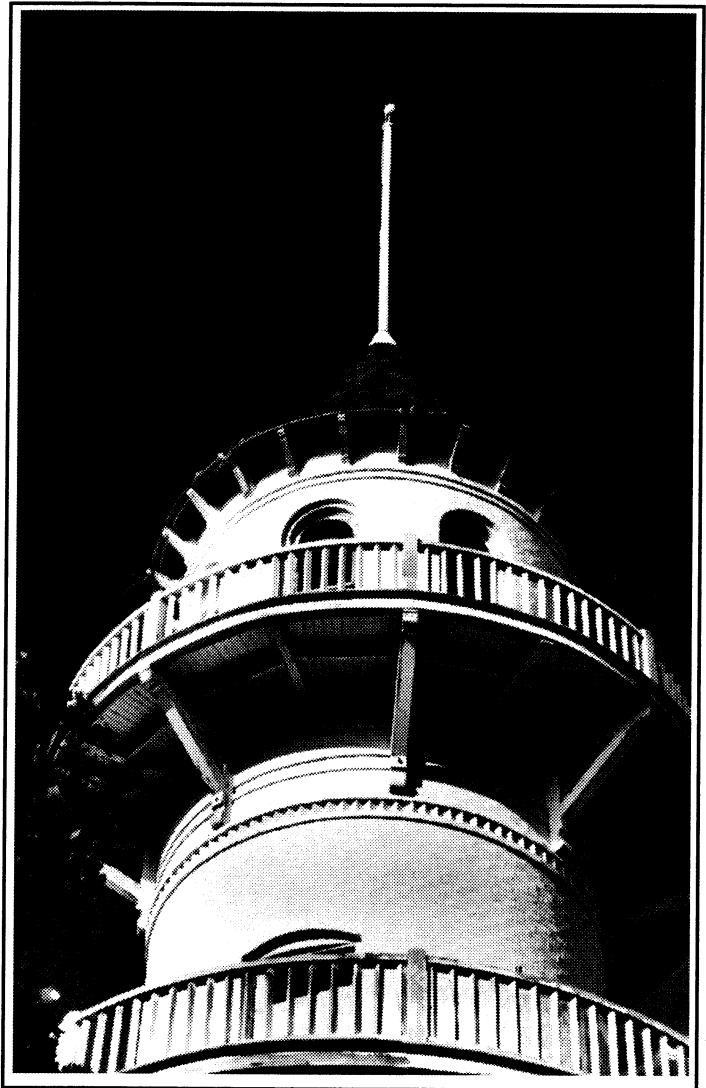


CHAPTER SEVEN:

SPECIAL MANAGEMENT AREAS



Thus always does history, whether of marsh or market place, end in paradox. The ultimate value in these marshes is wildness, and the crane is wildness incarnate. But all conservation of wildness is self-defeating, for to cherish we must see and fondle, and when enough have seen and fondled, there is no wilderness left to cherish.

Aldo Leopold
A Sand County Almanac



SPECIAL MANAGEMENT AREAS

The State of Georgia recognizes the need to address areas that are of particular importance because of their coastal-related values or characteristics, or because they may face pressures which require detailed attention beyond the general planning and regulatory system which is part of the regulatory program. As a result, these areas require special management attention within the terms of the State's overall coastal program. This special management may include regulatory or permit requirements applicable only to the area of particular concern. It also may include increased intergovernmental coordination, technical assistance, enhanced public expenditures, or additional public services and maintenance to a designated area. "Special Management Areas" are, therefore, areas of unique natural resource value, including those exhibiting scarce or vulnerable natural habitats and physical features; those offering substantial recreational value; those of particular economic value; and those of vital importance in protecting and maintaining coastal resources. An area or resource must meet one or more of the following criteria to be designated a Special Management Area.

- (1) The area is a unique, scarce, fragile, or vulnerable natural habitat; a unique or fragile physical figuration; or an area of historical significance, cultural value, or scenic importance;
- (2) The area demonstrates high natural productivity or essential habitat for living resources, including fish, wildlife, and endangered species and the various trophic levels in the food web critical to their well-being;
- (3) The area is one of substantial recreational value and/or opportunity;
- (4) The area is one where developments and facilities are dependent upon the utilization of, or access to, coastal waters;
- (5) The area has unique hydrologic, geologic, or topographic significance for industrial or commercial development or for dredge material disposal;
- (6) The area is one of urban concentration where shoreline utilization and water uses are highly competitive;
- (7) The area is one where, if development were permitted, it might be subject to significant hazard due to storms, slides, floods, erosion, settlement, salt water intrusion, and sea level rise; and/or
- (8) The area is needed to protect, maintain, or replenish coastal lands or resources including coastal flood plains, aquifers and their recharge areas, estuaries, sand dunes, coral and other reefs, beaches, offshore sand deposits, and mangrove stands.

**SECTION I:
AREAS OF PARTICULAR CONCERN**

This category of Special Management Areas includes areas or resources of such special importance and concern that the State has established regulatory and/or management controls over them. As development and implementation of the Georgia Coastal Management Program continues, areas that may deserve particular attention or designation as Areas of Particular Concern will be studied. Nominations of additional Areas of Particular Concern for inclusion in the Coastal Management Program may be suggested by State agencies, federal agencies, local governments, organizations, and interested private citizens. As long as the designation criteria are met, the Coastal Resources Division may designate new Areas of Particular Concern as a routine program change. Any addition that would require a change in the designation criteria would constitute an amendment to the Program, subject to public review and Commissioner approval as described in Chapter Four, Section II, Part E. Routine program changes and amendments must be approved by the National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management (15 C.F.R. §§ 923.80-923.84). The criteria for designating an Area of Particular Concern are as follows.

- (1) The area of concern must be inventoried and designated on a generic or site-specific basis, or both;
- (2) The area must be identified by location (if site specific) or category of coastal resources (if generic) in sufficient detail that affected landowners, governmental entities, and the public can determine with reasonable clarity whether a given area is designated;
- (3) In identifying areas, the nature of the concern must be described as well as the basis on which designations are made;
- (4) The management program must describe how it addresses and resolves the concerns for which areas are designated; and
- (5) The management program must provide guidelines regarding priorities of uses in these areas, including guidelines on uses of lowest priority.

The Coastal Zone Advisory Committee Task Force identified certain areas as areas of concern because they are unique and either environmentally fragile or economically significant to the coastal area and the State. This section describes the Areas of Particular Concern, along with the policies appropriate to each area. Refer to Chapter Five, "Policies and Management Authority," for more detailed descriptions of the applicable policies.

TABLE 7.1: Inventory of Areas of Particular Concern

Areas of Historic, Archaeological, Cultural, and Paleontological Significance
Barrier Islands
Marsh Hammocks
Aquifer Management and Protection
Economic Development Areas
Public Access and Open Space
Freshwater Wetlands
Navigational Channels
Beaches, Dunes, and the Sand-Sharing System
Rivers and Adjacent Wetlands
Shorebird Nesting Areas
Ocean Management

A. Areas of Historic, Archaeological, Cultural, and Paleontological Significance

Findings

Georgia's coastal area has a rich cultural history. Historic sites attract tourists and local residents alike to learn about the life and history of their predecessors. As of January 1997, 112 historic resources in the coastal area have been nominated to the National Register of Historic Places. The Regional Development Centers and the Department of Natural Resources, Historic Preservation Division provide technical assistance and funding to help identify these resources. Local communities and property owners are the critical link for nominating areas of historical significance. Local governments are required by the Georgia Planning Act to include an inventory of historic resources in their comprehensive plans. Without proper zoning protection, historically-significant areas could be used for activities that would diminish their historical value. It is important that local governments use their zoning powers to protect valuable historic and cultural sites from the impacts of development.

Policies

- Coastal Marshlands Protection Act
- Georgia Comprehensive Solid Waste Management Act
- Historic Areas
- Revocable License Program (Georgia Administrative Procedures Act)
- Shore Protection Act
- Submerged Cultural Resources

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Description

The Historic Preservation Division is responsible for identifying historic and archeological sites; for establishing, maintaining, and expanding the site inventory and register of historic places; and for assisting local communities in designating and nominating sites for the National Register. Local communities may initiate recognition of a site, and Regional Development Centers may employ historic planners to assist local communities with the application process.

The Historic Areas and Submerged Cultural Resources Code Sections establish the laws for preservation of historic sites in Georgia. The Georgia Planning Act requires local governments to address historic resources in their local comprehensive plan. The Real Estate Unit of the Georgia Department of Natural Resources acquires property throughout the State under various authorities and for various purposes, including historic preservation.

Under the Georgia Comprehensive Solid Waste Management Act, publicly-owned solid waste facilities are required to identify and consider historic or cultural sites. Georgia law specifies a 5,708 yard minimum distance from historic sites. Private facilities are limited by local zoning requirements that are within the jurisdiction of local governments.

Within the jurisdiction of the Coastal Marshlands Protection Act, the Shore Protection Act, and the Revocable License Program, potential disposal sites for dredging materials must take into account significant historic, cultural, and archeological areas.

B. Barrier Islands

Findings

Eight major barrier islands and several smaller barrier islands lie along the Georgia coast, separated from the mainland by several miles of salt marsh. These islands currently support a wide range of uses and activities, ranging from wildlife refuge and camping to residential and commercial development. All of Georgia's approximately 88 miles of ocean beach is located on the seaward side of these islands. This fact, combined with coastal Georgia's generally mild climate, makes the barrier islands highly attractive for recreational and commercial development.

Ten of the islands are in public ownership. With one exception (Jekyll Island), these islands lack causeway access and are designated wildlife management areas, heritage preserves, and undeveloped recreational areas. Tybee Island, Sea Island, St. Simons Island, and Jekyll island are the only barrier islands directly accessible by automobile and are thus the only islands where significant urban development has occurred. Approximately 65% of the total upland acreage of the fifteen largest barrier islands is in public ownership (36% State and 29% Federal). The

Georgia barrier island system is the most undisturbed system of large barrier islands in the United States. Section III of this chapter, "Shorefront Access and Protection Planning," provides a more complete description of Georgia's beaches and barrier islands.

Policies

- Coastal Marshlands Protection Act
- Revocable License Program (Georgia Administrative Procedures Act)
- Shore Protection Act

Description

The Coastal Marshlands Protection Act, the Shore Protection Act, and the Revocable License Program consider impacts on barrier islands when issuing permits. Development is allowed if in the public interest. Local governments are responsible for zoning decisions for their communities.

C. Marsh Hammocks

Findings

In addition to the barrier islands, there are forested islands called marsh hammocks amidst salt marshes. Marsh hammocks exist for a number of reasons. Some are the remnants of old barrier islands formed during times of higher sea level; some are islands separated from larger islands by erosion; some are formations from ballast dumped by ships during the colonial era; some are dredge spoil disposal sites. Marsh hammocks act as protectors for other areas by slowing erosion from high spring or flood tides, acting as wind barriers, and impeding stormwater runoff. Marsh hammocks are botanically unique and can be valuable habitat for eagles and other animal species, as well as rare plants whose seeds have washed ashore. In many cases, Indian middens have been found on these islands. Marsh hammocks are unique scenic counterparts to coastal marshes.

Marsh hammocks are sometimes developed for residential sites, used as platforms for causeways, or used as wetland mitigation sites. As population and development pressures increase, more interest in developing these small upland areas is expected. Since development of these sites often requires considerable investment of infrastructure such as building causeways, laying utility lines to more remote areas, as well as disrupting valuable habitat, the extent of marsh hammock development that is in the public interest must be carefully evaluated. Erosion and sedimentation buffers help protect surrounding marsh.

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Policies

- Coastal Marshlands Protection Act
- Georgia Erosion and Sedimentation Act

Description

Development and associated projects involving marsh hammocks have the potential to impact marshlands. In particular, roads built to developed marsh hammocks may affect the function of the surrounding marsh. All projects impacting salt marshlands are subject to the jurisdiction of the Coastal Marshlands Protection Act. Residential, commercial, and industrial development on marsh hammocks are subject to the 25 foot setback required of the Georgia Erosion and Sedimentation Act. Local governments are responsible for zoning decisions in their communities.

D. Aquifer Management and Protection

Findings

Coastal Georgia has a series of aquifer systems that vary in their confinement, depth, geologic characteristics, and water yield. The limestone strata underlying the coastal plain form one of the most productive aquifer systems in the country. The shallowest aquifers are near the surface in unconsolidated sediments, and are generally unconfined. The aquifers range in depth from 11 to 72 feet, and commonly yield two to 25 gallons of water per minute. They serve as a supplemental source of water in urban areas, and a primary source of water for domestic and livestock use in rural areas.

The Upper and Lower Brunswick aquifers are located in phosphatic and dolomitic quartz sand, and are generally confined. They range in depth from 85 to 390 feet, and commonly yield 10 to 30 gallons of water per minute. In coastal Georgia, these aquifers are considered to be a supplemental water supply to the Upper Floridan aquifer. Most wells tap both the Floridan aquifer and parts of the Upper and Lower Brunswick aquifer.

The Floridan aquifer is a limestone, dolomite, and calcareous sand aquifer system, and is generally confined. Its depth ranges from 40 to 900 feet, and it commonly yields 1,000 to 5,000 gallons of water per minute, though it can exceed 11,000 gallons per minute. The aquifer was deposited in the period from mid-Eocene to mid-Miocene. Since the aquifer is deeply buried in the coastal area, the groundwater level is influenced primarily by pumping and not by recharge from local precipitation. Instead, it is recharged with water where it is exposed near the fall line that runs from an area south of Augusta towards Macon, through Albany to Bainbridge. The

aquifer flows from the fall line toward the ocean and provides water to the coastal area. The Floridan aquifer supplies 50 percent of groundwater used in Georgia.

The major withdrawals from the Floridan aquifer occur in the Savannah and Brunswick areas. Since pumping began in Brunswick during the late 1800's, withdrawals have lowered the level of the Upper Floridan aquifer and formed a cone of depression centered at Brunswick. This water level decline has allowed saltwater to migrate upward into the Upper Floridan aquifer in Brunswick from the Fernandina permeable zone. A cone of depression has also developed in Savannah. The water level in the Upper Floridan aquifer in the Savannah area is mainly affected by pumping for municipal and industrial uses. The water level in the Upper Floridan aquifer in the Jesup-Doctortown area is mainly affected by industrial pumping at Doctortown, near Jesup. Beneath the Floridan aquifer lie the Claiborne, Clayton, and Cretaceous aquifers. These aquifers are less important as water sources for the coastal area.

As pressure on groundwater use increases and saltwater intrusion and lowering of the water table limit the usefulness of the aquifer, groundwater management issues become more pressing. The continued availability of high quality groundwater is a major limitation for residential, commercial, and industrial development in coastal Georgia. Long-term planning for alternative water uses such as surface water use, water conservation, and limiting excessive withdrawals are necessary to ensure continued access to water and to allow continued economic growth and achieve groundwater quality standards.

Policies

- Georgia Safe Drinking Water Act
- Groundwater Use Act
- Water Wells Standards Act

Description

The Georgia Safe Drinking Water Act charges the Department of Natural Resources, Environmental Protection Division with the responsibility of maintaining the quality of drinking water and maintaining a water-supply program adequate for present and future needs of the state. The Division is also authorized to develop rules and policies for the proper administration of drinking water programs.

The Groundwater Use Act charges the Board of Natural Resources with the responsibility to adopt rules and regulations relating to the conduct, content, and submission of water conservation plans, including water conservation practices, water drilling protocols, and specific rules for withdrawal and utilization of groundwater. The Environmental Protection Division administers these rules and regulations. Groundwater withdrawals over 100,000 gallons per day

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require a permit from the Division. Permit applications that request an increase in water usage must also submit a water conservation plan approved by the Division Director. The Environmental Protection Division has prepared a comprehensive groundwater management plan for coastal Georgia that addresses water conservation measures, protection from saltwater encroachment, and economic development issues.

The Water Wells Standards Act provides standards for siting, construction, operation, maintenance, and abandonment of wells and boreholes. In the case of individual and non-public wells, the Act requires that they be located as far from known or potential sources of pollutants as possible. The Act establishes licensing requirements for drilling contractors and a State Water Well Standards Advisory Council. The Council has the authority to adopt and amend rules and regulations that are reasonable to govern the licensing of well contractors. Compliance with the Act is required for all activities that use well water. The Council may file a petition for an injunction in the appropriate superior court against any person that has violated any provisions of the Act.

E. Economic Development Areas

Findings

Continued economic growth is important to the economic health of the coastal area. Local governments are encouraged to use comprehensive planning and zoning authority to guide development at the local level. Through the Georgia Coastal Management Program, the Coastal Resources Division provides information and technical assistance to local governments and developers to assist the planning process and to ensure that appropriate coastal issues are addressed. The Division's role includes providing technical and scientific information that encourages sustainable development in order to make efficient use of resources without degrading the coastal environment and quality of life. Making quality economic growth a priority for the coastal region encourages long-term investment, economic stability, and employment opportunities in years to come.

The median income varies among the coastal counties reflecting the diversity of communities in the coastal area. Chatham County, which includes the City of Savannah, is the most urban county and ranks highest for median income. The comparatively rural counties rank lower for personal income levels. The coastal area has experienced strong population growth for the period from 1980 to 1990. This population growth is expected to continue at an average of 20 percent per decade. Since increased population means increased use of resources and increased demand for municipal services, development planning and resource management is critical for the coastal area.

Although forestry and fishing are important employers in the coastal area, these industries are expected to lag behind State and national growth trends for the period 1990 to 2005. The service, communication, and transportation industries are expected to show the strongest growth in Georgia. To maintain a healthy economy while protecting natural resources for current and future residents, new development must be sustainable or carefully planned to minimize adverse environmental impacts. Through the Coastal Management Program, resources are available to provide planning and technical assistance, including referrals to experts and agencies.

Policies

Currently, there are no Program policies in this category.

Description

Local governments are responsible for zoning decisions for their communities. These governments may consider setting aside specific areas to promote and encourage economic development. Regional Development Centers assist in planning efforts. The Coordinated and Comprehensive Planning by Counties and Municipalities Act guides local planning.

F. Public Access and Open Space

Findings

Public access to recreational, wilderness, and other areas of the Georgia coastal area is of paramount importance to a burgeoning population. Section IV of this chapter, "Shorefront Access and Protection Planning," provides a summary of beach and natural areas within the coastal area that can be easily accessed by the public. Section VI of Chapter Six, "Marine Related Facilities," provides additional aspects related to public docks. Also refer to the Coastal Resources Division publication, "Anglers Guide to Georgia's Saltwater Fishing Access Sites" for information.

Policies

- Coastal Marshlands Protection Act
- Georgia Fisheries Law Pertaining to Shellfish (Game and Fish Code)
- Georgia Natural Areas Act
- Georgia Scenic Rivers Act
- Georgia Scenic Trails Act
- Revocable License Program (Georgia Administrative Procedures Act)
- Shore Protection Act

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Description

The Nongame Wildlife Conservation and Habitat Acquisition Fund provides a mechanism for voluntary donations and tax refund allocations to establish a fund to acquire property for wildlife habitat. The Georgia Department of Natural Resources has the authority under Title 27-1-6 of the Official Code of Georgia Annotated to "acquire by purchase, condemnation, lease, agreement, gift, or devise lands or waters suitable for ... fish hatcheries, nursery ponds, game ponds, sanctuaries, reservations, and refuges ... and for wildlife restoration, propagation, protection, preservation, management research or management...." Programs such as Preservation 2000 and RiverCare 2000 use State funding to acquire land for conservation and alternative uses. These programs also encourage access to publicly-owned areas for recreational and educational use. Any new tax incentive program will require legislative action.

The Georgia Natural Areas Act authorizes the Department of Natural Resources to identify areas in Georgia which are of unusual ecological significance, and to secure the preservation of such areas in an undisturbed state. The purpose of such acquisition is to allow for scientific study and education, to serve as an example natural area, and to enrich the quality of Georgia's environment. The Act defines natural areas as tracts of land in their natural state to be set aside and permanently protected, or managed for the purpose of preserving natural plant or animal communities, rare or valuable members of such communities, or any other natural feature of significant scientific, educational, geologic, ecological, or scenic value.

The Georgia Scenic Trails Act provides for a Georgia Scenic Trails System, in order to provide for the increasing recreation needs of an expanding population, promote outdoor areas, and provide an alternative to motorized travel. The Georgia Scenic Rivers Act defines scenic rivers to mean those which have valuable scenic, recreational, or natural characteristics that should be preserved for the benefit and enjoyment of present and future generations.

The Coastal Marshlands Protection Act, the Shore Protection Act, the Revocable License Program, and Georgia Fisheries Law Pertaining to Shellfish include policies to prevent docks from having an adverse impact on navigation, marsh habitat, waterfowl, shellfish habitats, or safety. Refer to section VI of Chapter Five, "Marine Related Facilities," for additional information about docks. Local governments are responsible for planning public access and open space in their communities.

G. Freshwater Wetlands

Findings

There is no single definition of wetlands among wetland ecologists, managers, or government regulators. Despite differences in wording, however, there is much agreement among scientists with regard to areas or habitats that are wetlands. Problems in defining wetlands stem from the nature of wetlands themselves, which vary greatly in their characteristics and functions. Some wetlands are temporary or transient and some are degraded by dredging and filling, thus making the functions of the wetlands difficult to determine. Most definitions of wetlands include the following three attributes: saturation or inundation by water at some time during the growing season; unique anaerobic soils called "hydric" soils; and "hydrophitic" vegetation which is adapted to or tolerant of saturated soils.

Wetlands are some of the most productive natural areas in the world. Important fish and wildlife habitat, wetlands are the nursery areas for most of the fish and shellfish used for human consumption. These fish and shellfish also depend on wetlands for breeding, spawning, feeding, and cover. Migratory birds and waterfowl use wetlands for food, shelter, breeding, and wintering grounds. Many other animal species, including many threatened and endangered species, rely on wetland habitats.

Wetlands are critical to humans as habitat for commercially-important fish and shellfish species, and as habitat for hunted waterfowl and fur-bearers. They also provide important recreation areas for boaters, hunters, fishers, hikers, photographers, etc. Functionally, wetlands are important in helping control flooding and erosion. They also are frequently located between water bodies and high ground, thus serving as buffers. Finally, wetlands help improve water quality and availability. They purify water by processing nutrients, suspended materials, and other pollutants. They help increase water availability by absorbing water in wet seasons and gradually releasing it during dry periods.

Policies

- Georgia Environmental Policy Act
- Georgia Erosion and Sedimentation Act
- Georgia Safe Drinking Water Act
- Georgia Water Quality Control Act
- Mountain and River Corridor Protection Act

Description

Federal, State, and local laws have been passed to protect wetlands. Many development, construction, agricultural, and silvicultural activities affect or are affected by wetlands. All

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activities that impact the navigable waters and wetlands of the State require a federal permit from the Corps of Engineers and a certification of consistency with State water quality laws under Section 401 of the federal Clean Water Act. The Savannah District Corps of Engineers is developing standard operating procedures for wetland mitigation which value wetland restoration and enhancement greater than preservation in mitigating situations.

The Georgia Water Quality Control Act gives the Environmental Protection Division the authority to restore and maintain a reasonable degree of purity in the waters of the State, to maintain an adequate supply of such waters, to regulate where needed reasonable usage of State waters, and to require reasonable treatment of sewage, industrial wastes, and other wastes prior to their discharge into such waters. Implementing Rules of the Act include "wetlands" as "waters of the State" to which the regulations are applicable.

The Georgia Erosion and Sedimentation Act requires a 25-foot setback for residential, commercial, and industrial development. The Georgia Environmental Policy Act calls for an environmental effects report when a proposed governmental action may significantly adversely affect the quality of the environment. The Safe Drinking Water Act delegated authority to the Environmental Protection Division to ensure that the drinking waters of the State are utilized prudently to the maximum benefit of the people.

The Mountain and River Corridor Protection Act authorizes the Department of Natural Resources to develop minimum standards and procedures for the protection of wetlands to be used by local governments in developing, preparing, and implementing their comprehensive plans. These include land use activities, land development densities, and activities which involve alteration of wetlands.

H. Navigational Channels

Findings

Safe navigation of the rivers and estuaries of Georgia's coast are important considerations for management, in conjunction with protection of natural resources. Section VI, "Marine Related Facilities," and Section III, "Transportation Facilities," provide additional information on safe navigating and dredging in association with channel maintenance.

Policies

- Coastal Marshlands Protection Act
- Georgia Boat Safety Act
- Georgia Erosion and Sedimentation Act
- Shore Protection Act

Description

The Coastal Marshlands Protection Act, the Shore Protection Act, and the Georgia Erosion and Sedimentation Act require permits for dredging when excavating shipping channels from the Atlantic Ocean to inland waters and associated sounds. If wetlands are involved, a Section 401 Water Quality Certification is required under the federal Clean Water Act. The Historic Preservation Division reviews dredging and excavation actions under Section 106 of the National Historic Preservation Act to ensure protection of historic resources. Inland sites include, but are not limited to, the Altamaha, Ogeechee, Satilla, Turtle, Brunswick, Savannah, and St. Mary's Rivers and their sounds.

I. Beaches, Dunes, and Sand-Sharing System

Findings

Georgia's coast is comprised of barrier islands and marshes. All of Georgia's beaches and dunes are found on the barrier islands. Major elements of the island-marsh-tidal system are interrelated: sand beaches and dunes protect the islands from erosion and flooding; islands protect the marshes from the force of storms; and marshes provide feeding and nursery grounds for aquatic life. The dunes, beaches, and sediment transport provided by the rivers of Georgia and neighboring states comprise the "sand-sharing system." This system is vitally important for retaining the beaches and barrier islands.

Through the Georgia Coastal Management Program, the Coastal Resources Division recognizes the need to protect the fragile sand-sharing system, while allowing recreational access to the beaches and waterfront areas. This sand-sharing system, however, is evolving over time. The impacts of unrestrained development can greatly exaggerate the migration of the barrier islands, lead to flooding problems, and reduce the recreational opportunities provided by Georgia's beaches. Careful planning and management of the sand-sharing system are essential to continued and sustainable use of this resource.

Policies

- Shore Protection Act

Description

The Shore Protection Act limits activities along the shoreline and requires a permit for certain activities and structures on the beach. Construction activity in sand dunes is limited to temporary structures such as crosswalks, and then by permit from the Coastal Resources Division.

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Structures such as boat basins, docks, marinas, and boat ramps are not allowed in the dunes. The Act prohibits operation of any motorized vehicle on or over the dynamic dune fields and beaches, except as authorized for emergency vehicles and government vehicles for beach maintenance or research. The Act also prohibits storage or parking of sailboats, catamarans, or other marine craft in the dynamic dune field.

J. Rivers and Adjacent Wetlands

Findings

There are five major rivers (the St Mary's, Satilla, Altamaha, Ogeechee, and Savannah Rivers) and several smaller, tidal rivers in coastal Georgia. Georgia's coastal salt marshes, intertidal areas, and tidal water bottoms are the jurisdiction of the Coastal Marshlands Protection Act, and comprise approximately 701,000 acres -- about one-third of all of the salt marshes on the Atlantic Coast. The wetlands provide many useful functions, including storm surge and flood protection, nursery and spawning habitat for marine fish and shellfish, flushing and filtration of land-borne contaminants, and migratory wildfowl nesting and feeding areas. They also provide recreational fishing and boating activities and scenic vistas.

Wetlands and rivers are discussed elsewhere in this chapter, in part G, "Wetlands," of this section, and in section IV, "Shorefront Access and Protection Planning." Protecting and encouraging sustainable use of these valuable resources is of paramount importance to the Georgia Coastal Management Program.

Policies

- Coastal Marshlands Protection Act
- Georgia Natural Areas Act
- Georgia Scenic Rivers Act
- Georgia Scenic Trails Act
- Georgia Water Quality Control Act
- Historic Areas
- Mountain and River Corridor Protection Act
- Submerged Cultural Resources

Description

Stormwater runoff from agricultural field and impervious surfaces (e.g., roads, rooftops, parking lots), commonly empties into wetlands, streams, and embayments. This runoff often contains contaminants such as nutrients from fertilizer, oil from cars, and toxics from pesticide

use. Contaminants are a significant cause of shellfish bed closures throughout the country and the world. Section 402 of the Clean Water Act specifies requirements for municipalities to develop and implement stormwater management plans, and to obtain appropriate National Pollutant Discharge Elimination System (NPDES) permits. Savannah, the largest city and urban area in the Georgia coastal area, has a stormwater management plan. The Environmental Protection Division developed amendments to the Georgia Water Quality Control Act to provide regulatory guidelines for stormwater runoff and discharges. Through the Georgia Coastal Management Program, the Coastal Resources Division encourages development of stormwater runoff systems that do not contaminate local waters; the Division can provide technical assistance to help in these efforts.

Discharges must meet federal and State water quality standards. The Georgia Water Quality Control Act is the State authority that addresses the issues and regulations necessary to implement Section 402 of the federal Clean Water Act, the Nation Pollutant Discharge Elimination System. State-funded programs such as Preservation 2000, River Care 2000, and Heritage 2000 provide funds to acquire and manage lands for conservation and alternative uses. The Georgia Scenic Trails Act authorizes the Department of Natural Resources to construct, manage, and maintain a system of trails throughout Georgia.

The Georgia Natural Areas Act authorizes the Department of Natural Resources to identify areas in Georgia which are of unusual ecological significance, and to secure the preservation of such areas in an undisturbed state. The purpose of such acquisition is to allow for scientific study and education, to serve as an example natural area, and to enrich the quality of Georgia's environment. The Act defines natural areas as tracts of land in their natural state to be set aside and permanently protected, or managed for the purpose of preserving natural plant or animal communities, rare or valuable members of such communities, or any other natural feature of significant scientific, educational, geologic, ecological, or scenic value.

The Georgia Scenic Rivers Act defines scenic rivers to mean those which have valuable scenic, recreational, or natural characteristics that should be preserved for the benefit and enjoyment of present and future generations. The Historic Areas and Submerged Cultural Resources Code Sections also address historic resources.

K. Shorebird Nesting Areas

Findings

Nesting areas for shorebirds and waterfowl are important considerations for the preservation of these species. There are hundreds of species of birds that either reside or migrate through coastal Georgia. Some of these birds are endangered or threatened with extinction. Others provide a valuable recreational opportunity for hunters and birdwatchers. All are part of

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the biodiversity of the coastal area that provides stability to the coastal ecosystem. Development considerations must comply with regulations implementing the federal Endangered Species Act and the Georgia Endangered Wildlife Act. For those species not covered under these laws, it is still important to recognize their significance in the coastal ecosystem during consideration of any development activities.

Policies

- Coastal Marshlands Protection Act
- Endangered Wildlife Act
- Revocable License Program
- Shore Protection Act

Description

The Coastal Marshlands Protection Act recognizes coastal marshlands as important habitat and protects these marshlands by limiting and requiring permits for activities and structures in marsh areas. In establishing protections for sand dunes, beaches, sandbars, and shoals, the Shore Protection Act contributes towards the protection of Shorebird Nesting Areas. In addition, projects permitted under authority of the Coastal Marshlands Protection Act, the Shore Protection Act, and the Revocable License require full compliance with the protection of endangered or protected species.

The Endangered Wildlife Act provides for identification, inventory, and protection of animal species that are rare, unusual, or in danger of extinction. The protection offered to these species is limited to those that are found on public lands of the State. It is a misdemeanor to violate the rules prohibiting capture, killing, or selling of protected species, and protection of protected species on public lands. Some important Shorebird Nesting Areas are protected as natural areas. Refer to Section II, "Areas of Preservation and Restoration."

L. Ocean Management

Findings

The Atlantic Ocean is a substantial resource for Georgians. It provides food supplies, a means of transportation, historic sites and relics, valuable live bottom habitat, and potential sites for waste disposal and phosphate mining. As is the case on land, not all uses of ocean resources are mutually compatible. Further, some ocean uses can have impacts on nearshore and land-based resources. Mining and oil and gas activities, for example, can have severe and wide-reaching environmental impacts.

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Minerals are abundant in the marshes and estuaries, and phosphates and strategic minerals (e.g. titanium) have been identified as resources with significant economic potential. Some dredging occurs for sand, gravel, and shell. The phosphate deposits of major economic potential lie in upper Miocene strata in Wilmington, Little Tybee, Cabbage, and Wassaw Islands. There are also indications of minable concentrations approximately 10 miles offshore. At least 800 tons of 100 percent bone phosphate of lime could be recovered at a profit using 1969 technology levels. Possible adverse impacts of phosphate mining include the destruction of large areas of marsh-estuarine habitat, increased biological oxygen demand from sediment disturbance, hydrologic changes and patterns of sediment disruptions, and accidental rupture of the impermeable layer capping the aquifer and the consequent saltwater intrusion. Indirect impact on industries such as fisheries, mariculture, recreation, and tourism could also occur.

Other ocean management issues such as transportation of hazardous materials and takings of marine mammals can adversely affect habitat and biological populations. Regional management of fisheries, through the South Atlantic Fisheries Council, is a well-recognized. Other resources, however, have less defined management programs and are, therefore, more vulnerable to exploitation. The State of Georgia's jurisdiction over the ocean extends three nautical miles beyond the State's shoreline. Georgia can create laws and rules to regulate activities within this boundary. Beyond three miles, however, Georgia's direct authorities are more limited. Certain activities that occur beyond the three-mile limit that impact ocean and land resources may be subject to State law through federal consistency (See Chapter Eight).

Policies

- Coastal Marshlands Protection Act
- Endangered Wildlife Act
- Erosion and Sedimentation Act
- Georgia Oil and Gas and Deep Drilling Act
- Shore Protection Act

Description

Georgia's Oil and Gas and Deep Drilling Act regulates oil and gas drilling activities to provide protection of underground freshwater supplies and certain "environmentally sensitive" areas. Implemented by the Board of Natural Resources, the Act establishes requirements for drilling, casing, and plugging of wells for oil, gas, or mineral exploration.

The Georgia Endangered Wildlife Act and Wildflower Protection Act provide exemptions for construction activities and are limited to enforcement on public lands only. However, all State-issued permits must also ensure that the requirements of federal laws such as the federal Endangered Species Act and the Marine Mammal Protection Act are met.

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The Shore Protection Act and the Coastal Marshlands Protection Act regulate activities which may affect the sand-sharing system, or coastal marshlands. Any near-shore ocean activity may be subject to these Acts. In addition, activities outside State waters that may impact Georgia's valuable sand-sharing system and marshland resources must comply with these acts under the federal consistency provisions.

The Erosion and Sedimentation Act requires local governments to adopt a comprehensive ordinance establishing procedures governing land-disturbing activities. The Act also requires permits for specified land-disturbing activities such as the construction or modification of manufacturing facilities, construction activities, certain activities associated with transportation facilities, and activities on marsh hammocks. Exemptions include: surface mining, granite quarrying, and minor land-disturbing activities such as home gardening, construction of single-family homes built or contracted by the homeowner for his or her own occupancy, agricultural practices, forestry land management practices, dairy operations, livestock and poultry management practices, construction of farm buildings, Department of Transportation construction and maintenance projects, and others.

**SECTION II:
AREAS OF PRESERVATION AND RESTORATION**

This category of Special Management Areas includes those areas 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. The forests, marshes, streams, beaches, and coastal waters warrant special attention in the State's coastal management program because of their ecological and economic importance. The fact that these are finite and limited resources which need careful preservation and thoughtful management is increasingly evident. The following areas have been categorized as Areas of Preservation and Restoration by because they, by definition, include procedures to designate the areas for the purpose of preserving and/or restoring them for their conservation, recreation, ecological, historical, and/or aesthetic values.

TABLE 7.2: Inventory of Areas of Preservation and Restoration

<p><u>Heritage Trust Program Lands:</u> Ossabaw Island -- Chatham County Richmond Hill Wildlife Management Area -- Liberty, Bryan, and McIntosh Counties Wormsloe Historic Site -- Chatham County Little Tybee Island / Cabbage Island -- Chatham County Altamaha River Corridor -- McIntosh, Wayne, and Long Counties</p> <p><u>Wildlife Management Areas:</u> Altamaha Wildlife Management Area -- McIntosh County Dixon Memorial Wildlife Management Area -- Brantley County Little Satilla Wildlife Management Area -- Wayne County Ossabaw Island Wildlife Management Area -- Chatham County Paulk's Pasture Wildlife Management Area -- Glynn County Rayonier Wildlife Management Area -- Wayne and Brantley Counties Richmond Hill Wildlife Management Area -- Bryan and McIntosh Counties Sansavilla Wildlife Management Area -- Glynn and Wayne Counties Richard J. Reynolds Wildlife Management Area -- McIntosh County</p> <p><u>State Parks and Historic Sites:</u> Crooked River State Park -- Camden County Fort McAllister Historic Site -- Chatham County Skidaway Island State Park -- Chatham County Fort King George Historic Site -- McIntosh County Hofwyl-Broadfield Plantation Historic Site -- Glynn County Fort Morris Historic Site -- Glynn County Wormsloe Historic Site -- Chatham County</p> <p><u>Jekyll Island -- Glynn County</u> <u>Sapelo Island National Estuarine Research Reserve -- McIntosh County</u></p>
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A. Heritage Trust Program Lands

Heritage Trust Preserves within Georgia's coastal area, because of their unique natural, historical, and cultural values, are designated Areas of Preservation and Restoration. The Georgia Heritage Trust Program was established by the Heritage Trust Act of 1975. The purpose of the Heritage Trust Program is to identify those areas in Georgia that exhibit unique natural characteristics, special historical significance, or particular recreational values, and therefore warrant protection through the acquisition of fee simple title or lesser interests, or by utilization of other available methods. A "heritage area" is an area that has been identified by the Board of Natural Resources as having significant historical, natural, or cultural value.

A heritage area that has been acquired by the Department of Natural Resources for the Heritage Trust Program, and any other real property owned by the State of Georgia and under the custody of the Department of Natural Resources, may be dedicated as a heritage preserve and shall contain a designation of the best and most important use or uses for the particular area. Heritage preserves, upon written recommendation of the Board of Natural Resources and approval by the Governor, shall be held by the State in trust for the benefit of the present and future generations of Georgia citizens. Heritage preserves may not be put to any use other than the dedicated use or uses. Any lands within the coastal area dedicated as heritage preserves in the future will also be designated as "Areas of Preservation and Restoration" by the Georgia Coastal Management Program.

Priority of Uses for Heritage Trust Program Lands

- (1) The dedicated uses of the specific heritage preserve;
- (2) Uses that allow public enjoyment of the areas as long as the primary natural character of the area is not disrupted;
- (3) Uses that are compatible with the area's wildlife and wildlife management;
- (4) Uses that jeopardize the integrity of the Heritage Trust Program are prohibited.

B. State Wildlife Management Areas

Wildlife Management Areas located within the coastal area are designated as Areas of Preservation and Restoration. The Georgia Department of Natural Resources, Wildlife Resources Division is empowered to acquire land areas and to enter into agreements with landowners for purposes of managing wildlife species and establishing specific sanctuaries, wildlife management areas, and public fishing areas. The Wildlife Resources Division administers a management plan for each area that establishes short- and long-term uses and guidelines for the protection and use of each specific area. These areas owned and/or managed by the Wildlife Resources Division are important for conservation of wildlife and for recreational hunting and fishing opportunities. New

acquisitions of wildlife management areas and public fishing areas within Georgia's coastal area will be designated as Areas of Preservation and Restoration. The Wildlife Management Areas within the jurisdiction of the Coastal Marshlands Protection Act, the Shore Protection Act, and/or the Revocable License receive the additional protection provided by these authorities.

Priority of Uses for State Wildlife Management Areas

- (1) Uses that are consistent with the wildlife management area or public fishing areas plan for each designated area; and
- (2) Uses that are compatible with the area's wildlife, wildlife habitats, and wildlife management that simultaneously provide public recreational opportunities such as hunting and fishing.

C. State Parks and Historic Sites

State parks and historic sites within the coastal area are designated Areas of Preservation and Restoration. The Parks, Recreation, and Historic Sites Division of the Georgia Department of Natural Resources is responsible for the maintenance and operation of State parks and historic sites within the coastal area. These State parks and historic sites provide a wide variety of recreational opportunities and educational programs to Georgia residents and visitors. The State parks and historic sites within the coastal area also highlight many aspects of coastal Georgia's natural and cultural heritage.

The Parks, Recreation, and Historic Sites Division prepares management plans and regulates uses of each State park and historic site. Future additional State parks and historic sites within the coastal area will be designated as Areas of Preservation and Restoration.

Priority of Uses for State Parks and Historic Sites

- (1) Varied recreational activities open to the public;
- (2) Non-intensive uses that require minimal feasible alteration and that maintain the natural functions of the area; and
- (3) Provision of educational opportunities to park visitors.

D. Jekyll Island

Jekyll Island is the sixth largest of coastal Georgia's barrier islands, with about 4,400 acres of upland. Jekyll was named for Sir Joseph Jekyll, the largest contributor to Georgia's colonization. At one time, the English operated an outpost garrison on Jekyll to support the

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fortifications of General Oglethorpe on St. Simons Island to the north. In 1886, the island was purchased by a group of America's wealthiest families who developed it into the nation's most exclusive resort of the time, the Jekyll Island Club. By 1900, the members of the Jekyll Island Club represented one-sixth of the world's wealth. The club closed in 1942 at the outbreak of World War II, and never reopened. The State of Georgia acquired Jekyll Island in 1947 for use as a State park. In 1950, the State legislature established the Jekyll Island Authority (O.C.G.A. 12-3-230) to operate the island's facilities. The State purpose of the Authority is to maintain and to protect Jekyll Island's resources using funds generated from its amenities, and to restore and conserve the facilities. Jekyll Island is not, therefore, within Georgia's system of State parks. In 1978, the Jekyll Island Club Historic District was designated a National Historic Landmark.

The Jekyll Island Authority is responsible for planning and regulating uses of Jekyll Island within the guidelines established in the "Jekyll Island -- State Park Authority Act." Due to Jekyll Island's unique recreational, historical, and cultural value, it is designated an Area of Preservation and Restoration.

Priority of Uses for Jekyll Island

- (1) Uses that preserve the historic and cultural values of Jekyll Island;
- (2) Varied recreational activities open to the public;
- (3) Non-intensive uses that require minimal feasible alteration and that maintain the natural functions of the island; and
- (4) Provision of educational opportunities to visitors.

E. Sapelo Island National Estuarine Research Reserve

Congress created the National Estuarine Research Reserve System (NERRS) in 1972, in order to develop a system of estuarine reserves that represents a wide range of coastal and estuarine habitats found in the United States and its territories. In 1975, Georgia proposed the Duplin River estuary as a national estuarine sanctuary. The U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) studied and approved the State's proposal, and the site received designation as the Sapelo Island National Estuarine Sanctuary in December 1976. Sapelo Island was the second estuarine sanctuary designated as part of the national system. These protected estuarine areas are now known as the National Estuarine Research Reserve System. As part of the national program, Sapelo Island represents the Carolinian biogeographic region.

The Sapelo Island National Estuarine Research Reserve (SINERR) occupies almost one-third of Sapelo Island. Sapelo Island is the fourth largest Georgia barrier island, and one of the most pristine. The reserve, about 6000 acres, is made up of the Duplin River estuary, maritime

forest, and beach and dune areas. The Duplin River estuary includes unspoiled coastal marsh and tidal creeks. This area represents one of the earth's most biologically productive systems and was formed at its present location five to ten thousand years ago. Not only is the island rich in natural history, but also in human history dating back over 6000 years.

The Georgia Department of Natural Resources manages the SINERR in conformance with the applicable NOAA regulations for the National Estuarine Research Reserve System and with a memorandum of agreement between the two agencies. The two primary purposes of the SINERR are to protect natural and cultural resources, and to allow scientists to investigate and research the functions of the estuarine system. Public education and compatible recreation use are also part of the SINERR's program. The University of Georgia Marine Institute operates a major research center within the SINERR that provides scientists from around the world the opportunity to study estuarine and marine resources, geologic development of barrier islands and associated shoreline processes. Research at the Institute has generated more than 600 publications.

The Sapelo Island National Estuarine Research Reserve is an Area of Preservation and Restoration due to its important research, educational, and recreational attributes.

Priority of Uses for Sapelo Island NERR

The priority of uses for Sapelo Island National Estuarine Research Reserve are those research, educational, and recreational activities conducted within the guidelines and regulations established for National Estuarine Research Reserves, and the goals and objectives established by the Department of Natural Resources with assistance from the SINERR Advisory Committee.

**SECTION III:
SHOREFRONT ACCESS AND PROTECTION PLANNING**

A comprehensive coastal management plan must provide a definition of the term "beach" and a planning process for the protection of, and access to, public beaches and other public coastal areas of environmental, recreational, historical, aesthetic, ecological or cultural value. Georgia has defined "beach" in the Shore Protection Act (O.C.G.A. 12-5-230, *et seq.*) as "a zone of unconsolidated material that extends landward from the ordinary low-water mark to the line of permanent vegetation." Management consideration of public beaches and other public areas within the purview of the Georgia Coastal Management Program provides a planning framework for shorefront access and protection.

The coast of Georgia extends about 100 linear miles from the mouth of the St. Mary's River in the South to the mouth of the Savannah River in the North. The Savannah, Ogeechee, Altamaha, Satilla, and St. Mary's Rivers, as well as several smaller tidal rivers, empty into the Atlantic Ocean along Georgia's coast. The coast is characterized by an extensive system of salt marshes, tidal estuaries, and sounds that separate a series of eight major and several smaller barrier islands from the mainland. The "shoreline" of Georgia, therefore, is estimated to be more than 2,344 miles long when including all tidally-influenced shores. Unlike many other areas of the East Coast, approximately two-thirds of Georgia's islands are parks, refuges, or preserves. Georgia's coastal marshes comprise approximately one-third of the remaining salt marshes on the Atlantic Coast. All major elements of the island-marsh-tidal system are interrelated: sand beaches and dunes protect the islands from erosion and flooding; the islands protect the marshes from the force of storms; and the marshes provide feeding and nursery grounds for aquatic life.

A. Georgia's Barrier Islands

All of Georgia's beaches are located on the barrier islands, and most are ocean-facing. Georgia's 13 barrier islands comprise about 76,300 acres and include approximately 88 miles of beach. The largest island, Cumberland Island, has approximately 16.9 miles of beach on its 15,100 acres. Ossabaw, Sapelo, and St. Simons islands are also larger than 10,000 acres.

Of the 88 miles of beaches, approximately 19 miles have easy public access. All of the beaches in Georgia belong to the citizens of Georgia and are open to the public to the ordinary high water mark. Access to most of Georgia's beaches is difficult because they are located on islands not connected to the mainland by roads. While all of Georgia's beaches are accessible by boat, access is limited, for safety reasons, to non-motorized boats on Tybee, Sea, St. Simons, and Jekyll Islands. Motor vehicle traffic is prohibited on all of Georgia's beaches, except by permit from the Department of Natural Resources.

TABLE 7.3: Inventory of Georgia's Barrier Islands

<u>Island</u>	<u>Approximate Acreage</u>	<u>Approximate Miles of Beach</u>
Tybee	1,500	3.4
Little Tybee	1,600	3.0
Wassaw	2,500	6.0
Ossabaw	11,800	9.5
St. Catherines	7,200	11.0
Blackbeard	3,900	7.5
Sapelo	10,900	5.6
Little St. Simons	2,300	6.5
Sea	1,200	3.8
St. Simons	12,300	3.8
Jekyll	4,400	8.0
Little Cumberland	1,600	2.4
Cumberland	15,100	16.9
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Totals	76,300	88.3

Tybee Island

The northernmost of Georgia's barrier islands, Tybee Island is located within a short drive from Savannah, the largest city in Georgia's coastal area. Tybee Island's approximately 3.4 miles of beach are easily accessible by dune crosswalk structures and paths. There are three parking areas for beach access that can accommodate approximately 1500 cars. A fee of \$5.00/day is charged between St. Patrick's Day (March 17) and Labor Day (or longer if warm weather prevails). There are also approximately 1500 metered parking spaces on streets in close proximity to the beaches. The combined revenue from the parking fees amounted to approximately \$44,000 in 1994. The revenue is collected and used by the city of Tybee Island for law enforcement, lifeguards, beach maintenance, etc. There is one fishing pier with parking. Additionally, there are several private parking lots. There are three public dune crosswalk structures on the north end of the Island, eight public crossovers at the ends of streets that terminate at the dunes, as well as many privately-owned dune crossovers. The beach renourishment in 1995 included artificial dune construction, with re-vegetation of the artificial dunes and construction of three additional public dune crossover structures.

Little Tybee Island

State-owned and managed as a Heritage Preserve, Little Tybee is accessible only by boat and open to the public for day-use only.

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Wassaw Island

Federally-owned and managed as a Wildlife Management Area, Wassaw is accessible only by boat. Use of the island is limited to tours conducted by the U.S. Fish and Wildlife Service.

St. Catherine's Island

Privately-owned and managed by the New York Zoological Society as a wildlife preserve, St. Catherine's is accessible only by boat and is not open to the public. Several exotic species, such as Grevy's Zebras, Palm Cockatoos, and Ring-Tailed Lemur are raised on the island for subsequent release back into the wild.

Ossabaw Island

State-owned and managed as a Heritage Preserve and Wildlife Management Area, Ossabaw is accessible only by boat and is restricted to hunting only.

Blackbeard Island

Federally-owned and managed as a Wildlife Management Area, Blackbeard is accessible only by boat. Public access is controlled by the U.S. Fish and Wildlife Service.

Sapelo Island

State-owned and managed in part as a Wildlife Management Area, Sapelo is accessible only by boat. Use of the Wildlife Management Area is restricted to hunting and primitive camping. A "pioneer campsite" with limited restroom and shower facilities is available. The Georgia Department of Natural Resources operates a scheduled ferry service to the island. There are a limited number of private residences and tourist-related facilities on the island. The Sapelo Island National Estuarine Research Reserve (SINERR), operated by the Georgia Department of Natural Resources in conjunction with the National Oceanic and Atmospheric Administration, provides educational and research opportunities on the island. SINERR also includes the upland, marsh, and ocean areas in close proximity to Sapelo Island.

Wolf Island

Managed by the U.S. Fish and Wildlife Service as a Nature Preserve, Wolf Island is accessible only by boat. There is no beach on the island.

Little St. Simons Island

Privately-owned, Little St. Simon is accessible only by boat. Tours and lodging are available by reservation. Lodging is limited to small bed-and-breakfast facilities.

Sea Island

A privately-owned residential island, Sea Island is accessible by automobile via a causeway from St. Simons Island, and by boat. There is no land-side access to public beaches, except the areas associated with the Cloister Hotel complex, available to guests of the hotel only. There are no public parking areas on the island, and no access to beaches from the public thoroughfares. Although the beaches are public, they can be accessed by non-motorized boat only. Sea Island (as well as Tybee, Jekyll, and St. Simons Islands) has a boating safety zone that prohibits motorized boating within 1,000 feet of the shore, limiting beach access to sailboats, kayaks, surfboards and other non-motorized water craft. The southern end of the island is most easily accessible by boat from East Beach on St. Simons Island.

St. Simons Island

With approximately 14,000 permanent residents, St. Simons Island has the largest human population of Georgia's barrier islands. The island is accessible by causeway from the mainland, by boat, and by air. The public beaches on St. Simons Island are easily accessible. There are 24 specific beach access points and nine overlooks. Nineteen of the access points are improved with a county-provided crosswalk. Seventeen access points have a total of 677 public parking spaces, five of which are reserved as handicapped parking. The largest parking lots, providing direct access to the beaches, are located at East Beach and Massengale Park. There is free public parking near the fishing pier that is within easy walking distance of beaches. There are four areas equipped with public restrooms: Neptune Park (near the Pier), the Lighthouse, Massengale Park, and First Street (near the old Coast Guard Station). The facilities at Massengale Park include picnic tables and barbecue grills. The facilities at East Beach include a fenced and lockable storage site for non-motorized water craft, and a unique crosswalk structure that allows boats to be hauled across the dunes with minimum impact. Bike trails throughout the island connect to the beaches.

Jekyll Island

Jekyll Island is State-owned and operated by the Jekyll Island Authority. There is a \$2.00 per day parking fee that is collected upon arrival to the island. Access to the island is via a causeway from the mainland. In addition to golf courses, hotels, and convention facilities, Jekyll Island offers excellent public access to the approximately eight miles of beaches. There are 15 beach access locations associated with hotels on the island, all of which provide dune crosswalk

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structures and parking facilities. There are beach access provisions on 13 streets in residential areas of the island, all of which have paths to the beach and three of which have crosswalk structures. There are nine public beach areas that provide over 2,500 parking spaces and crosswalk structures. Four of these areas provide access facilities to accommodate handicapped individuals. There are also three picnic areas, with 185 parking spaces and crosswalk structures to provide access to the beach. One of the picnic areas provides facilities to accommodate the handicapped. There is a full-featured campground for tents and recreational vehicles that is within walking distance to the beach and a fishing pier.

Little Cumberland Island

Little Cumberland is privately-owned and accessible only by boat. There is limited access to the beaches, and public access to the rest of the island is prohibited.

Cumberland Island

Federally-owned and managed by the National Park Service as a National Seashore, Cumberland is accessible only by boat. A scheduled ferry service operates daily, with a limit of 300 persons allowed on the island each day. There are a few private residences, and a limited number of primitive camp sites on the island which must be reserved in advance. Cumberland Island hosts a community of feral ponies.

B. Access to Non-Beach Shorefront and Marsh Areas

In addition to the 88 miles of beaches, there are approximately 2,200 miles of shorefront on coastal Georgia's rivers and marshes. Access to these areas is provided in each of the eleven coastal counties by private and public roads, boat ramps, and hiking trails. The waterways are public property and easily accessible by boat for recreational fishing, birdwatching, photography, and other activities. Several private entrepreneurs offer guide service for nature observation, fishing, and hunting. Private hunting and fishing clubs are found throughout the region.

The Parks, Recreation, and Historic Sites Division of the Department of Natural Resources offers canoe trips on the Altamaha and Satilla Rivers, and several private companies offer kayak and canoe trips on the rivers and marsh areas throughout coastal Georgia. Several State and federal parks are located adjacent to marshes or rivers, and offer short hiking trails. A few even provide nature guidebooks or trail markers to help identify plant and animal species that might be encountered, as well as historical and cultural information about the area. Scenic overlooks and historical markers alongside roadways are found throughout coastal Georgia.

C. Planning for Beach and Shorefront Access

There is a variety of public and private beachfront property in coastal Georgia. Access to the beaches is often limited to water craft only. Tybee Island, Sea Island, St. Simons Island, and Jekyll Island have a boating safety zone that prohibits the use of motorized craft within 1000 feet of the beach, thereby further limiting beach access to non-motorized water craft. This is not a serious limitation on Tybee Island, St. Simons Island, or Jekyll Island, but is a serious restriction to the use of Sea Island's beaches.

The Georgia Planning Act (O.C.G.A. 45-12-200, *et seq.*) requires each local government to develop a comprehensive plan to guide growth and development as a condition to receive State funding assistance. On the federal level, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 mandates a "continuing, comprehensive, and cooperative" transportation planning process for the state and urbanized areas. This planning effort must include alternative modes of transportation such as bicycling and walking. The Act provides a link between community transportation planning and planning for local recreation trails.

Under the Georgia Planning Act, minimum planning standards were developed for the preparation, adoption, and implementation of local comprehensive plans. The planning standards constitute a three-step planning process: inventory and assessment; needs and goals; and implementation and strategy. Assistance for preparing the recreational component of local comprehensive plans is provided by the "Georgia Recreation Planning Manual -- A Manual for Georgia Communities" prepared by the Parks, Recreation and Historic Sites Division. Technical assistance is also available from the Recreational Technical Assistance Office at the University of Georgia's Institute of Community and Area Development, the Regional Development Centers, and various other civic, student, and citizen groups.

As part of the development of local comprehensive plans, the assessment, need, and development of coastal access is addressed by local governments in the coastal area. There are six counties located directly on the coast. Only two of the coastal counties, Chatham and Glynn, have beaches that are easily accessible by automobile or trail; the beach on Tybee Island is located in Chatham County, and the beaches of St. Simons Island and Jekyll Island are located in Glynn County. As a State-owned island, ordinances governing Jekyll Island are developed and implemented by the Jekyll Island Authority. Sea Island is also located in Glynn County, but its beaches are not easily accessible. All of the other beaches in Georgia are located on islands that are not easily accessible and are not addressed in local comprehensive management plans.

D. The Role of Georgia's Coastal Management Program

Through the Georgia Coastal Management Program, the Coastal Resources Division seeks to ensure public access to beaches and other areas of the ocean front, and to protect and maintain those areas as a sustainable resource. Not a land use doctrine, the Coastal Management Program provides a management framework through which local land use decisions can be coordinated with all interested parties. Georgia's Coastal Management Program facilitates beach and shorefront access through the following activities.

Publicize Public Access

The staff at the Coastal Resources Division publicizes and promotes public access to Georgia's beaches through newsletters, public speaking engagements, participation in community festivals, and other outreach venues and media.

Provide Technical Assistance

The Coastal Resources Division, Habitat Management Program provides technical assistance for permitted activities within Georgia's coastal marshlands and shore sand-sharing system. Experts in the regulatory requirements of the Coastal Marshlands Protection Act and the Shore Protection Act, staff provide site analyses and technical advice for construction of piers, crosswalks, fences, etc., within the jurisdiction of these laws.

Acquire Property for Coastal Access

Most public recreational facilities in the coastal area (as throughout the State) are financed in full or in part by the U.S. Department of the Interior, National Park Service. Permits for parks, tourist-oriented or commercial recreation facilities within the jurisdiction of the Coastal Marshlands Protection Act and the Shore Protection Act are administered by the Department of Natural Resources Coastal Resources Division.

Several legal authorities allow the State of Georgia to acquire property for various reasons, including recreation. The Georgia Scenic Trails Act (O.C.G.A. 12-3-110, *et seq.*) provides authority to construct, manage, and maintain trails throughout Georgia, including beach access trails. The Nongame Wildlife Conservation and Wildlife Habitat Acquisitions Fund is a program funded by voluntary tax deductions to acquire wildlife habitat and to support educational activities about wildlife. The Uniform Conservation Easements Act provides a mechanism for landowners to enter into agreements with charitable organizations or government agencies to develop easements for portions of their property for public access, conservation, recreational, or other purposes, in exchange for tax benefits. The Department of Natural Resources also has broad authority to acquire property for the citizens of Georgia for recreational and conservation

purposes. Another mechanism to acquire properties are Land Trusts, which are charitable organizations established to acquire and manage properties for conservation or similar purposes. These represent just a few of the legal mechanisms for acquiring property for public access to coastal areas.

The Georgia Greenways Council is a coalition of trail organizations and local, State, and federal agencies involved with trail development. The Council promotes the protection of linear corridors and coordinates the development of trails throughout the State. A proposed Coastal Water Trail, the aquatic equivalent of the Appalachian trail, will run along Georgia's coast from the Savannah River to the St. Mary's River. This trail will provide routing for sea-kayaks and other small craft, and will include access trails, boat launching sites, and camping opportunities. Since most of Georgia's beaches are accessible only by water and some are restricted to non-powered watercraft, a sea-kayak trail will provide increased accessibility.

The Georgia Department of Natural Resources, Wildlife Resources Division is empowered to acquire land areas and to enter into agreements with landowners for purposes of managing wildlife species and establishing specific sanctuaries, wildlife management areas, and public fishing areas. The Wildlife Resources Division administers a management plan for each area. The management plan establishes short- and long-term uses for each area, and provides guidelines for protection and use of the area. The areas owned and/or managed by the Wildlife Resources Division are important for conservation of wildlife and also for recreational hunting and fishing opportunities. Wildlife management areas within the salt marsh and shore areas receive the additional protection provided by the Coastal Marshlands Protection Act and the Shore Protection Act.

Encourage Beach Access on County and Municipal Properties

Through the Georgia Coastal Management Program, the Coastal Resources Division works with municipal and county planning agencies and commissions to promote and enhance coastal access. In addition to coordinated permit activities, the Coastal Resources Division provides technical expertise for design considerations that maximize dune protection while enhancing beach access.

Develop a Model Coastal Access Ordinance

In 1994, the Georgia Department of Community Affairs, in coordination with the U.S. Environmental Protection Agency and the Georgia Department of Natural Resources, developed a "Model Wetland Protection Ordinance" for use and adoption by local governments. The model provides a cookbook approach for adoption of a wetlands protection ordinance that can be amended by local governments. Through the Coastal Management Program, the Coastal

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Resources Division provides technical assistance to develop similar model ordinances for coastal access that can be used by local governments when developing local zoning ordinances.

**SECTION IV:
SHORELINE EROSION AND HAZARD MITIGATION PLANNING**

Shorelines naturally move and shift due to the constant energy forces from water and wind, as well as the deposit of materials along the land/water interface. These accretion and erosion cycles can be affected by both natural events and human activities. In turn, the cycles affect structures, property values, flood hazards, nesting areas, and other social and ecological factors.

The total length of coastal Georgia's shoreline has been estimated at 2,344 miles, which ranks eleventh of the 36 coastal states and territories. Georgia's ocean-front beaches constitute approximately 88 linear miles of the total shoreline. Georgia's beaches are located on the seaward side of barrier islands, of which only four are readily accessible by automobile (Tybee Island, St. Simons Island, Sea Island, and Jekyll Island). These four barrier islands contain about 19 miles of ocean beaches. Due to their automobile accessibility, these four barrier islands are also Georgia's only islands where development has substantially impacted the beach's natural sand-sharing system and dynamic sand dune fields. Coastal Georgia's less accessible barrier islands have retained their dynamic sand dune fields and natural cycle of beach erosion and accretion.

The majority of coastal Georgia's 2,344 miles of shoreline is contained within the hundreds of salt water rivers and creeks that intertwine the 378,000 acres of salt marsh lying between the barrier islands and the mainland. Some fairly severe erosion in tidal rivers has been observed, along the Ogeechee River at seven-mile bend and along the Crooked River at Elliott's Bluff, for example. Erosion and sedimentation control is a primary consideration in the evaluation of all permit applications for activities within the jurisdiction of the Coastal Marshlands Protection Act.

Shoreline erosion of beaches in coastal Georgia is of paramount concern on only about 19 miles out of the total 88 miles of beach. Jekyll Island is owned by the State of Georgia and operated by the Jekyll Island Authority as a resort/recreational park. Jekyll Island has approximately eight miles of beach that has never undergone artificial renourishment. St. Simons Island is predominately used for private residences and tourist-related businesses. Public access to St. Simons' approximately 3.8 miles of beach is maintained by the Glynn County government. Shore stabilization structures are prevalent on St. Simons Island's beach, which has never been artificially renourished.

Sea Island is privately-owned and is operated by the Sea Island Company as a residential resort community. Public land access to Sea Island beaches is restricted. Sea Island has about 4.7 miles of beach which underwent privately-funded renourishment projects in 1986 and 1990. Tybee Island is privately-owned and is the most densely-developed barrier island in Georgia.

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Residential and commercial development dominate Tybee Island. Public access to Tybee Island's beach is managed by the City of Tybee Island. Tybee Island's 3.4 miles of beach was artificially renourished in 1976, 1987, 1993, and 1995.

The primary State management authority for shoreline stabilization and beach erosion control is embodied in the Shore Protection Act. The Coastal Resources Division, through the Shore Protection Committee, issues permits for any shoreline engineering activity or land alteration on beaches, sand dunes, bars, or submerged shoreline lands. The Shore Protection Act contains provisions for two distinct alternatives in addressing shoreline erosion. The first alternative, erosion control activities, includes beach restoration and renourishment, artificial dune construction, and construction and maintenance of groins and jetties. The second alternative, shoreline stabilization, includes construction of revetments.

In addition to shoreline erosion, natural processes such as storms and hurricanes can result in hazards to people and property through resulting wind, waves, and rising and falling water. There are two approaches to reducing damage from storms and hurricanes: engineering solutions and land-use planning. Engineering solutions may be directed at the environment (e.g., jetties, sea walls) or at structures (e.g., stilts, break-away walls). Many engineering modifications of the environment, however, can result in problems elsewhere on the coastline. Thus, the Shore Protection Act limits structures on Georgia's beaches. Land-use planning recognizes that certain areas (e.g., inlets, beaches) are more hazardous than others (e.g., areas protected by dunes and vegetation). Through policies such as the Shore Protection Act, which recognizes that coastal sand dunes, beaches, sandbars, and shoals help protect "real and personal property and natural resources," and the Marsh Protection Act, which recognizes that marshes "provide a great buffer against flooding and erosion," Georgia addresses coastal hazards. While land-use planning is the responsibility of local governments, through the Georgia Coastal Management Program the Coastal Resources Division can assist with hazard mitigation planning by providing technical assistance and pass-through funding.

Policies

- Coastal Marshlands Protection Act
- Endangered Wildlife Act
- Georgia Erosion and Sedimentation Act
- Georgia Water Quality Control Act
- Revocable License Program (Georgia Administrative Procedures Act)
- Shore Protection Act

Description

The Coastal Resources Division does not initiate erosion control activities. Permit applications for erosion control activities are made to the Division by the governing entity or private owner of the barrier island on which the activity is proposed. Beach restoration and renourishment techniques are preferable to shoreline stabilization activities since stabilization structures separate land from sea by maintaining the shoreline at its present position. Permits are granted for shoreline stabilization structures when the applicant has demonstrated that loss of property due to erosion is inevitable and that no reasonable or viable alternative exists.

Erosion control activities include beach restoration and renourishment, sand dune construction, and the construction and maintenance of groins and jetties. Local government units and private owners of barrier islands are encouraged to develop comprehensive beach erosion control programs that include continuous monitoring of erosion and accretion rates. Permittees of erosion control activities are required to conduct monitoring of the project's effectiveness and possible adverse impacts to adjacent properties. Permit applications must include beach monitoring (profile) data. Permittees of erosion control activities must also post a cash forfeiture bond payable to the State to cover the expenses of removal or modification of structures deemed responsible for adverse impacts to adjacent properties.

The State of Georgia has its own list of protected animals and plants that State-issued permits must address. In addition to the State's protected species there is a federal list of threatened and endangered species, many of which are included on the State's lists. Just like individual citizens, the State of Georgia must obey federal law. Therefore, when the State of Georgia issues permits, it holds the responsibility of ensuring that federal laws are not violated by the permitted activity. To this effect, State-issued permits must include provisions, if applicable, to protect endangered species. Additional federal laws such as the Migratory Bird Act, the Marine Mammal Protection Act, and Standard Manatee Conditions also apply if applicable protected species may be adversely impacted by the project.

The Coastal Marshlands Protection Act, the Shore Protection Act, and the Revocable License Program consider impacts on shoreline areas when issuing permits. Development is allowed if in the public interest. Local governments are responsible for zoning decisions for their communities. Residential, commercial, and industrial development in shoreline areas are subject to the 25-foot setback required of the Georgia Erosion and Sedimentation Act.

The Georgia Water Quality Control Act gives the Environmental Protection Division the authority to restore and maintain a reasonable degree of purity in the waters of the State, to maintain an adequate supply of such waters, to regulate where needed reasonable usage of the State waters, and to require reasonable treatment of sewage, industrial wastes, and other wastes prior to their discharge into such waters.

CHAPTER SEVEN
