized as Geographic Areas of Particular Concern, due to their unique dependence on coastal location, and because of the economic importance and possible environmental impacts of these activities.

Criteria for Designation

To qualify as a GAPC under this category, an area or facility must meet one or more of the following criteria:

1) Significant quantities of water, such that it can only be obtained in a coastal location, are an absolutely necessary component of the process for a particular industrial or commercial activity;

2) Access to coastal waters, primarily for transportation purposes, not only enhances, but is fundamental to the given activity; or

3) Minerals, energy-related resources, or other coastal resources occuring in the coastal zone are the primary purpose of an activity, which is the major source of income for a given individual or company, and proximity to that resource is vital to success of the operation.

A. State Ports

Economists at the University of South Carolina estimate that the State Ports have an impact throughout the State of almost $600 million per year, representing direct and indirect employment of about 35,000 jobs. State Ports facilities are a major attraction of industrial investments, and also play an important role for South Carolina agriculture, which exports 29 percent of its total production value.

These valuable economic assets are, by definition, dependent on their coastal location for access to the transportation corridor provided by coastal waters. While their maintainance and further development are vital to the South Carolina economy, these activities can have significant environmental impacts, and also secondary development effects, particularly on other industrial and commercial uses and on public services, such as transportation.

Because of their importance as an economic resource and their dependence on a coastal location, the port facilities in South Carolina have been recognized as Geographic Areas of Particular Concern.

Management Authority

The South Carolina State Ports Authority (SPA) was created by Act 1535 of the 1942 South Carolina General Assembly (Section 54-3-10 et seq. 1976 S. C. Code of Laws). Under direction of a seven member board appointed by the governor, the SPA has the responsibility for development, construction, operation, and promotion of the State's ports. The SPA has certain jurisdiction over waters, shores, and tidal tributaries of the harbor at Charleston, Georgetown and Port Royal. It has the power to sue and be sued; the power of eminent domain; the power to acquire and dispose of property, and to take State property not otherwise in use; and the authority to issue revenue bonds.

Section II of the South Carolina Coastal Zone Management Act (Act 123 of the 1977 South Carolina General Assembly) has mandated another requirement for the SPA. It reads as follows:

> The South Carolina State Ports Authority shall prepare and submit to the Council a management plan for port and harbor facilities and navigation channels. Upon approval by the Council of such management plan it shall become part of the comprehensive coastal management program developed by the Council. The South Carolina State Ports Authority shall include in the management plan a designation of the geographical area appropriate for use by public and private port and harbor facilities and military and naval facilities and submit this to the Council for approval.

Joint development of this required port and harbor management plan, coupled with the Coastal Council's permit authority in the critical areas, including coastal waters and wetlands that might be part of a harbor area, will result in coordinated efforts between the SPA and the Coastal Council. And it will ensure that port modifications or expansion activities, and management of the ports system remain consistent with the goals of coastal zone planning.

Inventory

Information on existing SPA properties and facilities was obatined through consultation with SPA staff and the publications which were made available. When submitted, the required ports plan will provide extensive data on existing port facilities and on likely, potential sites for future ports development, which will be considered in identifying and designating additional port-related GAPCs.

Designated Sites

The South Carolina Ports Authority owns and manages the following facilities, which are designated as GAPCs:

Beaufort County

Port Royal - State Pier 21

This 500 foot pier facility is leased to the Port Royal Clay Company. It has one berth, used for bulk and break-bulk cargo, and also 60,000 square feet of covered warehouse and storage shed area. In 1973, this facility handled approximately 175,000 tons of cargo (most recent SPA figures).

Charleston County

Port of Charleston

In 1976, the Port of Charleston became the 11th-ranked port in the United States, in terms of dollar value of general cargo. It is the leading port in the South Atlantic area and his grown five fold in only 7 years. The thirteen SPA berths located in Charleston handle almost 3 million tons of cargo per year. There are 7 berths for conventional cargo; 3 are containership berths; one is a combination break-bulk/container berth; one is a grain berth and one is a specialized banana berth. The 400-ton shear leg crane at the Port of Charleston is the most powerful of its type in the Western hemisphere; the Port also offers a modern freezer facility of 600,000 cubic feet, for meets and dairy products, and a 1.5 million bushel capacity grain elevator.

Over half of the general cargo now moves in containers, with about 100,000 containers handled per year. About 1,200 ships per year call at the Port of Charleston; and this figure does not include tankers and dry bulk carriers handled by private terminals. Charleston is served by 98 different steamship services.

Georgetown County

State Piers 31 and 32

State Pier 31 is a public general cargo facility approximately 500 feet long, handling break-bulk and petroleum products. Pier 32 is

leased to the Georgetown Steel Corporation and is a steel-handling facility with a 75-foot gantry crane. Together these two berths handled approximately 550,000 tons of cargo, in 1973 (the most recent figures available from the SPA).

B. Mining Operations

There are over 344 active mines in South Carolina, which in 1974 had an estimated mineral commodity value of $120,000,000. Extraction of minerals by mining is a basic and essential activity, making an important contribution to the economic welfare of this State and the Nation.

While it is not practical to extract minerals required by society without disturbing the earth's surface and producing waste materials, it is possible to conduct mining in such a way as to minimize its effects on the surrounding environment. Proper reclamation of mined land is necessary to prevent undesirable land and water conditions that would be detrimental to the environment, and to the general health, safety, and welfare, and property rights of the citizens of the State.

As such, areas of ongoing mining operations qualify as Geographic Areas of Particular Concern (GAPCs), due to their geologic, economic, and environmental significance, and their dependence on a coastal location for access to particular mineral resources.

Management Authority

The provisions of the S.C. Mining Act, §48-19-10 et seq. of the 1976 S. C. Code of Laws are intended to allow the mining of valuable minerals and provide for the protection of the State's environment with the subsequent beneficial use of the mined and reclaimed land. The expressed purposes of the South Carolina Mining Act are as follows:

a) That the usefulness, productivity, and scenic values of all lands and waters involved in mining within the State will receive the greatest practical degree of protection and restoration.

b) That from the effective date of the Act, no mining shall be carried on in the State unless plans for such mining include reasonable

provisions for protection of the surrounding environment and for reclamation or the area of land affected by mining.

The Act states that after January 1, 1975, mine operators must obtain an operating permit from the Land Resources Conservation Commission (LRCC). The permit application must be accompanied by a reclamation plan which must be approved by the LRCC, and the permit applicant must file a performance bond to ensure compliance with this reclamation plan.

As an advisory body to the LRCC, the South Carolina Mining Council serves to promulgate rules and regulations necessary to implement the S.C. Mining Act, and also serves as an appeal body for any LRCC decisions. Also serving in an advisory capacity are:

a) the State Technical Advisory Committee which is composed of State and Federal agencies, universities, and mining industry representatives; and

b) the County Technical Advisory Committee, which is composed of local members of the Soil and Water Conservation Districts, Soil Conservation Service, Clemson University, the S.C. Forestry Commission, and local government officials.

Assistance from these committees helps insure that the administration of the Mining Act is effective, reasonable, and technically sound.

The required reclamation plans must include:

1. practices to protect adjacent surface resources;
2. specifications for surface gradient restoration;
3. manner and type of re-vegetation;
4. method to prevent conditions hazardous to fish or animal life;
5. method of compliance with State air and water pollution laws;

6. method of rehabilitating settling ponds;

7. method of control of contaminants and mining refuse;

8. method of restoring stream channels and banks to minimize erosion, siltation and pollution;

9. maps as required; and

10. time schedule to be followed.

The LRCC shall deny a permit application if:

1. the operator violates the Act or regulation;

2. the operation has unduly adverse effects on wildlife or freshwater, estuarine, or marine fisheries;

3. the operation violates air quality, surface water quality, or ground water quality standards;

4. the operation constitutes a substantial physical hazard;

5. the operation has a significant adverse effect on a public owned park, forest, or recreation area; or

6. the operator has violated commitments under the permit.

The LRCC may approve a permit application only when it meets the following minimum standards:

1. the final slopes have been minimized;

2. safety provisions to adjoining property are provided;

3. placement of soil complies with accepted conservation practices;

4. no noxious, odious, or foul pools of water remain;

5. methods of re-vegetation and reforestation conform to practices established by the Agricultural Experiment Station of Clemson University and the South Carolina Forestry of Commission.

The operator shall file an annual report with the LRCC that describes the reclamation carried out and estimates the acreage to be actively mined in the next twelve months.

The basic idea of the reclamation plan is to develop a strategy for mining a resource and returning the land to an economically useful, environmentally sound, and aesthetically pleasing form. In the coastal zone, ponds or lakes are the main reclamation practice. This is because of availability of water from streams or a high water table. These water bodies must have certain shoreline construction for long-term safety and stability, a certain percent shallow area for spawning, and certain minimum depths to control vegetation. The potential exists for a mining company to turn this reclamation process into a profitable real estate enterprise.

Inventory

Presently all mining operation in the coastal zone of South Carolina are required to have mining permit and a reclamation plan filed with the Land Resources Conservation Commission. These mining operations have been located on aerial photos by the Coastal Council staff with assistance from LRCC personnel and the U.S. Bureau of Mines. The mine locations have been plotted on U.S.G.S. 7½ minute quadrangle map overlays. The data can readily be entered into computer mapping system. As new mining operations are proposed or discovered, the inventory file can be updated.

Specific Sites

Currently there are five minerals that are mined in significant amounts in the South Carolina coastal zone. They are sand, gravel, limestone, peat, and clay.

A listing of mining operations presently permitted in coastal counties is as follows shown in Table B.

Table B
Active Mining Sites

Company Name	Commodity
Beaufort County:	
Malphrus Construction Co.	sand and clay
Berkeley County:	
Dorchester Brick	clay
Martin-Marietta Aggregates	limestone
Consolidated Enterprises	sand and clay
Ware Brothers Investment Co.	limestone, sand, and clay
BASS. Ltd.	limestone
Charleston County:	
Banks - Construction Co.	sand and gravel
Truluck Construction Co.	sand and gravel
Brinson Excavating Co.	sand and clay
Ware Brothers Investment Co.	sand and clay
Land Associates	sand and clay
Edmondson Hauling Co.	sand and clay
Iland Construction Co.	sand and clay
Addco Mining Co.	sand and clay
C. F. Rhodes Construction Co.	sand and clay
C. D. Walters Construction Co.	sand and clay
Chaplin Landing Co.	sand and clay
A & A Contractors	sand and clay
O. L. Thompson Construction Co.	sand and clay
H & M Mining Co.	sand and clay
Colleton County:	
Becker Sand and Gravel	sand and gravel
Nettles Sand	sand and gravel
U. S. Peat Corp.	peat
J. F. Cleckley and Co.	sand and gravel
Sanders Bros. Const. Co.	sand and gravel
Walker Trucking Co.	sand and gravel
Banks Construction Co.	sand and gravel
Seigles Sand Co.	sand and gravel
Dorchester County:	
Becker Sand and Gravel	sand and gravel
Dorchester Brick Works, Ltd.	clay
Giant Portland Cement Corp.	limestone and clay
Murray Sand Co.	sand and gravel
Salisbury Brick Corp.	clay
Gifford-Hill and Co.	limestone
Santee Sand Co.	sand and gravel
Muckenfuss Landscaping Co.	sand and clay
Addco Mining Co.	sand and gravel

Georgetown County:	
Martin-Marietta Aggregates	limestone
McDaniels Sand and Gravel Co.,Inc	sand and clay
Asphalt Products Corp.	sand and gravel
Horry County:	
C and C, Inc.	coquina stone
Waccamaw Clay Products Co.	clay
Asphalt Products Corp.	sand and clay
Godwin Construction Co.	sand and gravel
Blythe Development Co.	sand
Horry Limestone Products	limestone
C. L. Benton and Sons	sand and gravel
Cedar Creek Village	coquina stone
William Bird Sales Corp.	coquina stone
Coast Limestone	coquina stone
Locher Silica	sand
J. O. Cannon & Sons	sand
Jasper County:	
Deerfield Sand & Mining Company	sand and gravel
J. F. Cleckley & Co.	sand and gravel
Eastern Contractors, Inc.	sand and clay

III. AREAS OF SPECIAL HISTORIC, ARCHEOLOGICAL OR CULTURAL SIGNIFICANCE

The coastal zone of South Carolina is rich in historic, archeological, and cultural features. The coastal area was the location of early colonial settlements and, prior to this, the territory of various Indian tribes. Both residents and visitors, alike, perceive these resources as valuable assets and their preservation and protection as an important issue in the growth and development of the Lowcountry. Historic societies are very active throughout the area, and the value placed on the South Carolina heritage by its citizens cannot be over-emphasized. On this basis, areas of specific historic, archeological and cultural significance are felt to be important as Geographic Areas of Particular Concern (GAPCs) in the coastal zone.

Management Authority

To date, there is no specific legislation for historic preservation in South Carolina. However, since 1960, the State, through its Historic Preservation Officer, has developed "a program recognized nationally as an innovative and exemplary type of state-federal partnership in preservation and implementation." (South Carolina Historic Preservation Plan, Vol. III, 1977). Through 1975, this State led all others in annual amount of federal funds received for preservation programs.

The National Historic Preservation Act of 1966 (PL 89-665), states that,

> "The Secretary of the Interior is authorized to expend and maintain a national register of districts, sites, buildings, structures and objects significant in American history, architecture, archeology and culture, hereinafter referred to as the National Register...."

Executive Order 11593, of May 13, 1971, further emphasized the leadership of the Federal government in historic preservation efforts.

The National Register program is implemented and administered by State Historic Preservation Officers (SHPOs), who are responsible for the survey and nomination process, in conjunction with a review board of professionals in the field. Also, the SHPO and the State review board are responsible for preparation and review of the State's historic preservation plan, which includes background information on the State (Volume III).

Properties and sites listed on the National Register receive full consideration of their historic or archeological values through the OMB Circular A-95 review process, whereby Federal, State, and local agencies comment on proposed Federal activities or funding. Section 106 of the National Historic Preservation Act of 1966 provides that:

> The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally-assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking on any district, site, building, structure, or object that is included in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation... a reasonable opportunity to comment with regard to such undertaking.

In South Carolina, both the Department of Archives and History, Historic Preservation Division; and the Institute for Archeology and Anthropology, as well as the South Carolina Coastal Council, are involved in the State Clearinghouse process for project proposals subject to A-95 review and also review Environmental Impact Statements (EIS), pursuant to the National Environmental Policy Act of 1969. The Historic Preservation Division estimated that they annually review over 500 A-95 project clearances, project notifications, and environmental impact statements for possible impact on the historic environment. While the review and comment process for Federal, federally-assisted, or federally-licensed projects affecting a National Register property does not provide a veto power, it does ensure that historic values are thoroughly considered. Experience

with the process has shown ample regard is given to relevant comments or objections by State agencies.

The S.C. Coastal Council is mandated to consider historic and archeological resources in implementation of its permitting authority in critical areas of the coastal zone. In evaluating applications for alterations in the critical areas, the Council must consider, among other factors, "the extent to which the development could affect .... irreplaceable historic and archeological sites of South Carolina's coastal zone" (§15 (6), Act 123 of 1977).

Because of the scope of jurisdiction and the requirement for management authority for GAPCs, only those historic and archeological sites which have been named to the National Historic Register can be designated as GAPCs. The Coastal Council's inventory will provide staff at the Office of Coastal Planning with complete information on all known historic and archeological sites for permit assessments and project evaluations. As those sites listed achieve National Register status, they will automatically be designated as GAPCs.

Inventory

The State of South Carolina has had an active Statewide Historic Preservation Program since 1969, based on the National Historic Preservation Act of 1966 (PL 89-665). One of the major functions of the Historic Preservation Division of the Department of Archives and History has been an inventory identifying more than 6,000 sites in the State, reflecting 300 years of State history and over a thousand years of prehistory. Under contract with the Department of Archives and History, as well as the Coastal Council, the regional Councils of Government also have been contributing to this inventory and research effort.

The University of South Carolina Institute of Archeology and Anthropology has an on-going statewide survey and mapping program for identification of both archeological and historic sites. (The Institute operates under contract to the Interagency Archeological Program, as mandated by the Federal Archeological and Historic Preservation Act of 1960, amended in 1974. This program under responsibility of the Department of Interior contracts with qualified state and private educational and scientific institutions to perform necessary research and surveys to meet program needs identified by work with other federal agencies).

All of this data for the eight coastal counties has been made available to the Office of Coastal Planning, and the historic and archeological sites have been added to the coastal map overlay system on U.S.G.S. 7½" quadrangle maps. For reasons of confidentiality, to protect unmanaged sites from looting or destruction, the majority of this information will be limited to in-house use, for review and evaluation of permits and project proposals. From this thorough inventory, sites which have been named to the Historic Register will be designated as GAPCs.

Criteria for Designation

The following criteria are those adopted by the Secretary of the Interior and are used in nominating sites to the National Register. These evaluation criteria are recognized by the Coastal Council for designating GAPCs under this category.

The quality of significance in American history, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. that are associated with the lives of persons significant in our past; or

C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinquishable entity whose components may lack individual distinction;

D. that have yielded, or may be likely to yield, information important in prehistory or history.

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, re-constructed historic buildings, properties primarily commemorative in nature, and properties that have achieve significance within the past 50 years shall not be considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

A. a religious property deriving primary significance from architectural or artistic distinction or historical importance; or

B. a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event, or

C. a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his productive life; or

D. a cemetery which derives its primary significance from graves or persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

E. a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

F. a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or

G. a property achieving significance within the past 50 years if it is of exceptional importance.

Designated Sites

The following historic and archeological sites are on the National Register of Historic Places in the South Carolina coastal zone. They are designated as Geographic Areas of Particular Concern:

Beaufort County

1) Hilton Head Shell Ring (or Ford's Skull Creek Ring); prehistoric.

This Indian shell ring on the north end of Hilton Head Island is the oldest discovered along the Georgia-Carolina coastline, dating from 1500-2000 B.C. Artifacts indicate family groups may have lived most of the year around the shell ring, which is thought to have been a place of worship.

2) Sea Pines Shell Ring; prehistoric.

Also on Hilton Head Island, this small shell ring contained ceramic artifacts from about 1500 B.C. It is located on Seabrook Plantation, which shelters ruins of a plantation used by Federal troops as a supply and coal base during the Civil War.

3) Hassell Point Shell Ring; prehistoric.

This site on the Colleton River near Port Royal contains two small Wilmington Indian burial mounds.

4) Little Barnwell Island Shell Ring; prehistoric.

Two sand and oyster Indian shell mounds are found on this site on the Broad River.

5) Chester Field Shell Ring; prehistoric.

This Indian shell ring site, on Stallings Island, is located west of Hudson's Landing Road.

6) The Anchorage; pre-Revolutionary; (1103 Bay Street).

On the waterfront in downtown Beaufort, this home was built before the American Revolution, and was used as a Federal hospital during the Civil War. Its builder and owner was William Elliott, noted statewide as a politician, agriculturalist, author and poet.

7) William and Elizabeth Barnwell House; c.1818 (800 Prince Street).

Built in about 1818, this house in the City of Beaufort has a double stairway and fine interior woodwork.

8) John A. Cuthbert House; c. 1810 (1203 Bay Street)

Built about 1810, this historic house, on Bay Street in the City of Beaufort, features excellent interior and exterior woodwork

9) Sheldon Church

The ruins of this historic church are located just east of Pocotaligo on US Highway 21.

10) Tabby Manse (Thomas Fuller House), c. 1788 (1211 Bay Street)

One of the finest early Colonial homes in Beaufort, this private residence on Bay Street was built about 1788. The house was used as a hospital in the Civil War.

11) John Mark Verdier House (Lafayette House); c. 1790 (801 Bay Street).

Built about 1790 by a wealthy Beaufort Planter and shipowner, Lafayette visited this home on his American Tour in the 1820's, and spoke to the people from its steps. The home is built on a high tabby foundation and features exemplary interior wood and plaster work.

12) Tombee Plantation; c. 1790

This two-story clapboard house was built about 1790 by Thomas Chaplin on St. Helena Island. The house is constructed so that rooms have window exposure on three sides. Chaplin's grandson kept a 780 page journal from 1845 to 1857, which is now part of the S.C. Historical Society Collection.

13) Coffin Point Plantation; c. 1801

On St. Helena Island, this two-story clapboard is believed to have been constructed around 1801. A ½ mile avenue of live oaks leads the entrance to the plantation, which was the location of prosperous cotton production. It was a center of activity during the Port Royal experiment in the early years of the Civil War.

14) Auldbrass Plantation; c. 1940

This home was designed and built by Frank Lloyd Wright, between 1940-1951. It offers a unique combination of traditional plantation architecture with innovative structure and details that reflect the Lowcountry natural environment, specifically the characteristic cypress trees and live oaks draped with Spanish moss.

15) Barnwell-Gough House; (705 Washington Street)

16) The Marshlands;

17) Robert Smalls House;

18) Charles Forte;

19) Hunting Island State Park Lighthouse;

20) Fort Frederick;

Berkeley County

1) Medway Plantation; c. 1712

This private residence, near Mount Holly off US 52, was built by Landgrave Thomas Smith, a noted Colonial politician, in 1712. It serves as a fine example of baroque, early 18th century architecture.

2) St. Thomas Episcopal Church (The White Church); 1812

On the Wando River near Cainhoy on County Highway 98, this small brick church was built in 1819. Behind the church there is a rare vestry building.

3) Middleburg Plantation (The Pine Lands); 1699

Located off S.C. Highway 98 on the East Branch of the Cooper River, this is the oldest known wooden house still standing in South Carolina. It was built by Benjamin Simons in 1699. (This structure is a National Historic Landmark)

4) Pompion Hill Chapel; 1769

Built in about 1767, this chapel near Huger off S.C. Highway 41 was intended as a chapel of ease to the main parish church.

5) Strawberry Chapel; 1725

Built in about 1725, this chapel is the only surviving building from the planned colonial town of Childsbury. It is located at the south end of S.C. Highway 402, and represents a rare architectural example of the Episcopal Chapel of Ease of this period.

6) Lewisfield Plantation; 1774

Standing high off the ground and oriented to catch summer breezes, this home was built about 1774. Its high ceilings and porch shading the principal rooms is characteristic of Lowcountry plantation houses.

7) St. James Goose Creek Church; c. 1719

Architecturally one of the finest churches in the South Carolina Lowcountry, it is the oldest Anglican Church building still standing

outside of Charleston. It escaped destruction during the Revolution because there were British Royal Arms above the altar. It is located about a half mile east of U.S. Highway 52 in Goose Creek. (This structure is a National Historic Landmark)

8) Thomas Broughton Plantation, Mulberry, c. 1714

Near Moncks Corner on the West Branch of the Cooper River, this house represents the transition from the ethnic colonial architectural style to the formal eighteenth century Georgian style. It was used as a fort during the Yemassee Indian War of 1715 and as a British outpost in 1781. (This structure is a National Historic Landmark)

9) St. Stephen's Episcopal Church; c. 1767

In St. Stephen, near the junction of U.S. Highway 52 and S.C. Highway 45, this church is a beautiful example of religious architecture of the period. The building was also used as an administrative center of colonial government. (This structure is a National Historic Landmark)

10) Lach Dhu Plantation; 1816 (Berkeley County)

This two story wood house on a low brick foundation was built by Robert J. Kirk, a cotton planter. The house is one of the few remaining plantation houses of the upper half of Berkeley County.

Charleston County

1) Willtown Bluff/Willtown Town Site, (also called New London); c. 1697 (Adams Run Vicinity)

The town site is located about 5 miles west of the community of Adams Run. Willtown was one of the earliest and most important towns in South Carolina, but it began to decline during the mid-1700's and died out after the revolution.

2) Sewee Shell Ring; (or Mackintosh Mound; (Awendaw Vicinity)

Near the interesection of U.S. 17 and Awendaw School Road, this prehistoric Indian Shell midden measures about 149 feet in diameter.

3) William Aiken House and Associated Railroad Structures; (456 King Street, Charleston) c. 1811

This great Regency house with its arched piazzas and intricately carved entrance door was converted to business in 1863 when the S.C. Railroad Company began using it for offices. It now houses the district office of the Southern Railway. The building is a National Historic Landmark because of its importance in the history of railroading.

4) Bethel Methodist Church; (57 Pitt Street, Charleston), 1853

In 1795 the property was acquired for a Methodist burial ground. A Methodist meeting house was built there in 1798 and the present building was begun in 1852.

5) William Blacklock House; (18 Bull Street, Charleston), 1800

This house, made of Carolina grey brick is an outstanding example of a Charleston "double" house. An exquisite fanlight over the front door, marble keystones and a double set of steps are some of its outstanding features. (This structure is a National Historic Landmark)

6) Daniel Blake Tenement; (2-4 Courthouse Square, Charleston), 1764-72

This double house dates from 1764-1772. Located at Court House Square in the City of Charleston, it is a fine example of English bond

brickwork, and has noteworthy wrought iron porch railings and interior woodwork.

7) Branford-Horry House; (59 Meeting Street, Charleston), c. 1751

This fine "double" house was built around 1751 by William Branford. Its portico which extends over the public way was built in the 1830's by Elias Horry, great-grandson of William Branford. The house contains a wealth of fine Georgian woodwork.

8) Miles Brewton House; (27 King Street, Charleston), 1765-69

This fine old house is considered to be one of America's outstanding Georgian mansions. Built by the prominent and wealthy Miles Brewton and inherited by his sister, Mrs. Rebecca Brewton Motte, Rev. war heroine. The house was commandeered as headquarters for General Sir Henry Clinton during part of the American Revolution and again in 1865 for Federal officers. (This structure is a National Historic Landmark)

9) Robert Brewton House; (71 Church Street, Charleston), c. 1730

This house is one of the earliest remaining examples of the Charleston "single" house; a long, narrow building one room wide and two rooms deep with the narrow end facing the street. (This structure is a National Historic Landmark)

10) Charleston Historic District;

The total area of this district corresponds to the Old and Historic District delineated in the zoning ordinance of the City of Charleston, ratified on August 16, 1966. Charleston's first settlement was in 1670 on the west bank of the Ashley River. The town was moved in 1680 to its present location on the peninsula between the Ashley and Cooper Rivers. Charleston's early economy was based on the planting of rice and indigo, and the town became the largest and wealthiest metropolis south of Philadelphia.

11) Charleston's French Quarter District (Lodge Alley);

This area today is located at the edge of "Old and Historic Charleston" and is the section where the Huguenots once had warehouses and dwellings. Lodge Alley is one of the oldest streets in Charleston and is a visual example of the city's Old World ties. The ten foot wide passage paved in "Belgian Blocks" served as a thru-way for merchants, allowing them access from their homes on State Street ships on East Bay Street.

12) Citizens and Southern National Bank of S.C. Building; (50 Broad Street, Charleston), c. 1797

This building was used by the Bank of South Carolina from 1798 until 1835 at which time it was bought by the Charleston Library Society. In 1916 the Library Society sold the building to the Charleston Chamber of Commerce which, in turn, sold it in 1966 to the Citizens and Southern National Bank of South Carolina. The building is thought to be the oldest bank building in the United States still in use as a banking office.

13) College of Charleston; (Charleston), 1785

Chartered in 1785 and officially opened in 1790 the College of Charleston is noted as being the first municipal college in America. The old "main building" built in 1828 is handsome Greek Revival structure. The College of Charleston is a National Historic Landmark.

14) Dock Street Theatre (Planters' Hotel); (135 Church Street, Charleston)

This building is located on or near the site of the first theatre of Charleston, the Dock Street Theatre. The present Dock Street Theatre is a creation of an 18th century continental theatre within the old shell of the 1803 Planters' Hotel. The only original parts of the hotel interior which remain are the lobby, staircase, and the two rooms above the lobby. The woodwork and carving in the lobby and upstairs rooms is from the Judge King House, since demolished.

15) The Exchange and Provost; (East Bay and Broad Streets, Charleston) 1769-72

Built between 1769-72 the Exchange and Provost is one of the most historic buildings in America. "In January, 1775, the Provincial Congress assembled here to set up the first independent government established in America and to elect delegates to the General Congress which met later in Philadelphia." (Historic Charleston Guidebook, complied and originally purlished as Across the Cobblestones by the The Junior League of Charleston, Inc.) The building is perhaps best known as the place where President George Washington was officially received during his visit to Charleston in May, 1791. The cellars beneath the building served as a British dungeon, "The Provost", during the Revolution. The building is a National Historic Landmark.

16) Farmers' and Exchange Bank; (141 East Bay Street, Charleston), c. 1853-59

This old building is a fascinating example of Moorish gothic architecture. It is used today by a law firm and is a National Historic Landmark.

17) Fireproof Building; (100 Meeting Street, Charleston), 1822-26

Originally intended to safeguard public records, this was the first completely fire-resistant building in this country. It was erected between 1822 and 1826, and has been described as "sternly beautiful". The building is now owned by the County of Charleston.

18) Fort Sumter; (Charleston Harbor), Begun 1829

This 19th century fortification was the scene of a South Carolina artillery attack on Federal troops, on April 12, 1861, marking the beginning of the Civil War. Located in Charleston Harbor, the fort was later the scene of a 20 month seige, with the Confederate garrison withstanding overwhelming Federal attacks.

19) William Gibbes House; (64 South Battery, Charleston), 1772

The height of Charleston's Georgian period can be seen in this beautiful mansion. The upstairs ballroom is considered to be one of the most beautiful rooms in America. The house is a National Historic Landmark.

20) DuBose Heyward House; post-Revolutionary (76 Church Street, Charleston)

Number 76 Church Street, Charleston, is noted as being the place where DuBose Heyward wrote his famous story of Porgy. The house is a National Historic Landmark.

21) Heyward-Washington House; (87 Church Street, Charleston), 1770

This fine Georgian town house was built in 1770 by Daniel Heyward, the founder of a great rice-planting dynasty. Daniel's son, Thomas Heyward, a signer of the Declaration of Independence, leased the house to the city of Charleston as a residence for President George Washington during his visit to Charleston in 1791, thus the name Heyward-Washington House. The house is a National Historic Landmark.

22) Hibernian Hall; (105 Meeting Street, Charleston), 1840

This Greek Rivival structure was built by the Hibernian Society, an Irish fraternal order, which still owns and uses the building today. Each year this hall is the scene of the St. Cecilia Ball, the most famous social event in the South. The building is a National Historic Landmark.

23) Huguenot Church; (136 Church Street, Charleston), 1844-45

Built in the Gothic style this church building is the fourth to stand on this site. Many Huguenots, fleeing persecution in France, established themselves in and around Charleston. They began worshipping at this site about 1687. The Huguenot Church is a National Historic Landmark.

24) McCrady's Tavern and Long Room; (153 East Bay Street, Charleston), 1786

This rectangular brick building was acquired by Edward McCrady, a Charleston barber, and was operated as a tavern. The Long Room was constructed in 1788 as an adjunct to the tavern. It is a one-room, multi-purpose building which was used for balls, music festivals, etc. In 1791 President George Washington was entertained there.

25) McLeod Plantation; (325 Country Club Drive, Charleston), c. 1858

The country house built by William McLeod around 1858 was altered in the early 1900's to become a good example of Greek Revival architecture. The grounds contain an avenue of well preserved wooden slave cabins.

26) Joseph Manigault House; (350 Meeting Street, Charleston) c. 1802

Constructed of Carolina grey brick and laid in Flemish bond, the house forms a geometric figure and is an outstanding example of Adam style architecture. It was designed by Gabriel Manigault for his brother Joseph. The house is a National Historic Landmark.

27) Market Hall and Sheds; (188 Meeting Street, Charleston)

Erected between 1788 and 1804 the City Market sheds stretched for six blocks from Meeting Street to the Cooper River. Market Hall was erected at the head of these buildings in 1841. It is a fine example of Roman Doric. The hall presently houses the Confederate Museum and is operated by the United Daughters of the Confederacy.

28) Clark Mills Studio; (51 Broad Street, Charleston), Early 19th Century

An equestrian statue of General Andrew Jackson placed in Lafayette Park in Washington established the reputation of Clark Mills who pioneered in the casting of bronze statues in America. In his Charleston studio on Broad Street he carved a marble bust of John C. Calhoun for which the City of Charleston awarded him a gold medal.

29) James Nicholson House (Ashley Hall School); (172 Rutledge Avenue, Charleston), c. 1816

A classic villa on a very grand scale, this house was built in the fashionable suburb called Cannonsboro which today is well within the city limits. One of its past owners was George A. Trenholme, Secretary of the Treasury of the Confederacy. Today it serves as a nationally known school for girls.

30) Site of Old Charles Towne, Albemarle Point; 1670

In April 1670, three English ships landed on the west bank of the Ashley River at a place known as Albermarle Point and founded Charles Towne, the first permanent settlement in Carolina. Ten years later the town was moved to the peninsula between the Ashley and Cooper Rivers. The historic area of Albermarle Point is today a state park called Charles Towne Landing.

31) Old Marine Hospital; (20 Franklin Street, Charleston), 1834

Designed by the well known Charleston architect, Robert Mills, this building exemplifies the Gothic revival style of architecture. It is presently used as Housing Authority Headquarters for the City of Charleston.

32) The Circular Congregational Church; (150 Meeting Street, Charleston), 1890

The first church on this site was a small wooden structure built in 1681 which housed a congregation of Huguenots, Presbyterians and Congregationalists. It was replaced in 1804 by a Pantheon-like church which burned in 1861. The present structure was built by using the bricks from the burned building. This church building is a National Historic Landmark.

33) Powder Magazine; (21 Cumberland Street, Charleston), c. 1713

This building, built around 1713, is one of the few buildings in Charleston which has survived from the days of the Lords Proprietors.

Constructed for storing powder its 2'8" thick walls and heavy groined vaulting are made of brick and oyster shell mortar.

34) Robert Barnwell Rhett House; (6 Thomas Street, Charleston), c. 1832

This dwelling was the home of Robert Barnwell Rhett from 1856-63. Known as the "Father of Secession", this U.S. Senator composed the "Address to the Slaveholding States". His son was the editor of the Charleston Mercury.

35) Robert William Roper House; (9 East Battery, Charleston), c. 1838

It is probable that the architect Edward Brickell White designed this mansion. The beautiful Greek Revival portico, dramatically high ceilings and tall windows and doors make this house truly grand.

36) Thomas Rose House; (57-59 Church Street, Charleston), c. 1735

Built around 1735 this house is a fine example of the early Georgian period. The exterior lines are simple and solid; the house has two floors instead of the three so typical in Charleston.

37) Nathaniel Russell House; (51 Meeting Street, Charleston), 1809

This house, completed in 1809, is the finest example of Charleston's Adam architecture. It was built by Nathaniel Russell, a native of Rhode Island, who moved to Charleston and became one of her most prosperous merchants. The house is now owned by and serves as headquarters for the Historic Charleston Foundation. The house is a National Historic Landmark.

38) Edward Rutledge House; (117 Broad Street, Charleston) post-Revolutionary

Built for James Laurens, this house later was owned by Edward Rutledge, a signer of the Declaration of Independence. The house is a National Historic Landmark.

39) Governor John Rutledge House; (116 Broad Street, Charleston) 1760

This house was owned by John Rutledge who served as President of the Independent Republic of South Carolina during the Revolutionary War and later as governor of the state. He later served as the second chief justice of the Supreme Court of the United States. The house is a National Historic Landmark.

40) St. Michael's Church; (80 Meeting Street, Charleston), 1751-61

St. Michael's is the oldest church edifice in Charleston, and except for the addition of the sacristy, the building remains unchanged. Its bells, imported from England in 1765, are beloved for their connection with Charleston's history. The building is a National Historic Landmark.

41) St. Philip's Church; (146 Church Street, Charleston), 1835-38

St. Philip's congregation is the oldest in the state. The original building was located at the present site of St. Michael's Church. When the growing congregation needed more room, a new church building was built on the Church Street site; this building burned in 1835. The third and present building was built between 1835-38. The building is a National Historic Landmark.

42) Simmons-Edwards House; (12-14 Legare Street, Charleston), c. 1800

Built by a Johns Island planter, Francis Simmons, this single house was later owned by George Edwards. Edwards added a garden and formal entrance. The house is a National Historic Landmark.

43) South Carolina National Bank of Charleston; (16 Broad Street, Charleston), 1817

This building was erected for the Charleston branch of the Second Bank of the United States and was acquired by the Bank of Charleston in 1835. The name was changed to the South Carolina National Bank in 1926.

44) South Carolina State Arsenal (Old Citadel); (2 Tobacco Street, Charleston), c. 1826

The Denmark Vesey slave uprising of 1822 resulted in the construction of this arsenal which was converted to the Gothic style in 1849. The building housed the S.C. Military Academy from 1843-1922, and today it serves as a Charleston County Office Building.

45) Stiles-Hinson-Thompson House; (940 Paul Revere Drive, James Island), c. 1742-1891

Actually two houses in one, the original one-and-one-half story colonial farmhouse was built around 1742. Around 1891 a two-and-one-half story Victorian house was built on to it. Each house maintains its architectural integrity.

46) Col. John Stuart House; (104-106 Tradd Street, Charleston), c. 1772

This house was built around 1772 by Col John Stuart, Indian Commissioner for the Southern Colonies. The carving of the overmantels is some of the finest in the City of Charleston. The house is a National Historic Landmark.

47) Sword Gates House; (32 Legare Street, 111 Tradd Street, Charleston)

The premises at 32 Legare Street are valuable because of the famous Sword Gates as well as the fine wooden house with its masonry additon. The gates, with their design of Roman swords and spears, were forged about 1838 by Christopher Werner, a famous Charleston ironsmith. The house (now 111 Tradd Street), which served as a seminary for young ladies from 1819-1849, contains a beautiful Adam ballroom.

48) Unitarian Church; (6 Archdale Street, Charleston) 1772-76

This building was remodeled in 1852 to resemble the chapel of Henry VII in Westminster Abbey. The congregation was an offshoot of the Congregational Church, and was rechartered as the Unitarian Church in 1839. It is the oldest Unitarian Church in the South. The building is a Naitonal Historic Landmark.

49) U.S. Customhouse; (200 East Bay Street, Charleston)

Begun by 1853 and finished after the Civil War this beautiful neo-classic building uses an elaborate grillage to support its weight. It is interesting from both an engineering as well as an architectural standpoint.

50) U.S. Post Office and Courthouse; (83 Broad Street, Charleston) 1896

This beautiful Renaissance Revival structure was built of Winnsboro, S.C. granite. It is an appropriate expression of the late 19th century.

51) Castle Pinckney; (Charleston Harbor on Shute's Folly Island) 1812

Named in honor of Charles Cotesworth Pinckney, U.S. Commissioner to France (1797), this fortification was constructed just before the War of 1812. It was used to house prisoners during the War Between the States.

52) John Drayton House (Drayton Hall); (12 miles west of Charleston) 1738

This magnificent structure is probably the finest example of Georgian architecture in America. It was built by John Drayton whose son, William Henry Drayton, was a Revolutionary patriot. Drayton Hall was saved from burning and pillage in 1865 because of its use as a hospital for smallpox victims. The house is a National Historic Landmark.

53) Fenwick Hall Plantation; (Johns Island), 1730

Near the intersection of River Road and Maybank Highway on Johns Island, this two-story brick plantation home was built in 1730. Except for minor changes, the building retains the appearance of its Georgian architectural period.

54. Fort Johnson/Powder Magazine; (James Island), 1814

This is an area which contains a number of forts the earliest dating from 1708. The second fort was built in 1759, and a third fort was constructed between 1793-1794 using elements of the two earlier fortifications. Other structures on the site included two batteries erected

in 1812, two barracks and a martello tower some years later and a mortar battery in 1861 for the purpose of firing on Fort Sumter. The powder magazine (1814) appears to be the only intact remnant of all the fortifications.

55) Magnolia Gardens; (10 miles northwest of Charleston) 1671

This estate was named Magnolia-on-the-Ashley and has been in the Drayton family since 1671. One of its owners, John Grimke-Drayton, developed the famous gardens, importing the Camellia Japonica and the Azalea Indica for which the gardens are so well known.

56) St. Andrews Parish Church; (5 miles northwest of Charleston)

St. Andrews Parish was one of ten parishes established in the colony's political divisions under the Church Act of 1706. A small church building was begun on this site in 1706, and its walls, used in the nave of the present structure, represent the oldest example of church architecture in the state.

57) Arnoldus Vander Horst House; (Kiawah Island) c. 1770

Built around 1770 this structure is a rare example of a late eighteenth century wooden plantation house. It passed from its builder, James Stanyarne, to Arnoldus Vanderhorst who served as Mayor of Charleston, (1785-1786 and 1790-1792) and as Governor of South Carolina (1794-1796).

58) Fairfield Plantation; (Five miles east of McClellanville), c. 1735

Originally owned by the Lynch family, the house passed into the hands of Jacob Motte, one of the Colonial treasurers of South Carolina. Motte enlarged and altered the house as did members of the Pinckney family who subsequently became its owners. It is the oldest house in the old parish of St. James Santee.

59) St. James Santee Episcopal Church; (Georgetown Vicinity), c. 1768

This church building with its brick exterior and cypress interior is one of the most beautiful of the Low Country's parish churches.

Erected when the Episcopal faith was the state religion, it was used as a center for colonial governmental administration. The building is a National Historic Landmark.

60) Marshlands Plantation House; (James Island), c. 1810

With its unusual Adam mantels and well balanced proportions, this house is one of the finest examples of Adam architecture in the Low Country. It was moved from its original location on the Cooper River to its present location in 1961.

61) Hampton Plantation; (Seven miles north of McClellanville), c. 1735

This beautiful house is located on the western bank of the South Santee River. Hampton was visited by President George Washington in 1791. The Hampton Plantation is also a National Historic Landmark.

62) Mount Pleasant Historic District; (Mt. Pleasant), 1766, 1808, 1847

Significant buildings in this old section of Mt. Pleasant document its history with architecture. Styles range from the Colonial and early Federal period through the Victorian age and many buildings test to the town's cultural, religious and political endeavors.

63) Old Court House; (311 King Street, Mt. Pleasant), 1884

Located on King Street in Mr. Pleasant, this building was erected in 1884 and used as a court house until 1898, during the period when Mt. Pleasant was the county seat of Berkeley County. It is the only example of commerical Victorian architecture in Mt. Pleasant.

64) Auld Mount (or Yough Hall Shell Ring); (Near Mr. Pleasant)

Dating from the second millenuim B.C., this Indian shell midden stands about 6 feet above the surrounding swamp, with the ring itself 2-3 feet higher that the central area. It lies about one mile off U.S. Highway 17 near Mt. Pleasant.

65) Buzzards Island Shell Ring; (Near Mt. Pleasant)

Located near Mt. Pleasant, southeast of U.S. Highway 17, this

ring-shaped shell midden dates from a prehistoric Indian era. It is about 178 feet in diameter and stands no more than 3 feet above sea level.

66) Christ Church; (Episcopal), (Near Mt. Pleasant)

This building was a parrish church and used as the administrative center of the colonial government. The original walls, erected in 1726, were destroyed by British soldiers, but later rebuilt. It is located six miles north of Mt. Pleasant on U.S. Highway 17.

67) Paul Pritchard Shipyard; (Near Mt. Pleasant), 1706

Located several miles north of Mt. Pleasant this site was being used for shipyard in 1706 when it was burned by a French and Spanish invasion fleet. It was rebuilt and used until about 1922. Paul Pritchard built ships there for S.C.'s Navy during the Revolutionary War.

68) Snee Farm; (Near Mt. Pleasant), c. 1754

Built in approximately 1754, this plantation was the home of Charles Pinckney, a framer of the U.S. Constitution, a Governor of South Carolina, and U.S. Minister to Spain. The farm is located on S.C. Highway 97, near Mt. Pleasant.

69) Stono River Slave Rebellion Site; (Rantowles vicinity), 1739

On this site, slaves under the leadership of an Angolan slave Jemmy, attacked the Hutchison warehouse located near the river. After killing two guards and seizing arms they moved on toward Savannah. This insurrection led to the passage of one of the most comprehensive slave codes adopted in the English colonies.

70) Village of Rockville Historic Districts; (Rockville), c. 1824

Rockville was founded by the planters of Wadmalaw and Edisto Islands as a summer refuge from malaria. It contains one late eighteenth century building, twelve pre-Civil War buildings and six outstanding structures dating from the late nineteenth and early twentieth centuries.

71) Fig Island Shell Ring; (Near Rockville)

Southeast of Rockville on Oceola Creek, these Indian shell rings are two of the approximately twenty between the central S.C. coast and central Georgia coast. All date from prehistoric times and were the site of significant finds of early North American pottery.

72) Hanckel Mound Shell Ring (or Leadenwah Creek Mound);

A prehistoric Indian shell midden deposited in a ring shape, this site is believed to date early in the second milleuim B.C. Located near Rockville, at the confluence of Leadenwah Creek and the N. Edisto River, it contains some of the earliest pottery known in North America.

73) Horse Island Shell Ring; (Near Rockville)

Just south of Rockville, this prehistoric Indian shell midden also contains significant early North American pottery remains.

74) John Seabrook Plantation Bridge (Admiral George Palmer Bridge): (Wadmalaw Island), c. 1784

Located on the south bank of the Leadenwah Creek, this structure is a unique example of a late eighteenth century brick highway bridge.

75) Battery Gadsden; (Sullivan Island), 1903-04

Built to protect Charleston harbor this fortification is one of a series of batteries stretching from Fort Moultrie to the end of Sullivans Island. Its four gun emplacement is unique among batteries of this period on the island. Guns and Machinery were removed in 1917.

76) Battery Thomson; (Sullivan's Island), 1906-09

This two, 10' gun, coastal defense battery was established to command the entrance to the Charleston harbor jetties. Machinery and guns were removed in 1947.

77) U.S. Coast Guard Historic District; (Sullivans Island), c. 1891

This five acre district contains three buildings (rescue station boathouse, administration building, carriage house) dating from about 1891

as well as a Spanish-American War army bunker and a 1962 lighthouse. The buildings are fine examples of East Lake architecture.

78) Harrietta Plantation; (South Santee River), c. 1858

This wooden two-story dwelling was probably begun in the 1830's. Resting on high brick foundations, it is built in the Charleston single house style.

79) Johns Island Presbyterian Church; (Johns Island), c. 1719

This original wooden building is framed of handsawed lumber and it's put together with wooden pegs. It is considered to be the oldest continuous Presbyterian Church in South Carolina.

80) Ashley Hall Plantation; (Five miles northwest of Charleston), c. 1670

Originally the home of the Bull family who were outstanding in South Carolina politics from 1670-1860. The area contains an Indian mound, the ruins of a 1710 house and the Stephen Bull house of 1670.

81) Central Baptist Church; (22 Radcliffe Street, Charleston), c. 1893

This clapboard structure was built around 1893 by a black congregation and has been continuously used since that time. The church is significant in terms of black history and folk art and is one of the first black churches founded and built solely by blacks in Charleston. It serves as an example of the Carpenter Gothic vernacular style of architecture.

82) Oakland Plantation; (7 miles north of Charleston Harbor), c. 1750

This clapboard house of hand-hewn black cypress sits on a low foundation of bricks made from oyster-shell lime. Built on land originally granted by the Lords Proprietors in 1696, this dwelling is probably the oldest house in Christ Church Parish.

83) St. Mary's Roman Catholic Church; (93 Hasell Street, Charleston) 1839

The church was incorporated in 1791 and a church building was constructed on the site at an unknown date. This first structure was replaced

by a brick building which was destroyed by fire in 1838. The third and present building built in 1839, is a two-story stucco over brick structure with Massive Doric columns.

84) Old Bethel United Methodist Church; (222 Calhoun Street), 1809

Begun in 1797 and completed in 1809, this is the oldest Methodist church building in Charleston. Originally located at the corner of Pitt and Calhoun Streets, it served a congregation of blacks and whites until the 1840's when the blacks seceded. The church was moved to the western part of the church grounds in 1852 and was then used by blacks alone. In 1880, the church building was given to the black congregation and was moved once again to its present site on Calhoun Street.

Colleton County

1) Colleton County Courthouse; 1822

The First Nullification meeting in South Carolina was held in this brick building in 1828. Constructed in 1822, it is a good example of the work of Robert Mills, its architect. The walls of the Greek Revival structure are 29 inches thick (three bricks deep), and its wrought iron stairway is a unique rustproof feature.

2) Walterboro Jail (Old Colleton County Jail); 1855

Built in 1855, this Neo-Gothic building served as the County jail until 1937. It was designed by noted Charleston architects Jone and Lee.

3) Walterboro Little Library, (Walterboro Library Society); 1822

Moved from its original site, where it once served as a focal point for determining the town's boundaries, this frame house with louver shutters was built in 1820. It was a favorite stopping place for area planters when business brought them to the County Seat. It is currently used for meetings by the Colleton County Historical Society.

4) Issac Haynes Hall

North of Jacksonboro off Route 64, this was the ancestral home of the Haynes Family, which came from England. A monument erected in the gardens marks the burial site of Col. Issac Haynes, "the Martyr" who was hanged by the British in Charleston in August, 1871.

5) Pon Pon Chapel; 1725

The original St. Bartholomew's Parrish was established in 1706, but devastated by Yemassee Indians. In 1725, the General Assembly provided for construction of the chapel, where John Wesley was to preach in 1737. A Charleston newspaper recorded that a fire destroyed the church in 1801, and it is referred to day as "the Burnt Church".

6) Presbyterian Manse; c. 1831

The oldest clergyman's house on Edisto Island, this simple structure was the residence for the minister of one of the State's oldest Presbyterian congregations. The manse is located just south of U.S. Highway 17 on a private road.

7) William Seabrook House (Dodge Plantation); c. 1810

This Republican-style two-story house established a distinctive architectural style followed in many subsequent plantation houses on Edisto Island.

8) Trinity Episcopal Church; 1876

This structure is the only Episcopal church, and only Victorian-style church on Edisto Island.

Dorchester County

1) Middleton Place; c. 1738

About fourteen miles outside Charleston on S.C. Highway 61, this plantation has America's first landscaped gardens. The 45 acres were developed by Henry Middleton as a setting for a brick Tudor mansion, built in 1738. A later owner was Arthur Middleton, a signer of the Declaration of Independence.

2) Indian Fields Methodist Church Campground; 1801

Dating from before the 1801 visit of Rev. Francis Ashbury, the founder of American Methodism, this religious camping area was moved to its present location in 1848. It contains 99 cabins and an open-air tabernacle, and is located on S.C. Highway 73, northeast of St. George.

3) Old Dorchester; 1695

On the Ashley River near the mouth of Dorchester Creek, this site contains the ruins of the original trading village and fort of Dorchester, a settlement of New Englanders from Massachusetts. A fort was built on part of the town site in 1775, and the town burned in the Revolutionary War.

4) Carroll Place; c. 1820

Located at the intersection of Quaker and Wire Roads, this two-story wooden house is said to be one of the oldest in Dorchester County. It served as a stage coach tavern on the Charleston-to-Orangeburg Road.

5) Summerville Historic District;

Summerville originated as a pineland summer refuge for Lowcountry planters. The National Register district of Summerville largely conforms to the boundaries of 1847 when the village was incorporated. Originally the streets were laid out without a plan, and winding roads still characterize the older section of town.

Georgetown County

1) Hopsewee Plantation (Thomas Lynch House); c. 1735

This historic home on the North Santee River was the plantation of Thomas Lynch, a signer of the Declaration of Independence. It was part of a grant from King George II, and the black cypress building was constructed between 1735-40. It is open to the public as an historic house museum.

2) Prince George, Winyah, Episcopal Church House; 1825

This frame house, built in 1825, was used as command headquarters by the U.S. Troops that occupied the City of Georgetown in the Civil War. At the corner of Broad and Highmarket Streets, it is today the offices and meeting house for the Episcopal congregation of Georgetown.

3) Old Market Building (The Town Clock); 1835

On Front and Screven Streets, this two-story brick structure was erected as a town hall and public fresh air market in 1835. It replaced an earlier structure destroyed by hurricane in 1822. The lower floor was enclosed in the 20th century, and today the building houses the Rice Museum.

4) Annandale Plantation; (14 miles south of Georgetown)

Annandale was a plantation prior to 1791, and its original name was Millbrook. It was here, in 1792, that Jonathan Lucas built the first rice pounding mill operated by tidal flow. The stately columned plantation house was built in 1833 by the Johnstone family.

5) Chicora Wood Plantation; (Approximately 18 miles north of Georgetown)

This plantation was originally granted to John Allston of Berkeley in 1732, and remained in the Allston family for generations. One of its owners, Robert Francis Withers Allston, a governor of South Carolina, was one of the best known rice planters in the Lowcountry The plantation house was built sometime before 1819.

6) Georgetown Lighthouse; (North Island), 1811

Built in 1811 this lighthouse stands on land which was donated to the United States by Paul Trapier in 1789. The structure is built of brick with the stairs and a center supporting post of solid stone.

7) Prince Frederick's Chapel; (Plantersville)

In 1877 upon completion of Prince Frederick Church, the old chapel building on the site was moved to Plantersville. This building, known as Prince Frederick's Chapel was consecrated on July 23, 1879. Some of the silver used in this chapel is the original silver given to the church by Prince Frederick of Wales.

Horry County

1) Old Horry County Jail; 1820

Located on Main Street in Conway, this brick structure was built in 1820 for the County jail. It was renovated and used as a hotel between 1920 and 1966. Plans are in the making for renovation to a museum by the City of Conway, the present owner.

Jasper County

1) Gillisonville Baptist Church; 1845

This white frame colonial church was built in 1845, when Gillisonville was the seat of government for the Beaufort District. The original steeple was lost to federal cannon fire during the Civil War, but the rest survived Sherman's burning of the town in 1865.

2) Robertson Baptist Church (Black Swamp Baptist Church)

The original church building, established in 1781, was destroyed by Sherman's troops in 1864. The members bought the present building and moved it from Gillisionville to its present location. This white frame structure has classic Gothic-style columns.

IV. HAZARD RISK AREAS

The shorelines of the coastal zone are part of a dynamic system, subject to the influences of tides, waves, and wind, and the impacts of storm conditions and flooding. The processes of erosion and accretion of the shorelines are most dramatic along the barrier islands and exposed oceanfront shorelines, particularly at the mouths of inlets and bays.

The beaches, dunes, vegetation, and flood plains of these coastal areas are very important as buffers to possible storm damage in adjacent, more inland areas. At the same time, their proximity to the water makes them, popular locations for residential and recreational/commercial development. Extensive development along the shoreline can place both property and lives at stake. In addition, improper development practices can disrupt the natural dynamics which maintain these shoreline areas as effective storm barriers.

Specific parts of the coastline are more susceptible to erosion forces than others, and these high hazard erosion areas warrant even more careful management. Because of the value of South Carolina's coastline, as an economic and recreational resource, and as a unique physical feature and natural buffer, those areas which are least stable and have been identified as high erosion areas are recognized as Geographic Areas of Particular Concern.

Management Authority and Inventory

The South Carolina Coastal Zone Management Act (Act 123 of the 1977 South Carolina Legislature) mandates the South Carolina Coastal Council to develop a beach erosion control program. Section 12 of the Act reads as follows:

> (A) The Council shall develop and institute a comprehensive beach erosion control policy that identifies critical erosion areas, evaluates the benefits and costs of erosion control structures funded by the State, considers the dynamic littoral and offshore drift systems, sand dunes and like items.

The Council's responsibility includes State permitting authority for all construction activities or alterations on the beach and primary sand dune critical areas. The Council also has authority to remove erosion control structures which are deemed to have an adverse effect on the public interest; to receive and expend federal funds for beach or shore erosion control in areas with full public access; and to declare a beach or shore erosion emergency and expend any available State funds to alleviate the acute erosion situation.

The erosion control program and its policies will become a part of South Carolina's overall coastal zone management program, as it is developed and finalized. An inventory of erosion and accretion trends and shoreline processes will be conducted as part of the planning effort. This comprehensive erosion study will provide information on those segments of the State's shoreline which are most severely eroding. While not yet completed, the study will identify those coastline areas which later will be designated as Geographic Areas of Particular Concern, as well as developing the designation criteria for critically-eroding shorefront.

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APPENDIX A

*NOTE: (Recently proposed, new draft 306 regulations include GAPC's under the subpart entitled "Special Management Areas". The requirement is restated as follows:

(a) Requirement. In order to meet the requirements of subsections 305 (B) (3) and (5) of the Act, States must:

(1) designate geographic areas that are of particular concern, on a generic or site-specific basis or both;
(2) indicate the nature of the concern and the basis on which designations are made;
(3) describe how the management program applies enforceable policies and authorities to the designated areas; and
(4) provide guidelines regarding priorities of uses in these areas, including guidelines on uses of lowest priority.

This draft element of South Carolina's coastal program has been organized and written in an effort to comply with both existing regulations and the proposed regulations, at such time as they are promulgated in final form.)

APPENDIX B
ENDANGERED SPECIES
in
SOUTH CAROLINA

Birds

American Peregrine Falcon
Falco peregrinus anatum

Arctic Peregrine Falcon
Falcon peregrinus tundrius

Bachman's Warbler
Vermivora bachmanii

Eastern Brown Pelican
Pelecanus occidentalis carolinensis

Eskimo Curlew
Numenius borealis

Ivory-billed Woodpecker
Campephilus principalis

Kirtland's Warbler
Dendroica kirtlandii

Red-cockaded Woodpecker
Dendrocopus borealis

Southern Bald Eagle
Haliaeetus l. leucocephalus

Fish

Shortnose Sturgeon
Acipenser brevirostrum

Mammals

Atlantic Right Whale
Eubalaena glacialis

Blue Whale
Balaenoptera musculus

Bowhead Whale
Balaena mysticetus

Eastern Cougar
Felis concolor cougar

Finback Whale
Balaenoptera physalus

Florida Manatee
Trichechus panatus

Humpback Whale
Megaptera novaeangliae

Mammals (cont.)

Indiana Bat
Myotis sodalis

Sei Whale
Balaenoptera borealis

Sperm Whale
Physeter catodon

Reptiles

Atlantic Leatherback Turtle
Dermochelys c. coriacea

Atlantic Ridley Turtle
Lepidechelys kempii

Gopher Tortoise
Gopherus polyphemus

Amphibians

Pine Barren Tree Frog
Hyla andersoni

Zig Zag Salamander
Plethodon dorsalis

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