

The Water's Edge



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A Guide to Florida's Coastal Management Program

A document prepared by
The Citizen Advisory Committee
on

Florida's Coastal Resources Management

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Cover photo: Fernandina Beach

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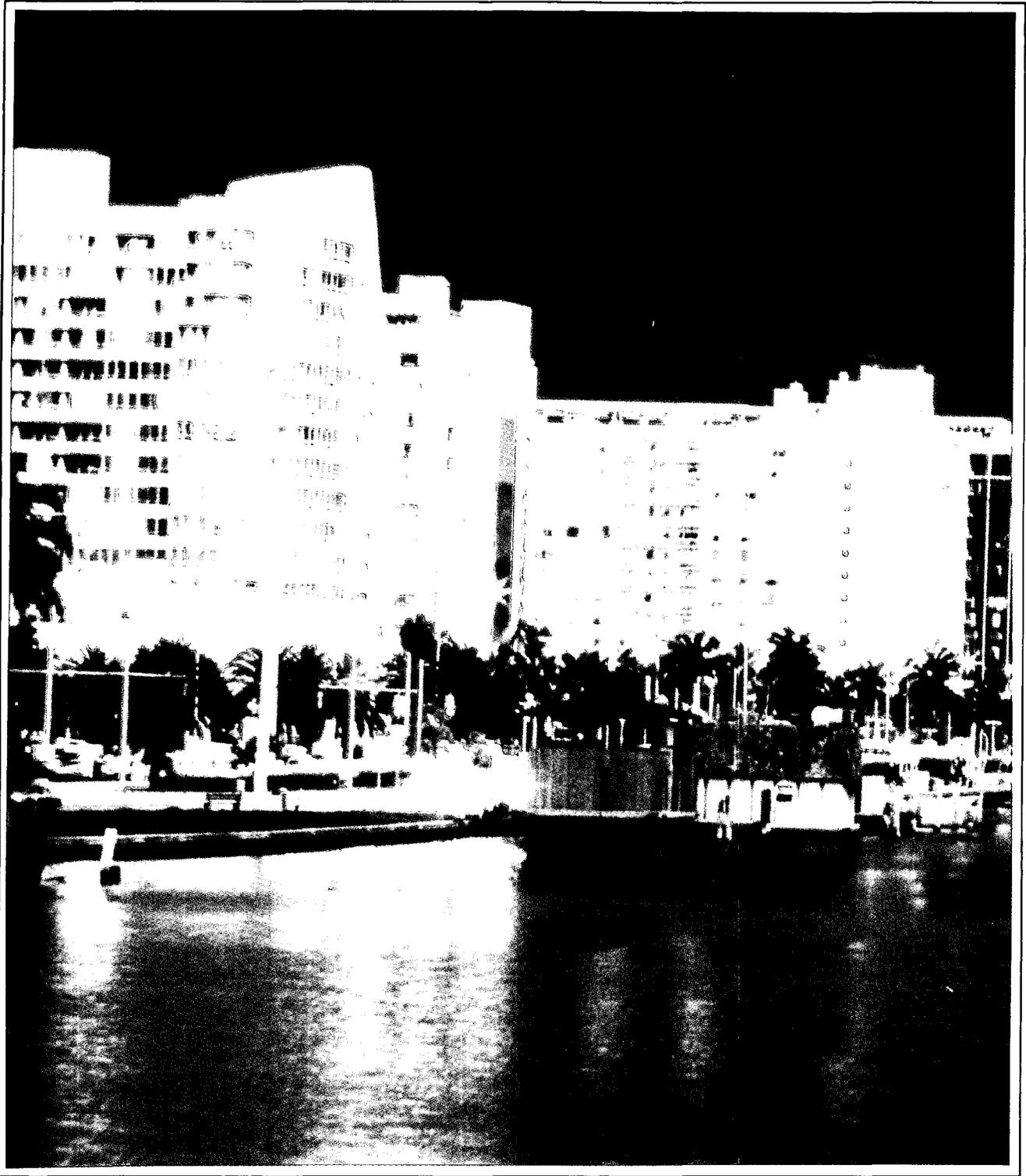
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PURPOSE

This booklet, a brief explanation of the issues of special focus in the Florida Coastal Management Program document (see Appendix A), is published for the citizens and public officials of Florida to provide information on the coastal area and the key issues and policies which affect it. By increasing public knowledge and awareness of coastal issues, it is hoped that citizens and public officials will more fully understand and appreciate the Coastal Management Program's role in maintaining the delicate balance between development and protection of our coastal resources.

morning star over Florida as seen from Apollo 7

1894 map of Florida



Miami Beach

COASTAL DEVELOPMENT IN FLORIDA

Native Americans had been living in Florida for thousands of years when Ponce de Leon first arrived in 1513. Many of the estimated 100,000 native Americans lived along the coast and depended largely on fish and shellfish for survival.

The Spanish established their first settlement at St. Augustine in 1565, and for two centuries the Spanish ruled Florida. Spanish rule was followed by a short period of rule by the British and then again by the Spanish before Florida became a territory of the United States. Most of the population increase was concentrated in the northern part of the state, from Pensacola to St. Augustine, during this time.

Florida's population and economy began growing rapidly by the twentieth century. People were attracted to Florida's warm climate and sunny beaches. As the population grew, it shifted to the central and southern parts of the state in settlements concentrated mainly along the coast. The natural beauty, the climate, and the enormous variety of natural resources enchanted almost all who came.

The native Americans and early settlers placed little stress on the environment because of the low population level and simple economy. In contrast, the twentieth century's rapid population growth and accompanying development have placed stress on the envi-

ronment which is so much a part of Florida's attractive quality of life. Many of these environmental stresses and land use conflicts are located in coastal areas, where the natural environment is fragile and most attractive to the public.

This rapid growth has led to a number of specific problems and issues which gave impetus to the development of a coastal management program. Some examples of the results of growth and development in coastal Florida are listed below.

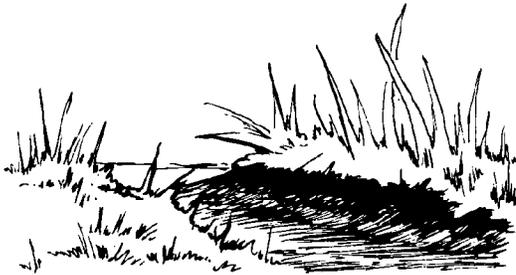


- Urban development and associated activities such as runoff, dredging and filling, industrial and sewage discharge, and disposal of solid and hazardous waste materials cause coastal water quality to deteriorate. Recent environmental legislation has slowed,

and in some areas reversed, this deterioration, but many areas are still polluted.

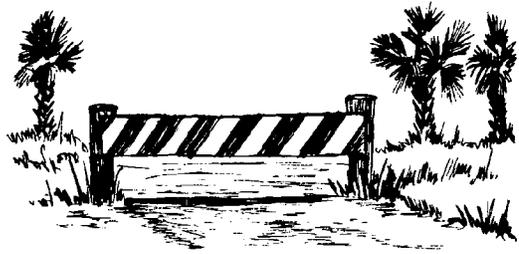


- Freshwater supplies are crucial and the demand for water by population centers, agriculture, and industry can create conflicts. Saltwater intrusion into over-used aquifers and from stream channelization and wetland drainage can cause shortages of drinkable water. This has already caused local shortages of fresh water, and in the near future more areas will be faced with this problem.

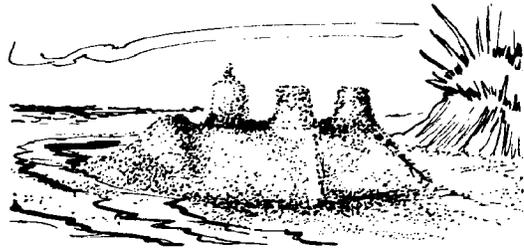


- Improper development too close to the water has caused beach erosion in many areas, destroying recreational and aesthetic values. In addition, the destruction of dunes has eliminated the ability of beaches to protect inland buildings from the effects of storms.

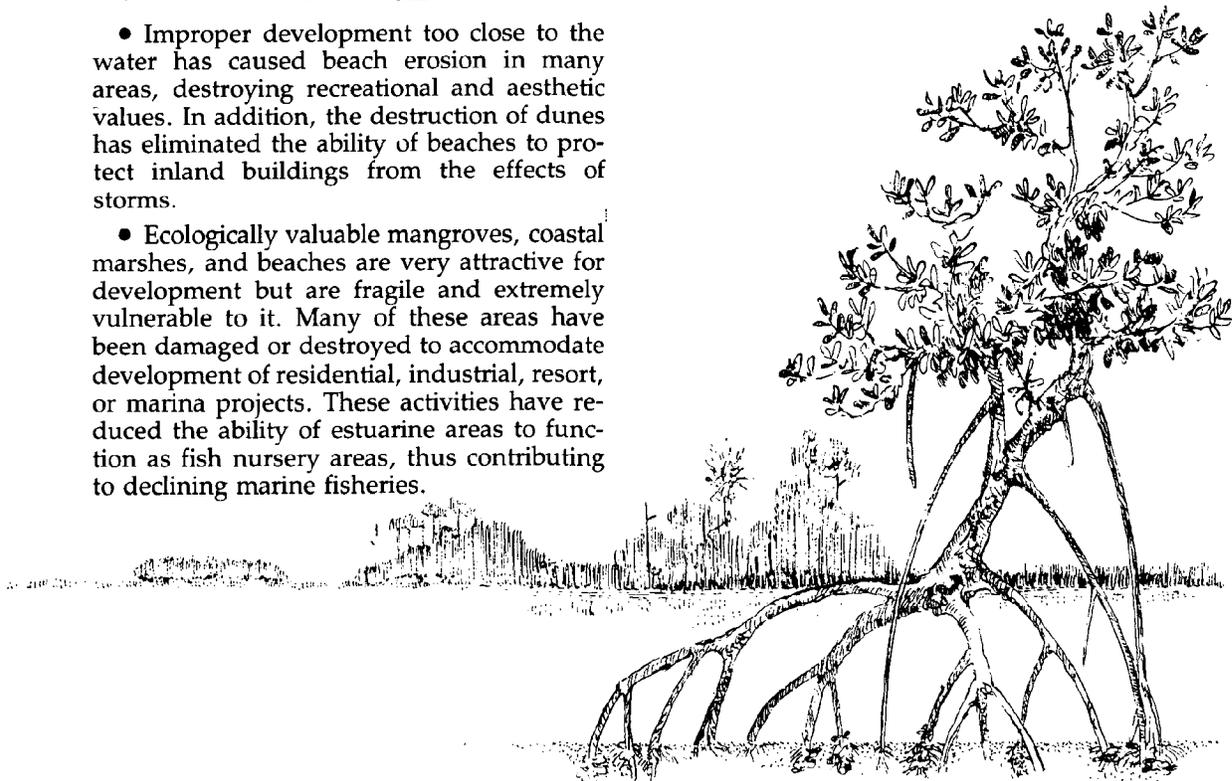
- Ecologically valuable mangroves, coastal marshes, and beaches are very attractive for development but are fragile and extremely vulnerable to it. Many of these areas have been damaged or destroyed to accommodate development of residential, industrial, resort, or marina projects. These activities have reduced the ability of estuarine areas to function as fish nursery areas, thus contributing to declining marine fisheries.

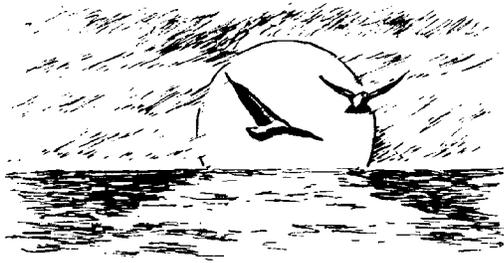


- Intensive, haphazard commercial and residential development in beach areas restricts the public use of beaches. As development expands along the coast, there is a resulting decrease in areas available for recreational use, and the aesthetic features which draw people to the coast are lost.



- Development in hurricane-prone areas is of special concern in Florida. As development increases in low-lying areas and on barrier islands, the potential for loss of life and property increases.





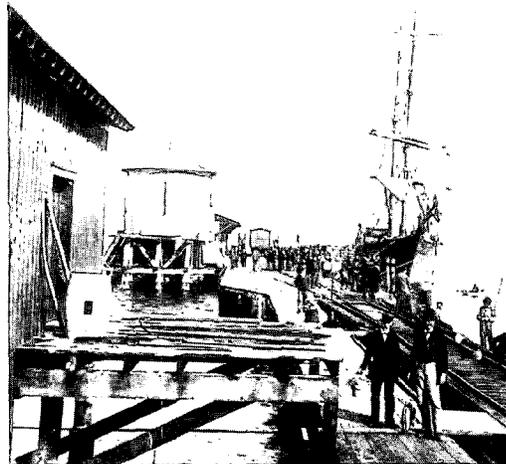
- Pollution degrades not only water but air as well. With development and people inevitably come automobiles—the greatest single source of air pollution in the coastal area. Industrial and domestic sources also contribute pollutants. Coastal air pollution will require even more attention as growth continues.

Given these problems, it would be easy simply to condemn growth and development because they damage resources. However, the issues are not that simple. Growth and development have important benefits as well as adverse effects. The benefits include an increase in the number of jobs, higher income, and improved quality of life. These benefits must be weighed against the loss of environmental resources when making decisions about the use of coastal resources.

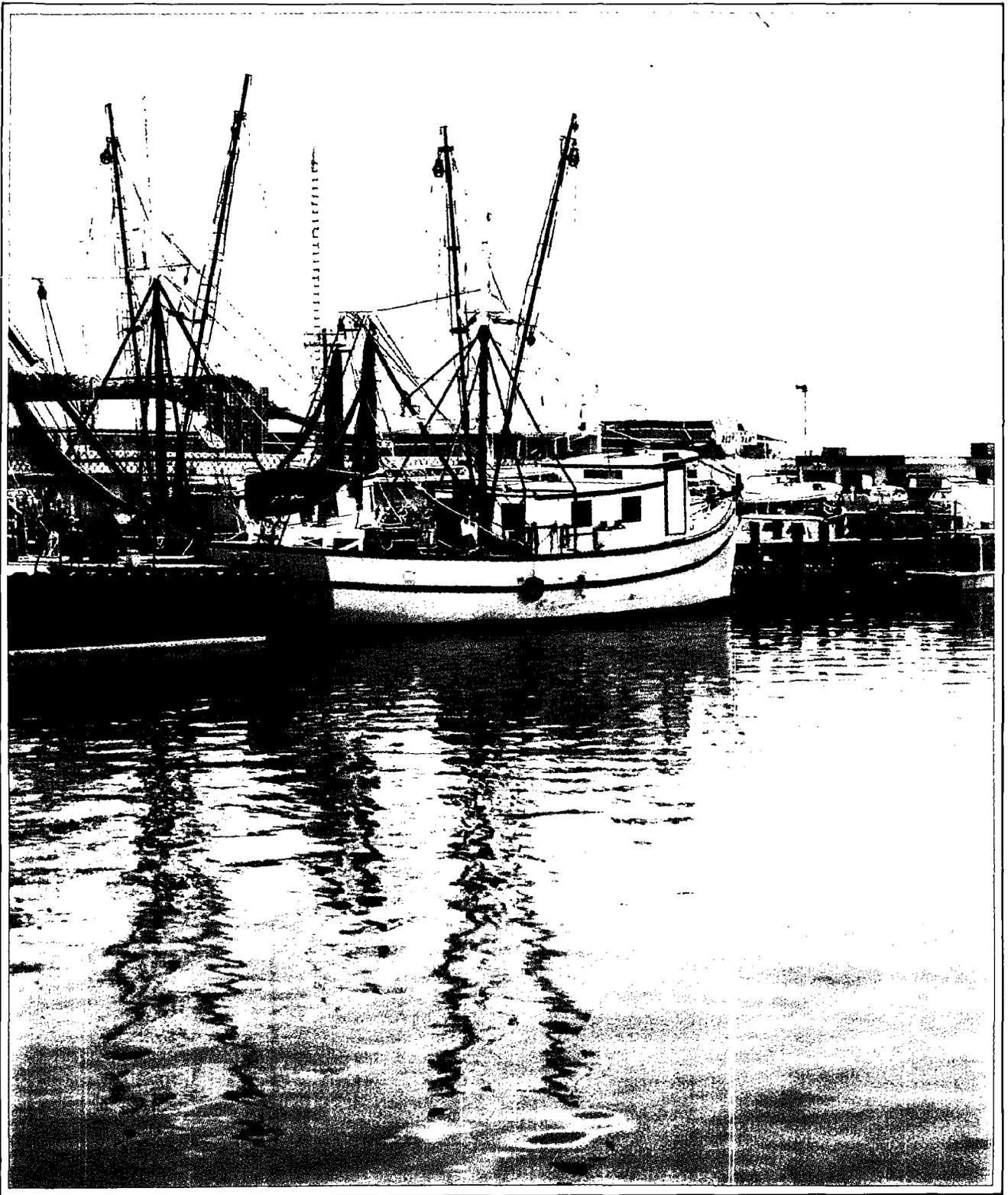
There are no easy answers in resolving resource use conflicts. Experience has shown that these conflicts are often related to the issue of short-term economic benefits versus long-term economic benefits such as continued natural resource productivity. The

short-term economic benefits are immediate, monetary, and easy to see, while the benefits of resource conservation and preservation may be long-term, difficult to express in monetary terms, and hard to see. Unless a conscious effort is made to consider long-term interests, it is easy to let short-term economic gain dominate the decision-making process.

Despite these difficulties, decisions must be made about the use of coastal resources. Recognizing the need for legislative attention to resource management, the state created the Coastal Coordinating Council in 1970, which began the development of a coastal management program. The Legislature renewed its commitment to coastal management with the passage of the Florida Coastal Management Act of 1978. While in some states a coastal zone management program is the impetus for making new environmental regulations, the Legislature specifically directed that Florida's program be structured around coordinating existing statutes and their implementing rules to achieve effective coastal management. To accomplish this goal, Governor Graham and the Cabinet formed the Interagency Management Committee (IMC) in 1980. This committee, comprised of the chief executives of ten state agencies (see Appendix B) with coastal management responsibilities, is charged with identifying and resolving weaknesses and conflicts in the state's management of coastal resources. A detailed description of the program can be found later in this booklet. However, an important first step in fully understanding the coastal program is recognizing the public's role in resource management.



Ports have played an important role in Florida's development. The photo above shows a pier in St. Petersburg circa 1900, the photo at left is Tampa's waterfront in 1888.



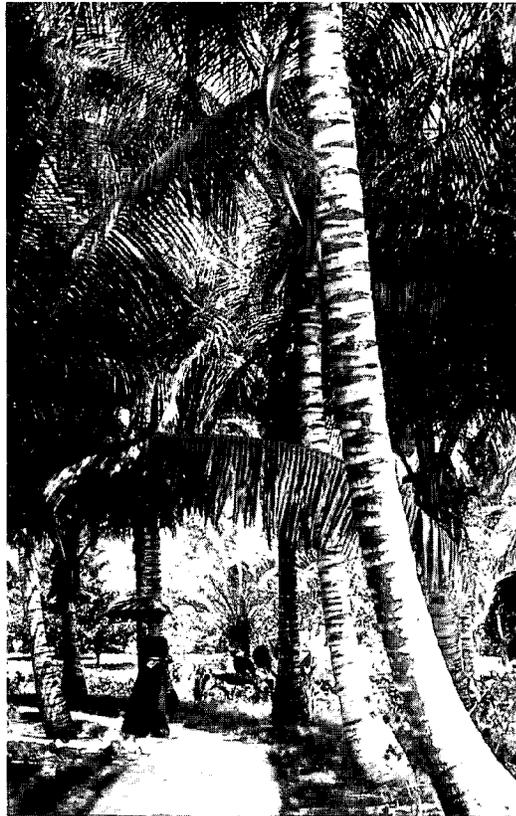
Tarpon Springs

THE PUBLIC'S ROLE IN COASTAL RESOURCE MANAGEMENT

The public's role in coastal resource management is directly related to the public's claim to these resources. Private ownership is one aspect of that claim, but in such cases as air and water quality, public interest must also be considered. In addition, archaeological and historical sites are part of our common heritage, and the coastal area's scenic and aesthetic qualities should be shared by everyone.

The coastal area enjoys a special public status. Waters of the state and certain adjacent land areas, as defined by law, are in public ownership. The state holds these lands in trust for the benefit of all people. Waters of the state include bays, bayous, sounds, estuaries, rivers, streams, the natural tributaries of all of these, the Atlantic Ocean and Gulf of Mexico out to the seaward limit of the state's territorial boundaries, and most natural lakes.

Because the Florida Coastal Management Program involves and affects a large number of persons and groups, public participation is an important element in the program. Florida's Coastal Resources Citizens Advisory Committee (CAC) provides one avenue for public participation. Appointed by the governor, the committee is made up of persons representing government, industry, and environmental interests, from various regions of the state. By drawing on experts and in-



A stroll along a palm-lined path was as pleasant in 1890 as it is today.

terested individuals, the committee is able to make informed recommendations on coastal issues and advise state agency members of the Interagency Management Committee by:

- reviewing and recommending priorities concerning the issues of special focus and other coastal issues;
- reviewing priorities for allocating coastal management funds and technical assistance;
- reviewing and commenting on department rules related to coastal management; and,
- suggesting new or additional legislation necessary to better implement the Florida Coastal Management Program.



Participation in meetings and hearings is an important way for citizens to become involved in coastal resource decisions.



Development too close to the water has caused beach erosion in many areas, and measures such as seawalls are costly and temporary solutions.



The desire for waterfront property led to many dredge and fill developments in ecologically valuable and fragile wetland areas.



Often when people walk or drive to the water's edge, they trample fragile dune plants leaving a cut in the dune.

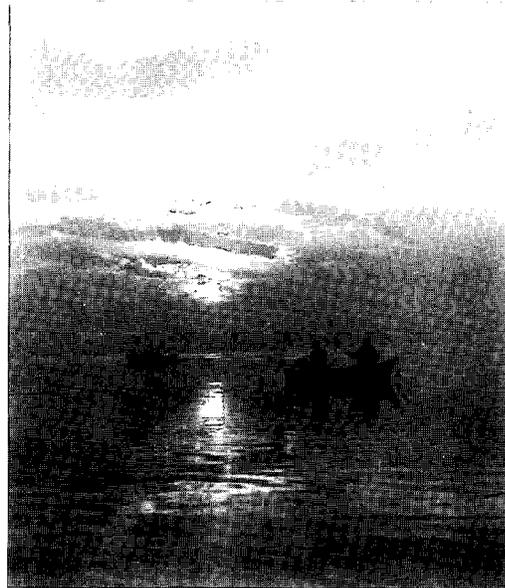
In addition to direct involvement on the advisory committee, citizen participation in the coastal management program is guaranteed by Florida Statutes in three ways: access to public information, participation in rule-making, and participation in licensing and enforcement judgments.

The State of Florida, acting as trustee for the public, is responsible for seeing that coastal resources are managed in the public interest. It is the public's responsibility to see that government officials properly perform their jobs. Citizen participation in public

hearings and meetings, monitoring of existing and proposed rules, and direct communication with government officials are ways the public can do so. Managing public resources is a tremendous responsibility. The public shares this responsibility with state agencies and should actively participate in the process.



Tonging for oysters in Apalachicola Bay.



Sunrise greets many anglers in Florida, a fisherman's paradise.



The coastal area also provides important habitat for a variety of wildlife species, such as the brown pelican.



Florida Bay

COASTAL MANAGEMENT PROGRAM SUMMARY

Florida's coast is important for commerce and economic development, for tourism and recreation, as a residential center, and as a unique ecological resource. To manage competing demands on these resources, the 1978 Florida Legislature passed the Florida Coastal Management Act stating that:

the coastal zone is rich in a variety of natural, commercial, recreational, ecological, industrial, and aesthetic resources of immediate and potential value to the present and future well-being of the residents of this state which will be irretrievably lost or damaged if not properly managed.

The act established a coastal management program based on existing laws and regulations to protect, maintain, and develop these resources. The key to an effective program in Florida is coordination between the state agencies charged with administering the laws and programs. Resolution of coastal issues will require intergovernmental cooperation. The issues are complex and cut across the responsibilities of more than one agency or level of government.

The Florida Coastal Management Act directed the Department of Environmental Regulation, as the lead agency, to develop a coastal program which provides a framework to shape a more coherent, rational, and predictable management scheme. Two elements provide the primary means to coordinate and unify state agency activities—the Interagency Management Committee (IMC) and the coastal program's improvement of routine procedural cooperation between state agencies.

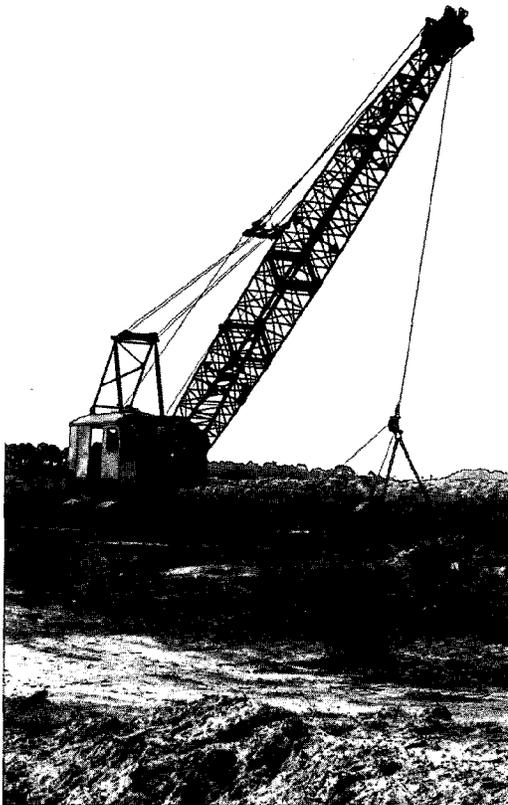
The IMC provides a forum in which state agencies address pertinent inter-agency issues. Though not a regulatory body, the IMC does make recommendations to the Governor and Cabinet, including new legislation, inter-agency agreements, and rule-making. Although not all state agencies are represented on the IMC, their assistance in meeting committee and coastal program goals is sought and encouraged.

Most of the everyday implementation of key state coastal programs is carried out by three agencies: the Department of Environmental Regulation, the Department of Natural Resources, and the Department of Community Affairs.

Department of Environmental Regulation

The Department of Environmental Regulation serves as the lead agency in Florida's Coastal Management Program. The program is administered through the agency's Office of Coastal Management. This office provides staff support to the Interagency Management Committee, assists in coordinating state and local agency programs related to coastal resources, administers grants to various state and local agencies related to coastal resources, and reviews federal activities in the coastal area for consistency with the State's program. The Department of Environmental Regulation also administers Florida's environmental permitting programs, including:

- air and water pollution sources;
- dredging and filling on submerged lands, waters of the state, and wetlands;
- electric power plant siting, transmission line siting, and industrial siting;
- drinking water (water wells);
- solid and hazardous wastes;
- public works program.



All dredge and fill activities on submerged lands, waters of the state, and wetlands must be permitted by the Department of Environmental Regulation.



Managing Florida's parks, like St. Joseph State Park, is one of the responsibilities of the Department of Natural Resources.

Department of Natural Resources

The Department of Natural Resources manages the state's natural resources, including the following program areas:

- management of all state-owned lands, including sovereignty submerged lands administered through the Board of Trustees of the Internal Improvement Management Trust Fund;
- management of recreation and conservation areas, aquatic preserves, state parks, wilderness areas, environmentally endangered lands, and recreational trails;
- shoreline use and protection, beach nourishment and erosion control projects, assurances of adequate beach access, and establishment of coastal construction control lines;
- conservation and management of marine fishery resources;
- mineral resource management.

Department of Community Affairs

The Department of Community Affairs administers the following activities related to the coastal management program:

- coordination of the state's responsibilities related to Development of Regional Impact and Areas of Critical State Concern programs;
- primary agency responsibility for implementation of the Coastal Energy Impact Program under the federal Coastal Zone Management Act;
- implementation of a state disaster preparedness program to reduce vulnerability to damage, injury, and loss of life and property from natural or man-made hazards;
- review of ten-year siting plans for Florida electrical utilities.



Coastal storms can cause damage to life and property. The Department of Community Affairs implements the state's disaster preparedness program.

Regional and Local Agency Participation

In addition to state agencies, any comprehensive coastal management program must include regional and local agencies. For example, the state's five water management districts have authority to manage the ground and surface waters of the state. The eleven regional planning councils have a formal role in reviewing developments of regional impact. In addition, the support and assistance of the councils is needed to address certain issues of special focus in the Coastal Management Program. Finally, the councils and their citizen involvement help to meet public participation obligations.

Local agencies, including county and municipal governments, soil and water conservation districts, ports, beach and shore preservation districts, and mosquito control districts, are also an integral part of any complete coastal management program. While the specific involvement of each local agency will vary, the general kinds of responsibilities for program implementation will be similar. For example, local governments must approve the deposition of fill onto submerged lands, and ports are responsible for preparing both port plans and spoil disposal plans. Local agency support and assistance is needed in addressing many of the issues of special focus, in addition to implementing existing statutes.

Issues of Special Focus

Florida's Coastal Management Program is built around ten primary issues which provide a focus for the future direction of the program. The issues are identified within three broad areas—resource protection, coastal development, and coastal storms.

Resource Protection Issues

• Coral Reefs

South and west of the Florida peninsula lies the Florida Reef Tract, the most extensive living coral reef system in the continental United States. This coral ecosystem is not only beautiful but functional as well. The reefs help cement the foundation of the Florida Keys, form a critical breakwater to lessen the impact of coastal storms, and provide a primary source of sand for Florida's glistening beaches.

Coral reefs are a phenomenon of the tropics. The Florida Reef Tract is at the northernmost limit for reefs, which means that it is constantly under natural stresses, such as the



Coral reefs are the skeletal deposits of billions of tiny coral polyps built up over hundreds of years.

influx of cold water. The effects of additional external stresses are poorly known. The heavy commercial and recreational use of the reefs, their proximity to the dense population centers of south Florida, and man's shoreline activities are all factors which make the coral reefs highly vulnerable.

Some problems and issues concerning this

fragile reef community have recently been identified. These issues illustrate the jurisdictional and scientific complexities involved in any attempt to regulate and manage coral reefs. Some of the environmental concerns include dredge and fill activities, channelization, land development, water pollution, diving, fishing, anchoring and boat groundings, and oil tanker traffic, all of which can adversely affect coral reefs.

It is evident from the problems identified that management of coral reefs is a complex effort. The Coastal Management Program recommends several actions to address concerns related to the protection and utilization of the Florida Reef Tract ecosystem. It is important that the IMC address reef management issues and make recommendations for their resolution. For example, the IMC reviews the current state efforts related to enforcement, surveillance, and research. After this review, the committee may develop recommendations for the Governor and Cabinet concerning deficiencies in Florida's coral reef management efforts. In addition, the IMC reviews the jurisdictional problems associated with management efforts. Another action is the use of Coastal Zone Management funding to assist in improving the state's capability for developing specific cooperative management programs in the Florida Reef Tract by developing coral reef maps.

● Estuaries

The most productive coastal area is the estuary, a semi-enclosed water body with an open connection to the sea. An estuarine ecosystem includes not only the coastal water basin but also the adjacent shorelands and water flowing into the estuary. The estuary is a zone of transition between freshwater and saltwater systems and an important nursery for numerous marine animals. Historically, estuaries have fostered many important commercial and recreational activities, such as ports, marinas, and commercial and recreational fisheries. Balancing the diverse environmental, economic, and social interests in estuarine areas is essential to coastal management.

While people benefit from estuaries, the use of these areas often brings changes. Development in and around estuaries usually requires dredging and filling, which disturbs the water storage and purifying capability of vegetated wetlands and damages the estuary.

Changes in the quality, quantity, and timing of freshwater flow into estuaries are also problems. Pollutants from stormwater runoff, aerial spraying, and sewage outfalls, for example, are washed into estuarine waters, degrading the water quality. Development often causes changes in the natural water flow patterns. In order to drain areas for development, a channel is often built to divert



If allowed to function naturally, estuarine systems provide many benefits. They act as a defense against storm tides, cleanse water as it flows to the sea, and provide food and shelter for fish and wildlife.

excess water, causing an increase in freshwater flow which changes the salinity patterns and adversely affects estuarine plants and animals.

A number of issues are addressed by the program in order to provide a balanced approach to using and protecting estuarine areas. For example, the program is assisting the development of administrative rules and cooperative management programs for state owned submerged lands and aquatic preserves, and working to improve the consistency of the decision-making process among the various state management and regulatory programs. The Coastal Management Program also helps to establish rules to define flow

• Barrier Islands

A dominant geographic feature along much of Florida's coastline is the barrier island. Shaped by wind, waves, and tidal action, barrier islands often occur in long chains, separated from the mainland by estuaries and saltwater wetlands.

Barrier islands form the first line of defense for the mainland against coastal storms. This protection also encourages the development of low-energy tidal wetlands and marshes, while the semi-enclosed lagoons behind the islands create estuaries. The barrier islands are a unique microsystem in themselves.



Barrier islands are extremely dynamic systems constantly in transition. This changing nature may be frustrating to man in trying to develop, but is necessary for their existence.

rates on major river systems and to improve the Department of Environmental Regulation's water quality monitoring and enforcement programs in estuarine areas.

Florida also uses new techniques and approaches to manage critical estuarine areas such as the "Geographic Areas of Special Concern" program, which assists the Conservation and Recreation Lands Program (CARL) in its efforts to purchase important estuarine areas.

Research provides the information essential to developing management and regulatory approaches. The Coastal Management Program helps to improve the coordination between research and decision-making by improving coordination between programs.

Because barrier islands are extremely mobile and dynamic systems, they are constantly changing. This dynamic nature is necessary for the existence of barrier islands, but it may frustrate man's desire for development. This conflict is the basis for the issues and problems concerning man's use of barrier islands.

Erosion of beaches is a natural phenomenon which is often accelerated by man's development. This erosion threatens the stability of established developed areas. The response to this threat is, often, an attempt to stabilize the area, which may only cause further erosion and interfere with natural processes. The stabilization methods include building bulkheads, seawalls, and groins, or



Florida ports, such as the one at Jacksonville, gain two primary advantages from their geographic location: proximity to major shipping lanes and relatively mild weather, free from the extremes of other U.S. ports.

beach renourishment and dune stabilization. With the possible exception of dune stabilization, these alternatives are costly and provide only temporary solutions.

Barrier islands are fragile coastal resources, and Florida has more barrier island acreage than any other state. Development is often begun without any understanding of the environmental values and changing characteristics of barrier islands. In addition, much of the development has been directly or indirectly subsidized by state and federal government agencies. Because the State of Florida does not have a comprehensive policy for barrier islands, conflicting goals between state programs often result.

One of the goals of the Florida Coastal Management Program, through the IMC, is to develop a comprehensive program for managing Florida's barrier island system. These islands are currently being identified and environmental and development information is being collected. Based on this data, an overall barrier island policy will be developed which will include policies specific to individual islands and their special needs. These policies will then be used to guide state agencies in such issues as reviewing permit requests relating to coastal construction setback lines, establishing priority areas for beach renourishment, reviewing requests for new causeways, water and sewage construction grants and permits.

In addition, the Coastal Management Program recognizes that the prime responsibility for land management rests with local government. The state is developing a program

to assist local governments in managing barrier islands. Basically, the state will establish a broad strategy concerning these islands, use the existing budgetary and management tools to implement the adopted strategy, and provide assistance to local governments for development of site-specific plans for the islands.

Coastal Development Issues

• Ports

Ports have played a major role in Florida's history and will continue to be important to the economic vitality of the coastal area. The conflict between the various demands for the use of the coastal area is recognized by port authorities. As Florida's coastal population increases, the 27 existing ports will find development opportunities shrinking as people seek to use the coastal area for other activities. In addition, there is a growing recognition of the value of fish, wildlife, and other living resources. As a result, a number of laws and regulations now deal with port development and its relation to the natural environment.

Several issues relating to ports need to be considered in a successful coastal management program. Water quality, one of the most important elements among our coastal resources, is affected by a number of port activities, such as dredging and filling, spillage, and discharges from vessels. In addition, air quality is a concern since activities in and

around a port add to the area's air pollution problems. A final problem is location since space is becoming scarce. Expansion opportunities depend on the availability of adjacent land. This problem increases if the port activity and other land uses are not compatible.

The Florida Coastal Management Program recognizes that ports are water dependent coastal users and that ports make substantial contributions to local, regional, and national economies. The needs of ports must be met in ways which are least damaging to other resources and activities. The environmental, economic, social, and administrative problems associated with port requirements can be addressed through an improved management system. The Coastal Management Program encourages a port planning process which seeks to resolve the conflicts over port development and to assure predictability in siting decisions. The program also encourages major state agencies that deal with port facility development to maintain an adequate staff to work on the complex, long-range issues associated with ports.

• Disposal of Dredged Material

Both dredging and the associated spoil disposal are major coastal issues. The environmental, economic, and administrative issues relating to the disposal of dredged material are complex. In the past, spoil was disposed of without regard for any consequences other than cost. More recently, dredging projects



When dredged material is suitable, the Department of Natural Resources can authorize the use of the spoil for beach renourishment. This option may be a partial solution to many disposal problems in the future.

have been restricted, delayed, or stopped because of the possibility that spoil disposal would degrade water quality or create adverse impacts on fisheries, wildlife, and vegetation.

Dredging and spoil disposal are essential if Florida's commercial and recreational ports, harbors, channels, and inlets are to be improved and maintained. A major problem is finding suitable sites for the disposal of dredged material.

The Coastal Management Program assists with the development of a program for the long-range consideration of dredged material disposal needs. Development of comprehensive spoil disposal management strategies must include the early identification of the location, estimated volume of spoil, and the environmental characteristics of areas to be dredged. The strategy also includes an assessment of the condition of spoil areas used in the past and an assessment of the ecological and other land use implications of alternate courses of action for potential sites. Other tasks involve providing information on direct and indirect costs of disposal, improving coordination of planning among all agencies and parties involved, and developing strategies for acquisition of disposal sites selected.

The Coastal Management Program also assists in evaluating the cumulative impacts associated with spoil disposal in the design of solutions to spoil disposal problems.

• Marina Siting

It is estimated that Florida has more than 800 marina and boatyard operations, making them a major shorefront commercial activity. The large number of facilities is an indication of the popularity of recreational boating in Florida beyond the traditional needs for commercial fishing. To meet the varied and increasing demands of the boating public,



An estimated 800 marinas, like this one in St. Augustine, provide services for the boating public in Florida.

marina operations range from small boat rental and launching facilities to major berthing and servicing facilities for offshore vessels. This great diversity means a corresponding variety of physical requirements for marina siting.

In order to operate, marinas have several basic needs related to the site. These include adequate protection from storms, depths to accommodate vessels, the absence of strong currents, room for expansion, land access, compatible adjacent uses, proximity to popular boating and fishing waters, the ability to perform routine maintenance, and size to make the operation economically feasible. Marinas also share many environmental and economic problems with ports, but on a smaller scale.

The state Coastal Management Program recognizes certain problems and issues associated with marina siting. First, there is no effective mechanism for assuring that marina regulatory practices under the Department of Environmental Regulation are consistent or coordinated with management principles of the Department of Natural Resources State Lands Plan. In addition, there is no adequate information for determining long-term cumulative environmental impacts of marina facilities or generally accepted methods for identifying suitable marina sites. Another problem is the lack of an effective forum for communication between the state regulatory agencies and the marina industry to reduce misconceptions and unnecessary conflicts. Finally, local land use and zoning plans generally do not recognize marina needs and do not adequately provide for their siting.

There are a number of possible actions that can be taken to improve the state's ability to deal with marina siting questions. State Coastal Management Program funds are being used to examine these issues and make recommendations for their resolution. The program also establishes a closer coordination between local comprehensive planning required under state and federal programs and

a closer working relationship between the Florida Sea Grant Program and the Coastal Management Program.

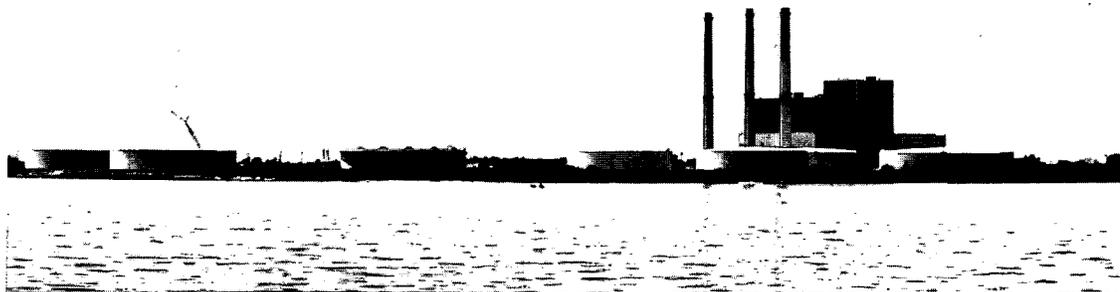
• Water Related Energy Facilities

Two major water-related coastal activities involved with energy are electrical generating facilities and Outer Continental Shelf oil and gas operations. Many OCS facilities, such as service bases and pipelines, must have shoreline locations. Florida electrical power companies often must look to the coast for cooling water because of constraints on freshwater consumption. Careful siting and design of these facilities is a necessary part of our efforts to meet energy needs.

The Florida Coastal Management Program assists in energy facility siting by coordinating existing management processes more effectively, promoting efficient and clear implementation of existing processes, and promoting consistency in site plan review and decisions.

Energy will be a major issue in the future, yet the energy outlook is unclear. In terms of OCS-related oil and natural gas activities, the state must do its part to reduce uncertainty in the development of energy facilities and to assure that the protection of the natural and human environments is balanced with the development of energy resources. The OCS represents one of the keys to the country's energy independence, but major oil and gas operations will create environmental, fiscal, social, and administrative problems. The search for energy resources off Florida's coast will continue. If the resources are found, they must be recovered and developed in a way which protects the quality of life enjoyed by Florida's citizens.

The Coastal Management Program seeks to establish a smoother energy management process. For example, it supports the state OCS Advisory Committee in its efforts to strengthen state decision-making capability and coordination with the petroleum indus-



In Florida, electric power companies must often look to the coast for cooling water because of constraints on freshwater use.

try, local government, and affected interest groups. The Coastal Management Program also assists in developing a coordinated state level approach to OCS-related activities and assesses the consistency of federal license and permit activities. Finally, a coordinated effort is made with the Department of Community Affairs, Coastal Energy Impact Program, in refining Development of Regional Impact guidelines for onshore OCS-related facilities.

• Commercial and Recreational Fisheries

Both commercial and recreational fishing are important in Florida. Recreational fishing makes a large contribution to the state's economy because millions of tourists who visit here each year come to fish. In addition, many residents support themselves by recreational fishing. The commercial seafood industry provides jobs, tax revenues, and other benefits while providing a nutritious and desirable food for many people.

A major part of the nation's ocean resources lies within the areas under state jurisdiction. As stewards for these national resources, states have a responsibility to look after the well-being of the fishing industry and the resources it depends upon.

The problems confronting Florida's commercial and recreational fishermen are not simple. They are closely linked with coastal issues such as loss of access to the shore, pollution, and loss of habitat. Most fish and shellfish are dependent on the state's sheltered estuaries, bays, and other nearshore areas during all or part of their life cycles. Yet some of the worst examples of estuarine pollution (dredging and filling, alteration of normal freshwater flow into estuaries, and sewage disposal) are found in Florida's nearshore waters. These events have all affected the health of fishery stocks. Legislation enacted in the 1970s has reduced but not halted the habitat loss. The remaining habitat is under stress and the long-term survival of many ecosystems cannot be assured. Even the untouched ecosystems yield only a limited amount of resources, which must be divided among a growing number of fishermen.

The Coastal Management Program seeks ways to maintain, promote, and enhance the fishing industry in ways consistent with the long-term productivity of our living marine resources. The program is assisting the Department of Natural Resources in establishing and maintaining an information program directed to fishermen and consumers and in collecting data on habitat loss and fishery decline. These efforts are particularly important



In 1980, the Florida commercial fishing sector landed 187,480,752 pounds of fin and shell fish with a dockside value of \$132,827,568. (National Marine Fisheries Service figures)

since fishery management must integrate the restoration or creation of habitat with a working relationship between the various public and private groups responsible for fisheries.

• Recreation

The extraordinary lure of Florida's coast is obvious. Millions of residents and tourists visit the coast every year. Tourism is the largest industry in the coastal area, so the challenge to provide opportunities for recreation must be met for economic reasons, if for no other.

The primary responsibility for providing local recreational opportunities lies with cities and counties, which in turn depend on assistance from state and federal governments. State government assumes the responsibility for promoting and coordinating these efforts and bridging the gap between national parks administered by the federal government and neighborhood parks provided by local governments. Recreation is related to several of the coastal issues already discussed. In addition, public perceptions of problems are an important consideration in decision-making. Some of the common perceptions include a belief that there is a lack of recreational areas, that development is threatening valuable resources, that environmental problems like water pollution are affecting the quality of outdoor recreation, and that land use and management programs are not coordinated to maximize the recreational value of Florida's coastal resources.



The lure of Florida's coast is extraordinary. In 1981, almost 36,000,000 people visited Florida.

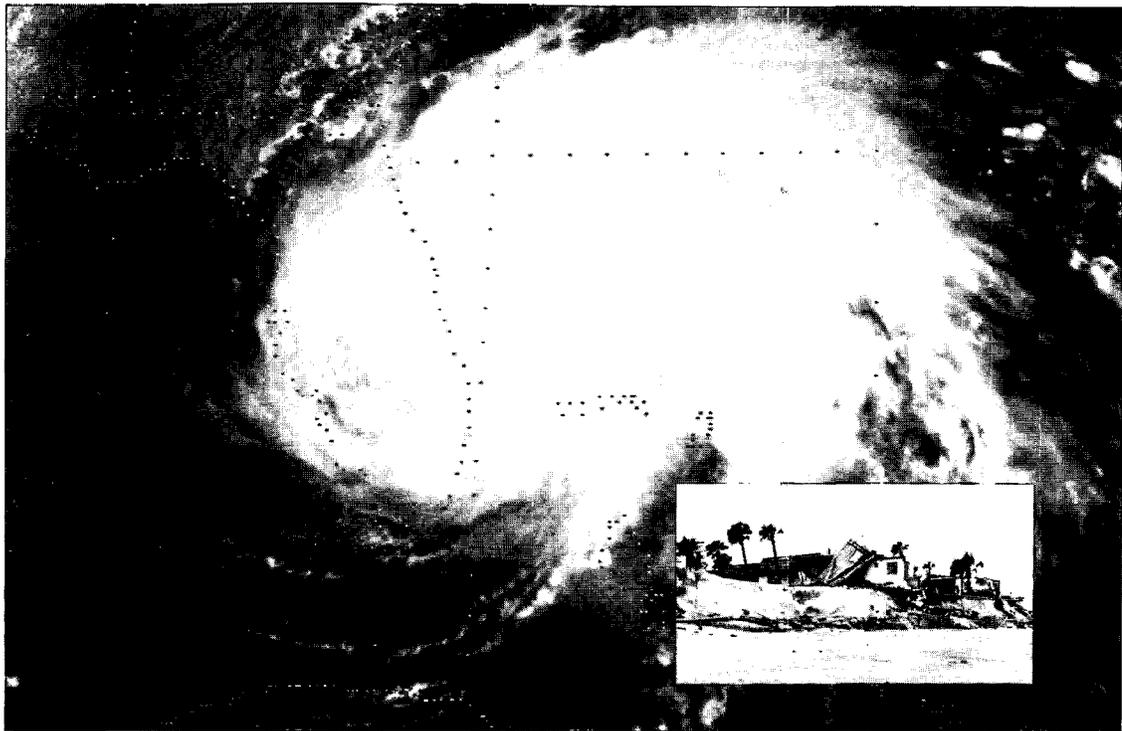
The Coastal Management Plan, through the Department of Natural Resources Florida Outdoor Recreation Plan and other activities of state and local agencies, pursues several avenues relating to recreation and access. The state is realizing that demands on the coast are increasing, while opportunities for access for swimming, fishing, boating, and the general enjoyment of the coast are diminishing. Under the Coastal Management Program, the IMC examines access issues, including those addressed in the Florida Outdoor Recreation Plan, and makes recommendations for coordinating the activities of public agencies which affect access and recreation. The program also encourages the redevelopment and revitalization of urban waterfronts for recreational purposes.

Coastal Storm Issues

Coastal storms are not abnormal events but are natural phenomena which occur periodically over the same areas. Damage occurs when structures are built in areas vulnerable to storm hazards such as flooding and high winds. At one time coastal structures were built on stilts and wet areas were avoided, since access was difficult and other land was available. This practice tended to reduce the impact of storms but was reversed as new construction techniques were used and a rising population increased the demand on the limited coastal areas available for development. As a result, newer structures tend to be more vulnerable to the hazards of coastal storms and the population at risk is much greater.

Coastal storm hazards are created by one or more natural occurrences, including wind, tidal surge, heavy rainfall, and wind-driven waves. Several factors influencing the severity of hurricane impacts combine to make Florida a highly vulnerable state. The state is located in an area with a high probability of storms, has low-lying coastal areas which offer little protection from the dangers associated with a hurricane, and has nearly 80 percent of the state's population living in coastal counties.

Development in coastal areas is already extensive and continues to increase. Yet de-



Hurricanes, like David in 1979, cause property damage and endanger human life. Building too close to the coast increases the potential for damage.

velopment in the floodplain subjects both individuals and property to hazards. New development in coastal areas is often begun with little concern for natural hazards. The most effective way to minimize risks from storms is through proper location of development in relation to flood hazards. However, state law, through the Local Government Comprehensive Planning Act, places little emphasis on including flood protection in plan elements. Also, Florida's building codes typically are deficient, and the monitoring of existing building codes is inadequate.

Government management and regulatory programs generally do not take hazard protection into account. For example, hazard mitigation usually is not considered by land acquisition programs as a criterion for selecting land for purchase nor is it considered by permitting programs in their evaluation of wetlands and water quality permit requests.

The state is using the IMC to develop a program to minimize loss of life and property due to coastal storms, including developing coordinated evacuation plans and developing coastal storm hazard awareness programs for property owners. Florida can also reduce future losses from storms by supervising the development of high hazard areas using existing statutes and regulations.

The state, working through the regional planning councils, helps local governments develop and implement local comprehensive plans which address the hazards associated with coastal storms. The state encourages these efforts by providing legal, financial, and technical assistance, identifying research needs, and working with local governments to educate the public about coastal storms.

Areas of Special Management

While recognizing that the entire coastal zone is an important resource, the federal Coastal Zone Management Act recognized that certain areas of even greater significance warrant particular attention to their preservation and development. Federal regulations suggest that several different kinds of areas should be considered for designation, including important natural resource areas, habitat, cultural and scenic resources, hazard areas, areas for development and siting of large facilities, and areas of intense competition for space or resources.

Florida has several existing programs which have identified areas of particular state interest. These four programs are the Aquatic Preserves System, the State Wilderness System, Areas of Critical State Concern, and the Conservation and Recreation Lands Program.

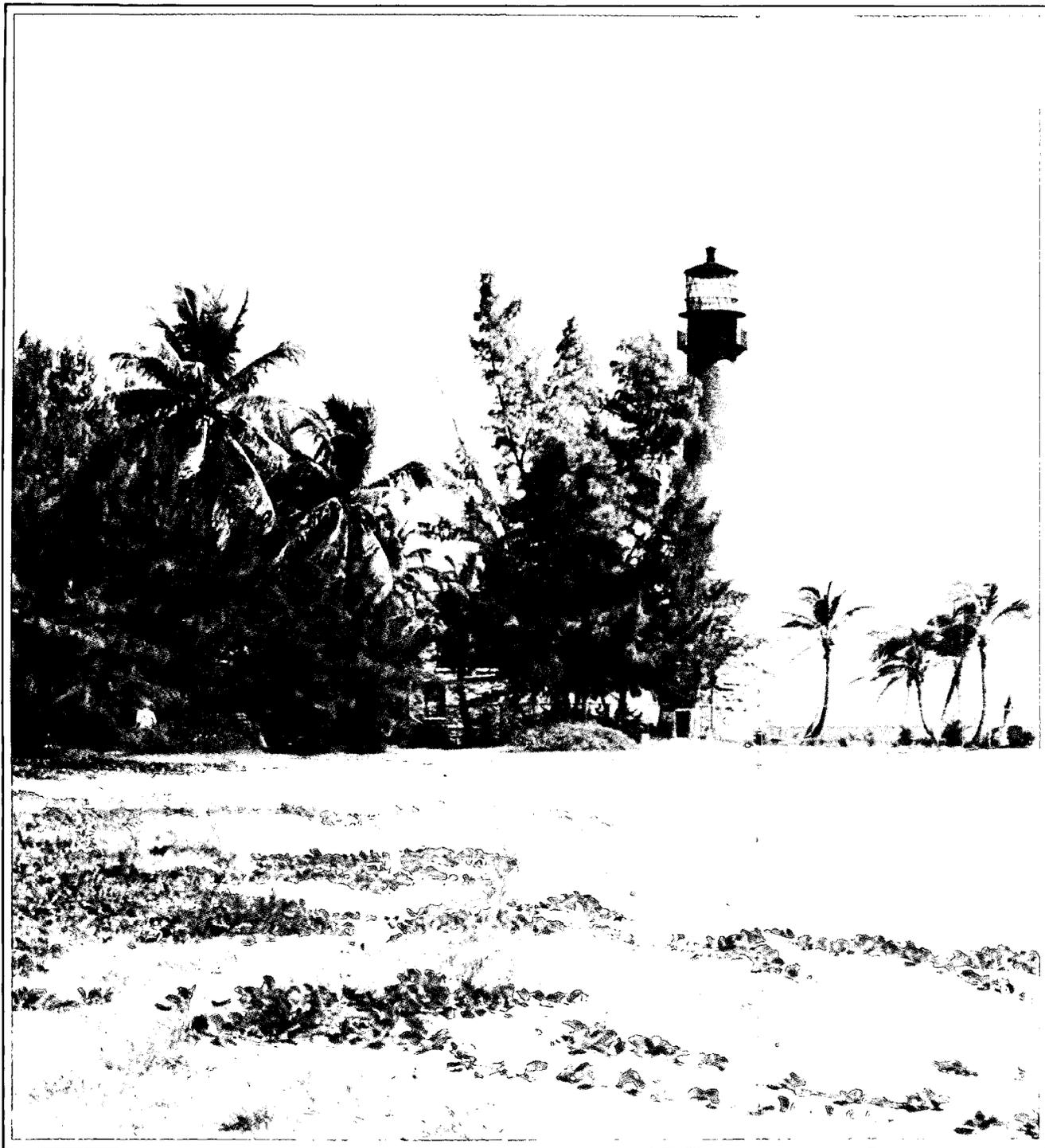
The state controls 30 estuarine and marine aquatic preserves through Florida's Aquatic

Preserve Act of 1975. The act was passed to set aside, as aquatic preserves or sanctuaries, certain state-owned submerged lands and associated coastal waters which have exceptional biological, aesthetic, and scientific value. The preserves are generally areas of high natural productivity which provide an essential habitat for various living resources. The state also values many of the aquatic preserves for their scenic and recreational qualities.

The State Wilderness System Act provides for the selection and management of state lands set aside as state wilderness areas to protect and enhance their natural qualities. These lands are predominantly in a natural undisturbed condition and are in need of additional protection by the state. Some of these areas are very fragile and vulnerable to many human activities. Their ecological value as important bird and fish habitats, breeding grounds, and natural botanical areas is recognized along with their aesthetic and educational values. These wilderness areas, reserved for public enjoyment and low intensity use, also serve as a permanent reminder of the natural conditions which preceded development. Under this protection, the five wilderness areas in Florida's coastal region are off limits to incompatible human activities and are shielded from the undesirable side effects of these activities.

Florida's concern for its natural water resources led to the passage of the Environmental Land and Water Management Act of 1972. To protect these resources, the act provides authority to designate specific "areas of critical state concern." These lands contain significant environmental and natural resources or historical and archaeological resources which may be significantly impacted by existing or proposed major public facilities. There are three areas in the state designated as areas of critical state concern — Big Cypress Swamp, the Florida Keys, and the Green Swamp. Based on this designation, the state oversees development and local regulatory reform in these areas.

As a direct result of the state's concern for preserving valuable and irreplaceable natural resources, the Land Conservation Action of 1972 was enacted. It authorized the state to issue \$200 million in state bonds for the purchase of environmentally endangered lands. Florida realized that its natural systems were rapidly being damaged or destroyed. The Conservation and Recreation Lands Program (CARL), which replaced the Environmentally Endangered Lands Program, is designed to complement existing regulatory programs and contribute to the state's environmental protection efforts. The acquisition of lands is an effective method of protecting some of Florida's environmental resources.



Cape Florida

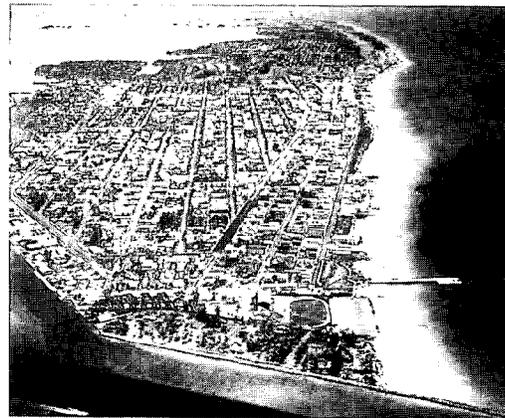
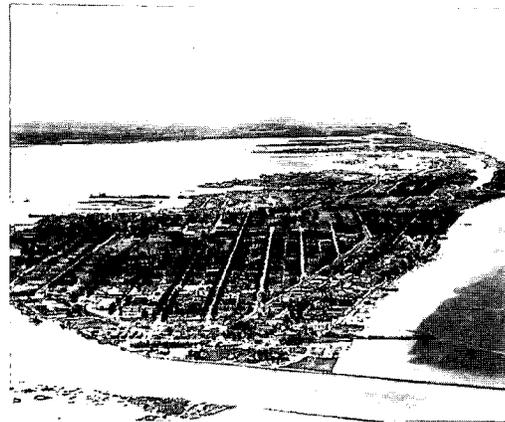
LOOKING TO THE FUTURE

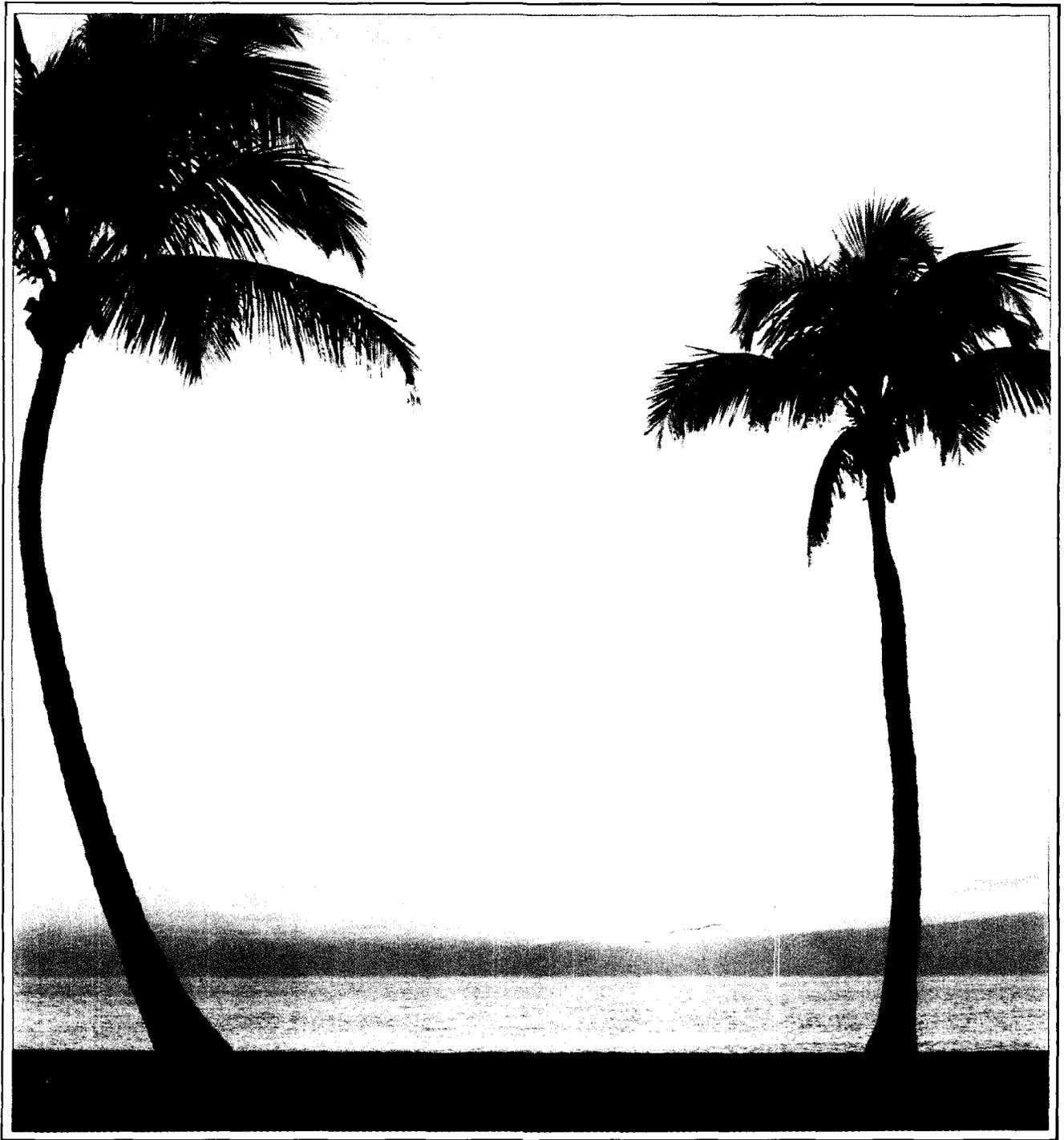
The Florida Coastal Management Program is concerned with the entire state. The geography of Florida and the fact that coastal resources are so closely linked with one another make it difficult to establish a boundary beyond which areas would not affect the coast. The use or preservation of one resource affects the use or preservation of all other resources.

The program is based entirely on existing statutes and separate programs which do not consider the coastal area as a whole. The Coastal Management Program coordinates these authorities so that they will be applied consistently and efficiently throughout the entire coastal area. The essential purpose of a coastal program is to balance development demands with environmental considerations. This task is often quite difficult. In most cases neither development nor preservation interests are completely satisfied with the outcome of a decision.

The statutes and guidelines contained in the program are designed to ensure that public resources are used wisely, but these are not enough. Ultimately, it will be public awareness, understanding and appreciation of our limited resources that will assure their existence for future generations.

Development along the coast will continue. The changes in Miami Beach, from 1925 (top) to 1953 (bottom) are easily discernible.





APPENDIX A

Coastal Program Cross-Reference

In the preceding sections of this booklet the Florida Coastal Management Program has briefly been explained. Details about specific parts of the program can be found in the text of the Coastal Management Program Final Environmental Impact Statement. It should be noted that the Coastal Management Program will be revised from time to time. Please contact the Office of Coastal Management to be kept current on these revisions. The table below will enable the reader to locate various parts of the program.

Subject	Page
Areas of Special Management	II:144 –169
Aquatic Preserve System	II:145 –151
Areas of Critical State Concern	II:155 –161
Conservation and Recreation Lands Program (CARL)	II:161 –169
State Wilderness System	II:151 –154
Department Functions	II:259 –260
Department of Community Affairs	II:259 –260
Department of Environmental Regulation	II:259 –260
Department of Natural Resources	II:259 –260
Energy Facilities Planning	II:325 –346
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General Information	xvii –xxii; I:1 –11; II:1 –9
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Interagency Management Committee	II:256 –259
Issues of Special Focus	II:171 –254
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Disposal of Dredged Material	II:203 –208
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Legal Authorities and Jurisdiction	I:4 –5; II:12 –143
Public Participation	II:265 –268
Regional and Local Participation	II:264 –265

APPENDIX B

Interagency Management Committee

Member agencies of the Interagency Management Committee were selected because of the importance of each agency's program to coastal management and to other resource management programs in the state. Each agency administers one or more programs which have a clear impact on resource management issues.

Agency	Responsibility
Department of Agriculture and Consumer Services, Division of Forestry	To administer the state's forestry program and the state forest system.
Department of Commerce	To guide, stimulate, and promote tourism and the economic development programs which affect resource management responsibilities of other IMC members.
Department of Community Affairs	To administer the Development of Regional Impact, Areas of Critical State Concern, and the Coastal Energy Impact programs, state efforts related to the Local Government Comprehensive Planning Act, and program for disaster preparedness.
Department of Environmental Regulation	To administer the major regulatory programs relating to air and water pollution, solid and hazardous waste management, water resources, and wetlands and serve as lead agency for the Coastal Management Program.
Department of Health & Rehabilitative Services	To administer public health programs related to radiation control and insect control, along with significant responsibility for public drinking water supplies and for individual sewage disposal systems.
Department of Natural Resources	To administer all programs relating to saltwater fisheries, programs relating to coastal protection and erosion control, and to operate the state lands programs, including the aquatic preserves system and the Environmentally Endangered Lands programs. Also to conduct the state's comprehensive outdoor recreational planning programs.
Department of State, Division of Archives, History and Records Management	To locate, identify, and preserve historical and archaeological materials and sites.
Department of Transportation	To develop and maintain a balanced and efficient transportation system.
Game and Fresh Water Fish Commission	To exercise exclusive jurisdiction over freshwater fish, birds, and both upland game and non-game animals, including endangered species.
Governor's Office of Planning and Budgeting	To help in the development of the State Comprehensive Plan.

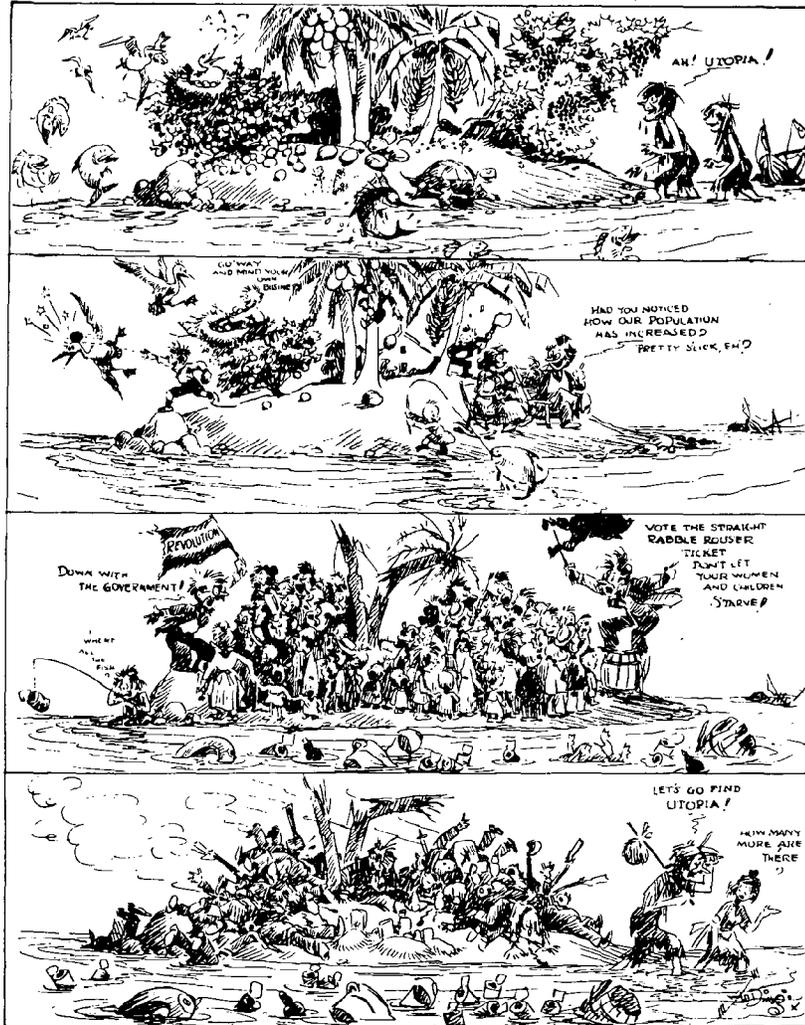


St. Andrews Bay

*“. . . That sun-drenched, shimmering, glorious
expanse of land and water that is Florida
Our job is to protect it, to use it wisely, and
enjoy it, to ensure that those of the generations
to follow may be as blessed as we.”*

**John Simonds
Governor's Task Force on
Resource Management**

The Outline of History



Cartoon by J. N. "Ding" Darling

Cartoon courtesy of J. N. "Ding" Darling Foundation, Inc.

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